Great Salt Lake: What is in it for you?

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Utah Department of Natural Resources: Division of Forestry, Fire and State Lands


Diet
Coke


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ABB

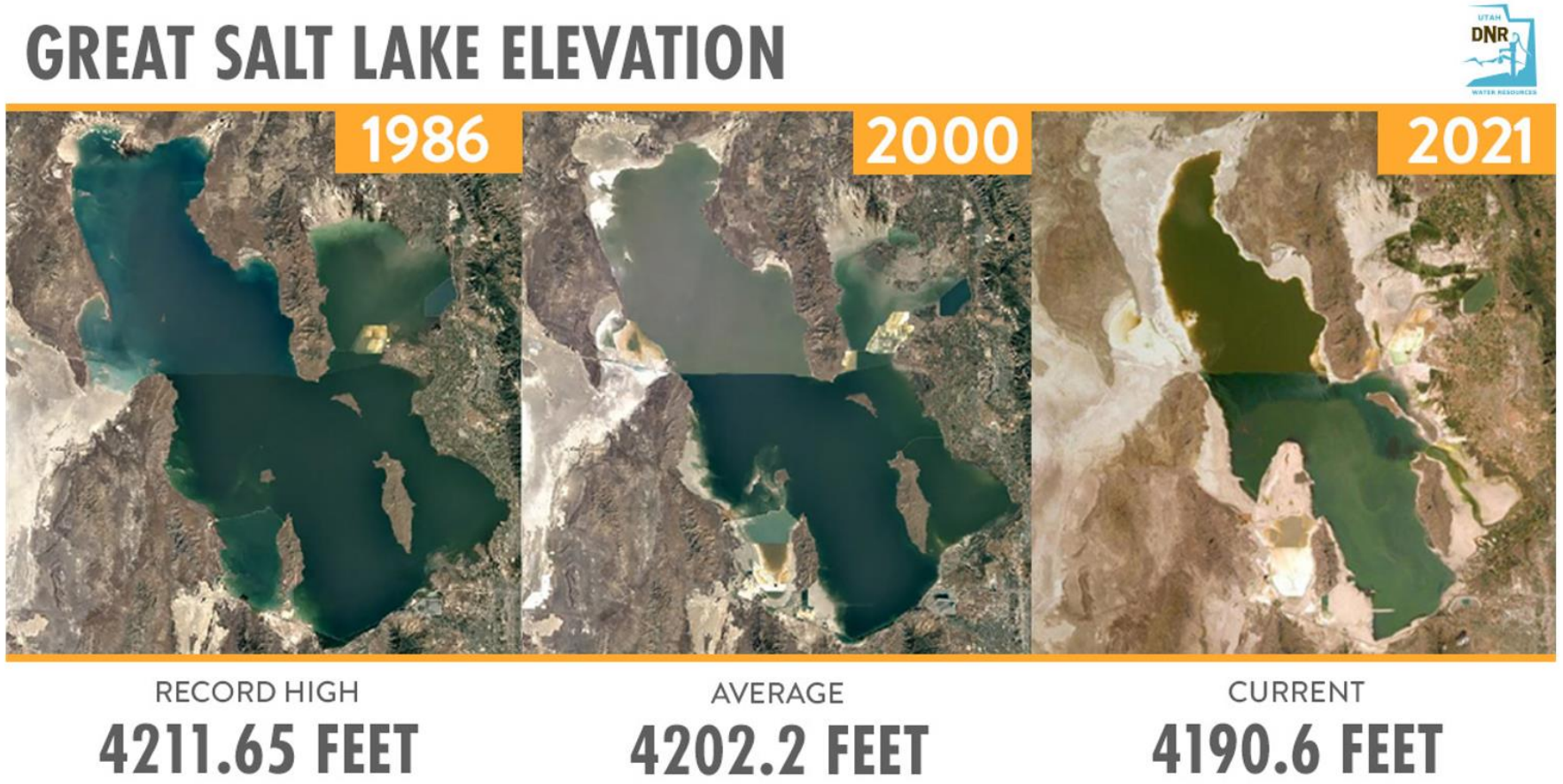
Estimated Total Economic Impact

Statistic	Direct Economic Effect	Indirect Economic Effect	Induced Economic Effect	Total Economic Effect
Total Economic Output (millions of 2010 $)				
Recreation Sector	74.6	27.8	33.5	135.8
Industrial Sector (Mineral)	685.2	217.7	227.9	1,130.8
Aquaculture (brine shrimp eggs)	33.9	8.0	14.8	56.7
TOTAL ALL SECTORS				***1,323.3***
