

# ARIZONA WATER BANKING AUTHORITY Final Meeting Summary

**March 20, 2024**  
**Arizona Department of Water Resources**  
(Hybrid Meeting)



**AUTHORITY MEMBERS**  
Thomas Buschatzke, Chair  
Mark Clark, Vice-Chair  
Eric Braun, Secretary  
Mark Taylor  
Joseph Olsen

**EX OFFICIO MEMBERS**  
The Honorable Sine Kerr  
The Honorable Austin Smith

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## I. Welcome

Chair Tom Buschatzke and Commission members Joseph Olsen, Mark Taylor, and Eric Braun attended in person. Commissioner Clark, Senator Sine Kerr and Representative Smith were not in attendance.

The meeting was called to order at 10:04 a.m.

Chair Buschatzke introduced the new Water Bank staff member, Madeleine Oliver, who joined the Bank in February.

## II. Approval of Meeting Minutes

Chair Buschatzke asked for a motion. Commissioner Olsen moved to approve the December 5, 2023, AWBA Regular Meeting minutes with any needed corrections. Commissioner Braun provided the second to the motion. Chair Buschatzke asked if there was any further discussion. There was none; the minutes were unanimously approved.

## III. Water Banking staff activities

**Quarterly report on AWBA credit purchases for calendar year 2024.** Rebecca Bernat, AWBA Manager, provided an update on credit purchases during the first quarter of 2024. The AWBA completed a purchase of 529.24 acre-feet (AF) of long-term storage credits (LTSCs) from the Tohono O'odham Nation pursuant to A.R.S. § 45-841.01. The LTSCs were purchased using \$156,125.80 of Tucson Active Management Area (AMA) withdrawal fees.

Chair Buschatzke asked Commission members if there were any questions or comments. There were none.

**Status report on Colorado River conditions.** James Heffner, Senior Hydrogeologist for ADWR's Colorado River Management Section, gave the Colorado River Basin update. On March 3<sup>rd</sup>, 2024, the elevation of Lake Powell was 3,591.74ft, and Lake Mead was 1,076.60ft; total system contents were 43%, or 24.86 MAF. These numbers have not changed much over the month. As of Monday, March 18<sup>th</sup>, total system contents were at 42%, with Lakes Powell and Mead still at approximately

34% and 37% full respectively. The current snow-water equivalent is 108% of the median and 100% of the median peak as of March 18<sup>th</sup>. It is not as high as it was in 2023 at this time—is more comparable to 2020 or 2014—but is still an improvement from earlier.

The unregulated inflow forecast on March 3<sup>rd</sup> ranged from 6.15 MAF to 10.90 MAF. The most probable forecast at that time was 7.66 MAF, similar to December, although it increased to just over 8 MAF as of the mid-month forecast.

The Bureau of Reclamation released their Final SEIS on March 5<sup>th</sup>, adopting the Lower Basin states' proposal for voluntary conservation of 3 MAF to protect the system through 2026. Although the Imperial Irrigation District agreement is still outstanding, most other agreements have been executed, and the Record of Decision is expected in early April.

The most recent projections, from the CRMMS-ESP and 24-month studies, show a most probable EOCY 2024 elevation in Lake Powell of 3,569.19ft (35% full), and 3,579.15 for EOCY 2025 (40% full), indicating that it is likely increases will be seen in this lake going forward. Lake Mead, however, shows a return to declining conditions. The EOCY 2024 projection is for 1,059.82ft, or 32% full, and EOCY 2025 is 1,055.60ft (31% full). Tier 1 is likely for 2025, and possibly a return to Tier 2 for 2026 depending on the hydrology.

Chair Buschatzke asked if there were any questions from the Commission for Mr. Heffner.

Commission Braun asked for clarification on the statement that the snowpack appears similar to 2020 or 2014, when the runoff was very different for the two years. Mr. Heffner acknowledged this difference and stated that the two extremes are essentially paralleled in the Min and Max forecasts presented today. Mr. Heffner also stated that as it is only March, there is still a lot of uncertainty, and reiterated that the range presented here is narrower than what was seen in December.

Commissioner Olsen noted that the Lake Powell CRMMS most-probable elevation is in a Mid-Elevation Release Tier at the end of 2024 and asked what the release from the lake at that tier would be under current operating guidelines. Mr. Heffner replied that he could not answer off the top of his head, but that the modelling right now shows 7.48 for both years.

