COLORADO RIVER BASIN SALINITY CONTROL ADVISORY COUNCIL
Meeting Minutes

Virtual Meeting
July 7, 2022

Advisory Council Beginning Time: **Thursday, July 7, 2022, 10:00 am (MDT)**

Designated Federal Officer Aung Hla
Presiding: Chairman Bill Hasencamp

I. Welcome, Introductions — Hasencamp

The Advisory Council (Council) Meeting was called to order by Chairman Bill Hasencamp at 10:05 a.m. on Thursday, July 7, 2022. The meeting was held virtually via Zoom. After welcoming people to the meeting, Chairman Hasencamp began by have introductions of Council Members followed by others participating in the meeting. A list of the attendees at the meeting is attached to these minutes as Appendix A.

II. Opening Comments — Aung

Aung Hla expressed hope that the next meeting of the Council will be in person in October. He then introduced himself as the Federal Designated Officer of the Council meeting. Aung expressed his desire to be the "play-maker" for the group.

Aung then recognized the alternates who were filling in for Council Members as follows: Kristen Johnson for Clint Chandler (AZ), Ali Effati for Mike Hamman (NM), Warren Turkett for Sara Price (NV), and John Mackey for Erica Gaddis (UT).

III. Review and Approval of Agenda — Hasencamp

Chairman Hasencamp asked for any comments on the proposed agenda. There were no changes to the agenda, and it was approved (see Appendix B for a copy of the agenda).

IV. Draft Minutes of 2021 Fall Advisory Council Meeting – Virtual — Hasencamp

In presenting the minutes, Aung gave particular appreciation to Marcie Bainson for her assistance with the prior Council meeting. Chairman Hasencamp then asked if there were any comments or proposed changes to the draft minutes to the October 27-28, 2021, Advisory Council Meeting. There were no comments or changes and, upon motion, the minutes as drafted were approved.

V. Charter Renewal Status — Aung

Aung indicated that they began very early with the process of approving the next charter. He indicated that it has already passed through Interior and that it is now moving through the Department of Agriculture and then will pass to EPA.

VI. Items from the Forum — Rebecca Mitchell

Becky Mitchell was not in attendance and so Chairman Hasencamp asked Rich Juricich and Don Barnett to provide background on the draft letter. Barnett provided some background on the letter in general and the recently proposed edits from the Forum which included the expression of concerns for high expenditure of O&M dollars at the Paradox Valley Unit when the injection well is not operating. After discussion, a motion passed to accept the letter as circulated.

VII. Expenditures of Basin Funds — Rich Juricich/Tom Marston

TAG Chair Rich Juricich then ran through recommendations regarding the expenditures of cost share dollars for studies, investigations and research pursuant to a memo which the TAG had previously circulated to the Council (see Attachment C). Two of the five proposed studies were recommended for funding by the TAG, and three were not recommended at that time. The two recommended studies were one on the Green River and one in the Spanish Valley. Juricich reviewed the basic elements of the two recommended studies. The study in the Green River area involves quantifying salt gains due to return flows from irrigated lands. There were three levels of study in the write-up and the TAG was recommending the higher level of study. In the Spanish Valley, Juricich recounted the history of prior studies. Though there is a significant brine source underlying the valley, in the past there has not been an indication of salt discharge to the Colorado River. With recent drier conditions, there is a concern that the situation has changed. If local entities are willing to participate in the study, the TAG recommended the higher level of study. There was a question relative to the local entities participating. Tom Marston indicated that the local entities are still reviewing and developing their willingness to participate. He indicated that the hope is that the funding be approved for the synoptic portion of the study with the full study being approved if the local entities decide to participate.

Juricich also reviewed the three proposed studies which were reviewed by the TAG but not recommended for funding at that time. The first study was to use the SPARROW model to predict future salt loads under varying climate change scenarios. The TAG noted that the proposed study was fairly costly and did not have a direct link to the CRSS model which is used for future salinity forecasting. There was a comment that future salinity modeling would be important to the program objectives. The second one is for an interactive mapping tool of salinity conditions in the Basin. The TAG has reviewed some options from the USGS but wants to further explore the options. The third study is more of a place holder to do a hydrosalinity study in the Upper Green River. Wyoming has requested that a study be considered, but it has not yet been fully developed.

