Saving the Great Salt Lake: A Lake-First Approach

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The Great Salt Lake is being destroyed by drought and excessive water diversion.

Changes by the numbers

19 ft	below average natural level
73%	water loss
60%	surface area loss
1.2 mil	acre-feet drop per year since 2020
>0.1 mil	acre-feet returned per year
5 years	to **disappear** if loss rate continues

Impacts of a drying Great Salt Lake

ECOLOGICAL

Extreme conditions

Food web collapse
Increased salinity cannot support migratory bird species critical to the ecosystem

Declining populations

- First year white pelican hasn't been spotted
- Dwindling number of brine shrimp and brine flies

Habitat loss for 10 million migratory birds
Risk of endangered species

Impacts 80% of Utah's wetlands

ECONOMIC

Decline of economic activity

Risk of unviable mineral extraction
$1.3 billion mineral extraction industry

Destruction of local jobs
Estimated 6,000–9,000 jobs

Loss of up to $2.5 billion in direct economic activity each year
Mineral extraction: $1.3 billion
Mitigation: $192–$610 million
Recreation: $81 million
Brine shrimp industry: $67 million
Health costs: $7–22 million
Lost ski days: $6–10 million

ENVIRONMENTAL

Air pollution and dirty snow

Increased air and water pollution
Heavy metals (arsenic), toxic dust, organic pollutants

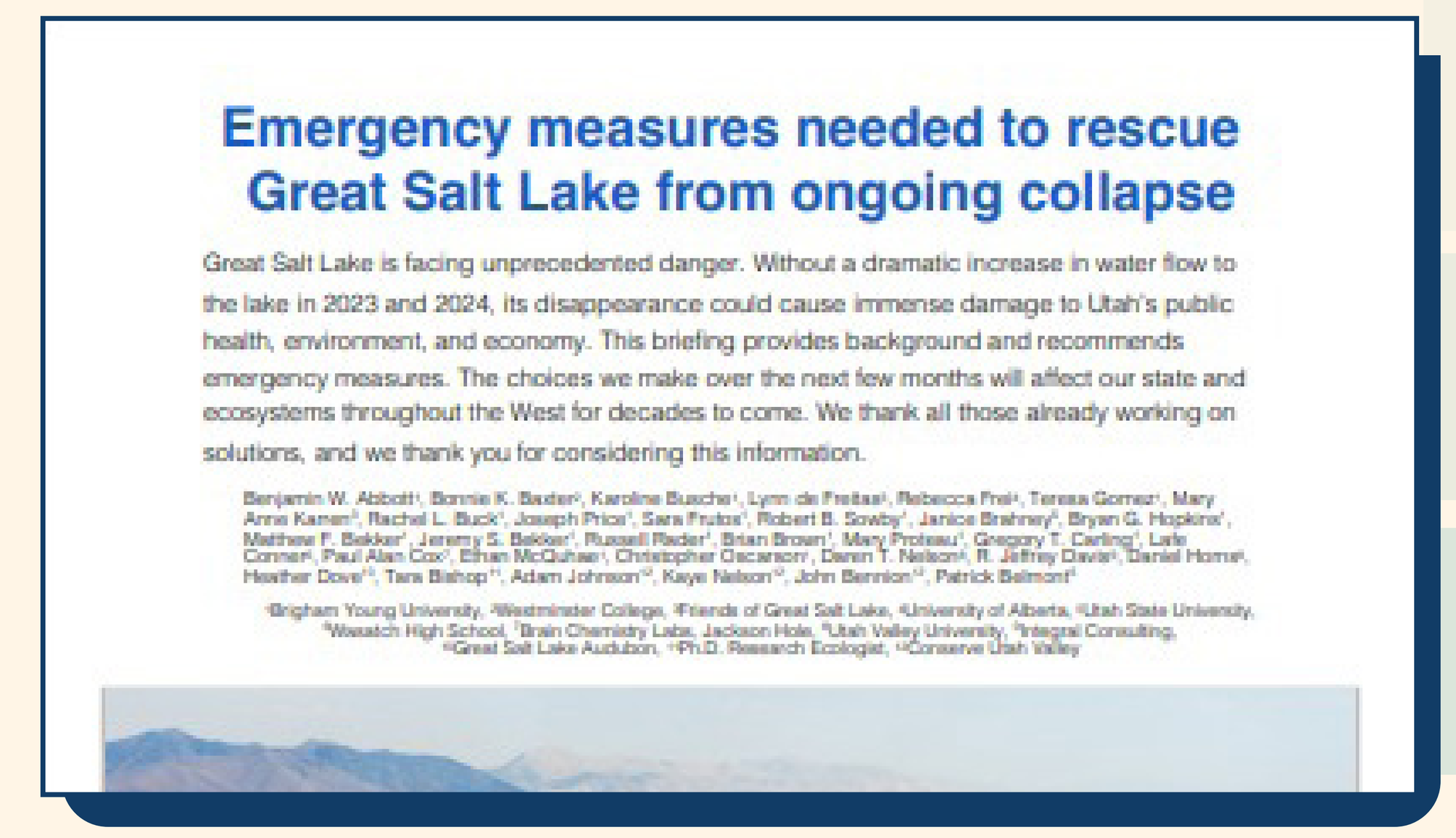
Agricultural productivity collapse
Degraded soil fertility, premature snowmelt, reduced water

Modified climate
10% annual decrease in snowfall, more extreme temperature swings, desertification, reduction in runoff

The fate of the lake is in our hands.

