January 7, 2026

Great Salt Lake STRIKE TEAM

Data and Insights Summary

UtahState University | THE UNIVERSITY OF UTAH | UTAH DNR NATURAL RESOURCES | UDAF | UTAH DEPARTMENT of ENVIRONMENTAL QUALITY | Great Salt Lake

Great Salt Lake STRIKE TEAM

UtahState University

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Great Salt Lake

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Hannah Freeze

Other Team Members:
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Tim Hawkes
Marissa Weinberg

Great Salt Lake STRIKE TEAM

Utah State University | The University of Utah | Utah DNR Natural Resources | UDAF | Utah Department of Environmental Quality | Great Salt Lake

Scientific Update | Brian Steed

Figure 1: Elevation of Great Salt Lake South Arm, 1903-2025 Water-year-end Elevation

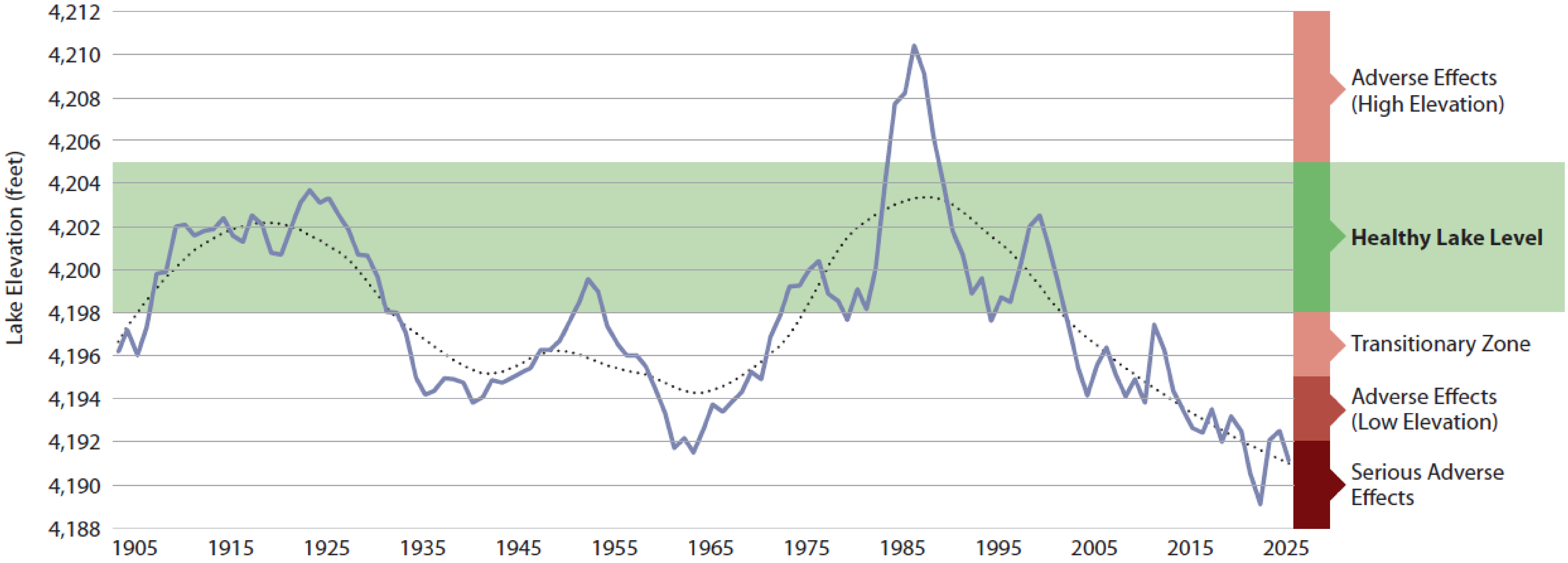


Figure 8: Reservoir Storage in the Great Salt Lake Basin, 20 Largest Reservoirs, 1989-2025

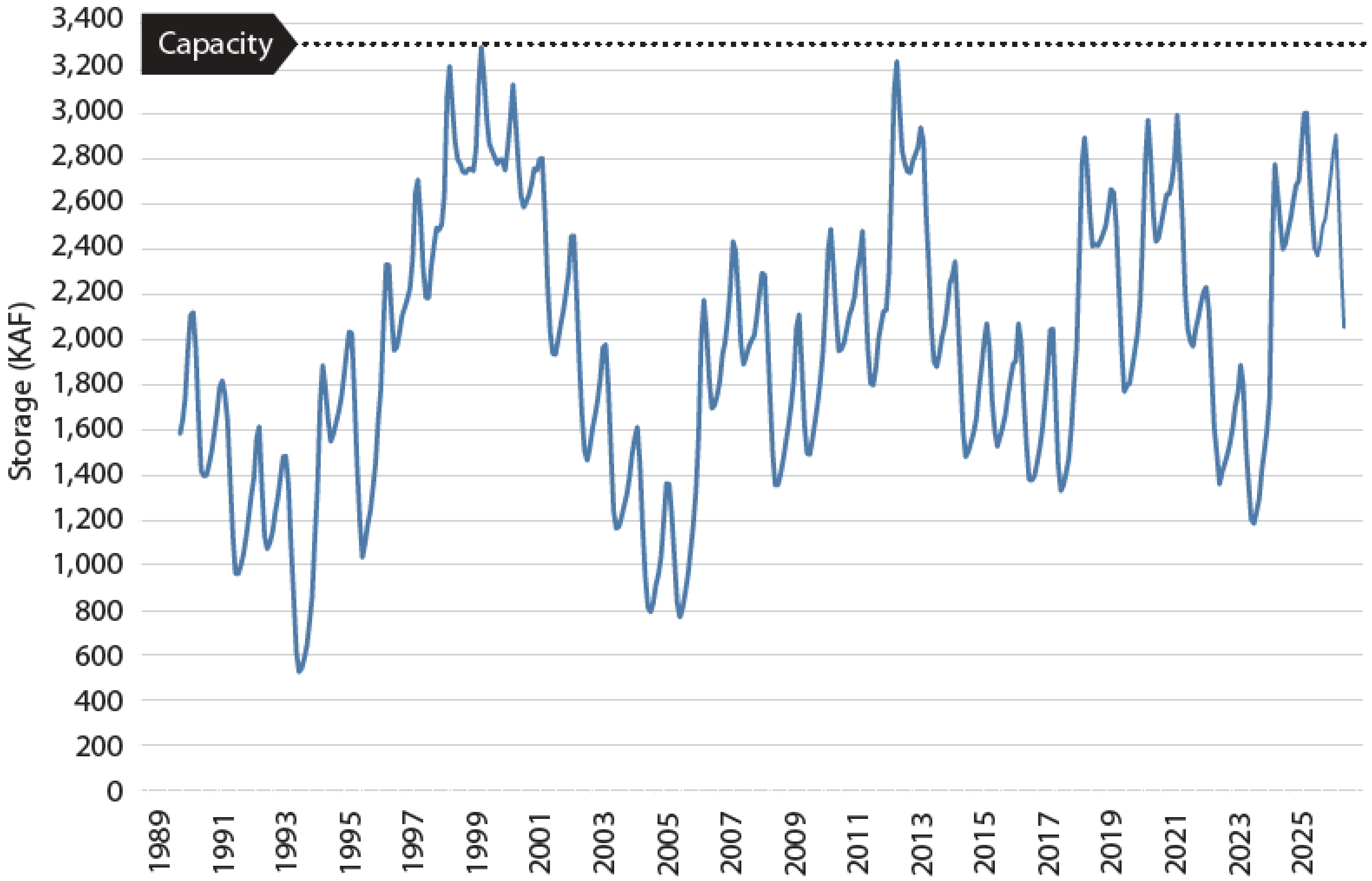


Figure 9: Salinity of Great Salt Lake South Arm, 1989-2025

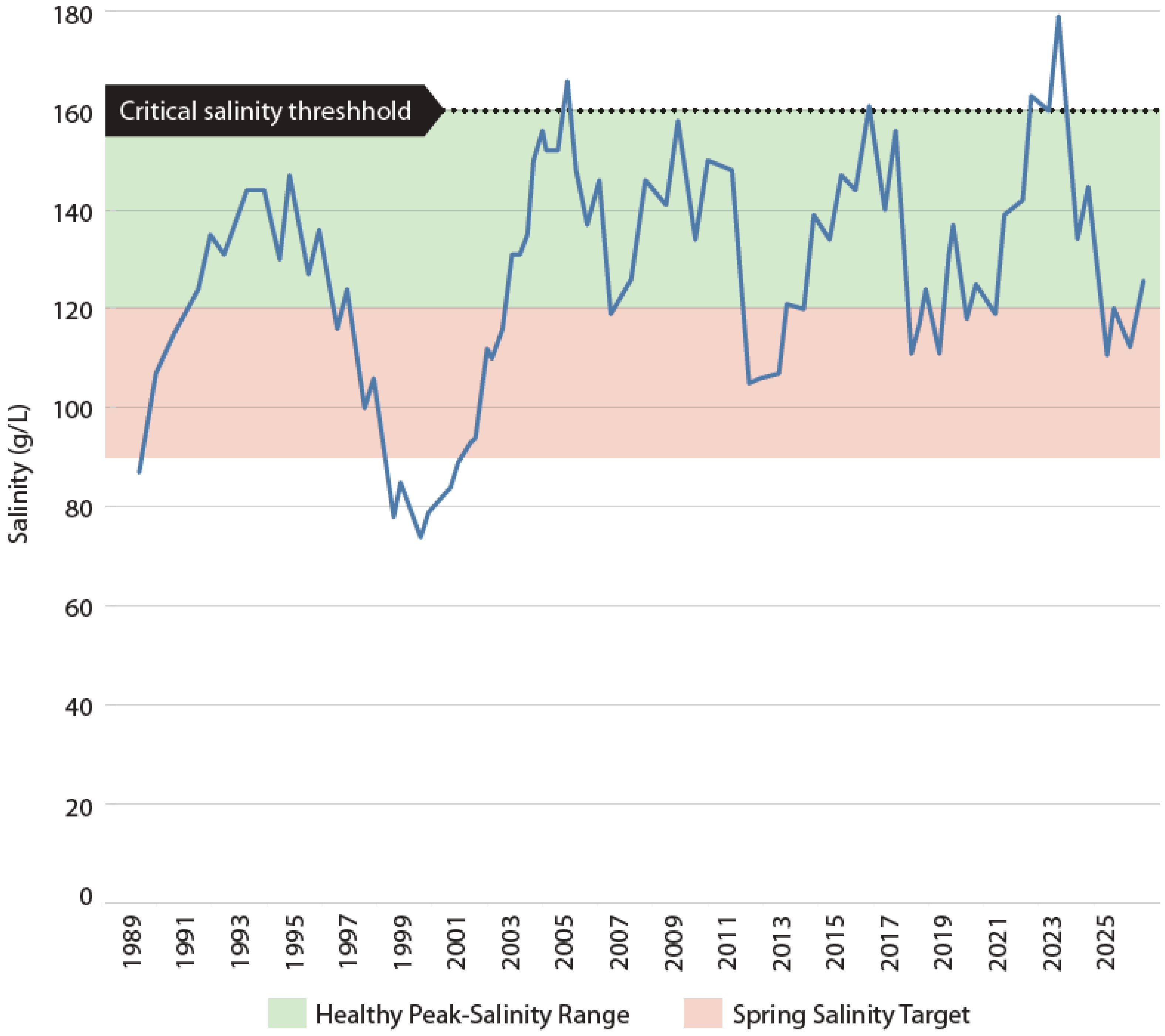


Figure 10: Historical **Precipitation** in Great Salt Lake Headwaters, 1901-2025

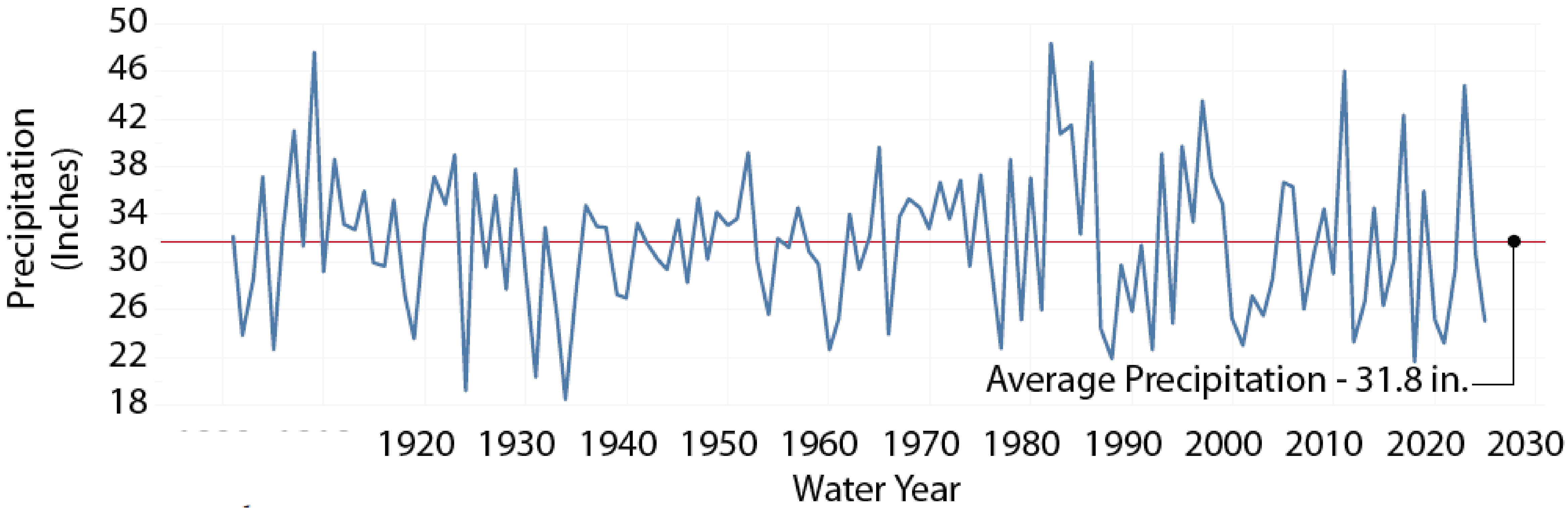


Figure 10: Historical **Air Temperature** in Great Salt Lake Headwaters, 1901-2025

