

Minutes of Meeting  
COLORADO RIVER BOARD OF CALIFORNIA  
Wednesday, May 15, 2019

A meeting of the Colorado River Board (Board) of California was held on Wednesday, May 15, 2019 at the Sheraton Ontario Airport Hotel, 429 North Vineyard Avenue, Ontario, California 91764 on Wednesday, May 15, 2019.

Board Members and Alternates Present:

Dana B. Fisher, Jr. (PVID)  
James Hanks (IID)  
Jeanine Jones (DWR Designee)  
David R. Pettijohn (LADWP)

Doug Wilson (SDCWA)  
Peter Nelson, Chairman (CVWD)  
Glen D. Peterson (MWD)

Board Members and Alternates Absent:

David DeJesus (MWD Alternate)  
Evelyn Cortez-Davis (LADWP Alternate)  
Mark Watton (SDCWA Alternate)  
David Vigil (DFW Alternate)  
Nicole Neeman-Brady (Public Member)

Christopher Hayes (DFW Designee)  
John Powell, Jr. (CVWD Alternate)  
Norma Sierra Galindo (IID Alternate)  
Jack Seiler (PVID Alternate)  
Henry Kuiper (Public Member)

Others Present:

Steve Abbott  
Joseph Avilz  
Elsa Contreras  
Roberto Gonzalez  
Christopher Harris  
Bill Hasencamp  
Ned Hyduke  
Rich Juricich  
Laura Lamdin  
Tom Levy  
Lindia Liu  
Sam Mannan  
Henry Martinez  
Kara Mathews

Rich Nagel  
Jessica Neuwerth  
Angela Rashid  
Ivory Reyburn  
Shanti Rosset  
Eric Ruckdaschel  
Tom Ryan  
Maria Sheridan  
Tina Shields  
Gary Tavetian  
Alina Tishchenko  
Kimberlyn Velasquez  
Jerry Zimmerman

## **CALL TO ORDER**

Chairman Nelson announced the presence of a quorum and called the meeting to order at 10:06 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 18, 2019, Special Board meeting minutes. Mr. Fisher moved that the minutes be approved, seconded by Mr. Wilson. By roll-call vote, the minutes were unanimously approved.

Chairman Nelson asked for a motion to approve the April 10, 2019, meeting minutes. Mr. Fisher moved that the minutes be approved, seconded by Mr. Wilson. By roll-call vote, the minutes were unanimously approved.

## **COLORADO RIVER BASIN WATER REPORTS**

### **Colorado River Basin Report**

Ms. Rashid reported that as of May 5<sup>th</sup>, the water level at Lake Powell was 3,574.18 feet with 9.45 million-acre feet (MAF) of storage, or 39% of capacity. The water level at Lake Mead was 1,088.67 feet with 10.74 MAF of storage, or 41% of capacity. As of May 5<sup>th</sup>, the total system storage was 27.55 MAF, or 46% of capacity, which is about 2.88 MAF less than the system storage at this same time last year.

Ms. Rashid reported that the forecasted Water Year-2019 inflow into Lake Powell is 12.1 MAF, or 112% of normal. The forecasted April-July 2019 runoff into Lake Powell is projected to be 9.2 MAF, or 129% of normal. The April 2019 observed Lake Powell inflow was 1.24 MAF (118% of normal), and the May Lake Powell inflow forecast is 3.0 MAF (128% of normal). To date, the WY-2019 precipitation is 119% of normal and the current basin snowpack is 138% of normal.

Chairman Nelson noted that despite above average snowpack in the Upper Basin the runoff into Lake Powell appeared lower than anticipated. Mr. Harris reported that dry soil conditions in

the Upper Basin tend to retain much of the precipitation impacting runoff into local and larger stream systems. He added that sublimation can also contribute to reduced runoff into Lake Powell. Ms. Rashid added the Colorado Basin River Forecast Center (CBRFC) has been monitoring and reporting on the dry soil conditions in the Upper Basin since the beginning of Water Year 2019. She noted that some lower elevation areas in the Upper Basin have rebounded due to the season's above average precipitation conditions.

Ms. Rashid reported that precipitation conditions in March were above average. April started off with above average precipitation conditions but as the month progressed the conditions became drier.

