



The Salton Sea

Turning Promises into Projects

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Pacific Institute



www.pacinst.org

Founded in 1987 and based in Oakland, California, the Pacific Institute creates and advances solutions to the world's most pressing water challenges. Our vision is to create a world in which society, the economy, and the environment have the water they need to thrive now and in the future.

Key Questions



- Natural or artificial?
- Restore a dynamic system?
- Conundrum of efficiency
- Rural vs urban water use
- Who pays?
- Accountability?



Overview

- Background
- Hydrologic links
- Transfer impacts & costs
- Challenges
- Solutions ?



Salton Sea

California

Arizona

Los Angeles

Colorado River

San Diego

U.S.

Tijuana

Mexico

Pacific Ocean

Gulf of California

Drivers of Change

- Lower inflows
 - IID-SDCWA water transfer
 - changes in Mexico
 - no surplus
 - cropping changes
- Urbanization
- Ag changes/BMPs & TMDLs
- Climate change

Conservation has saved 4.8 million acre feet of water since 2003

BY MICHAEL MARESH
Staff Writer

IMPERIAL — Since 2003, Imperial Irrigation District has conserved almost 4.8 million acre feet of water, mostly through water transfers and agreements.

A 1988 agreement between IID and the Metropolitan Water District of Southern California near Los Angeles has amounted to 1.56 million of that amount since 2003 at the Imperial Dam.

The San Diego County Water Authority Conservation District received more than 993,000 acre

feet in water under the agreement from 2003 to 2017, and Salton Sea mitigation in the same frame was 730,182 acre feet of water.

IID Public Affairs Director Robert Schletter said the water transfers bring in money to the district because the water being delivered comes with a cost.

Water to local farmers, municipalities and industrial businesses is delivered for a charge of \$20 per acre foot, while the San Diego County Water Authority pays IID \$667 for every acre foot delivered. What the

Metropolitan Water District pays IID to deliver water to them is more complex because MWD is not charged per acre foot.

Every year the IID conserves close to 500,000 acre feet of water that other water districts and organizations use in water transfers or agreements, which equates to 10 percent to 15 percent of its share of water from the Colorado River.

The funds from MET for example has been used to line the IID canals with concrete to stop seepage.

Schletter said the

funds for the water transfers are also used for IID operations, its budget and developing projects on how to conserve water

IID's availability of water every year from the Colorado River is between 2.5 million and 2.6 million acre feet. One acre foot at 326,800 gallons of water would be enough water for one to two families for an entire year

Schletter said all the IID does is deliver raw water to entities in the county. Of the 2.5 million to 2.6 million acre feet of water from the

Colorado River IID receives and is available, 95 percent of it is used for agriculture. The other 5 percent of the raw water, that still must be treated, is delivered to Imperial County communities, which treat it and sell it to their ratepayers.

According to data for 2017, 2.186 million acre feet, or more than 712 billion gallons, of water were used for agriculture. Imperial Valley cities had 31,922 acre feet (10.4 billion of gallons) of water delivered to them.

For industrial operations, 24,076 acre feet,

or 7.8 billion gallons, of water were used for this purpose in 2017.

Some IID board members have made it clear they will not support another water transfer because they believe the water should stay in the county.

