



## VI. Items from the Forum

Mitchell

Becky Mitchel reported on two items discussed by the Forum which are also on the Council's agenda, namely, recommendations on FY2022 expenditures from the Lower Colorado River Basin Development Fund and recommended FY2023 Program funding levels. These items were taken up by the Council under other agenda items.

## VII. Federal Agency Reports on 2021 Accomplishments

### A. USGS

Tom Marston

Tom Marston provided the report on behalf of USGS. He started by showing an organizational chart listing those within USGS involved in salinity control efforts. The organizational chart and other materials presented by Marston as described below are shown in Appendix C. Marston showed a chart outlining the four areas of focus by USGS in providing Program science support and reviewed efforts within each focus area. Marston discussed USGS' role in maintaining the 20 Stream Gage Network which is used by Reclamation in modeling salinity flows. He also highlighted USGS' maintenance of SPARROW for salinity predictions.

Marston updated the Advisory Council on the large Upper Basin trends study. The first phase of study has been completed and has been published. It identifies downward trends in salinity prior to implementation of the CRBSCP. He reported on efforts in the second phase to identify the causes of such trends. He also indicated that there is a similar effort ongoing in the tributaries in the Lower Basin. They are only able to apply their methodology to stream reaches which are above dams. They have been able to identify some decreasing trends also in the Lower Basin reaches, but they appear to be more related to streamflow processes rather than the watershed processes identified as the cause in the Upper Basin. These might be more related to climatic shifts. A draft report of these findings will be worked on in the coming months.

Marston reported on efforts to create a dynamic SPARROW model which will simulate changes in irrigation over time. They have had early success in this effort and will continue to keep the Council informed as they move ahead. Marston also provided an update on study efforts on Pah Tempe Hot Springs. He reported on a bromide tracer effort that they have performed to help understand transit times and connectivity within the aquifer. He also reported on USGS' data gap analysis effort to identify data availability and data needs for performing hydrosalinity analyses. The USGS is working with the Forum's Work Group on identifying areas of interest for future studies.

Marston reported on USGS' three-year high flow study. 2021, though dry, was marked with several high flow events which are beneficial for the study. The USGS has completed the hydrosalinity analysis on the Blacks Fork in Wyoming and the study has been published.

Marston then reported on potential future areas of study. He discussed the Spanish Valley area along the Colorado River and the potential that future changes may lead to the discharge of briny groundwater directly to the Colorado River. He is working with

local entities on this potential study. He also alerted the Council of a potential study to look at how various climate change scenarios could impact base flow discharges to the Colorado River and how it might affect changes in the salinity loading to the Colorado River.

In response to a question, Marston indicated that the high flow study is funded by both salinity dollars and moneys from BLM. The intent is to determine the effect of monsoonal events on salinity loading and could lead to future management strategies. Marston also clarified that the bromide study at Pah Tempe, which requires yet additional analysis, will help understand the timing and efficiency of recovery of brine.

#### B. BLM

Bob Boyd/Paula Cutillo

Paula Cutillo, BLM's salinity coordinator, made the presentation on behalf of BLM (see Appendix D). Also participating from BLM were Bob Boyd from the National Operations Center and Scott Miller, National Program Lead of the Aquatic Resources Program which includes implementation of salinity control activities. Cutillo ran through BLM's salinity organization chart. She indicated that BLM headquarters provides coordination of program implementation and budget oversight. She indicated that BLM provides both point and non-point salinity control. Cutillo outlined BLM's efforts which include erosion control activities, data collection efforts and watershed modeling to quantify the effectiveness of their activities. She provided a chart which shows the types of activities and states where an average of \$1.7 million has been expended by BLM since 2015. In FY2021 BLM allocated \$2 million for salinity control activities. Cutillo then went through several slides and provided examples of BLM's salinity control activities. She also reviewed the anticipated FY2022 funding to be used on 17 projects in five of the Colorado River Basin states.

Bob Boyd pointed out that the \$2 million outline by Cutillo is just for the funds allocated by Congress to go specifically to Colorado River salinity control activities, and that there are other efforts which contribute to salinity control and which they are seeking to model.