Chair Buschatzke noted that at this time of year in past years, a trend towards decreasing runoff projections was observed, and asked if this was being seen so far this year as well. Mr. Heffner responded by acknowledging inherent caveats and uncertainties, but by stating that forecasts this year are more or less stable, that he looks forward to seeing what April looks like, and that there has not been the continued decline in the forecast so far. Chair Buschatzke asked for confirmation that the runoff projection was from March 5<sup>th</sup>, which Mr. Heffner confirmed and stated that the mid-month projection has increased by another 400,000 acre-feet.

Chair Buschatzke asked for any further questions or comments, which there were none, and noted that the more optimistic news was appreciated, thanking Mr. Heffner for his presentation.

**Report from the Central Arizona Water Conservation District.** Marcus Shapiro, CAP Water Systems Supervisor, provided the CAP System update, reviewing the 2024 conservation volumes.

At this time, system conservation volumes total just under 160,000 AF, with another 132,000 AF anticipated, bringing the total to 291,784 AF of planned conservation for 2024.

Mr. Shapiro noted that the water rates set by CAP can influence rates for acquiring credits. The CAP Finance Department set their water rates for 2024 based on a Tier 3 shortage condition rather than Tier 1 to account for reduced delivery due to 2024 conservation volume (the total 2024 reduction volumes correspond roughly to a Tier 3 shortage reduction). CAP has fixed maintenance and operation costs that have to be spread over the actual amount of water delivered; so, setting the rate at Tier 3 means a higher OM&R rate but it allows water users to understand how conservation plays into the setting of CAP water rates, rather than reconciling differences at the end of the year.

Chair Buschatzke asked Commission members if there were any questions. There were none.

**Report on Recovery Planning Activities.** Water Bank Manager Rebecca Bernat provided an update on the Water Banking Authority's firming agreement approved by the Commission in September 2022. The most recent 10-year plan predicted no reductions to the CAP M&I supply pool, meaning that there is no anticipated firming required of AWBA. Nevertheless, there are firming agreements in place, just in case. To date, 17 agreements have been executed, with 12 partially executed. The Water Bank continues to meet on a regular basis with ADWR and CAWCD to talk about recovery planning.

Chair Buschatzke asked if there were any questions from Commission Members.

Commissioner Taylor asked if there were any changes or revisions being proposed or made to the 12 agreements still being looked at. Dr. Bernat responded that there are agreements in progress because they were requested by the subcontractor, but have not been signed or executed yet. She also noted, should the Water Banking Authority need to firm a subcontractor in the next year, the subcontractor would then have the opportunity to choose between Independent Recovery (receiving credits) or Direct Delivery (wet water from CAWCD). Commissioner Taylor asked for clarification that all agreements are the same. Dr. Bernat responded that they are, but that there are separate templates for public and private entities.

Chair Buschatzke asked if there were any further questions or comments from Commission members. There were none.

#### **IV. Discussion and potential approval of Letter Agreement between the AWBA, CAWCD, Southern Nevada Water Authority and Colorado River Commission of Nevada for recovery of interstate long-term storage credits**

Dr. Bernat presented an update on interstate recovery for the Southern Nevada Water Authority (SNWA). At present, the Water Bank has 613,846 LTSCs on account for SNWA. A letter dated December 20, 2023, was received from SNWA with their updated recovery plan for Intentionally Created Unused Apportionment (ICUA) for the next ten years. The letter outlines their plan for the recovery of 2,500 AF recovery per year by CAWCD, for the period 2025 to 2050. The letter

also mentioned discussions between SNWA, Colorado River Commission of Nevada (CRCN), CAWCD, and AWBA to postpone this recovery until 2028, as SNWA does not need the water in 2025.

In 2017, SNWA invested \$1million for recovery capacity starting in 2025, in partnership with Arizona Water Company (AWC), in exchange for an equal volume that CAP would not divert, thus creating ICUA in Lake Mead available for SNWA to take. Also in 2017, the Water Banking Authority sent a letter agreement to give SNWA the right to the first 2,500 AF of recovery from 2025–2050. The proposal at hand now is to modify the recovery time-period to read 2028-2053. That is the only change being suggested.