Ms. Rashid reported that as of May 6<sup>th</sup>, the Upper Colorado River basin reservoirs, excluding Lake Powell, ranged from 41% of capacity at Fontenelle Reservoir in Wyoming; 88% of capacity at Flaming Gorge Reservoir in Wyoming and Utah; 98% of capacity at Morrow Point and 44% of capacity at Blue Mesa Reservoirs in Colorado; and 66% of capacity at Navajo Reservoir in New Mexico.

Ms. Rashid reported that as of April 25<sup>th</sup>, Brock and Senator Wash Reservoirs captured 45,079 AF and 37,571 AF, respectively. She also reported that excess deliveries to Mexico through May 1<sup>st</sup>, were 2,425 AF. As of May 7<sup>th</sup>, the total bypassed to the Cienega de Santa Clara in Mexico is 31,307 AF.

Mr. Harris reported that the Bureau of Reclamation (Reclamation) is finalizing the 2018 Accounting and Water Use Report for Arizona, California, and Nevada. He noted that the California section of the report was released for agency review and comment on March 29<sup>th</sup>, and the final report is expected to be posted on Reclamation's website on May 15<sup>th</sup>. Mr. Harris reported that Mr. Paul Matuska, manager of the Water Accounting and Verification Group in Reclamation's Boulder Canyon Operations office will be retiring by the end of June and noted Mr. Matuska's great contributions to the Boulder Canyon Operations office.

### **State and Local Report**

Ms. Jones, representing the California Department of Water Resources (CDWR), reported that the snow accumulation season has concluded and hydrologic conditions throughout the State were above average, particularly, in the Sacramento Valley and major Central Valley watersheds. She also reported that a late season storm would bring about one foot of snow to parts of the Sierra Nevada.

Ms. Jones reported that the Western States Water Council and the CDWR were holding a Sub-Seasonal to Seasonal (S2S) Precipitation Forecasting Workshop in San Diego on May 22-24, 2019. She noted that the National Oceanic and Atmospheric Administration (NOAA) Boulder

office will present on its statistical snowpack research aimed at improving forecasting in California.

Board member Peterson, representing The Metropolitan Water District of Southern California (MWD), stated that the MWD's storage facilities are near capacity. As of May 1<sup>st</sup>, the combined reservoir storage is 94% of capacity. He reported that the Colorado River Aqueduct is currently being operated on a 3-pump flow but may move to a 4-pump flow by the end of the year. He also reported that MWD is continuing to deliver water to the Coachella groundwater basin.

Board member Pettijohn, representing the Los Angeles Department of Water and Power (LADWP), reported that as of April 1<sup>st</sup>, the Eastern Sierra snowpack peaked at 165% of normal. He stated that the Los Angeles Aqueduct will produce close to 500,000 AF of water. He noted that LADWP will purchase about 70,000 from MWD and pump groundwater to meet the remainder of its demands. Mr. Pettijohn stated that LADWP will also deliver water to the Owens Valley groundwater basin.

### **Los Angeles Department of Water and Power Presentation: Boulder Canyon Pumped Storage Project**

Mr. Joseph Avila, Staff Assistant to the Office of the COO, Mr. Sam Mannan, Project Manager, and Roberto Gonzalez, Engineering Lead of LADWP's Boulder Canyon Pumped Storage Project presented on LADWP's Boulder Canyon Pumped Storage Project. Mr. Avila stated that this presentation is part of LADWP's technical outreach efforts. He explained the City of Los Angeles has a goal to produce energy from cleaner and more sustainable sources. He noted that in the past, the City has experienced several days of hot weather and about 75% of the power produced during this time came from fossil fuels. He explained that the City's legislators have a goal to drastically cut its dependence on fossil fuels. By 2030, 60% of the City's power will be sourced from renewables and by 2045, the goal is to be 100% reliant on renewable sources of energy. Mr. Avila added that previously recognized renewable energy sources, such as biomass and large hydro-electrical dams are no longer considered renewable energy sources. He explained that the impetus for the project was to increase the production and storage of energy from renewables.

Mr. Avila stated that LADWP has experience operating a pumped storage facility at Castaic Pumped Storage Plant, noting that it has been in operation for close to fifty years. He stated that facility recently underwent an upgrade and is expected to produce power for another fifty years. He added the facility's O&M has increased over the years as demands have increased, noting that the facility also stores and utilizes excess energy created from renewable energy sources. He added that this action has allowed LADWP to mitigate issues related to renewable energy curtailment. Mr. Avila explained that renewable energy curtailment is an ongoing issue that other California utilities such as Southern California Edison and PG&E are dealing with. He explained

that agencies have had to cut back on producing energy from renewables because the energy becomes a burden to the utility if it cannot be utilized or stored during off-peak demand hours. He referred to the “Duck Curve” which displays the imbalance between peak demand and renewable energy production.

