

Minutes of Meeting
COLORADO RIVER BOARD OF CALIFORNIA
Wednesday, March 9, 2022

A meeting of the Colorado River Board of California (Board) was held virtually on Wednesday, March 9, 2022, using the Zoom Webinar meeting platform, pursuant to Governor Newsom's Executive Order N-1-22 issued on January 5, 2022.

Board Members and Alternates Present:

David De Jesus (MWD Alternate)	Peter Nelson, Chairman (CVWD)
Castulo Estrada (CVWD Alternate)	Glen D. Peterson (MWD)
Dana B. Fisher, Jr. (PVID)	David R. Pettijohn, Vice Chairman (LADWP)
John B. Hamby (IID)	Jack Seiler (PVID Alternate)
James Hanks (IID Alternate)	David Vigil (DFW Alternate)
Jeanine Jones (DWR Designee)	
Jim Madaffer (SDCWA)	

Board Members and Alternates Absent:

Christopher Hayes (DFW Designee)	Delon Kwan (LADWP Alternate)
Henry Kuiper (Public Member)	Mark Watton (SDCWA Alternate)

Others Present:

Steve Abbott	Rich Juricich
Justina Arce	Laura Lamdin
Jim Barrett	Tom Levy
Bert Bell	Henry Martinez
Robert Cheng	Dylan Mohamed
Gary Croucher	Pedro Nava
Dennis Davis	Jessica Neuwerth
Dan Denham	Jessica Rangel
JR Echard	Shana Rapoport
Melissa Baum-Haley	David Rheinheimer
Chris Harris	Kelly Rodgers
Bill Hasencamp	Shanti Rosset
Michael Hughes	Tom Ryan
Ned Hyduke	Roberta Saligumba

Alexi Schnell
Tina Shields
Darren Simon
AJ Slagan
Gary Tavetian
Angela Tomayko

Sara Tucker
Margaret Vick
Cherie Watte
Jay Weiner
Jerry Zimmerman

CALL TO ORDER

Chairman Nelson announced the presence of a quorum and called the meeting to order at 10:00 a.m.

OPPORTUNITY FOR THE PUBLIC TO ADDRESS THE BOARD

Chairman Nelson invited members of the audience to address the Board on items on the agenda or matters related to the Board. Hearing none, Chairman Nelson moved to the next item on the agenda.

ADMINISTRATION

Chairman Nelson asked for a motion to approve the February 9, 2022, meeting minutes. Mr. Peterson moved that the minutes be approved, seconded by Mr. Madaffer. By roll-call vote, the minutes were unanimously approved.

Consideration of Application for Water Subcontract from the Lower Colorado Water Supply Project (Action)

Mr. Juricich summarized a proposed Board Resolution 2022-1 that recommends a subcontract for Lower Colorado Water Supply Project (Project) water in Imperial County, California be offered to the applicant and directs the executive director to forward the application to Reclamation. Ms. Laurie Marie Estes is requesting a new contract for 1.0 acre-feet of future use. If the Board recommends approval, a new subcontract would be developed by Reclamation for the owner at a future point in time. The Board approved and adopted Resolution 2022-1 during its meeting on March 9, 2022.

Chairman Nelson asked for a motion to approve the resolution on the application for the Lower Colorado River Water Supply Project. Mr. Pettijohn moved that the resolution be approved, seconded by Mr. Madaffer. By roll-call vote, the resolution was unanimously

approved.

COLORADO RIVER BASIN WATER REPORTS

Colorado River Basin Report

Mr. Juricich reported that as of March 7th, the water level at Lake Powell was 3,526.01 feet with 5.99 million-acre feet (MAF) of storage, or 25% of capacity. The water level at Lake Mead was 1,066.03 feet with 8.89 MAF of storage, or 34% of capacity. The total system storage was 21.37 MAF, or 45% of capacity, which is 5.45 MAF less than system storage at this time last year.

Mr. Juricich reported that as of March 2nd, for Water Year-2022 (WY-2022), the observed February inflow to Lake Powell was 0.22 MAF, or 59% of normal. The March inflow forecast to Lake Powell is 0.30 MAF, or 50% of normal. The forecasted unregulated inflow into Lake Powell for WY-2022 is 6.58 MAF, or 69% of normal and the WY-2022 forecasted April to July inflow to Lake Powell is 4.4 MAF, or 69% of normal. Mr. Juricich reported that overall precipitation conditions in the Upper Colorado River Basin were 100% of normal and the current Basin snowpack is 93% of normal.