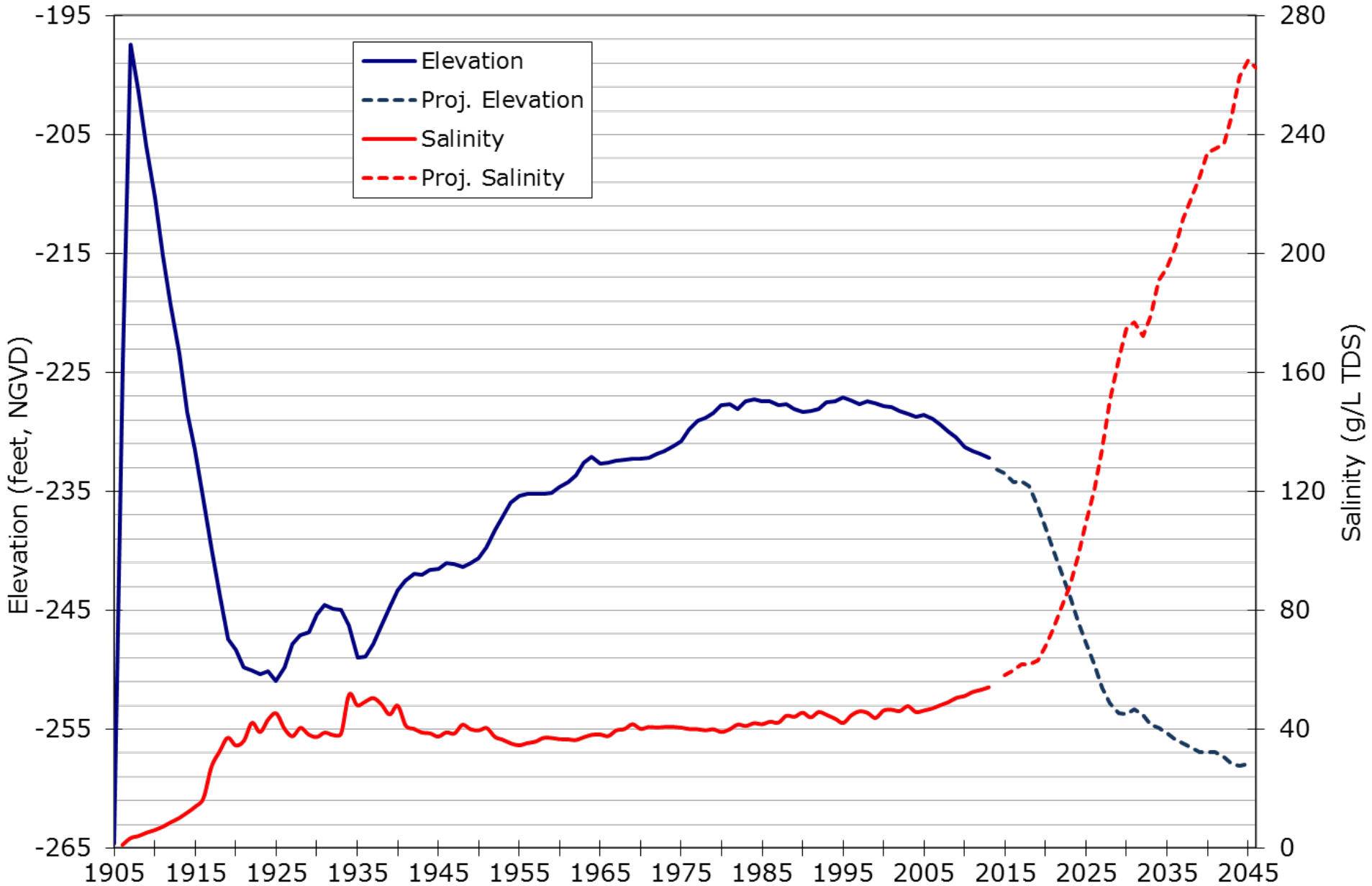
Protecting the county's water rights is a priority, Schletter said.

