



Great Salt Lake. Cover Photo: Mary Anne Karren/Audubon



GREAT SALT LAKE WATERSHED ENHANCEMENT TRUST

FIVE-YEAR STRATEGY 2024-2028



On behalf of the Great Salt Lake Watershed Enhancement Trust, its co-managers, National Audubon Society (NAS) and The Nature Conservancy (TNC), and the Trust's Advisory Council, it is with great pleasure that we share this plan to guide the Trust's operations and goals for the next five years. The Trust has just finished its first year of operation and we look forward to working collaboratively with many others to help preserve the irreplaceable wetlands and waters of Great Salt Lake through partnerships and innovative water projects that benefit people and wildlife.

Through 2023, our first year of operation, the Trust made important progress toward achieving its mission. The Trust co-managers have facilitated, or provided funding, for water transactions of up to 64,000 acre-feet on a diversion basis for Great Salt Lake and are starting 2024 with a baseline of approximately 54,000 acre-feet. The Trust also awarded more than \$8.5 million in funding over the next two years to eight projects led by partners to protect and restore more than 13,000 acres of wetlands and habitat surrounding the lake and benefitting the hydrology of Great Salt Lake.

As we look to 2024 and beyond, this Five-Year Strategy lays out the Trust's vision and goals for the next five years and outlines our path to achieve them. By 2028, building upon the current baseline, we aim to protect existing or secure additional flows of 100,000 acre-feet of water per year for Great Salt Lake, support protection and restoration of at least 20,000 acres of wetlands around the lake, identify and improve at least five key water distribution bottlenecks, and significantly leverage the expended state grant money. This plan draws upon the scientific expertise and watershed management experience of both NAS and TNC as well as our deep network of partners.

We are grateful to our nine-member Trust Advisory Council for providing wide-ranging expertise and perspectives as they advise the Trust and help us work toward achieving our goals. Our gratitude also extends to the other state leaders and partners who have worked with us including policy makers, the newly appointed Great Salt Lake Commissioner, state and local agencies, and the other organizations whose interest and work also is essential to preserving Great Salt Lake and its wetlands.

The Great Salt Lake Watershed Enhancement Trust is only one of the many solutions needed to address the challenges facing Great Salt Lake and its wetlands. We look forward to working alongside many others to secure Great Salt Lake's future as a thriving ecosystem that sustains people and wildlife for generations to come.

Thank you,
Marcelle Shoop
Executive Director, Great Salt Lake Watershed Enhancement Trust
Program Director, Saline Lakes Program, National Audubon Society



The Great Salt Lake Watershed Enhancement Trust is co-led by National Audubon Society and the Nature Conservancy in Utah.



This document was prepared by Nature for Water Facility, a partnership of The Nature Conservancy and Pegasys, for the Great Salt Lake Watershed Enhancement Trust.



INTRODUCTION

Great Salt Lake and its associated wetlands are an essential intertwined ecosystem that provides crucial habitat for millions of migratory birds, water quality improvement, flood control, recreational opportunities, and many other public benefits. Importantly, these special expanses help maintain important connections that contribute water to Great Salt Lake and the quality of life for surrounding communities. As the largest saline lake in the Western Hemisphere, Great Salt Lake spans 1,700 square miles, or over three times the area of Canyonlands National Park. Great Salt Lake plays a unique role in Utah's water cycle, providing lake effect precipitation and significant contributions to Wasatch Front snowpack. This globally important ecosystem also serves as vital natural water infrastructure for communities and wildlife, provides food and habitat for more than 10 million waterbirds;¹ supports 7,700 local jobs and nearly \$1.9 billion in annual economic output from minerals, fertilizers, brine shrimp industries, and recreation,² and is a source of identity and heritage for the lake's nearby communities.

Unfortunately, Great Salt Lake has experienced a consistent decline in water levels for more than 150 years. Human activities, particularly diverting too much water, in combination with intense drought, continue to shrink Great Salt Lake causing a variety of cascading impacts that are incredibly difficult to reverse and costly to mitigate. The situation is exacerbated by climate change that is intensifying droughts, increasing evaporation, and jeopardizing urban and rural communities and our way of life, including economic viability and wildlife habitat health. The far-reaching consequences of the Great Salt Lake ecosystem collapsing are difficult to fathom. Such an ecosystem crash would have continental-wide ecological consequences, jeopardize important economic activities for the state, and potentially create public health hazards from dust storms. One only needs to look at Owens Lake in California, where costs of remediation efforts have exceeded \$2.5 billion, to understand the consequences of mitigating health impacts from exposed lakebeds.

