

Minutes of Regular Meeting  
COLORADO RIVER BOARD OF CALIFORNIA  
Wednesday, April 15, 2009

A Meeting of the Colorado River Board of California (Board) was held in the Vineyard Room, of the Holiday Inn Ontario Airport, 2155 East Convention center Way, Ontario, California, Wednesday, April 15, 2009.

Board Members and Alternate Present

Dana Bart Fisher, Jr., Chairman  
Thomas M. Erb  
John V. Foley  
Terese Maria Ghio  
W.D. 'Bill' Knutson  
Henry Merle Kuiper  
John W. McFadden  
John Pierre Menvielle

David Elms, Designee  
Department of Fish and Game  
  
Jeanine Jones, Designee  
Department of Water Resources

Board Member Absent

James B. McDaniel

Others Present

Steven B. Abbott  
Brian J. Brady  
Celia A. Brewer  
John Penn Carter  
Bob Doss  
David Fogerson  
William J. Hasencamp  
Michael L. King  
Russell Kitahara  
Bob Lucas  
Dan Parks  
Ed W. Smith  
Mark Stuart

William H. Swan  
Peter E. von Haam  
Bill D. Wright  
  
Abbas Amirteymoori  
J.C. Jay Chen  
Lindia Liu  
Gary E. Tavetian  
Mark Van Vlack  
Gerald R. Zimmerman

**CALL TO ORDER**

Chairman Fisher 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 Fisher asked if there was anyone in the audience who wished to address the Board on items on the agenda or matters related to the Board. Hearing none, Chairman Fisher moved to the next agenda item.

## **ADMINISTRATION**

### Approval of Minutes

Chairman Fisher requested the approval of the March 11<sup>th</sup> meeting minutes. Mr. Knutson moved the March 11<sup>th</sup> minutes be approved. Mr. Menvielle seconded the motion. Unanimously carried, the Board approved the March 11<sup>th</sup> meeting minutes.

### New California Department of Fish and Game representative

Chairman Fisher introduced Mr. David Elms who is replacing Mr. Christopher Hayes as the designee of the California Department of Fish and Game to the Board. The Board welcomed Mr. David Elms.

### New Colorado River Board Engineer

Mr. Zimmerman introduced Ms. Lindia Liu, a new engineer hired by the Colorado River Board. The Board welcomed Ms. Liu.

### Cancellation of May Board Meeting

Chairman Fisher reported that there were conflicts regarding the scheduled May 20<sup>th</sup> Board meeting. Chairman Fisher asked the Board if there was any objection to cancelling the May 20<sup>th</sup> Board meeting. Hearing none, Chairman Fisher cancelled the May 20<sup>th</sup> Board meeting.

### Partners in Conservation Award

Mr. Zimmerman reported that each year the Department of the Interior (DOI) recognizes conservation achievements that are made possible through partnering with a diverse range of entities. This year, DOI has selected the successful development of the Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead to receive the award. The Colorado River Board has been selected as one of the entities to receive the award. Interior Secretary Salazar will make the presentation of the award in Washington D. C. on May 7<sup>th</sup>. Mr. Zimmerman reported that the Board's Chairman has volunteered to accept the award for the Board.

### Improving Climate Prediction in Colorado River Basin

Mr. Zimmerman, reported that NOAA is funding a two-year study, that has just completed the first year, to improve runoff prediction in the Colorado River Basin. The work

is being led by Western Water Assessment at University of Colorado, and other universities and federal agencies are also participating. Ms. Jeanine Jones of the Department of Water Resources (DWR) added that Brad Udall of NOAA, gave a very good presentation at the Binational Border Drought Conference, February 27-28, in San Diego. Mr. Udall also held a Climate Change Conference in Las Vegas in January 2009. Where he, and others, reported on the progress of the current work being done by the participating scientists. The current studies indicate declines of minus six to minus 45 percent, a wide range, with general trends showing less runoff in the future. NOAA is funding a group of scientists, to be led by Mr. Udall, charged with bringing some understanding of the scope of the work being done and to recommend directions for future research to improve prediction of runoff predictions of the Colorado River Basin. Ms. Jones mentioned that Mr. Udall would be willing to make a presentation to the Board on the current work in progress, possibly at the June Board meeting.

