Minutes of Meeting
COLORADO RIVER BOARD OF CALIFORNIA
Wednesday, December 11, 2019

A meeting of the Colorado River Board of California (Board) was held on Wednesday, December 11, 2019 at the Skyview Room 3 at Bally's Las Vegas Hotel and Casino, 3645 South Las Vegas Blvd., Las Vegas, Nevada.

Board Members and Alternates Present:

David De Jesus (MWD Alternate)
Norma Sierra Galindo (IID Alternate)
Dana B. Fisher, Jr. (PVID)
Jeanine Jones (DWR Designee)
Jim Madaffer (SDCWA)
Mark Watton (SDCWA Alternate)
Peter Nelson, Chairman (CVWD)
Glen D. Peterson (MWD)
David R. Pettijohn (LADWP)
John Powell, Jr. (CVWD Alternate)
Jack Seiler (PVID Alternate

Board Members and Alternates Absent:

Evelyn Cortez-Davis (LADWP Alternate)
James Hanks (IID)
David Vigil (DFW Alternate)
Henry Kuiper (Public Member)
Christopher Hayes (DFW Designee)

Others Present:

Steve Abbott
Heather Baez
Judy Baker
Don Barnett
David Bradshaw
Dee Bradshaw
Jerry Butkiewocz
Grant Chaffin
Robert Cheng
Ted Chester
Brad Coffey
Michael Cohen
Harvey De La Torre
Dione Deennan
Dan Denham
Tommy Drennan
Jeremy Dodds
Kevin Donhoff
Chuck Dumars
Craig Elmore
John Fleck
Christy Guerin
Melissa Baum Haley
Nadia Hardjadinata
Christopher Harris
Kathleen Coates Hedberg
Tammy Hierling
Brad Hiltscher
Ned Hyduke
Rich Juricich

Surabhi Karambelkar
Eric Katz
Sandy Kerl
Mark Krause
Eric Kuhn
Rebecca Laudbear
Laura Lamdin
Russell Lefevre
Wally Leimgruber
Henry Martinez
Mary Aileen Matheis
Kara Mathews
Aaron Mead
Jessica Neuwerth
G. Patrick O'Dowd
David Osias
Anisa Patch
Dennis Patel
Demetri Polyzos
Shanti Rosset
Mojgan Poursadighi
John Powell
Sergio Quirol
Angela Rashid
Ivory Reyburn
Kelly Rodgers
Alex Rodriguez
Martha Camacho Rodríguez
Phil Rosentrater
Keith Scoular
Jack Seiler
Tina Shields
Laura Simonek
Karyn Stockdale
Mitch Thompson
Sara Tucker
Mark Watton
Leticia Vasquez Wilson
Jerry Zimmerman

## CALL TO ORDER

Chairman Nelson announced the presence of a quorum and called the meeting to order at 10:06 a.m.

## Report from Commissioner Brenda Burman from the United States Bureau of Reclamation

Chairman Nelson introduced Commissioner Brenda Burman of the United States Bureau of Reclamation. Ms. Burman congratulated the Colorado River Board of California (Board), and the different agencies present for their accomplishments throughout the year. Ms. Burman thanked the Board and the agencies present for their leadership, commitment and support.

## 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 November 13, 2019, Board meeting minutes. Mr. Fisher 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 Proposed Calendar Year 2020, Board meeting schedule. Mr. Peterson suggested that the Proposed Calendar Year 2020 match up with the water conferences for the year 2020. Executive Director Mr. Harris stated that changes will be made to the Proposed Calendar Year 2020 Board meeting schedule. Chairman Nelson deferred action on the Proposed Calendar Year 2020 Board meeting schedule, to be considered for approval during the next Board meeting.

Chairman Nelson asked for a motion to approve the proposed Resolution 2019-1 Regarding Potential Applicant to Receive Lower Colorado Water Supply Project Water, which would recommend approval of an application for two acre-feet of annual domestic water use for one parcel of land in San Bernardino County. Mr. Madaffer moved approval of the resolution, seconded by Mr. Pettijohn. By roll-call vote, the motion was unanimously approved.

