

# *Public Workshop on the Mono Lake Drought Response Considerations*



February 15, 2023

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# *Item 3: Mono Lake Current Conditions*

**Mono Lake Committee**

Geoffrey McQuilkin & Ryan Burnett



February 15, 2023



Robb Hirsch

Geoff McQuilkin, Executive Director  
Mono Lake Committee, [monolake.org](http://monolake.org)





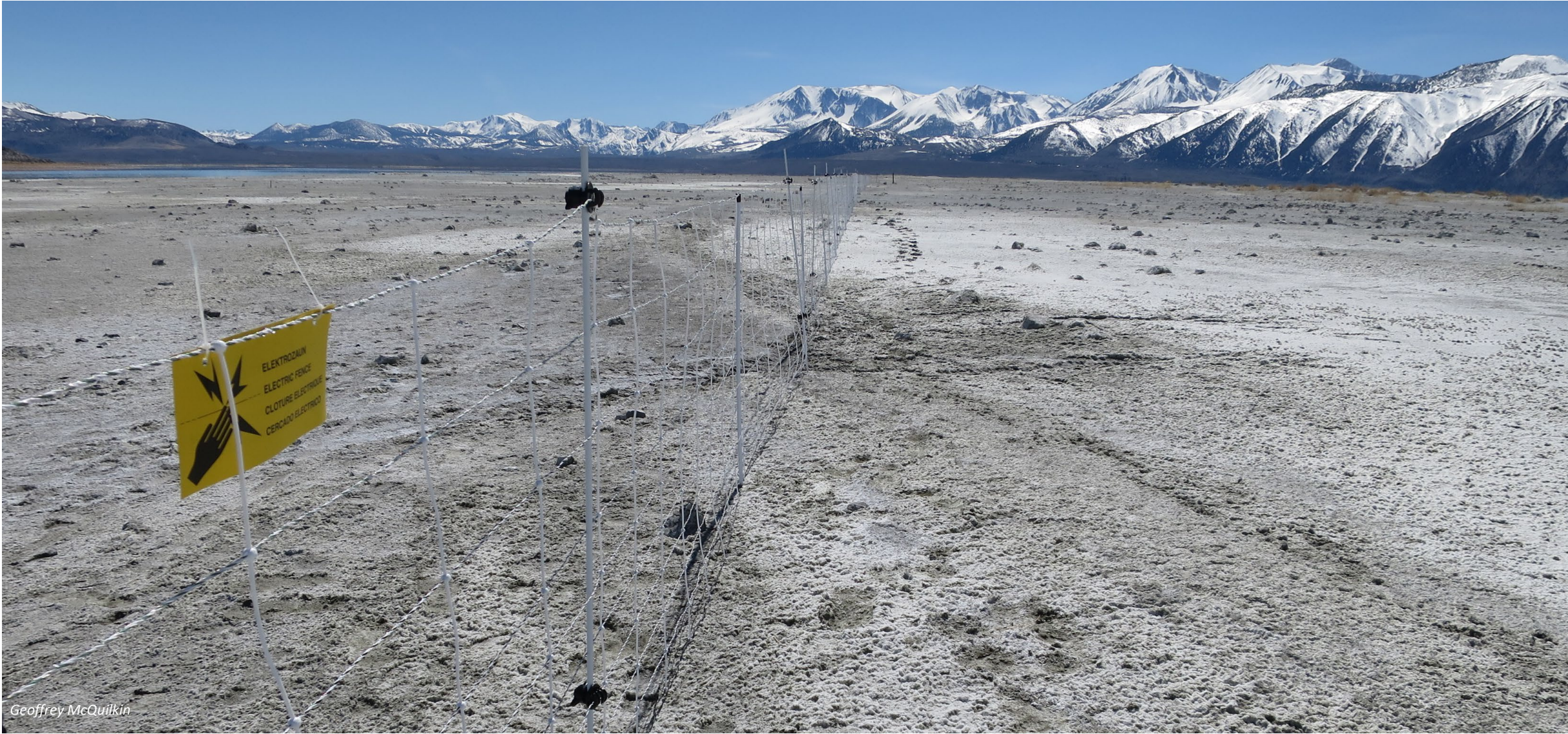
Landbridge expansion due to falling lake level, September 2022.



Robert Di Paolo

Negit Island and edge of the landbridge, January 2023.





Geoffrey McQuilkin

Temporary electric California Gull protection fence, April 2017.



Lloyd Baggs



1962



1995

LADWP water diversions caused Mono Lake to decline rapidly.



