Minutes of Meeting
COLORADO RIVER BOARD OF CALIFORNIA
Wednesday, October 12, 2016

A meeting of the Colorado River Board of California was held on Wednesday, October 12, 2016.

Committee Members and Alternates Present

Stephen Benson
Brian Brady
Dana Bart Fisher, Jr., Chairman
Jeanine Jones
Hank Kuiper
Peter Nelson
Glen D. Peterson
David R. Pettijohn
Michael Touhey
David Vigil
Doug Wilson, Vice-Chairman

Committee Members and Alternates Absent

James Hanks
Christopher Hayes
Jack Seiler
John Powell, Jr.

Others Present

Steve Abbott
Melissa Baum-Haley
Javier Carlos
Robert Cheng
Dan Denham
Karen Donovan
Chuck Dumars
Christopher Harris
Bill Hasencamp
Ned Hyduke
Michael Hughes
Eric Katz
Lori Jones
Kara Mathews
Jan Matusak
Jessica Neuwerth
Vic Nguyen
Autumn Plourd
Angela Rashid
Tina Shields
Alina Tishchenko
Tanya Trujillo
Donnell Wilcox
Gerald Zimmerman

## CALL TO ORDER

Chairman Fisher announced the presence of a quorum and called the meeting to order at 10:04 A.M.

## OPPORTUNITY FOR THE PUBLIC TO ADDRESS THE BOARD

Chairman Fisher invited anyone in the audience to address the Board on items on the agenda or matters related to the Board. Ms. Trujillo introduced new Colorado River Board employee, Ms. Alina Tishchenko.

## Consideration and Approval of the Minutes

Chairman Fisher asked for a motion to approve the September 14, 2016 meeting minutes. Mr. Pettijohn moved that the minutes be approved, seconded by Ms. Jones, and by unanimous support, the September 14, 2016 meeting minutes were approved.

## Resolution in recognition of service of Joseph Vanderhorst

The next item on the agenda was approval of a resolution in recognition of the service of Mr. Joseph A. Vanderhorst. Mr. Peterson moved that the Resolution be approved, seconded by Mr. Kuiper, and by unanimous support, the Resolution was approved.

## COLORADO RIVER BASIN WATER REPORTS

Colorado River Basin Water Reports and State and Local Water Reports

Ms. Trujillo reported that as of October 3, Basin storage was at 51% of capacity, similar to storage levels at this same time last year. Lake Mead was at 37% of capacity, while storage at Lake Powell was 53% of capacity. Ms. Trujillo stated that October 1, 2016 marked the start of Water Year 2017. The Preliminary Observed Water Year for 2016 was 9.62 million acre-feet. Ms. Trujillo reported that in August, precipitation conditions in the Colorado River Basin were dry in the northern areas and wet in the southern areas. In September, the Basin saw wetter conditions in the western areas and dry conditions in the eastern areas. Ms. Trujillo remarked that the precipitation that occurred in September produced inflows to Lake Mead. Ms. Trujillo reported that reservoir storage in the Upper Basin upstream of Lake Powell was full and continued this trend throughout the season. As of October 6, the Lower Basin regulatory storage reservoirs, Brock and Senator Wash have captured up to 120,818 acre-feet and 57,252 acre-feet, respectively. As of September 29, bypass flows to the Cienega de Santa Clara were 70,703 acre-feet. As of October 10, excess flows to Mexico were only 3,271 acre-feet. This time last year, excess flows to Mexico were 13,947 acre-feet.

Ms. Trujillo reported that California is still experiencing drought conditions and noted that the Drought Monitor maps are just one indicator of drought conditions in California. Ms. Jones reported that at the end of September the Department of Water Resources released a pamphlet entitled "Drought and Water Year 2016: Hot and Dry Conditions Continue". Ms. Jones stated that the precipitation was slightly above average in some areas of Northern California, but the runoff produced was below average due to the long-term dry soil conditions caused by the multi-year drought. Ms. Jones reported on the storage levels of the State Water Project reservoirs, noting that among the larger reservoirs, Shasta's level was close to average, partly due to operational decisions to hold water for salmon releases.

State and Local Reports

Board Member Peterson reported that Metropolitan Water District (MWD) of Southern California combined reservoir storage levels have increased, including levels at Castaic Lake. Mr. Peterson stated the Southern California region is continuing its water conservation activities and programs.

Board Member Wilson reported that since June 2015, San Diego's cumulative water conservation programs had reduced water use by 21%. Mr. Wilson noted that although the State's mandatory conservation targets were lifted, San Diego County Water Authority is still communicating with its customers about the importance of conservation.

