

Give a Little to Get a Lot: Snake River/Great Salt Lake Canal

Wayne Meulendyk*

Active Climate Rescue Initiative, USA

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Introduction

Active Climate Rescue Initiative (ACRI) has identified an area where Move the water! Would be hugely beneficial for the local people and for reversing global warming. The identified area is northern Utah and southern Idaho. These two areas have an unrealized interdependent hydrologic cycle. Let me explain.

In The Great Salt Lake and the Snake River there are several occurrences which have drawn ACRI's attention.

- Contamination has been reported in the Snake River Aquifer which may be the result of Idaho's force fill of the Aquifer.
- The Snake River gains a portion of its volume from The Great Salt Lake via the Hydrologic Cycle.
- The SW USA has been in a Mega-drought for the last 20 years.
- The Snake River drains into the Pacific where it is lost for use in the watershed.
- The level of The Great Salt Lake has been diminishing over the last 20+ years.
- The level of Snake River Aquifer has been diminishing over the last 20+ years.
- Both the lake and the aquifer have been diminishing at the same rate.
- The Great Salt Lake and its proximity to the Snake River bring the possibility for a sixty-mile canal which can reverse the depletion of The Great Salt Lake and concurrently the depletion of Eastern Snake River Plain aquifer.

The water level of The Great Salt Lake is tied to the other water levels in the surrounding area. Everyone knows that the water which feeds the Snake River and The Great Salt Lake comes from rain and snow. Who thinks about where the rain and snow come from? For a large degree, the rain and snow come from evaporation from the Great Salt Lake. It is the hydrologic cycle, but this geographic area has a moisture deficit, and some of that water escapes the cycle as it is blown out of the immediate area or flows into the Pacific. Much of The Great Salt Lake evaporated moisture is blown into the Snake River Watershed, which fills the Snake River Aquifer.

The below simple graphic Figure 1 illustrates that the Great Salt Lake and the Snake River Aquifer Both are diminishing at the same rate. I posit that if the level of the Great Salt Lake is increased, the level of the Snake River Aquifer will also increase via Natural Systems, without special efforts on man's part.

The Great Salt Lake is diminishing because of the mega-drought. Eventually it will be dry because of the water deficit in the GSL watershed. If the great Salt Lake becomes the Great Salt Plain, the Eastern Snake River Plain aquifer will also dry up.

Part of the cause of the mega-draught is the destruction of the Colorado River Watershed hydrologic cycle by over extraction of water

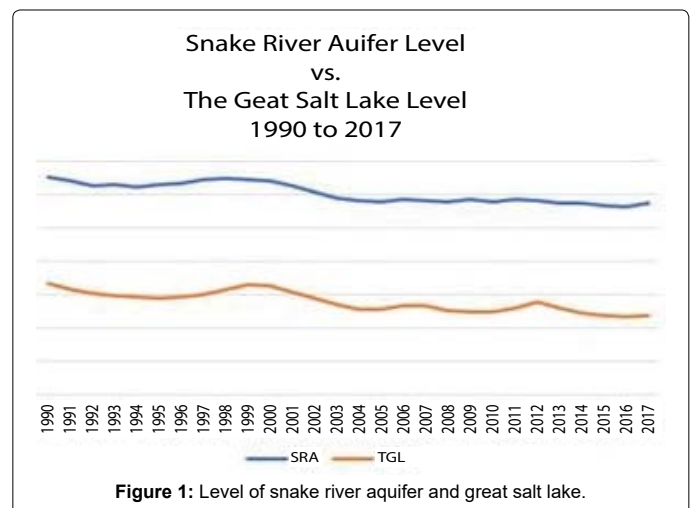
outside of the watershed (think two rivers manufactured to carry water to California). Repairing the Colorado River Water Cycle is being worked on, but that is not the topic here.

The immediate problem, Snake River Aquifer diminishing, has an immediate and easy fix: Increase the surface level of The Great Salt Lake. Refilling The Great Salt Lake would greatly increase the lake surface area, which increases evaporation, which increases atmospheric water, which increases snow pack and/or rain, which refills the Snake River Aquifer.

The Snake River drains into the Pacific where it is lost for use in the Snake River watershed. It could be considered beneficial to Utah and Idaho to divert some of the Snake River water to the Great Salt Lake; thus indirectly keeping it for atmospheric water and snow production.

The installation of a 60-mile-long, gravity flow canal between the Snake River and the Great Salt Lake can be accomplished in Cassia, water rights district #43, Idaho, generally along Interstate 84. Step one would be an irrigation canal from Snake River moving south through the valley. At southern end of valley options can be considered for continuing the water flow: canal or tunnel.

Unfortunately, this may be a hard sell to Idaho. The initial drain on the Snake River would be more than the subsequent maintenance drain after the GSL has reached a better level. But the people of Idaho should understand that the Snake River water comes from somewhere, and if that somewhere goes away, the whole of the Snake River may disappear. With nothing done, that someday could come soon.



*Corresponding author: Wayne Meulendyk, Active Climate Rescue Initiative, USA, Tel: + 2039365566; E-mail: wayne.meulendyk@climate-rescue.org

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