

Salton Sea Perimeter Lake Concept Background

Presentation to:

Salton Sea Authority Board of Directors



June 25, 2020

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Salton Sea Authority Benchmark Reports

Salton Sea Funding and Feasibility Action Plan

Benchmark 3: Evaluation of Alternatives With Respect to Existing Conditions

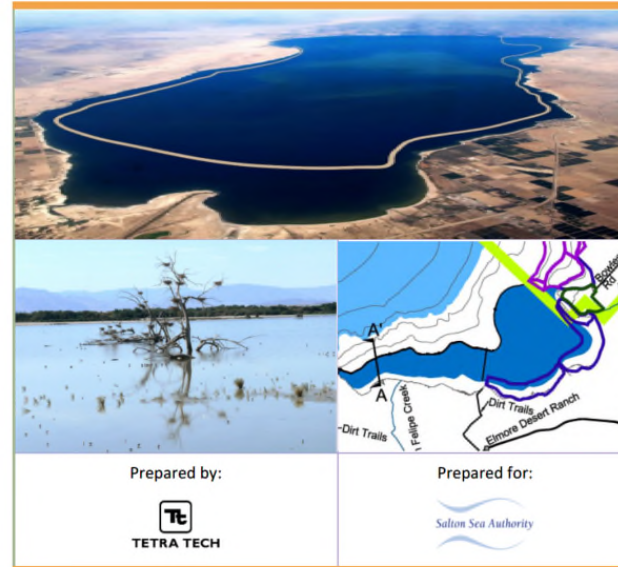
June 2015



Salton Sea Funding and Feasibility Action Plan

Benchmark 4: Conceptual Plans and Cost Estimates Volume 2: Smaller Sea Options – Perimeter Lake Concept

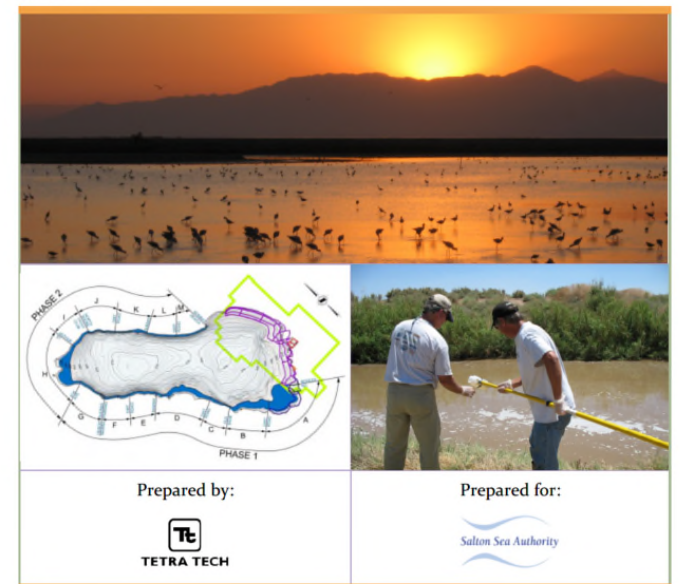
May 2016



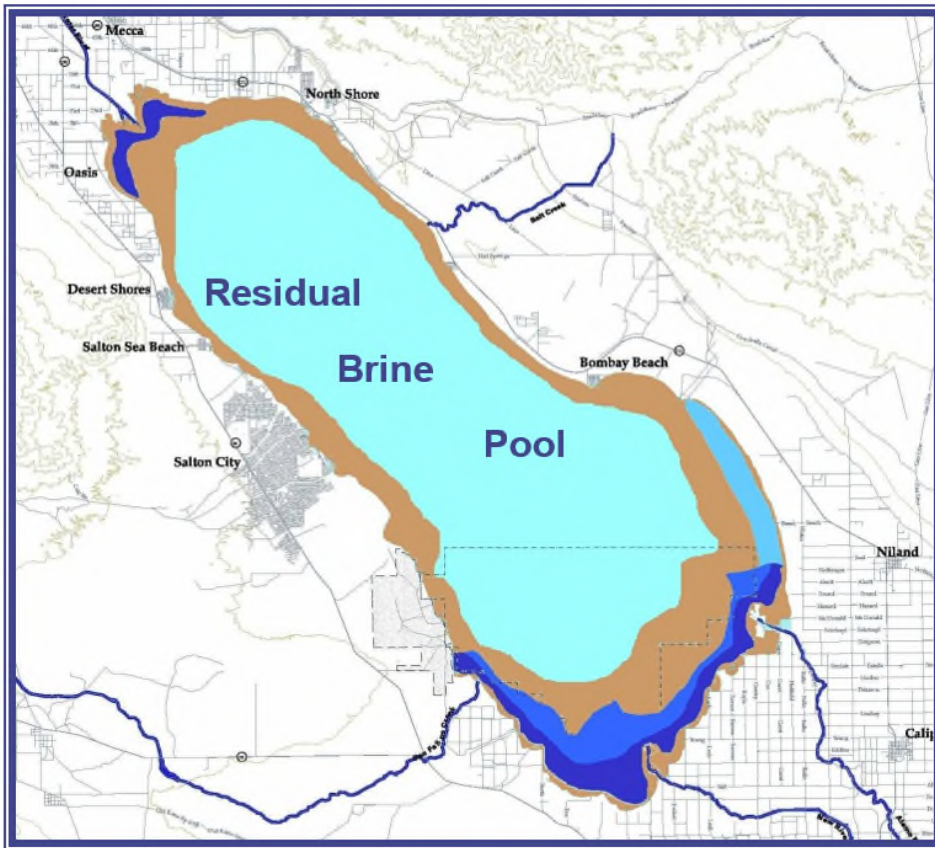
Salton Sea Funding and Feasibility Action Plan