Total Labor Income (millions of 2010 $)				
Recreation Sector	25.7	9.2	10.8	45.7
Industrial Sector	168.3	67.1	73.7	309.2
Aquaculture (brine shrimp eggs)	12.3	3.2	4.8	20.2
TOTAL ALL SECTORS				***375.1***
Total Employment (Full and Part-time Jobs)				
Recreation Sector	1,217	236	310	1,764
Industrial Sector	1,967	1,288	2,112	5,368
Aquaculture (brine shrimp eggs)	373	63	138	574
TOTAL ALL SECTORS				***7,706***

Ecological Significance of Great Salt Lake

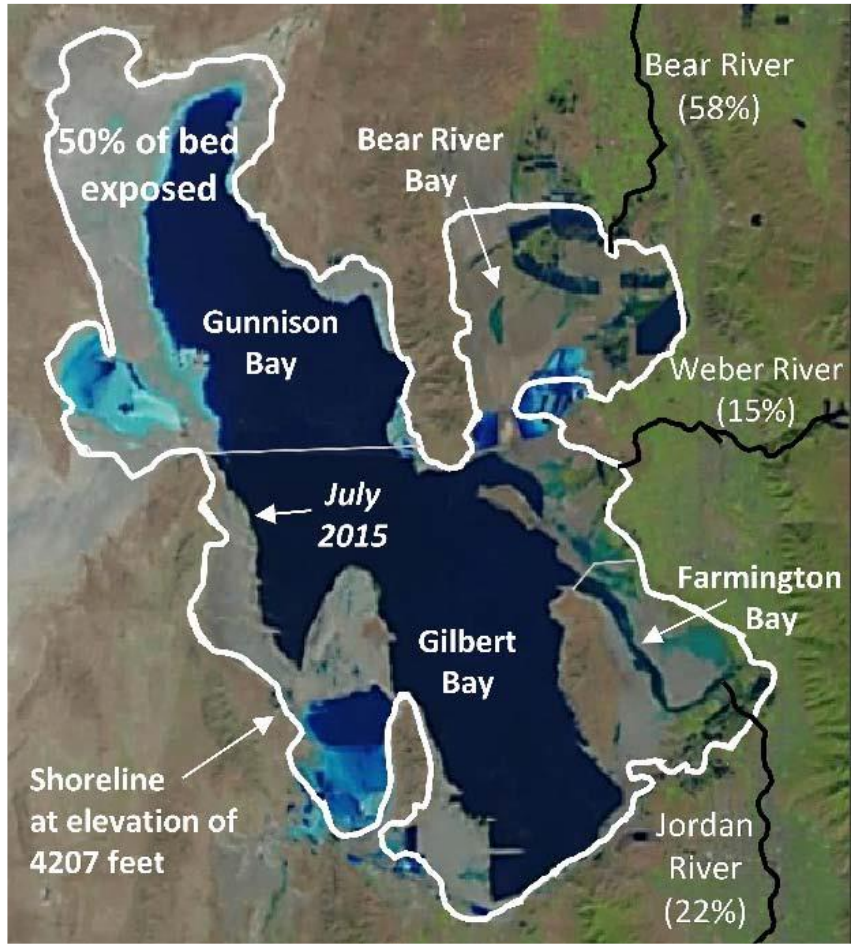
- 10 million birds visit GSL annually
- Critical link in Pacific Flyway for over 330 bird species
- 80% of Utah's wetlands

What if these benefits dry up?