1 Birds. Utah Division of Wildlife Resources. (2023). <https://wildlife.utah.gov/gsllep/wildlife/birds.html>

2 Great Salt Lake. (2023). <https://greatsaltlake.utah.gov>



Great Salt Lake. Photo: Mary Anne Karren/Audubon

Great Salt Lake is now at a pivotal moment. Water levels have recently reached historic lows. Increased salinity levels are threatening the health and viability of brine flies and brine shrimp, as well as the migratory birds that depend on them. In the face of this predicament, water users, policy makers, and communities are rethinking ways water is used and conserved in the West. The efforts to save Great Salt Lake, including collaborative and market-based solutions, must integrate the needs of people, agriculture, and wildlife—not pit them against each other. It’s essential that we work proactively to improve the climate resilience of Great Salt Lake by increasing the reliability of its water supply and improving water and wetland management, so that this already-stressed ecosystem can sustain life for generations to come.

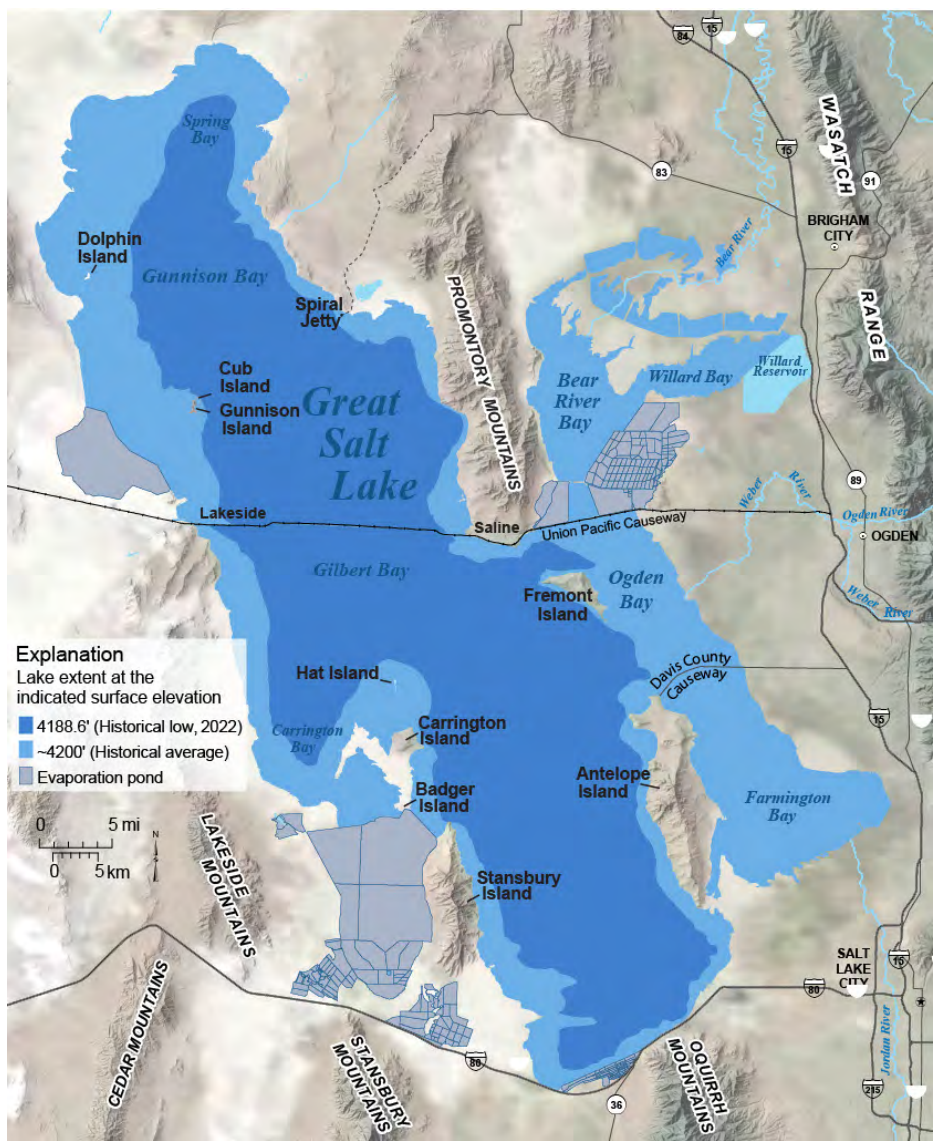


Figure 1: Map of Great Salt Lake
 (source: Utah Geological Survey, modified from Clark and Baxter, 2022)

