



Executive Summary of  
Legal Analysis and Review  
of Select Water Strategies  
for Great Salt Lake

# Water Strategies for Great Salt Lake

A healthy Great Salt Lake is critical to Utah’s economy, environment, and culture. Upstream diversions of water are contributing to declining lake levels. Without timely action to address declining lake levels, the Great Salt Lake may be irreparably damaged for future generations.

Diminished lake levels pose multiple negative and costly impacts to Utah, including deteriorated air quality, a disrupted water system, and decreased revenue from recreational and industrial activities.

The Utah Legislature and Great Salt Lake Advisory Council (GSLAC) are investing resources to understand what actions can most effectively bring more water to the Great Salt Lake. Of 72 crowdsourced concepts, the GSLAC chose 12 priority Strategies for additional review. Combining technical and legal expertise, this Report analyzes each priority strategy and provides decisions makers with context, considerations, and action options for realizing greater lake levels.

“NOW, THEREFORE, BE IT RESOLVED that the Legislature of the state of Utah the Governor concurring therein, recognize the critical importance of ensuring adequate water flows to Great Salt Lake and its wetlands, to maintain a healthy and sustainable lake system.

BE IT FURTHER RESOLVED that the Legislature and the Governor recognize there is a need for an overall policy that supports effective administration of water flow to Great Salt Lake to maintain or increase lake levels, while appropriately balancing economic, social, and environmental needs, including the need to sustain working agricultural land.”

Concurrent Resolution to Address Declining Water Levels of the Great Salt Lake, H.C.R. 10  
2019 General Session, State of Utah

Each of the 12 priority Strategies provides a unique and discrete element of water management. Using the Strategies to raise lake levels, requires understanding how the Strategies work together.

Impactful water management decisions recognize key intersections of law, hydrology, technology, and innovation. The Report categorizes Strategies based on function, summarizes key concepts, and provides action options. While each Strategy is important, to assist in realizing water gains for the Great Salt Lake, it necessary to first adopt the three Foundational Strategies.



**LEGEND**

- Foundational Strategies
- Tactical Strategies
- Operational Strategies
- Organizational Infrastructure

# A Strategy to Improve Water Management and Increase Water Deliveries to Great Salt Lake



## Organizational Infrastructure

Coordinating and integrating complex and interdependent strategies such as these will require strong leadership and synergy around a common goal. State Agency and stakeholder coordination will be critical for success.



**Strategy No. 11: Groundwater Management**

Protect adjacent groundwater levels and inflows to Great Salt Lake by defining safe yields, through existing Prior Appropriation tools, and adoption of a Groundwater Management Plan.

**Strategy No. 4: Secondary Metering**

Secondary metering is a popular means of reducing outdoor water use by separating and discreetly metering indoor and outdoor municipal/residential use. The cost-to-benefit ratio for secondary metering is highly dependent on the characteristics of the individual system. Water conserved through secondary metering is generally controlled by the owner and already dedicated to meeting new growth. Reallocating such water for Great Salt Lake will require market and other incentives.

**Strategy No. 5: Municipal and Industrial Water Conservation**

Though a smaller percentage of Utah's water use, continue to encourage and incentivize implementation and development of M&I water conservation tools. Collect data such as treatment costs, rate tolerance, source development costs etc. to properly value water in the public water system and watershed. M&I water conservation may postpone development of new supplies or be used to assist with instream flows to meet water quality standards. Specifically reallocating M&I water for Great Salt Lake will require market and other incentives.

**Strategy No. 8: Agricultural Water Conservation**

Agriculture is currently the largest user of water in the State and presents the largest opportunity for incentivizing water conservation. Modify existing law to allow water rights holders to maintain rights to the water they conserve, develop methods that enable quantification of actual water depletion and management of water rights by depletion, and incentivize agricultural water users to conserve.

**Strategy No. 2: Split Season Leasing**

New law provides water users the authority to sequentially split the use of their water and use it for two discreet purposes in the same period of use. Applicants seeking a split season Change Application will need to provide the State Engineer adequate information to assess the change and ensure other water users are not impaired. The State Engineer may need additional resources to adequately review more complicated Change Applications.

**Strategy Nos. 7 & 10: Water Acquisition**

Amend the current Instream Flow statutes to expand the universe of entities allowed to hold rights for instream flow and Great Salt Lake.

**Strategy No. 9: Agency Coordination**

Assess and amend existing organizational structure to better align the mandates, efforts, and investments of agencies with the State's policy for Great Salt Lake. Provide full support to the GSLAC and development of a new Great Salt Lake Watershed Council.