Board Member Pettijohn reiterated that although the Los Angeles Water and Power (LADWP) passed the State's stress test it has not changed the agency's mission to conserve water and improve water use efficiency. Mr. Pettijohn reported that LADWP is still operating under Phase 2 of the Emergency Water Conservation Ordinance which limits landscape watering to three days a week. Mr. Pettijohn reported that LADWP customers have conserved 16% and per capita water use in Los Angeles is 104 gpcd. Mr. Pettijohn explained that LADWP went to a four-tier rate structure with the highest rate at $8.00 per 100 cubic feet at Tier 4. The LADWP Board is also considering an Implementation Plan for excessive use designed to target users using more than needed on their outdoor vegetation. Depending on the severity of the drought and amount of time the user is in violation, fines can range from $1,000 a month to $40,000 a month, which would be levied against the user during Phase 5. Mr. Pettijohn added that LAWDP will work with their highest use customers by putting them on a budget and create a schedule for them to comply with the Model Water Efficient Landscape Ordinances.

Board Member Nelson reported that Coachella Valley Water District also passed the State's stress test and is no longer subject to conservation mandates. Mr. Nelson noted that CVWD is still conserving and has conserved an average of 25%. Mr. Nelson reported that CVWD has performed a cost of service study and has realigned how it bills for landscape and domestic meters.

Board Member Benson reported that the Imperial Irrigation District (IID) continues to meet its targets for the Quantification Settlement Agreement (QSA). Mr. Benson stated that IID is not subject to the State's conservation mandates but the cities in its service area have been affected. Mr. Benson reported that the State Board will be holding a meeting to discuss the status of the Salton Sea, noting that budget issues between the State and IID have delayed construction efforts. Mr. Benson reported that IID's underrun is currently over 100,000 acre-feet. Mr. Benson reported that IID is considering doubling its reservoir capacity to 4,000 acre-feet, which would increase operational management. IID has identified the site for the first reservoir and budgeted between $80 million to $100 million for construction. Five additional reservoirs are planned to capture water throughout its system. Mr. Benson added that IID has also invested $25 million to automate the district's lateral canals and headings. Mr. Benson reported that IID's on-farm efficiency program is progressing with a 50% participation rate. The current program is targeted to create 80,000 acre-feet. By 2020, IID hopes to create 160,000 acre-feet of water annually with the program and continue to generate this amount throughout the life of the QSA. Mr. Benson explained that in previous years the program was oversubscribed, conserving more water than was required.

Mr. Benson reported that on October 20, IID will participate in a meeting with the Department of Energy (DOE) regarding geothermal development of the Salton Sea. Mr. Benson added that the federal government is interested in developing 250 megawatts of renewable power for its military bases and government facilities. He noted that the Salton Sea area has over 500 megawatts of identified projects, half of which have already been permitted, while the other half are currently in the permitting process. `

Mr. Hyduke reported that he has been working with Chris Harris to evaluate water use and management of a Lower Colorado Multi-Species Conservation Program (LCR MSCP) conservation areas located in the Palo Verde Valley. Mr. Hyduke stated that PVID is working to recover and refurbish flumes to improve the determination of measured return flows. Mr. Fisher added that evaluating the amount of water moving through PVID is not only important to the agency but also MWD, nothing that over the last several years of the MWD-PVID fallowing program there has been an increase in water use within PVID that may be attributed to over-irrigation of LCRMSCP lands within PVID. Mr. Harris added that MWD, PVID, Reclamation and the CRB are working closely to examine the accounting over the entire ten-year period of the fallowing program. Mr. Harris reported that they are also investigating PVID's unmeasured return flow. Mr. Vigil reported that Department of Fish and Wildlife staff have been busy hauling water to big game drinkers due to low rainfall in the area.

Presentation regarding Colorado River ongoing and emergency water quality issues

Angela Rashid and Jessica Neuwerth reported on various water quality issues in the Basin. Ms. Neuwerth reported that there were various agencies along the Colorado River that provide data and information regarding baseline and routine water quality monitoring.. She stated that the Colorado River Water Quality Database hosted by the Southern Nevada Water

Authority housed one of the most comprehensive sources of water quality data in the Basin dating back to 1961.