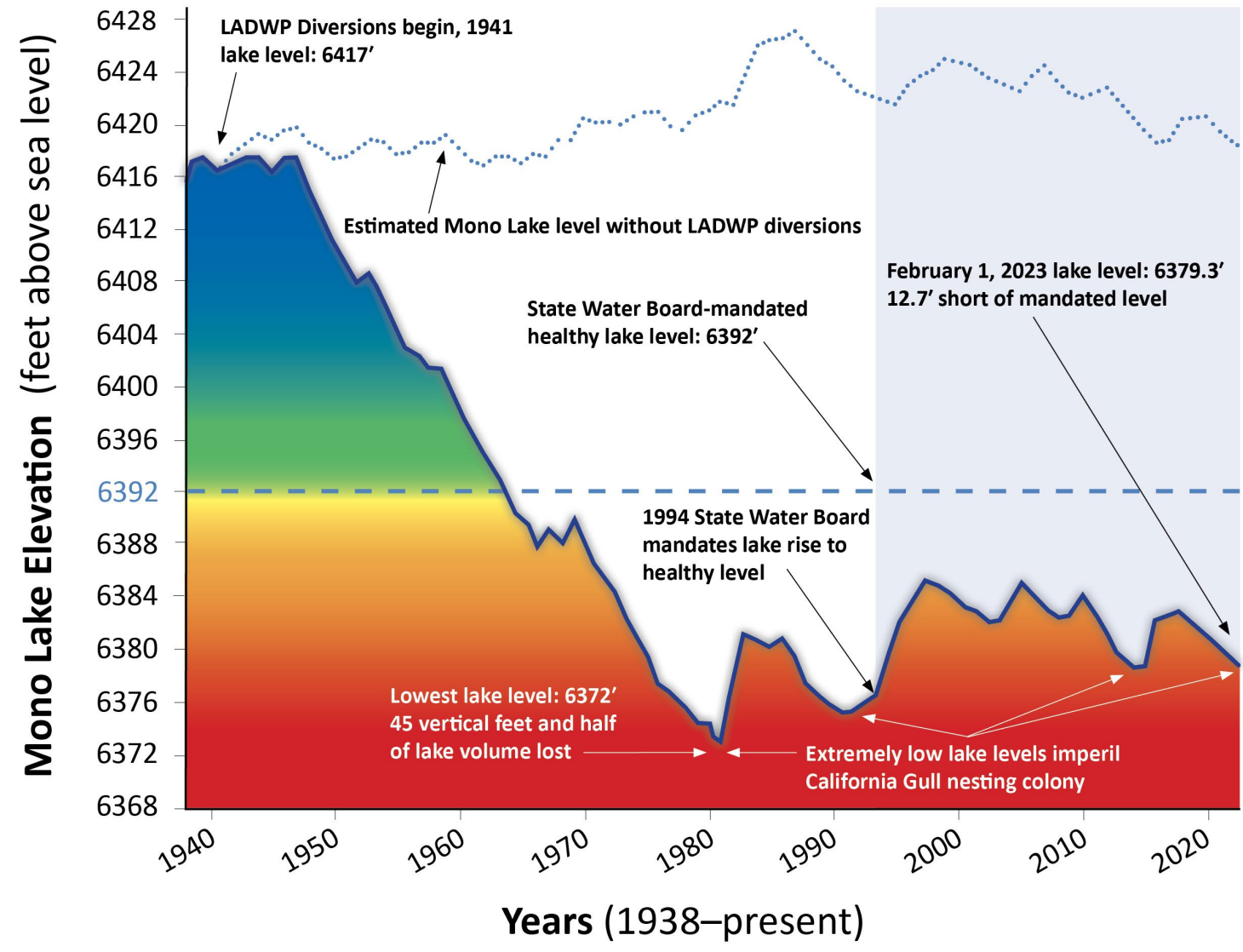


Geoffrey McQuilkin

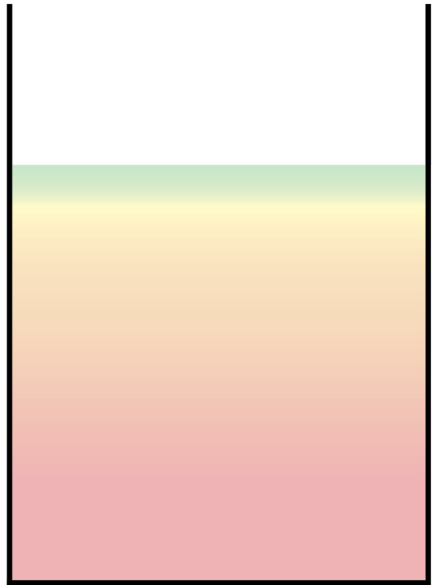
**“This decision ... amends Los Angeles’s water right licenses to include specified water diversion criteria which are intended to gradually restore the average water elevation of Mono Lake to approximately 6,392 feet above mean sea level in order to protect public trust resources at Mono Lake.”**

