

Dear Bureau of Reclamation Staff,

Please accept the following comments for the Supplemental EIS of the 2007 Interim Guidelines.

The major long term mismatch between water supply from tributaries feeding the Colorado River and the allocation of the River's water resources to users has led to a major risk in the next several years of critical reservoirs like Lake Mead reaching elevations where severe cutbacks are mandated and possibly even reaching a deadpool condition. If Lake Mead were to reach an elevation where delivery of water is unmanageable, the impact would be catastrophic for regions like the Imperial Valley, which depends almost entirely on the Colorado River for water.

Under these serious risks of potentially catastrophic consequences the No Action Alternative is clearly inadequate. If the many users on the River can come to agreement, the Framework Agreement Alternative is preferable because it will push many competing water user interests to come to a compromise for the greater good. It's understood that this alternative would be developed as an additional consensus-based set of actions that would build on the existing framework for Colorado River Operations. A reasonable, but short, deadline needs to be defined to push water users to come to agreement, with the threat of arbitrary cutbacks to pressure them as may occur under the Reservoir Operations Modification Alternative.

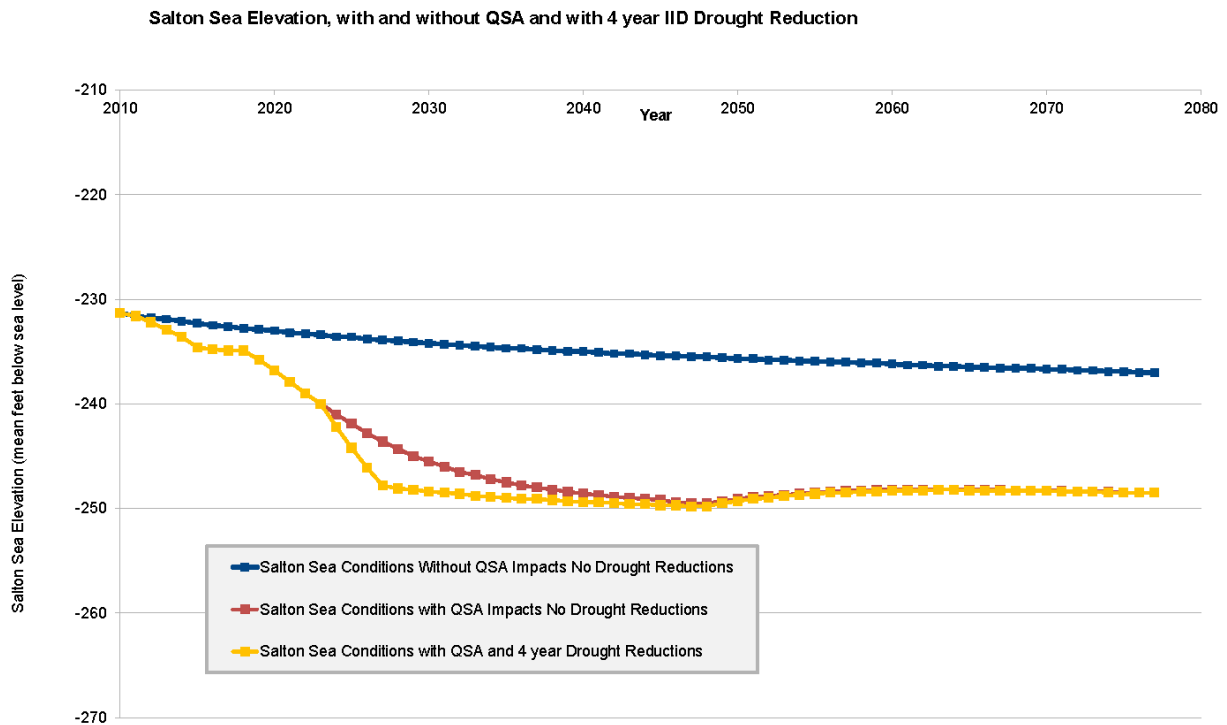


Chart 1. Four year 250 KAFY irrigation flow reduction impact on Salton Sea elevation

Among the impacts evaluated in the EIS, the impacts on the Salton Sea must be included. The Salton Sea will be dramatically impacted by reduced irrigation flows to the Imperial Valley planned to conserve 250 KAFY for four years. Irrigation drainage from the farms in the Imperial

Valley, plus some cross border flow from Mexico, supplies roughly 90% of the inflow to the Salton Sea. For every three acre feet of water conserved by fallowing in the Imperial Valley one acre foot of drain water that would have flowed to the Salton Sea will not flow to the Salton Sea. For water conserved by on farm efficiencies every acre foot of conservation will mean one acre foot of inflow reduction to the Salton Sea. A four year conservation of 50 KAFY by on farm efficiencies plus 200 KAFY will accelerate the loss of elevation of the Salton Sea by about five feet, see Chart 1 above.