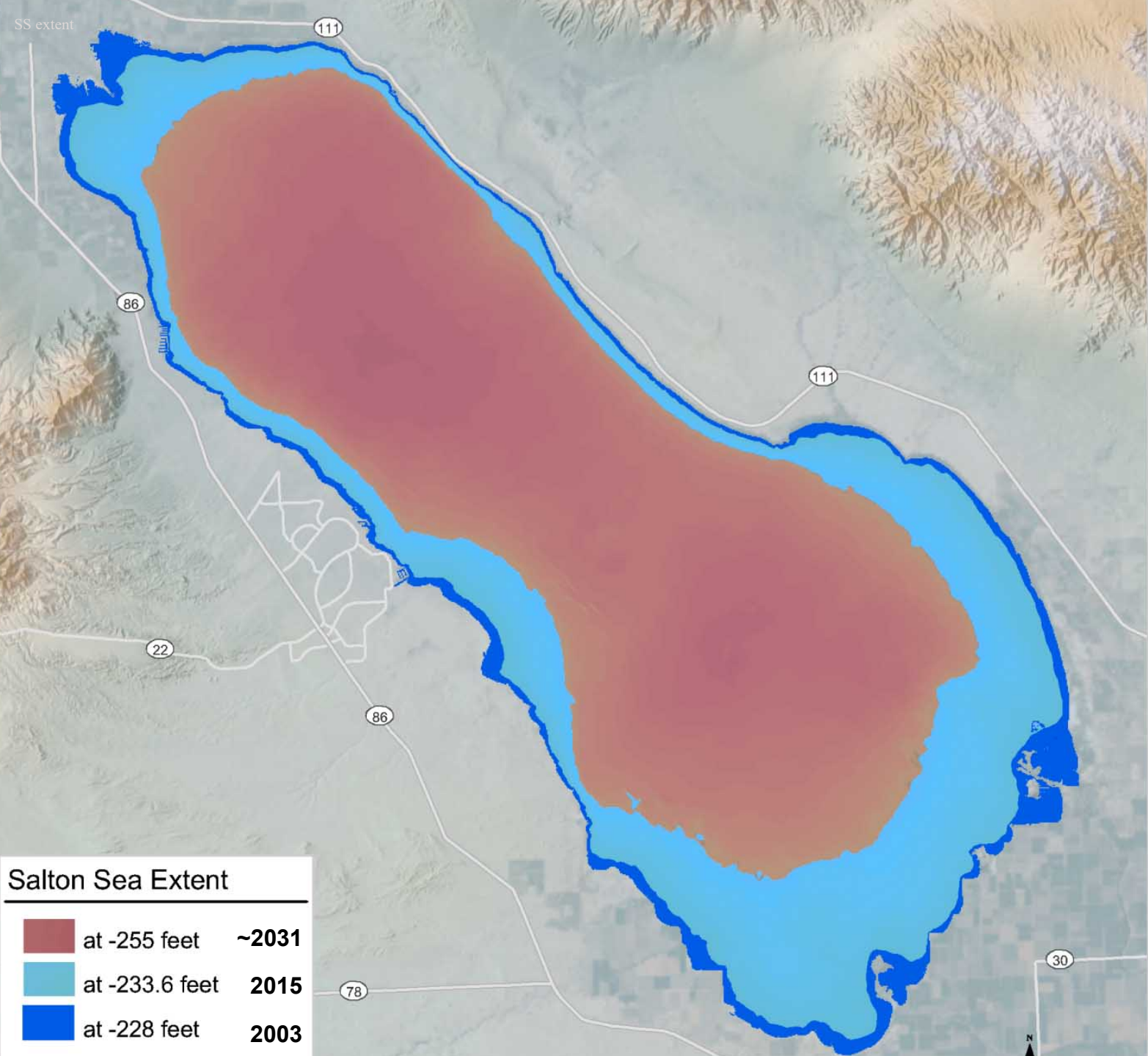
"When it comes to water in the desert we fight for it," he said. "When someone wants a chunk of the Colorado River we fight for it. This is a desert, and water is our life blood."

IID 2003-2020 Water Accounting Summary




- IID-MWD – 1.77 MAF
- IID-CVWD – 0.30 MAF
- ICS – 0.39 MAF
- IID-SDCWA – 1.32 MAF
- AAC Lining – 0.75 MAF
- (to MWD area) – **3.84 MAF**

