

Minutes of Meeting
COLORADO RIVER BOARD OF CALIFORNIA
Wednesday, June 12, 2019

A meeting of the Colorado River Board (Board) of California was held on Wednesday, June 12, 2019 at the Sheraton Ontario Airport Hotel, 429 North Vineyard Avenue, Ontario, California 91764 on Wednesday, June 12, 2019.

Board Members and Alternates Present:

David DeJesus (MWD Alternate)
Jeanine Jones (DWR Designee)
Henry Kuiper (Public Member)
Peter Nelson, Chairman (CVWD)
Glen D. Peterson (MWD)

David R. Pettijohn (LADWP)
Jack Seiler (PVID Alternate)
David Vigil (DFW Alternate)
Mark Watton (SDCWA Alternate)

Board Members and Alternates Absent:

Nicole Neeman-Brady (Public Member)
Evelyn Cortez-Davis (LADWP Alternate)
Dana B. Fisher, Jr. (PVID)
Norma Sierra Galindo (IID Alternate)

James Hanks (IID)
Christopher Hayes (DFW Designee)
Jim Madaffer (SDCWA)
John Powell, Jr. (CVWD Alternate)

Others Present:

Steve Abbott
Brian Alvarez
Roberto Gonzalez
Melissa Brown-Haley
Christopher Harris
Michael Hernandez
Ned Hyduke
David De Jesus
Lisa Johansen

Rich Juricich
Tom Levy
Kara Mathews
Ivory Reyburn
Tom Ryan
Eric Ruckdaschel
Gary Tavetian
Kimberlyn Velasquez
Jerry Zimmerman

CALL TO ORDER

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

OPPORTUNITY FOR THE PUBLIC TO ADDRESS THE BOARD

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

ADMINISTRATION

Chairman Nelson asked for a motion to approve the May 15, 2019, Board meeting minutes. Mr. Pettijohn 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 Fiscal Year 2019-2020 budget. Mr. Pettijohn moved that the budget be approved, seconded by Mr. Kuiper. By roll-call vote, the budget was unanimously approved.

Overview of the Improving Sub-Seasonal to Seasonal Precipitation Forecasting Workshop, Western States Water Council/DWR

Ms. Jones, representing the California Department of Water Resources (CA DWR), reported on the Western States Water Council and CA DWR's annual workshop focused on improving longer term precipitation forecasting held on May 22-24, 2019 in San Diego, California. Ms. Jones explained that the Western States Water Council is comprised of 18 western states with representatives appointed by their governors. The council was originally formed through the Western's Governors' Association. Further, she explained that the council provides the opportunity for state water agencies to coordinate on several issues, like federal appropriation lobbying.

Ms. Jones reported that 2018 marked the 10-year anniversary of CA DWR's Winter Outlook Workshops with the research community, which began as a result of the 2007-2009 drought in California. She noted that over the years there has been great progress in improving sub-seasonal to seasonal forecasting (S2S) and more work on this effort is underway. She stated that the National Academies of Science released a report outlining a ten-year research direction for National Oceanic and Atmospheric Administration's (NOAA) to follow that will continue to improve S2S forecasting. She added that the recent legislation, the Weather Research and

Forecasting Innovation Act of 2017, will require NOAA to prepare a report to Congress outlining how it will improve its S2S forecasting abilities.

Ms. Jones reported that the goal of improving forecasting is to develop a seamless suite of forecasts that extend from forecasts of hourly precipitation, needed for managing flooding, to longer time scales, that would be helpful with dealing with droughts. She noted that CA DWR has been doing a lot of groundwork to support this effort. Ms. Jones stated that CA DWR's decade long partnership with NOAA on the Hydrometeorology Testbed program has funded research to observe and analyze atmospheric rivers (AR), which contribute to much of the State's extreme precipitation events. She noted that various water agencies throughout California have been using improved forecasting of extreme precipitation events to run operations of its reservoir, adding that there are pilot projects underway in the counties of Sonoma, Orange, and Yuba. Ms. Jones noted that most reservoirs use rule curves for flood control operations, which have no forecasting skill.

Ms. Jones displayed a graphic showing the various ranges of seasonal precipitation prediction skill that the National Weather Service possesses for many areas of the United States. She reported that forecasting skill quickly declines as the time scale increases beyond two weeks. Ms. Jones explained that for several areas in the western U.S. there is little to no forecasting skill. She reiterated that CA DWR's investment in the AR observing station will help improve forecasting in these areas.

