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Chief Hearing Officer
Nevada Division of Water Resources
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Re: SNWA Hearing Application

The State Engineer should consider alternatives to the Southern Nevada Water Authority application for assignment of withdrawal rights in east-central Nevada basins. Following is a feasible alternative that I have proposed to a number of officials with resulting interest, but no follow-up due to waiting for the hearing outcome.

I relate the following in the hope that you will not dismiss my thoughts out-of-hand as simply those of a neophyte (or nut job) in the field. I am a Las Vegas resident. I am also a retired Assistant Chief Hydrologist of the Water Resources Division of the US Geological Survey, having spent the final 10 years of my career at our Reston, Virginia, headquarters and the previous 27 years in water resources investigations in all parts of the country. The 27-year period included significant assignment periods in California and New Mexico where I learned first hand of western water problems, policies, and sometimes real solutions. I developed national recognition as somewhat of a scientific expert in ground water - surface water relationships.

It is well recognized that water is the key to life in the arid and semiarid western US. Shortages exist in many areas today and climate change experts predict that these shortages will get worse and exacerbate the viability of western towns and cities, especially in the lower Colorado River basin where allocations are based on one of the few 'wet' periods in the basin's history. Las Vegas is one of the larger cities in the non-Los Angeles part of the basin and through the Southern Nevada Water Authority is on a constant mission to find 'new' sources.

What does Nevada seriously lack? Water and gasoline. What does Nevada have in abundance? Sunshine. The latter has the potential to solve the problems of the former. Yet, the public utilities in Nevada scorned participation in the large solar energy development near Boulder City. Tragically, it was left to a Spanish company to finance that development. And, the Chinese are the funding source for the proposed Laughlin project. Perhaps the CEO of Nevada Energy could be approached to initiate, with government help, a forward-looking project to positively impact our problems and provide his company profit potential not far down the road.

Las Vegas needs water. Some, even former Gov. Gibbons, have broached the idea of desalinization of Pacific Ocean water in California and piping fresh water to Nevada. Desalinization requires lots of power. The cost of that power is high and becoming prohibitive. Bringing fresh water across state lines gets tangled in the web of the Colorado River Compact and might never happen. Why not pipe the raw water to a non-

polluting power source? Solar farms in southern Nevada could supply all the power required to desalinate sea water by combinations of reverse osmosis and electrodialysis. This water could be sold through the Southern Nevada Water Authority for use in Las Vegas. Additional electrodialysis could split H2O into it's components of hydrogen and oxygen to be sold as fuel for a developing market in fuel-cell powered automobiles. Nevada Energy is in a unique position to accomplish such a project. Utility company capabilities and missions could be used to obtain an ocean withdrawal permit. They could acquire pipeline right-of-way or use the existing finished gasoline and natural gas pipeline rights-of-way to transport raw water to solar farms that they could build to help satisfy renewable energy mandates. There is profit potential for them in both the water and fuel products. There should be no water rights problems between California and Nevada for obtaining sea water. In fact, supplying some fresh water to desert California might be a deal sweetener. There are solar power projects on the drawing board that need only a fresh-water supply for cooling in order to proceed. Additional treated waste water return to the Colorado River would reduce Nevada's consumptive use under the Colorado River Compact. Profit potential from sale of hydrogen and oxygen is almost limitless. Increased availability of these fuel cell input supplies would help reduce the Nation's dependence on oil.

Of course, there would be problems to solve such as what to do with high-salinity residual waste water. This 'waste' also has economic potential in the trace minerals contained. Potential disposal solutions could involve evaporation ponds (also with mineral sale potential), deep well injection, or, even a much smaller return pipeline. The combination of efforts needed in such an ambitious project would require a public-private partnership of Federal, State, and Local Governments to pave the way with legislative and regulatory actions to facilitate development by utility companies. Free marketeers, Republicans, and Democrats should all love it!

This idea has been floated by me to Nevada's Federal office holders as well as local entities. While most are 'intrigued' by the possibilities, the hotbed of politics in the current water rights application has precluded any real study. My hope is that folks in your position might give the idea the boost to encourage implementers to begin to look seriously at it. I have no illusions about any quick adoption of this and you may not find it worth pursuing, either. So be it. I can only put it in front of you and hope it piques your curiosity enough to look at it in a bit more detail.

If you care to discuss it further, I'm available.

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