## COLORADO RIVER BASIN WATER REPORTS

### Colorado River Basin Report

Mr. Harris reported that as of December 2nd, the water level at Lake Powell was 3,611.20 feet with 12.85 million-acre feet (MAF) of storage, or 53% of capacity. The water level at Lake Mead was 1,083.89 feet with 10.34 MAF of storage, or 40% of capacity. Mr. Harris reported that the total system storage was 31.21 MAF, or 52% of capacity, which is about 3.9 MAF more of system storage than at this same time last year.

Mr. Harris reported that for Water Year 2019 the Observed Lake Powell inflow was 12.95 MAF, or 120% of normal and Observed April to July runoff into Lake Powell was 10.41 MAF, or 145% of normal. For Water Year-2020, the November observed inflow into Lake Powell was 0.40 MAF, or 85% of normal and the forecasted December inflow into Lake Powell is 0.33 MAF, or 91% of normal. Mr. Harris reported that Water Year-2020 precipitation to date is 81% of normal and the current Basin snowpack is 120% of normal.

Mr. Harris reported that precipitation conditions in October were dry and below average throughout the Basin, but conditions improved in November. Mr. Harris reported that snowpack conditions in early December are above average in the Upper Basin, particularly in the Lower Green and Little Snake basin in Wyoming.

Mr. Harris reported that as of December 2nd, the Upper Basin reservoir system was doing well, with exception to Lake Powell. He also reported on the regulatory storage conditions in the Lower Basin. In calendar year 2020, through November 21st, Brock and Senator Wash reservoirs captured 116,316 AF and 95,084 AF, respectively. Mr. Harris reported that as of December 7th, excess flows to Mexico were 52,773 AF, and at this time last year the excess flows were about 7,100 AF. Mr. Harris reported that 87,923 AF of saline drainage was bypassed to Mexico in calendar year 2019. Starting in September 2019, these bypass flows were discharged into the river channel in the Limitrophe division just below the Morelos Dam while maintenance was being completed on the Main Outlet Drain Extension (MODE) canal in the United States and Mexico.

**State and Local Report**

Ms. Jones, representing the California Department of Water Resources (CDWR), reported that the State Water Project's allocation is 10%, reflecting the customary initial allocation. She reported that precipitation conditions in southern California were better than other parts of the State, noting that it is early in California's winter season and the wettest months of the season are December, January and February.

Mr. Peterson, representing The Metropolitan Water District of Southern California (MWD), reported that the Colorado River Aqueduct is operating at a one-pump flow due to maintenance activities.

Mr. Pettijohn, representing the Los Angeles Department of Water and Power (LADWP), reported that as of December 3rd, the Eastern Sierra precipitation conditions were 90% of normal with 5.8 inches of water content. He noted that within the course of two years the Eastern Sierra precipitation conditions went from the driest year on record (2014-2015) to the wettest year on record (2016-2017).

**Agency End-of-Year Reports**

*San Diego County Water Authority*

Mr. Madaffer, representing the San Diego County Water Authority (SDCWA), reported that the SDCWA recently marked its 75th anniversary. He also reported that Mr. Mark Watton, the SDCWA alternate on the Board and the general manager of the Otay Water District would be retiring soon. Mr. Madaffer also recognized several SDCWA agency members and staff, particularly that of the appointment of Ms. Sandra Kerl as the new General Manager of the SDCWA.

Mr. Madaffer also presented highlights of SDCWA's current projects and local water supply development. He reported that SDCWA launched a regional conveyance system study which will analyze technical and financial options for the conveyance of 280,000 AF of Quantification Settlement Agreement (QSA) water supplies from the Imperial Valley. He further explained that the study will also analyze the development of shared benefits of strategic

partnerships and assess the potential of multi-use projects that could address various issues such as agricultural water delivery. He stated that the overall goal of the project is to develop a project that could have multiple benefits as part of a long-term management strategy for not just the Southwest, but for the state of California.