Water Development and Great Salt Lake

- "The lake is now 11 feet lower than it would have been if we were not diverting water for agricultural, industrial, urban and impounded wetland uses."
- The 11-foot drop is a 48% reduction in lake volume
- Future development could decrease lake levels by an additional 8 feet and expose up to 30 more miles of lakebed



Potential Costs of A Drying Great Salt Lake

Potential Costs

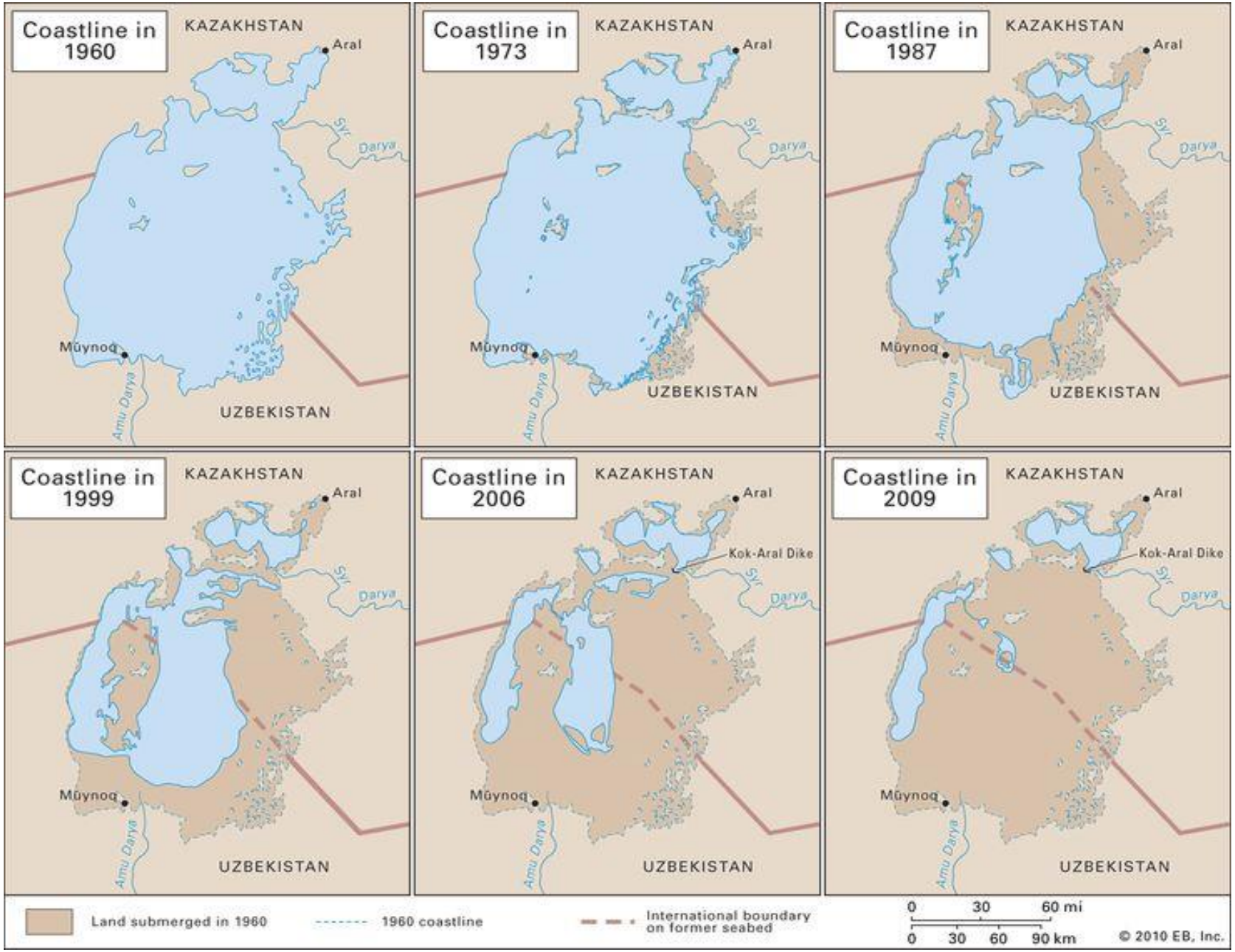
- Reduced lake effect snow and rain
- Increased dust
- Reduced lake access
- Increased salinity