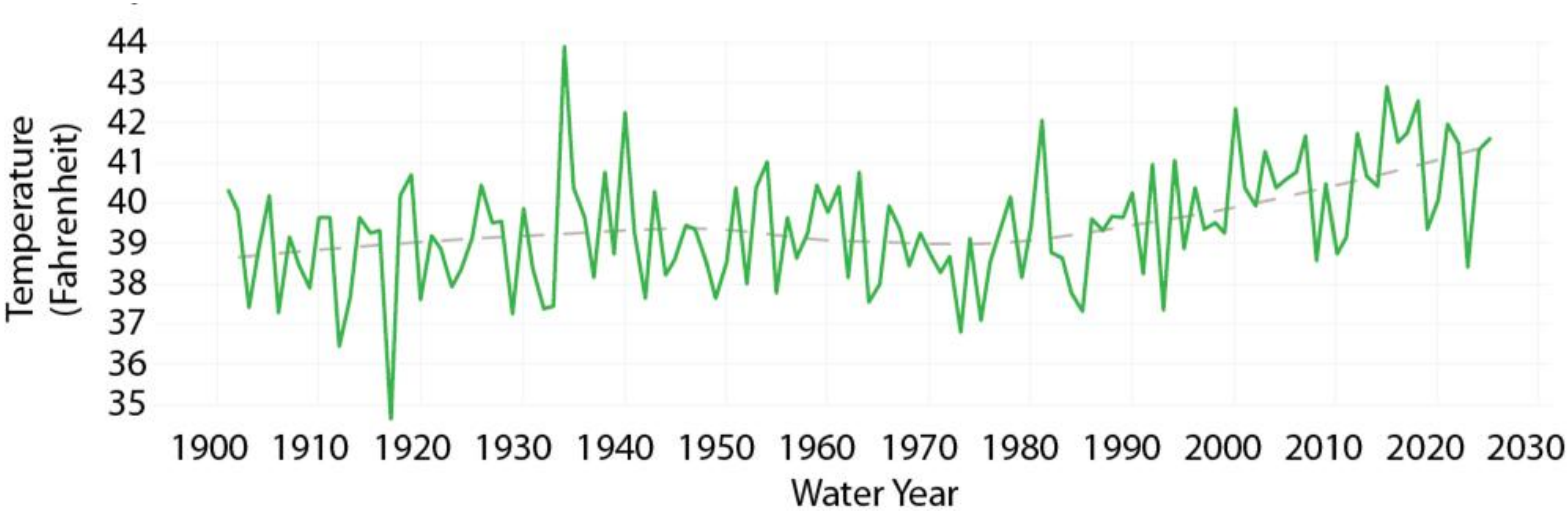


Figure 11: **Bear River** Streamflow, 1903-2025

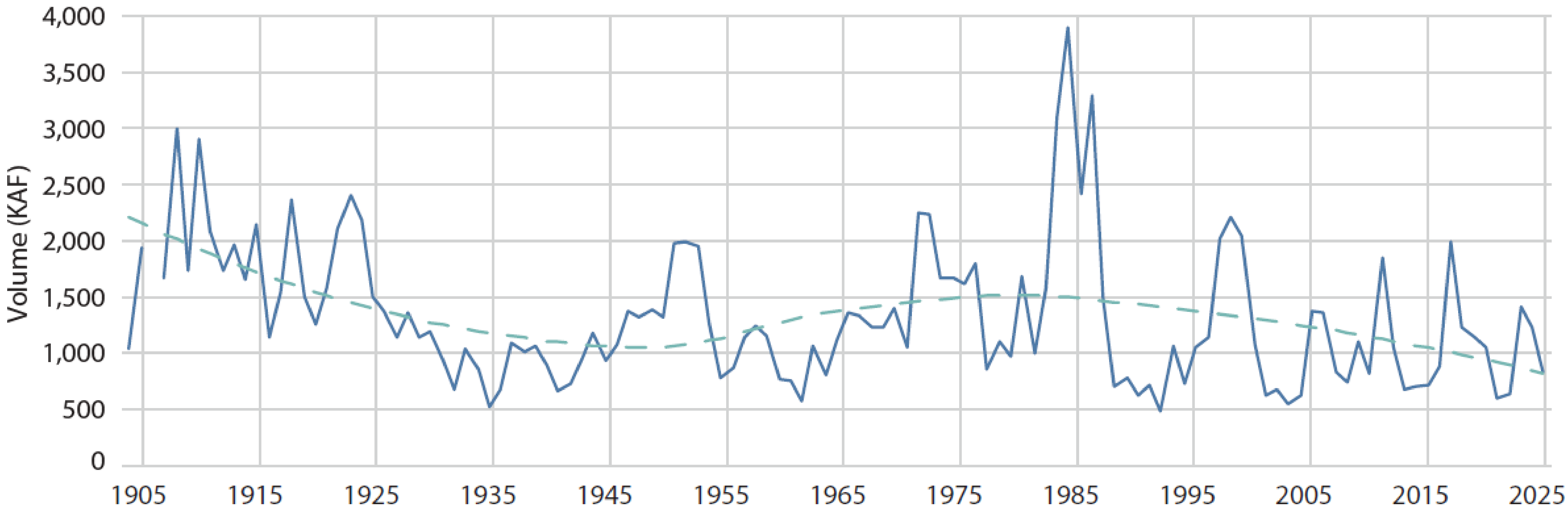


Figure 11: **Weber River** Streamflow, 1908-2025

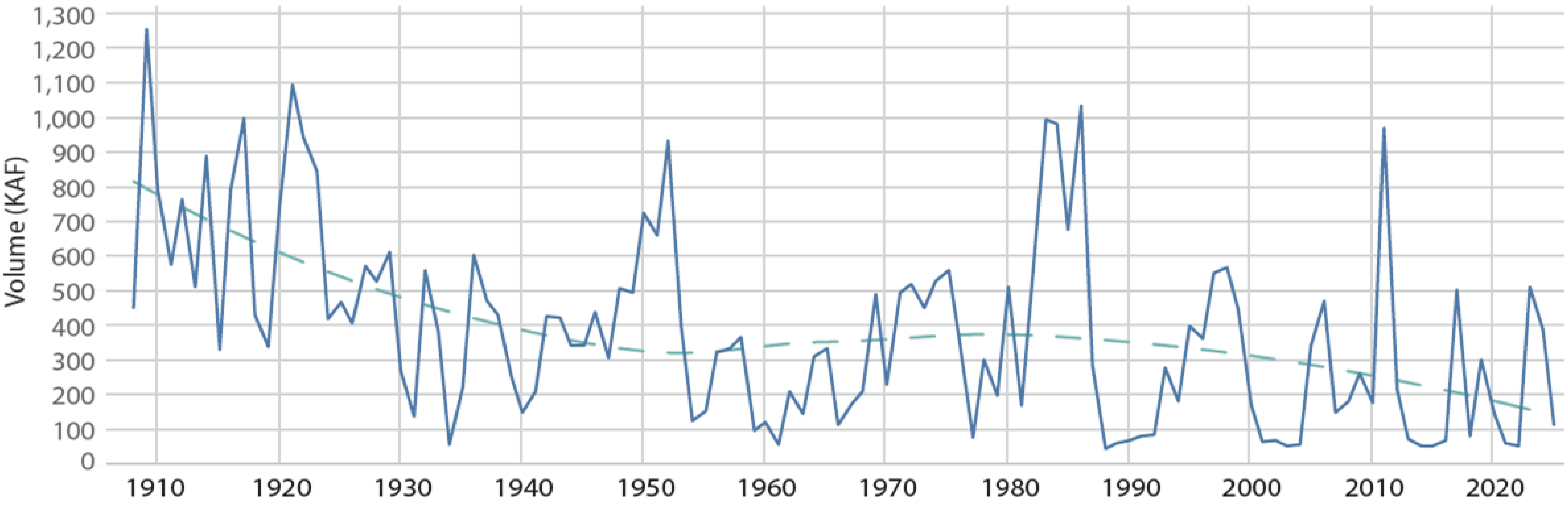


Figure 11: **Jordan River** Streamflow, 1902-2025

