

Minutes of Meeting
COLORADO RIVER BOARD OF CALIFORNIA
Wednesday, January 13, 2021

A meeting of the Colorado River Board of California (Board) was held virtually on Wednesday, January 13, 2021, using the Zoom Webinar meeting platform.

Board Members and Alternates Present:

David DeJesus (MWD Alternate)	Glen D. Peterson (MWD)
Dana B. Fisher, Jr. (PVID)	David R. Pettijohn (LADWP)
James Hanks (IID)	John Powell, Jr. (CVWD Alternate)
Jeanine Jones (DWR Designee)	Jack Seiler (PVID Alternate)
Henry Kuiper (Public Member)	David Vigil (DFW Alternate)
Jim Madaffer (SDCWA)	Mark Watton (SDCWA Alternate)
Peter Nelson, Chairman (CVWD)	

Board Members and Alternates Absent:

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

Others Present:

Steven Abbott	Laura Lamdin
Brian Alvarez	Tom Levy
Justina Arce	Lindia Liu
Jim Barrett	Kara Mathews
Bert Bell	Dylan Mohamed
Emily Dooley	Jessica Neuwerth
JR Echard	Jessica Rangel
Melissa Baum-Haley	Shana Rapoport
Emily Halvorsen	Angela Rashid
Christopher Harris	Ivory Reyburn
Bill Hasencamp	Shanti Rosset
Lynda Lo-Hill	Tom Ryan
Michael Hughes	Tina Shields
Ned Hyduke	Andrew Slagan
Sarai Jimenez	Gary Tavetian
Lisa Johansen	Jay Weiner
Rich Juricich	Meena Westford
Larry Lai	Jerry Zimmerman

CALL TO ORDER

Chairman Nelson announced the presence of a quorum and called the meeting to order at 10:05 a.m.

OPPORTUNITY FOR THE PUBLIC TO ADDRESS THE BOARD

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

ADMINISTRATION

Chairman Nelson deferred approval of the December 9, 2020 meeting minutes to the February 10, 2021 Board meeting.

COLORADO RIVER BASIN WATER REPORTS

Colorado River Basin Report

Mr. Juricich reported that as of January 4th, the water level at Lake Powell was 3,581.80 feet with 10.10 million-acre feet (MAF) of storage, or 42% of capacity. The water level at Lake Mead was 1,083.89 with 10.34 MAF of storage, or 40% of capacity. The total system storage was 27.50 MAF, or 46% of capacity, which is 3.8 MAF less than system storage at this time last year.

Mr. Juricich reported that as of January 5th, the unregulated inflow into Lake Powell for Water Year-2021 is 5.73 MAF, or 53% of normal and the WY-2021 forecasted April to July inflow to Lake Powell is 3.80 MAF, or 53% of normal. For Y-2021, the observed December inflow to Lake Powell was 0.17 MAF, or 46% of normal. The January inflow forecast to Lake Powell is 0.22 MAF, or 60% of normal. To date, the WY-2021 precipitation in the Upper Colorado River Basin is 61% of normal and the current Basin snowpack is 70%.

Mr. Juricich reported that the Basin experienced dry precipitation conditions in November and December. He reported that early snow conditions are lower than conditions at this time last year. He also added that some of the poor snowpack conditions across the West reflect La Nina conditions. Snow conditions in the Upper Colorado River Basin range from 70% to 80% of normal and further south, snow conditions range from 60% to 70%.

Mr. Juricich reported that as of January 8th, the Brock and Senator Wash regulating reservoirs captured 4,145 AF and 3,302 AF, respectively. He also reported that the excess deliveries to Mexico through January 11th, were 0 AF. As of December 30th, the total amount of saline drainage water bypassed to the Cienega de Santa Clara in Mexico was 126,041 AF.

Mr. Juricich reported on the historical consumptive uses of the Lower Divisions states. He stated that over the last several years, consumptive use of the Lower Division states has been declining, resulting in water use less than its 7.5 MAF apportionment. He added that the lower consumptive use has benefited Lake Mead elevations. Mr. Juricich reported that the Bureau of Reclamation (Reclamation) projects continued lower consumptive use in 2020, 2021, and 2022.