Potential Costs of A Drying Great Salt Lake

$1.69 – 2.17 billion in potential costs annually

Extent of that cost depends on different lake levels

- Lost mineral extraction: $1.3 billion
- Mitigation (for dust, etc.): $192 to $610 million
- Lost recreation: $81 million
- Lost brine shrimp industry: $67 million
- Health costs (dust): $7-22 million
- Loss ski days (reduced snow): $6-10 million


Coastline in 1960
KAZAKHSTAN
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Coastline in 1973
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Coastline in 1987
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Coastline in 1999
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Coastline in 2006
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UZBEKISTAN
Coastline in 2009
KAZAKHSTAN
Aral
Kok-Aral Dike
Syr Darya
Mūynoq
Amu Darya
UZBEKISTAN
Land submerged in 1960
1960 coastline
International boundary on former seabed
0 30 60 mi
0 30 60 90 km
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Aral Sea

Was the 4th largest lake in the world
(26,300 sq. miles)

“Drying of saline lakes around the world costs billions of dollars in economic losses and mitigation efforts and causes severe harm to human health and the environment.”

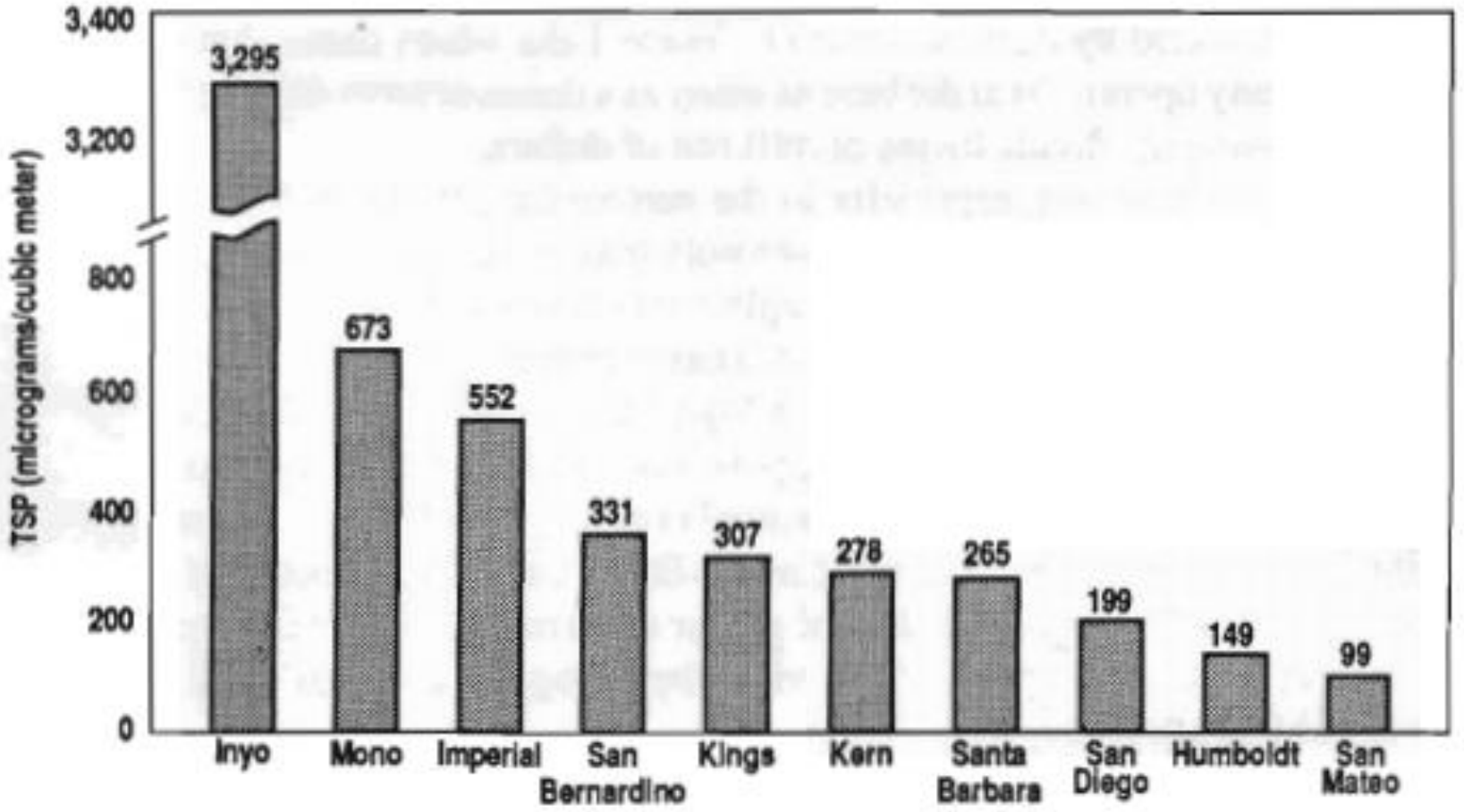
Owens Lake circa 1900

Owens Lake Dust Storm 2016

Largest source of particulate pollution in U.S.

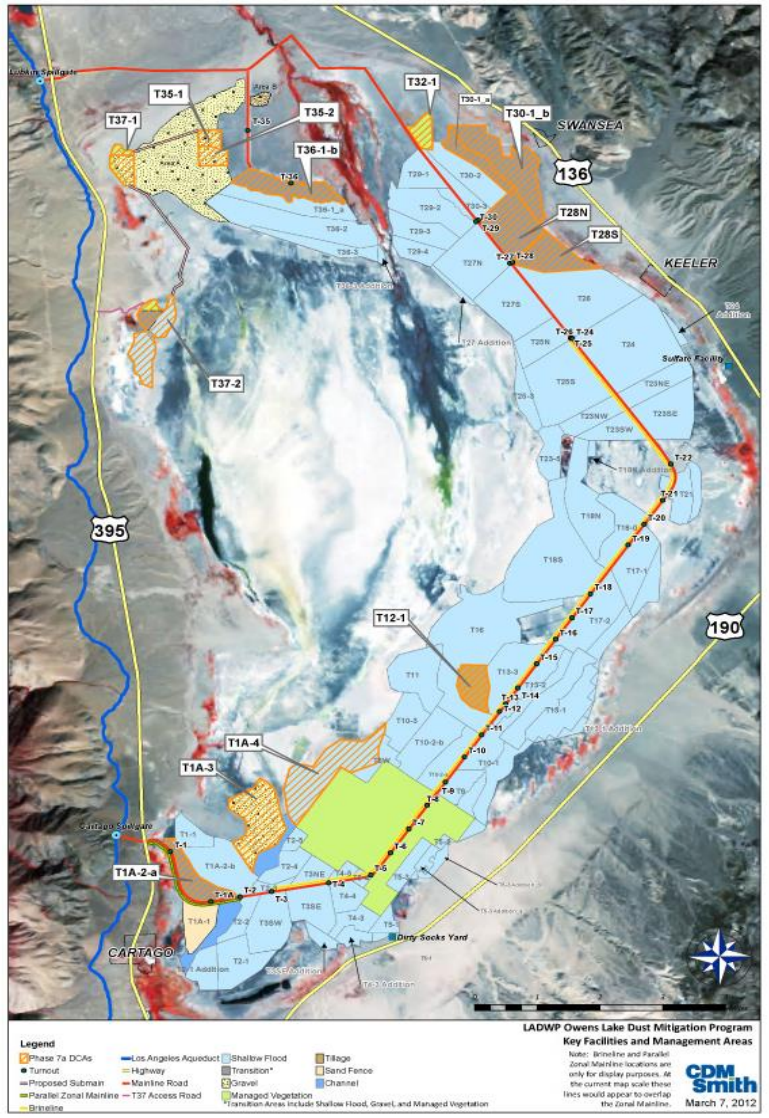
Figure 2. Owens Lake playa environments [Cochran et al., 1988].

Figure 3. Highest 24-hour total suspended particulate (TSP) concentrations in California during 1982, by county [after Kusko and Cahill, 1984].



Mitigation Costs

- $3.6 billion by 2025
- Estimated $75 million/year to maintain
- Roughly 1/5 of a person's water bill in L.A.
- 1/15 the size of GSL



2022 WATER SUMMIT
SALT LAKE COUNTY

What Can Be Done?

