INTEGRATED RESOURCE PLANNING ADVISORY COMMITTEE
MEETING SUMMARY

July 23, 2014, 4:00 p.m.

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

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

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

Ed Uehling, Las Vegas, urged that SNWA not exaggerate the effects of reduced flows from the Colorado River into Lake Mead. He also expressed concern about what he believes is an inequity related to how different categories of water users pay for water within rate tiers.

SUMMARY OF ACTIVITIES
The Southern Nevada Water Authority's (SNWA) Integrated Resource Planning Advisory Committee (IRPAC) met on Wednesday, July 23, 2014. The meeting began at 4:15 p.m.

Item No. 1 was taken out of order.

Item No. 2: Receive and update on current drought conditions.
John Entsminger, SNWA General Manager, updated the committee on the drought condition in the Colorado River Basin. The 2014 water year started strong, but the Basin received only 30 percent of average precipitation in the month of June. As a result, the forecasted amount of water to flow into Lake Mead in 2014 has been revised slightly lower, to 95 percent of normal.

The Metropolitan Water District of Southern California (MWD) normally utilizes water from California's State Water Project, which conveys water from northern California to southern California, and water from the Colorado River. However, due to the extreme drought in northern California,

MWD will receive little to no water from the State Water Project this year. Consequently, MWD is using its annual Colorado River allocation plus additional water banked in Lake Mead since 2007. A consequence of the added withdrawal is a further decline of Lake Mead. Lake Mead's elevation is now at 1,081 feet, which is the lowest the reservoir has ever been since it was originally filled in 1937.

Bob Ferraro asked how much water California will be taking from Lake Mead in the future. Mr. Entsminger said California has withdrawn most of the water it had banked, and anticipates it to draw its full allocation this year.

Mr. Entsminger reminded the committee that Intake No. 3 is able to draw water from elevation 860 feet. It is conceivable that Lake Mead's elevation could fall below 1,000 feet in the near term. Without the addition of a new intake pump station, SNWA would be unable to pump water below elevation 1,000 feet to the treatment plants and to its customers.

Item No. 1: Approve the meeting summary for June 18, 2014.
The meeting summary was approved without comment.

Item No. 3: Discuss and finalize a list of attributes to consider when developing recommendations.
Facilitator Dave Ebersold asked the committee to consider attributes, which would be used to compare the different alternatives in addressing key issues facing SNWA. He reminded the committee that the attributes should be easy to understand, non-duplicative, measurable and precise in number.

The committee agreed that the attributes of Efficiency, Costs Savings and Rate Impacts be combined.

Although the attributes of Economic Sustainability and Economic Development are related, there was disagreement among committee members whether they should be combined. While Economic Sustainability may be related to SNWA's long-term financial health, Economic Development pertains to fostering new economic activity in the region, partly from an assurance that Southern Nevada has a reliable and adequate water system.

The committee discussed the definition of Implementation Time, as there are number of government agencies with oversight, different levels of technical requirements and other issues such as public acceptance. The committee determined that the attribute of Public Awareness should not be an attribute on its own, but agreed that it is an important factor that needs to be considered as different alternatives are measured. Mr. Ebersold then had the committee refine some of the attributes, beginning with Reliability.

Mr. Ebersold recommended the attributes of Reliability, Impacts to Quality of Life and Equitability be discussed further.

<u>Reliability</u>
Mr. Ebersold suggested using a qualitative scale of 1-5 to rank the potential alternatives in how they address the attribute of reliability.

Mr. Ralston asked if the reliability of SNWA's water system should include its ability to move water all the way to a residents' home or business, beyond the ability to draw water from Lake Mead. Mr. Entsminger said a system must have both adequate water resources and the ability to deliver that water to its customers to be considered reliable.

Cost Efficiency or Cost Effectiveness

Mr. Ralston proposed that unit costs might be compared to water systems similar to SNWA. Mr. Entsminger suggested that the committee use cost per acre-foot as a tool to help compare the cost effectiveness of different alternative options, rather than comparing SNWA's costs to other water systems. Mr. Ebersold agreed that while the attribute only indicates that one alternative is more expensive than another, it is still a valuable tool when comparing alternative options.