GSLWET'S MISSION

Preventing the disappearance of Great Salt Lake and its wetlands requires an ‘all hands-on deck’ approach. Several initiatives have been established and funded by the State of Utah that seek to coordinate and align the work of a broad coalition of state and federal government agencies, scientists, nonprofit organizations, businesses, farmers, industry, and the public. The Great Salt Lake Watershed Enhancement Trust (GSLWET or “the Trust”) is one of the strategies to help address the water challenges facing Great Salt Lake and its wetlands, slowing the rate of decline as we work in collaboration to change Great Salt Lake’s trajectory and preserve this vital ecosystem. The Trust will leverage public and private resources for activities that protect and enhance Great Salt Lake through:

- Retaining or securing water flows for Great Salt Lake and its wetlands based on voluntary arrangements that benefit water quality and water quantity
- Conserving and restoring upland and wetland habitats through strategic and collaborative approaches to protect or enhance the lake hydrology
- Contributing to efforts improving the flexibility of water distribution systems
- Leveraging external funding from public and private sources

GSLWET’S VISION is to contribute to an enduring Great Salt Lake that sustains people and wildlife for generations to come.

GSLWET’S MISSION is to help preserve the irreplaceable wetlands and waters of Great Salt Lake by fostering collaborative partnerships and innovative water projects for the benefit of people and wildlife.

Figure 2: GSLWET’s Vision and Mission Statements

GSLWET was established through a collaboration agreement between National Audubon Society (NAS) and The Nature Conservancy in Utah (TNC) and a grant agreement with the Utah Division of Forestry, Fire, and State Lands (FFSL). As co-managers of the Trust, NAS and TNC selected the Community Foundation of Utah (CFU) to act as the fiduciary of the Trust to hold and administer the Trust’s funds.

The following principles will guide the Trust in fulfilling its mission and vision:

Retain and enhance water flows

- Protect and retain water flows already being delivered to Great Salt Lake
- Enter voluntary water transactions to bring new flows to Great Salt Lake

Support habitats

- Protect, conserve, and restore uplands, wetlands, and habitats in the Great Salt Lake watershed to benefit the hydrology and ecosystem functions of Great Salt Lake

Invest in the long-term

- Establish voluntary partnerships that result in long-term benefits for Great Salt Lake and its wetlands, reducing future uncertainty

Improve flexible water distribution

- Contribute to improvements in the flexibility and efficacy of water distribution systems, including monitoring and water delivery to Great Salt Lake and its wetlands

Steward funding efficiently

- Base water pricing on fair market principles and work with partners to leverage state grant funding to achieve increased impact

Adaptively manage

- Learn from our experiences and improve our strategies and operations over time

Figure 3: GSLWET Guiding Principles

GSLWET's efforts alone will not be enough to support the endurance of Great Salt Lake. The GSLWET team will continue to engage with other initiatives and leaders, including the Great Salt Lake Commissioner's Office, to incorporate broader perspectives and ensure our efforts build upon the greater whole.

GSLWET'S ACTIVITIES & OBJECTIVES



Great Salt Lake. Photo: Mary Anne Karren/Audubon

GSLWET will pursue a variety of conservation strategies as part of a holistic approach that increases the overall benefits provided to the lake and its wetlands. Each strategy, shown in Figure 4, independently and collectively contributes to GSLWET's mission of preserving the unique wetlands and waters of Great Salt Lake. These activities have the potential of providing meaningful social and ecological co-benefits such as:

- Stabilizing wetlands and associated habitats instrumental for Great Salt Lake hydrology and building climate resilience and protecting natural infrastructure³
- Increasing the amount of habitat in good condition to sustain wildlife
- Assisting in efforts to control invasive species like phragmites
- Expanding recreational opportunities or access to nature for communities
- Protecting future water availability by maintaining nearby upland areas and the hydrology connecting them to Great Salt Lake's open waters

In addition, GSLWET will adopt an adaptive management approach to our conservation strategies, maintaining the flexibility to respond to changing dynamics and allowing the team to “learn by doing.” The team anticipates that the composition of GSLWET's strategy portfolio will shift over time based on learnings about the effectiveness and overall impacts of the Trust's activities and will seek feedback from a broad range of interests. Ultimately, GSLWET is open to many strategies that effectively contribute to the Trust's mission.

