Appendix C Return Flow Credits and New Water Sources

The Southern Nevada Water Authority (SNWA) earns return flow credits for treated wastewater that is returned to Lake Mead via the Las Vegas Wash. These return flow credits allow the SNWA to withdraw water in excess of Nevada's 300 thousand acre-feet per year (KAFY) basic consumptive use apportionment.

The SNWA does not currently receive return flow credits for non-Colorado River water, such as stormwater or groundwater (SNWA 2006). In their draft recommendations for interim operations however, the seven basin states that rely on the Colorado River urged the Secretary of the Interior to develop procedures that would allow the Lower Basin states to obtain return flow credits for non-Colorado River water.[1,2] This proposal would greatly enhance the SNWA's available water resources. For example, if the SNWA extracts 40 KAFY from Spring Valley with current consumptive use maintained at 60%, then the SNWA would discharge an additional 16 KAFY into the Colorado River via wastewater discharge. Under the proposed recommendation, the SNWA would receive return flow credits for this discharge. These credits would then allow them to divert an additional 27 KAFY water from Lake Mead (of this 27 KAFY, 16 KAFY would be used consumptively and 9 KAFY would be returned as wastewater). The Secretary is expected to make a final decision on this issue when the Record of Decision is released in December 2007.

The new, non-Colorado River sources would affect the number of people that could be served in the Las Vegas Valley. Our analysis suggests that if the SNWA is able to obtain return-flow credits for non-Colorado River water then outdoor conservation efforts can

[1] Weather modification would not qualify as a potential source of return flow credits.

[2] Seven Basin States' Preliminary Proposal Regarding Colorado River Interim Operations. Retrieved September 17, 2007 from http://www.usbr.gov/lc/region/programs/strategies/documents.html (see "Attachment A" under "Coordination/Consultation Materials").

produce water to satisfy new growth-related demands; indoor conservation allows the SNWA to reduce Colorado River diversions while maintaining current demands; and by combining indoor and outdoor conservation, the SNWA could meet the needs of a growing population while minimizing diversions from the Colorado River, thereby reducing energy and other costs.

The same is not true if the SNWA is not allowed to earn return-flow credits for non-Colorado River water. Table C-1 shows how water diversions and the number of households served would be affected by an additional 40 KAFY of non-Colorado River water if the SNWA does *not* get return flow credits for this water. Under this condition, a combined program of indoor and outdoor efficiency efforts maximizes the number of households served while minimizing the total water that must be diverted, pumped, treated, delivered, and returned.[3]

Table C-1 Number of Users Served and Colorado River Diversions Under Various Water Conservation Programs

	User Demand						
Conservation Program	Total (AFY)	Indoor (AFY)	Outdoor (AFY)	Outdoor as Percent of Total Demand	Colorado River Diversion (KAFY)	Consumptive Use (KAFY)	Users Served
Scenario 2a: Baseline	1.0	0.4	0.6	60%	500	300	**540,000**
Scenario 2b: Outdoor Conservation	0.9	0.4	0.5	56%	540	300	**644,444**
Scenario 2c: Indoor Conservation	0.9	0.3	0.6	67%	450	300	**540,000**
Scenario 2d: Outdoor + Indoor Conservation	0.8	0.3	0.5	63%	480	300	**650,000**

References

Southern Nevada Water Authority (SNWA). (2006). 2006 Water Resource Plan. http://www.snwa.com/html/wr_resource_plan.html.

[3] These results, however, make no judgment about the relative costs of these options.