

#### Great Salt Lake Elevations Updated 09/16/2024







#### **GSL** salinity at 4 GSLEP sites



Source: U.S. Geological Survey

#### Year One - Better coordination

- Frequently hold interagency meetings with the Division of Water Resources and state and federal officials
- Regular coordination and communication with water conservancy districts
- The Division of Water Resources met with watershed councils throughout the basin
- Invested in a unified water data platform
- Great Salt Lake Sentinel Landscape designation
- Utah Department of Agriculture and Food Agricultural Water Optimization Program coordination with conservation districts



U.S. Army Corps of Engineers U.S. Fish &

Wildlife Service

U.S. Environmental

**Protection Agency** 

U.S. Geological Survey

- The Division of Water Resources finalized the initial work plan for the Great Salt Lake Basin Integrated Plan.
  - Municipal and Industrial conservation, agricultural conservation, and dust studies
- The Great Salt Lake Strike Team released a 2024 Great Salt Lake Data and Insights Summary and Policy Summaries.
- Invested in groundwater studies with UGS to better understand how much groundwater flows into the Great Salt Lake.



- The Division of Wildlife Resources invested in science related to brine flies and shorebirds.
- Utah State University conducted a water measurement infrastructure gaps analysis in the Great Salt Lake Basin for the Division of Water Rights. Completed in July.
- Initiation of the revision of the Great Salt Lake and Utah Lake Comprehensive Management Plans led by the Division of Forestry, Fire and State Lands.

 The Division of Forestry, Fire and State Lands supported studies related to water and salt balance and transfer between the North and South Arms of the lake, groundwater contributions, lithium recharge, a decision support tool to estimate PM10 dust emissions, a shorebird survey, and a study to investigate the die-off of submerged aquatic vegetation in Great Salt Lake wetlands.

- The Utah Geological Survey published an interim report on the lithium resource in Great Salt Lake and is completing another report that expands upon it.
- The Utah Geological Survey coordinated an effort to collect bathymetric lidar data over a 50-square-mile area on the west side of Antelope Island in June 2023 and evaluated the data to determine best practices for collecting additional data in the future. A contract is now in place with a lidar company to collect additional data in the second half of 2024 and 2025.

The USGS Utah Water Science Center and the U.S. Bureau of Reclamation have entered into an agreement for Great Salt Lake (GSL) Basin monitoring and reporting enhancements. \$3 million dollar from the U.S. Bureau of Reclamation and 5 year agreement funds the USGS to:

- Add 13 streamgages to USGS' existing network in the GSL Basin;
- Install and operate two temperature profile buoys on GSL;
- Expand monitoring at the Bear River Bay outflow and development of a Bear River Bay outflow numerical model by Utah State University;
- Add an interactive GSL surface area and volume feature to the existing GSL Hydro Mapper website, which is a collaborative website between USGS and Utah Division of Forestry, Fire, and State Lands.



#### Year One - Getting More Water to the Lake

- Worked with water conservancy districts on releases of stored water during the winter including estimating approximately 700,000 acre-feet of the amount of water that was released through the Jordan and Weber systems.
- Met with water rights holders across the basin to discuss the importance of conserving, dedicating and delivering water to the lake.
- The Great Salt Lake Watershed Enhancement Trust completed baseline water transactions for 54,000 acre-feet for the lake and developed a five-year plan.

### Year One - Getting More Water to the Lake

- The Division of Forestry, Fire, and State Lands & Compass Minerals voluntary agreement:
  - 200,000 acre-feet donated
  - 50% decrease at 4,195 ft of a 156,000 acre-foot water right
  - 100% decrease at 4,190 ft
- The Division of Forestry, Fire, and State Lands Request For Qualifications for an engineered solution to adaptively manage the berm

### Year One - Getting More Water to the Lake

- More than 4,000 acre-feet including 1,500 acre-feet from Ogden released from Willard Bay into Willard Spur in coordination with WBWCD
- 10,000 acre-feet Utah Lake in coordination with JVWCD, the Church of Jesus Christ of Latter Day Saints, and Welby Jacobs Water Users Company
- The Division of Water Rights has reviewed 13 change applications for water dedicated or leased for the lake



#### Year One - Protecting Air and Water Quality

- Hosted a Great Salt Lake Dust Forum with academics and managers to discuss dust research and management needs.
- The Division of Water Quality initiated the development of a salinity limit for the lake in coordination with the Commissioner's Office and the Division of Forestry, Fire and State Lands.
- The Division of Air Quality has deployed 3 new PM10 monitors around the lake in addition to the 4 existing ones

### 2034 Plan

- Baseline of voluntary water conservation, dedicated, and delivered to the Great Salt Lake
- Adaptively manage salt and water through the Union Pacific berm
- Take advantage of wet water years

### Water consumption in the Great Salt Lake Basin



Source: Great Salt Lake Strike Team







# Thank you.

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