Salton Sea Elevation & Salinity





**Sea could
recede >5
miles from
2003
shoreline**

Salton Sea Extent		
	at -255 feet	~2031
	at -233.6 feet	2015
	at -228 feet	2003

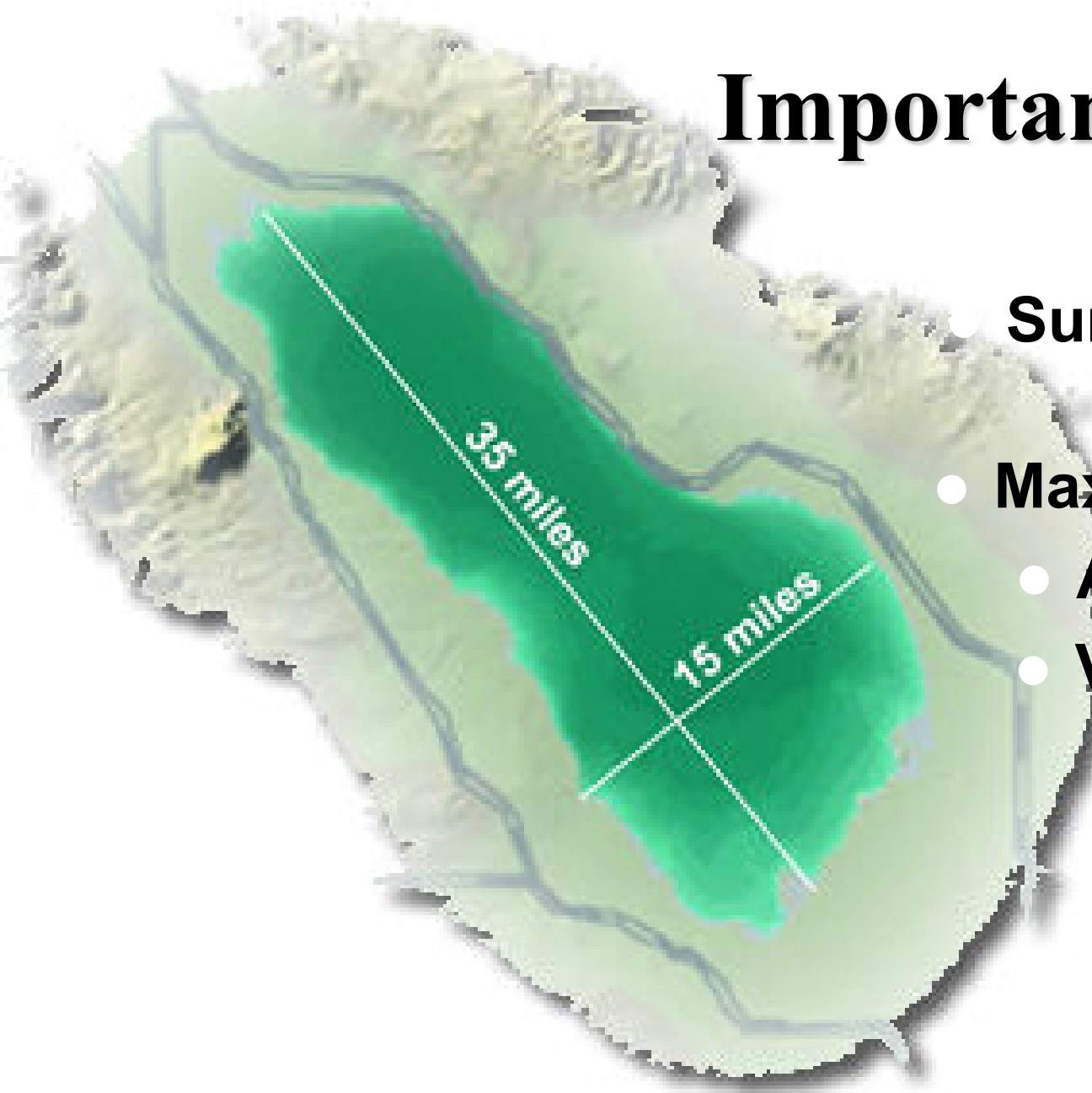
Failure to Act

- w/o project, Sea will change dramatically
- high human health costs
- increased AQ-related litigation
- increased costs to bring area into compliance
- catastrophic ecological impacts
- gradual accumulation of damage and degradation ultimately will be a crisis

Challenges

- Public perception
- Location
- Scale and Complexity of Sea
- Seismicity
- Time to solution
- Tremendous costs
- ‘creeping environmental problem’
- project management & political will