³ Natural infrastructure is defined as the strategic use, restoration, and management of natural lands and waters to conserve and restore ecosystem functions and to reduce climate risks to communities.

Water Investments

<i>Conservation Strategy</i>	<i>Description</i>
Water Protection	Permanent dedicated water for Great Salt Lake through voluntary paid transactions of water rights, water shares, and other arrangements.
Water Leases	Agreements to temporarily transfer water, water rights, or water shares. Terms can vary based on duration, transfer frequency, and schedule.
Water Donations	Donations of a water right or entitlement on either a permanent or temporary basis.
Conservation Easements	An agreement through which a landowner voluntarily agrees to limit the allowable exercise and use of a private property and associated water rights or water shares to provide conservation benefits.
Water Distribution Improvements (water)	Activities or investments that enhance the ability and flexibility to manage, measure, monitor, regulate, and transfer water flows to Great Salt Lake. Investments may be located upstream, nearby, or within existing freshwater, brackish, and saline wetlands, including infrastructure improvements.

Wetland Investments

<i>Conservation Strategy</i>	<i>Description</i>
Wetland Protection	Donation or permanent protection of land and associated water rights that precludes degradation or disappearance of existing and emerging freshwater, brackish, and saline wetlands, emerging shorelines, playas, mud flats, or salt marshes.
Wetland Restoration	Activities that restore the hydrologic and ecologic function of freshwater, brackish, and saline wetlands, playas, mud flats, or salt marshes and surrounding buffer areas. Activities include those that restore the hydrological connectivity between any of the above habitats and Great Salt Lake.
Water Distribution Improvements (wetlands)	Activities or investments that enhance the ability to manage, measure, monitor, regulate, and transfer water flows to, from, and within wetlands in the Great Salt Lake watershed. Investments, including infrastructure, may be located upstream or within existing freshwater, brackish, and saline wetlands.

Figure 4: GSLWET's Conservation Strategies

DEFINING PROGRAM OBJECTIVES & MEASURING SUCCESS

GSLWET’s adaptive management approach depends on tracking progress toward clearly defined objectives and using appropriate outcome metrics. The GSLWET team selected the following four outcomes to measure the impact of the Trust’s activities, based on their contribution to the Trust’s mission and connection to priority activities:

- acre-feet of water secured
- acres of habitat protected and/or restored
- improvements in water distribution system
- externally leveraged funding

GSLWET’s program objectives have a set of quantifiable targets that help articulate the Trust’s priorities, guide activities, and manage expectations regarding what the program can achieve.

<i>Outcome</i>	<i>Program Objective (by 2028)</i>
Water Transacted	Protect existing or secure additional flows of 100,000* acre-feet per year (diversion basis)
Habitat Protected & Restored	Protect or restore at least 20,000* acres of wetlands and associated habitat surrounding Great Salt Lake
Flexible Water Distribution	Conduct studies to identify key water distribution bottlenecks and contribute to improving at least five of them
Leveraged Funding	Leverage or match 25 percent of total expended state grant money

*These goals build on, and are inclusive of, the Trust accomplishments to date.

Figure 5: Summary of GSLWET’s Program Objectives

GSLWET’s program objectives are guided by a holistic mindset that requires not just securing water flows but improving the lake’s overall ecosystem and supporting water distribution or infrastructure so that Great Salt Lake is better equipped to face expected pressures from the effects of climate change, changes in precipitation, and ongoing and increasing water demand.