There was a motion to approve the recommendations as reviewed by the TAG. The motion passed.

VIII. Public Comment — Hasencamp

No public comment was provided.

IX. Direction to the Technical Advisory Group (TAG) — Hasencamp/Juricich

Juricich indicated that he had noted the feedback from the Council in the above discussions. Hasencamp also noted appreciation for the short-term salinity projections which were given at the

Forum meetings and asked that they continue. There was also a suggestion that the TAG consider if there were any additional studies needed at the Paradox Valley Unit.

X. Other Business/Actions **Hasencamp**

No other items of business were raised.

XI. Next Meeting **Hasencamp**

The next Forum and Advisory Council meetings were set for Monday, October 24 – Wednesday, October 26, 2022 in the Lake Tahoe area. The meeting may include a tour.

Adjourn Meeting: **Approximately 10:55 am (MDT)**

APPENDICES

Minutes of Meeting

Colorado River Basin Salinity Control Advisory Council

July 7, 2022

Held Virtually

Appendix A

Attendance Roster

Colorado River Basin Salinity Control Advisory Council Meeting
July 7, 2022
Held Virtually

ATTENDANCE ROSTER

COLORADO RIVER BASIN SALINITY CONTROL ADVISORY COUNCIL MEETING
Virtual Meeting
July 7, 2022

NAME	REPRESENTING
Bainson, Marcie	U.S. Bureau of Reclamation Salt Lake City, UT
Barnett, Don	Colorado River Basin Salinity Control Forum Farmington, UT
Jacob Barnett	Colorado River Basin Salinity Control Forum Farmington, UT
*Burns, Andrew	Southern Nevada Water Authority Las Vegas, NV
Collins, Casey	Southern Nevada Water Authority Las Vegas, NV
Cowley, Jeff	Interstate Streams, State Engineer's Office Cheyenne, WY
Cutillo, Paula	U.S. Bureau of Land Management Lakewood, CO
Cunningham, Colleen	NM Interstate Stream Commission Santa Fe, NM
Dunn, Ted	U.S. Bureau of Reclamation
*Esquivel, Joaquin	California Water Resources Control Board Sacramento, CA
*Ezekial Effati, Ali	New Mexico Interstate Stream Commission, Santa Fe, NM
Evans, Clint	U.S. Department of Agriculture/NRCS Washington, DC
Evanstad, Norm	U.S. Department of Agriculture/NRCS Salt Lake City, UT
Fegler, Mel	Wyoming State Engineer's Office Cheyenne, WY

*Ferrantelli, Charlie	Wyoming State Engineer's Office Cheyenne, WY
Fillerup, Anders	U.S. Department of Agriculture/NRCS Roosevelt, UT
Hamel, Madeleine	WY DEQ, Water Quality Division Cheyenne, WY
Hla, Aung	U.S. Bureau of Reclamation Salt Lake City, UT
*Hasencamp, Bill	Metropolitan Water District of So. California Los Angeles, CA
*Hasenyager, Candace	Utah Division of Water Resources Salt Lake City, UT
Ikeya, Deanna	Central Arizona Project Phoenix, AZ
*Johnson, Kristen	Arizona Department of Water Resources Phoenix, AZ
*Jordan, Erin	Arizona Dept. of Environmental Quality Phoenix, AZ
Juricich, Rich	Colorado River Board of California Glendale, CA
Kanzer, Dave	Colorado River District Glenwood Springs, CO
*Karta, Vineetha	Central Arizona Project Phoenix, AZ
Kehmeier, Paul	Colorado Department of Agriculture Delta, CO
Lai, Larry	Metropolitan Water District of Southern CA Los Angles, CA
Lair, Cindy	Colorado Department of Agriculture Denver, CO
*Mackay, John	Utah Division of Water Quality Salt Lake City, UT
Marston, Tom	U.S. Geological Survey Salt Lake City, UT
Martinez, Astrid	NRCS Wyoming Cheyenne, WY
*McGettigan, Scott	Utah Division of Water Resources