### **AGENCY MANAGERS' MEETING**

Mr. Zimmerman reported that the Agency managers met on March 11<sup>th</sup>, to discuss the Proposed Yuma Desalting Plant Pilot Project operations and the Basin States' Discussion Document regarding the International Boundary and Water Commission's (IBWC) binational process and the status of that process. Also discussed were legal and policy issues associated with both the Yuma Desalting Plant Pilot Project operations and the Basin States' Discussion Document. Mr. Zimmerman mentioned that the Agency Managers are scheduled to meet April 15<sup>th</sup> after the Board meeting to discuss the Inadvertent Overrun and Payback Procedures being developed by Reclamation.

### **PROTECTION OF EXISTING RIGHTS**

#### Colorado River Water Report

Mr. Abbas Amirteymoori reported that, as of April 5<sup>th</sup>, the storage in Lake Powell was 12.752 million acre-feet (maf), or 52 percent of capacity. The water surface elevation was 3,610.2 feet. The storage in Lake Mead was 12.086 maf, or 47 percent of capacity, and water surface elevation of 1,106.6 feet. Total System storage was about 32.101 maf, or 54 percent of capacity. Last year at this time, there was 30.899 maf in storage, or 52 percent of capacity.

Mr. Amirteymoori reported that precipitation from October 1<sup>st</sup> through April 3<sup>rd</sup> was 102 percent of normal, and the snowpack was about 104 percent of normal. The projected April through July runoff, as of April 3<sup>rd</sup>, is 7.2 maf, or 91 percent of normal. The anticipated 2009 water year runoff is 10.483 maf, or about 87 percent of normal.

Mr. Amirteymoori added that Reclamation's projected consumptive use (CU) for the State of Nevada is slightly over its entitlement of 300,000 acre-feet (304,000 acre-feet); and for Arizona, the CU is projected to be slightly below its basic entitlement of 2.8 maf (2.783 maf); and for California the CU is projected to be 4.436 maf. The total projected CU in the Lower Basin is projected to be 7.523 maf.

## State and Local Water Reports

Mr. Mark Stuart, of the California Department of Water Resources (DWR), reported on the climate conditions of California. In the Los Angeles basin precipitation is about 87 percent of normal, though further south in the South Coastal Basin, in San Diego, the precipitation was 115 percent of normal. The Central Coast area varies from 55 to 70 percent of normal. The Colorado sub-basin was about 80 percent of normal. The Northern Sierra eight-station precipitation index, as of April 9<sup>th</sup>, was 89 percent of average. The snowpack is below average, about 90 percent of normal, and last year was a critical dry year. State Water Project (SWP) reservoir storage north of the Delta was about 57 percent of capacity. South of the Delta SWP reservoir storage was 66 percent of capacity. Total SWP storage was about 60 percent of capacity. SWP deliveries are projected to be 20 percent of Table A Entitlements. North of the Delta the Central Valley Project (CVP) current deliveries are 5 percent of agricultural entitlements and 50 percent of municipal and industrial (M&I) entitlements. South of the Delta the CVP deliveries are 0 percent of agricultural entitlements and 55 percent of M&I entitlements. The Central Valley farmers are struggling under the reduced water deliveries.

Mr. Foley, of The Metropolitan Water District of Southern California (MWD), reported that overall storage in Lake Skinner, Lake Mathews and Diamond Valley Lake, as of April 1, was 564,300 acre-feet, or 54 percent of capacity. Diamond Valley Lake was about 404,900 acre-feet, or 50 percent of capacity. Lake Mathews was about 122,600 acre-feet, or 67 percent of capacity. Lake Skinner was about 36,900 acre-feet, or 84 percent of capacity. Overall storage in the MWD system is short about 500,000 acre-feet.

Mr. Thomas Erb, of the City of Los Angeles Department of Water and Power (LADWP), reported the results from the April 1<sup>st</sup> snow survey. The snow survey indicates the runoff from the Eastern Sierra will be about 72 percent of normal. The LADWP is continuing its efforts to implement water conservation measures. Last week, the City Council considered a measure to implement 15 percent rationing. The measure was deferred, to be reconsidered Friday, April 17<sup>th</sup>.

## Colorado River Operations

### *Commissioner of Reclamation Nomination*

Mr. Zimmerman reported that on March 18<sup>th</sup> that the Department of the Interior announced President Obama's intention to nominate Mr. Michael L. Conner as the next Commissioner of Reclamation. Mr. Zimmerman reported that Mr. Conner most recently served as Counsel to the U.S. Senate Natural Resources Committee. Prior to his service with the Senate, Mr. Conner was with the DOI's Office of the Solicitor.