The accelerated loss of elevation will consequently accelerate the exposure of potential PM10 dust emitting lakebed at the Salton Sea by roughly 16,000 acres, see Chart 2 below, releasing more PM10 dust into nearby lakeshore communities sooner than will happen with the ongoing QSA water transfers alone.

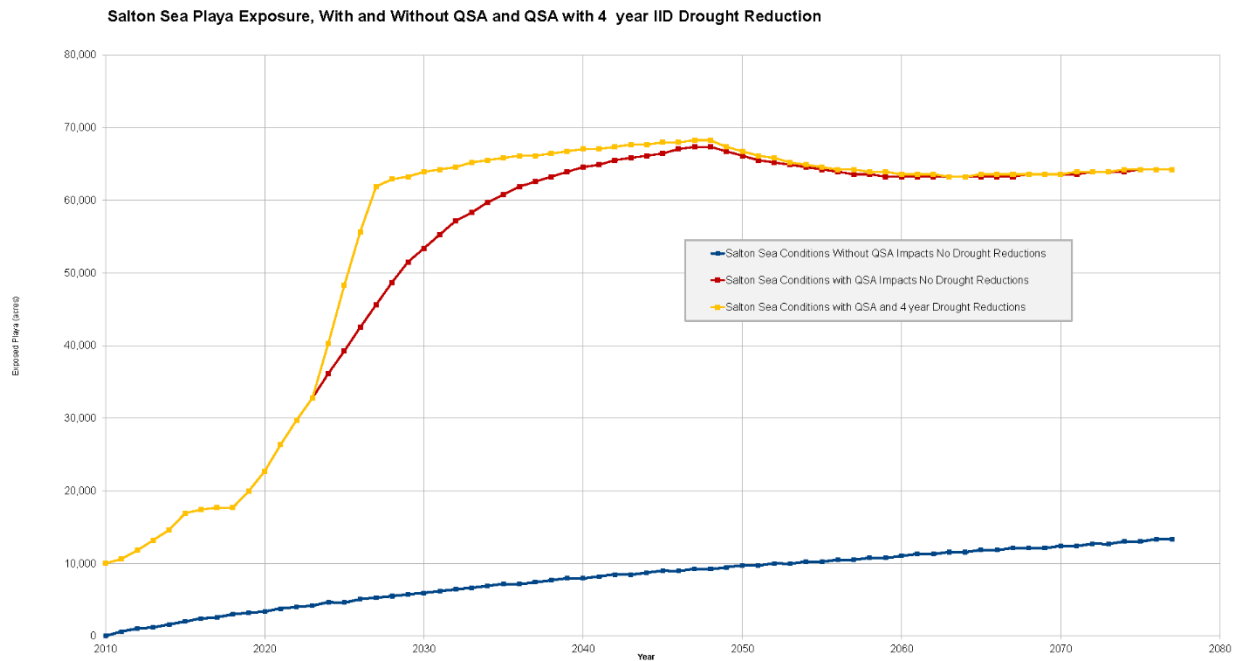


Chart 2. Four year 250 KAFY irrigation reduction impact on lakebed exposure at the Salton Sea

The other concern is salinity rise. The draining of excess salt from farms into the Salton Sea is necessary for local agriculture, but all salts are retained in the terminal lake. The shrinking of the volume concentrates the salts, which in turn is now killing off fish and other macroscopic life in the Salton Sea. Reduced irrigation flows of 250 KAFY for four years will push salinity in the Salton Sea to complete aquatic ecosystem collapse within four years, see Chart 3 below.

