

**INTEGRATED RESOURCE PLANNING ADVISORY COMMITTEE
MEETING SUMMARY**

June 18, 2014, 4:00 p.m.

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

IRPAC Members Present	Thalia Dondero Bob Ferraro John Guedry Joyce Haldeman Warren Hardy Katherine Jacobi Carol Jefferies Jennifer Lewis	Brain McAnallen April Mastroluca Otto Merida Terry Murphy John Restrepo David Scherer Danny Thompson Virginia Valentine
IRPAC Members Absent	Tom Burns Yvanna Cancela Garry Goett	Bobby Miracle Phil Ralston
Staff Present:	John Entsminger Phil Speight Julie Wilcox Dave Johnson Marc Jenson	Ken Albright Andy Belanger Zane Marshall Katie Horn

PUBLIC COMMENT

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

Thalia Dondero shared photographs from the Southern Nevada Water Authority's Integrated Resource Planning Advisory Committee facility tour of May 23, 2014.

Ed Uehling, Las Vegas, discussed the ongoing drought and Lake Mead's elevations. He suggested addressing water management issues instead of drought. He also discussed the committee's attributes, water rates and resource management.

SUMMARY OF ACTIVITIES

The Southern Nevada Water Authority's (SNWA) Integrated Resource Planning Advisory Committee (IRPAC) met on Wednesday, June 18, 2014. The meeting began at 4:05 p.m.

Item No.1: Approve the meeting summaries for April 23, 2014 and May 21, 2014.

IRPAC member Virginia Valentine asked for clarification of the April 23 meeting summary; specifically, the response given by former SNWA Deputy General Manager Kay Brothers, to a question about the annual investment needed to meet the supply-demand imbalance on the Colorado River. Dave Ebersold, facilitator, confirmed it was an annual investment of \$5 billion.

Mr. Ebersold also clarified that the meeting summary of May 21 would be corrected to show the facility tour ended at 6:30 p.m. instead of 7:30 p.m. With no additional comments, the meeting summaries were approved by the committee.

Bob Ferraro complimented SNWA staff on the May 18 tour of SNWA facilities and Lake Mead.

David Scherer said he appreciates Mr. Uehling taking the time to share his comments and hoped there would be more public involvement on issues that are so important to the community.

Item No.2: Receive and update on SNWA fund reserves as they relate to IRPAC's Phase I recommendations.

John Entsminger, SNWA General Manager, updated the committee on IRPAC Phase I recommendations regarding segregated operating funds. Fiscal year 2014-15 projections for Connection Charge revenue and excess fund balance will total approximately \$22 million, which may be applied to debt service or one-time capital charges. He also noted that the recent reduction of 49 full-time positions has resulted in a \$6 million savings, which was applied to asset management efforts.

Mr. Entsminger then briefly described the Water Resources Reform and Development Act (WRRDA) and Water Infrastructure Finance and Innovation Act (WIFIA), both federal programs that provide low cost loans and other funding opportunities to water purveyors.

Item No.3: Receive and update on current drought conditions.

Mr. Entsminger provided the committee with an update on the condition of the Colorado River Basin: the western slope of the Rocky Mountains received above average snowfall last winter and runoff is under way. Lake Mead is approximately 40 percent full at elevation 1,086 ft. above sea level.

Item No.4: Discuss hydrologic uncertainty and its potential impacts on the SNWA.

Mr. Entsminger went on to discuss how Lake Mead's elevation impacts Southern Nevada, specifically elevation 1,000 feet. Below elevation 1,000 feet, SNWA is unable to pump water from Lake Mead. Mr. Entsminger then reviewed drought projections that showed the possibility of Lake Mead elevations falling below elevation 1,000 feet. Hydrologic models used to make the predictions incorporated historic drought information and demonstrate Lake Mead is at risk of falling below elevation 1,000 feet as early as 2016.

Ms. Dondero asked if the projected Lake Mead elevations factored in potential future growth and water demands. Mr. Ebersold said the chart reflected current demands.

Mr. Scherer requested a cost-benefit-risk overview of Intake Pumping Station No. 3.