Conserve!

Understanding the potential impact of water conservation on water resource planning and the timing of large water development projects

Weber Basin Water Conservancy District

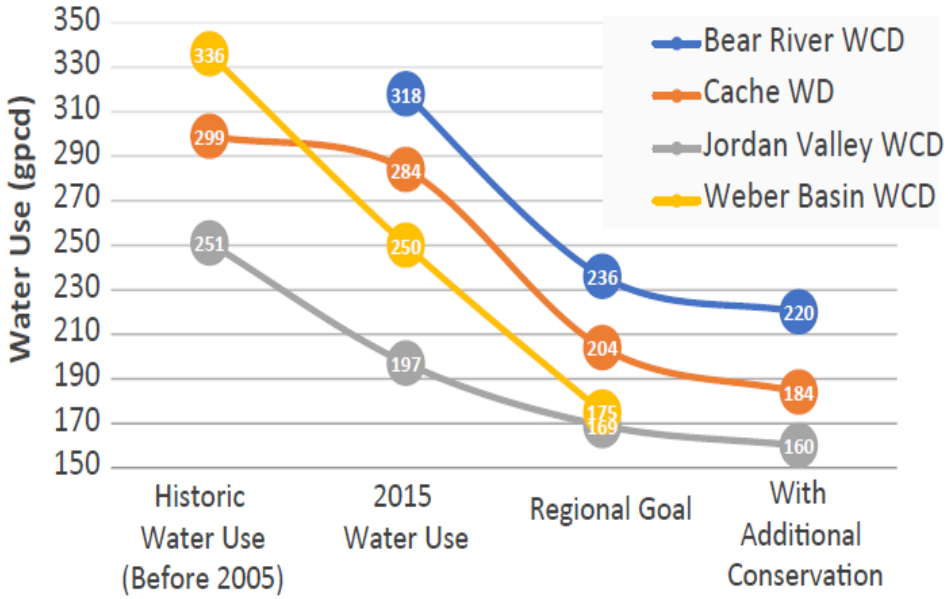
Impact of Water Conservation on Timing of Expected Need for Bear River Development