#### C. NRCS

Norm Evanstad/Anders Fillerup

Norm Evanstad initiated NRCS' report. He started by showing an organizational chart of those involved in salinity control activities within NRCS. He noted that Ronnie Mauer has taken Dave Mason's place as NHQ Salinity Program Manager. He highlighted the role of the Assistant State Conservationists in implementation of salinity control activities. He also highlighted that in 2021 NRCS in Colorado hired 27 new positions and in Utah 10 new positions within the salinity project areas.

Anders Fillerup then reviewed implementation of salinity control during 2021. He showed a chart with funding levels since inception of the Program. He then reviewed several slides which showed program achievements by salinity control units which have been designated through an EA or EIS process. He also defined the Tier II areas as where salinity control activities are accomplished in the Upper Colorado River Basin but outside of designated salinity control units. As Fillerup reviewed the slides, there

were several questions and discussions about monitoring and verification of salinity control accomplishments as well as the EQIP participation requirement that lands needed to show adequate irrigation during two of the prior five years.

Fillerup then reviewed the implementation efforts in FY2021. The reported “Tons Reduced” are based on an NRCS “salt sheet.” Fillerup also discussed the authorities in the Farm Bill for NRCS to work with Water Management Entities and provide funds for off-farm salinity control under EQIP.

Fillerup then discussed NRCS’ 3-Year Funding Plan. He indicated that the plan is developed based on anticipated applications and NRCS’s ability to process and implement contracts. He then reported to the group the FY2022 EQIP funding allocations.

Evanstad then reviewed a slide showing the five PL566 projects which are under development in Utah within the Colorado River Basin. He provided insight on the status of the efforts and the process for approval. He highlighted NRCS’ exploratory efforts to develop a large PL566 project on the San Juan River. Erica Gaddis added that this effort is an extension of the cooperation and relationships which have been established among the entities in dealing with the Gold King Mine cleanup efforts. Dave Kanzer highlighted similar activities occurring in Colorado and asked that these efforts be included in future reports. Evanstad recognized the need to provide assistance to other states and the potential significance of the PL566 Program within the Basin in the future. A copy of NRCS’ presentation is included as Appendix E.

#### D. EPA

Peter Monahan

Peter Monahan provided EPA’s report (see Appendix F). Monahan was representing all three regions of EPA within the Basin. Monahan reviewed the present EPA salinity organizational chart. He then reviewed a table showing the status of the efforts within each state and by EPA to adopt and approve the triennial reviews. He similarly reviewed a slide showing the status of development of water quality standards by the tribes within the Colorado River Basin. He highlighted the tribes which have fully developed all three water quality programs within the Basin. Monahan alerted the Council about EPA’s efforts to host roundtables on Waters of the United States (WOTUS). He also talked about other programs which provide salinity control as an additional benefit (i.e. 319 grant program).

#### E. FWS

Creed Clayton

Creed Clayton, the FWS’ salinity coordinator, presented on behalf of the FWS (see Appendix G for a copy of Clayton’s materials). Clayton showed an abbreviated organizational chart of those in the FWS involved in the salinity control efforts. Clayton reviewed the FWS’ role in the Salinity Control Program. He talked about the potential of habitat loss through improved irrigation efficiency and the requirement to replace the lost habitat. He indicated that there have been efforts and a number of meetings over the past year to update scoring criteria and streamline the habitat replacement options. He then reported on his tabulation of the status of habitat replacement efforts (tabulation along with other materials are included as Appendix G). He also discussed the Olsen Reservoir effort being worked on in Utah.

F. Reclamation

Marcie Bainson

Marcie Bainson provided Reclamation’s report. She started by reviewing Reclamation’s salinity control organization (see Appendix H for chart as well as other materials provided by Bainson) and key changes in personnel. She highlighted the fact that Jackie Gould is now the Lower Colorado Regional Director, Aung Hla is now Reclamation’s new Colorado River Basin Salinity Control Program Manager with Melynda Roberts now being the Salinity Coordinator. She also noted that Ted Dunn is now the STRD Group Chief, replacing Katrina Grantz who is now a new Assistant Regional Director in the UC Region

Bainson then reviewed Reclamation accomplishments in FY 2021. She noted that Reclamation is continuing salinity modeling efforts in the Basin by using CE-QUAL-W2, CRSS and SEIM. She reported on several SIR studies which were underway as well as continuing efforts with the Seismic Risk Analysis at the Paradox Valley Unit. She reported on efforts to continue to look at options at Paradox for reinitiating injection operations prior to completion of the risk analysis. Bainson then provided a slide showing the current project underway in the Basinwide Program since 2015. She also mentioned that they are reviewing options for dealing with the extreme increase in pipe prices so as to avoid entities canceling existing projects. She then reviewed similar efforts under implementation through the Basin States Program.