Mr. Juricich reported that Reclamation hosted a webinar on December 9th to discuss the incorporation of the 2016 Upper Colorado River Commission (UCRC) demand schedule into the Colorado River Simulation System (CRSS), Reclamation's long term planning model. He stated that the 2016 UCRC demand schedule will replace the 2007 UCRC demand schedule, which has been in use since 2008. Mr. Juricich reported that the 2007 and 2016 demands are a bit higher than the historically observed demands in the Upper Basin. He added that there are assumptions built into the new demand schedule such as additional exports like the Lake Powell pipeline.

Board member Fisher, representing the Palo Verde Irrigation District (PVID), commented that the April to July runoff is 53% of normal and inquired about the likelihood that the runoff will make it into the reservoir system. Responding, Mr. Juricich explained that Reclamation's December 24-Month Study results project the most probable Lake Mead elevation at the end of Calendar Year-2021 is 1,069.66 feet, which is below the first shortage tier. He added that the most probable projected release for Lake Powell is 8.23 MAF in WY-2021 and 7.48 MAF in WY-2022. He stated that the last 7.48 MAF release from Lake Powell occurred in 2014.

Responding to Board member Fisher's question, Mr. Harris added that if the April to July runoff into Lake Powell stays at 50% of normal and dry soil conditions persist, it is likely that inflows to Lake Powell will be low. Mr. Harris remarked that during next month's CRB meeting, Staff will present Reclamation's 24-Month Study projections for Lake Powell to better understand how the inflow forecast will impact the reservoir's elevation.

Finally, Mr. Juricich reported that exceptional drought conditions continue to plague some parts of the Southwest region.

State and Local Report

Ms. Jones, representing the California Department of Water Resources (DWR), reported that to date, precipitation conditions for WY-2021 were dry throughout the State. She stated that the National Oceanic and Atmospheric Administration (NOAA) ranked California's precipitation

in 2020 as the third driest year in its 126-year record. Similarly, California temperatures in 2020 ranked third for the warmest temperature on record. She noted that California's warmest years on record were the drought years of 2014 and 2015.

Ms. Jones reported that the inflows at the major Sierra watersheds for November through January are tracking with the inflows of 2014 and 2015. Ms. Jones reported that the Central Valley inflows were so low that it has created many water rights administration and water operations issues. Ms. Jones reported that the statewide snowpack is slightly better than 50% of average, with higher average snowpack in the Northern Sierra which benefits the Oroville reservoir. Snowpack conditions are 30% of average in the Southern Sierra, which does not bode well for spring runoff. Ms. Jones explained that the dry start of WY-2021, following the dry, warm conditions in 2020, will likely result in a poor runoff season.

Ms. Jones reported that the statewide reservoir storage is 82% of average, noting that Shasta and Oroville reservoirs are lagging which is concerning for operation of the State's large water projects. She explained that the reservoirs are lagging due to poor hydrologic conditions from last year. She noted that overall, California's reservoir system is doing well despite last year's dry conditions due to carryover from very wet precipitation conditions in 2019. She reported that we are at the mid-point of the State's wettest season and the precipitation conditions are so poor that there is a 10% to 30% chance of recovering to an average precipitation condition. She stated that even if the State receives a few big storms late in the season, precipitation conditions will only get close to average conditions due to dry hydrology and warm temperatures.

Ms. Jones reported that DWR is continuing to work with NASA and its subcontractor, Scripps Institution of Oceanography in San Diego, on another experiment forecasting product. She stated that the research team has been continuing its work forecasting atmospheric rivers (AR) but found that the forecasting skill is too low, noting that even if the AR is large, its predictability is no better than a normal, typical rainfall. The research team decided instead, to look at the problem from a different angle and try to predict when it would not rain, investigating the ridge of high pressure is parked off the coast of California deflecting precipitation away from the State. The research team identified three types of ridges as the North, West, and South ridge, blocking precipitation in different parts of its study area. The North ridge blocks precipitation in Northern California and often, the entire State. The South ridge blocks precipitation in the Colorado River Basin and the West ridge blocks precipitation in Southern California. She explained that the Weather Services models suggest that ridging will be present in the North and West ridges, therefore, projecting dry conditions in Northern and Southern California. She stated that the forecast for three and four weeks from now show ridging along the West ridge which means dry conditions persisting in Southern California. Forecast for five to six weeks from now, which is the limit of forecasting skill, shows similar results.