Virginia Valentine said it is important to know how an alternative option is used in other water systems in order to consider potential maintenance costs or rate impacts. Mr. Scherer agreed and asked if there is a way to benchmark water costs on an acre-foot basis, in order to make a comparison. Mr. Entsminger said there was some data available to compare, such as the cost of agricultural water leases and the amount other cities pay for water, but there are many factors that are unique to each water system, which makes benchmarking or other types of comparisons difficult.

Mr. Entsminger stated that rate impacts will be modeled when the committee narrows its choice of alternative options. SNWA staff will provide an overview of how the rates may change and its impact to SNWA water rates as compared to other water systems in the West.

Quality of Life

Mr. Ebersold again suggested a qualitative scale of 1-5 for comparison purposes. Mr. Ebersold said the committee would revisit this attribute at the next meeting.

Economic Development

Mr. Scherer stressed that water system reliability is a key consideration for economic development and that while the community should not recruit businesses that use large amounts of water, an adequate and reliable water system must be in place to both assure existing businesses and attract new businesses.

Mr. Ralston concurred that system reliability is important, but also suggested that investments made in system reliability will impact water rates, which conversely could suppress economic development efforts. Mr. Entsminger agreed that reliability is a threshold issue for business as most industries use some water. He suggested that while the community may not want to recruit businesses that use large amounts of water, there are many factors to consider in how a business uses water and what benefits that business brings to the region.

Regional Collaboration

Brian McAnallen proposed that the 1-5 scale be used to quantify options related to the attribute of regional collaboration. Mr. Ebersold offered the example that if SNWA could implement a given alternative with Basin States' support, it would receive a high score, and if the alternative conflicted with the other Basin States or federal regulations, it would get a low score.

Equitable & Implementation Risk

Mr. Ebersold offered two additional attributes for the committee to consider: **Environmental Sustainability** and **Water Use Efficiency**, the latter which could use a metric of gallons-per-capita-per-day, for example. These potential attributes will also be considered at the next meeting.

Item No. 4: Discuss options for interstate cooperation among Colorado River water users.
Mr. Entsminger reminded the committee that there are many Colorado River water users and, therefore, potential opportunities to collaborate on system conservation measures. SNWA and other regional water utilities are starting to make investments to bolster Lake Mead water elevations. In the agricultural industry, examples of system-wide conservation efforts include crop fallowing, deficit irrigation and canal lining. Municipal conservation is especially important if SNWA plans to urge other Colorado River water users to improve upon their conservation efforts.

Another example of collaboration is weather modification. For several years, SNWA has partnered with other Colorado River Basin states in a cloud seeding program that attempts to influence the amount of precipitation that falls from clouds onto the western slope of the Colorado Rocky Mountains. Last year, SNWA contributed $134,000 towards the program.

Recently, SNWA, Central Arizona Project, MWD, Denver Water and the U.S. Bureau of Reclamation partnered in an $11 million pilot project to explore ways to conserve additional Colorado River. Mr. Entsminger asked that IRPAC consider how much of a financial investment SNWA should make toward these types of collaborate efforts.

Mr. Ralston asked what SNWA charged its member agencies for water. Mr. Entsminger reported it is $303 per acre-foot of water.

Mr. Entsminger then showed the committee a graph projecting impacts on Lake Mead if system conservation efforts were able to yield 300,000 acre-feet per year and 600,000 acre-feet per year, respectively. The projections assumed that a drought condition would continue into the future. With 300,000 acre-feet per year in new system-wide conservation, the risk of Lake Mead dropping below elevation 1,000 feet is significantly lessened. By conserving 600,000 acre-feet per year, the risk shrinks further.

Another graph was shown to the committee projecting impacts on Lake Mead from system conservation; however, in this scenario, it was assumed the drought would be more intense, similar to what Southern Nevada has experienced over the last 10 years. Under this scenario, additional system-wide conservation of 300,000 acre-feet per year does not keep Lake Mead above elevation 1,000 feet; however, 600,000 acre-feet does support that elevation. Mr. Entsminger said to achieve these conservation savings would not be easy, but it would provide SNWA with a buffer against Lake Mead falling more quickly.