Ms. Jones reported that in December 2018, CA DWR and NOAA executed a 5-year contract for \$750,000 a year to develop near to longer-term projects ranging from statistical post-processing of current weather model runs to model data assimilation, to improving model representation of tropical convection. She explained that the contract will also include collaborating with NASA Jet Propulsion Lab (JPL) to explore forecasting pressure ridges, which disrupt precipitation patterns. She noted that during the last drought, the "ridiculously resilient ridge" persisted during 2014 and 2015. She stated that JPL has identified the ideal locations of possible ridges locations in California and the Colorado River Basin where precipitation conditions are expected to be dry.

Ms. Jones also reported that CA DWR has contracted with the Universities of California at Los Angeles (UCLA) and Irvine (UCI) for climate-scale analyses. She stated that the contract with UCLA will focus on experimental season statistical model forecast for California and the Upper Colorado River Basin. The contract with UCI will be for an analysis of climate diagnostics associated with wet season transitions.

Ms. Jones reported that during the workshop, Park Williams, a researcher at Columbia University, Lamont-Doherty Earth Observatory, discussed research on cold season (from November to March) precipitation variability and the development of more severe droughts in the mid-1970s through analysis of the long-term paleo record on precipitation.

Ms. Jones concluded that CA DWR will continue to work with NOAA to progress the science and research for S2S forecasting and NOAA's report to Congress is expected soon.

COLORADO RIVER BASIN WATER REPORTS

Colorado River Basin Report

Mr. Harris reported that as of June 10th, the water level at Lake Powell was 3,590.27 feet with 10.85 million-acre feet (MAF) of storage, or 45% of capacity. The water level at Lake Mead was 1,085.71 feet with 10.49 MAF of storage, or 40% of capacity. As of June 9th, the total system storage was 29.15 MAF, or 49% of capacity, which is about 1.5 MAF less than the system storage at this same time last year.

Mr. Harris reported that the forecasted Water Year 2019 inflow in Lake Powell is 13.49 MAF, or 125% of normal. The forecasted April to July 2019 runoff into Lake Powell is projected to be 10.30 MAF, or 144% of normal. The May 2019 observed Lake Powell inflow was 2.51 MAF (107% of normal), and the June Lake Powell inflow forecast is 4.40 MAF (165% of normal). To date, the WY-2019 precipitation is 125% of normal and the current basin snowpack is 765% of normal.

Mr. Harris reported on the monthly precipitation conditions in the Basin, noting that conditions in April were below average in the Lower Basin. He noted that during the last week of April, precipitation conditions greatly improved and precipitation conditions in May were wet and cool throughout most of the Basin.

Mr. Harris reported that intervening flows between Glen Canyon Dam and Lake Mead, were 1.1 MAF this year, noting that the average flows are close to 800,000 AF. He added that during this time of the year, 500,000 AF more is released from Hoover Dam to meet downstream demands but demands have declined due to cooler weather in the Lower Basin. He noted that in conjunction with the proposed conservation in the Lower Basin, the Lower Basin has set the stage for formal implementation of the Drought Contingency Plan (DCP).

Mr. Harris reported that as of May 30th, Brock and Senator Wash Reservoirs captured 58,072AF and 47,800 AF, respectively. She also reported that excess deliveries to Mexico through June 2nd, were 3,370 AF. As of June 3rd, the total bypassed to the Cienega de Santa Clara in Mexico is 38,483 AF.

State and Local Report

Mr. Harris reported that the State's reservoir system storage is above average. He noted that CA DWR has activated its flood operation center, noting that there is a possibility for localized flooding due to increased snow melt in the Sierras due to increasing temperatures.

Board member Peterson, representing The Metropolitan Water District of Southern California (MWD), stated as of June 1st, the combined reservoir storage is 95% of capacity. He also noted MWD continues to conserve water. Board member Pettijohn, representing the Los Angeles Department of Water and Power (LADWP), added that by the end of the year MWD will have 3.3 MAF in combined storage, which the most MWD has ever had in its history.

Board member Pettijohn reported that as of June 5th, the Eastern Sierra snowpack is 64% of the April 1st normal.