SNWA, CRCN, CAWCD, and AWC all support modifying the recovery period. Water Banking Authority staff recommend supporting the modified recovery period as well.

Chair Buschatzke asked if there were any questions from Commission members.

Commissioner Braun asked how the ICUA is to be documented and verified. Dr. Bernat responded that when Nevada requests recovery, and the ICUA will be created, there will be a process involving AWBA, CAWCD, CRCN, SNWA, and the Federal Government. There are multiple steps to follow and reports to submit, plus the AWBA provides a report every year to the Federal Government detailing interstate activities.

Chair Buschatzke asked if this would ultimately show up in the credit accounting report of the AWBA. Dr. Bernat responded that the creation of ICUA would be documented in the AWBA Annual Report.

Commissioner Braun asked for clarification on the recovery, asking if it would come out of AWC's CAP subcontract, so that they will forgo that 2,500 AF when it has been agreed SNWA will recover. Dr. Bernat replied that there are two additional agreements regarding SNWA recovery between 2025 and 2050. One agreement is between CAWCD and AWC, and the other is between CAWCD and SNWA. AWC would be recovering credits, so that CAWCD would not have to deliver them wet water.

Chair Buschatzke asked if there were any further questions from the Commission. There were none. He entertained a motion. Commissioner Braun moved to approve the modification of the Letter Agreement between the AWBA, CAWCD, SNWA, and CRCN for recovery of interstate long-term storage credits. Commissioner Taylor seconded the motion.

Chair Buschatzke asked if there were public questions or comments. There were none. He asked for discussion from the Commission. There was none. The motion was approved unanimously.

## **V. Discussion of firming proposal for the Gila River Indian Community for potential shortage year 2025**

Dr. Bernat presented the firming proposal for the Community for potential shortage year 2025. Colorado River shortages are anticipated to continue for 2025—the Bureau of Reclamation 5-

year probabilistic projections indicate a 90% chance for a Tier 1 shortage in the Colorado River Basin in 2025. CAWCD reports that this means the Non-Indian Agricultural pool (NIA) would be impacted, triggering an obligation for the AWBA to firm the Community; based on preliminary estimates, this Tier 1 firming obligation would be 10,043 AF.

The AWBA and the Community have agreed to use Firming Credits to meet this obligation, as has been done for the past three years. To do so, the AWBA would use credits developed in 2016, 2017, and 2018, that were accrued through payment for water delivered to the Community during non-shortage years. As this water was thus pre-delivered, the AWBA would simply extinguish the corresponding credits on the account. Should the AWBA have to firm 10,043 AF next year, there would be 6,783 credits left on the Firming Credits account.

Chair Buschatzke asked for questions from the Commission.

Commissioner Olsen asked what other account is available to meet firming obligations through 2107 after the full 6,783 firming credits are extinguished. Dr. Bernat informed the Commission that, in addition to these firming credits, the AWBA has LTSCs and Intentionally Created Surplus (ICS) credits for the Community, noting that Community has committed to not using these ICS firming credits until 2027.

Chair Buschatzke added that the extent to which firming might be necessary is still up in the air, depending on which Post-2026 alternative is adopted by the Federal Government in the NEPA process. The AWBA has some LTSCs that were created pursuant to DCP, and some that were created pursuant to groundwater withdrawal fee monies, so there are other potential credits that can be used. Should these credits need to be utilized to meet firming obligations, it would be a decision of the Commission.

Commissioner Braun asked if there is any indication that the Community is always going to accept credits, or if they are going to desire wet water at any time. Dr. Bernat responded that this is a conversation held every year with the Community, and that what Commissioner Braun described had not yet been discussed. Chair Buschatzke noted that a part of the calculus for the Community may also attach to the Post-2026 process, and the reductions that are known to be coming, although how much and how that might work for the Community is not known.

Commissioner Taylor asked if there are any other tribal requirements that might be coming up in the next few years and whether or not the Federal Government has the same obligation, in addition to the Community's. Dr. Bernat responded that, according to the Arizona Water Settlements Act, the AWBA and the Federal Government both have an obligation to firm the White Mountain Apache Tribe (up to 3,750 AF/yr each) and the Hualapai Tribe (up to 575.5 AF/yr each), although neither settlement is enforceable yet. Once they are, then the AWBA and the Federal Government will firm these two tribes if there is a need for firming. The White Mountain Apache Tribe settlements should be enforceable in 2027, and the Hualapai in 2029.