Mr. Madaffer reported that SDCWA is also working on establishing a mutually beneficial Lake Mead storage program and seeking opportunities to participate using eligible Colorado River supplies. He explained that SDCWA's participation in this program would help ensure sustainability and reliability of the system by improving the elevation of Lake Mead, ultimately benefitting the Southwest and the other Basin States. He added that the SDCWA is working with MWD and the Department of Interior to develop the program.

Mr. Madaffer reported that SDCWA is partnering with the City of San Diego to develop a pumped storage project at the San Vincente Reservoir. He explained that the project would harness the energy created by moving water from a new forebay back to the reservoir. Mr. Madaffer stated that the reservoir will serve as a "battery", providing an additional energy source to San Diego's power grid and support the State's renewable power goals. Mr. Madaffer added that SDCWA is working on legislation to allow this project to be integrated with other renewable projects across the Southwest.

Mr. Madaffer reported on various local water supply development projects. He stated that MWD approved the City of San Diego's Pure Water project and Phase 1 of the project will develop 33,600 AF per year (AFY). The East County Advanced Water Purification project will develop 12,880 AFY by 2025, while the Fallbrook Santa Margarita Conjunctive Use project will develop for 3,100 AF per year and the Pure Water project in Oceanside will develop 5,060 AFY by 2021. He reported that Lower Santa Margarita Indirect Potable Reuse Pilot Project will be in pilot stage by 2021. Mr. Madaffer stated that these local supply projects will help the region during times of drought, preserve water levels in Lake Mead, and enhance the State's water portfolio.

*Metropolitan Water District of Southern California*

Mr. Peterson reported that MWD had record low diversions on the Colorado River in 2019. He also reported MWD's Lake Mead ICS account contains nearly 1.0 MAF of stored water, adding that MWD's total system storage is nearly 4 MAF.

Mr. Peterson reported that the MWD Board has approved the 2020 Seasonal Fallowing Program with Bard Water District, which extends through 2026. He explained that the program fallows up to 3,000 acres for four months during the summer, yielding up to 6,000 AF of water annually. He explained that the program allows farmers to sell high-value crops in the winter and conserve more water in the summer, as summer crops use more water. Mr. Peterson reported that MWD will pay $452 per acre of fallowed land, computing to nearly $200 per AF of water. Mr. Peterson explained that not all of Bard's farmers can participate in the program so the farmers receive 75% of the payment and 25% goes to Bard Water District to help farmers that have

permanent crops (e.g., date palms) that cannot be fallowed. In addition, $15,000 is annually paid to Bard for the management and administration of the program.

Mr. Peterson reported that MWD completed the Regional Recycled Water Demonstration Project in October. He added that the project generates 500 million gallons of water a day and the one-year testing period began November 2019. Mr. Peterson reported that MWD developed a draft letter of intent with Southern Nevada Water Authority (SNWA) to explore partnership opportunities for the demonstration project.

*California Department of Water Resources*

Ms. Jones discussed the California Department of Water Resources' efforts to improve sub-seasonal to seasonal to (S2S) forecasting. Ms. Jones explained that the timeframe for operational weather models is two weeks, while S2S timeframe is about six weeks. She reported that the California DWR has been working with the Scripps Institute for two years to develop a three-week forecast for atmospheric rivers, adding that they are also working on efforts to forecast atmospheric ridging. Ms. Jones noted that the forecast for atmospheric rivers is available on the Scripps Institute website, adding that they will continue efforts to extend the forecasting ability for these projects as both could play an important role in supporting forecast-informed reservoir operations.

Ms. Jones reported that DWR has three research pilots underway with Scripps Institute, noting that the latest pilot project will be examine forecast-informed flood operations for Yuba County Water Agency. In addition, Ms. Jones reported that DWR is also working with NOAA, NASA JPL, University of California, Irvine, and University of California, Los Angeles on various forecasting improvements.

*Los Angeles Department of Water and Power*

Mr. Pettijohn reported that LADWP started its conservation program in the 1980s and have installed about 120,000 AF of hardware-based conservation since that time, noting that LADWP invests close to $30 million a year on this type of conservation. He added that before recent droughts, per capita water use in the city of Los Angeles was 130 gallons per person per day (gpcd). This figure has dropped consistently, and over the past year was further reduced from 108 to 104 gpcd. Mr. Pettijohn explained that the gpcd figures accounts for all the water used in Los Angeles, not just water used by the residential sector, including losses from firefighting. He added that residential water use is close to 70 gpcd. He stated that LADWP is also exploring conservation opportunities for inventorying and retrofitting cooling towers, which were recently identified as a potential source of additional conservation.