– Importance of Scale

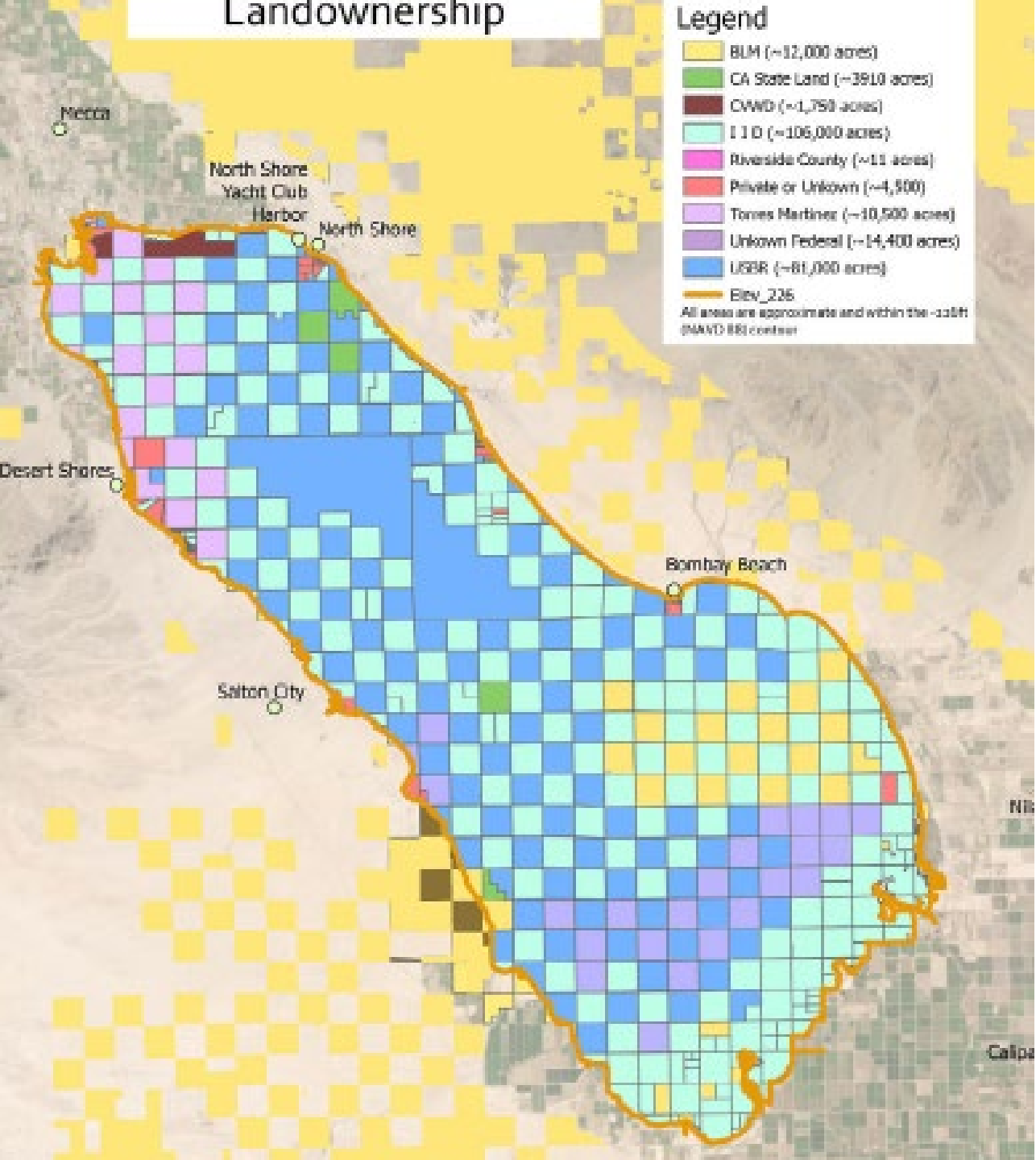


- **Surface area ~ 326 sq miles**
- **Max depth - 40 feet**
- **Avg. depth ~ 19'**
- **Volume – 5 MAF**
~100 miles of shoreline

