



REMOVING INVASIVE PHRAGMITES

The **Division of Wildlife Resources' Great Salt Lake Ecosystem Program** works to protect and conserve the aquatic and avian resources of the lake through ongoing research and active management.

- Made infrastructure improvements to release water from adjacent waterfowl management areas into the lake
- Completed several collaborative water rights transactions to deliver water to the lake
- Monitoring the sustainability of the brine shrimp population and developing an ecosystem model to predict changes to their population
- Managing 94,000 acres of wetland habitat around GSL for birds, including treating over 10,000 acres of invasive phragmites through chemical, mowing and grazing treatments in coordination with FFSL
- Collaborating with GSL wetland managers (federal, non-profit and private) to share hydrology, weed control and water rights information
- Collaborating with partners to conduct migratory shorebird surveys each spring and fall that document the distribution and abundance of shorebirds at 50+ sites around GSL and its watershed for the next three years
- Carrying out long-term avian surveys to determine temporal and spatial patterns of numerous waterbird species throughout their life cycles
- Periodically assessing mercury and other contaminants in waterfowl, as well as monitoring and tracking avian diseases
- Coordinating and managing an applied avian research program to answer specific questions important to the brine shrimp population and conservation of the ecosystem, including a bioenergetics study for shorebirds and waterfowl
- Monitoring and describing long-term trends in phytoplankton and the abiotic and biotic changes in the lake



BRINE SAMPLING ON THE NORTH ARM

The **Utah Geological Survey** provides timely scientific information about Utah's geologic environment, resources and hazards that enhance our understanding of the lake.

- Monitoring the salinity and geochemistry of both the north and south arms of the lake since 1966, including researching how salt moves (or cycles) through the lake system
- Studying and documenting groundwater contribution to the lake system
- Keeping a record of mineral production and production value from GSL
- Researching microbialites, including details of their formation, composition and spatial distribution
- Conducting a pilot study of bathymetric lidar, which will increase our knowledge of the shape of the lake floor and microbialite distribution
- Compiling water quality data in support of establishing wetland water quality standards
- Conducting surface flow and groundwater measurements, vegetation mapping and health assessment, and water quality monitoring at GSL Shorelands Preserve to assess water supply, water needs and provide data for future management decisions
- Assessing current condition and stressors of mudflat/playa wetlands – the aerially most extensive yet least known type of GSL wetlands
- Collaborating with other lake researchers, within and outside of the DNR, on a variety of different topics



WHAT **DNR** IS DOING TO BENEFIT GREAT SALT LAKE





MARINA AT GREAT SALT LAKE



LOW LEVELS EXPOSE MICROBIALITES



RAISING THE CAUSEWAY BERM

In 2023, the Utah Legislature created a **Great Salt Lake Commissioner** to coordinate the many agencies and interests aligned with the lake.

- The commissioner will develop a strategic plan and annually inform the governor, the president of the Senate, and the speaker of the House about the status and plan implementation
- State agencies will work with the commissioner and provide information
- The GSL Advisory Council will advise the commissioner

The **Division of Forestry, Fire and State Lands (FFSL)** has direct management jurisdiction over lands below the meander line of Great Salt Lake (GSL). FFSL coordinates with other state, federal and local entities to ensure that the management of this resource will provide lasting benefit to the Public Trust.

- Implementing the GSL Watershed Enhancement Program, including a \$40 million water trust
- Updating the 2013 GSL Comprehensive Management Plan and Mineral Leasing Plan
- Developing an education and outreach campaign to connect the public and decision makers to the lake
- Increasing internal and external coordination efforts with the utilization of a full-time GSL Coordinator in addition to several staff members dedicated to the lake
- Implemented management recommendations from the Salinity Advisory Committee to raise the Union Pacific Railroad Causeway berm to keep the saltier north arm water from flowing into the south arm, and is actively monitoring conditions to determine when further modifications of the berm should take place.
- Hired a dedicated GSL law enforcement officer to reduce illegal activities with an emphasis on curtailing motorized travel on the exposed lakebed
- Can acquire and hold water rights for all sovereign lands, including GSL
- Encouraging innovation within the extractive industry to reduce water depletions
- Actively working with industry partners to develop lithium resources at GSL in a manner that does not deplete additional water or harm the ecosystem.

The **Division of Water Resources** models the lake and river systems that feed it, administers water conservation programs and manages the state’s cloud seeding program, which augments the water supply.

- Developing the GSL Basin Integrated Plan to assess current water supply, forecast need and determine actionable strategies for supply management
- Distributing \$268 million to meter (measure) secondary water systems, which decreases water use
- Awarding \$10 million one-time and \$3 million ongoing for statewide landscape conversion incentives through Utah Water Savers
- Partnering with water districts on conservation rebates for smart irrigation controllers, low-flow toilets and Flip Your Strip rebates
- In partnership with FFSL, designed and oversaw the construction of two berm modifications on the Union Pacific Railroad Causeway to decrease the salinity in the lake’s south arm

The **Division of Water Rights** (i.e., Office of the State Engineer) has the responsibility for the general administrative supervision of the waters of the state and the corresponding appropriation, measurement and distribution of those waters.

- Currently installing over 30 additional measurement devices with telemetry on tributaries within the GSL basin to better facilitate and manage water deliveries
- Enhancing water distribution accounting models to provide accurate distribution accounting and enhanced transparency for all water users
- Providing additional levels of focused effort on critical issues within the GSL basin by creating new Deputy Director, Distribution Engineer and Enforcement Engineer positions with responsibility to tackle issues relating to the lake and its tributaries
- Actively engaging the community and key stakeholders in the development of regional plans and policies that promote order and certainty in the beneficial use of water within the GSL basin
- Collaborating with the Legislature to update key provisions of Utah water law to facilitate the use of water to preserve or enhance natural aquatic environments

The **Utah Division of State Parks** provides public access to premier outdoor recreation areas while also educating visitors on the lake, its history and ecosystem.

- Dredging GSL State Park Marina in order allow improved lake access to search and rescue boats and facilitate research
- Managing both Antelope Island State Park and GSL State Park Marina, which combined, receive over 1-million visitors each year. Visitors participate in a wide variety of programs that help spread awareness and overall appreciation of the lake and the many wildlife, recreation amenities and ecosystems that rely on it.

The **Division of Oil, Gas and Mining** permits and inspects evaporative operations along the lake to ensure that they are following the rules and protecting the environment.

“Great Salt Lake is our #1 priority”
 – DNR Executive Director, Joel Ferry