Mr. Juricich reported on the Colorado Basin River Forecast Center (CBRFC) March 1st Water Supply forecasts for the April to July runoff period. He stated that across the Upper Basin the forecasts ranged from 45% to 75% in the Upper Green Basin, 70% to 100% in the Upper Colorado Basin and 69% of normal for Lake Powell River Basin. He noted precipitation conditions in the Upper Green River Basin have been dry for the last few months.

Mr. Juricich reported on the February 24-Month Study projections for reservoir elevations for Lakes Powell and Mead. For Lake Powell, the most probable release from Glen Canyon Dam for 2022 and 2023 is 7.48 MAF and 7.72 MAF, noting however, that 7.0 MAF release may be more likely. Mr. Juricich reported that Lake Mead's elevation at the end of the calendar year is projected to be close to 1,050 feet.

Mr. Juricich reported that Reclamation released an updated version of the five-year projections for reservoir system conditions for Lakes Powell and Mead. He noted that in 2023, about half of the traces are in the Lower Elevation Balancing Tier. Mr. Juricich explained that Reclamation has switched the methodology for developing the five-year projections from the Colorado River System Simulation (CRSS) to the Colorado River Midterm Model System (CRMMS), noting that Board staff will present an overview of the methodology change at a future meeting.

He reported that Reclamation performed analysis that showed that CRMMS more accurately reflected the near-term conditions over the next five years or so. Mr. Juricich stated that CRSS will still be used for long-term projections for planning purposes.

Chairman Nelson asked for more information about the tier determination of the mid-elevation release tier. Mr. Harris explained that if the August 24-Month Study report for January 1st projection for Powell's elevation is below 3,525 feet, Reclamation will compare the contents between Lakes Powell and Mead and set the annual release from Glen Canyon Dam. He added that the release would be no less than 7.0 MAF and no greater than 9 MAF.

Mr. Juricich reported that the five-year projections for Lake Mead show a Level 1 shortage condition for the next five years, with the increased probability of reaching a Level II shortage in 2024 and a Level III shortage in 2025 and 2026.

Mr. Harris reported on the status of Upper Basin States and the Department of Interior (DOI) Water Year-2022 DROA operations. He explained that the parties are trying to better understand how the remainder of the water year finishes out with respect to April to July runoff. He noted that they are also working on understanding the role side inflows between Glen Canyon Dam and Lake Mead will play. Mr. Harris explained that the Upper Basin States and DOI are also trying to figure out the level of drought operations will need to be implemented. He stated that it is very likely that there will be drought operations pursuant to the 2019 Upper Basin Drought Contingency Plan (UB DCP) and Drought Operations Agreement (DROA). He stated that the Upper Basin States and the Upper Colorado River Commission are trying to determine the size, and volume of water that will need to be released from Flaming Gorge reservoir. He stated that there will be a shift in the timing of annual releases out of Glen Canyon Dam for the remainder of 2022 in order to withhold 350,000 AF of water from January to April when inflow to the reservoir is low. He noted that Reclamation is not changing the volume of the annual release but rather, the timing.

Mr. Harris reported that the seven Basin States are working to develop additional measures that can be implemented in 2023, in conjunction with the 500-plus plan to protect the critical elevations in Lakes Powell and Mead. He added that they want to avoid taking a precipitous action in one reservoir that may damage another reservoir. Chairman Nelson added that there is a great level of concern from the Upper Basin and Lower Basin principals about the declining water supply conditions in reservoir system. Board member Peterson inquired about Lake Powell's operations at or below the minimum power pool of 3,490 feet. Mr. Harris explained that at elevation 3,490 feet Reclamation would have to shift its primary movement of water from Powell downstream onto the river outlet works. He stated he didn't believe Reclamation could

release a full 7.48 MAF release but could probably release close to 7 MAF. He added that there are no low head turbines at Glen Canyon Dam in contrast to Hoover Dam and it is anticipated that energy production capability will be impacted, adding that power can't be generated twenty feet below 3,490 feet. Mr. Peterson noted that a similar situation occurred at Lake Shasta reservoir and the outlets had to be reconfigured to remove cold water. Mr. Harris responded that reconfiguration of the outlets in Lake Powell is not an option. He added that Reclamation has looked at the feasibility of constructing additional turbines on the river outlet works but it would be a costly multi-year effort. Responding to Chairman Nelson about the discharge flow allowed on the river outlet works, Mr. Harris stated that the valves can release 15,000 cubic feet per second.

Mr. Juricich reported that through February 25th, the Brock and Senator Wash regulating reservoirs captured 15,382 AF and 12,333 AF, respectively. He also reported that the excess deliveries to Mexico were 553 AF, compared to 6,160 AF this time last year. Finally, the total amount of saline drainage water bypassed to the Cienega de Santa Clara in Mexico was 27,394 AF, through March 5, 2022.