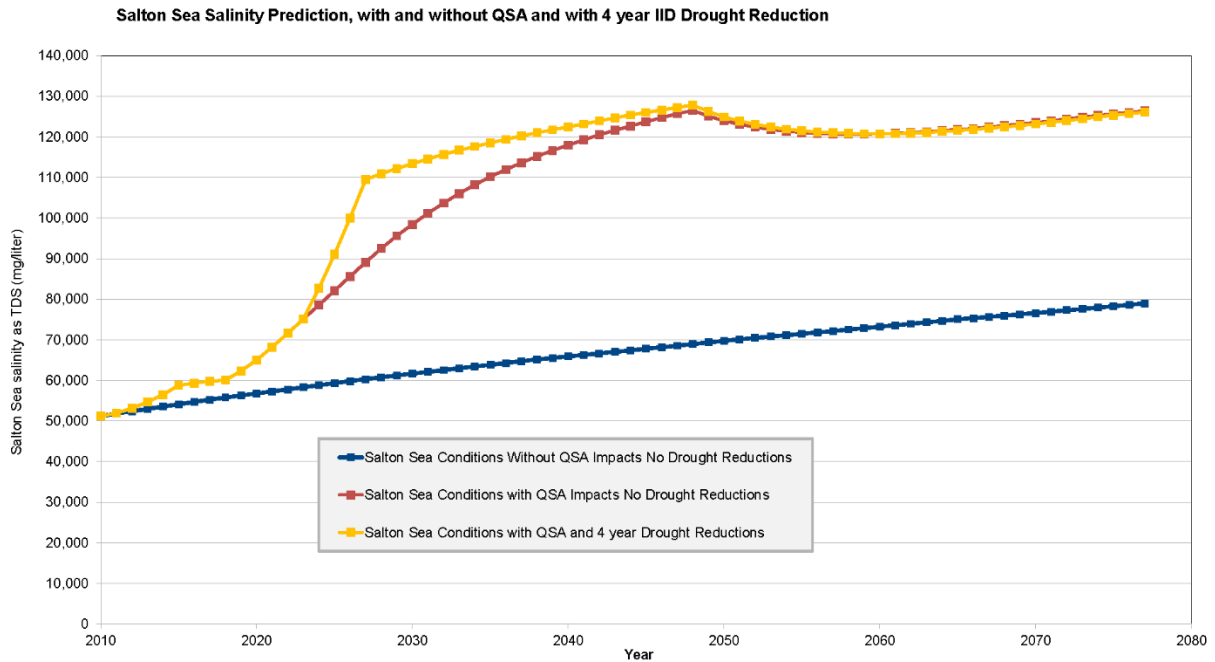


Chart 3. Four year 250 KAFY irrigation flow reduction impact on salinity at the Salton Sea