In light of his announced retirement at the end of the year, Chairman Hasencamp took the privilege to recognize Bob Boyd for his dedicated service to the Salinity Control Program over a number of years. Several within the room expressed their appreciation to Bob and their recognition of his significant, and often behind the scenes, efforts to keep the Program moving forward.

VIII. Public Comment

Hasencamp

There were no public comments.

**Recess Meeting:**

**Approximately 4:00 pm (PDT)**

**Reconvene Meeting:**

**Thursday, October 28, 2021, 8:30 am (PDT)**

X. Reclamation

Marcie Bainson introduced Aung Hla who started the previous day as the new Colorado River Basin Salinity Control Program Manager for the Bureau of Reclamation. Aung took a few minutes to introduce himself. He is coming to Salt Lake City from a Reclamation area office in Nebraska. He indicated that he is looking forward to meeting with the group and working together.

A. Basin Funds Status and Accounting

Bainson/Chad Vellinga

a. Basin Fund Payments /Accrual

Bainson shared a spreadsheet showing the income and expenditures in the LCRBDF (see Appendix I for Bainson’s materials). She noted the surprisingly, relatively high level of income to the LCRBDF in 2021. Hasencamp indicated that it is probably, at

least partly, due to a higher level of releases due to drought conditions. Bainson noted the present and future potential accrual levels and expressed concerns over future increases. Due to a question regarding the LCRBDF, Bainson explained how the funding levels and requirements are set by statute and how the various factors contribute to the creation of an accrual. Patrick Dent added that revenues to the LCRBDF are exclusively from power revenues which are specifically set by statute. Dent then asked why the forecasted budgeting at the Paradox Valley Unit were so high for a project that has been idled. Bainson indicated that she would need to get additional information on the matter and get back to the group. Dent expressed concern over the impact to the cost share requirements. Hasencamp asked why the future revenues in the LCRBDF show increases in 2026 and expressed concern that such may not be consistent with other forecasts. Rich Juricich asked about the status of the Solicitor's Office's efforts to look at the opportunity for additional funds being provided to the LCRBDF. Bainson indicated that she does not know the status of the effort but believes that their opinion was leaning towards recognizing that non-power revenues could be provided to the fund.

B. Status of Basinwide Program Bainson  
Bainson then reviewed a table showing contracts underway in the Basinwide Program. Most of the 2019 awarded contracts are finishing up their NEPA efforts. Bainson indicated that, depending on where things fall out with pipe costs, there will be adjustments later in the year as they balance funding with contract needs.

C. Status of Basin States Program Bainson  
Bainson then reviewed the contracts and costs under the Basin States Program. She indicated that the new state agreements are in place and vital to implementation of the Program. She reviewed the remaining items shown on the spreadsheet. She indicated that there is a need for a FOA in FY2022 so that we can expend the anticipated funding in FY2023. She also reviewed a tabulation of the SIR contracts which are funded under the Basin States Program. She indicated that there is up to \$600,000 allocated for SIR efforts next year due to the limited amount expended in FY2021. Bainson also reviewed miscellaneous expenses under the Basin States Program.

Bainson then reviewed a slide which showed the preliminary income, transfers and balances in the LCRBDF. In FY2021, \$11.2 million was withdrawn from the fund. The final values should be available shortly.

Bainson indicated that Reclamation is looking into what can occur to help out with the increasing pipe costs to the existing awardees. She expressed appreciation for the assistance that the states have provided on this matter. She also discussed a tentative timeline for the 2022 FOA.

D. Update on State Ag Agreements projects Mark Quilter/Cindy Lair/ Bill Brewer  
Mark Quilter indicated to the group that the State of Utah has completed all its authorized projects. He then reviewed the tasks included in Utah's new contract with Reclamation. The contract calls for them to promote the Basinwide and Basin

States Programs and assist people to participate in these programs, to participate in water efficiency projects, to assist entities in securing available funding sources, to participate in Work Group activities, help FOA applicants within habitat replacement projects and cultural resources compliance, stay up to date on water efficiency technology and oversee the salinity coordinator's efforts.

