

### INTEGRATED RESOURCE PLANNING ADVISORY COMMITTEE 2020 MEETING SUMMARY

December 18, 2019, 3:00 p.m.

# Colorado River Conference Rooms, Southern Nevada Water Authority 100 City Parkway, 7th Floor, Las Vegas, Nevada

IRPAC members present:	Ken Evans Carol Jefferies Paul Moradkhan Jonas Peterson John Restrepo	Peter Guzman Andy Maggi Bob Murnane Phil Ralston Virginia Valentine
IRPAC members absent:	Tom Morley	
Staff present:	John Entsminger Kevin Bethel Andy Belanger Peter Jauch Zane Marshall Colby Pellegrino Jordan Bunker	Dave Johnson Ken Albright Tabitha Fiddyment Greg Kodweis Doa Meade Katie Horn
Others present:	Terry Murphy, Facilitator Guy Hobbs, Financial Consultan	t

#### PUBLIC COMMENT

There were no speakers.

#### SUMMARY OF ACTIVITIES

The Southern Nevada Water Authority's (SNWA) Integrated Resource Planning Advisory Committee 2020 (IRPAC 2020) met on Wednesday, December 18, 2019. The meeting began at 3:04 p.m.

*#1 Approve agenda and minutes from the November 20, 2019 meeting.* Peter Guzman motioned to approve the agenda and minutes from the November 20<sup>th</sup> meeting. The agenda and minutes were approved.

At the previous meeting, there was discussion about a potential time change for future committee meetings, but Terry Murphy indicated that there was no desire among the committee to change meeting times.

#2 Receive an overview of the Southern Nevada's water resources. John Entsminger, General Manager, reviewed the total proposed SNWA capital budget from the previous meeting and stated that today's presentation focuses on water resources and that the next meeting will focus on water conservation, and added a \$162.3 million contingency for resources and conservation onto the proposed capital budget.

Colby Pellegrino, Director of Water Resources, gave an overview of the SNWA's water resources beginning by reviewing its history, citing the 1922 Colorado River Compact, the 1928 Boulder Canyon Project Act and the Mexican Water Treaty of 1944. She stated that through the 1970s, Southern Nevada relied exclusively on groundwater supplies to meet demands until the Southern Nevada Water System became operational, granting access to Nevada's Colorado River allocation. She discussed the growth in the valley that took place over the next 30 years, which required the use of the Colorado River allocation and the need to look into other water resource options.

Ms. Pellegrino outlined the banking agreements the SNWA has with the states of Arizona and California and reviewed the 2001 Interim Surplus Guidelines. Following adoption of the Interim Surplus Guidelines, drought significantly reduced storage levels in lakes Powell and Mead, underscoring the need for a cooperative approach to drought among the Basin States. Ken Evans asked how long lake levels in Lake Mead have been monitored. Ms. Pellegrino responded that lake levels have been monitored daily since the dam became operational and that only a few years ago, the lake recorded its lowest elevation since it was filled following construction of Hoover Dam. She also discussed the 2007 Interim Guidelines, which addressed several ongoing basin concerns at the time, including shortage volumes and the formation of the Intentionally Created Surplus (ICS) – the ability to store water in Lake Mead. Phil Ralston asked if shortages have caused SNWA to access other water resources. Ms. Pellegrino stated that there has never been a shortage declared on the Colorado River to date, and the SNWA has not had to access or use temporary water resources.

Ms. Pellegrino discussed in more detail ICS as a resource, including Tributary Conservation, Extraordinary Conservation and System Efficiency. She noted that ICS is possible because of the partnerships on the river and serves as an example of how cooperation yields better results than conflict. Mr. Evans asked that if water is being banked, should Lake Mead levels go up. Ms. Pellegrino responded that Lake Mead levels have gone up as a result of these programs, but at today's levels and the size of Lake Mead, it is somewhat insignificant adding roughly only three feet of elevation. The Yuma Desalting plant is one example of a System Efficiency ICS and is the largest brackish desalination plant in the United States. The SNWA received more than 3,000 acre-feet of water from funding a one-year pilot program at the plant. She also highlighted the Brock Reservoir as a System Efficiency ICS project, a project that has provided SNWA with 400,000 acre-feet of water as a temporary resource. Mr. Ralston asked if the water going into Brock Reservoir is water that SNWA plans to save by spending money to put it into storage. Mr. Entsminger clarified that the water going into the reservoir is water that was lost to the system every year but is now being captured because of the reservoir. Ms. Pellegrino went on to highlight the interstate partnerships with Central Arizona Project (CAP) and Metropolitan Water District of Southern California (MET). Ms. Jefferies asked if the Yuma Desalting plant was still in operation to which Mr. Entsminger stated that it is not and SNWA's involvement was only a pilot project.