Benchmark 7: Project Summary

May 2016



Evolution of the Perimeter Lake Concept



Pacific Institute (2001)



US Filter (2002)

Salton Sea Authority Preferred Project (2004)

SALTON SEA RESTORATION

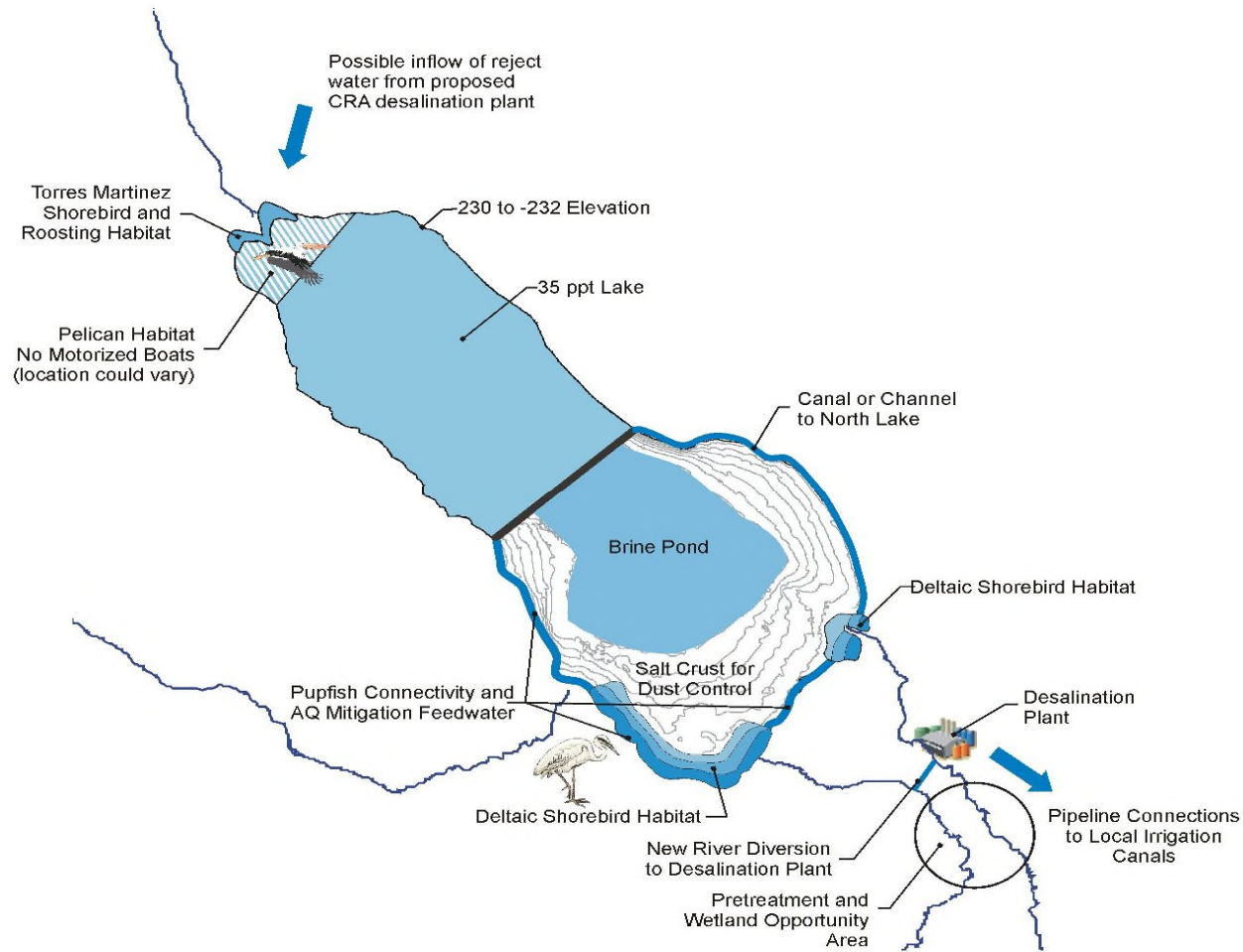
Final Preferred Project Report



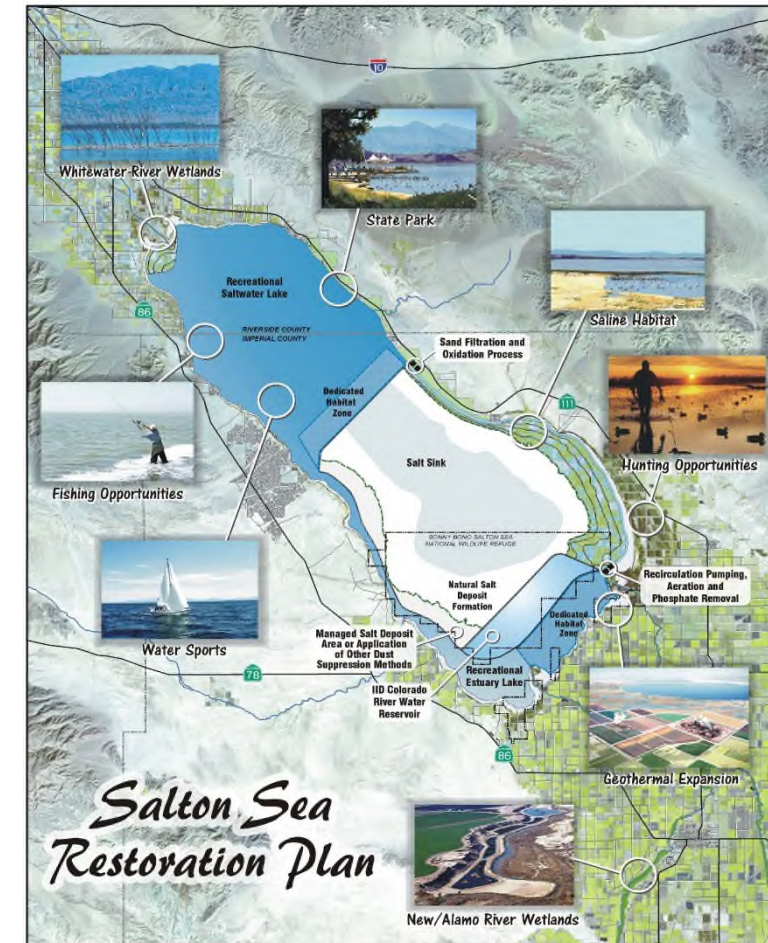
July 2004



Evolution of Salton Sea Authority Preferred Plan