Ms. Neuwerth reported on three larger scale remediation projects in the Basin. The Uranium Mill Tailings Remediation Project consists of the removal and containment of 16 million tons of radioactive mill tailing left at the site near the Colorado River, near Moab, Utah. In 2000, Congress passed a law authorizing the removal and containment of the waste. As of late, 50% of the waste has been cleaned up at a cost of $400 million. It is estimated that removal and containment of the waste will continue for 20 more years. The Las Vegas Wash Perchlorate Remediation Project consists of the cleanup of perchlorate used in manufacturing rocket fuel that leached into the groundwater throughout the 20th century. A groundwater interception system was installed to pump up and treat the contaminated groundwater, which has reduced the contamination by 90%. The Topock Hexavalent Chromium Remediation Project consists of the cleanup of hexavalent chromium discharged into a dry wash in the 1950s and 1960 located near I-40 bridge outside of Needles, California. The groundwater and soil has been contaminated, but the contamination has not yet been found in the Colorado River. A collaborative cleanup process is underway between Pacific Gas & Electric, the California Department of Toxic Substances Control and the Department of the Interior. Treatment methods are being finalized including an in-ground filtration system to neutralize the contaminants.

Ms. Rashid reported on the events that led up to the Environmental Protection Agency (EPA) release of waste water from the Gold King Mine on August 5, 2016, and the agency's subsequent efforts to mitigate the situation. The EPA estimates that 80% of the metals released from the mine remain in the Animas River sediments and will be washed downstream over time. Ms. Rashid noted that this incident was of great importance to all Colorado River users as the Animas River is tributary to the San Juan, which terminates in Lake Powell. Ms. Rashid reported that the Gold King Mine, as well 47 other mines located in the region have been declared Superfund sites and are now eligible to receive federal funding for mitigation efforts. Ms. Rashid noted that the 5.5 million gallons of mine waste drain into the Animas watershed daily. The EPA has dedicated $29 million to respond to the incident with $5 million available to State, Local, and Tribal entities for reimbursements, long-term monitoring and support. Ms. Rashid explained that the State response to the spill was also robust. Colorado, New Mexico, and Utah responded to the spill by conducting their own sampling and development of long-term monitoring plans. Ms. Rashid also presented on the Lower Colorado Emergency Geographic Response Plan, which outlines the multi-agency response plan for emergency events that may occur in the Lower Basin along the Colorado River. The plan outlines the policies, responsibilities, and procedures required to protect the health and safety of the environment and the public. Ms. Neuwerth added that water quality issues to all Colorado River water users and that CRB staff are available to share additional water quality resources management and emergency plan.

Drought Contingency Planning

Ms. Trujillo reported that the drought contingency planning efforts are still underway. Ms. Trujillo stated that in October, Bill Hasencamp gave a detailed presentation to the MWD Board about the current drought contingency plan concepts under development and consideration. Ms. Trujillo reported that there are two main goals of the drought contingency planning process which are to encourage additional flexibility for operations at lower reservoir elevation and encourage more storage in Lake Mead to avoid critically low reservoir elevations. Ms. Trujillo stated that the plan is to develop a supplemental contingency plan that would run in parallel to the existing Guidelines through 2026. Ms. Trujillo reported more information about planning efforts may be presented to the California agencies in November and December. Ms. Trujillo noted that Arizona continues to work with Reclamation and the Department of the Interior to resolve certain issues associated with elements of the proposed drought contingency plan before they can finalize the plan. Chairman Fisher added that the proposed plan requires California to contribute water to Lake Mead if the reservoir reached the elevation of 1,045 feet, but modeling indicates that there is a 70% probability that California would not have to contribute water. Ms. Trujillo noted that there is not a firm date to finalize the drought contingency plan but stated that the change of the federal administration may affect the schedule.

**Colorado River Basin Salinity Control Program**

The Colorado River Basin Salinity Control Forum will be meeting in Moab, Utah, on October 26-27, 2016 and will be held in conjunction with a tour of the Paradox Valley Unit salinity control project. The Paradox Valley Unit EIS is ongoing and alternatives are being evaluated including a second injection well, evaporation ponds, and brine crystallization process. The Forum's work group has also initiated preparation of the 2017 Triennial Review and Reclamation's modeling results for the Reviews will be presented at the Forum meeting. Finally, a trailer video on the Salinity Control Program will be shown at next month's Board meeting.

Board Member Peterson expressed concern about the Paradox Unit second injection well alternative and the need to have a pilot project that demonstrates the potential for long-term operation for more than ten years. Ms. Trujillo noted that a pilot project related to the surface disposal options is being considered in the EIS process. With respect to the second injection well alternative, Reclamation is aware of concerns that have been expressed including the potential to induce seismicity due to operations as well as having a limited operational period.

Board Member Benson asked if lining a section of the Dolores River has been evaluated. Deputy Director Harris replied that lining the Dolores River or channeling the flows through a pipeline has been considered, and noted that other approaches such as constructing small regulating reservoirs on the Dolores River to flush out salts has also been studied. However, constructing barriers on the Dolores River may have associated environmental impacts. Deputy Director Harris added that evaporation pond alternatives have issues related to hyper-saline water and potential impacts on migratory birds, but that there are mitigation measures available.

