

**MEETING OF THE
INTEGRATED RESOURCE PLANNING ADVISORY COMMITTEE
MEETING SUMMARY**

October 15, 2014, 3:00 p.m.

Colorado River Conference Rooms, Southern Nevada Water Authority
100 City Parkway, Seventh Floor, Las Vegas, Nevada

IRPAC Members Present	Chris Armstrong	April Mastroluca
	Tom Burns	Bobby Miracle
	Thalia Dondero	Paul Moradkhan
	Bob Ferraro	Terry Murphy
	Joyce Haldeman	Phil Ralston
	Warren Hardy	John Restrepo
	Carol Jefferies	David Scherer
	Jennifer Lewis	Danny Thompson

IRPAC Members Absent	Yvanna Cancela	Otto Merida
	John Guedry	Virginia Valentine
	Katherine Jacobi	

Staff Present:	John Entsminger	Ken Albright
	Dave Johnson	Andy Belanger
	Phil Speight	Zane Marshall
	Julie Wilcox	Kathy Flanagan

PUBLIC COMMENT

For full public comment remarks, please visit www.snwa.com/apps/agenda/snwa/index.cfm

There were no persons wishing to speak.

SUMMARY OF ACTIVITIES

The SNWA's Integrated Resource Planning Advisory Committee (IRPAC) met on Wednesday, October 15, 2014. The meeting began at 3:07 p.m.

Approve the meeting summary for September 10, 2014. There being no comments or questions, the meeting summary was approved by the committee.

Item No. 1: Approve the meeting summary for September 10, 2014

The meeting summary was approved without comment.

At the previous meeting, the committee finalized the attributes and discussed SNWA's conservation efforts. Committee members discussed the consensus it reached at its June 2014 meeting that the risk of Lake Mead elevation dropping below elevation 1,000 feet is unacceptable. Dave Ebersold,

Facilitator, explained that today's meeting would focus on developing recommendations to address this threat.

John Entsminger, SNWA General Manager, introduced Chris Armstrong, who will represent the golf course industry on the committee. He is replacing Garry Goett. In addition, Paul Moradkhan will be replacing Brian McAnallen of the Las Vegas Metro Chamber of Commerce.

Item No. 2: Receive a presentation on Water Resource Planning

Mr. Entsminger explained that SNWA reviews its Water Resource Plan annually to ensure the community will have sufficient water resources into future. The first Water Resource Plan was written in 1996 and the most recent was revisited in 2009. If IRPAC's final recommendations are adopted by the SNWA Board of Directors, they could help shape future resource planning efforts.

SNWA's water resources can be separated into permanent, temporary and future supplies.

PERMANENT RESOURCES - examples include SNWA's allocation from the Colorado River, return-flow credits and water rights on the Virgin and Muddy Springs rivers.

TEMPORARY RESOURCES - examples include banked water in Arizona and California.

FUTURE RESOURCES - on the planning horizon but not yet available. Examples would be the In-state Groundwater Project, desalination or system conservation.

The basis for determining future water demand is primarily dependent upon population growth over the next 50 years. SNWA utilizes population projections supplied by the Center for Business and Economic Research (CBER) at the University of Nevada, Las Vegas. CBER projects Clark County's population to grow 1.1 percent annually over the next 50 years. In addition to using CBER's population growth estimate, SNWA also modeled a slightly faster population growth rate of 1.5 percent, based on the potential for a stronger regional economic recovery and to plan conservatively.

To demonstrate how SNWA's permanent, temporary and future resources may be used to meet water demands over the next 50 years, Mr. Entsminger reviewed several scenarios of potential water supply and demand conditions and how different water resources would be utilized at different times. Each scenario assumed a different combination of population growth rate and water supply/drought condition on the Colorado River. All were based on a GPCD of 199. The scenarios were:

1. CBER 2014 Scenario and Normal Conditions

Assumes CBER's population projection and normal conditions on the Colorado River going forward. In this scenario, there is little need for additional water resources during the next 50 years.

2. CBER 2014 Scenario and 20,000 acre-foot Annual Shortage

Assumes CBER's population projection and a 20,000 acre-foot annual shortage condition on the Colorado River. A 20,000 acre-foot curtailment is currently the largest annual cut SNWA would be required to take due to shortage conditions on the Colorado River.

3. CBER 2014 Scenario and 40,000 acre-foot Annual Shortage

Assumes CBER's population projection and 40,000 acre-foot annual shortage condition on the Colorado River. A 40,000 acre-foot curtailment is double SNWA's maximum shortage share based on the current agreement among the Basin States.

4. Economic Recovery Scenario and Normal Conditions

Assumes a higher population growth rate with normal conditions on the Colorado River.

5. Economic Recovery Scenario and 20,000 acre-foot Annual Shortage

Assumes a higher population growth rate and 20,000 acre-foot annual shortage condition on the Colorado River.

6. Economic Recovery Scenario and 40,000 acre-foot Annual Shortage

Assumes a higher population growth rate and 40,000 acre-foot annual shortage condition on the Colorado River. It is also the most aggressive scenario in terms of needing future resources.