Danny Thompson stated that if Lake Mead dropped below elevation 1,000 feet, it would damage Nevada's economy, and IRPAC cannot wait long to make decisions because of the time it takes to implement mitigation measures.

John Restrepo asked how IRPAC can address mitigation efforts without knowing what the other Basin States are doing. Mr. Entsminger said the other states are now discussing what to do beyond the 2007

Interim Guidelines and the existing shortage-sharing agreement among the Lower Basin states. Current discussions include the amount of water each state needs to leave in the reservoir to keep Lake Mead from dropping below elevation 1,000 feet. Mr. Entsminger noted that the declining reservoir is not solely Nevada's issue; at elevation 1,000 feet, only 4 million acre-feet of water remains in the reservoir, which is less than a one-year supply for California.

Mr. Ebersold summarized the comments made by committee members regarding the risk to SNWA's ability to pump water from Lake Mead. The committee agreed that the current level of risk for Lake Mead dropping below elevation 1,000 feet is unacceptable for Southern Nevada.

Dave Johnson, SNWA Deputy General Manager for Engineering and Operations, gave a presentation on the effects of declining Lake Mead water levels on SNWA's water pumping operations.

Mr. Johnson began with an explanation of how the thermocline in Lake Mead affects water quality. The water below the thermocline is colder and of a higher quality. SNWA's original intake (No. 1) was located at elevation 1,050 feet, well below the thermocline at the time. However, when the reservoir began to fall in to fall, an extension was attached in 2006 which allowed continued access to the colder water lower in the lake. Even with the extension, SNWA is unable pump water below elevation 1,050 feet through Pumping Station No. 1.

In 2011, modifications were made to the pumps at Intake No. 2 that increased the system's flexibility and pumping capacity.

SNWA currently operates two water intakes in Lake Mead, each with a pumping station. Intake No. 1 is located at elevation 1,050 feet, and Intake No. 2 at elevation 1,000 feet. If the lake drops below elevation 1,050 feet and Intake No. 1 becomes inoperable, water can be pumped exclusively from Intake No. 2 with Pumping Station No. 2, but SNWA will be required to pay more in energy costs.

If Lake Mead falls below elevation 1,000 feet, Intake No. 2 will no longer be able to pump water.

While Intake No. 3 is located much deeper in the lake (elevation 860 feet as currently configured), it will be limited to pumping water at elevation 1,000 feet because it utilizes Intake Pumping Station No. 2. As originally designed, Intake No. 3 would be constructed with a third pumping station. However, due to the increased capacity of Intake Pumping Station No. 2 and the financial expenditures required, SNWA deferred construction of the third pumping station.

In order for Intake No. 3 to pump water below elevation 1,000 feet, a third pumping station will need to be designed and constructed.

Carol Jefferies asked if there was sufficient time to build the required infrastructure to mitigate the risk. Mr. Johnson estimated it would take 3-4 years to design and construct a third pumping station.

John Guedry suggested IRPAC should be worried about losing Intake No. 1 because if Intake No. 1 became inoperable, the community will then be relying on only one pumping station (No. 2) for its water needs.

Mr. Ferarro asked about the pumping redundancy of the system. Mr. Johnson explained that each pumping station has several pumps which are cycled and most of the pumping occurs at night, when electricity costs are lower.

Mr. Thompson wondered if SNWA could recover some of its electricity costs by installing hydro-generators within its infrastructure. Mr. Johnson said this occurs already but, unfortunately, most of the water delivered by the agency is pumped uphill and consumes all of SNWA's cost savings.

Mr. Entsminger moved on to presenting four categories of options to address declining Lake Mead water levels. Each category is larger in scope and expenditure. The categories are:

Conservation: While Southern Nevada has made great strides in its ability to conserve water; there remain opportunities for additional water savings. Conservation should be the first step and is also the least expensive option for the community.