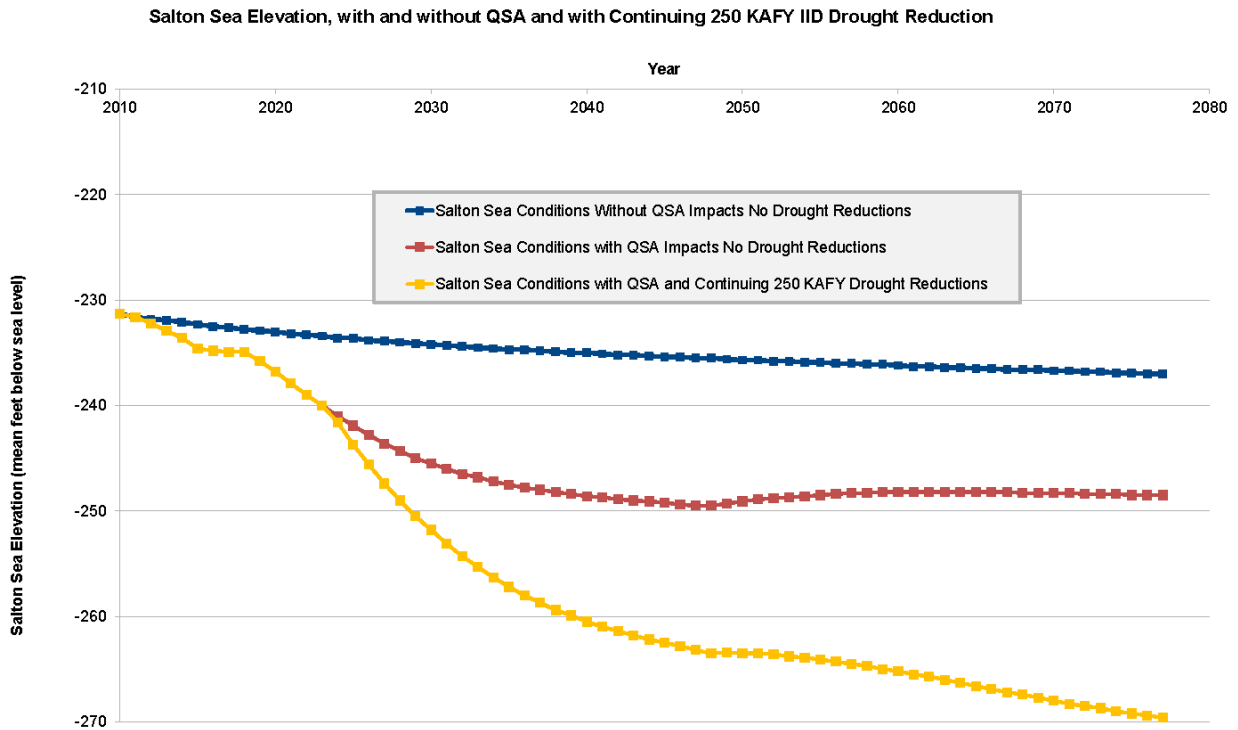


Chart 4. Continuous 250 KAFY irrigation flow reduction impact on Salton Sea elevation

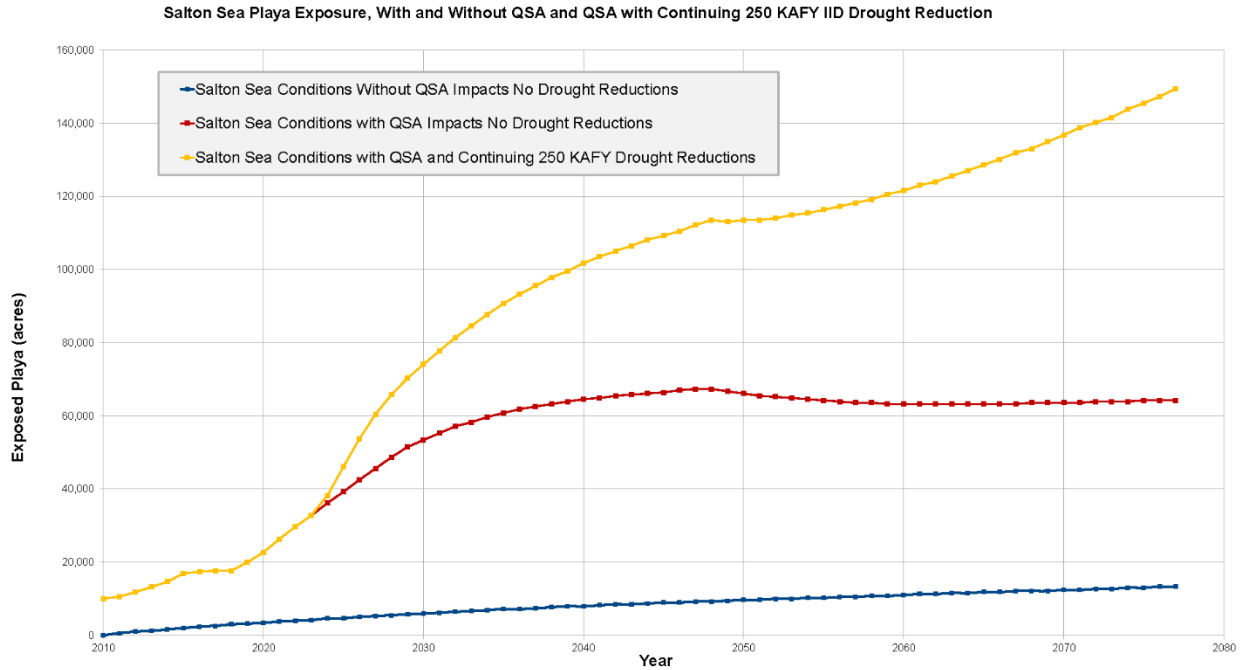


Chart 5. Continuous 250 KAFY irrigation reduction impact on Salton Sea lakebed exposure