BUILDING & STRENGTHENING PARTNERSHIPS

NAS and TNC understand that the path to a successful program depends on building long-lasting, collaborative partnerships across the Great Salt Lake watershed. GSLWET will focus on developing strong relationships with key water users and providers such as agricultural producers, irrigation and canal companies, municipal and industrial users, wetland managers, and government agencies such as the Utah Department of Natural Resources (DNR) and local governments. In addition, both TNC and NAS have advocated for, and continue to support, the inclusion of Tribes in efforts to protect and manage Great Salt Lake. We know we can do more to engage with diverse community leaders and incorporate broader perspectives in our water and conservation efforts.

Utah Department of Natural Resources

The Trust works closely with the Utah Division of Forestry, Fire, and State Lands (FFSL), the Utah Division of Wildlife Resources (DWR), and other divisions of DNR, on water right transactions. Typically, either or both DWR and/or FFSL, are named as the beneficial users in water right transactions and parties to water rights change applications.

Private, State, & Federal Wetland Managers

The network of managed wetlands (e.g., within Waterfowl Management Areas and other Migratory Bird Protection Areas including private duck clubs and private reserves), brackish wetlands, and associated habitats along the shores of Great Salt Lake provide crucial habitat for a myriad of wildlife species and important recreational opportunities for Utah residents. These wetland areas provide opportunities for synergies between GSLWET's activities and broader efforts undertaken to provide ecosystem and hydrological services to Great Salt Lake. The GSLWET team is interested in pursuing partnerships with managed wetlands owners (private, state, or federal) to provide water quality improvements from stormwater runoff control, aid in phragmites management efforts, and improve water conveyance to associated habitats surrounding impounded wetlands.

Water Conservation Districts, Private Water Suppliers, Municipal, County, & Other Local Governments

Water providers and managers⁴ or other water suppliers in the Great Salt Lake watershed are also important partners for GSLWET. These entities have expertise and capacity related to water management that could greatly facilitate GSLWET's efforts to distribute water from points of diversion to Great Salt Lake wetlands and open waters.

⁴ This includes publicly owned wastewater treatment facilities that provide important water flows for Great Salt Lake and its tributaries.

Agricultural Producers & Irrigation Companies

In the Great Salt Lake watershed, agriculture represents approximately 61 percent of total water depletions.⁵ GSLWET recognizes the unique role of agricultural producers and the social value of their work in producing food, often benefiting the same natural systems of interest to GSLWET. GSLWET considers agricultural producers as fundamental partners for its efforts due to a shared understanding of the true value of water. The agricultural sector, perhaps more than any other sector, understands the importance of using the right amount of water at the right time to achieve the best results. GSLWET is interested in enhancing and increasing the hydrological benefits agriculture provides to the Great Salt Lake watershed (e.g., return flows and associated habitat for species during irrigation season). For this reason, GSLWET will partner with agricultural producers and irrigation companies on a voluntary basis via transaction approaches (e.g., water leases, conservation easements, water purchases or other potential innovative projects) to provide an avenue for water rights holders to sustain their economic viability while providing water for Great Salt Lake. GSLWET can help foster support of viable agricultural enterprises. Additionally, GSLWET will explore possibilities to work creatively with agricultural partners to leverage investments in agricultural water optimization and other water conservation efforts.

Communities & Tribes

Working through the individual efforts of NAS and TNC programs, or through the Trust's activities, we will seek out opportunities to engage with impacted communities and Tribes in the region to better understand their interests in the preservation of Great Salt Lake and its wetlands, and understand how the work of the Trust can benefit those interests or avoid harm.

⁵ Percentage corresponding to the period between 2016-2020. Estimate based on data from Great Salt Lake Water Budget, Utah Division of Water Resources, 2023, featured in Great Salt Lake Policy Assessment Report (Great Salt Lake Strike Team, 2023).



Great Salt Lake. Photo: Mike Fernandez/Audubon

SUSTAINABLE FUNDING

GSLWET’s initial funding from the State of Utah provides essential seed funding to begin the work of securing flows to Great Salt Lake. The GSLWET team understands, however, that preserving the waters and wetlands of Great Salt Lake will require extensive work and consistency over the years. To achieve the program objectives for 2028 alone, the team estimates requiring between \$110 million and \$145 million in additional funding.⁶ We will identify and pursue sustainable funding for GSLWET so that the Trust can continue to carry out its mission beyond the initial \$40 million funding capitalization. One component of GSLWET’s sustainable funding strategy includes setting aside an initial \$2 million endowment that will support the operational viability of the Trust. It is worth noting that the Community Foundation of Utah represents a key partner in holding, investing, and administering the Trust’s funding, including the initial state investment of \$40 million in grant funding and the long-term management of GSLWET’s endowment. GSLWET will pursue additional funding strategies to multiply the impact of its initial state contribution and potentially expand available funding in the future.