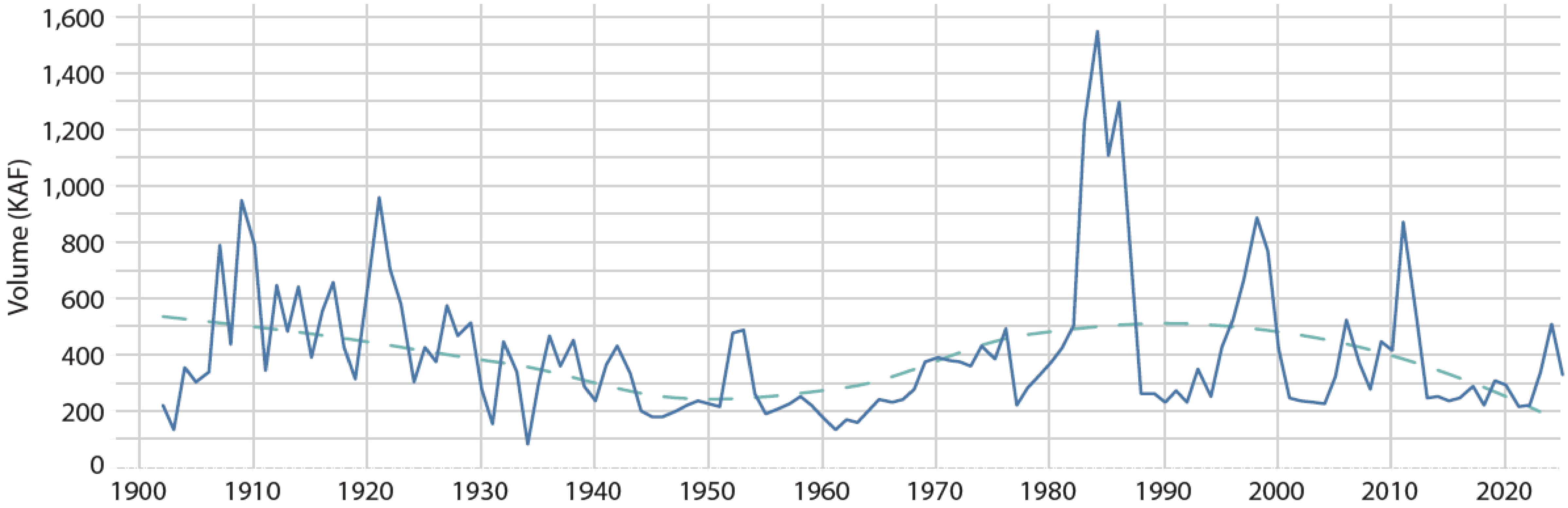


Figure 12: Human Water Depletions by Type, 1989-2024

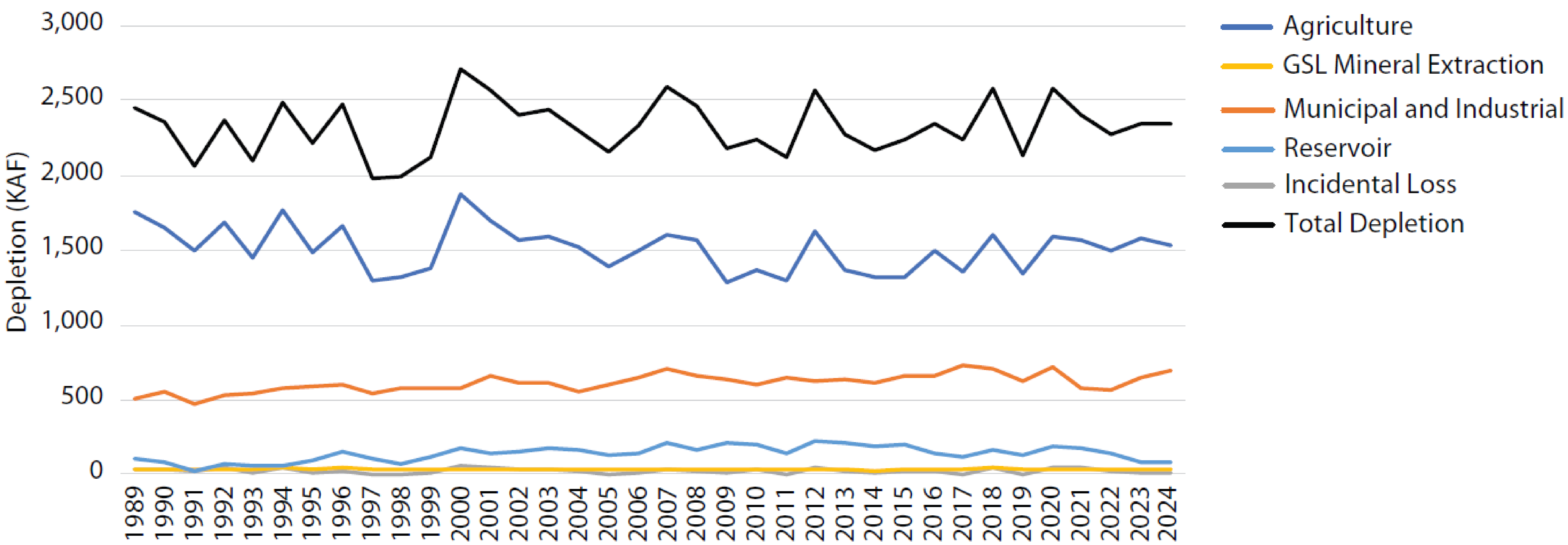


Figure 16: Mineral Extraction Water Depletions on Great Salt Lake,1989-2024

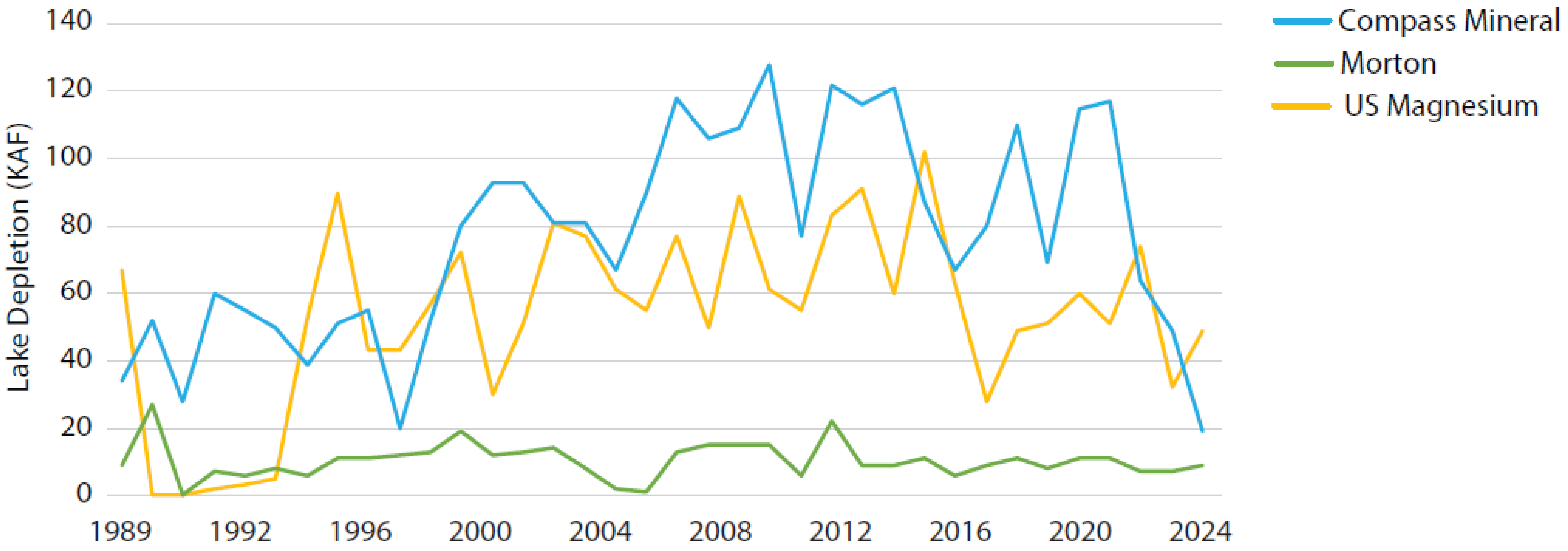
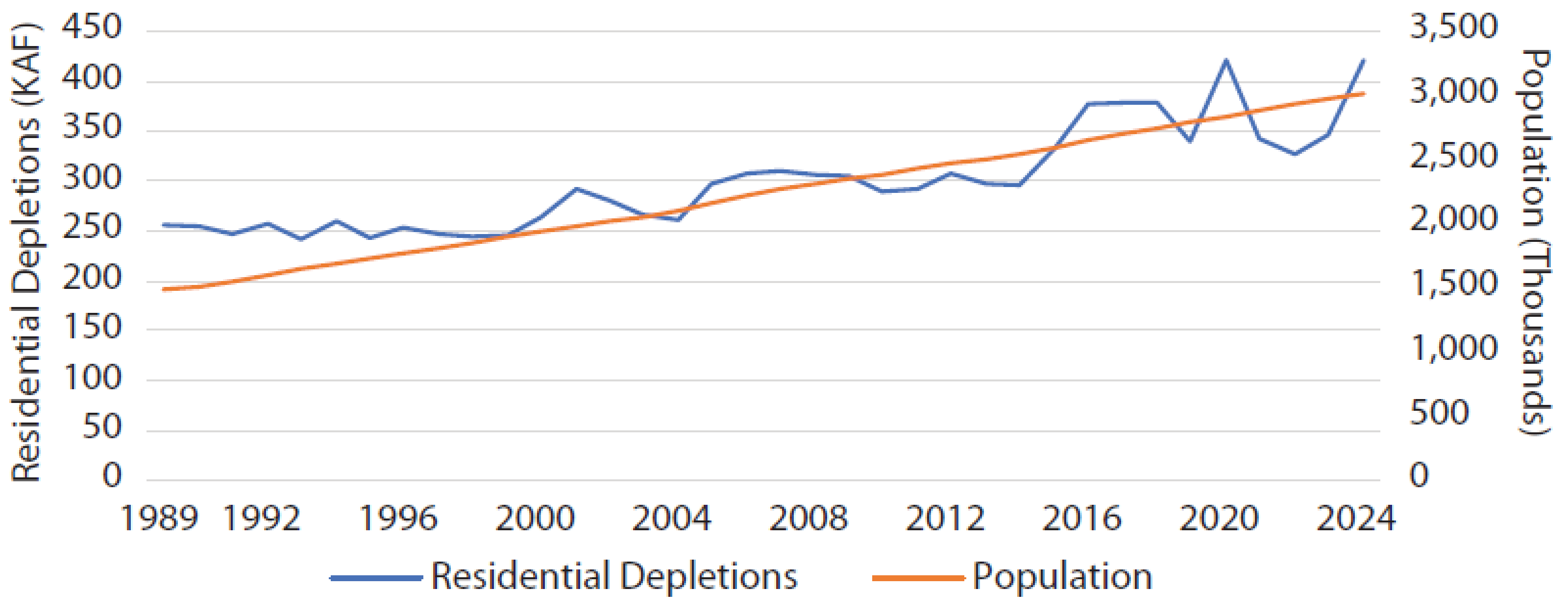