—State Water Resources Control Board  
Decision 1631, p195  
emphasis added

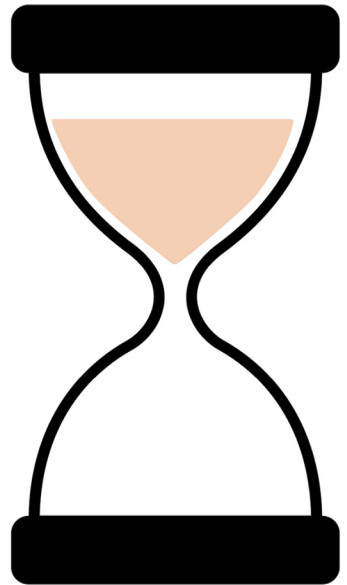
# Mono Lake Surface Elevation



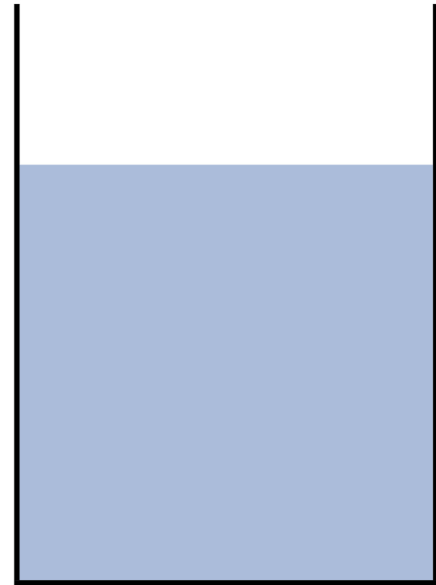
# The State Water Board expected that Mono Lake would ...



rise to 6392 ...

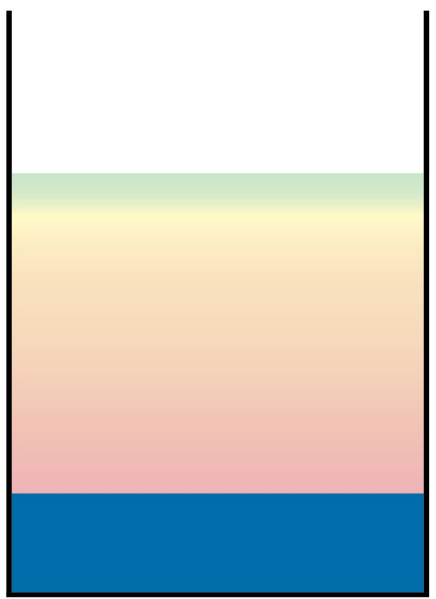


in about 20 years ...

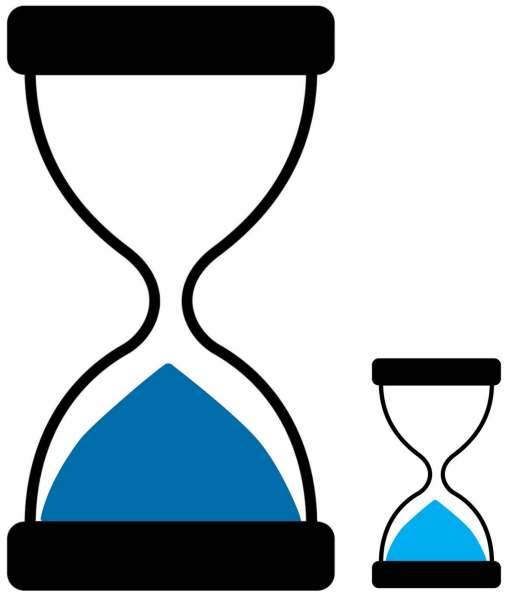


with limited LADWP diversions.

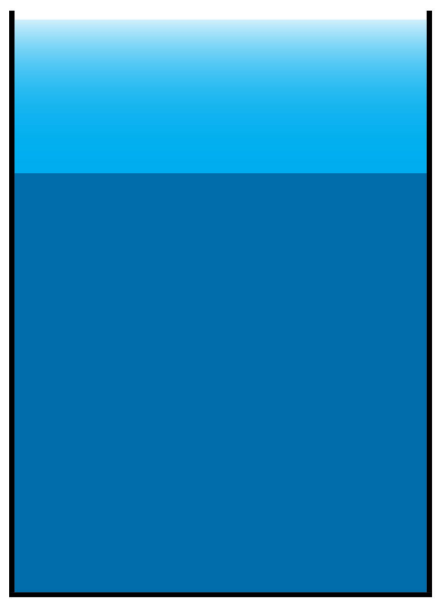
**Instead, as of today, Mono Lake has ...**