Commissioner Taylor asked if the AWBA may have additional obligations because of future settlements. Chair Buschatzke responded that it is a point of consideration regarding future settlements as to whether they will contain firming obligations, and that the challenges ahead with Post-2026 operations and the extent to which reductions may fall on the state of Arizona will play into whether or not those future settlements do contain any firming obligations.

Chair Buschatzke asked for any further questions or comments from the Commission. There were none.

## **VI. Report on reciprocal transfers of long-term storage credits pursuant to the Lower Basin Drought Contingency Plan Implementation Plan**

Dr. Bernat provided an update on the exchange of LTSCs under the LBDCP Implementation Plan. As a part of DCP, the Water Bank facilitated CAP water deliveries to the Pinal AMA. The Cities of Avondale, Chandler, Goodyear, Peoria, Phoenix, Scottsdale, and Tucson, as well as Freeport Minerals Corporation and EPCOR, agreed to store CAP water in the Pinal AMA under a Tier 1 shortage condition. Under this agreement the AWBA would exchange credits accrued in the Phoenix and/or Tucson AMAs for an equal amount accrued in the Pinal AMA where the storing entities are not able to use the credits.

To date, three entities have requested exchanges: EPCOR, the City of Chandler, and the City of Phoenix. This quarter, the total exchanged was 17,815.39 AF. Information on the amounts credited to the AWBA at Central Arizona Irrigation and Drainage District GSF, Maricopa-Stanfield Irrigation and Drainage District GSF, and Hohokam GSF were provided to the Commission, summing to the total of 17,815.39 AF of credits developed in the Pinal AMA. The same volume of LTSCs was deducted from the AWBA account in the Phoenix AMA. For those exchanges, credits were used from the Salt River Valley Water Users' Association GSF, Granite Reef Underground Storage Project, and New Magma Irrigation and Drainage District GSF.

Chair Buschatzke asked for questions from the Commission. There were none.

## **VII. Update on Post-2026 NEPA process, including the Lower Basin Alternative**

Chair Buschatzke presented the Post-2026 NEPA process and Lower Basin Alternative to the Commission, noting that most of the information was also available on ADWR and CAWCD's websites, and that an in-depth presentation was given at the March 6, 2024 Arizona Reconsultation Committee Meeting.

The final Supplemental EIS document was released on March 5<sup>th</sup>. In this document, the three Lower Basin states looked at creating the conservation of 3 MAF through the end of 2026. A lot but not all of this is compensated conservation, and a lot but not all of the money is Inflation Reduction Act money. Most Lower Basin parties have executed their final conservation agreements, and are collectively well on track to reach the 3 MAF volume by the end of 2026, as well as the 1.5 MAF volume in the first two years of the program (2024 and 2025). As a result, in the final SEIS, there was certainty that the Colorado River system has been stabilized through the end of 2026, providing the room to instead work on Post-2026 operational guidelines with the faith that there will not be any more one-off actions required to protect the river system. The Record of Decision on this SEIS is expected to come out in April.

Regarding Post-2026 Colorado River operations, the Bureau of Reclamation initiated the NEPA

Process in June 2023, and the three Lower Basin states developed a draft alternative for consideration by Reclamation in the EIS process. Additional work with stakeholders, water users, and the Upper Basin is needed to reach a consensus. The process is at the stage of development of alternatives by the Bureau of Reclamation, partners, and stakeholders. NEPA allows almost anyone to submit an alternative for consideration by Reclamation. The Lower Basin and the Upper Basin alternatives will be compared shortly. By early May, Reclamation may be ready to share with stakeholders some of the alternatives received. It would be a big step forward in seeing what other alternatives have come in, and what possibilities are being put together by the Bureau themselves. There may be more than one. Reclamation is working towards a draft EIS by December this year, with a Record of Decision intended in late 2025 or early 2026.