Mr. Pettijohn reported that LADWP has been working with the Los Angeles County on stormwater issues for over thirty years. Currently, LADWP is capturing 60,000 to 70,000 AF a year of stormwater and LADWP's stormwater capture master plan lays out plan to double or triple

the amount of stormwater capture. Mr. Pettijohn explained that LADWP is close to completing the Tujunga Spreading Ground Project which will increase the amount of stormwater capture, noting that the project won various national and state awards. He reported that Measure W, Los Angeles County's Safe, Clean Water Program tax, will provide $35 million to help fund stormwater capture programs for water supply and municipal separate storm sewer systems (MS4) compliance.

Mr. Pettijohn reported that LADWP has also made investments to construct three large treatment plans to treat contaminated groundwater in the San Fernando Basin, adding that Prop. 1 will provide $300 million toward this effort.

Mr. Pettijohn explained that the Mayor Garcetti's Sustainability Plan includes initiatives to recycle 100% of raw water within the City of Los Angeles by 2035. He displayed various layouts that showed plans to take wastewater from the city's four wastewater treatment plants and transport the water into the Central Basin plant or the L.A. Aqueduct Filtration plant as source water. He added that the recycled water can also be connected to MWD's regional water recycling system. He stated that LADWP is also seeking partnership opportunities with other entities. Mr. Pettijohn reported that direct potable reuse regulations for raw water and treated drinking water augmentation are under development and is expected to be completed by 2023.

Mr. Pettijohn reported that in 2016-2017, the LADWP Eastern Sierra aqueduct system experienced its wettest year on record, delivering the most water ever through the L.A. aqueduct system. He stated that it was difficult to manage the large amount of water and that some of it had to be spread in the Owens Valley. He added that to address similar issues in the future, LADWP is rehabilitating and repurposing the Maclay Highline tunnel, which was used in the early 1980's but discontinued after much of the L.A. aqueduct water was diverted to the Owens Valley for environmental purposes. The Maclay Highline will be reestablished to deliver raw L.A. aqueduct water to San Fernando Valley spreading grounds.

Mr. Pettijohn reported that LADWP will be replacing 170,000 feet of water delivery trunk lines every year, noting that the system is over one-hundred years old. He added that they hope to replace the entire system within one-hundred years. Mr. Pettijohn reported that the city loses 5% to 7% of water a year from the water delivery lines and the replacement program will help alleviate water losses. He also reported the Upper Stone Canyon Reservoir has been completed and that construction is underway for the Headworks Reservoir which will provide additional regulatory storage.

*Coachella Valley Water District*

Board Chairman Nelson, representing Coachella Valley Water District (CVWD), reported that CVWD participated in the Drought Contingency Plans, congratulating all the participants and noting IID's contribution to the DCP planning efforts. He also reported that CVWD amended and restated exchange agreements for advanced delivery of water between MWD, Desert Water Agency, and CVWD for state water project water. The exchange agreement expires in 2035.

Mr. Nelson reported on CVWD's groundwater replenishment program, noting that there are three replenishment facilities, which include Whitewater, Thomas E. Levy, and Palm Desert. He reported that the groundwater basin elevation increased 21.7 feet over a ten-average in the western part of the groundwater basin and increased 31 feet in the eastern part of the basin. He stated that MWD delivered 230,000 AF of water to Whitewater Groundwater Facility in 2019. He stated that Thomas E. Levy Groundwater Facility recharged 30,000 AF. He added that 7,000 AF was delivered to the new Palm Desert Groundwater Facility, located close to CVWD's main offices. It is anticipated that the facility will be expanded to accept up to 25,000 AF per year.

Mr. Nelson reported that CVWD removed about one-million square-feet of turf in 2019 with water savings of 368 AF. Since 2008, a total of 17.5 million square-feet of turf has been removed with a total annual water savings of close to 17,000 AF since 2008.