**only risen 25% ...**



**after 29 years ...**

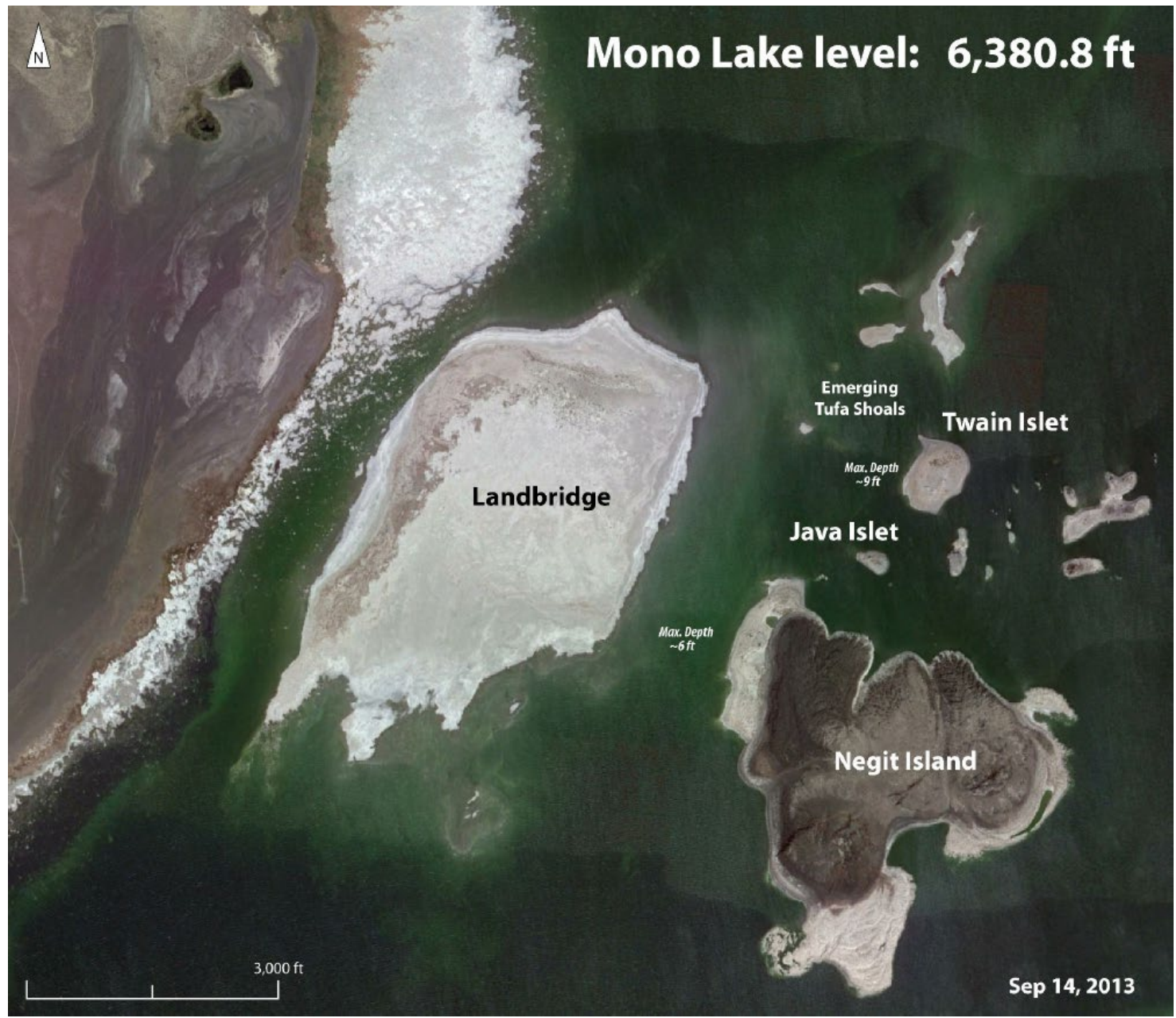