	Salt Lake City, UT
Monahan, Peter	U.S. Environmental Protection Agency Denver, CO
Morgan, Betsy	Utah Division of Water Resources Salt Lake City, UT
Murray, McKenna	Utah Division of Water Resources Salt Lake City, UT
Parham, Lucy	Utah Division of Water Quality Salt Lake City, UT
Cole Pihl	Arizona Department of Water Resources Phoenix, AZ
Quilter, Mark	Utah Department of Agriculture & Food Salt Lake City, UT
Rapoport, Shana	Colorado River Board of California Glendale, CA
Rickert, Andrew	Colorado Water Conservation Board Denver, CO
Roberts, Melynda	U.S. Bureau of Reclamation Salt Lake City, UT
Rickert, Andrew	Colorado Water Conservation Board Denver, CO
*Rowan, Nicole	Colorado Water Quality Control Division Denver, CO
Skeie, Erik	Colorado Water Conservation Board Denver, CO
Scott, Carrie	U.S. Bureau of Reclamation Yuma, AZ
Sobien, Helen	Interstate Stream Commission Sant Fe, NM
*Turkett, Warren	Colorado River Commission of Nevada Las Vegas, NV
Wade, Stacy	U.S. Bureau of Reclamation Boulder City, NV
*Waterstreet, David	Wyoming Dept. of Environmental Quality Cheyenne, WY

*Indicates an Advisory Council member or individual representing an Advisory Council member

Appendix B

Agenda

Colorado River Basin Salinity Control Advisory Council Meeting

July 7, 2022

Held Virtually

PROPOSED AGENDA
COLORADO RIVER BASIN SALINITY CONTROL ADVISORY COUNCIL

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I.	Welcome, Introductions	Hasencamp
II.	Opening Comments	Aung
	A. Acceptance letters from members designating alternates	Aung
III.	Review and Approval of Agenda	Hasencamp
IV.	Draft Minutes of 2021 Fall Advisory Council Meeting – Virtual	
	A. Review	Aung
	B. Action	Hasencamp
V.	Charter Renewal Status	Aung
VI.	Items from the Forum	Rebecca Mitchell
	A. Draft Letter on LCRBDF Management	
	B. Other	
VII.	Expenditures of Basin Funds	
	A. Recommendations from TAG	Rich Juricich/Tom Marston
	B. Action by Advisory Council	Hasencamp
VIII.	Public Comment	Hasencamp
IX.	Direction to the Technical Advisory Group (TAG)	Hasencamp/Juricich
X.	Other Business/Actions	Hasencamp
XI.	Public Comment	Hasencamp
XII.	Next Meeting	Hasencamp

Adjourn Meeting:	**Approximately 12:00 pm (MDT)**

Appendix C

TAG Memo Containing SIR Funding Recommendations

Colorado River Basin Salinity Control Advisory Council Meeting
July 7, 2022
Held Virtually

Memorandum TAG 2022-01

To: Colorado River Basin Salinity Control Advisory Council

From: Technical Advisory Group (TAG)

Date: June 29, 2022

Re: TAG Recommendation to the Advisory Council Regarding Expenditure of Cost-Share Dollars for Studies, Investigations and Research

At its October 2009 meeting, the Colorado River Basin Salinity Control Advisory Council (Council) created a Technical Advisory Group (TAG) and charged it with the duty of reviewing potential funding needs and opportunities under the Basin States Program (BSP) and reporting back recommendations to the Council. The TAG provides recommendations relative to expenditure of cost-share dollars associated with the Colorado River Basin Salinity Control Program (Program). This memorandum provides recommendations regarding expenditure of cost-share dollars for studies, investigations and research associated with the Program.

The 1996 amendments to the Colorado River Basin Salinity Control Act (Act) authorized up-front cost sharing, in lieu of repayment, in the Program. Since that time, the required cost share in EQIP obligations has been used to fund salinity control projects, including habitat replacement, as well as a small portion that has been used to fund research and planning studies which facilitate the implementation of the Program. The 2008 amendments to the Act specified that all future Program cost-share moneys be expended through the newly created Basin States Program (BSP). The Act further specifies that Reclamation is the fiduciary of the moneys expended under the BSP and that such expenditures are to be made in consultation with the Council.

The TAG has reviewed the following potential new studies for potential funding with BSP dollars:

SIR 2022-01
Name: Reassessment of hydrologic conditions and salinity loading associated with agricultural areas around Green River, Utah

Objective: The objectives of this study are to 1) assess current water quality associated with return flows from irrigated agricultural fields previously unmeasured on the east bank of the Green River; 2) to reassess water quality at a subset of sites measured and analyzed during the 2004-05 to evaluate changes in conditions since the last study; and 3) to re-evaluate the surface water and shallow groundwater hydrology related to

agricultural water deliveries from canals on both the west and east bank areas of the Green River near Green River, Utah.