Chair Buschatzke laid out for the Commission the goals that the Lower Basin states worked towards in preparing their Alternative:

- Improving Colorado River reliability over a broad but plausible range of future conditions or hydrologies.
- Addressing the structural deficit by reducing use in the Lower Basin by 1.5 MAF. In January 2024, Reclamation published a report of system losses in the Lower Basin mainstem, using a 2017-2021 timeframe, that concluded there were 1.33 MAF of evaporative and system losses in the Lower Basin reservoirs and deliveries down to Mexico. The Lower Basin alternative does just a bit more than this 1.33 to show a more robust outcome.
- Sharing the risks and benefits of the system within and between both the Upper and Lower Basins. Today, we have an outcome of a separate Lower and Upper Basin alternative.
- Improving the predictability of reductions necessary to stabilize Lake Mead. This would involve basing reductions more on data rather than forecasts, giving more reliability and certainty to all water users.

The Lower Basin Alternative is based on system contents, rather than the contents of Lake Powell and Lake Mead, as has been done since at least the 2007 guidelines. The seven reservoirs looked at in the Alternative are Flaming Gorge Reservoir, Blue Mesa Reservoir, Navajo Reservoir, Lake Mohave, Lake Havasu, Lake Powell, and Lake Mead. The total maximum system contents of these seven is 58.05 MAF. When determining the system contents for triggers, the volume of each of these reservoirs would be summed and divided by the maximum system contents, resulting in the reduction determinations in the framework document. At the upper levels of system health, there would be no reductions (when contents are 69-100%). At the 69% trigger, reductions would begin, and would ramp up to 1.5 MAF—this is the Initial Reduction Zone. At 58% of system contents, the system enters the Static Reduction Zone, at which point reductions stay at 1.5 MAF and are proposed to be split between the Lower Basin and Mexico. When more reductions are needed, which is known to be possible, we enter the Basinwide Reduction Zone. This starts at 38% of total system contents, going down to 23%, with a total of 3.9 MAF reductions needed based on modelling projections in how those numbers perform in protecting the system. This is a delta of 2.4 MAF of additional reductions. The

expectation is to share those reductions between the Upper and Lower Basin, and not have them all fall on the Lower Basin. There is a point, at 23%, where necessary reductions stand steady at 3.9 MAF, potentially going to 0%, which is deadpool. In the modelling, there are no traces that are showing deadpool. That is a pretty good performance considering there are some dry individual traces in the hydrologic ensembles.

The hydrologic ensembles used to model the Lower Basin Alternative are based on discussions with Reclamation. Chair Buschatzke showed the probabilities of operating in the different reduction zones, when testing the performance of the Alternative with five different hydrologies. Under all five hydrologies, the Static Reduction is the most common set of outputs from looking at the individual traces. In the wetter hydrologies, the Stress Test, and the CMIP-5, there is a possibility to move out of the Static Reduction Zone into the Initial Reduction Zone. But, to focus on the driest ensemble, the Paleo Drought Resampled Subsample hydrology, the system is living in the Static and Basinwide Reduction Zones 89% of the time. This combined reduction could be as much as 3.9 MAF. Expectations of a wetter future should be tempered, and planning should be for the drier futures that are to some degree already upon us but may become more frequent under our climate change scientists' projections out into the future.

Next, Chair Buschatzke presented a back-cast model to show how the Alternative would have performed had it been implemented in 2007. Results showed that the system would have been mostly in the Static Reduction Zone, with a little dip into the Basinwide Reduction Zone in the early 2020s when there were some very bad hydrologies.

Next, Chair Buschatzke presented the proposed reduction sharing of the LB Alternative among Basin States and Mexico, noting that the reductions to Mexico will be determined in a separate binational process. He highlighted the reductions in the Static Reduction Zone: 760,000 AF for Arizona, 440,000 AF for California, 50,000 AF for Nevada, and 250,000 AF for Mexico.

How the 760,000 AF might attach to water users in Arizona is still to be discussed out into the future.

In the Initial Reduction Zone, above the Static Zone, percentages of the reduction have been agreed to—more importantly, maybe, the first 240,000 AF is taken by Arizona when you start at that 0 point and go towards the 1.5 MAF. Nevada and Mexico's percentages kick in along with Arizona, but California's does not kick in until after the first stage (300,000 AF). On the flip side, if surplus conditions are reached (and surplus does not start at 69% + 1), if surplus can be taken safely out of the lake, Arizona gets the first 240,000 AF of the surplus. This was the quid pro quo deal cut when agreeing to these percentages and numbers. A table can be created, and through work with stakeholders it will be, but again this formula is what needs to be used to ensure that the ramp line is a smooth line from 0 to 1.5. It would be a pretty big table if you tried to calculate every percentage number, but some benchmarks can be looked at as the process is worked through with all stakeholders.

