LIVING RIVERS
COLORADO RIVERKEEPER®

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Friday, January 17, 2014

Grand County Council
125 E Center Street
Moab, UT 84532

Fred Ferguson
Legislative Director
Rep. Rob Bishop
123 Cannon HOB
Washington, DC 20515

Re: Public Lands Bill for Eastern Utah

Dear County Council and Congressman Bishop,

INTRODUCTION

Thank you for inviting the public to submit written comments about the proposed public lands bill for eastern Utah.

Living Rivers & Colorado Riverkeeper is a non-profit organization based in Moab, UT. Our mission is to protect the water resources of the Colorado River, with special emphasis on the Colorado Plateau; this includes the basin's groundwater. Our riverkeeper program is affiliated with the international Waterkeeper Alliance.

We recognize that the proposed land bill will most likely require review under the National Environmental Policy Act, which will open the process to the entire nation and the other six states of the Colorado River basin. Since this issue is of regional and national importance, we ask that the complete administrative record of this process be posted on a designated web page for the public to access freely.

We also request public meetings to be conducted by the county and the congressional representatives at appropriate times in order to keep people and the press up-to-date.

We also request that the state of Utah provide a water budget for citizens and investors to demonstrate how, or how not, the possible development of eastern Utah's natural resources can proceed with sufficient water supplies, because the proposed projects are water intensive and we live in drying times. We ask that the water budget be based on a time-period of 100-years which, for example, is the procedure for approving development projects in the arid state of Arizona. This would include an economic assessment of what the projected water

infrastructure would cost to deliver this water to communities, mines, well pads and processing facilities.

It should be mentioned that the governor's 50-year water plan now under review, so far, is devoid of any such discussion.

Water availability is the critical lynchpin for this proposed process. The Colorado River is facing declared shortages imminently, because the demand in the basin currently exceeds the supply, and the supply has been dropping one million acre-feet every 50-years since 1906. This trend is expected to continue for the rest of the 21st century, as we will elaborate more fully in the sub-headings below.

Our organization has done an internal review, and we have decided not to support this initiative because there is no evidence in the administrative record that water surpluses are available for the extraction and processing of eastern Utah's natural resources. If the process moves forward as an act of congress, and the proposed development begins with a known risk of water curtailments occurring, then a situation of harm is created and litigation will follow. Then the State Engineer and the court system will have to make the hard choices and decide who does and doesn't get water. Since avoiding litigation is one of the main objectives of this initiative, we think the process in its present state is lacking sufficient information to address and resolve the risks and uncertainties of water insecurity in the Colorado River basin.

What our organization would support is a process that would permanently restore the function of this watershed to a healthy state, and remove this insecurity permanently.

THE REAL-TIME WATER BUDGET OF THE COLORADO RIVER BASIN

The Colorado River and it's major-most tributaries all convene in eastern Utah before plunging into Lake Powell. The Colorado is also a river of national and international importance. This watershed generates 1.7 trillion dollars per year. If the basin were an independent nation, it would be the 12th largest economy in the world.

Utah is a partner in an interstate agreement with six other states. The federal government has a commitment to honor water right agreements with the tribes and Mexico.

The Colorado River Compact of 1922 divided the watershed at Lee's Ferry, AZ. The lower and the upper divisions were each apportioned 7.5 million acre-feet (MAF). Since the Compact Point (Lee's Ferry) is in Arizona, this state receives water from both divisions.

The Boulder Canyon Project Act of 1928 divided the lower division states into fixed allocations and as follows: California - 4.4 MAF; Arizona - 2.8 MAF; Nevada - 0.3 MAF. The US Supreme Court affirmed these lower division allocations in 1963, and the court also affirmed federal water right obligations.

The water rights for tribes are apportioned out of the states they reside in. Since the Navajo Nation is in parts of three states, for example, they have water rights in Arizona, New Mexico and Utah.

During World War II, a treaty was approved by the US Senate to provide Colorado River water to Mexico in the amount of 1.5 MAF. The upper and lower divisions each provide 750,000 acre-feet to honor this international agreement. Therefore, every year 8.25 MAF must flow from the upper basin to the lower basin.

There is an exception to this criteria, which is related to the Shortage Criteria agreement of 2007. For the first time in history (water year 2014), the upper basin is holding water back from the lower basin in order to equally balance the contents of Lakes Mead & Powell. No other action could better convey the reality of looming water shortages for the water users of the Colorado River basin than this recent decision.

In 1948, the upper division states divided their appropriation through negotiations and chartered an interstate Compact for themselves. Northern Arizona was given a fixed amount of 50,000 acre-feet, and the remaining water was divided amongst the other upper basin states by percentages, and as follows: Utah - 23%; Colorado - 51.75%; Wyoming - 14%; New Mexico - 11.25%.

However, the water budget of the upper basin has been modified because the negotiators of the 1922 Compact over-estimated the annual yield of the Colorado River by ~2.5 MAF. This is why the upper division states decided to determine their water apportionments by percentages, instead of by fixed amounts.

In 1984, the Bureau of Reclamation officially determined the revised annual yield of consumption for the upper basin to be 5.8 MAF (this is 1.7 MAF less than the promised 7.5 MAF). In 1988, the yield was revised to 6.0 MAF, and in 2007, the yield was revised yet again to 5.76 MAF.