Amount:

- Limited Scope sampling, seepage, and simple hydrology + internal report = S49,000
- Full Scope sampling, 3 canal seepage, with complex hydrology + internal report = $79,700
- Full Scope sampling, 3 canal seepage, with complex hydrology + USGS report = $94,700

Recommendation: The TAG recommends the third, or Full Scope option with the USGS report.

SIR 2022-02

Name: Refined assessment of salinity loading to the Colorado River in Spanish Valley, Utah

Objective: The objectives of this study are to 1) quantify salt loading from Spanish Valley, Utah to the Colorado River at below average flows; 2) provide additional monitoring locations within the Matheson Wetlands Preserve to better characterize the relationship of the brine to the river; and 3) to evaluate the effects of freshwater depletion on the underlying brine in the valley-fill aquifer in Spanish Valley.

Amount:

Task	Cost	CRSCP	USGS	UT Coop
USGS Synoptic Investigation	$25,000		$10,000	$15,000
BOR Monitoring Well Drilling (per well) x5	~$13,500	$67,500		
USGS Small diameter pump test	$50,000		$20,000	$30,000

- Total Cost with 5 additional monitoring wells drilled: $120,000

Recommendation: TAG recommended funding $25,000 for the Synoptic Investigation. An additional $42,500 is recommended if the USGS can secure additional cost share funds from partners in the Spanish Valley. Maximum recommended funding is $67,500.

Other Studies Considered and not currently recommended for funding

SIR 2022-03

Name: Predicting future salinity loading to streams in the Upper Colorado River Basin

Objective: The principal goal of this project is to use the salinity and baseflow SPARROW models to predict future salinity loading to streams under different climate scenarios at 10,000+ stream reaches in the Upper Colorado River Basin (UCRB). Input data to the SPARROW model will include projections of future precipitation, temperature, and baseflow discharge.

Amount:

- Option 1: Modify the SPARROW UCRB salinity model to include baseflow as a source and calibrate for historical conditions, then apply future climate projections = $150,017
- Option 2: Calibrate a new baseflow salinity model to estimate salinity loading from baseflow across the UCBR for historical conditions, then apply future climate projections = $193,421
- Option 3: Calibrate new baseflow salinity model. Modify existing total salinity model to include baseflow salinity. Use baseflow salinity predictions under future climate as input to total salinity model under future climate = $228,007
-

Recommendation: Though the TAG recognizes the value in developing modeling capabilities which can better predict changes in salinity levels with varying climate scenarios, it did not feel comfortable with recommending this proposal at this time. The TAG would like to further explore the relationship between SPARROW, CRSS and other modeling capabilities and the relative costs.

SIR 2022-04

Name: Interactive Mapping for the Colorado River Basin – USGS Colorado

Objective: The USGS proposes to publish a service definition file through ScienceBase with geospatial services that can be accessed as an interactive map in ArcGIS Online (link provided on the ScienceBase page). ScienceBase is a U.S. Geological Survey (USGS) data-management platform that allows for public data sharing. ScienceBase will create an ArcGIS Representational State Transfer (REST) service for a service definition, allowing users to access the map in ArcGIS Online through a link on the ScienceBase page (for an example, see https://doi.org/10.5066/P943BUQZ).

Amount: $32,000.

Recommendation: The TAG is yet interested in pursuing some type of graphical, interactive map which will show salinity inputs to and concentrations within the Colorado River System over varying periods of time. The vision is to have such a tool on the Forum's website and accessible and usable by the general public. It will work further with USGS on identifying the appropriate tool.

SIR 2022-05 TBD
Name: Upper Green River Hydrosalinity Study, Wyoming

Objective: TBD

Amount: TBD

Recommendation: There is no recommendation as there is no proposal at this time. This is simply a placeholder to let the Advisory Council know that the State of Wyoming is interested in pursuing a hydro-salinity model of the Upper Green River. The scope and details of the study are yet being developed.

cc: Aung Hla, Designated Federal Officer