In the Basinwide Reduction Zone, an agreement could not be reached to date with state partners on how much reduction should attach to Arizona, California, and Nevada. There are different views of how it should work—for example, priority or proportional—but it was not able to be determined in time for Reclamation's March guidance date. The opportunities to continue those negotiations and discussions are out there. The Upper Division states have not agreed to



taking any reductions, which will be seen in discussion of their proposal. The Lower Basin submittal to Reclamation will ask for at least half of the 2.4 MAF delta to be modelled attaching to the Upper Basin. This is the Lower Basin view of equitably sharing in the protection of the system, of equitable sharing in the impacts of climate change on the reduced flows of the river.

Surplus conditions have been addressed briefly already; there has not really been any work done yet on identifying when surplus conditions should start—again, it will not be at 69.0001%. There are surplus criteria under the guidelines that are really spill avoidance criteria. What is being discussed is something in between the start of that 69% and the start of the surplus criteria to avoid spill. A lot of modelling work is to be done, to figure out what a safe surplus number is so that we do not undo the benefits of the reductions that we are all going to take. There has not been time to work through any of that modelling yet, either internally within DWR or with partners in the three states.

An important aspect of the Lower Basin Alternative is the proposed movement of water from Lake Powell to Lake Mead. It was desired to be considerate of Compact requirements, and was believed that under the Compact and the Law of the River, the Mexican obligation is owed half by the Upper and Lower Basin. So, instead of a ten-year 7.5 MAF nut from the Upper to the Lower Basin, it is 8.23 or so. The minimum objective release under the 1970 Long-Range Operating Criteria is 8.23 MAF a year. This is a point of contention, and the Upper Basin does not necessarily agree with it.

The Lower Basin Alternative acknowledges the connection between hydrology and Upper Basin use or depletions. The Lake Powell release to Lake Mead is determined primarily by the Upper Basin reservoirs' live capacity, and by Upper Basin depletions under the release regimes. Under higher levels, there is equalization of the contents of Powell and Mead. This happens at a high level (80%) and will not happen very often. In recognition of the Upper Basin view that "hydrologic shortages" attach to their water users every year, the Lower Basin Alternative lays out a release pattern in which the more water the Upper Basin uses, the more water they release from Powell to Mead. This pattern leaves room for the Upper Basin to grow into a greater use than their present 4.3–4.5 acre-feet maximum, towards the full 7.5 MAF entitlement that they have not yet been able to develop. This is a very new concept but also a very creative one. At lower levels, 30% or below, it starts to get into more of a sharing of what is left in Powell and Mead. There may be some situations in which there is only a 6 MAF release out of Powell to Mead, which will create some real risks to Lake Mead, and bring into question Compact compliance, in either the 7.5 or 8.23 view.

Chair Buschatzke then noted that conservation and storage programs have been very beneficial since the inception of the guidelines. Intentionally Created Surplus is going to be carried forward as this is required under the DCP guidelines, but new storage programs are being looked at past 2026. At this point, there are only concepts without much clarity on how they might work. It is also desired to leave room for the potential that some augmentation might be found and need to be stored in Lake Mead, which was approached as a modelling exercise. A potential example is the Pure Water program that CAP is pursuing with Nevada and California for the reuse of reclaimed water in southern California. This may create 160,000 AF that would need to be in Mead if Arizona is going to benefit, to use as an exchange mechanism with California's 4.4 MAF allocation. Some concerns have been heard about Intentionally Created Surplus creating a perverse outcome in which reductions in Lake Mead are being artificially reduced by having ICS

count as reservoir contents in terms of the triggers. It is likely that storage projects will end up being neutral to avoid that outcome, so that the reductions on the framework chart would not be impacted by these storage accounts. There are still details to work through on that outcome. There is a need to ensure that the reductions are taken that need to be, and that the modelling and the histograms analyze the actual reductions, not something being altered by storage or conservation programs.