Ms. Jones reported that the ridging forecast for next week shows an active ridge in the South which means dry conditions are likely for the Colorado River Basin. Ms. Jones reported that they are in the second year of the experimental atmospheric ridging forecast and the research team will evaluate effectiveness of the forecasts. She stated that the idea behind the experimental ridging project was to provide more skill than NOAA's seasonal outlook. She added that experimental forecasting uses different techniques than NOAA's, such as statistical modeling, artificial intelligence, and machine learning.

Ms. Jones reported that NOAA finally submitted its report to Congress, as part of its requirement by the Weather Research Act. She thanked the Board and other agencies that submitted letters of support to improve forecasting as a tool for water management. She stated that NOAA's report includes a recommendation for a pilot project for improving weather forecasting for water management purposes. The cost for the pilot project would be \$15 million but there is no funding available to develop it. She added that DWR and its partners have spent \$4 million for its experimental forecasting efforts. She stated that DWR has been trying to work with the federal appropriations process to put money into the budget as well as remind NOAA that the developing forecasting with longer time scales is a priority. She stated that DWR would like to request a letter from the Six Agency Committee as well as other Western water agencies for support of this effort. She noted that the Western States Water Council will be taking the lead on requesting appropriations from Congress, adding that improving these fundamental issues with existing weather models is critical if progress is to be made in weather forecasting.

Mr. Harris inquired about the driver of the ridges. Ms. Jones responded that there are a combination of factors causing the ridging, adding that this is one of the reasons that forecasting is so difficult through modeling as it requires solving a series of equations that cover the entire globe. She stated that the modeling effort consumes an enormous amount of super-computing time, which is one of the biggest costs to improving the models. Board member Peterson, representing The Metropolitan Water District of Southern California (MWD), recommended that CRB's lobbyist work on efforts to fund seasonal and sub-seasonal forecasting. Mr. Harris concurred and stated that the Six Agency Committee would provide a letter supporting the appropriations effort.

Mr. Peterson reported that the status of the Oroville reservoir, noting that a \$400 billion dollar lawsuit against the State Water Project was thrown out by the Butte County courts. He added that the Federal Emergency Management Administration (FEMA) paid for 75% of Oroville's spillway repairs, relieving the impact to MWD's customers. He stated that MWD's water consumption is down and it has more water in storage than ever before, which MWD may need to use this year. He also noted that MWD's consumption has slightly increased in the last several months. He stated that normally, consumption is lower during this time of the year, but warm and dry conditions may be driving the increased use. He reported that sales will be lower than what MWD budgeted.

Mr. Peterson stated that the Colorado River Aqueduct is operating at seven-pump flow and there are plans to bring a total of 1.08 MAF in 2021. He stated that a shut-down of the aqueduct system is scheduled for February for repairs.

Vice Chairman Pettijohn, representing the Los Angeles Department of Water and Power (LADWP), stated that precipitation conditions in the Eastern Sierra are off to a bad start. He stated that the current conditions are closely tracking with the driest year on record, 2014-2015.

STATUS OF COLORADO RIVER BASIN PROGRAMS

Status of the Salinity Control Program

Mr. Juricich updated the Board on the status of the Paradox Valley Unit (PVU) project final EIS, which identified no action as the preferred alternative contrary to the Basin States' support for evaporation pond as the preferred alternative. Reclamation's concerns for evaporation ponds include the large footprint, the requirement for an off-site waste landfill, and potential wildlife issues associated with the ponds. The Basin States believe these concerns could be overcome. The existing injection well has been shut down since March of 2019 due to seismic concerns, so there is currently no salinity control in Paradox Valley. Both the Board and the Salinity Control Forum have requested that Reclamation not proceed with a Record of Decision at this time in hopes of collaborating on a suitable replacement for the existing project and overcoming the concerns associated with the evaporation pond alternative.

Chairman Nelson expressed concern for the impact from the lack of salinity control at PVU to the water users in the Lower Basin and particularly the California agencies. Mr. Juricich responded that, with Mr. Bill Hasencamp as the Forum chairman, the Forum and the Basin States are committed to work with Reclamation to evaluate all potentially effective opportunities that either continue the existing operation or come up with a new paradigm for controlling the same level of salt loading in the Paradox Valley. Without a Record of Decision, the Basin States can continue the dialog and explore opportunities. In response to Chairman Nelson's question, Mr. Harris explained how the PVU project is funded. In response to a written comment from Mr. Aaron Mead, Mr. Harris agreed that having someone familiar with salinity issues as the commissioner of Reclamation would help the long-term continuity of the project.