Interstate Cooperation: Regardless of what Southern Nevada achieves in water conservation, it does not significantly change the lake's elevation. This is because California, Arizona and the country of Mexico together use 97 percent of the water that enters into Lake Mead every year; Nevada receives about 3 percent of the total. To significantly influence the water level in Lake Mead, cooperation among the Lower Basin States is required. Among other things, this may include a financial investment by each stakeholder to study and explore new ways to manage the reservoir. Costs associated with these types of intermediate-step projects are estimated to be in the millions of dollars.

Facilities: Examples of new or modified projects include constructing a third pumping station to pump water from an elevation lower than 1,000 feet or modifying SNWA's existing water treatment facilities to manage degraded water quality, which is expected to occur as Lake Mead shrinks in size. Costs associated with these types of projects are estimated to be in the tens of millions of dollars.

Supplies: If the SNWA lost its ability to access its Colorado River allocation, the community would require an alternative water supply, such as in-state groundwater resources or desalination. Mr. Entsminger shared Australia's experience as they addressed drought on the Murray-Darling River; the Australian government invested \$10 billion in six desalination plants, only to mothball four of them because cheaper alternatives became available. Mr. Entsminger emphasized that while large water supply projects are sometimes warranted, they should be evaluated against other practical alternatives first. Costs associated with these types of large-scale water supply projects can exceed \$1 billion. Mr. Entsminger asked IRPAC to consider the parameters as to how SNWA should move from one alternative to another.

Mr. Guedry said he is looking forward to offering recommendations, but asked for a commitment from the SNWA that all the information conveyed to IRPAC is honest and transparent. Mr. Entsminger offered to provide any information that would make IRPAC members feel suitably informed on the issues and assured them that their task was genuine. He also underscored the importance of their duty; SNWA has an obligation to ensure a safe and adequate water supply for more than 2 million people and is looking to IRPAC for recommendations in how best to proceed in the face of a potentially extended drought. Mr. Guedry indicated his past experiences with the organization demonstrated honesty and transparency.

Item No.5: Develop a list of attributes to consider when developing recommendations.

The committee then turned its focus to discussing potential attributes in order to compare potential mitigation measures. Mr. Ebersold solicited IRPAC members for an initial list of attributes that would be further developed in upcoming meetings. Member suggestions included:

Attributes:

- Reliability: ability to maintain health and safety of nearly 70 percent of the state's population
- Public awareness
- Economic sustainability
- Efficiency and cost savings (leverage technology)
- Cost
- Impacts to lifestyle / quality of life (for example, pool and turf restrictions)
- Awareness of the impact of "crying wolf," but recognizing real impacts
- Time needed to implement
- Equitable: impacts to different types of users
- Regional collaboration / collaborative approach to solutions
- Gives the assurance that the risk is minimized
- How is growth affected?
- Rate impacts of IPS-3 (and other mitigation measures)

Item No.6: Discuss committee requests for additional information to develop recommendations.

Mr. Ebersold asked IRPAC members what additional information was needed for the committee to evaluate options to mitigate the risk of Lake Mead falling below 1,000 feet. The ensuing discussion included questions concerning future growth in the region and if SNWA could accommodate that growth. Mr. Entsminger reminded the committee that SNWA's water supply was adequate to provide for future growth; the immediate concern is to protect access to SNWA's Colorado River allocation.

Ms. Valentine asked that future discussions of the attributes include possible impacts to the regional economy from mitigation efforts.

Ms. Dondero asked about the new economy of marijuana cultivation in Southern Nevada and if growing marijuana plants would consume a large amount of water. Mr. Entsminger said the amount of water used by that industry is estimated to be relatively small.

Mr. Scherer requested a report on the financial impact on water rates from the construction of Intake No. 3 and other infrastructure.

Mr. Restrepo requested more information on the regional discussion among the Lower Basin States.

Mr. Ebersold said the attributes would be further be developed and weighed at the next meeting and thanked the committee for its input. Mr. Ebersold reminded IRPAC members that the next meeting is scheduled for July 23, 2014.

PUBLIC COMMENT

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

Ed Uehling, Las Vegas, complimented Mr. Entsminger on his comments regarding conservation and water supplies, but was critical of SNWA's water management, personnel costs and water rates.

ADJOURNMENT

The meeting was adjourned at 6:25 p.m.