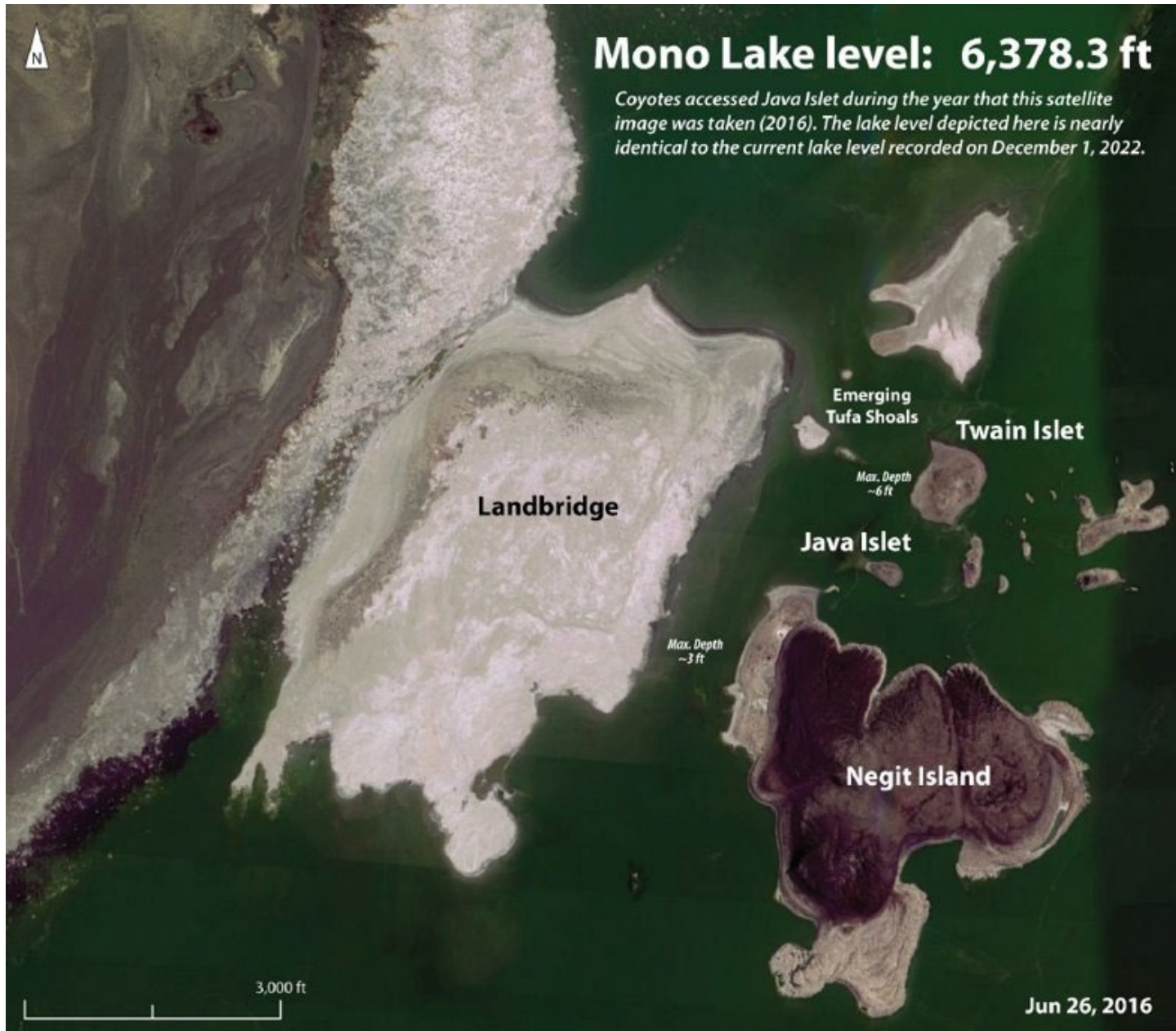
**and LADWP has received all the water the Board expected ... and more.**