Emergency Brief, January 2023

Co-authored by scientists and conservationists across the state, the briefing calls on the governor, legislature, and every water user and manager to help rescue the lake in this all-hands-on-deck emergency.



Emergency measures needed to rescue Great Salt Lake from ongoing collapse

Great Salt Lake is facing unprecedented danger. Without a dramatic increase in water flow to the lake in 2023 and 2024, its disappearance could cause immense damage to Utah's public health, environment, and economy. This briefing provides background and recommends emergency measures. The choices we make over the next few months will affect our state and ecosystems throughout the West for decades to come. We thank all those already working on solutions, and we thank you for considering this information.

Outlined principles for sustainable water management

- LEARN
- CONSERVE
- AUGMENT

Moving forward

Goal

- **Minimum streamflow requirement of 2.5 million acre-feet per year**
- **30-50% reduction in consumptive water use in the watershed**

1. LEARN — Carefully study the physical, biological, and social dimensions of water

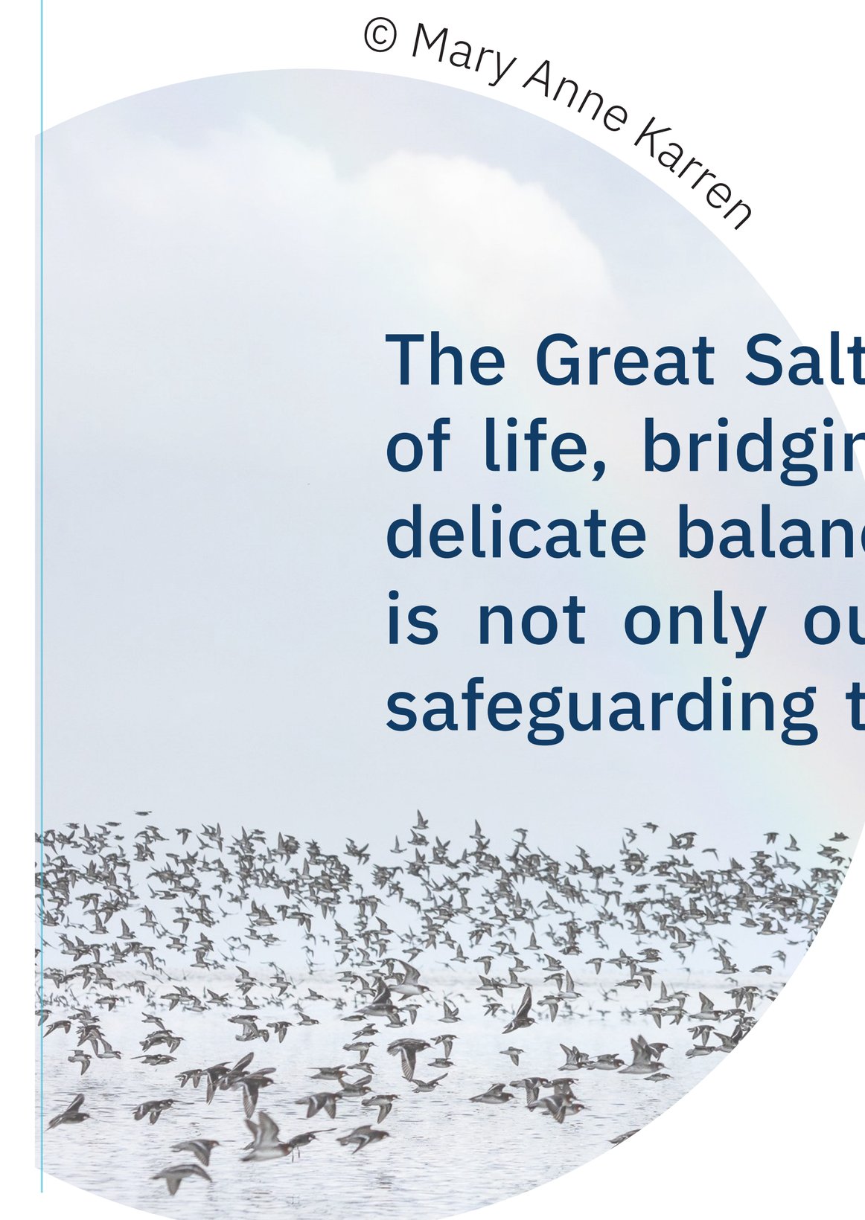
- Hundreds of millions of state and federal dollars currently set aside to study and implement water saving measures to get water to the lake
- Greater public, academic, and government awareness resulting in workshops, symposiums, and other meetings to collaborate on solutions

2. CONSERVE — Systematically eliminate water waste and overuse

- Designating instream flow and sovereign lands as beneficial uses
- Reducing widespread water consumption
- Optimizing agricultural water use
- Metering secondary water
- Funding—federal and local
- Raising public awareness

3. AUGMENT — Increase supply as little as necessary after exhausting steps 1 and 2

- Establishing minimum lake level at 4200 above sea level
- Recognizing Great Salt Lake's ownership of water rights as a sovereign body
- Relinquishing and buying water rights
- Possibly limiting growth



The Great Salt Lake is not just a source of salt; it's a wellspring of life, bridging the gap between the people of Utah and the delicate balance of nature. Let's remember that its preservation is not only our duty but a testament to our commitment to safeguarding the beauty and biodiversity that grace our planet.

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