State and Local Report

Ms. Jones, representing the California Department of Water Resources (DWR), reported that precipitation conditions in December were over 150 percent of average at the end of month and conditions have declined greatly since then. Ms. Jones reported that statewide reservoir storage is at 72% of average. She added that snowpack is slightly above 50% of the April 1st average throughout the State. As of March 5th, statewide precipitation conditions were 80% of average. She added that precipitation conditions in Southern California have been drier than Northern California. She stated that temperatures in WY-2022 were largely above average in Southern California and inland Colorado River hydrologic regions.

Ms. Jones stated that the wet season for the state is coming to a close, adding that March is usually the last wet month. She presented a graphic depicting experimental forecast of atmospheric rivers making landfall, noting that there is a probability of precipitation coming to the State within the next week. She stated that the climatological maximum period for atmospheric river storms is at the end of December and early January. Ms. Jones stated that we are at the end of the period where large storms provide significant amounts of precipitation. Ms. Jones reported that April 1st is the date that is used to measure the maximum period of snowpack accumulation.

Board member Peterson, representing The Metropolitan Water District of Southern California (MWD) reported that as of March 1st, total reservoir storage is 70% of capacity. He stated that the shutdown of the Colorado River aqueduct is complete and will ramp up to an 8-pump flow through May. He stated that MWD's diversion target is 1.087,00 AF. He added that on March 3rd, MWD converted 103,000 AF of flow to storage during the shutdown. Mr. Peterson reported that the target diversion for the Desert Water Agency and Coachella Valley Water district is 15,000 AF.

Vice Chairman Pettijohn, representing the Los Angeles Department of Water and Power (LADWP), reported that LADWP finished the March 1st snow course survey, which showed that every course lost snow water content. He added that the snow content is 63% of the April 1st normal, noting that it has been dry since December. Mr. Pettijohn stated that it has been so dry over the last few years that it is hard to know what the runoff forecast will be and LADWP is not predicting any supplies from the LA Aqueduct at this time. He stated that the SWP allocation will likely go down from 15% and it is possible that the city of LA and some other SWP exclusive areas will operate under a health and safety allocation from the State to manage through the water year. He added that LADWP is in a difficult situation, one that they have not found themselves in before and that it is shifting water across its system accordingly. He stated that 5,000 AF has been shifted through the shift program that MWD implemented. He added that MWD has 2.6 MAF in storage and can't get the water to LADWP.

STATUS OF COLORADO RIVER BASIN PROGRAMS

Colorado River Basin Salinity Control Program Implementation

Mr. Juricich discussed activities of the Salinity Control Forum Work Group hybrid in-person / virtual meeting held on February 15-16 with in-person participation at the Arizona Department of Water Resources offices in Phoenix. Key topics under discussion included updates from Reclamation, the U.S. Geological Survey, and Natural Resources Conservation Service on program funding, research, and implementation.

Mr. Juricich reported that Reclamation provided an update on the status of the Paradox Valley Unity (PVU) salinity control project, located in Montrose County, Colorado. PVU has not operated since March 2019 in response to a significant seismic event. When fully operational, the PVU removed about 100,000 tons of salt per year that would have otherwise entered the Colorado River. Of special note for water users in the Basin, Reclamation reported it is developing

an Injection Test Plan for PVU that would restart operations subject to peer review and senior Reclamation and Department of Interior approval. Mr. Juricich reported that Board staff worked with the CRB agencies to draft a letter to Reclamation supporting a restart of the PVU facility and has shared the letter with the States of Arizona and Nevada.

Mr. Juricich reported that the U.S. Geological Survey (USGS) reported the results of a pump test conducted at the Pah Tempe Springs Geothermal area located in Washington County, Utah. Pah Tempe Springs, also known as Dixie Hot Springs or La Verkin Springs, are located along the Virgin River at the mouth of Timpoweap Canyon in Washington County, Utah. The springs are recognized as a substantial localized source of dissolved solids (salt) discharging to the Virgin River, which is a tributary to the Colorado River at Lake Mead. The purpose of the pump test is to better understand the aquifer properties thus allowing USGS to model pumping requirements to capture the brine presently discharging to the Virgin River.

Board Member Peterson asked if the Salinity Program was applying for federal stimulus money. Mr. Harris responded that conversations on funding are occurring at the Work Group and Forum and that it will likely require additional federal legislation. Chairman Nelson stated that Paradox is the greatest opportunity for salt control in the basin. Mr. Harris responded that there is also potential for salinity control at Pah Tempe Springs. Mr. Juricich reported that the Pah Tempe Springs also has interest by a local agency in Washington County. Mr. Madaffer stated his concern that some of the other basin states are not supporting the PVU project, and that California should pull out all stops to get the PVU restarted.