Figure 14: Residential Depletions and Population, 1989-2024



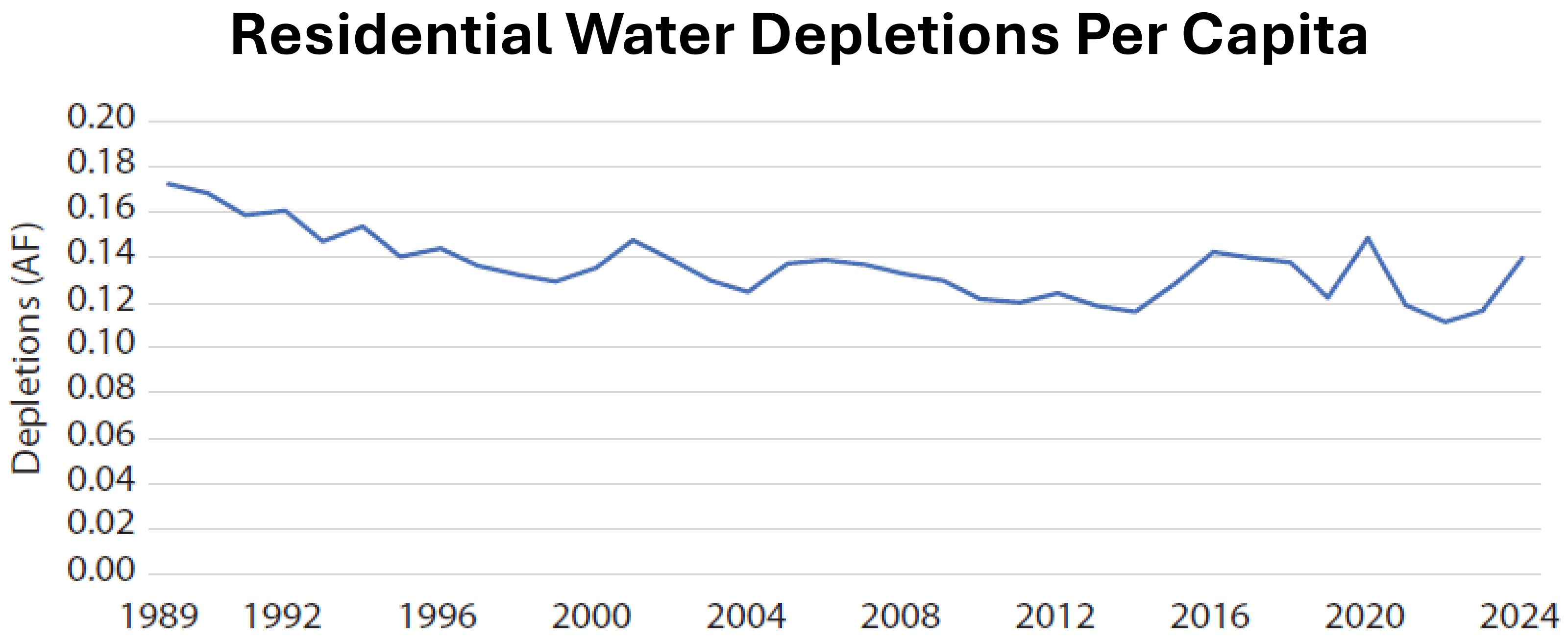


Figure 15: Residential Indoor and Outdoor Depletions

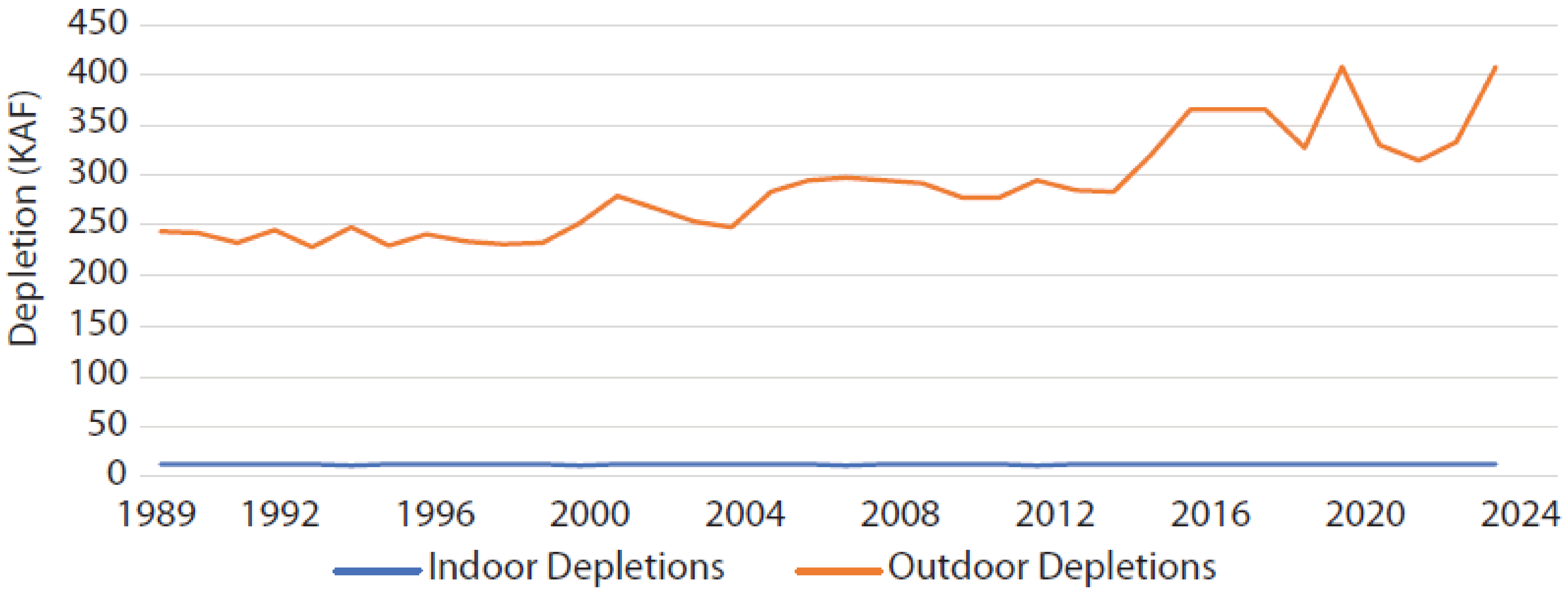


Figure 13: Agriculture and M&I Depletion

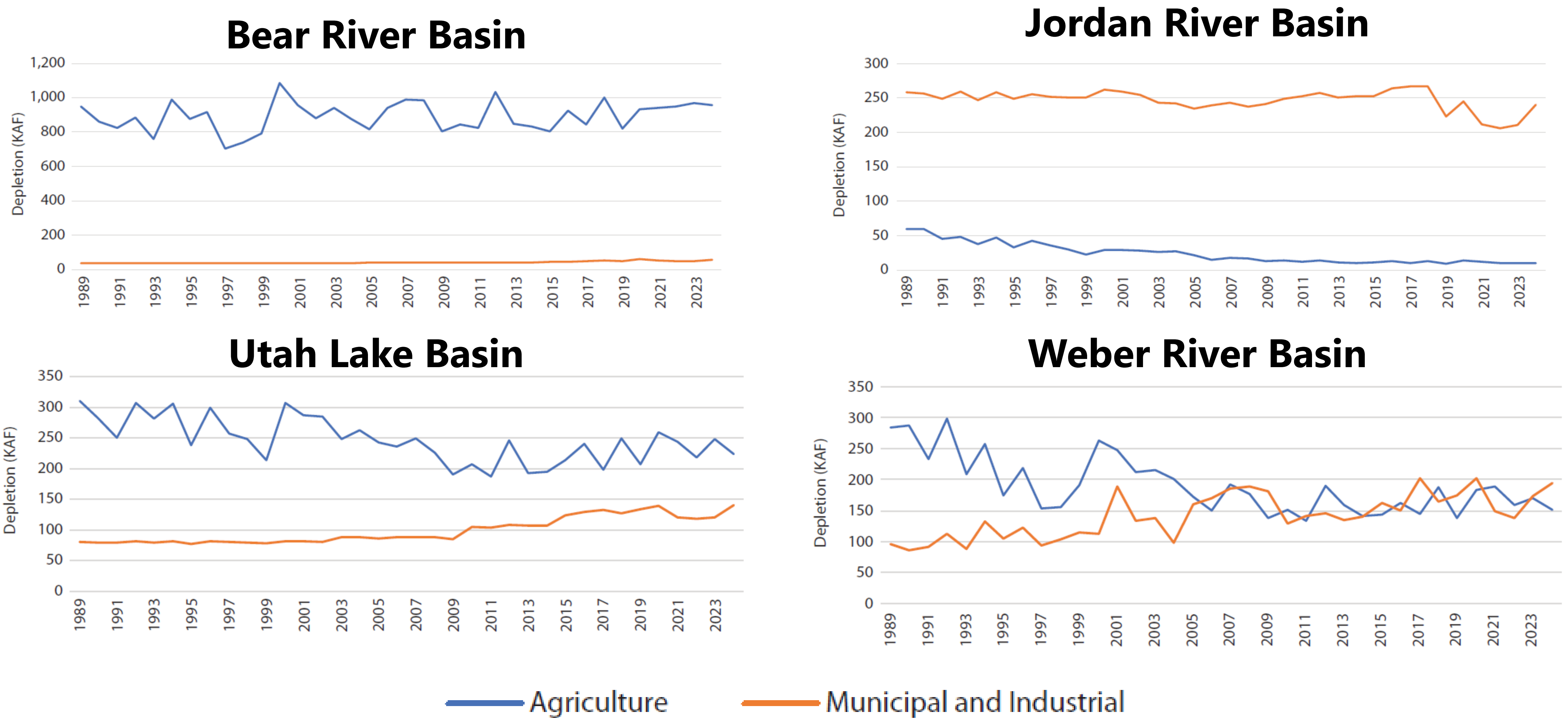
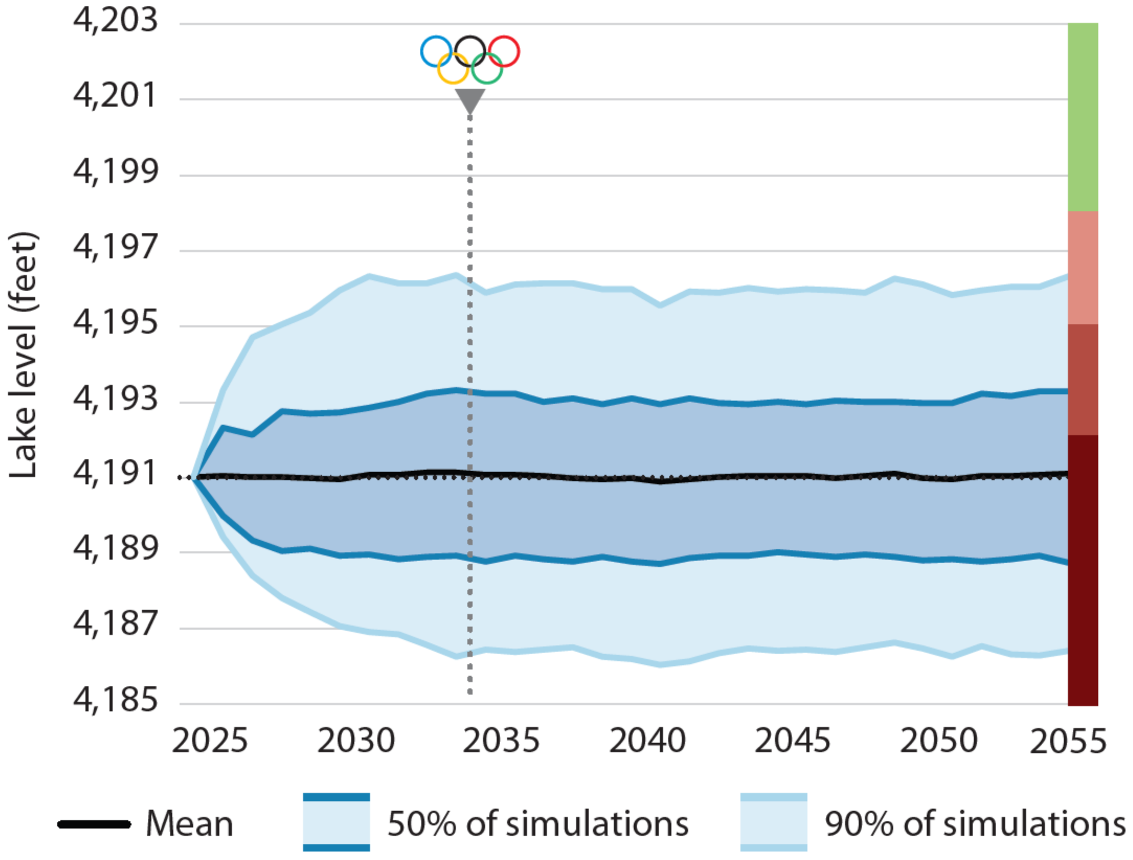


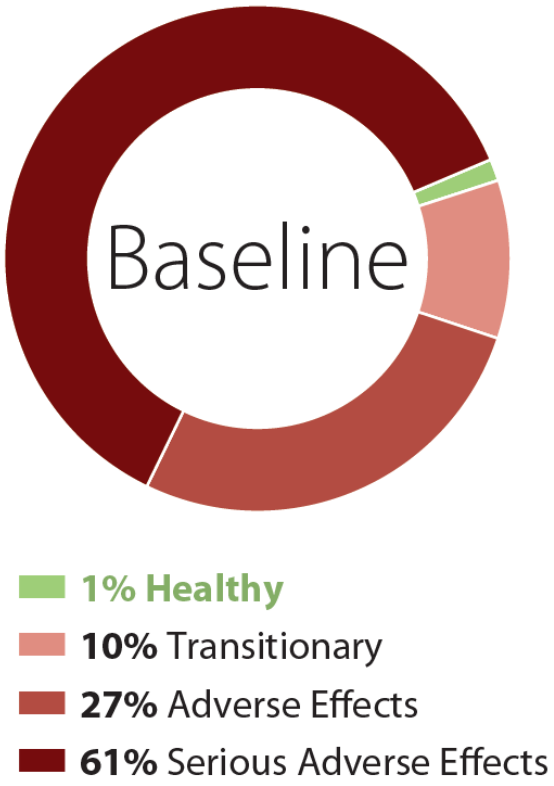
Figure 21: Projected Lake Level Ranges Under Sustained Additional Inflows

Baseline Scenario

Average Inflow - 1,665 KAF/year



Percent of long-term simulations within elevation ranges



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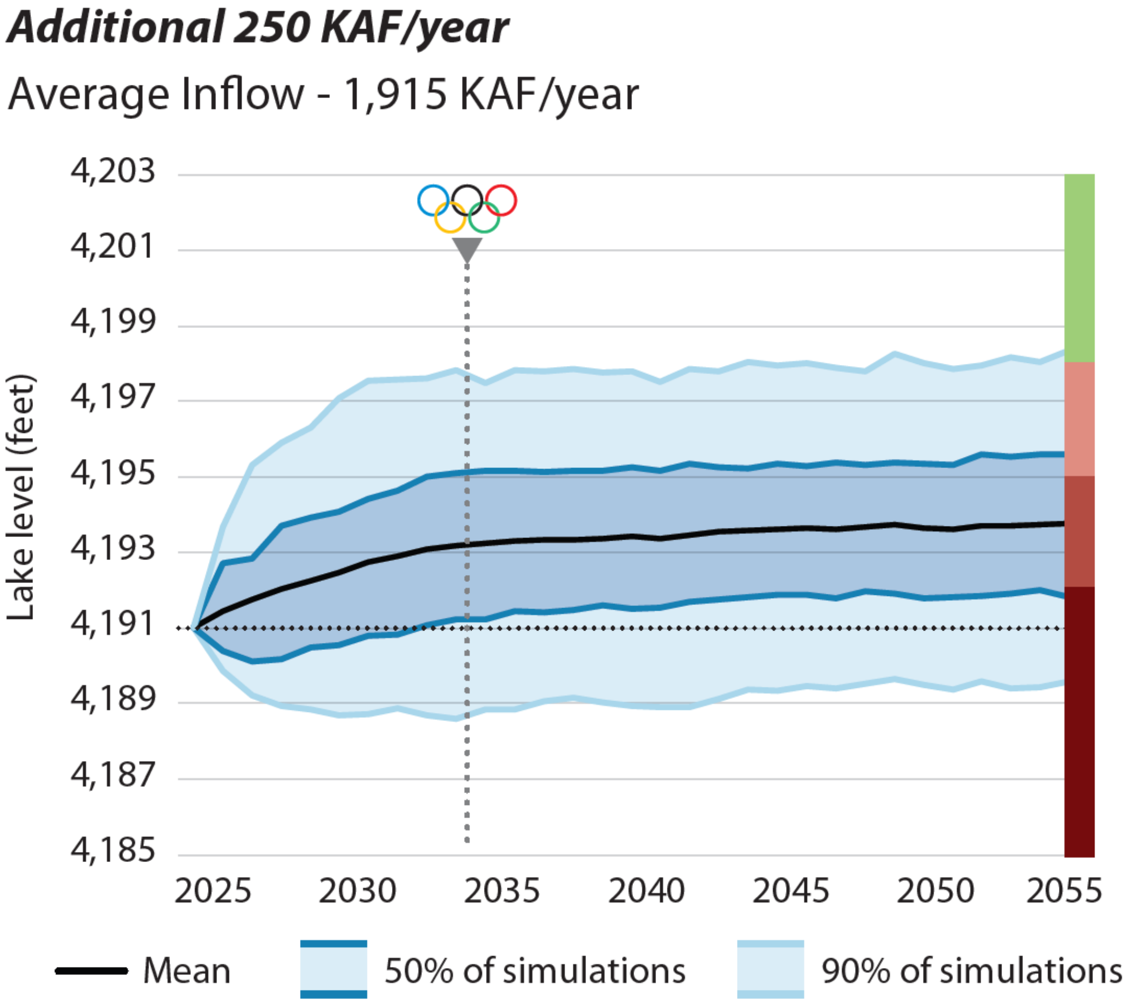