Ms. Trujillo referred to a graph depicting the success of various projects and their control levels within the basinwide Salinity Control Program over the last several decades. Ms. Trujillo stated that it is important to try to achieve a balance between salinity control improvements and potential increases in consumptive use in the Upper Basin.

Minute 319/32x

Ms. Trujillo noted that the negotiations with Mexico regarding Minute 32x have continued at a slow pace and that the existing Minute 319, expires at the end of 2017. She attended a negotiation meeting at the end of September in Tijuana and another meeting is scheduled in October. She noted that the Mexican delegation has been having a lot of internal discussion about how to bring the next Minute together. One of the topics that is still under discussion is a binational drought contingency plan to run in parallel with the plan under development among the Lower Basin States.

Ms. Trujillo noted that the International Boundary Water Commission held its Citizen's Forum meeting on September 3 in El Centro which focused on a discussion about projects associated with the New River in the U.S. and Mexico, which is an important source of approximately 90-100,000 acre-feet of flow per year into the Salton Sea. The flow rate has previously been approximately 140,000 acre-feet per year, but Mexico has been able to reuse some of the water discharged from a water treatment facility.

Glen Canyon Dam Adaptive Management Program

Ms. Neuwerth reported that the Final Long-Term Experimental and Management Plan (LTEMP) EIS was released October 7. The EIS will guide Glen Canyon dam operations for 20 years and includes a number of experimental actions designed to benefit resources of interest, while maintaining as much hydropower generation value as possible. Ms. Neuwerth also noted that the EIS includes a decision-making framework that includes stakeholder participation. A Record of Decision and Biological Opinion are expected in November or December.

Ms. Neuwerth reported that sediment conditions in the Grand Canyon are currently adequate to support a High Flow Experiment (HFE) this fall. Ms. Neuwerth noted that a newly established population of invasive green sunfish below Glen Canyon Dam was the main barrier to carrying out the HFE, but that plans were in place to try to remove that population in time to approve the high flow. The primary purpose of HFEs is to combat the erosion of beaches used for recreation in the Grand Canyon. In response to a question from Board Member Peterson, Ms. Neuwerth reported that although HFEs can impact hydropower revenues by approximately $1-2 million, this loss is not expected to significantly impact the Upper Colorado River Basin Development Fund, which provides funding to the Glen Canyon Dam Adaptive Management Program and other environmental and water quality programs in the Upper Basin. Finally, Ms.

Neuwerth and Deputy Director Harris noted that experiments such as HFEs could always be discontinued under the LTEMP EIS if they were not proving to be successful.

Lower Colorado River Multi-Species Conservation Program

Mr. Harris reported that the Lower Colorado River Multi-Species Conservation Program (LCR MSCP) is considering adding a new species, the northern Mexican gartersnake, to the program as a covered species. The species was recently federally listed as threatened and has been detected in the Havasu National Wildlife Refuge and lower Bill Williams River. Mr. Harris reported that it seems that no additional mitigation habitat acreage will be required to receive ESA coverage for the snake through the LCR MSCP. Mr. Harris noted that inquiries were being made into the NEPA or CEQA compliance actions that might be needed to amend the program permits. The LCR MSCP Steering Committee plans to make a decision at its meeting in late October.

**ANNOUNCEMENTS**

Ms. Trujillo reported that on November 15, 2016 the State Water Resources Control Board will hold a workshop on the status of the Salton Sea Management Program.

Ms. Trujillo reported that she and Ms. Rashid participated in a follow-up meeting regarding the Colorado River traveling museum exhibit. The traveling exhibit would be available throughout the Colorado River Basin and in Chicago, New York and Washington D.C. A preliminary plan will be completed by the end of the year that can be used as a tool to develop fundraising for the larger project.

Ms. Trujillo provided details on Reclamation's WaterSMART notice of modification to its grant funding evaluation criteria. Comments on the drought evaluation criteria are due October 28, 2016. Ms. Trujillo reported that the Colorado Basin River Forecast Center will be holding a stakeholder forum on October 11-18, 2016 to orient the public again to its forecasting process. The stakeholder forum is available in person and via website.

Ms. Trujillo reported that planning for the Colorado River Water Users Association (CRWUA) conference is in the final stages and the conference is scheduled to be held on December 14-16, 2016. A Colorado River Board meeting will be held in conjunction with the conference on December 14, 2016.

**ADJOURNMENT**

With no further items to be brought before the Board, Chairman Fisher asked for a motion to adjourn the meeting. Upon the motion of Mr. Pettijohn, seconded Mr. Fisher, and unanimously carried, the meeting was adjourned at 11:38 A.M.