### *Assistant Administrator of Environmental Protection Agency Nomination*

Mr. Zimmerman reported that on April 3<sup>rd</sup>, President Obama announced his intention to nominate Mr. Peter S. Silva as the Assistant Administrator for Water Programs in the U.S. Environmental Protection Agency. Mr. Silva has been a senior policy advisor for the MWD, and that his advice will be missed by the Board and MWD. His prior service includes the

State Water Resources Control Board, and as a member of the Board of the Border Environmental Cooperation Commission during the Clinton Administration.

#### *Flaming Gorge Pipeline Project*

Mr. Zimmerman reported that on March 20<sup>th</sup>, the U.S. Army Corps of Engineers published a *Federal Register* notice, announcing its intention to prepare an Environmental Impact Statement associated with the Flaming Gorge Pipeline Project (Regional Watershed Supply Project). The Regional Watershed Supply Project will take water out of the Flaming Gorge Reservoir and move it into the Front Range in Denver, as well as deliver some water in Wyoming. Board staff prepared a letter requesting to be placed on the “interested parties” mailing list and to receive all future notices and project documentation. Copies of the Board’s letter and the related *Federal Register* notice were included in the Board folder.

#### *Lower Colorado Water Supply Project Monitoring Study*

Mr. Zimmerman reported that previous discussions and concerns regarding groundwater quality in the vicinity of the wells of the Lower Colorado Water Supply Project (LCWSP) prompted the need to insure the long term supply of the LCWSP. The U.S. Geological Survey was selected to conduct the study. Before the study could be undertaken, approval to spend money in the LCWSP’s Trust Fund was required from Reclamation and MWD. This approval was received by Reclamation. Reclamation’s letter of approval arrived March 5<sup>th</sup> and was included in the March Board folder. MWD’s letter was received March 24<sup>th</sup> and was included in the April Board folder. The study is a three year study beginning in 2009, with an estimated cost of \$1.1 million dollars.

#### *Dedication of the All-American Canal Lining Project*

Mr. Zimmerman reported that on April 30<sup>th</sup> the All-American Canal Lining Project will be officially dedicated. The event is to be held at the project site alongside the All-American Canal. A copy of the dedication event flyer was included in the Board folder.

#### Basin States Discussions

##### *Binational Activities*

Mr. Zimmerman reported that both sections of the International Boundary and Water Commission (IBWC) executed the Terms of Reference regarding Cooperative Actions of Colorado River Users on March 11, 2008. The Terms of Reference created a Core Group and four Work Groups; it identified how meetings would be conducted, the objectives for the process and the organization and management effort; and it established a process for addressing binational projects and programs.

Mr. Zimmerman reported that, early in the process, Mexico identified a number of projects that it was interested in pursuing, it requested the Basin states similarly identify projects and programs. The Basin states responded with the Basin States’ Discussion Document concerning Binational Water Management. The Discussion Document was transmitted to IBWC’s American Commissioner Mr. Bill Ruth on December 17, 2008.

Commissioner Ruth shared the Discussion Document with Mexican counterparts in January 2009. Mexico then requested a consultation meeting with federal representatives. A consultation meeting was held on February 13<sup>th</sup>. Mexico welcomed the Discussion Document, though it felt it lacked sufficient detail, and that they also wanted further discussions to be held in the established binational process.

Mr. Zimmerman reported that the Basin states have prepared a PowerPoint presentation that more fully describes the Basin states role regarding water management within the United States and more fully explains the concepts contained in the Basin States' Discussion Document. The Basin States' presentation also identifies how implementation of the programs contained in the Discussion Document could work and benefit both nations.

Mr. Zimmerman reported that the Basin states are scheduled to meet with IBWC and Reclamation on April 16<sup>th</sup> to brief the federal representative on the proposed Basin states presentation to Mexico and to receive the federal representatives input. The Basin states then plan to meet with Mexico, in late May or early June, to present the PowerPoint presentation and address questions regarding the presentations and to request written questions from Mexico. After the initial meeting with Mexico, the states are proposing that a workshop be held to address Mexico's written questions and further the dialogue on projects and programs that have a binational interest. The workshop will identify the framework for moving binational projects and programs toward implementation. At the workshop, both countries can prepare a joint recommendation to be presented to the IBWC Commissions.

Mr. Zimmerman reported that representatives of the Basin states are meeting to flesh out the policy and legal issues that must be addressed and attempt to reach a unified position regarding the legal and policy issues. During this process it is anticipated that Mexico will also identify a number of legal and policy issues that will need to be addressed.