April Mastroluca asked for an estimate of how much money would be required to fund system conservation strategies that would conserve those amounts of water in the system.

Mr. Entsminger noted that it's difficult to estimate a total amount because of the multitude of users and types of uses of Colorado River water. The value placed on Colorado River water varies, and part of the reason SNWA is participating in the pilot program with other utilities is to evaluate costs.

Item No. 5: Discuss a third intake pumping station in Lake Mead and impacts to water quality from lowered lake elevations.
Dave Johnson, Deputy General Manager of Engineering and Operations, provided information to the committee on a third pumping station and water quality concerns.

Mr. Johnson noted that construction of a new intake pumping station would preserve SNWA's ability to pump water down to Lake Mead elevation 875 feet. Preliminary cost estimates to construct a new pumping station range from $350-550 million. The pump station would maintain SNWA's existing 900 million gallons-per-day (MGD) pumping capacity. The project is estimated to take 1-2 years to design and an additional 4-6 years to build.

Ms. Valentine asked if SNWA had secured the necessary permitting for the project. Mr. Entsminger confirmed SNWA had already completed the National Environmental Protection Act and Endangered Species Act processes because the original concept and design of Intake No. 3 included a pumping station.

A new intake pumping station would be designed to pump 600 MGD to the Alfred Merritt Smith Water Treatment Facility and 300 million MGD to the River Mountains Water Treatment Facility. The large volume of water drawn from Lake Mead plus the need to lift it more than 500 feet to the treatment plants requires a significant amount of electricity.

Mr. Johnson discussed two options for design and construction of a new intake pumping station:

Option 1: Below-ground pumping station. The pumping station would be located below the surface of Lake Mead, near the elevation of Intake No. 3. The advantages of a below-ground pumping station include pumping technology that is widely used and proven, and lower electrical power costs. The disadvantages include a risk of leaks into the pumping station, especially due to the high hydrostatic pressure at that depth.

Option 2: Above-ground pumping station. The pumping station would be located above the surface of Lake Mead and use a submersible pump to draw water from the lake. One advantage of an above-ground pumping station is the risk of a leak or flooding of the station is alleviated. The disadvantages are utilizing pumps that are less proven in the marketplace and higher electricity costs associated with pumping the water.

The engineering evaluation is expected to be completed in August 2014 and will include additional detail on the options, risks and cost estimates. The information will be shared with the committee in September.

Mr. Johnson then spoke about the potential change to Lake Mead water quality as elevations continue to fall. As Lake Mead shrinks in volume, the quality of the water also deteriorates due to higher water temperature, a higher amount of total dissolved solids and influence from urban runoff. These potential changes would require additional treatment methods.

Mr. Ralston asked what would happen if SNWA did not construct a third pumping station. Mr. Entsminger said it would be placing the region at some risk, but it's up to the committee to determine how much risk it is willing to accept. If Lake Mead fell to catastrophic levels, some emergency actions by the federal government could take place, but such reprieves would be unsustainable. For the longer term, SNWA may want to take some action which determines its own fate, and IRPAC can help make that determination. Mr. Entsminger said the situation is challenging but solvable. The SNWA is fortunate in one respect; it has the option of securing its water supply from the Colorado River through infrastructure investment, while other water purveyors in the Southwest do not have that opportunity.

Ms. Mastroluca asked how much it would cost to treat Lake Mead water with deteriorated water quality. Mr. Johnson said SNWA would be able to provide the committee that information at a future meeting.

Mr. Ebersold thanked the committee for their time and attention. The next meeting is scheduled for September 10, 2014.

PUBLIC COMMENT

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

Ed Uehling, Las Vegas, thanked the committee and staff in making the distinction between consumptive and non-consumptive use of water. He disagreed with how SNWA calculates is cost per acre-foot of water and said it was misleading. He also urged the committee to examine what he believes are inefficiencies within the organization.

ADJOURNMENT

The meeting was adjourned at 6:12 p.m.