

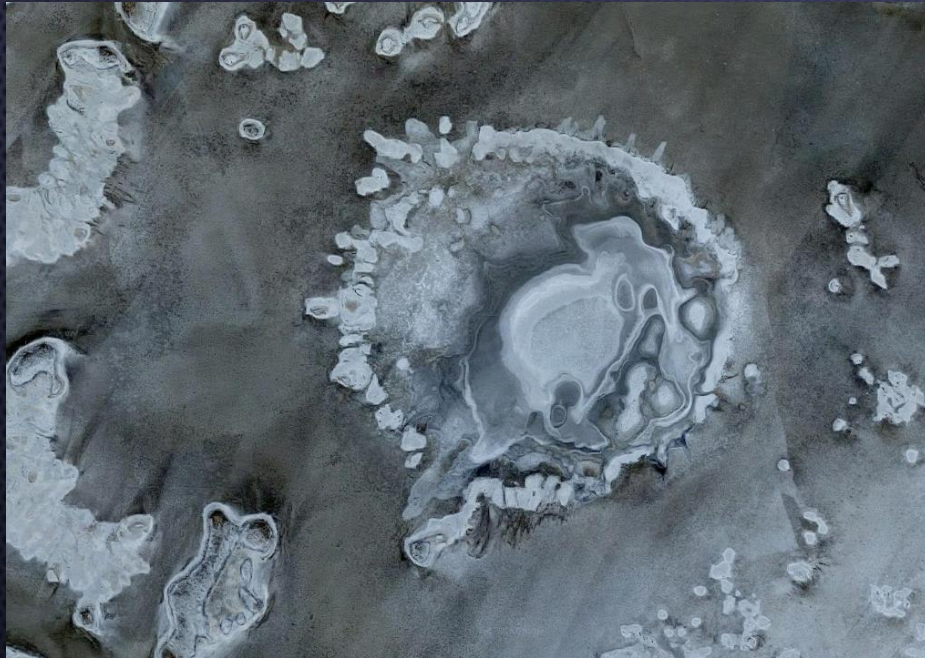


POLICY AND REGULATORY RESPONSES
TO DECLINING WATER LEVELS AT
GREAT SALT LAKE WITH IMPLICATIONS
FOR THE BRINE SHRIMP *ARTEMIA*
FRANCISCANA RESOURCE



- WATER LAW & POLICY: 18 YEARS
- UTAH HOUSE OF REPRESENTATIVES FOR 8 YEARS
- HOUSE LEADERSHIP FOR 4 YEARS
- GSL POINT PERSON: 6 YEARS

DECLINING LAKE LEVELS – WHAT POLICY AND REGULATORY RESPONSES?



➤ ACTIONS TAKEN

- POLICY (LEGISLATION ENACTED, \$ INVESTED)

- REGULATORY (FORMAL AND INFORMAL AGENCY ACTION)

- HOW WE GOT THERE

- LESSONS FOR THE AQUACULTURE INDUSTRY

MEDIA ATTENTION

Utah's Great Salt Lake Is Disappearing, With Mounting Economic Costs

The lake is critical for the survival of many industries such as mineral extraction, brine shrimp harvesting, ski resorts and tourism.

By Wall Street Journal

Sep 07, 2022 3:30 am



Smithsonian
MAGAZINE

SMART NEWS

Utah's Great Salt Lake Is Drying Out

Water levels, the lowest ever measured, are placing migrating birds, local development at high risk