#### Colorado River Environmental Activities

##### *Status of the Glen Canyon Dam Lawsuit*

Mr. Gary Tavetian, of the California Attorney General's Office, reported that the federal court heard cross-motions for Summary Judgment. The court has indicated that there could be a decision in the near future.

##### *Multi-Species Conservation Program Water Use and Acquisition Agreement*

Mr. Zimmerman reported that with the passage of Omnibus Public Land Management Act of 2009 by the Congress, and signed by the President, the Secretary is authorized to manage and implement the Lower Colorado River Multi-Species Conservation Program (LCR MSCP). The Secretary can now enter into agreement with the states providing for the use of water for the LCR MSCP. Reclamation is proposing to move forward with the execution of a water use and acquisition agreement among the states and Reclamation. Included in the Board folder is a copy of a proposed agreement that was prepared in February 2007 by representatives of the non-federal and federal Program participants. The primary purposes of the water use and acquisition agreement are to insure that Reclamation can acquire and lawfully utilize mainstream Colorado River water in conjunction with the

approved LCR MSCP habitat restoration and maintenance activities, and provide for the accounting of water used for MSCP purposes.

Mr. Zimmerman asked for a motion to approve the Chairman to sign the agreement for Reclamation to execute the MSCP Water Use and Acquisition Agreement. Upon the motion of Mr. Kuiper, seconded by Ms. Jones, and unanimously carried, the Board authorized the Chairman to sign the agreement for Reclamation to execute the MSCP Water Use and Acquisition Agreement.

Mr. William Swan added that this agreement is a great victory, taking about 10 years to negotiate, authorizing appropriations of about \$310 million, and including a waiver of sovereign immunity. Mr. Swan mentioned that the MSCP, when fully implemented, encompasses about eight thousand acres along the Colorado River created by planting trees and creating habitats for wildlife. Part of the habitat creation includes backwater restoration. The backwaters contain native fish and the problem is that if you have sport fish in those areas then they reduce the population of the native fish. Rotenone (a piscicide) has been used to control the non-native fish, however sport fisherman have complained, expressing concern about the health effects to humans who ingest fish exposed to Rotenone as well as drink the water downstream of where Rotenone is used. Complaints have also been voiced at IID Board meetings. The IID Board is considering requesting the LCR MSCP manager consider other alternatives to the use of Rotenone.

## **WATER QUALITY**

### Colorado River Basin Salinity Control Program Status

Mr. Amirteymoori reported that at this time of year members of the Colorado River Basin Salinity Control Forum (Forum) typically send testimony letters to the Congress in support of the funding for the salinity control projects by the federal agencies: Reclamation, U.S. Department of Agriculture, and the U.S. Bureau of Land Management. This year, as in previous years, the Board will be sending letters of support for the Forum's recommended funding levels to each committee. All agencies are encouraged to send their own letters of support for the program and the funding levels.

Mr. Amirteymoori also reported that at a recent meeting of the Forum work group there was a presentation on the Salinity Economic Damage Model using 2005 salinity levels. There was an assumption in the Model that with no salinity control projects in place what the salinity levels in 2005 would have been. The study indicated the salinity would be 165 mg/l more than they were in 2005, at a cost of about \$1.8 million per milligram per liter, that adds up to about \$297 million per year. Without the salinity control projects, current annual salinity damages would amount to about \$360 million per year.

### Moab Mine Tailings Status

Mr. Amireteymoori reported that the Moab uranium tailings project received \$180 million in funding from the stimulus package, enabling the removal of the uranium mine tailings away from the Colorado River to begin later this month. The original schedule had

the completion as late as 2030. With the stimulus funds the Moab uranium tailings project could be completed by 2019.

#### PG&E's Topock Compressor Station Hexavalent Chromium Cleanup Update

Mr. Bob Doss, principal engineer of Pacific Gas and Electric Company of San Francisco (PG&E), made a presentation to the Board regarding the current status of the Topock Chromium VI remediation. PG&E have conducted extensive studies for remediation of the hexavalent chromium contamination at PG&E's Topock Compressor Station. Water samples from wells in the vicinity of the site, both upstream and downstream, including the river itself, has indicated that no hexavalent chromium has entered the river from the groundwater plume. The interim remediation activities, since 2004, have kept the groundwater gradient toward the groundwater plume. After 12 years of study, the effort is changing from investigation to development of a final remedy for the site. Mr. Doss reviewed the characterization of the study area and gave a brief history of the investigation and the intermediate remedy. Mr. Doss characterized the alluvial soils underlying the Topock Compressor Station as cobbly, granular, semi-gravelly soils that were worn off of adjacent mountains. Groundwater moves through rapidly without much attenuation or chemical interaction. In contrast, the soils underlying the Colorado River are organic rich, and low in oxygen. Some of the core samples underlying the Colorado River showed a high reduction, and absorption capacity of Hexavalent Chromium. This reduction, and absorption capacity was not included in the recommended remediation alternatives. Mr. Doss reported that the completion of the groundwater site characterization report was given to the agencies and stakeholders in January 2009. A new phase of the groundwater investigation is being embarked upon in the bedrock east of the Topock Compressor Station. It is hoped that the results of the bedrock investigation will be quicker than the underlying soils of the plant and the river and that the results can be incorporated in the current remedy process.