Bartshe Miller











# Point Blue California Gull Project

1983–2022 — 40 Year Study

Annual Monitoring of nesting population number & productivity

Ground Based 1983–2019, Remotely Sensed 2018–2022



# California Gull Population

World breeding population estimated at ~400,000 birds

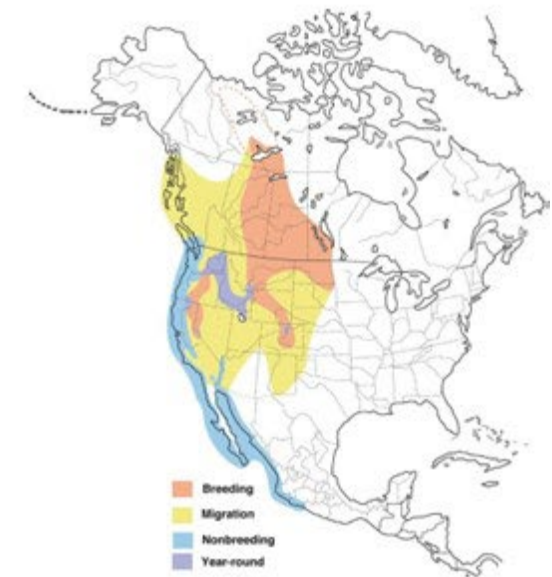
Mono Lake

45,000 in mid 1990's

28,000 in 2021

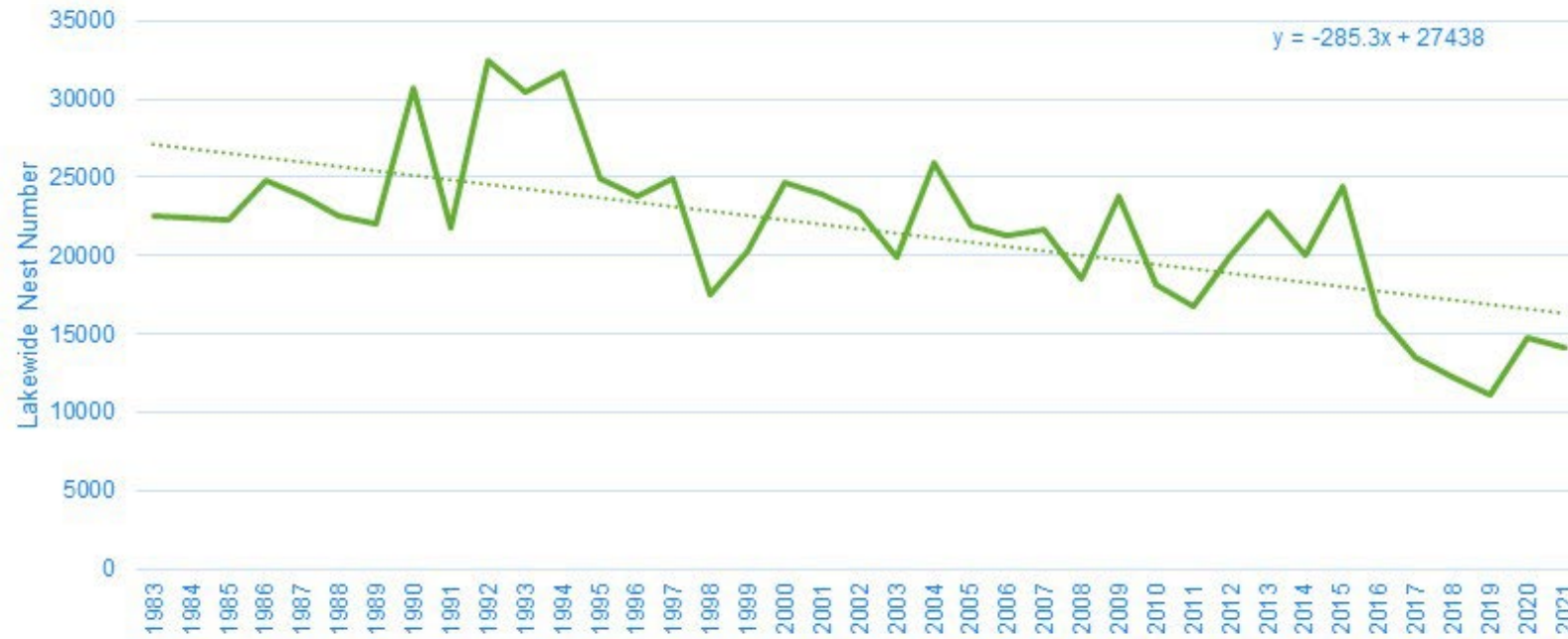
Great Salt Lake population ~100,000

South S.F. Bay population — 200 in 1980, ~50,000 in 2020



# Mono Lake California Gull Population in Decline

Average loss of 285 nests per year



# Terrestrial Predators are a Threat

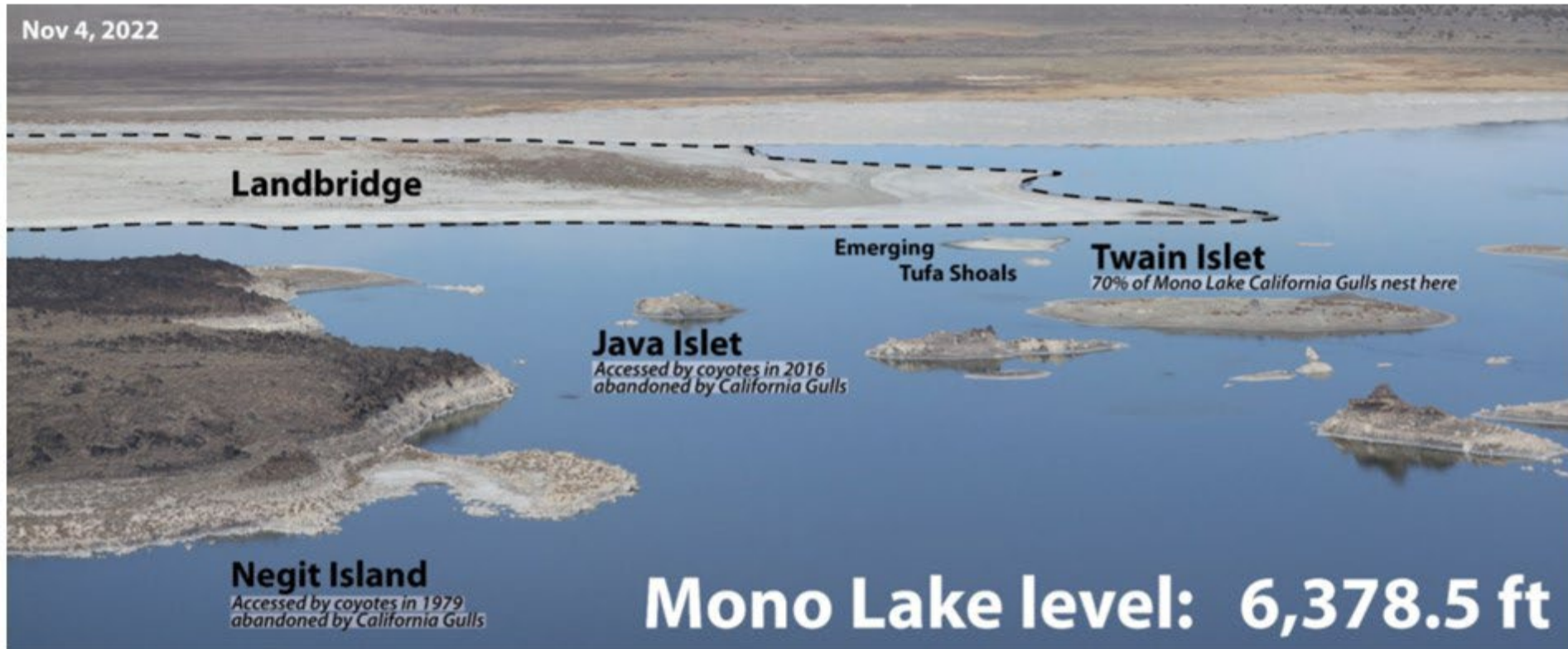
**“Nesting islands secure from predators and human disturbance are nesting gulls’ greatest need” – Shuford & Ryan 2000.**

- Negit supported majority of gull nests until 1979
- Land bridge connected Negit to mainland in late 1970’s
- Coyotes raided colony multiple years in late 1970’s until it was abandoned
- Colony moved to Negit Islets (primarily Twain in early 1980’s)



## Recent Evidence of Coyote Impacts to Gulls

- 2016 confirmed coyote presence on Negit & Java, suspected presence on Twain
- Lake level was 6378.2 in June 2016
- Java — 439 nests in 2015, 60 nests in 2016, 0 from 2017–2022
- Accessed Negit by wading/short swim, swam at least 200 yards to Java
- Once they figure it out incentive to come back is great
- Once Negit islets are accessible there is no where left to go



# Great Salt Lake Population Imperiled

- Largest Breeding Population ~100,000 birds in late 1980's