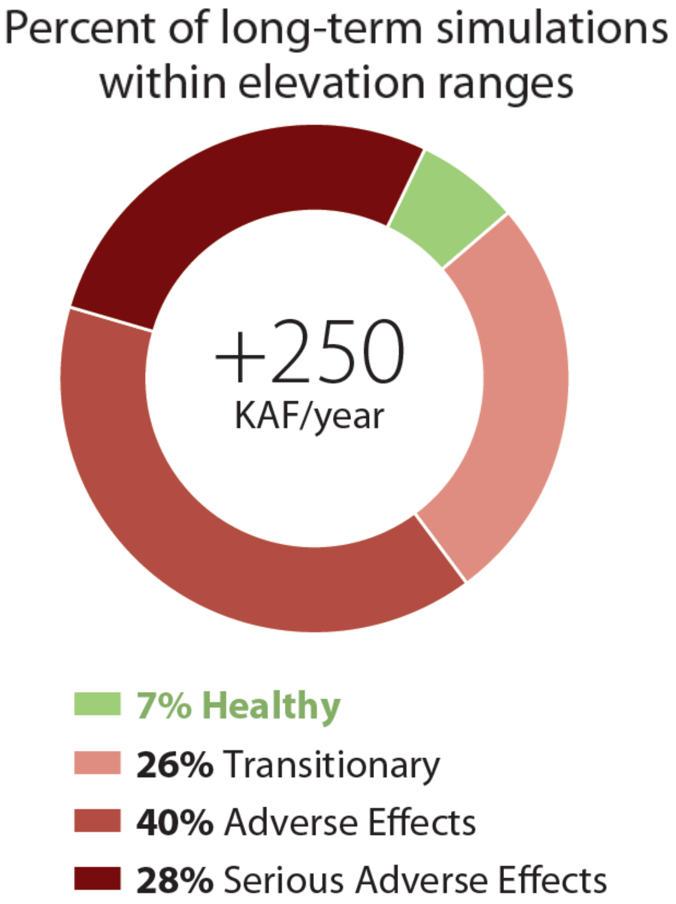
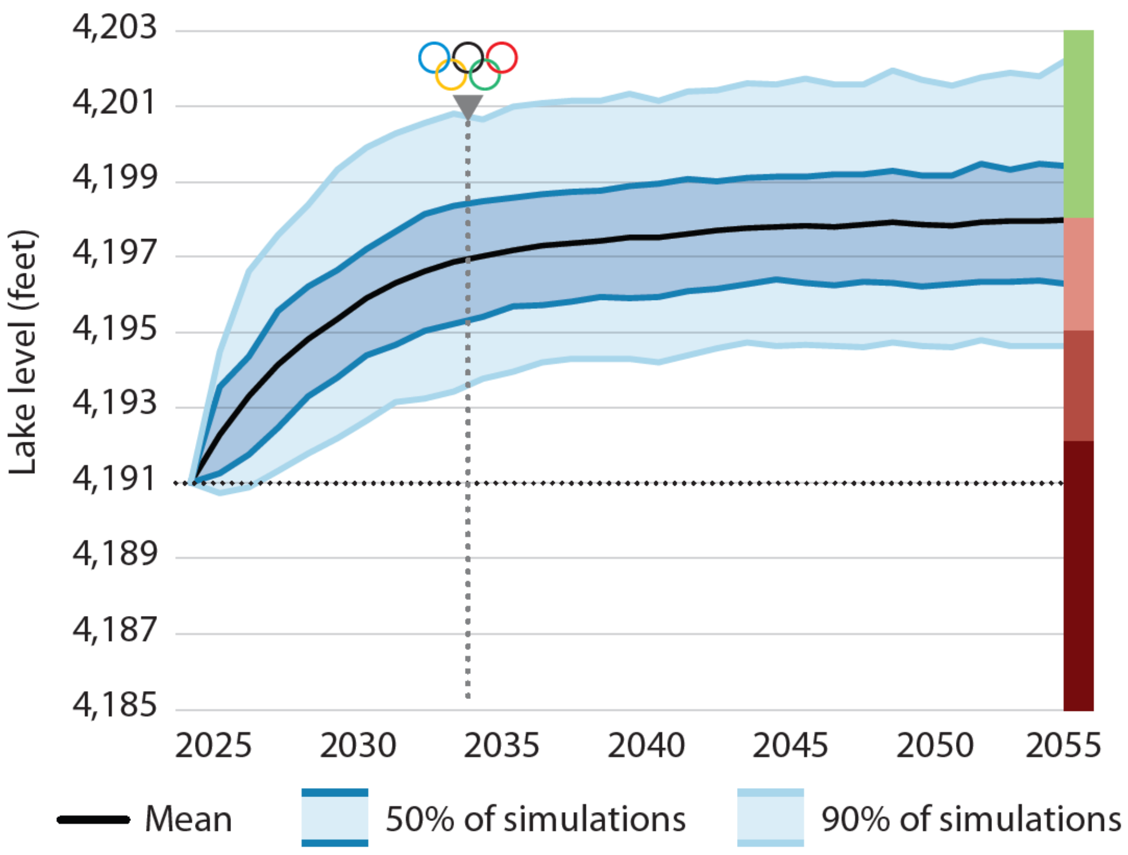


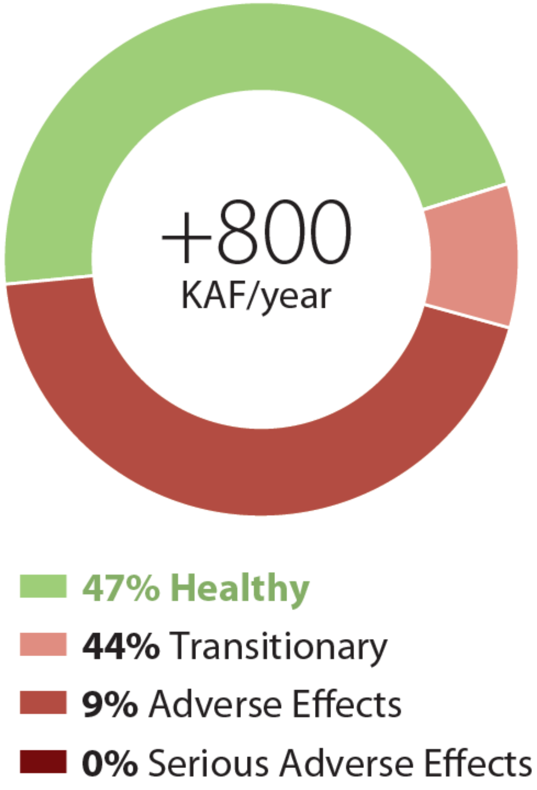
Figure 21: Projected Lake Level Ranges Under Sustained Additional Inflows

Additional 800 KAF/Year

Average Inflow - 2,465 KAF/year



Percent of long-term simulations within elevation ranges



Great Salt Lake STRIKE TEAM

Utah State University | The University of Utah | Utah DNR | UDAF | Utah Department of Environmental Quality | Great Salt Lake

Lightning Talks

What has been done?

Getting water to Great Salt Lake | **Anna McEntire**

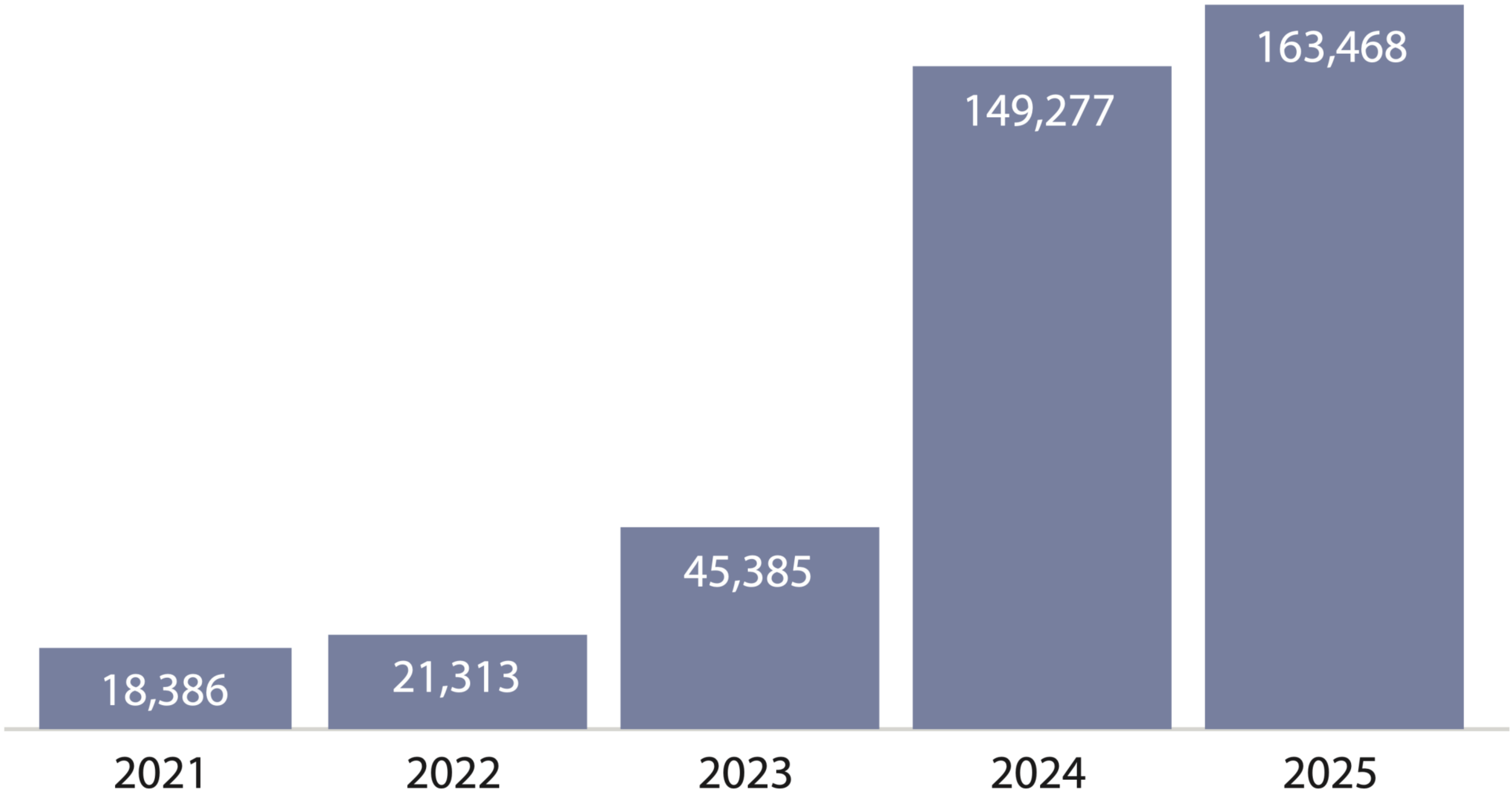
Great Salt Lake dust updates | **Kevin Perry**