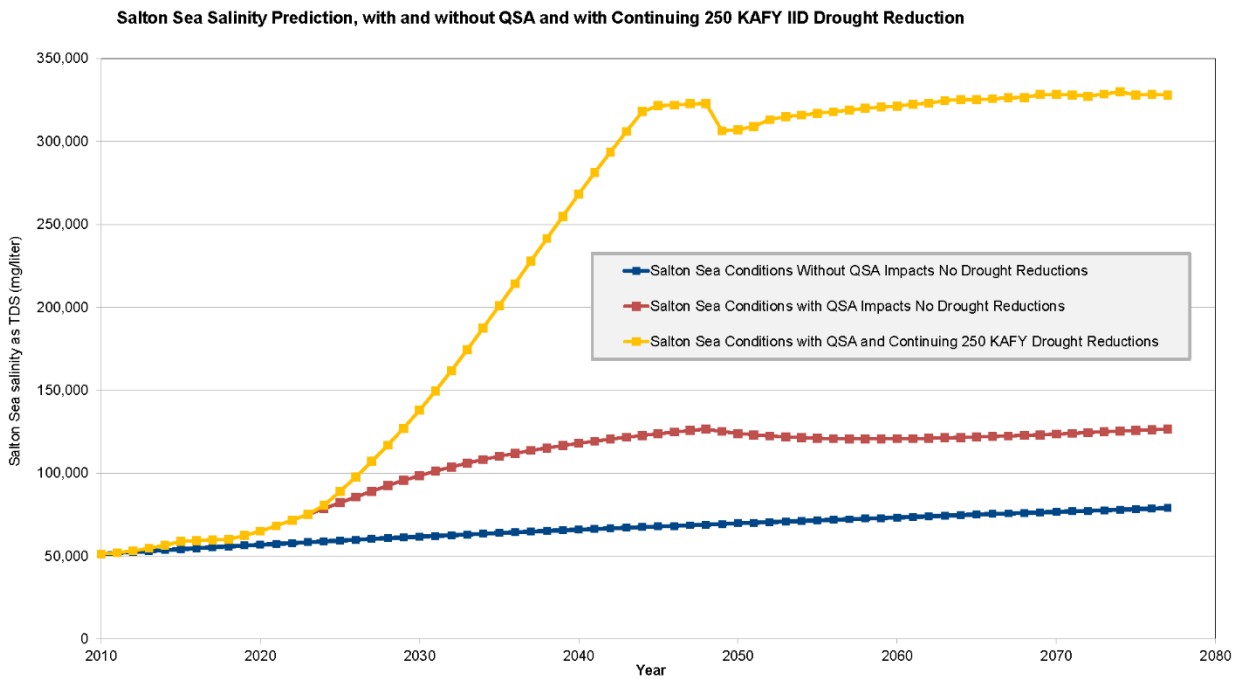


Chart 6. Continuous 250 KAFY irrigation flow reduction impact on salinity at the Salton Sea

The ongoing two decade mega-drought may not be over in four years. Additionally, it's likely the Colorado River has been over allocated since the conception of the 20th Century project to dam the River. If major cutbacks in water deliveries to the Imperial Valley continue indefinitely, the impact on the Salton Sea will be devastating. Charts 4 and 5 show the elevation and lakebed exposure impacts from an

indefinite reduction of 250 KAFY in water delivery to the Imperial Valley. Gradual conversion from fallowing to on farm efficiencies is likely and is estimated. Tens of thousands of acres of exposed lakebed would potentially emit PM10 dust when the wind blows strongly, as it often does in the region, and choke the air in surrounding communities. Chart 6 shows the impact on salinity. The Salton Sea would reach saturation and precipitate millions of tons of halide as well as gypsum, calcite, and other salts on the lakebed. Only halophytic algae and some bacteria would survive in the lake. All elements of the existing aquatic ecosystem would quickly collapse.

If major indefinite reductions to Imperial Valley water supplies on the order of 250 KAFY or more were implemented, the only alternative known to be capable of reversing the damage from loss of elevation, PM10 dust, and hyper-salinity of the lake would be to create new water supply for the Lower Colorado Region, or the Salton Sea, or both. Such new supply would need to be of a magnitude to offset almost 500 KAFY in lost inflow to the Salton Sea due to QSA water transfers in addition to new inflow reductions due to new long term drought management policies. Ocean water is the only supply known to be of sufficient magnitude and availability to fill that level of shortage.

One way to cost effectively provide the magnitude of new water supply required is described in the concept linked below that takes advantage of some new improvements to long established technologies pilot tested at the Salton Sea with support from Reclamation:

http://www.sephtonwatertech.com/WISER_2021/

A less cost effective concept to do the same using only conventional technologies is described in the link below. This concept, and two others, passed a 2022 fatal flaw review by staff, private consultants, and a Panel organized by UC Santa Cruz, but no concepts submitted by outside proposers were fully analyzed by the UCSC group that instead opted to create their own proposals.

http://www.sephtonwatertech.com/NOTWISER_2022/

Thank you for considering these comments and suggestions.

Best Regards,

Tom Sephton