Mr. Avila explained that in most cases the energy produced by renewables such as solar needs to be stored in battery facilities but noted that these facilities are large and, in some communities, there has been push back about the placement of these facilities, particularly from California desert communities.

He added that LADWP’s mandate to produce more energy from renewables could exacerbate this imbalance. Mr. Avilla stated if the excess energy produced by wind and solar could not be stored in the Castaic facility or consumed it would have to be dumped onto neighboring utilities, incurring additional costs to LADWP customers.

Mr. Avila stated that the Boulder Canyon Pumped Storage Project would be a great asset to LADWP and to others, as it would store and utilize the energy generated from LADWP’s, various renewable energy sources. He stated that the Boulder Canyon Pumped Storage facility will also have a greater generation and transmission capacity than the Castaic facility.

Mr. Avila explained that LADWP initiated the project but needs the support and participation of the forty-seven power contractors, which includes thirty-two tribes that receive power from Hoover Dam. He explained that LADWP has been doing technical outreach for this project over the last two years. Mr. Avila added that he believes that the project will gain strong support from contractors and utilities because it may be a solution to the on-going issue of renewable curtailment.

Mr. Mannan reiterated LADWP’s commitment to working with the other Hoover power contractors to develop a mutual partnership. He added that LADWP is committed to providing support for the Lower Basin Multi-Species Conservation Project (LB MSCP) over the next fifty years and will continue to pay its share of the \$645 million project.

Mr. Mannan explained that the project will use the excess power generated from renewable energy sources to pump water from a lower elevation reservoir to Lake Mead, which is located at a higher elevation. Further, he explained that the pumped water in Lake Mead serves as stored energy which can be released at any given time depending on the system demands. Mr. Mannan reported that the Hoover Dam’s hydroelectric turbines are currently operating at twenty percent of capacity due to Lake Mead’s declining reservoir elevations and the pumped water would help improve the dam’s efficiency. He noted that the pumped water will have a small evaporative factor.

Mr. Mannan showed a video animation of the proposed routes and location of the pumping facilities. Mr. Avila stated that the preliminary engineering design work will be completed by Stantec. HDR and E3 will provide a financial analysis of the project and the engineering hydrologic study will be performed by LADWP.

Mr. Mannan reiterated that the project's public affairs office has spent the last two years reaching out to stakeholders to ensure they understand the various parts of the project in terms of engineering, financial and legal. Mr. Gonzalez, the project's lead engineer, provided additional information about the project's consultants and how the project's legal, environmental and financial issues would be analyzed. He added that the firm, VFM, will assist with the project's funding and risk analysis. The Los Angeles City Attorney, in conjunction with an outside legal consultant, will address legal matters such land ownership. He added that environmental issues will be analyzed by LADWP's internal environmental group.

Mr. Gonzalez stated that Stantec's engineering work will focus on three tasks: conducting a hydraulic study using bathometric measurements of the upper and lower basin reservoirs and the Colorado River; selecting locations and routing of the conveyance systems and pump stations; and developing detailed engineering layouts and specification of the conveyance system and pump station. It is expected that the preliminary engineering work should completed in a year.

Mr. Gonzalez explained that the financial analysis will be conducted by HDR and consist of a comprehensive financial analysis, with an emphasis on renewable resources as well as a market analysis of the project compared to competing technologies. It is expected that the financial analysis should be completed in six months. He reported that the risk analysis will analyze the feasibility of including additional energy purchasers as well as public funding opportunities.

Mr. Gonzalez reported that the legal team will be reviewing contractual and ownership concerns of the Wilderness Act. The legal team will also examine open access requirements for the transmission facilities and impacts to the existing Hoover Power Purchasers Implementation Agreement. Mr. Gonzalez added that the environmental team will address permitting needs, identify risk and litigation strategies, contingency alternatives and the project's impacts to the LCR MSCP. He stated the conceptual timeline for the entire project is about ten years, adding the first three to four years will consist of outreach, planning, engineering feasibility and financial analysis. Environmental analysis will take two years to complete and construction would start in 2024 and be complete in four years. Years 2029 and 2030 will be devoted to testing the project.