Lastly, Chair Buschatzke wanted to mention new information from Reclamation. Reclamation is concerned about cavitation in the river outlet works of Glen Canyon Dam. This was seen during an experimental flow event last spring. These pipes need new relining. There has been some scouring or deposition back towards the face of the dam when these river outlet works are used. Reclamation is building fluvial models in their Denver research center; stakeholders will be given the opportunity to go visit when those are ready to be viewed, to see how it is going to work and look at what fixes may or may not be available. The Lower Basin has advocated, and seems to be on the same page as Reclamation, that if engineering fixes are not available and reductions in flows from Powell to Mead are the only option, they do not fall solely on the Lower Basin's responsibility, which would be a very perverse outcome.

Chair Buschatzke then took an opportunity to talk briefly about the Upper Basin's proposal, in which the entire burden of reductions in the Basin falls on the Lower Basin. Their proposal would assign all of the 3.9 MAF to the Lower Basin alone. In their view, they take reductions pursuant to Mother Nature on a regular basis. The proposal also reduces releases from Lake Powell to Lake Mead, where the Lower Basin only gets 8 MAF or more when Powell is 80% or more full. The Lower Basin can really expect, looking at the Upper Basin proposal, 6 MAF on a regular basis, which would have serious repercussions for the shortage determinations for the Lower Basin and Mexico. And the Upper Basin proposal only looks at Powell and Mead contents, completely discounting anything going on in the Upper Basin CRSP reservoirs. In that regard too, the Upper Basin has taken out of their proposal, as compared to DCP, any actions by the Upper Basin requiring the movement of water from Flaming Gorge or other reservoirs to protect infrastructure at Lake Powell, at Glen Canyon dam, under DROA. They would consider those action items in a completely separate process from this Post-2026 NEPA process. So, there is a long way to go. Chair Buschatzke stated that there is still the desire to have the opportunity to come up with a seven-basin state alternative at some point in near future, maybe before December, maybe before a final EIS and a Record of Decision, but there is a very large gap right now between the Upper and Lower Basin. Currently, the Lower Basin is in the process of trying to have at least a virtual conversation with Upper Basin colleagues in the first couple of weeks of April, and a timeline for that is being worked on. There are lots of other alternatives that might be in the offing, whether that is Reclamation or other stakeholders putting forward alternatives, that might have different outcomes than either the Lower Basin or the Upper Basin, or they might bring the Upper and Lower Basin closer together, depending on how those alternatives might impact the Upper Basin and the Lower Basin collectively.

Chair entertained any questions.

Commissioner Olsen asked for clarification on terminology used on slide 14 for releases from Lake Powell, noting that it was likely the same terminology being used for different reasons. When releases are below 23%, it is a static release of 6 MAF, but under the Lower Basin proposal, a static release would be during the Basinwide Maximum Reduction Zone. He asked if

it was a coincidental terminology of the static release at the Basinwide Maximum Reduction Zone as opposed to also the terminology of the Static Reduction Zone of 58% to 38%. Chair Buschatzke replied that he believed it was static just because the number does not change, unlike the ramps where it is a moving number that changes according to where you are on the ramp. Counsel Klobas also noted that these numbers were determined based on what would achieve results, not necessarily to try to align the Powell releases with the Mead releases. The Chair noted that the lower section of the chart, below 30% Live Capacity, and the Equalization Release above 80%, was more or less the Upper Basin's chart. The Lower Basin created the rainbows in between, as a way of recognizing the variable hydrology in the Upper Basin. Mr. Heffner added that this was probably not exactly what the Upper Basin would have determined because it includes the CRSP reservoirs. Chair Buschatzke agreed.

Commissioner Olsen then noted that the Stress Test shows an average flow of 13.2 MAF from 1988-2020, while the previous presentation on Powell Unregulated Flow showed 9.6 MAF between 1991 and 2020. He asked if the delta was just due to side flows after Powell. Chair Buschatzke noted that he believed the chart was annual. Mr. Heffner double-checked that the question was regarding the unregulated flows versus the natural flows—the CRSS model—and stated that they are slightly different. The natural flows use everything to run the model: any kind of regulation, any kind of diversion. Unregulated flows that are run through for CRMMS and are used for the forecast, they are not quite everything. It accounts for regulation and for some of the major diversions, but they are not the same exact thing. Commissioner Olsen then noted the 3.5-4 MAF difference between the two; he asked what was not being included on the unregulated flows, and if the regulation aspects are being reduced out of the model. Mr. Heffner responded that the difference between the unregulated and the natural flows is that there is a large volume of users in the Upper Basin that do not have measurements. The major ones are captured by the river forecast center when they try to generate the inflows for the simpler CRMMS model. But CRSS attempts to back up everybody, all of those who do not have measurements, so it does add up.