Mr. Juricich reported that Intrepid Potash, located in Moab, Utah, has expressed interest in potential partnerships in making use of the minerals from PVU for potash and other chemicals. This is one of the areas that the Forum intends to pursue over the next few months. Mr. Harris added that, as a point-source project, the PVU provides a precise amount of salt control being achieved from a quantification perspective. Losing the eight to nine percent of total annual salinity

control at PVU would pose a burden to the Lower Basin states as well as certain areas of the Upper Basin.

In response to a question by Mr. Watton on the PVU's impact on water delivery to Mexico, Mr. Harris stated that there is a potential increase of nine milligrams per liter of TDS at Imperial Dam with the PVU project off-line. Mr. Watton added that involvement of the international treaty with Mexico may put more interest on PVU and other salinity control projects with Reclamation. Mr. Harris agrees that PVU project remains one of the main issues moving forward with the new Interior team.

ANNOUNCEMENTS

Reclamation Appointments

Mr. Harris reported that Mr. Wayne Pullan has been selected as Upper Colorado Regional Director. Mr. Pullan had previously served as area manager of Reclamation's Provo Area Office and deputy regional director of the Upper Colorado Region. Mr. Harris noted that the Lower Colorado Regional Director has not been selected.

CRWUA "Federal Friday"

Mr. Harris reported that the 2020 CRWUA Conference was cancelled due to the pandemic, but a virtual "Federal Friday" was held on December 18, 2020. Mr. Harris noted that the speakers highlighted past achievements, including Minutes 319 and 323, the DCPs, and emphasized the need to collaborate to address future challenges.

Windy Gap Firming Project Update

Board Staff Ms. Neuwerth reported that a December ruling by a U.S. District Court judge would allow the Windy Gap Firming Project in Colorado to move forward. The Windy Gap Firming Project would increase the reliability of the Windy Gap Project, which was constructed in the 1980s but has struggled to provide a steady supply of water to its participants due to a lack of storage. Ms. Neuwerth noted that a major component of the project is the construction of Chimney Hollow Reservoir, which has a capacity of 90,000 AF.

Hydrologic Periods Webinar

Mr. Juricich provided a summary of the December 16, 2020, Board staff webinar provided to the Board's member agency technical staff on the hydrologic periods used in the modeling studies performed by Reclamation using the Colorado River Simulation System (CRSS). Mr.

Juricich reported that the Basin States must choose hydrologic period or periods for use in CRSS studies to reasonably capture current and future water supply conditions including uncertainties associated with future drought and warming temperatures. Mr. Juricich shared a figure showing the different hydrologic periods and described how selection of hydrologic periods forms the explicit representation of the total water supplies available to meet System needs for the municipal, agricultural, and environmental sectors. Further, the selection of a dry hydrologic period is necessary to determine the safe yield of the system under a defined drought. Mr. Juricich also summarized the recommendations presented during the webinar that the early pluvial removed hydrology is probably more realistic for the current conditions in the basin.

State of Utah – Navajo Nation Water Rights Settlement

Mr. Harris reported on the proposed water rights settlement between the Navajo Nation and the State of Utah, confirming the Navajo Nation’s right to deplete 81,500 acre-feet of water per year from Utah’s Upper Colorado River Basin apportionment; and, authorizing approximately \$220 million for water infrastructure to provide water infrastructure, which will provide clean drinking water, to Navajo communities in Utah.

Washington, D.C. Updates

Mr. Harris reported that President-Elect Biden’s transition team was still being developed. Mr. Harris noted the 2021 Omnibus, Water Resources Development Act, Western Water Legislation, and Coronavirus Stimulus Package were signed into law in late 2020.

Mr. Harris reported that the EPA published draft guidance to clarify a U.S. Supreme Court ruling in Maui on groundwater pollution. Mr. Harris noted that the guidance provided by the court, may be rescinded when the Biden administration takes office.

Next Scheduled Board Meeting

Finally, Mr. Harris noted that the next meeting of the Colorado River Board would be held on February 10, 2021 and would also be held virtually using the Zoom Webinar meeting platform.

ADJOURNMENT

With no further items to be brought before the Board, Chairman Nelson adjourned the meeting at 11:27 a.m.