Regardless of the scenario, SNWA has enough water resources to meet demand until 2035.

David Scherer asked if any one scenario was more probable than another. Mr. Entsminger said the Colorado River has experienced below-average hydrology over the last decade and he would be surprised if the river was not in a shortage condition by 2064. However, it is also unlikely that SNWA would be required to take either a 20,000 or 40,000 acre-foot cut in its annual allocation every single year going forward; some years are going to be above average years on the Colorado River.

Thalia Dondero asked if higher water use by other Basin States would influence the scenarios. Mr. Entsminger confirmed that Lake Mead would decline at a faster rate, but that variable had been included in the water resource demand models.

Warren Hardy suggested that conservation affects both permanent and temporary resources. Mr. Entsminger agreed, but made the point that SNWA is not immediately planning on replacing its temporary resources since those resources would not be needed for at least 20 years. Mr. Ebersold clarified that conservation lowers the demand line in future years.

Phil Ralston suggested that the committee compare the costs of conservation efforts to costs of securing new water resources. Mr. Entsminger said some conservation efforts can be quantified easily, such as SWNA's landscape conversion program where a certain amount of money is spent by SNWA to save a specific amount of water. Comparing the costs of other conservation programs to the costs of additional water resources would be more difficult, but that information could be studied, he said.

Mr. Entsminger emphasized that regardless of the specific scenario, SNWA has adequate water resources to meet demand well into the future. For the immediate term, physical access to water, not additional new water resources should be the focus.

Item No. 3: Apply attributes to conservation issues and draft recommendations.

Mr. Entsminger turned to the topic of water conservation and reminded the committee that local conservation efforts, regardless of how aggressive, would not impact SNWA's ability to access water from Lake Mead. In addition, local conservation does not eliminate the need for future resources; it just pushes them into the future a number of years.

To assist the committee in forming its recommendations, Mr. Entsminger raised questions that could help foster discussions.

Question: Should SNWA adopt a more stringent GPCD trajectory of 185 at this time, or should the current goal be maintained until it is achieved or Permanent Resource availability dictates additional reductions?

Terri Murphy asked how much SNWA would need to expend to achieve a GPCD of 199, SNWA's current goal. Mr. Entsminger said that SNWA's existing conservation budget would be sufficient to meet that goal by 2035.

SNWA has spent approximately \$300 million on conservation programs in order to lower GPCD from 314 to 212. It will require expenditures of \$115-\$380 million to achieve a GPCD of 199, depending on whether future conservation efforts are mandates or incentive-based (incentives cost more).

To lower GPCD from 199 to 185, it would require spending an additional \$60-\$115 million. Going from a GPCD of 199 to 185 delays future resource needs by approximately 6 years (from 2037-2043).

Mr. Ralston and Mr. Scherer expressed doubt whether SNWA should strive for a GPCD of 185 in light of the relatively high incremental costs required to achieve that level of conservation. Ms. Murphy expressed concern that if SNWA simply decided to make its GPCD goal 199 without additional comment or justification, it could be negatively interpreted by the public.

After some discussion, the committee recommended SNWA continue its aggressive conservation efforts and maintain its current GPCD goal of reaching 199 by year 2035. However, when 199 is achieved, the SNWA Board of Directors should reevaluate the option to reduce GPCD further.

Question: Should SNWA staff present to the Board of Directors and the community water usage information in both "gross" and "net" terms for the purposes of more accurately conveying water resource implications associated with various conservation measures?

Mr. Entsminger reviewed the purpose of using both gross and net water use figures. Gross GPCD is valuable in evaluating facilities because it reflects water deliveries. Net GPCD reflects the recycling of water and better reflects SNWA's water footprint when compared to other cities. Net consumptive use is also helpful in communicating to customers the importance of outdoor conservation.

The committee recommended SNWA present GPCD information in both "gross" and "net" terms, as appropriate.

Item No. 4: Receive a presentation on Colorado River System Conservation

System conservation pertains to keeping enough water in Lake Mead to be able to access SNWA's Colorado River allocation using its intakes, which are located at specific lake elevations.

Mr. Entsminger explained that system conservation, 1) positively affects the elevation of Lake Mead; 2) reduces the risk, duration and magnitude of Colorado River shortages for Southern Nevada; 3) does not yield additional water resources for SNWA.

Question: Should the SNWA continue to partner with other Basin States to protect critical elevations in Lake Powell and Lake Mead? And, should the SNWA Board of Directors begin budgeting sufficient funds to enact system conservation projects on a significant scale?

Mr. Entsminger said SNWA is partnering with other Basin States and the U.S. Bureau of Reclamation in an initial system conservation pilot project. One of the primary goals of the pilot project is to determine what kinds of conservation tactics have the potential to work if additional funds are spent.

Carol Jefferies asked if SNWA's participation in system conservation efforts is proportional to the amount of water SNWA receives from the Colorado River (1.8 percent). Mr. Entsminger said depending on the circumstance, SNWA may contribute more to a given project if the project benefitted SNWA particularly important way, such as in protecting Lake Mead elevations.