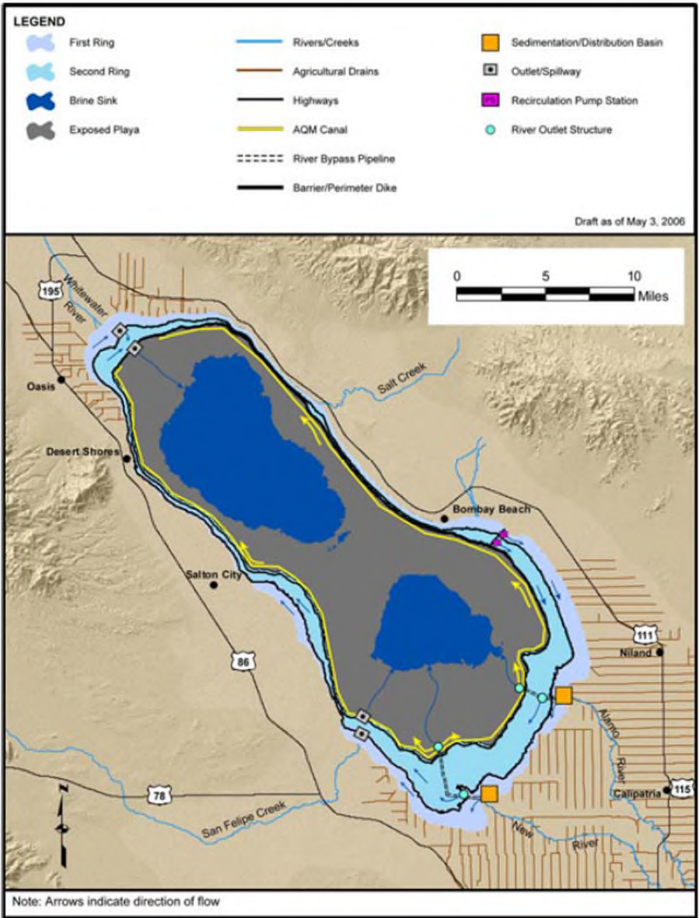


Salton Sea Authority (2003)

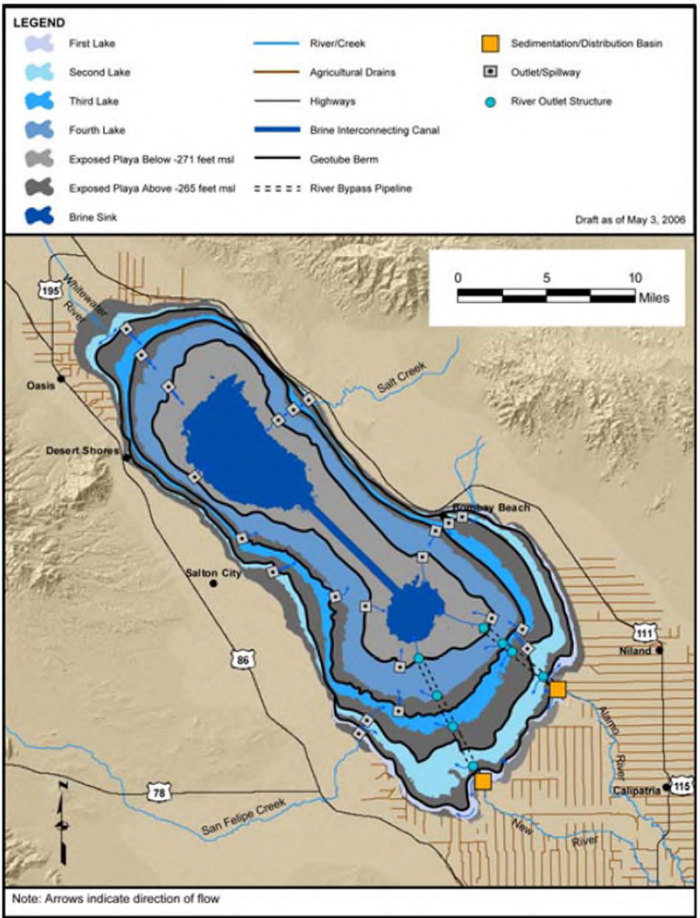


Salton Sea Authority (2006)

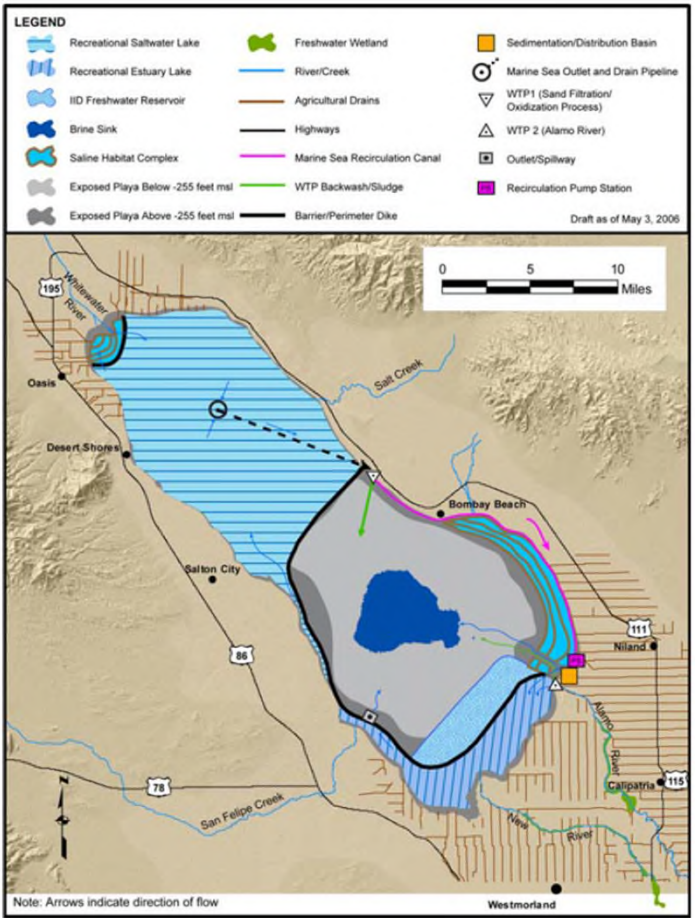
DWR PEIR (2006)