Commissioner Taylor noted an extreme difference between 5% and 42% ramp occurrence of the Basinwide Reduction Zone between the Stress Test and the Paleo Drought Resampled Subsample, respectively. He expressed a desire to understand more what the Bureau of Reclamation is going to be looking at when they do make a decision, since the Basinwide Reduction Zone is where he imagines all the major negotiations are going to happen. Chair Buschatzke said that, while working through the DCP, SEIS, and the May plan that was incorporated into SEIS, the Lower Basin and Reclamation heard continuously from stakeholders that the hydrologies are not dry enough. The Lower Basin has already heard formally from Water Resources Advocates that the current Alternative is not dry enough. Chair Buschatzke emphasized the need to use dry hydrologies. Counsel Nicole Klobas added that, recently, staff from Reclamation and other states have been pulling out individual traces to show what happens over a specific pattern of years. What happens if you have 5 dry years and one really wet year. What happens if you have 20 dry years in a row. What happens if you have a dry year that we have never seen likes of before in recorded history in middle of it. She noted that this seems a lot more useful for water managers to be able to evaluate whether an outcome seems not only fair, but also like good policy, and results in proper management of the River when looking at this combination of circumstances rather than just looking at an overall average of hydrologies and assuming that what is going to be the outcomes is that average. Because usually the concern is not what that average is, if its 13 MAF or 9 MAF, but instead the greater concern is

whether the average is either one of those, what about the year when it is 4 or 6 MAF, and what about the year where it is 15 MAF that gets thrown in among several years of 8 MAF years, or 6 MAF years. She believes that is a lot of what is going to be happening, evaluation of individual traces and a combination of individual traces just to see how the system works overall.

Chair Buschatzke added that when one looks at the range of the two climate change models, CMIP 3 and 5, they are much bigger than when one looks at the historical data range. Mr. Heffner concurred, and added that even the Post-Pluvial NPC Adjusted has a lot more range to it. It does have some drier traces, but it has really wet sequences too. This is why the three charts show a larger percent ramp occurrence in the Initial and Static Reduction Zones than the Stress Test chart.

Chair Buschatzke asked for further questions or comments from the Commission. There were none.

### **VIII. Consideration of action to go into Executive Session of the Commission**

Chair Buschatzke entertained a motion to go into executive session of the Commission for the purpose of:

- a) obtaining legal advice from its attorneys on agenda item No. 7, and
- b) the Commission giving direction to staff regarding contract negotiations regarding potential LTSC purchases, pursuant to A.R.S. § 38-431.03(A)(3).

Executive session is not open to the public.

Commissioner Olsen moved to enter executive session. Commissioner Braun seconded the motion. Chair Buschatzke asked for a discussion. There was no discussion. The motion passed unanimously.

The Executive Session started at 11:30 a.m.

The regular session reconvened at 12:50 p.m.

### **IX. Consideration of Action regarding items discussed in Executive Session**

Chair Buschatzke said no action will be taken pursuant to agenda item No. 8a as discussed in Executive Session. Chair Buschatzke asked if the AWBA was seeking some direction from the Commission pursuant to agenda item No. 8b as discussed in Executive Session. Dr. Bernat replied in the affirmative.

Commissioner Olsen made a motion to direct AWBA staff to proceed as discussed in Executive Session. Commissioner Taylor seconded the motion. Chair Buschatzke asked for further discussion by Commissioners. There was none. The motion passed unanimously.

## **X. Call to the Public**

Chair Buschatzke called for public comments. There were no comments.

### **Future Meeting Dates:**

Monday, June 17, 2024

Wednesday, September 11, 2024

Wednesday, December 11, 2024

The meeting adjourned at 12:53 p.m.