Ms. Pellegrino gave an overview of Bi-National discussions with Mexico that followed the completion of the 2007 guidelines and reviewed the Minutes that helped frame and establish these negotiations (Minute 316, 317, 318, 319 & 323). There are more than 23,000 acre-feet of Bi-National ICS credits. Mr. Evans asked if the nation of Mexico pays for some of the actions within the Bi-National discussions. Mr. Entsminger stated that Mexico funding doesn't necessarily come to the State of Nevada, but both U.S. federal and Mexican funding goes into the Minutes.

After 14 years of sustained drought, the threat of reaching critical elevations in the Basin's two principal reservoirs had significantly increased. In 2014, the Colorado River Basin states began to evaluate and develop strategies to reduce the risk. The Drought Contingency Plan was forged among the river's users

to reduce the risk of the reservoirs reaching critical elevations. Ms. Pellegrino gave a hydrology update and showed the inflows to Lake Powell from the year 2000 to 2019. Overall, the last 19 years is one of the lowest 19-year period on record, with only 5 years of above average inflows. She also stated that storage within the Basin's two major reservoirs remain less than 50 percent.

Ms. Pellegrino gave an overview of the SNWA's Water Resource Plan which is influenced by various factors such as drought, climate change, economic conditions and adaptive management. SNWA's Water Resource Portfolio includes a diverse set of resource options to reliably meet current and future demands and are labeled as either permanent, temporary of future resources.

	Permanent Resources	Temporary Resources		Future Resources	
•	Colorado River	٠	Southern Nevada banking	٠	Virgin River / Colorado River
•	Unused river water	٠	Arizona banking		augmentation
•	Tributary Conservation ICS	•	California banking	٠	Desalination
•	Groundwater rights	٠	ICS	٠	Transfers and exchanges
				•	In-state groundwater

Ms. Pellegrino noted that while groundwater permits are in future resources, they remain subject to ongoing litigation. She stated that the SNWA Board has not authorized construction of the project and this Major Construction and Capital Plan (MCCP) amendment does not include funding for constructing the Groundwater Development Project.

The SNWA's Water Resource Plan considers a variety of hydrologic scenarios in its planning efforts. This year, the Water Resource Plan implements four water supply scenarios based upon output from the Bureau of Reclamation's model for managing the river: Average Hydrology, Dry Hydrology, Extremely Dry Hydrology and Climate Change Hydrology. Each hydrology scenario is presented with three different demand scenarios: lower, upper and upper with additional conservation.

Mr. Evans asked if all available land in Southern Nevada was developed, what would be the total invalley population. Ms. Pellegrino responded that based on CBER's numbers, the lower demand uses 3.2 million people by 2070 and the upper demand uses 3.99 million people by 2070 and added that the CBER model is job-based, not land-based. Mr. Restrepo asked about the community's current GPCD. Ms. Pellegrino stated that the goal is 105 GPCD by 2035 and as of 2018, current GPCD is 113. Mr. Evans stated that our community has done a great job conserving water and asked if there will be a time when we exhaust our conservation efforts and limit development. Mr. Entsminger stated that new water resources, coupled with demand management in conservation, can present scenarios that will not limit development.

#3 Receive an overview of potential new water resources for Southern Nevada that can be developed through Colorado River partnerships. Ms. Pellegrino reiterated the SNWA has been successful working with Colorado River Basin partners to flexibly manage Colorado River resources and that the community must be prepared to take action when an opportunity becomes available, as future projects take time to evaluate, negotiate, fund and construct. The MCCP amendment includes \$587 million to fund these types of projects, with a contingency if needed. The SNWA is working to further diversify its water resource portfolio and has identified potential resource options, which include investment in a water recycling project in Southern California, a groundwater desalination project in Yuma, AZ, and/or desalination projects on the coastline.

