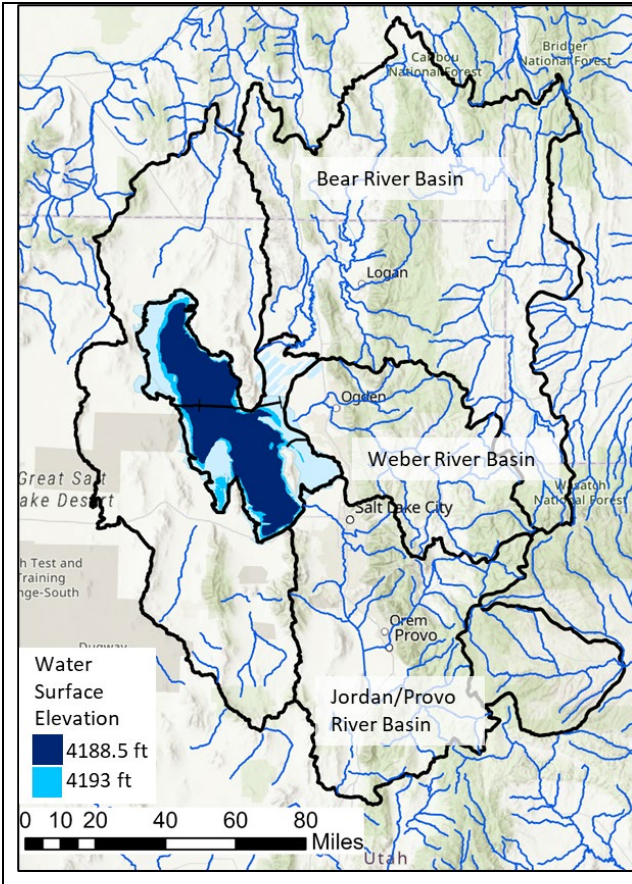


Somewhat Geeky Great Salt Lake Fact Sheet

Prepared by David Tarboton, 11/12/23

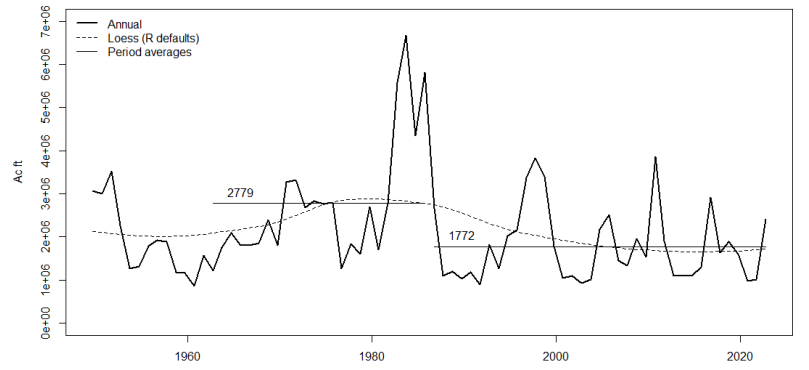


Average Annual Water Balance

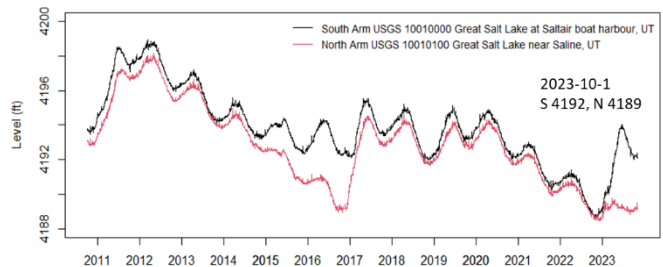
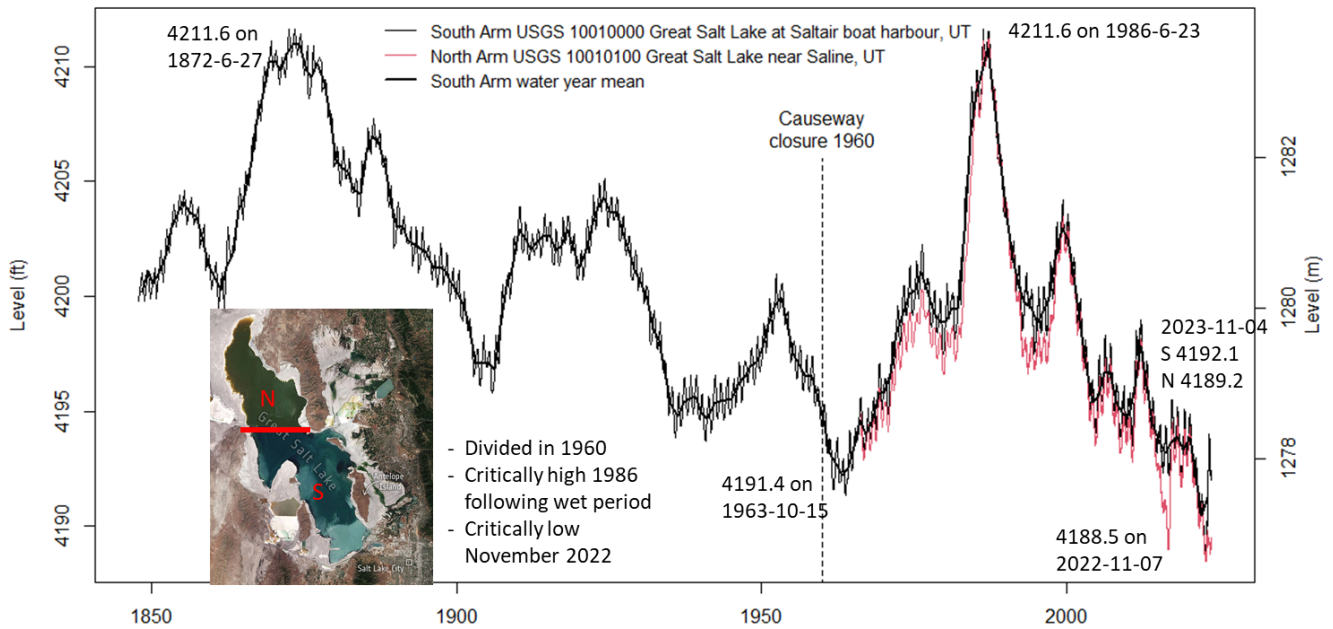
Area	Area (km ²)	Precip. (mm)	Inflow (1000 acre-ft)	Stream-flow %	Overall %	Runoff (mm)	Runoff ratio
Bear	19262	535	1283	61%	39%	82	15%
Weber (inc. Davis)	6326	652	373	18%	11%	73	11%
Jordan/Provo	9963	559	462	22%	14%	57	10%
West Desert	14604	339	-	-	-	-	-
Total Streamflow	50155	498	2118	100%	65%	56	12%
Lake Precipitation	3608	368	1077		33%		
Groundwater			75		2%		
Total	53763	486	3270		100%		