Mr. Avila noted that one of the biggest issues that the project faces is its costs, noting that the project could cost close to \$3 billion. He stated that a preliminary financial analysis shows that the project will save LADWP money and create revenue, potentially yielding three to four billion dollars in value over thirty years. He added that cost of the project will also be impacted by the maintenance of the batteries.

Responding to a question from a Board member regarding FERC licensing, Mr. Mannan reported that the project has a specialized legal team examining FERC licensing. He added that LADWP hired a former President Trump administration official help LADWP navigate federal licensing and permitting issues. Mr. Avila reported that LADWP has also engaged with Reclamation since the beginning of the project. He reported that Mr. Marty Adams, Director of Water Operations at LADWP is scheduled to travel to Washington, DC in June to meet up with the Los Angeles delegation and other key officials at the Bureau of Land Management about the project. Mr. Mannan stated that LADWP met with Mr. Terry Fulp, Lower Colorado Regional Director, to discuss the project during the Hoover Dam plan technical review committee.

Board member Mr. Wilson inquired about the potential impact of Lake Mead's declining elevation to the project. Mr. Avila stated that this a major concern and the engineering team will examine this issue, adding that Lake Mead's declining elevation has reduced the operating efficiency of the dam. Responding to a question about the transit time of the pumped water, Mr. Avila responded it may take a day for the water to return to Lake Mead, depending on the dam's operations.

A Board member inquired about the potential costs incurred from the additional operation of the hydropower facilities. Mr. Avila responded that the capital costs will be borne by the entities that have invested in the pumped storage. Mr. Hasencamp commented that in addition to paying for power, Hoover power contractors also pay for the LCR MSCP, the Salinity Control Project and the Hoover Dam Visitor's Center, adding that the cost share for these programs is based on the percentage of power received by the contractor. He inquired whether these costs should be redistributed because more power will be generated with this project. Mr. Avila responded that the project will increase the O&M costs but whether there will be any financial benefits to the contractors has not been determined yet.

## **STATUS OF COLORADO RIVER BASIN PROGRAMS**

### **Status of the Lower Basin Drought Contingency Plan**

Mr. Harris reported that President Trump signed the Drought Contingency Plan Authorization Act (Public Law 16-14) into law on April 16<sup>th</sup>. He added that a signing ceremony has been scheduled for May 20<sup>th</sup> at the Hoover Dam facility, where Basin State principals will sign the Companion Agreement and the Upper Basin and Lower Basin DCP Agreements. Mr. Harris reported that the California agencies that have executed the DCP agreement include the Coachella Valley Water District, MWD, Palo Verde Irrigation District and the City of Needles.

### **Status of Minute No. 323 Binational Water Scarcity Contingency Plan**

Mr. Harris reported that work continues to reconcile the operational and water accounting aspects of both the LB DCP and the Minute 323 Binational Water Scarcity Contingency Plan. He stated that Section 4 of the Minute details the implementing details of the Binational Water Scarcity Plan, which needs to be consistent to the operating sections within the LB DCP. Mr. Harris stated the goal is to have both plans fully effective and synced by the release of the August 2019 24-Month study report, adding the plan is expected to be finalized by the end of June or early July.

### **Status of the Salinity Control Program**

Mr. Harris reported that the Salinity Control Program Work Group met in Salt Lake City on April 17-18. The group reviewed CRSS model scenarios that were compiled for the 2020 Triennial Review, which evaluated three different levels of potential future salinity control. Mr. Harris also reported that the Salinity Control Forum's Executive Director, Don Barnett, visited Washington D.C. in late March and met with agency leads, committee and congressional staff to promote the program and urge the administration to support full funding for the program. Mr. Harris noted that the President's budget request does include the full \$10 million budget requested by the Forum.

In response to a question, Mr. Harris noted that he would return to the Board with any information or studies that compare the cost effectiveness of controlling salinity at point sources such as the Paradox Valley versus non-point sources, such as on-farm conservation.

Mr. Harris noted that a magnitude 4.5 earthquake occurred near the Paradox Valley Unit injection well on March 4<sup>th</sup>. The well was not operating at the time of the earthquake and will remain off-line for a three-month shutdown while Reclamation evaluates the seismic risk of continuing operation.