STATUS OF COLORADO RIVER BASIN PROGRAMS

Status of the Lower Basin Drought Contingency Plan

Mr. Harris reported that the Colorado River Basin Drought Contingency Plans had been executed on May 20th in a ceremony at Hoover Dam, at which the Colorado River commissioners and Bureau of Reclamation signed the final agreements. A small binational work group continues efforts to reconcile the operational and accounting aspects of the Lower Basin Drought Contingency Plan and the Binational Water Scarcity Contingency Plan, which will be finalized in a Joint Engineer's Report from USIBWC/CILA. With the completion of this report, possibly by early July, the United States and Mexico will be prepared to begin contributions to Lake Mead in Water Year 2020, if needed.

Status of the Salinity Control Program

Board Staff Rich Juricich reported on the Work Group, Forum, and Advisory Council meetings held on June 3rd to 6th in Denver, Colorado. This meeting marked the 100th meeting of the Forum since the first one in November of 1973. The first meeting was also held in Denver. Mr. Juricich reported that Mr. William Hasencamp was elected to chair the Forum for the next two years. Mr. Harris added that this is the first time a representative from the Metropolitan Water District has been the Forum Chair. Mr. Juricich reported that Ms. Rebecca Mitchell from Colorado will be the Vice Chair.

Mr. Juricich reported that the Paradox Valley Unit EIS continues to be on schedule with the Administrative Draft EIS to be released for a 30-day review by the cooperating agencies in

August, after which the Draft EIS for public comment will be out in November or December. The Final EIS is scheduled for release next year. Mr. Juricich reported that there was a discussion on the March 4th earthquake near the Paradox Valley Unit. More than 1,700 aftershocks occurred through May. Reclamation is completing their analysis of what the earthquake means in terms of project operations moving forward. The injection facility is currently shut down and brine is flowing down the Dolores into the Colorado River system.

Mr. Juricich reported that Reclamation's Funding Opportunity Announcement (FOA) was released on May 31st. Reclamation held a couple of workshops this week in Colorado, where most of the interest was. Reclamation will select projects in November. Mr. Juricich reported that the Program Funding Committee continues to discuss the Lower Colorado River Basin Development Fund's revenue shortfall to meet required cost-share dollars.

Mr. Juricich reported that there was long discussion at the meeting on the 2020 Triennial Review, looking at three scenarios on different levels of salinity control. Discussion will continue over the next year or so. Reclamation has included the DCP in the Colorado River Simulation System (CRSS) modeling runs with a stress test that include a dry period in 1988 and 2017 to show how it affects the river system. As expected, the salinity was higher in those dry periods.

Mr. Juricich reported that USGS continues to evaluate Pah Tempe Springs as a location for another potential salinity control project. USGS was able to recover an existing Reclamation well that goes right through the high salinity water. USGS will do additional test on the well before deciding whether they need to drill a new well in the area.

In terms of next meetings, the Work Group will meet in Salt Lake City on August 26-28 and the Forum and Advisory Council will have theirs in late October in Arizona.

Status of the Glen Canyon Dam Adaptive Management Program

Mr. Harris reported that the Glen Canyon Dam Adaptive Management Work Group met via webinar on May 22nd. The group heard from researchers on the impacts of high flow experiments (HFEs) on various resources. Researchers reported that HFE implementation appears to have no population-level effects on native fish or brown trout. Although there may be a link between spring HFEs and increased rainbow trout reproduction, more research is needed. Mr. Harris reported that the Technical Work Group (TWG) was meeting June 11-12 in Phoenix, Arizona.

ANNOUNCEMENTS

Mr. Harris reported briefly on the Fontanelle Dam Riprap Expansion Project. Mr. Harris indicated that the State of Wyoming postponed the expansion project until the reservoir is drawn down in the future drought.

Mr. Harris reported on the first minibus appropriations package. Mr. Harris stated that the Rules Committee will meet to determine which amendment will be offered and the Senate will follow suite in late June or July after review of the appropriation bills.

Mr. Harris reported on the United States Bureau of Reclamation Title Transfer. Mr. Harris indicated that Reclamation made changes to their processes and requirements for title transfer, which will help streamline the process. Mr. Harris reported that Districts interested in title transfers, should submit a written request to the appropriate Reclamation area office and Reclamation will determine the process.

Mr. Harris reported that the House passed the \$19 billion disaster aid bill which the Senate previously passed. Mr. Harris reported that the monies will go to certain Federal Agencies for disaster related projects.

Finally, Mr. Harris noted that the next meeting of the Colorado River Board would be July 10th and would be held in Ontario, California; however, it may be cancelled and moved to August 14, 2019.

ADJOURNMENT

With no further items to be brought before the Board, Chairman Nelson adjourned the meeting at 10:53 a.m.