Lake Evaporation	Area (km ²)	Depth (mm)	Volume (1000 acre-ft)
	3608	1100	3217

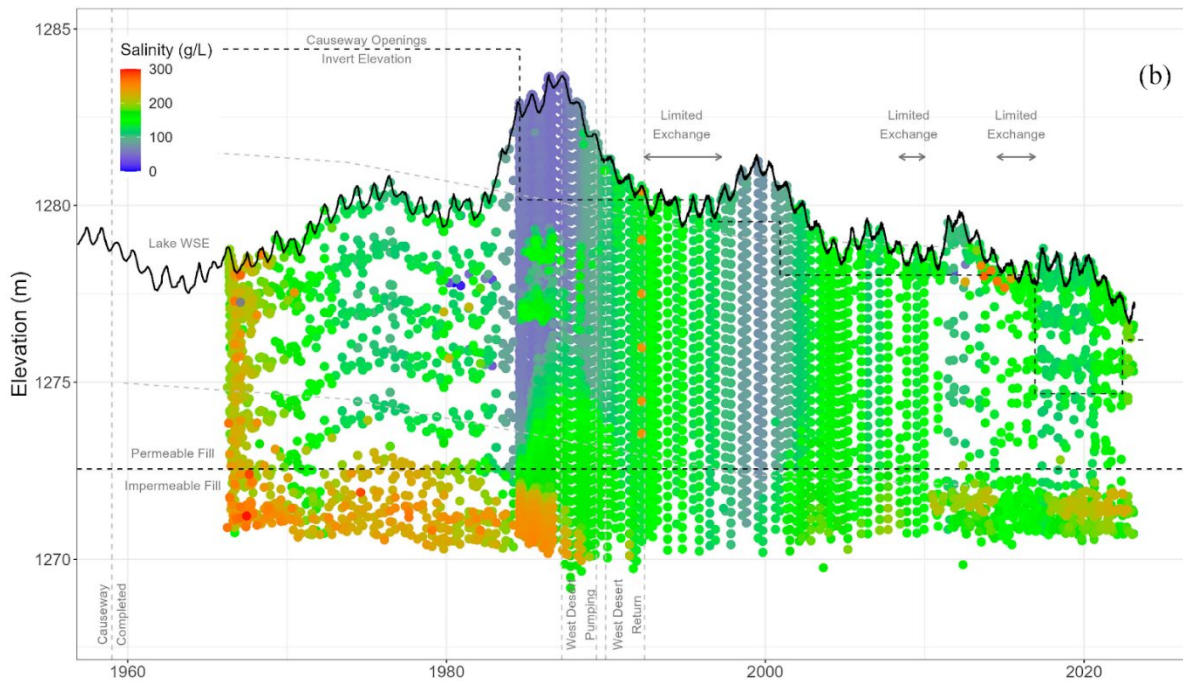
Great Salt Lake Annual River Inflows



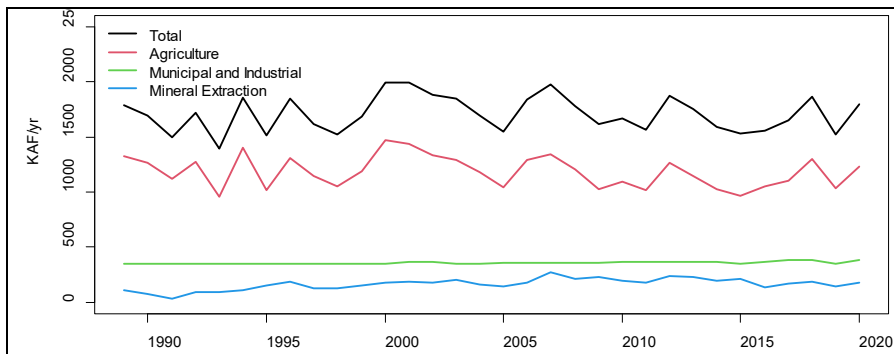
Great Salt Lake Water Surface Elevation Record



Salinity, exchange through causeway and the occurrence of deep brine layer



Basin Wide Water Use



Average Annual Depletion	Thousand Acre Ft
Agriculture	1188
Municipal and Industrial	358
GSL Mineral Extraction	165
Total	1711

From Utah Division of Water Resources

GSL management considerations

- Brine shrimp industry
- Mineral industries. Lithium, Magnesium, Potash
- Dust from exposed lake bed (and contaminants in the dust)
- Ecosystem - Birds, especially migratory
- Managed wetlands (Private duck clubs)
- Flooding (west desert pumping in 1986)
- Recreation

Sources and Links

Great Salt Lake Strike Team: <https://gardner.utah.edu/great-salt-lake-strike-team/>

Tarboton Conference presentation: <https://hydrology.usu.edu/dtarb/Tarboton-SRC-March-2023.pdf>

Great Salt Lake: <https://greatsaltlake.utah.gov/>

Utah Division of Water Resources: <https://water.utah.gov/great-salt-lake/>

Merck and Tarboton 2023: <http://doi.org/10.3390/w15081488>

Mohammed and Tarboton 2012: <http://dx.doi.org/10.1029/2012WR011908>

Wurtsbaugh et al. 2017: <https://doi.org/10.1038/ngeo3052>

Abbott et al. 2023: <https://pws.byu.edu/great-salt-lake>

Loving et al. 2000: <https://doi.org/10.3133/wri004221>

Great Salt Lake State Park: <https://stateparks.utah.gov/parks/great-salt-lake/>