- 25% of world breeding population
- No recent survey
- Climate-change, drought, water diversion threaten ecosystem collapse

**The Washington Post**  
Democracy Dies in Darkness

## Great Salt Lake on track to disappear in five years, scientists warn

By Sarah Lyall and Noah Davis  
January 6, 2023 at 7:22 p.m. EST

Without dramatic cuts to water consumption, Utah's Great Salt Lake is on track to disappear within five years, a new report warns, imperiling ecosystems and exposing millions of people to toxic dust from the drying lake bed.

The report, led by researchers at Brigham Young University and published this week, found that unsustainable water use has shrunk the lake to just 37 percent of its former volume. The West's ongoing megadrought — a crisis made worse by climate change — has accelerated its decline to rates far faster than scientists had predicted.

But current conservation measures are critically insufficient to replace the roughly 40 billion gallons of water the lake has lost annually since 2000, the scientists said.

The report calls on Utah and nearby states to curb water consumption by a third to a half, allowing 2.5 million acre feet of water to flow from streams and rivers directly into the lake for the next couple of years. Otherwise, it said, the Great Salt Lake is headed for irreversible collapse.

"This is a crisis," said Brigham Young University ecologist Ben Abbott, a lead author of the report. "The ecosystem is on life support, [and] we need to have this emergency intervention to make sure it doesn't disappear."