Ms. Pellegrino gave an overview of Metropolitan's regional Recycled Water Program which is a collaboration between MET and Los Angeles County Sanitation Districts where used water from customers would flow to wastewater treatment plants, and then again to a more advanced water treatment plant. From there, it would be injected into groundwater wells for future use. The total project cost is \$3.4 billion to construct and would create approximately 112,000 acre-feet of water per year. Mr. Evans asked about the collaboration with the State of California. Ms. Pellegrino stated that we would partner with MET to help fund a portion of this project in exchange for MET using less of their Colorado River allocation. Mr. Ralston asked if that would become an additional, permanent water resource. Mr. Entsminger stated that he would call it a long-term resource as Southern Nevada would likely require a minimum of 50 years, but that more negotiation is needed if the committee and board greenlight this opportunity. Virginia Valentine asked why California would be interested in other partners. Mr. Entsminger stated that MET would be seeking an additional funder, which would be an incentive.

Ms. Pellegrino introduced the Yuma Desalting Project and reviewed SNWA's involvement in the pilot project and discussed what this might look like as a long-term operational alternative. The project is smaller than the MET project, and would likely yield approximately 30,000 acre-feet per year.

Ms. Pellegrino also introduced the Carlsbad Desalination Plant project as an example of a working desalination plant but noted that the SNWA is not aware of any desalination projects being developed in California where there would be an opportunity for partnership. The existing plant produces 56,000 acre-feet each year.

The committee was shown impacts that these potential new resources would have on Southern Nevada's water supply given various hydrologic and demand scenarios. Mr. Entsminger added that in these scenarios, SNWA is assuming bad hydrology over the next 50 years with more demand, but it also shows that Southern Nevada, through additional water resources and demand management, has the tools to meet that combined challenge.

Mr. Restrepo asked how much water would the SNWA receive if it invested in the MET project. Mr. Entsminger estimated a conservative range of 20,000 to 25,000 acre-feet annually, but it would depend on SNWA's investment into the plant. Ms. Jefferies asked how soon MET customers would have access to the injected water. Mr. Entsminger stated that it would likely take approximately 10 years to permit and build, but once operational it should be immediate as they could use their aquifers as an underground storage and access the water when needed.

MCCP: Water Resources Capital	
Future water supplies	\$587.7 million
Virgin and Muddy River	98.4 million
Minute 323	36.4 million
Arizona Water Banking	5.5 million
Total Water Supplies	\$728.0 million
+ Water Smart Landscaping	152.3 million
	\$880.3 million
+ Resources/Conservation Contingency	\$162.3 million
TOTAL MCCP RESOURCES	\$1.04 billion

## **Total SNWA Capital**

Major Construction and Capital Plan	\$3,165.6 million
Facilities	\$2,123.0 million
Water Supplies	728.0 million
Water Smart Landscaping	152.3 million
Resources/Conservation Contingency*	162.3 million
Operating Capital	176.7 million
Capital Equipment	50.0 million
Lower Las Vegas Wash	122.5 million
TOTAL SNWA CAPITAL	\$3.51 billion

Mr. Entsminger stated that the SNWA will seek recommendations from the committee about moving forward with these potential new water resources with an intent to have further discussions with MET in the March/April 2020 timeframe. He stated that, if the committee agrees, staff will continue to gather information on the MET project. Mr. Evans asked about California's commitment to water conservation. Mr. Entsminger stated that MET, with a population of 19 million people, is using approximately the same amount of water as they used in 1990, so they are doing a good job in water conservation. Mr. Ralston assumes these types of initiatives would have rate impacts and implications and stated that perhaps that information be available and presented before making recommendations. Mr. Entsminger asked if the committee would like to receive financial modeling on how funding a future resource of this magnitude would look like, to which the committee agreed.

Peter Guzman asked about the economic impact and job creation impact these new projects would have on Southern Nevada. Mr. Entsminger stated that these types of projects help stabilize our water resources and that is the impact they have on the community, with water resource uncertainty coming as early, potentially, as 2050.

Ms. Murphy summarized by stating that in a future committee meeting staff will present funding scenarios that will show how to pay for these potentially new resource projects. She closed the meeting and stated that the next meeting will be held January 8<sup>th</sup>.

#### **PUBLIC COMMENT**

Ed Uehling stated that the water resource alternatives presented by SNWA staff, such as desalination plants, are better options than the in-state groundwater development project. He also presented water conservation alternatives and ideas, and suggested expanding the tiered water system.

## ADJOURNMENT

The meeting was adjourned at 4:59 p.m.