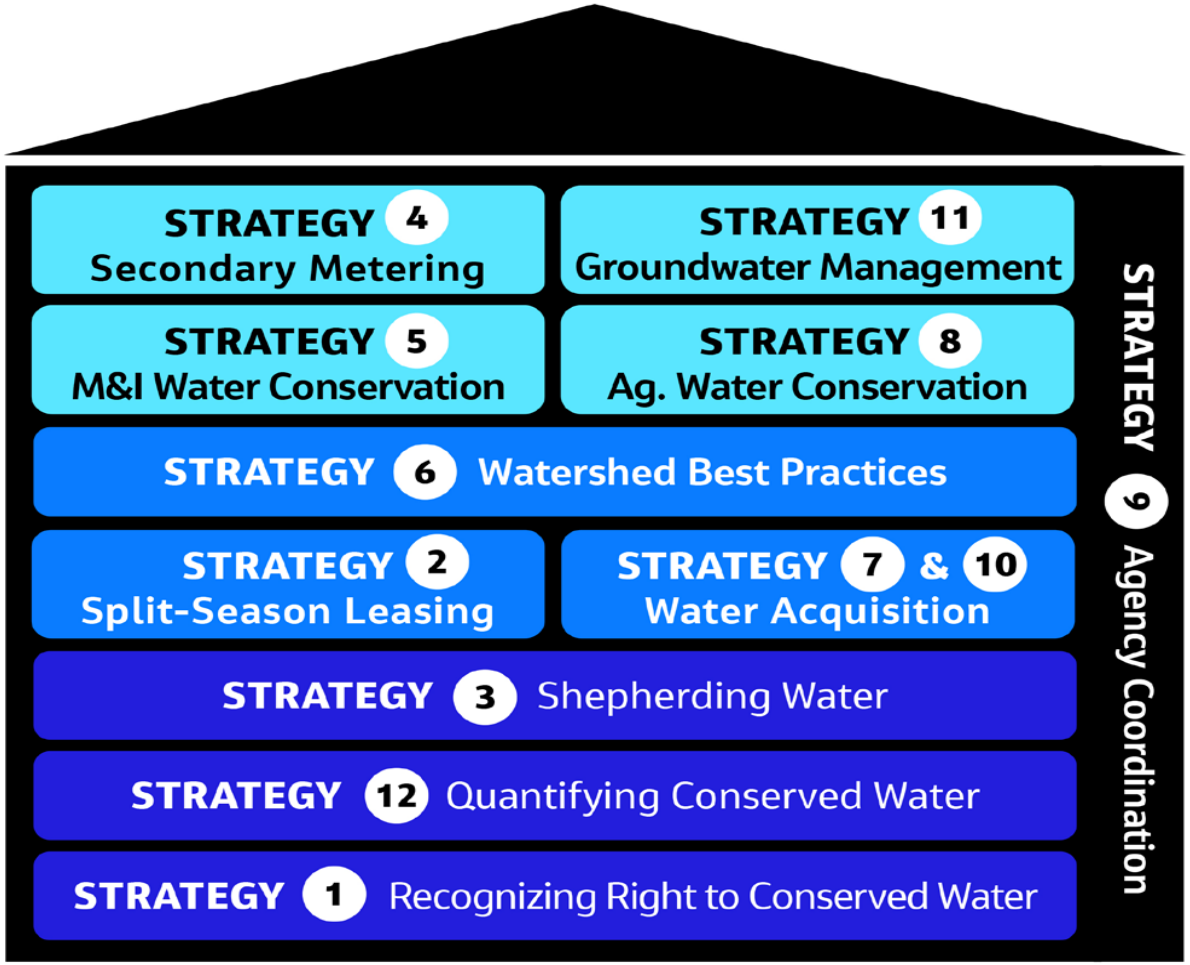
	Historic Water Use (Before 2005)	2015 Water Use	Regional Goals	With Additional Conservation
Bear River WCD	2035	2035	2055	> 2065
Cache WD	2040	2045	2055	> 2065
Jordan Valley WCD	2010	2040	2060	> 2065
Weber Basin WCD	2010	2035	> 2065	> 2065

Conserve!

Per Capita Water Use With Conservation (gallons per day)

	2015 Water Use	2065 Regional Conservation Goal	% Reduction from 2015 to Regional Goal	Additional Conservation Needed to Postpone Bear River Project	% Reduction from 2015 to Additional Conservation
Bear River WCD	318	236	25.8%	220	30.8%
Cache WD	284	204	28.2%	184	35.2%
Jordan Valley WCD	197	169	14.2%	160	18.8%
Weber Basin WCD	250	175	30.0%	175	30.0%
Weighted Average	**232**	**181**	**22.1%**	**173**	**25.4%**





GSLAC Water Strategies

GSL HCR10 Steering Group Strategic Opportunities

Integrated Water and Land Use Planning

Phase 1

Framework for Community Action

Stakeholder Checklist

Utah Community Self-Assessment

Phase 2 - Communities

Workshops

Technical Assistance

https://water.utah.gov/integrated-water-land-planning/
Contact the Division of Water Resources
at: waterandland@utah.gov

2022 Bills and Funding

Indirect - Water Optimization / Water Conservation

Legislation or RFA	Funding
HB33 – Instream Flow	---
HB410 – Great Salt Lake Watershed Enhancement	$30 million – water $10 million – habitat
HB429 – Great Salt Lake -Integrated Watershed Assessment	$ 5 million
HB334 - State Engineer Modifications (GSL Deputy)	$830,000 1x $530,000 Ong
Waterbird studies at Great Salt Lake and Utah Lake	$ 875,000

Red-Necked Phalarope

Photo: Max Malmquist

2022 Bills and Funding

Indirect - Water Optimization / Water Conservation

Legislation or RFA	Funding (1x)
Agricultural Water Optimization	$75 million*
HB242 - Secondary Water Metering	$250 million*
HB121- Outdoor Landscaping - Water Conservation Modifications	$5 million (turf removal incentives)
SB110 - Water as Part of General Plan	$300,000
HB282 - Water Wise Landscaping Amendments	


Thank you!
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