Mr. Harris also reported that the Moab uranium mill tailing removal project has moved approximately 9.5 million tons, or 60%, of the mill tailings from a site adjacent to the Colorado River to a permanent disposal site near Crescent Junction, Utah. Beginning in February, the Department of Energy, which oversees the project, significantly increased the rate of tailings removal.

Finally, Mr. Harris reported that the Salinity Control Work Group, Advisory Council, and Forum would meet June 3-7 in Denver, Colorado.



## **Status of the Glen Canyon Dam Adaptive Management Program**

Board Staff Ms. Neuwerth reported that the Glen Canyon Dam Adaptive Management Program Technical Work Group (TWG) met via webinar on May 1<sup>st</sup>. The group discussed the Fiscal Year 2020 budget, as well the next triennial budget and work plan, which will cover Fiscal Years 2021-2023.

Ms. Neuwerth reported that, following approval by the Department of the Interior in late April, invertebrate production flows or “bug flows” began at Glen Canyon Dam on May 1<sup>st</sup>. These low steady weekend flows will continue through August 31<sup>st</sup> and are intended to improve the aquatic foodbase below Glen Canyon Dam. Ms. Neuwerth noted that initial results from the bug flows conducted in the summer of 2018 indicate an increase in the diversity and distribution of aquatic insects.

Ms. Neuwerth also noted that the Adaptive Management Work Group (AMWG) would meet via webinar on May 22<sup>nd</sup>, followed by a TWG meeting on June 11-12 in Phoenix, Arizona.

## **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 a dedication ceremony in mid-April for the new Dennis Underwood Conservation Area. The 600 acre conservation area is located at the southern end of the Palo Verde Valley and will provide several types of native habitat.

Ms. Neuwerth reported that the LCR MSCP Steering Committee met April 24<sup>th</sup> in Las Vegas. The group approved the expenditure of funds originally budgeted for FY18 to be spent in FY19, to accommodate for a delay in the acquisition of the Dennis Underwood property easement. Ms. Neuwerth also noted that the Steering Committee acted to authorize the Bureau of Reclamation to begin preliminary consultations with the U.S. Fish and Wildlife Service regarding the possibility of amending the LCR MSCP to increase program coverage for changes in flow along the Colorado River.

Ms. Neuwerth noted that the LCR MSCP provides environmental coverage for changes in flow resulting from transfers and other changes in point of diversion. Currently, the program allows for 845,000 acre-feet of change-in-flow between Hoover and Davis Dams, 860,000 acre-feet of change-in-flow between Davis and Parker Dams, and 1.574 million acre-feet of change-in-flow between Parker and Imperial Dams. Ms. Neuwerth noted that this covers many actions, including the QSA transfers and the creation of ICS and delivery reductions in the 2007 Guidelines. Ms. Neuwerth reported that the group is exploring the option of increasing program coverage so that the entire river from Hoover Dam to Imperial Dam will have coverage for up to 1.574 million

acre-feet of change in flow. This increase in coverage is currently estimated to require minor additional habitat creation and program funding.

Chairman Nelson noted that this increase in program coverage could be of interest to the LADWP pumped storage project proponents. Mr. Harris noted that this marked the beginning of a process that will include robust stakeholder outreach to the LCR MSCP California participating agencies.

Ms. Neuwerth also reported that the work group for the LCR MSCP met in San Diego on May 8-9 to discuss program accomplishments in FY18 and the FY20 budget and work plan. Program managers reported that approximately 6,000 acres of habitat have been created through FY18, making up three-quarters of the program's 8,132 acre obligation. Ms. Neuwerth reported that the group also believes that with current and proposed conservation areas, the program will be able to meet its overall acreage obligation.

## **ANNOUNCEMENTS**

Mr. Harris reported that on May 10<sup>th</sup>, Governor Newsom announced several new appointments to the Natural Resources Agency. Ms. Angela Barranco was appointed Undersecretary of the California Natural Resources Agency and Mr. Thomas Gibson was appointed Deputy Secretary and Special Counsel for Water.

Mr. Harris reported that the House Speaker and Senate Minority Leader met with the administration to discuss next steps on potential infrastructure legislation, anticipated to cost about \$2 trillion and unlikely to focus on water infrastructure.

Finally, Mr. Harris noted that the next meeting of the Colorado River Board would be June 12<sup>th</sup> and would be held in Ontario, California.

## **ADJOURNMENT**

With no further items to be brought before the Board, Chairman Nelson adjourned the meeting at 11:35 a.m.