

October 20, 2017

Deputy Administrator - Susan Joseph-Taylor  
Office of the State Engineer  
901 S. Stewart Street, Suite 2002  
Carson City, NV 89701

**Re: Comment:** State Engineer Remand Hearing 9/25/17 to 10/06/17 regarding Southern Nevada Water Authority (SNWA) and White Pine County, Great Basin Water Network, et al.'s groundwater application 53987 through 53992, inclusive, and 54003 through 54021, inclusive:

Dear Ms. Taylor:

In the 21<sup>st</sup> century it is no longer acceptable to appropriate water from southwestern rural communities to support unchartered suburban growth. The need for new major water sources involving billion dollar infrastructure projects, such as SNWA's groundwater development project, are no longer needed, as evidenced by trends in per capita water use in the southwestern cities of Phoenix, Tucson and Las Vegas.

The trends are clear, water consumption as a proportion to population growth have changed. As recently reported, in 2016 the city of Tucson delivered as much water as it had in 1984, despite a 67 percent increase in customer hook-ups, and the trend are the same for Phoenix, Las Vegas and Los Angeles.

SNWA's groundwater development project was conceived in a different time, in a different century - it is simply no longer relevant - a fact the State Engineer cannot ignore.

More importantly, with completion of the "third straw" (i.e., the system now in place to pump water from the bottom of Lake Mead to Las Vegas), the need to spend billions on a new major water source for Las Vegas cannot be justified. Simply put, if water stopped flowing over Hoover Dam, the third straw would continue to support water consumption in the Las Vegas valley.

The threat of real reductions in water allocations from Lake Mead, moreover, will cause California and Arizona to act long before flows from Lake Mead are seriously in question.

**Alternatives:**

While the effects of climate change combined with the over allocation of water from the Colorado River system are real, and notwithstanding the need to expand urban and agriculture water conservation measures -- at some point in the future, California, Arizona [and Nevada] will be forced to address desalinating ocean waters to augment Colorado River flows into Lake Mead.

The question is? Will the State Engineer entertain this reality in his decision over SNWA's groundwater development project, or will he opt to be constrained by Nevada water law and the District Court's decision [i.e. the subject of the remand hearing].

### **Unavoidable Impacts:**

Regardless of how the decision process proceeds, SNWA has yet to demonstrate an effective plan to address damaging impacts its proposed Groundwater Development Project would cause to senior water rights and the environment. A recent federal court ruling has in part substantiated this concern (see: Case 2:14-cv-00226-APG-VCF).

It is well known that Nevada's basin and range topography is unparalleled in the world, its high mountain ranges and close deep valleys are exceptionally unique. It's a one of kind high desert topography that continues to collect snow-melt water which nature "saves" as a precious groundwater. These groundwaters are both primordial and new; they support shallow and deep aquifers that can share connections to each other and within basins. The streams, springs and seeps flowing from these aquifers support ecosystems that are fragile and sparse, and together they sustain countless and diverse habitats throughout Nevada's high desert communities.

Preserving Nevada's Great Basin communities means protecting our groundwater and surface water resources; and without sustainable water, the natural and human environment of the Great Basin will be lost. The State Engineer has a responsibility to be a steward of the Great Basin; to defend its unique and majestic qualities and its diverse and fragile high-desert ecosystems, its tribal cultures, and its rural communities.

Given the complexities about groundwater systems beneath the Great Basin, it's fair to say that uncertainties about how these waters are recharged, and at what rates, remain an open question.

Extracting and transporting thousands of acre feet of groundwater from any of these basins -- for use elsewhere -- calls to question what we know, and don't know, about perennial yields and the relationships among new and primordial waters. Make no mistake; these are questions of legitimate scientific debate, as evidenced during the 10 days of witness testimony and cross-examinations presented at the remand hearing.

The State Engineer decision to approve SNWA's water applications is a difficult one indeed. He must weigh the risk of losing these waters in perpetuity. Are we going to mine the groundwaters in these high desert valleys, and can we really "mitigate" groundwater loss once it has occurred?

Clearly, the proposal by SNWA to build a 300 mile pipeline at a cost of 15 billion dollars to drain "unappropriated" water from the Great Basin is unprecedented in ambition and scope; if implemented, many experts contend that it will cause disastrous impacts to the human and natural environments; impacts that both state and federal courts have called to question.

As a reminder, the impacts of SNWA's proposal have been assessed. They've been documented as "irreversible and irretrievable" adverse impacts and are listed in BLM's Final Environmental Impact Statement for Southern Nevada Water Authorities' "Groundwater Development Project."

The document notes that there would be long-term ecological impacts from the loss of groundwater in the Great Basin from this project. Fugitive dust would result from the loss of vegetation. Groundwater drawdown would reduce the source of water that sustains soils over the long-term. The changes to wetlands and meadows, and vegetation associated with springs and streams would be significant. As well, the loss of perennial surface water would impact wildlife with corresponding loss of habitat. The damage to aquatic habitats in perennial springs and streams from groundwater losses would also be devastating.

Over the long term groundwater pumping would also have profound socioeconomic impacts on tribal and rural communities. Outdoor recreation in the form of hunting, fishing and camping opportunities would be minimized or lost. A reduction in grazing and total agricultural production would occur, resulting in reduced farm populations. The cultural values of the local Native Americans would be diminished in the areas affected by the groundwater.

In making a decision on these water applications, the State Engineer must consider the allocation and beneficial use of water for all Nevadans, not just those in urban areas. The decision must include 21<sup>st</sup> century realities like climate change, higher global temperatures, and perpetual droughts, which together mean less water for everyone.

Regarding inter-basin groundwater transfers, particularly where uncertainties about ecosystem sustainability are unknowable, the State Engineer must acknowledge the legitimate ongoing controversies about the reliability of 3M mitigation plans proposed to reverse the loss of groundwater transfers once implemented.

### **The Decision:**

In any ruling that would deny SNWA's water applications, the State Engineer should cite the need for increased urban water conservation programs including but not limited to expanded graywater systems, rainwater capture, indoor and outdoor efficiency upgrades, water recycling, and tiered water rates, as well as investment to lower the capital and environmental costs of ocean desalination.

While progress with water conservation programs and subsequent saving achievements implemented by the water purveyors in Clark County [Las Vegas] have occurred, more must be done to support sustainable growth in the Las Vegas valley. And while "short term water forecasts" suggest all is well, nothing could be further from the truth. Like it or not, the Las Vegas valley is largely dependent on the health of the Colorado River system. Today, that system is seriously over-appropriated with no long-term plans in place to address water shortages -- other than rationing in form of declining river allocations.

Given these realities, acquiring farming and ranching operations and their water rights located some three hundred miles north, along with acquiring all other unappropriated waters in the eastern basins of Nevada, and then building a multibillion dollar pipe line to move “rural waters” to support Las Vegas’ growth is just not the answer -- particularly when the sustainability of such a projects is shrouded in scientific uncertainty. As mentioned above, the days of building large dams and pipelines are vestiges of the past; it’s the 21<sup>st</sup> century and we need 21<sup>st</sup> century solutions.

As you clearly know, the remand hearing took 10 days much of which included testimony and cross-examination of expert witness in the fields of hydrology and the environment.

One could argue that the whole affair left those present, or those viewing via the Internet with a clear sense of uncertainty about the risks of the SNWA’s groundwater development project.

Thank you for considering my comments.

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