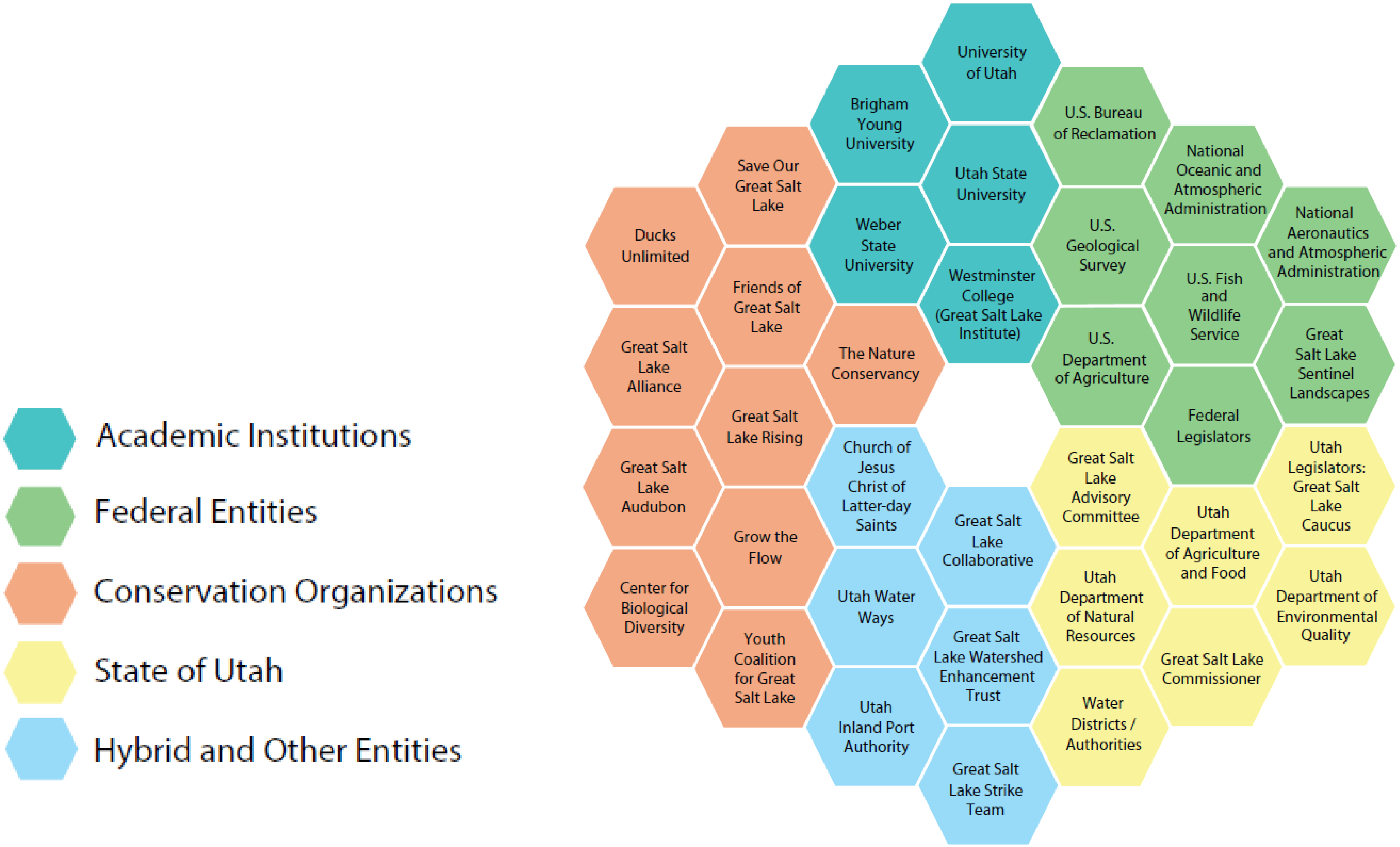
Dust mitigation and water augmentation
Beth Neilson

Agricultural optimization
& water leasing
Hannah Freeze

What has been done? | Anna McEntire

Figure 2: Water Dedicated and Delivered to Great Salt Lake in Acre-feet, 2021-2025




Academic Institutions
Federal Entities
Conservation Organizations
State of Utah
Hybrid and Other Entities
University of Utah
Brigham Young University
Utah State University
Weber State University
Westminster College (Great Salt Lake Institute)
U.S. Bureau of Reclamation
National Oceanic and Atmospheric Administration
National Aeronautics and Atmospheric Administration
U.S. Geological Survey
U.S. Fish and Wildlife Service
U.S. Department of Agriculture
Great Salt Lake Sentinel Landscapes
Federal Legislators
Save Our Great Salt Lake
Ducks Unlimited
Friends of Great Salt Lake
Great Salt Lake Alliance
The Nature Conservancy
Great Salt Lake Rising
Great Salt Lake Audubon
Grow the Flow
Center for Biological Diversity
Youth Coalition for Great Salt Lake
Church of Jesus Christ of Latter-day Saints
Great Salt Lake Collaborative
Utah Water Ways
Great Salt Lake Watershed Enhancement Trust
Utah Inland Port Authority
Great Salt Lake Strike Team
Great Salt Lake Advisory Committee
Utah Legislators: Great Salt Lake Caucus
Utah Department of Agriculture and Food
Utah Department of Natural Resources
Utah Department of Environmental Quality
Great Salt Lake Commissioner
Water Districts / Authorities

Getting Water to Great Salt Lake

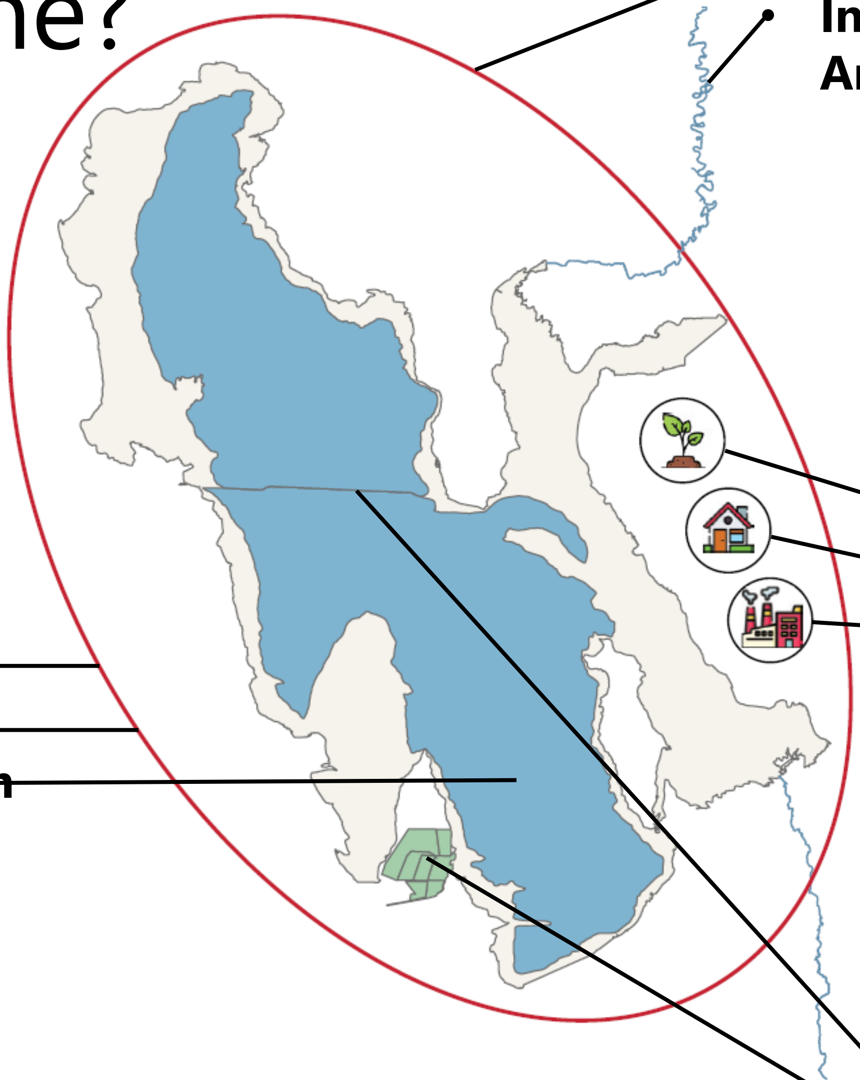
1. Slowing the decline and creating a system to refill the lake
2. Managing more than just water levels
3. Expanding conservation and leasing capacity
4. Creating local and national support for Great Salt Lake recovery
5. Building an adaptive management framework

Getting Water to Great Salt Lake

What has been done?

Slowing the decline and creating a system to refill the lake

- **Water Banking**
- **Instream Water Flow Amendments**



Expanding conservation and leasing capacity

- **Ag Water Optimization**
- **M&I Water Efficiency**
- **GSL Watershed Enhancement Trust**

Building an adaptive management framework

- **GSL Commissioner**
- **Basin Integrated Plan**
- **Distribution Management Plan**

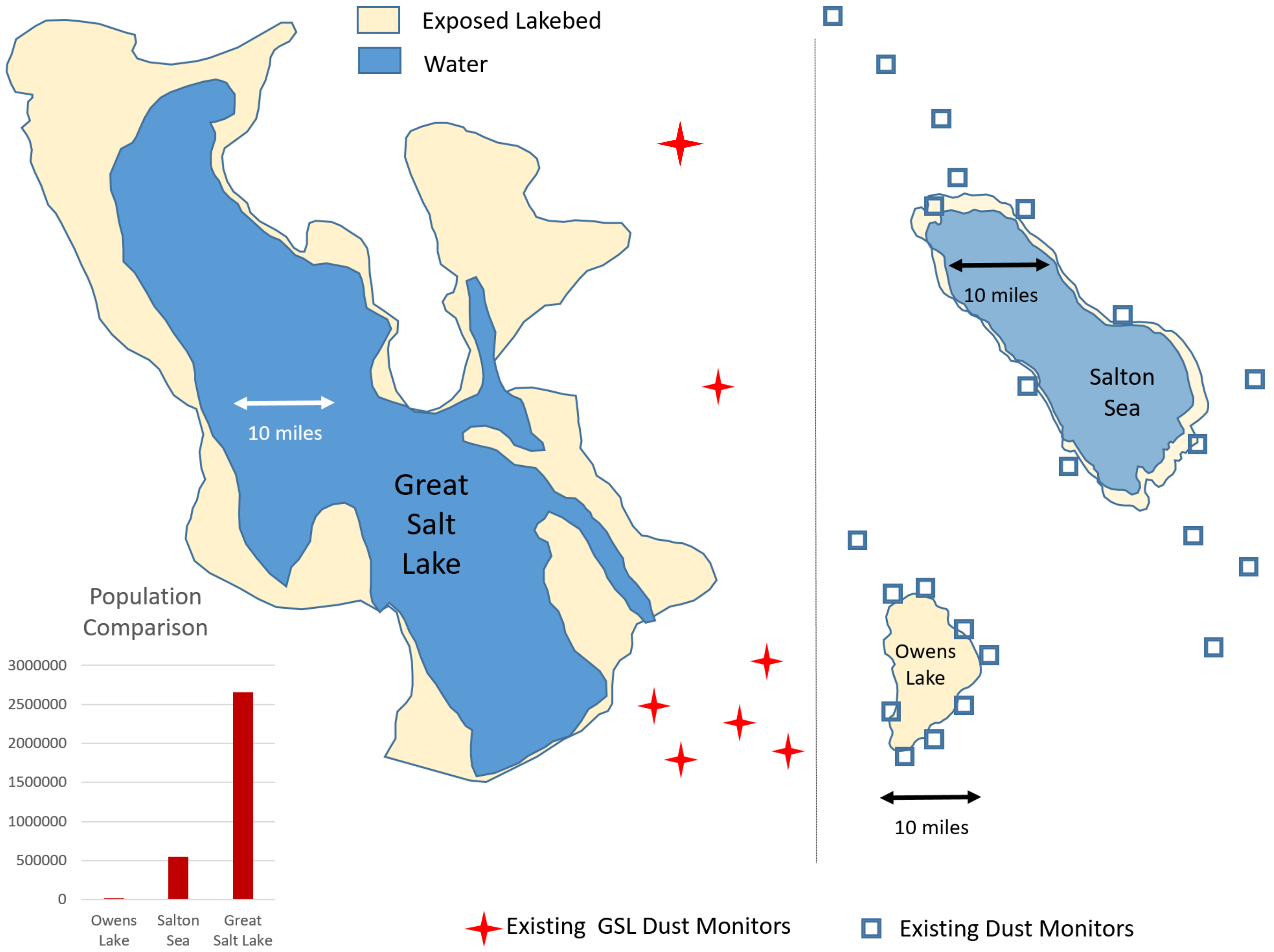
Managing more than just water levels

- **Berm Management**
- **Mineral Extraction**

GSL Dust Update | Kevin Perry


Photo: Liberty Blake

Dust Monitors at Great Salt Lake, Salton Sea, and Owens Lake, 2025



State of Utah Response

Governor of Utah
Spencer J. Cox

Budget Request of $650K (ongoing) for a Utah dust monitoring network

Utah Legislature

Funded $150K (ongoing) for a Utah dust monitoring network

UTAH DEPARTMENT of ENVIRONMENTAL QUALITY
AIR QUALITY

Drafted a comprehensive dust monitoring plan and hired a "Dust Scientist"