# South S.F. Bay Population

50,000 breeding birds

Population exploded after Negit Island colony abandonment in 1980

Using artificial salt pond habitat/land fills

Threat to Forster's Tern, American Avocet, Western Snowy Plover

Salt pond habitat is being converted to tidal marsh – gulls being displaced





# If Not Mono Lake, then Where?



“In addition to its increasing numbers, the California Gull was not included on the current list because the main threat to the breeding population was reduced by a state water board order that will maintain lake levels at Mono Lake that will protect the state’s largest colony from ground predators (Shuford and Ryan 2000, Strong et al. 2004).”  
Shuford & Gardali eds. 2008. California Bird Species of Special Concern



**“Based on the evidence in the record, the SWRCB concludes that a lake level of 6,384 feet would protect the gulls from coyote access to Negit Island and nearby islets, and would maintain a buffer for continued protection during periods of extended drought. A water level of 6,390 would completely inundate the landbridge between Negit Island and the shore, and would provide additional deterrence to potential terrestrial predators.”**

—State Water Resources Control Board,  
Decision 1631, p106  
emphasis added

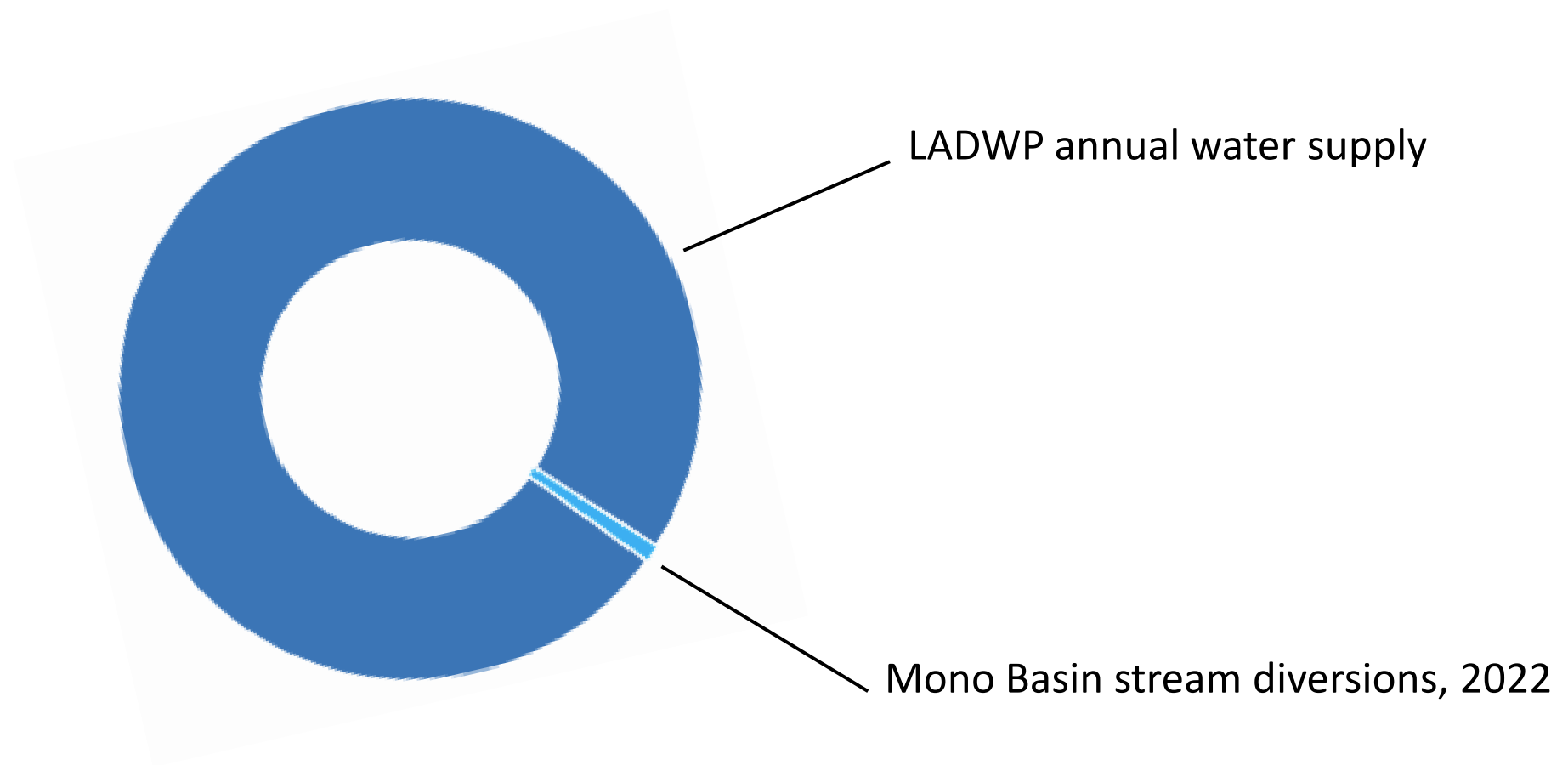


Marie Read

## Next Steps

1. Hold the hearing required by D-1631 to change the diversion rules—this year.
2. Implement stream diversion reductions before April 1, 2024.

# Los Angeles Annual Water Supply 2016–2020 Average



Source: LADWP 2021 Water Strong Fact Sheet, Fiscal Year-End 2016–2020 Average, 497,386 acre-feet.





Soly Moses



Kurt Harrigan



*Peter Essick*