Elizabeth Gamillo

Daily Correspondent

July 13, 2022

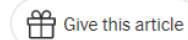
The New York Times

TRILOBITES

Seeking the Source of the Vanishing Great Salt Lake

By JoAnna Klein

Nov. 28, 2017



Search

US edition

The
Guardian
For 200 years

**Utah's Great Salt Lake has been
shrinking for years. Now it faces a
drought**

WHAT'S THE LEGISLATURE DOING TO PROTECT THE RESOURCE? #1 – LEGAL CHANGES

- **HB-410 (WILSON) | GREAT SALT LAKE WATERSHED ENHANCEMENT**
- **HB-429 (MILES) | GREAT SALT LAKE AMENDMENTS**
- **HB-33 (FERRY) | INSTREAM WATER FLOW AMENDMENTS**
- **HB-157 (HAWKES) | SOVEREIGN LANDS REVENUE AMENDMENTS**
- **HB-334 (HAWKES) | STATE ENGINEER MODIFICATIONS**
- **HB-317 (OWENS) | SOVEREIGN LANDS TRESPASSING AMENDMENTS**
- **HB242 (PETERSON) | SECONDARY WATER METERING AMENDMENTS**
- **HB-282 (WILCOX) | WATER WISE LANDSCAPING AMENDMENTS**
- **HB-121 (SPENDLOVE) | WATER CONSERVATION MODIFICATIONS**
- **SB-89 (IWAMOTO) | WATER AMENDMENTS**



Significant Policy (Legislation)

2010	Great Salt Lake Advisory Council
2019	State policy recognizes value and commits to protecting its water supply
2020	Water Banking
2020	Split Season Leasing
2022	Expanded/simplified instream flows (water rights for the Lake)
2022	Great Salt Lake Water Trust
2022	Long term funding for the Lake's protection

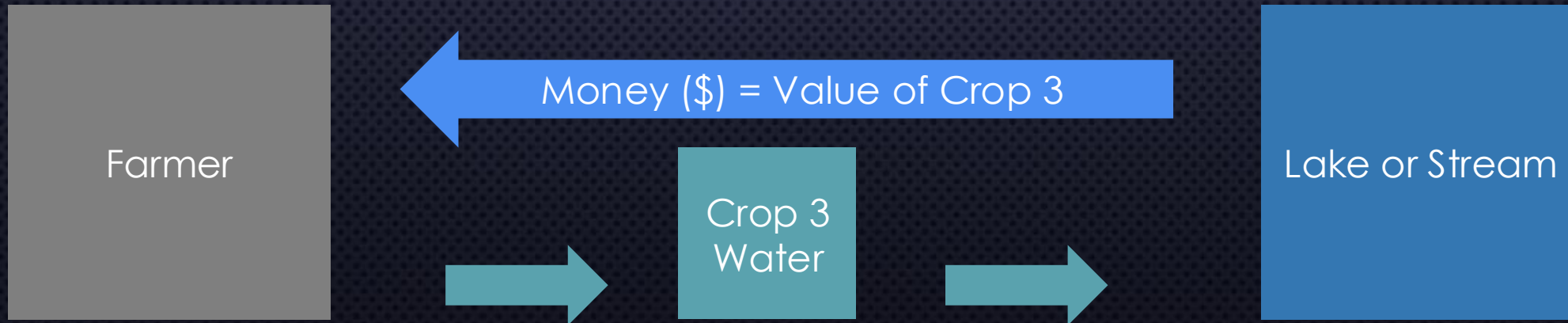
2020 – WATER BANKING AND SPLIT SEASON LEASING

FACILITATES WATER SHARING BETWEEN TRADITIONAL CONSUMPTIVE USES
AND THE ENVIRONMENT USING FREE MARKET FORCES



EXAMPLE – WATER BANKING + SPLIT SEASON LEASING

Farmer John - Alfalfa		
Crop 1	Crop 2	Crop 3
High Value	Medium Value	Low Value
Low Water Use	Medium Water Use	High Water Use



Public Investments

2021	Funding for groundwater modeling and other research (\$1M one-time)
2022	Utah: \$50M for Great Salt Lake (\$40M for water supply)
2022	Utah: \$400M for water conservation
2022	Federal: \$4B for drought response (GSL may access)
2023*	\$200M+ - Water conservation - Water trust - Public education and outreach - Additional research

Agency Actions

2020	New position: Great Salt Lake Coordinator
2022	Deputy State Engineer responsible for Great Salt Lake
2022	Release of water from state conservation areas
2022	Raising the adaptive management berm to help control salinity
2022	Closing of watersheds feeding the Great Salt Lake to new water rights
2022 *	Shrinking the surface area by eliminating flows to the North Arm



HOW DID ALL THIS HAPPEN SO FAST?