Paul Kehmeier providing Colorado's report in lieu of Cindy Lair. He similarly provided an overview of Colorado's contract with Reclamation. It included assistance with FOA applications, producers' assistance with participation with NRCS in the Program, and assistance with habitat replacement projects. He indicated that the goal is to be a resource for the funding of water efficiency improvement projects. Gawain Snow noted that the timing of funding from various sources often lags what is anticipated and becomes difficult to manage.

Bill Brewer indicated that Wyoming's Interstate Canal project is presently moving ahead under the Program.

- E. Recommendations on the FY 2022 Management of the LCRBDF Mitchell  
Becky Mitchell reviewed a draft joint letter from the Forum and the Advisory Council making recommendations on the use of LCRBDF moneys in FY2022. The letter had been approved the day before by the Forum. Patrick Dent raised a concern with the first recommendation to continue up-front cost share in the Paradox Valley Unit. Dent provided some history on past cost sharing and recommended that the states not be required to cost share until the project was up and running again. Dent indicated that this might help motivate efforts to move forward more quickly at Paradox as well as lessen the accrual balance in the LCRBDF. It would also encourage frugality in expenditures. There was discussion among the Council Members including a discussion of including this matter in the Advisory Council Report. Ultimately, there was a decision to add a footnote to the draft letter expressing the Council's concerns. There was a motion that the Advisory Council advise Reclamation to suspend cost sharing effective immediately until brine injection resumes at the Paradox Valley Unit by amending the letter with a footnote and also include a similar discussion in the Advisory Council Report.
- XI. Allocation of Payments between Upper and Lower Basin Funds Bainson  
After recommendation, there was a motion to keep the funding split between the Upper Colorado River Basin Fund and the Lower Colorado River Basin Development Fund at 15/85, respectfully. The motion passed.
- XII. Reclamation – Impeller Replacements at Hoover Dam Mark Cook  
Mark Cook, the facility manager at Hoover Dam, provided a presentation on improvements at Hoover Dam to help mitigate some of the impacts of drought. He discussed their recent impeller replacement efforts which sought to improve overall efficiency over a broad range of heads. He reviewed the issues and the solutions which were incorporated into their turbine replacement effort (see Appendix J). They also adjusted the gates to pick up some additional capacity at lower pressures. They gained an overall increase in efficiency of 4% or 100 MW of capacity. Cook shared with the

group a graph showing a fairly linear relationship between Hoover capacity and falling Lake Mead elevations. He also showed a graph with anticipated annual power production which includes steps due to DCP and other reductions in water releases. It does not account for the banking of water. Cook then showed the groups potential power production at various Lake Mead levels. Power production essentially ends at an elevation of 950 feet. There was a discussion of the ability to release sufficient water, independent of power production, at lower elevations. The conclusion was that water deliveries could occur down to an elevation of 895 feet.

XIII. Direction to the Technical Advisory Group (TAG) Hasencamp/Juricich  
Direction was given to the TAG to continue to look at potential science proposals.

XIV. 2021 Advisory Council Report Hasencamp  
A. Program Funding Recommendations Hasencamp  
There was a motion to include the funding requests outline in Memorandum 2021-36 in the 2021 Advisory Council Report. The motion passed.

B. Discussion of Items for Report Juricich  
There were items brought up through the meetings to be incorporated into the report including several items relative to the Paradox Valley Unit (i.e., hasten the pace for the seismic risk analysis, not cost sharing in the project when it is inoperable). There was also a discussion to ask Reclamation to operate the PVU well within some safe level while the risk analysis is proceeding. There was also a discussion to include a request to Reclamation to work on improving the forecasting of revenues to the LCRBDF. Lastly, there was a general discussion to provide comments on the information presented per agencies' accomplishments.

XV. Items for the Forum Mitchell  
There is a need to take back to the Forum, with the footnote amendment, the draft letter to Reclamation on the expenditures of LCRBDF dollars.

XVI. Other Business/Actions Hasencamp  
There was no other business brought before the Council.

XVII. Public Comment Hasencamp  
There were no public comments.

**Adjourn Meeting:**

**Approximately 10:00 am (PDT)**