Great Salt Lake
COMMISSIONER'S OFFICE

Provided $1M in one-time funding for air quality monitoring equipment and infrastructure

Dust Monitors at Great Salt Lake, Salton Sea, and Owens Lake, 2026

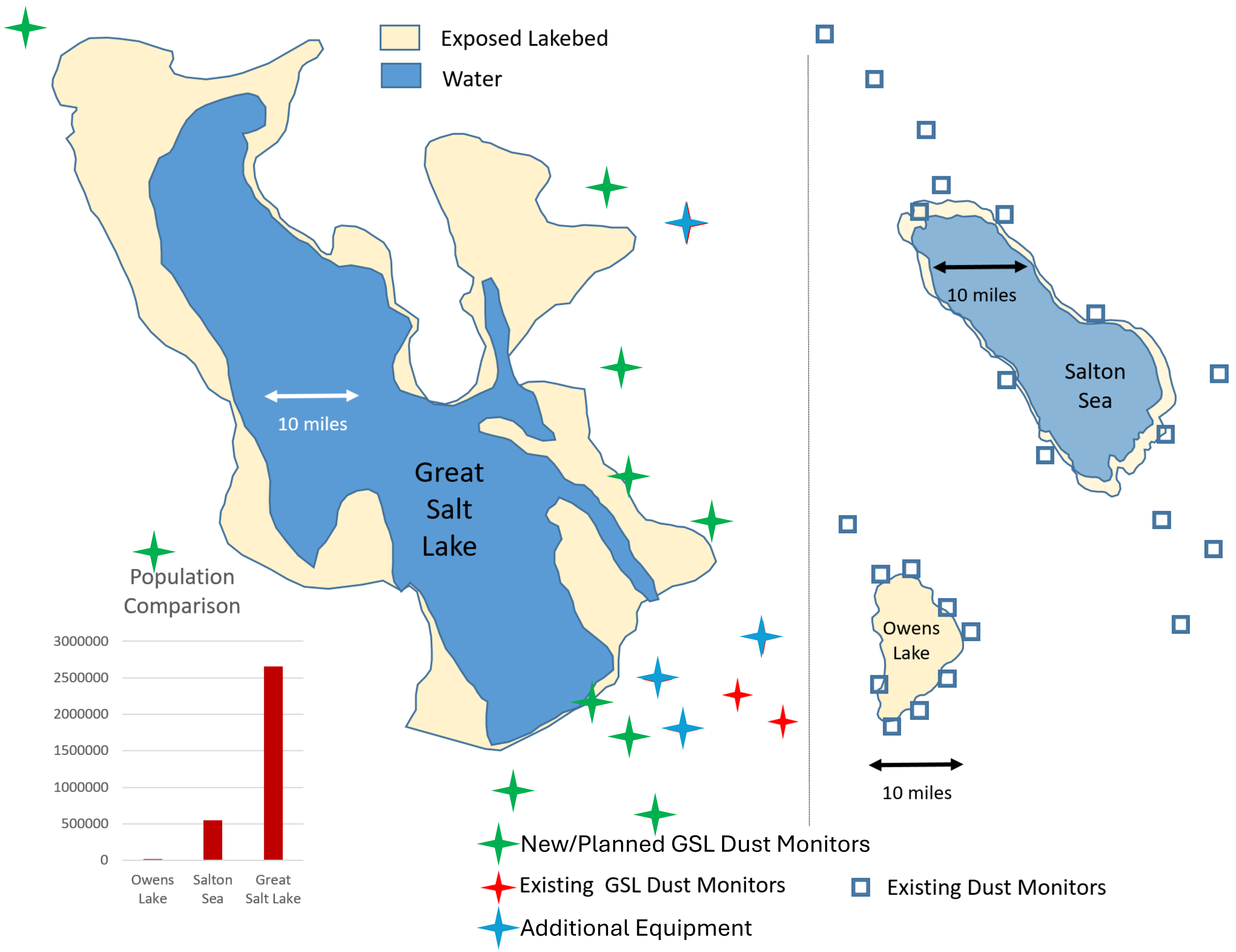
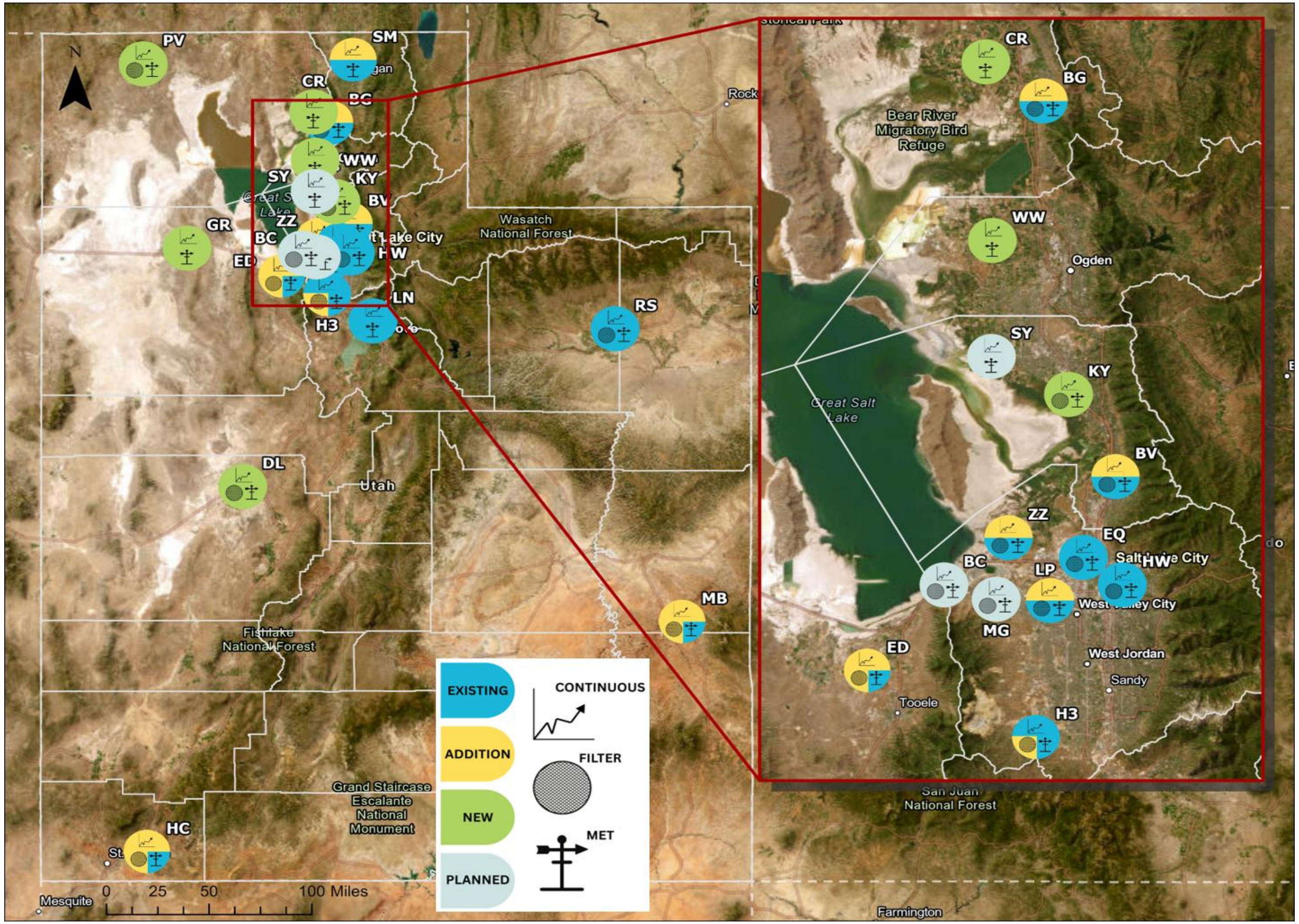


Figure 6: Map of the proposed Utah Dust Observation and Research Network (UDORN)



UDORN - Deliverables

- Dust event frequency and severity (including trends)
- Identification of most heavily-impacted communities
- Airborne metal concentrations (including arsenic)
- Real-time dust alerts
- Determination of actual health risks from exposure to GSL dust

Great Salt Lake Basin
Integrated Plan

UTAH DNR WATER RESOURCES

BUREAU OF RECLAMATION

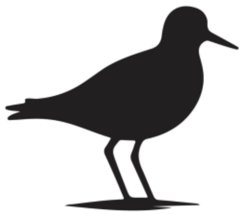
Purpose

To ensure an ongoing, resilient water supply within the Great Salt Lake Basin

GSLBIP Gap Analysis

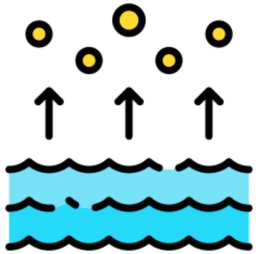
High Priority Research Projects

Storm water study



Water requirements for GSL shorebirds

Minimum functional stream flows

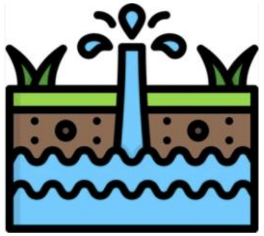


Quantification of GSL evaporative losses

Opportunities and costs of M&I water conservation

Opportunities and costs for agricultural water optimization

Options and costs for GSL dust control

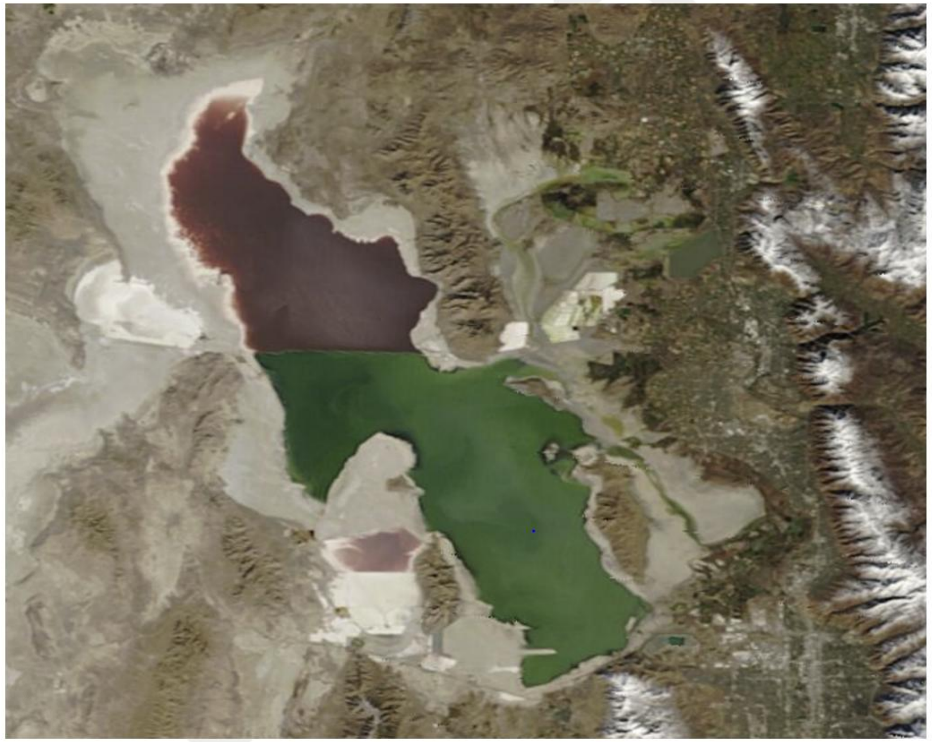


Safe yield estimates from aquifers

Description and Costs of Potential

Dust Control Options

for Great Salt Lake



Prepared in Support of the Great Salt Lake Basin Integrated Plan

Public Release (mid-late January 2026)

Evaluated Dust-Mitigation Options

- Surface wetting
- Temporary impoundment
- Ground-water-based rewetting
- Soil amendments/crusting agents
- Vegetation establishment
- Gravel, mulch, or surface armoring
- Hybrid approaches

Dust Mitigation Study Takeaway Messages

- No single option is sufficient or universally applicable.
- Highly-effective techniques tend to require substantial water volumes.
- Water-free techniques are generally limited in scale, durability, or effectiveness.
- Engineered dust-control solutions can be quite expensive ($billions).

Dust mitigation is a complementary strategy intended to reduce near-term risks while longer-term efforts to restore lake levels continue.