Mr. Nelson reported that the CVWD Board made an initial decision to move forward with the Oasis project, which would expand CVWD's Colorado River canal system to preserve 21,000 AF of groundwater for other uses. The project is expected to cost $41 million.

*Palo Verde Irrigation District*

Mr. Hyduke, representing the Palo Verde Irrigation District (PVID), reported that PVID successfully installed three new river intake gates at the Palo Verde Diversion Dam. He added that PVID decided to discontinue customer outages during maintenance of the system in the future. He also noted that PVID and its farmers are working with the Natural Resources Conservation Service (NRCS) on a three-year program to research deficit irrigation for alfalfa crops. Mr. Hyduke also reported on various infrastructure issues and recent stakeholder tours of the Palo Verde Valley. Board member Mr. Fisher stated that the NRCS study is important to better understand deficit irrigation, noting that it could be significant source of water that only moderately diminishes agricultural production.

*Imperial Irrigation District*

Ms. Shields, the Water Department Manager for the Imperial Irrigation District (IID), reported that IID is continuing to move forward on implementation of the 2003 Quantification Settlement Agreement (QSA) water conservation and transfer programs. She stated that IID's QSA conservation efforts, when fully implemented, will total close to a half-million AF a year, which is about 15% of IID's annual water supply. She stated that IID has had tremendous success with the on-farm conservation program but scaled the program back in order to manage excess water and storage opportunities.

Ms. Shields reported that IID is upgrading its 100-year old system with new technology to automate and monitor the system, providing information and real-time decision making. She added that the upgrades have been effective in managing operational discharges within the system and contribute to system conservation. Ms. Shield reported that IID is also installing interties to help

replumb the system. She stated that IID is also investigating adding additional regulating reservoirs to its water distribution system to help facilitate the on-farm conservation program and provide growers with additional water management flexibility.

Ms. Shields reported that IID was unable to participate in the final approved DCP program due to concerns with the Salton Sea. She explained that as part of the 2003 QSA, the State of California was obligated to perform restoration activities during a 15-year planning period but failed to complete its obligations within the timeframe. However, Ms. Shields acknowledged that State has been working to meet its obligations and has rededicated its efforts and commitments to funding restoration activities, adding that a water bond will also provide close to $200 million to the restoration efforts.

Ms. Shields reported that IID is currently working to help fulfill the Salton Sea obligations. She stated that IID constructed over 2,000 acres of pilot air quality projects. She stated that IID is also working to help the State implement some supplemental projects to help the State meet milestones specified in the Salton Sea Management Program Phase I Ten-Year Plan. She stated that IID executed easement agreements with the State to help facilitate the construction of the Species Conservation Project on nearly 3,800 acres of IID-owned land. Ms. Shields added that they are working with the State to facilitate the implementation of additional air quality projects aat Red Hill Bay. She reported that the Red Hill Bay project is a federal project that will utilize state funds and added that Reclamation will also provide supplemental funding. The Red Hill Bay project is expected to be completed in 2020.

Ms. Shields reported that on November 18, 2019, IID adopted Resolution No. 36-2019 which will establish parameters for future Colorado River negotiations. Ms. Shield explained the resolution is intended to lay the groundwork for the 2007 Interim Guidelines renegotiation and sets parameters to protect IID's right to allocate water, negotiate on behalf of its water users and advocate for safeguarding the Salton Sea. She added that public health risks are among IID's greatest concerns with managing a smaller Salton Sea in the future. She acknowledged IID's role in helping California manage and protect its Colorado River water resources, but also affirmed the importance of addressing local concerns.

Finally, Ms. Shields reported that on December 3, 2019, IID's Board voted on a resolution that will allow IID to work with Reclamation to resolve an outstanding issue from 2010 when IID pre-delivered 46,546 AF of water to the Salton Sea. She stated IID will use water created from excess 2019 conservation to resolve the issue. She concluded by displaying a chart that showed that IID's QSA water conservation and transfer program activities from 2003 to 2019 have totaled 5.8 MAF. She noted that IID has been focusing on meeting its conservation goals with efficiency-based conservation and has moved away from agricultural fallowing.