Mr. Juricich also reported on a study by the USGS looking at potential for salinity impacts in the Spanish Valley near Moab, Utah. The USGS and state of Utah are monitoring the area and looking for additional partnerships.

Status of the Glen Canyon Dam Adaptive Management Program

Ms. Neuwerth reported that the Glen Canyon Dam Adaptive Management Program's (GCDAMP) Adaptive Management Work Group (AMWG) met virtually on February 9 and 10.

Ms. Neuwerth reported that much of the meeting was an abridged version of the previous month's Annual Reporting Meeting.

Ms. Neuwerth reported that the AMWG is grappling with potential biological effects of low reservoir elevations behind Glen Canyon Dam. As the reservoir declines, there is potential

for warmer water to flow through the intakes as well as entrainment of non-native fish. The Glen Canyon/Grand Canyon area is one of the best spots in the entire Colorado River for native fish and both the natives and some of the non-natives love the warm water. The AMWG is considering options for mitigation.

Ms. Neuwerth reported that Reclamation is interested in using some of its infrastructure funding to do a feasibility study on adding power generation to the bypass tubes at Glen Canyon Dam. Installing hydropower is expensive and hydropower generation would reduce the capacity of the bypass tubes. Utilizing the bypass tubes could reduce the risks from warmer water and non-natives passing through Glen Canyon Dam as water released would be from lower levels in the reservoir. Ms. Neuwerth reported that it will be at least a year before study results are available.

Ms. Neuwerth reported on potential experiments for 2022. The program is currently in the accounting period for a spring high-flow experiment (HFE). Currently, there is insufficient sediment input to trigger a Spring HFE. The GCDAMP is also considering a “bug flows” experiment which are low weekend steady flows to help the food base in Glen and Grand Canyons. There is also the possibility for a fall HFE depending on the monsoon season.

Ms. Neuwerth reported that the Technical Work Group (TWG) will meet April 12 and 13.

Status of the Lower Colorado River Multi-Species Conservation Program

Ms. Neuwerth reported that the Lower Colorado River Multi-Species Conservation Program (LCR MSCP) held its annual financial reporting meeting on February 17.

Ms. Neuwerth reported that the FY 21 budget for the LCR MSCP was \$26.5 million and actual expenditures were \$23.1 million. The program has some lingering impacts from the pandemic that caused delay in planting and habitat creation schedules. Research being done through the program is declining as most of the critical research questions have been answered. The LCR MSCP is currently focusing on building and maintaining habitats.

Ms. Neuwerth reported that the budget for the program is set at in 2003 dollars; thus, inflation can have a big effect on program funding. Program funding is expected to increase a bit because of inflation but Ms. Neuwerth believes will still be in the range of \$26 million. The budget will continue to decline over the years until the program ends. Mr. Harris added that a few years ago the LCR MSCP budget was in excess of \$30 million.

Ms. Neuwerth added that approximately three-quarters of the habitat needed for the program has been established.

GENERAL ANNOUNCEMENTS

Salton Sea Management Program Annual Report

Mr. Juricich provided an update on the Salton Sea Management Program. Mr. Juricich noted that the Salton Sea Management Annual Report was submitted to the State Water Board by California Natural Resources Agency on February 25, 2022. Mr. Juricich also reported on the 2021-2022 Budget Act, which committed another \$220 million to support the Salton Sea Management Program in the upcoming fiscal years.

Washington D.C. Updates

Mr. Harris reported on the U.S. Department of Interior's new staff members. Mr. Harris noted that Mr. Michael Brain is the new Deputy Commissioner at the Bureau of Reclamation; Mr. Gary Gold is the new Deputy Assistant Secretary for Water and Science; and, Ms. Katherine Pustay Currie is the new Deputy Infrastructure Coordinator. Mr. Harris also reported on the federal appropriations. Mr. Harris mentioned that the federal government has extended its Continuing Resolution (CR) until March 11th.

Mr. Harris reported on the published guidebook for states, tribes, and local government to apply for funding for infrastructure projects as part of the Bipartisan Infrastructure Law (BIL), passed in November 2021. Mr. Harris noted that the Environmental Protection Agency's (EPA) Local Government Advisory Committee, whose members include mayors, council members and city officials, urged the EPA to consider climate change and environmental justice when it funds projects as part of the BIL.

Next Scheduled Board Meeting

Finally, Mr. Harris noted that the next meeting of the Colorado River Board would be held on April 13, 2022, and would be held in-person, at the Sheraton Ontario Airport Hotel.

ADJOURNMENT

With no further items to be brought before the Board, Chairman Nelson adjourned the meeting at 11:13 a.m.