Mr. Doss reported that a draft of the "Corrective Measure Study, Feasibility Study" was released January 27<sup>th</sup>. The Draft describes the remedial actions goals and the technologies that can be brought to bear on meeting those goals. The technologies described in the "Corrective Measure Study, Feasibility Study" are arranged in a series of remedial action alternatives. The alternatives are evaluated against state criteria and federal criteria. A recommendation of PG&E is made to the lead agencies including the Department of Toxic Substances Control (DTSC) and the Department of the Interior. Mr. Doss expects a long process of consultation among the area's stakeholders, including tribal nations providing input on the environmental evaluation of the remedies. It is hoped that the consultation process will conclude with what DTSC refers to as a "Notice of Determination", by the first quarter of 2010. While the consultation process is continuing, an Environmental Impact Report (EIR) under the California Environmental Quality Act, is being prepared. The EIR will evaluate, on a programmatic basis, all of the different remedies. The EIR is to be inclusive enough to cover all of the alternatives in consultative process. The implementation of the corrective measure is expected to include a period of monitoring and reporting.

Mr. Doss reiterated that their objectives are: 1) reduce human health and ecologic risks; 2) achieve groundwater standards; 3) reduce the mass of hexavalent chromium in the groundwater plume, and 4) achieve the clean up goals to reduce the concentration of hexavalent chromium in the area to 32 parts per billion within a reasonable time frame.

Mr. Doss reported that reasonable time frame is estimated based on the cleanup alternatives. The most aggressive alternative could achieve cleanup goals in as little as 20 to 25 years. With no further action hexavalent chromium, above background levels, could be in suspension in the groundwater plume for more than a thousand years. Mr. Doss added that to compare the alternatives they normalized the cleanup window at around 20-30 years. This is a very aggressive time-frame for cleanup of a plume this size. The plume is about a mile long and contains about a billion gallons.

Mr. Doss described the results of the *in-situ* treatment pilot studies. By adding certain carbon sources, food sources, food grade materials, that stimulate the growth of bacteria that reduce the hexavalent chromium (which is soluble and a cancer causing agent) to trivalent chromium (which precipitates out of solution and is actually a nutrient). The pilot studies in the upland area and the floodplain have been successful and scientists are convinced that when implemented as part of the final remedy can reduce the cleanup time from hundreds of years to just a few decades.

Mr. Doss reported that the "Corrective Measure Study, Feasibility Study" contains nine alternatives, the obligatory no action alternative, monitored natural attenuation, and various implementations of pump and treat technologies. The pump and treat alternatives range from extracting the contaminated groundwater, chemically treating the water to approved standards with perhaps some enhancements to various injection and extraction well configurations using a carbon-based nutrient to enhance bacteria that promotes an environment where the contaminant is attenuated. The proposed PG&E recommendation is an alternative where a limited array of injection and extraction wells are placed to effectively clean up the groundwater plume using *in-situ* treatment and fresh-water flushing while still respecting wildlife habitat and the Fort Mojave Indian Tribe that holds that any action in the area is a desecration (the ancient Topock Maze is located in the vicinity of the site). Mr. Doss agreed to stay after the Board meeting to describe in detail each of the alternatives included in the "Corrective Measure Study, Feasibility Study"

## OTHER BUSINESS

### Next Board Meeting

Chairman Fisher announced that the next meeting of the Colorado River Board will be held on June 10, 2009, 10:00 a.m., Holiday Inn Ontario Airport, 2155 E. Convention Center Way, Ontario, California.

There being no further items to be brought before the Board, Chairman Fisher asked for a motion to adjourn the meeting. Upon the motion of Mr. Menvielle, seconded by Mr. Foley, and unanimously carried, the meeting was adjourned 11:56 a.m. on April 15, 2009.



Gerald R. Zimmerman  
Executive Director