## STATUS OF COLORADO RIVER BASIN PROGRAMS

### Colorado River Basin Salinity Control Program

Chairman Nelson introduced the Executive Director of the Colorado River Basin Salinity Control Forum, Mr. Don Barnett, to give an overview of the progress and activities of the Salinity Control Program (Program). Mr. Barnett expressed appreciation for the Board for their support of Program.

Mr. Barnett provided a background on the formation of the Colorado River Salinity Control Forum, with the states governors appointing representatives to provide administrative leadership and policy for the Program. In 1974, the Forum helped to pass the Colorado River Basin Salinity Control Act, which created the Colorado River Basin Salinity Control Advisory Council, a formal federal committee that provides input to the Secretary of Interior, Secretary of Agriculture, and the Administrator of the Environmental Protection Agency on implementation of the Program. Mr. Barnett explained that although the governors appointed the same people to the Forum as to the Advisory Council, the organizations have separate and distinct functions. For this year, both organizations have elected MWD's Mr. Bill Hasencamp to be the chairman for the next two years. He had been serving as the vice-chairman on the Forum. Mr. Rich Juricich has taken on the role of the Work Group chairman. Mr. Barnett expressed his appreciation for both Mr. Hasencamp and Mr. Juricich for taking on their respective roles in the Program.

On funding appropriations, Mr. Barnett reported that this year's President's budget matches the Forum's request of ten million dollars for Reclamation's Basinwide Program. The House has appropriated that amount while the Senate has not yet done so. For the NRCS, the House has appropriated 1.6 billion dollars for EQIP funding, of which the NRCS uses about 1% of the appropriation on salinity projects. The Senate also has not yet appropriated this funding. The Forum requested two million dollars for BLM to spend on its salinity control effort but also does not have a bill yet.

Mr. Barnett explained the cost-share structure between the Upper Basin Fund and the Lower Basin Development Fund. He explained that the intention was to use surplus dollars in the Lower Basin Development Fund to cover salinity control effort. But there never really were surplus dollars so Congress established the current funding structure in 1984 to fund the Program. For the last thirty-five years, the Lower Basin's portion of the Program was funded by two-and-a-half mill in power generation sale to Nevada and California power users. At one point the bank account had about thirty-four million dollars surplus for expenditure. However, in the 1996 Farm Bill, a line item was changed to EQIP, which meant increased appropriations and in turn increased cost-share obligations. The second change from repaying the Treasury over time to upfront cost-share meant the Program must have dollars on-hand. That surplus of thirty-four million dollars has been utilized and the Lower Basin Development Fund is now operating at a deficit. Mr. Barnett explained that

solving this Lower Basin development fund deficit issue is a high priority if the Salinity Control Program's annual control measures are to continue on pace.

Mr. Barnett reported that the Forum is looking at different hydrology and funding levels to project salinity control levels for the 2020 Triennial Review report. At recent meetings, the Forum adopted a plan of implementation that calls for about 62,000 tons of new salinity control over the next three years. The Board will hear more updates on the Triennial Review in the near future.

Mr. Barnett provided an overview of the Paradox Valley Unit and explained that the injection-induced seismic activities have been a concern. The seismic rates in the near-well area have decreased since Mr. Barnett's report to the Board last year, but an earthquake on March 4th of this year prompted Reclamation to shut down the injection well. Reclamation has also been concerned with the several thousands of aftershocks since this earthquake. Reclamation has been analyzing the earthquake and its aftershocks and provided the Forum with a preliminary report two months ago on their core pressure study. While the Forum appreciates Reclamation's thoroughness in its investigations of earthquake hazard, the Forum continues to be concerned with the brine discharging into the Dolores River, which feeds into the Colorado River.

For the Paradox Valley Unit EIS, Mr. Barnett explained that it has been a ten-year process looking at alternatives for the injection well. Mr. Barnett reported that there are some folks who are considering the no-action alternative, under which no action would take place to reduce saline discharge into the Dolores River. The Draft EIS was released Friday for public comment and Reclamation will provide a briefing to the states this afternoon on the report. Reclamation is waiting to receive comments before arriving at a preferred alternative. Comments are due by February 4th, with the final Record of Decision expected by August.