The Bureau of Reclamation now reports (as of December, 2013) that the annual yield of the Colorado River at the Compact Point (Lee's Ferry) has dropped from 15 MAF to 14.9 MAF. Therefore, the upper basin hydrologic determination is now 5.66 MAF.

The average consumption of the combined upper basin states from 2006 - 2010 was 4.5 MAF (the high was in year 2011 at 4.85 MAF). The amount of aggregate water that is assumed to be available for the upper basin states to utilize is about 1.1 MAF.

However, and this is a critical point, according to the proceedings of the December 2013 annual conference of the Colorado River Water Users Association, Lakes Mead & Powell are projected to be near empty for the rest of the century. Additionally, the Department of Energy stated at this conference that the turbines at the power plant of Glen Canyon Dam may go offline in water year 2015.

Moreover, a presenter at this conference advised the seven states to prepare for declared shortages and to design appropriate contingency plans for their respective states. It was suggested that a component of the contingency plans might include releasing water from upper basin reservoirs such as Flaming Gorge, the Aspinall Unit, and Navajo Reservoir to meet power and water demands downstream.

It is unfortunate that the basin's water security has come to this point in it's history, but the administrative record makes it very clear that this eventuality was predicted as far back as 1952, when Arizona vs. California litigation began. Sixty-years of business as usual is why this situation exists, because the foundation documents of the basin's supply and demand are wrong, and leadership and financing to properly reconcile this situation has yet to occur.

UTAH'S WATER BUDGET

In the light of the water budget described above, the maximum water that is available for Utah to convert from paper water to project water is 1.3 MAF (23% of 5.66 MAF). Utah's highest annual consumptive use was in year 2001 at 1.06 MAF, leaving an assumed 300,000 acre-feet available for future use.

There are two tribes in Utah that have yet to receive their water rights in full: Navajo and Ute. Combined, the unfulfilled amount for these two tribes is 191,500 acre-feet. That leaves Utah with an assumed surplus of 108,500 acre-feet.

Other proposed projects waiting in line for Utah's assumed surplus water, for instance, include the Lake Powell Pipeline and the Blue Castle Holdings nuclear power plant. The combined depletion of these two projects is 124,000 acre-feet. These two projects, if approved, would put Utah's assumed water budget in the red.

Pinnacle Potash has stated that they need 20,000 acre-feet per year to operate a profitable potash facility in Grand County. They would require this annual amount of water for a period of 30-years and the total consumption would be 600,000 acre-feet.

K2O Potash and American Potash are the other two corporations preparing for permits to mine potash in eastern Utah, and it can be assumed that they need similar amounts of water as well.

The strip mining of tar sands (bitumen) and oil shale (kerogen) deposits in eastern Utah is the most speculative market ever proposed in the state of Utah. According to a recent economic study by the University of Utah, the start-up investment for a tar sands operation to produce 10,000 barrels per day is estimated to cost $800 million dollars to put technologies and machinery on the ground (from mine to refinery). At a 10% rate of investment return, the project would not reach the break even point for another 22-years, and in the meantime 31,000 acre-feet of water would be consumed.

A production rate of 10,000 barrels per day is not a large amount of oil. For example, just two conventional oil wells in Saudi Arabia will produce an average of 12,000 barrels in one day. If Utah's goal were to match the current output of North Dakota, for example, the annual water depletion in Utah would be 139,000 acre-feet per year.

What sours this risky venture further is the realization that synthetic crude derived from bitumen and kerogen has half the energy value of Texas sweet crude, and the quality of the final product would only serve the market that provides bunker fuel for trans-oceanic ships.

RECOMMENDATIONS & CONCLUSION

It is true there is lots of potash and lots of oil shale in eastern Utah. It is also true that there is lots of water that flows through these counties in the form of the Colorado River and it's tributaries. However, every single drop of this river has been allocated for a prescribed consumptive use. Additionally, as the demand for water is unwisely permitted to rise, the natural supply is falling. This imbalance is not sustainable and a watershed train wreck is the assured consequence of continuing the practice of business as usual. The best use of our time and resources at this point in Utah's history is not to do further harm to the river and help this river recover instead.

Measures that could accomplish sustainability in the Colorado River basin include the Wilderness Act, the Wild and Scenic Rivers Act, the Clean Water Act, the Salinity Control Act, the Clean Air Act and the Endangered Species Act.

Congressional designation of wilderness and scenic river corridors would preserve the integrity and productivity of the hydrologic cycle, especially with watersheds above 7,000 feet in elevation; high elevation snow packs provide 85% of the annual yield for the Colorado River basin.

The Salinity Control Act is a component of the Clean Water Act that is specific to the Colorado River basin. Compliance for this environmental law is largely dependent on the concept of reducing saline inputs and by dilution. If more depletions are applied on salty soils, as instream flow volumes are reduced, legal interventions from the states of Arizona and California, and the nation of Mexico are highly likely to occur.

The ethics behind the Endangered Species Act is critically important to creating sustainability in the Colorado River basin, because people and wildlife will mutually prosper if our instream flows are healthy, abundant, fishable and swimmable.

Sincerely yours,

/s/

John Weisheit
Conservation Director
Colorado Riverkeeper
Moab, UT