**Strategy No. 12: Quantifying Conserved Water**

Modify Change Application process to require applicants to present sufficient information to assess and implement depletion accounting and provide the means to quantify and condition Utah conserved water rights so as not to impair other users.

**Strategy No. 6: Watershed Best Practices**

Complete an integrated water resource management plan for the Great Salt Lake Watershed to collaboratively consider the costs, the opportunities and return on investment from water conservation as one means of increasing inflow to Great Salt Lake.

**Strategy No. 1: Recognizing a Right to Conserved Water**

Modify the definition of beneficial use to allow water owners to retain a legal right to control conserved water and to protect conserved water from forfeiture.

**Strategy No. 3: Shepherding Water**

Expand the definition of beneficial use to include instream flows and flow for Great Salt Lake so that water rights dedicated to that purpose can be shepherded to the Great Salt Lake according to priority.

## Foundational Strategies

Utah water law does not currently promote the conservation of water. The Foundational Strategies address 3 legal constraints to address in order to better incentivize and reward investment in water conservation. The Foundational Strategies must be implemented for the other 9 Strategies to be effective at bringing water to the Great Salt Lake.

## Tactical Strategies

The Tactical Strategies are tools to use less, protect, and conserve water. The Tactical Strategies work with the individual or assembly of water users. Water conserved through a Tactical Strategy is typically controlled by the entity who invested in the conservation measures. While Tactical Strategies achieve smart water use, whether any resulting conserved water reaches Great Salt Lake will depend on sufficient financial and social incentives.

## Operational Strategies

The Operational Strategies inform how water can be managed to optimize its use and prioritize dedicating water for Great Salt Lake purposes. The Operational Strategies spur innovation and flexibility that improves the overall sustainability of the water supply for Great Salt Lake.



Water entering Bear River Bay via weir at Bear River Migratory Bird Refuge

## Foundational Strategies:

The 12 priority Strategies all aim to use or manage water more effectively. These efforts are intended to stretch Utah's limited water resources and make water available for additional needs and uses.

For the Great Salt Lake to receive water from such activities, several key changes to Utah water law and administration are required. The 3 Foundational Strategies identify key barriers and discuss changes needed to more effectively bring water to the lake.

### Foundational Strategy 1: Recognizing a Right to Conserved Water

Water in Utah is owned by the public. Water rights are hyper-defined conditional property rights designed to maximize beneficial use of water across a water system.

Intended to protect against wasteful practices, water rights are allocated according to set metrics that define the amount of water to be diverted from the system (i.e. duty) and the amount of water to be depleted (or consumed) by a specific use. These metrics anticipate a portion of the water diverted will not be depleted and unused water will rejoin the water system as return flows. Downstream users depend on return flows to fulfill their water rights. If a water right owner undertakes practices that result in less water being depleted to satisfy the same authorized use (i.e. planting a less water consumptive crop), the owner forfeits the undepleted water and it is also returned to the system to meet downstream rights. Losing control of this unused portion of water depresses conservation efforts.

To promote water conservation, Utah water law can be changed to recognize a legal right to conserved water. To protect downstream water users dependent on return flows, **the Report understands a conserved water right to be the difference between the amount of water authorized to be depleted and the amount of water actually depleted by a use.**

### Strategy No.12: Quantifying a Conserved Water Right

Once a basis in law is recognized, the amount of water available to dedicate to a conserved water right must be quantified. The current Change Application process requires applicants demonstrate that a change in use will not impair other water users. The Change Application process can be used to collect the relevant technical information to compare the authorized depletion rate against actual depletion of a proposed new use. In approving a Change Application to quantify a conserved water right the State Engineer can also place conditions to protect other water users or implement public policy goals.

### Strategy No.3: Shepherding a Conserved Water Right

Utah adheres to the Prior Appropriation Doctrine which was developed in the 19th century and generally only recognizes water rights for beneficial uses that are consumptive in nature. For water intended for the Great Salt Lake to be shepherded through the water system and not be taken by junior users, there will need to be a greater legal recognition of instream flows as beneficial use to Great Salt Lake.

## Can it be successful?

The GSLAC's Great Salt Lake Integrated Model provided a unique opportunity to simulate several of these strategies in action and illustrated that "effective growth planning and water management can make a positive difference". Simulation of several of the strategies resulted in a significant reduction in lake decline over the baseline scenario.

## What's Next?! Keep the discussion going and start to act.

This Report is part of a larger discussion about how to steward the valuable resources of the Great Salt Lake. To reach the goal of increasing lake levels, the water user community must continue to make informed decisions that result in actions that benefit the Lake. Exploring how to best implement the 12 Strategies is a concrete step in the direction of building a better future for Great Salt Lake, Utah, and beyond.