The State of Utah remains a crucial partner for securing additional financial resources needed to implement GSLWET activities in greater magnitude to have a positive impact on Great Salt Lake. Utah leaders have shown their recognition of the lake’s importance and the need for swift action when they established and initially funded GSLWET. Additional funding support for GSLWET will demonstrate to Utahns that the State has a long-term commitment to preserving Great Salt Lake and that GSLWET is an effective mechanism to protect the lake for future generations.

Another key source of funding for GSLWET activities lies in match requirements for the Trust’s regrant processes, especially those supporting wetland and infrastructure projects. In-kind resources and donations associated with water transactions also leverage GSLWET funding beyond its initial state funding. The awareness of Great Salt Lake’s perilously low water levels has opened additional opportunities for funding through public, nonprofit, and private sources that align with GSLWET’s mission.

⁶ Additional funding need ranges correspond to estimates based on currently available information on the average cost of implementing GSLWET strategies and the composition of GSLWET’s activity portfolio. Estimates are subject to change as GSLWET obtains more information about market conditions and the costs of its activities.



Great Salt Lake. Photo: Mary Anne Karren/Audubon

CRITERIA FOR EVALUATING WATER TRANSACTIONS, WETLAND, & WATER INFRASTRUCTURE OPPORTUNITIES



Great Salt Lake. Photo: Mary Anne Karren/Audubon

NAS and TNC have established a set of threshold and desired criteria for evaluating water transaction opportunities for Great Salt Lake and its wetlands. While these may be updated as part of an adaptive approach, the current version is posted on [GSLWET's website](#). Core criteria focus on assessing water transactions based on the criteria listed below, in addition to their contribution to broader public benefits including habitat connections, community benefits, and expanding key partnerships. Core criteria include the following:

- validity and viability of the proposed water right
- ease of distributing water to the lake
- ability to monitor associated water flows
- cost effectiveness of transaction
- likelihood of repeatability or scaling of opportunity
- durability of water flows transacted

GSLWET also developed criteria for projects that protect or restore wetlands, including related infrastructure. The 2023 criteria are incorporated in the Great Salt Lake Watershed Enhancement Trust Announcement of Funding Opportunity and Application Guidance Document for the Protection and/or Restoration of Wetlands and Habitats in Great Salt Lake's Surrounding Ecosystem to Benefit the Hydrology of Great Salt Lake, available on [GSLWET's website](#). The core criteria to evaluate these opportunities are as follows:

- hydrologic benefit to Great Salt Lake
- ecosystem and wildlife benefits
- clear project budget and matching funds
- clear and achievable work plan
- evaluation plan
- additional community benefits

THE PATH FORWARD



Great Salt Lake. Photo: Mary Anne Karren/Audubon

NAS and TNC’s 5-Year Strategy will guide the team during the Trust’s next five years as it continues to grow and gain a better understanding of its activities and their impact on the Great Salt Lake watershed. The strategies described in the plan will be revisited as needed to incorporate learnings, and the team expects to revisit the plan by 2027.

Over the next few years, it will be a top priority to continue to build upon GSLWET’s \$40 million initial state funding. The lake’s ecosystem has been degraded over many years, and it will take many years to ensure it reaches an enduring state. The GSLWET team is committed to raising resources to keep GSLWET operating for years to come, working towards making the Trust’s vision a reality.

We are aiming for lasting, positive impact through GSLWET, and will focus on accountability in our impact while recognizing collaboration is key to accomplishing our goals to improve the health of Great Salt Lake. We will continue to work with a wide range of interested parties to find tangible, collaborative and innovative strategies to sustain this crucial ecosystem for the benefit of people and nature.

If you are interested in learning more about GSLWET’s efforts, please visit the [website](#). You can support GSLWET by raising awareness about our work, contributing a donation, or contacting the GSLWET team about a potential water transaction or project aligned with our strategies.

The GSLWET team is grateful for this opportunity to support the future of Great Salt Lake and its wetlands.



Audubon Gillmor Sanctuary. Photo: Evan Barrientos/Audubon