Farmington Bay Dust-Mitigation, Newfoundland Evaporation Basin Beth Neilson

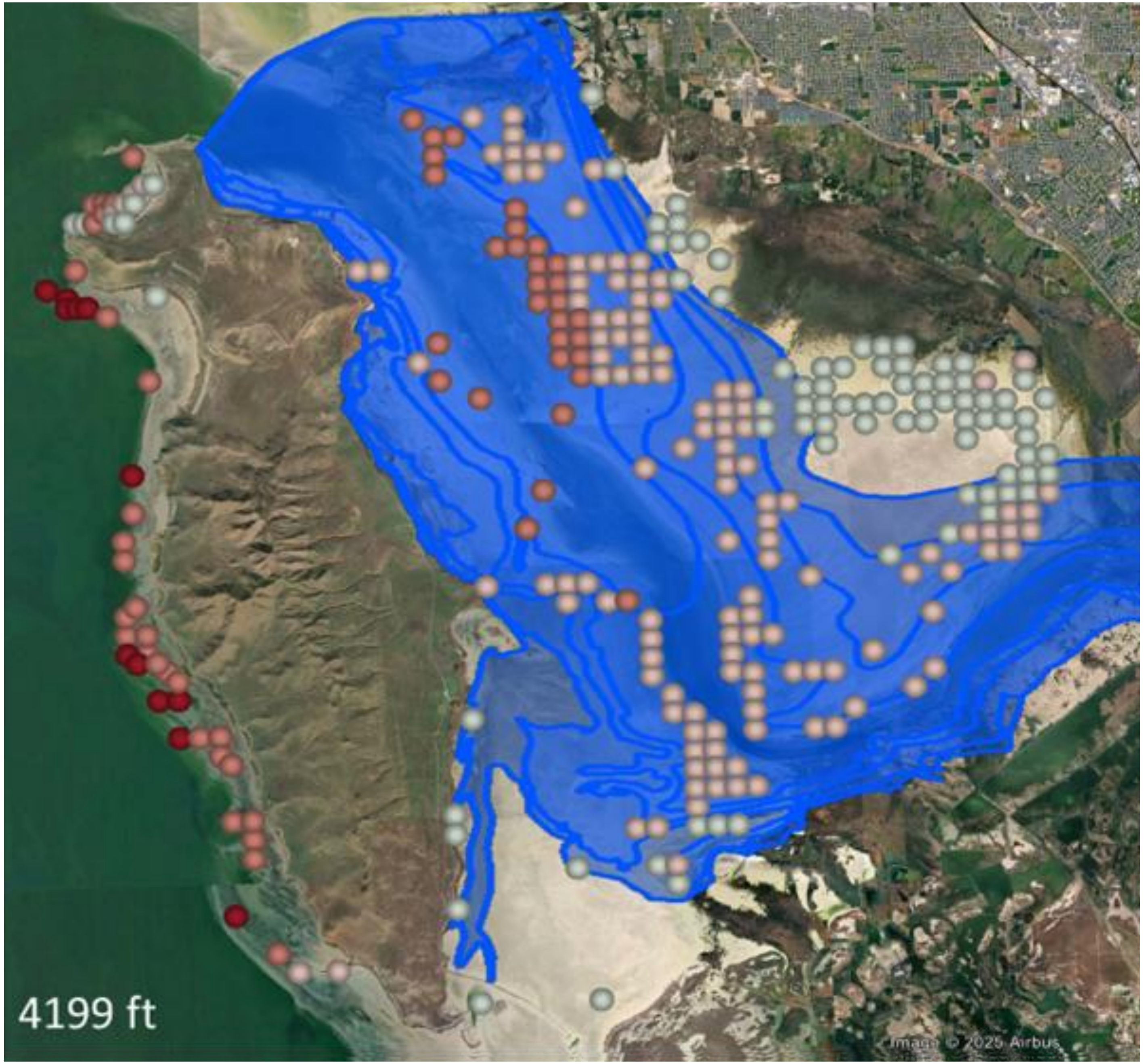
Farmington Bay Dust-Mitigation Opportunities

Mitigation Strategies

1. Impoundment
2. Local groundwater

Figure: Satellite Imagery of Farmington Bay at Different Elevations

Figure: Satellite Imagery of Farmington Bay at Different Elevations, with Dust Hot Spots



Farmington Bay Dust-Mitigation Opportunities

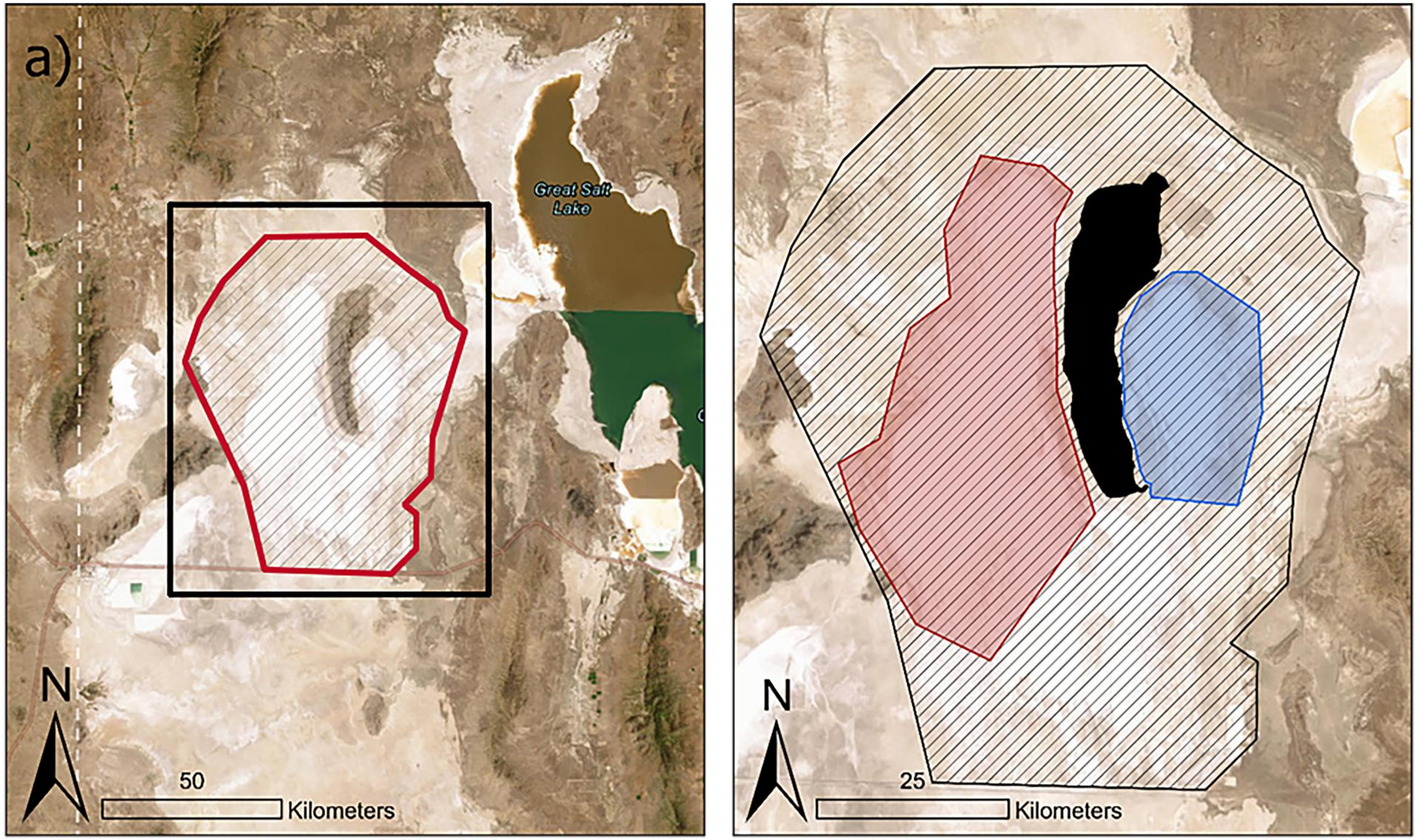

Photo: Kelley Hannah

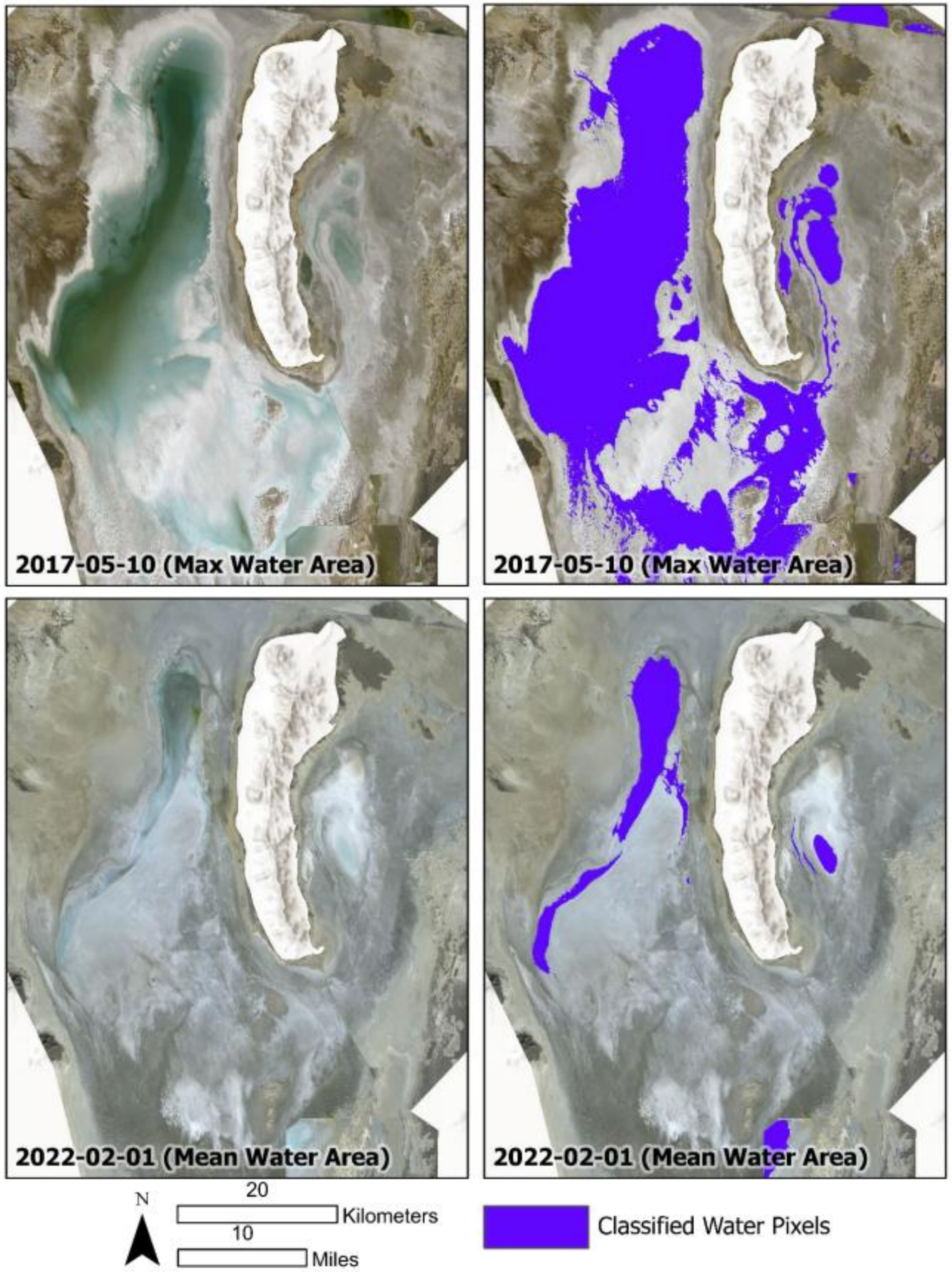
Key Findings

1. Impoundment is hydrologically feasible
2. Dust mitigation potential is promising
3. Water evaporation varies widely by strategy
4. Timing matters for temporary impoundment

Considerations for Decision-Makers: Newfoundland Evaporation Basin

Figure 5: Map of Newfoundland Evaporation Basin





Newfoundland Evaporation Basin

Key Findings

1. The Basin Accumulates Water Intermittently—in Highly Variable Amounts
2. Maximum "Potential Water" Does Not Equal "Recoverable Water"
3. Realistic Diversion Potential is Modest but Meaningful

Agricultural Water Optimization and Leasing|

Hannah Freeze

Opportunities and Costs for Agricultural Water Optimization and Leasing

Agricultural Water Optimization Pathways

1. Irrigation system upgrades
2. Crop substitution
   (may not be as simple as it sounds)
3. On-farm conveyance improvements
4. Land-use transitions

Agricultural Water Leasing in Practice

- Majority of agricultural water owned by irrigation companies
- Coordinating with irrigation companies
- Partial-season leases
- Making Great Salt Lake a place of use within irrigation companies

Viewing Agricultural Water as a Commodity

There are many, many layers. We may not be there…YET!

Water doesn't move at the speed of Amazon.

January 7, 2026

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