Tom Burns asked what other pilot programs are being considered. Mr. Entsminger listed brackish desalination, agricultural irrigation upgrades, land fallowing and weather modification as examples.

Ms. Jefferies stated that SNWA's level of participation in any future system conservation project should be partly based on the hydrologic situation at that time. Mr. Entsminger agreed that each project will have varying levels of participation based on each partner's individual goals and water supply circumstance.

Mr. Ralston asked how system conservation programs would be funded. Mr. Entsminger said funding would sometimes be a pay-as-you-go, and in other cases, it may require a one-time capital expenditure. Mr. Ralston asked if a separate account should be created to start accruing funds to spend on future, yet to be determined, system conservation efforts. Mr. Entsminger suggested SNWA's capital expense account may be able to fund these types of projects. IRPAC would need to specifically recommend that future system conservation projects qualify as one-time capital expenditures.

The committee made a recommendation that SNWA maintain its partnerships with other Basin States to explore ways to keep Lake Mead elevations above critical levels and to authorize revenues collected from rate increases which may be put toward projects used for system conservation. Additionally, the committee recommended that the SNWA's system conservation efforts be contingent upon participation from other basin states.

Item No. 6: Apply attributes to Intake Pumping Station No. 3 and draft recommendations

Intake Pumping Station No. 3 (IPS3) will allow SNWA to access water from Lake Mead down to below elevation 900 feet. IPS3 will take approximately one year to design and four years to construct. It will be designed to pump up to 900 million gallons per day, equal to SNWA's current pumping capacity. The average monthly bill for residential customers is expected to increase by \$3-\$5 dollars, depending on the final construction costs.

Mr. Entsminger indicated that system conservation efforts would be especially important during the construction of IPS3 because SNWA needs Lake Mead to be above elevation 1,000 feet in order to use its existing pumping stations (Intake Pumping Stations No.1 and No.2.). If the lake were to drop below 1,000 feet before IPS3 is completed, SNWA would be unable to pump water from Lake Mead.

If Lake Mead were to fall to 900 feet, there is another consideration; water quality would significantly decrease and require extensive additional treatment. To what extent the water would need to be treated

has yet to be determined, but treating the water to current standards would require a significant investment in new infrastructure.

Ms. Jefferies asked for the status of the 3rd Intake project. Mr. Entsminger informed the committee that tunnel construction for Intake No. 3 is 90 percent complete at this time. It is expected that all tunneling activities will be done by the first quarter of 2015 and the entire project complete by the end of 2015.

Question: Does IRPAC recommend that SNWA construct Intake Pumping Station No. 3? If so, should the SNWA initiate design and construction activities immediately or establish a “trigger” elevation or hydrologic trend?

Mr. Entsminger said there are Colorado River flow models present that make the need to start construction of IPS3 appropriate. On the other hand, Colorado River users could luck out and experience some bountiful water years, which would reduce the threat; it is hard to be certain. Mr. Entsminger suggested a potential trigger could be the shortage declarations established by U.S. Bureau of Reclamation, which set specific Lake Mead elevations as a basis to define shortage conditions.

Ms. Lewis asked how soon SNWA could begin construction of IPS3. Mr. Entsminger said that IPRAC is expected to finalize its recommendations by early 2015. Depending on direction from SNWA Board of Directors, design work for the project could potentially begin mid-2015.

John Restrepo said in order to ensure the community has sufficient water resources in the future as well as access to those water resources, SNWA should take a multipronged approach, which includes the construction of Pumping Station No. 3. The risk to the regional economy from not building IPS3 is far greater than if it is built now, he said. Mr. Hardy suggested that SNWA start the design phase at this time. Ms. Dondero concurred, and emphasized the community needs to prepare for the likely future.

The committee made a recommendation that SNWA proceed with designing ISP3 and not wait for a specified trigger. However, this recommendation is contingent upon the committee addressing the issue of how to fund it.

Mr. Scherer asked if the committee would be receiving a financial analysis of the project. Mr. Entsminger said the next meeting will have an extensive presentation on the financial aspects of the project. Guy Hobbs of Hobbs/Ong & Associates (SNWA’s financial consultant) will provide an overview of the financing options, potential changes to water rates and SNWA’s ranking among western water providers. In preparation for the discussion, the committee requested that costs associated with its recommendations be modeled entirely on fixed charges, entirely on variable charges and using a 50-50 fixed/variable split.

Mr. Ebersold said that today's meeting summary, the final list of attributes with the scoring sheet, and a list of draft recommendations will be distributed next week to committee members for their review. The next meeting is scheduled for November 5, 2014. Note: A second, additional meeting was scheduled for November 19, 2014, if needed.

PUBLIC COMMENT

For full public comment remarks, please visit www.snwa.com/apps/agenda/snwa/index.cfm

None.

ADJOURNMENT

The meeting was adjourned at 5:55 p.m.