Mr. Barnett distilled the Draft EIS for the Board. With the no-action alternative, the TDS at Imperial Dam would go up by 9.2 milligrams per liter per year. With a new injection well, the TDS would be reduced by 11 milligrams per liter, a similar reduction level as the current injection well. The reduction would be 16 milligrams per liter per year with evaporation ponds or the zero-liquid discharge technology. The economic damages downstream would increase by twenty-three million dollars per year without a project at Paradox. A new injection well will decrease the damage by twenty-eight million dollars per year, while evaporation ponds or zero-liquid discharge technology would reduce damage by forty-two million dollars per year. Mr. Barnett reported that the upfront construction costs of these alternatives is expected to be $108 million for an injection well, $132 million for the evaporation ponds, and $112 million for the zero-liquid discharge technology. In terms of cost per ton of salt saved, costs are expected to be sixty dollars per ton for both the injection well and evaporation ponds and more than ninety dollars per ton for the zero-liquid discharge option. To put the costs in perspective, Mr. Barnett explained that the cost per ton in the recent FOA ranges from fifty to sixty-nine dollars per ton, with an average of about fifty-nine dollars per ton. The injection well and the evaporation ponds are in line with the FOA cost, but the cost for zero-liquid discharge is much higher. Mr. Barnett explained that how the states

cost-share differs depending on the types of costs. On the construction cost, the states would repay within fifty years without interest, while annual operational and maintenance costs are subject to an upfront cost-share, which would have a more immediate impact on the Lower Basin Development Fund. Chairman Nelson thanked Mr. Barnett for presentation and his efforts in the Salinity Control Program.

## ANNOUNCEMENTS

Mr. Juricich reported that the Basin States Climate and Hydrology Work Group received an update on the draft of Colorado River Basin Climate and Hydrology State of the Science (SOS) Report during a November 12 meeting. Specifically, Mr. Juricich noted that the SOS report provides a comprehensive assessment of current and future trends in climate and hydrology within the Basin.

## Washington D.C. Updates

Chairman Nelson introduced Ms. Sarah Tucker with Natural Resources Results to provide Washington D.C. updates to the Board. Ms. Tucker noted that Colorado River issues have unique, bipartisan support in Washington, as demonstrated by the speedy passage of the Drought Contingency Plan legislation in spring 2019, and Ms. Tucker predicted that this support would continue regardless of the upcoming election.

Ms. Tucker noted that the energy and natural resources appropriations bill included support for Colorado River programs and policies but was currently stalled. Ms. Tucker reported that there were currently sixteen bills in the House and Senate with relevance to the Colorado River. Ms. Tucker also reported that the House Natural Resources Committee planned to hold a hearing on the Salton Sea in early 2020.

Finally, Ms. Tucker noted that, along with the State's delegations, tribes, and other interests, the Natural Resource Results will continue to collaborate with partners back in Washington D.C. to provide continuous strong federal support for programs and projects.

## Other Business

Chairman Nelson announced that one of the Board's public members, Ms. Nicole Neeman-Brady, was recently appointed to serve as a director on the Los Angeles Department of Water and Power Board and had therefore resigned her position as a public member of the Colorado River Board of California.

## EXECUTIVE SESSION

Pursuant to provisions of Article 9, commencing with Section 11120, of Chapter 1 of Part 1, Division 3 of Title 2 of the government Section Program 12516 and 12519 of the Water Code to discuss matters concerning interstate negotiations with representatives from other states or the federal government, a motion was made by Chairman Nelson to go into Executive Session. The Board entered Executive Session at 11:45 a.m. and adjourned from executive session at 12:12 p.m.

## RECONVENING & ADJOURNMENT

The regular session of the Colorado River Board of California was reconvened at 12:15 p.m. The Chairman reported that information was received by the Board during the Executive Session, but that no action was taken by the Board. With no further items to be brought before the Board, Chairman Peter Nelson adjourned the meeting at 12:20 p.m.