Landownership

Legend

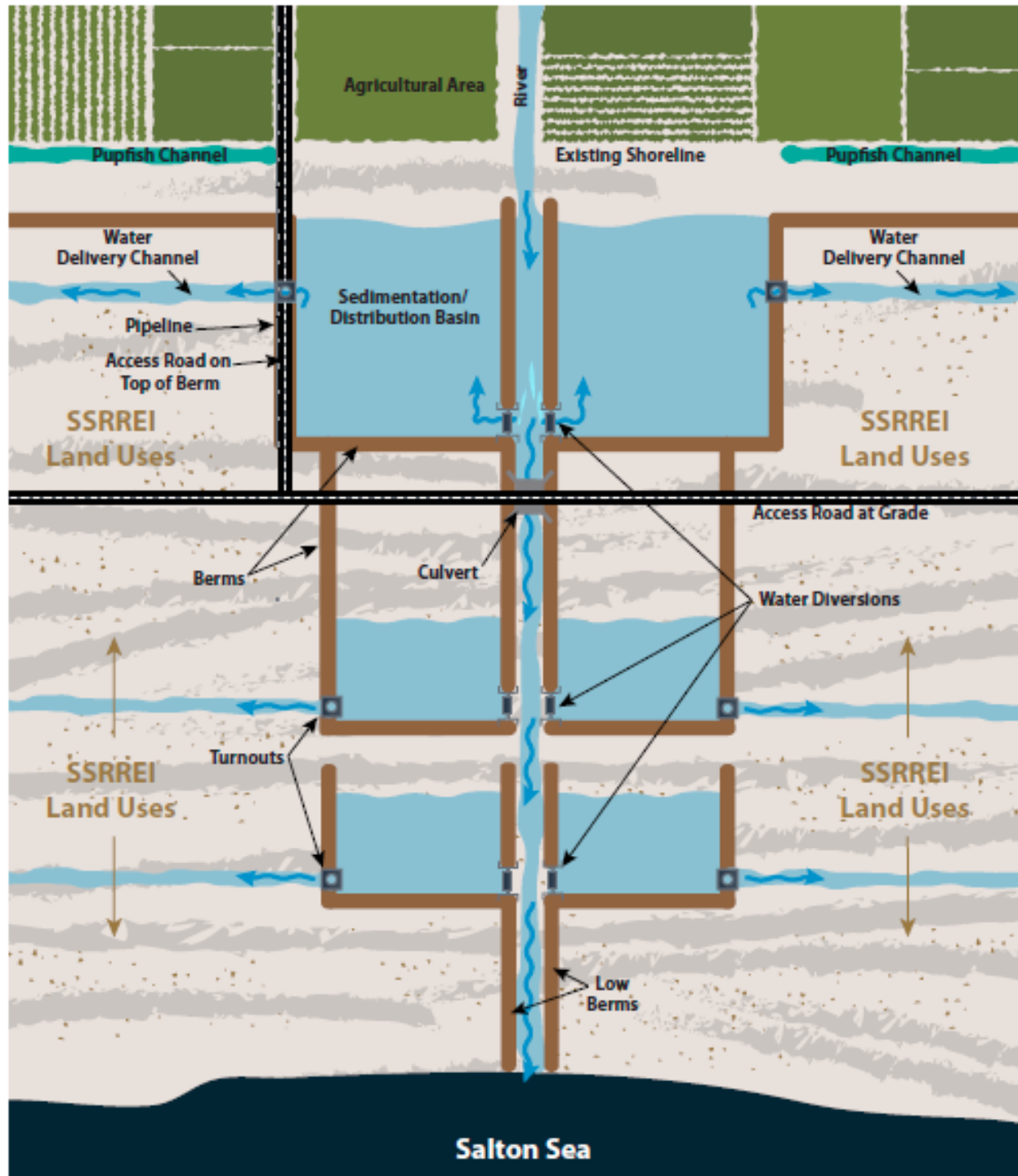
- BUM (~12,000 acres)
 - CA State Land (~3910 acres)
 - CVWD (~1,750 acres)
 - I I D (~106,000 acres)
 - Riverside County (~11 acres)
 - Private or Unknown (~4,500)
 - Torres Martinez (~10,500 acres)
 - Unknown Federal (~14,400 acres)
 - USBR (~81,000 acres)
 - Elev_226
- All areas are approximate and within the -115ft (MVD) 881 contour



Exposed Federal:
2018: 6190 acres
2023: 8880 acres

Salton Sea Management Needs

- **Water – ✓**
- **Stakeholder support – ✓**
- **Funding – ✓**
- **10-Year Commitment – ✓**
- **Leadership – ✓**



Salton Sea Ecosystem Monitoring Project



ALAMO NORTH DUST CONTROL AREA – BEFORE AND AFTER

Before: Non-Roughened Playa



After: Roughened Playa



For more information on IID's Salton Sea Air Quality Mitigation Program, please visit www.iid.com/airquality.

Learning Lessons

- **Need clear goals & objectives**
- **Assess O&M fee on transfer volumes**
- **Legislation is not sufficient**
- **Funding is not sufficient**
- **Accountability required**
- **Requires political will**



Further Reading

- salton-sea.ca.gov
- pacinst.org/issues/salton-sea/
- www.waterboards.ca.gov/waterrights/water_issues/programs/salton_sea/
- www.iid.com/water/salton-sea-initiative
- ca.audubon.org/conservation/birds-salton-sea
- www.usbr.gov/lc/region/programs/salton-sea.html