- INVESTING IN THE SCIENCE:
25 YEARS AGO
- INSTREAM FLOWS:
18 YEARS AGO
- ADVISORY COUNCIL:
12 YEARS AGO



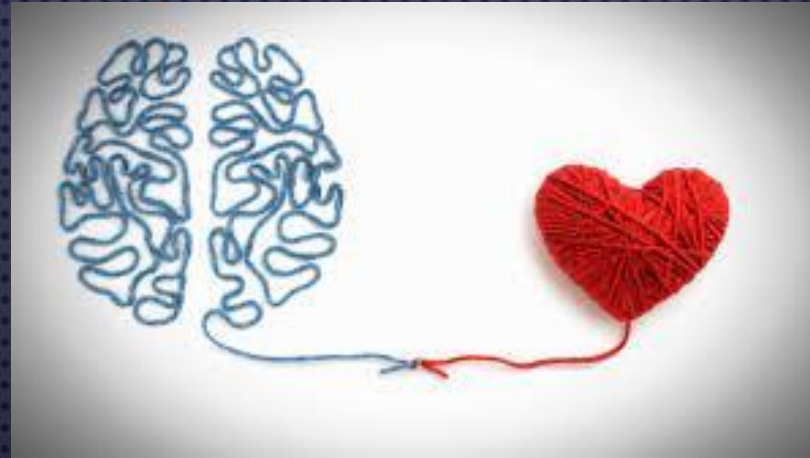
WHAT ROLE HAS INDUSTRY PLAYED?

- MANAGEMENT MODEL (INDUSTRY INITIATED)
- FUNDS THE GREAT SALT ECOSYSTEM PROGRAM
- COLLECTS AND SHARES DATA (COOPERATIVE)
- INITIATED THE GREAT SALT LAKE ADVISORY COUNCIL
- REMAINS ENGAGED: WATER TASK FORCE, SALINITY ADVISORY COMMITTEE, GSL TECH TEAM
- HIRED ME (SHIFTED AND BROADENED MY FOCUS)

INDUSTRY AS CATALYST – BUT IT TAKES A VILLAGE

- RELATIVELY SMALL INDUSTRY
- WE SUCCEED BY GETTING OTHERS TO CARE, AND, MORE IMPORTANTLY, TO ACT
- IN A DEMOCRACY, POLICY ONLY MOVES IF ENOUGH PEOPLE ARE ENGAGED AND SUPPORTIVE





HOW DO WE GET PEOPLE TO CARE?

THE AIR WE BREATHE ...



THE WATER WE DRINK:

LAKE EFFECT + ALBEDO EFFECT



THE FOOD WE EAT ...



> 2022: "THE YEAR OF THE GREAT SALT LAKE"



Salt Lake Tribune: "Utah lawmakers get serious about saving the Great Salt Lake in new summit."

KEY: MEET PEOPLE WHERE THEY'RE AT, NOT WHERE
WE WANT THEM TO BE

Change Agent

The only way to help people move forward is by building relationships and understanding where their journey begins, not focusing solely on where you want them to be.

FINAL THOUGHTS: LESSONS FOR AQUACULTURE GENERALLY AND LIVE FEEDS IN PARTICULAR

- NATURAL ALIGNMENT BETWEEN LIVE FEEDS AND A HEALTHY ENVIRONMENT (CREATES NEW ALLIES AND NEW OPPORTUNITIES).
- TAKE THE LONG VIEW, BUT REMEMBER IT'S NEVER TOO LATE TO START PLANTING SEEDS.
- COLLABORATION OFTEN BEATS 'ZERO SUM GAME' (SYNERGY: $1+1=3$)
- IN AN ERA FOCUSED ON SUSTAINABILITY, LIVE FEEDS HAS A GREAT STORY TO TELL.
- ***YOU AND YOUR INDUSTRY CAN MAKE A DIFFERENCE.***



ANY QUESTIONS?