Alternative 3: Concentric Rings



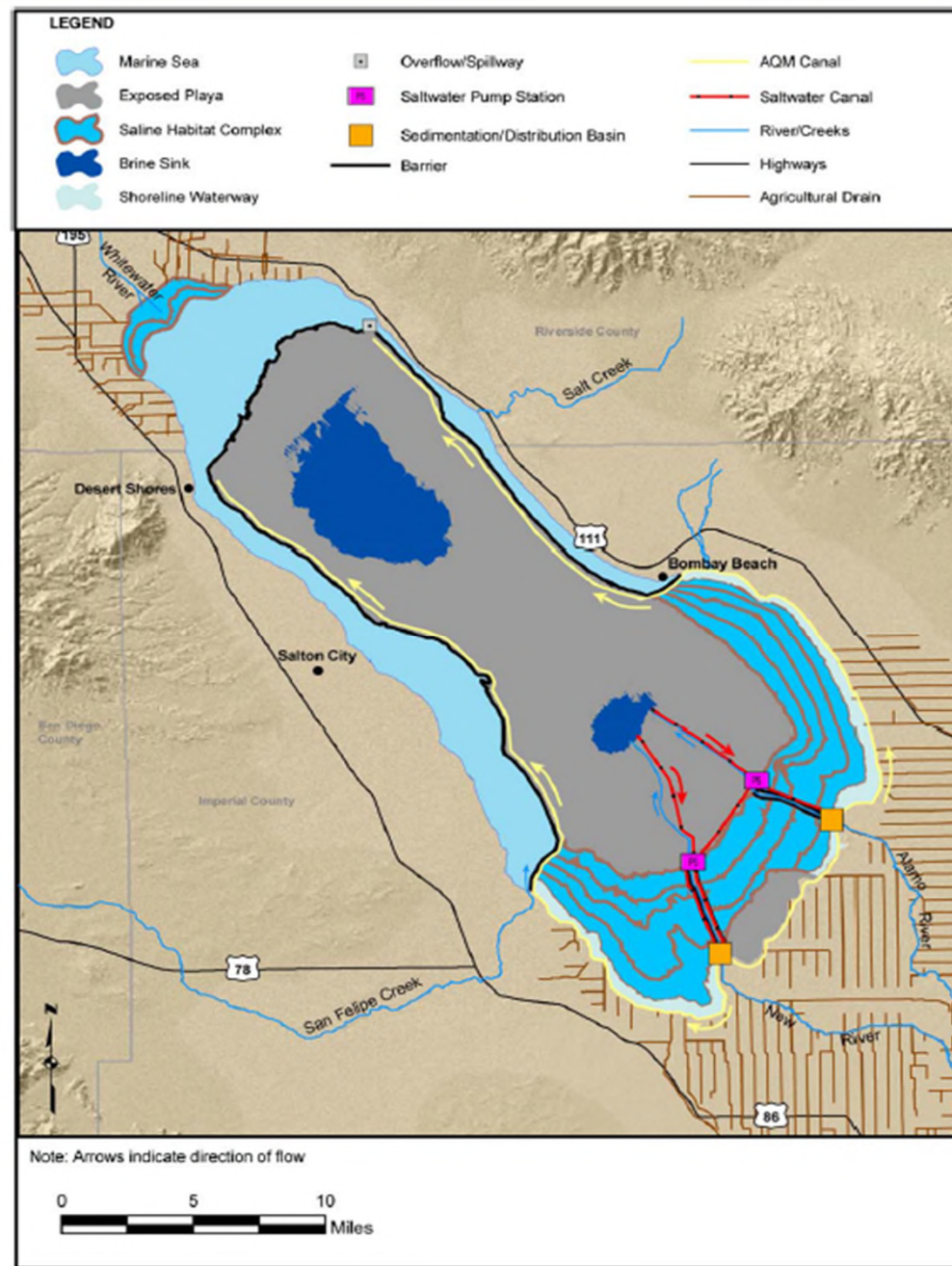
Alternative 4: Concentric Lakes
(Imperial Group)



Alternative 7 Combined North &
South Lakes (Salton Sea Authority)

DWR PEIR (2006)

DWR Preferred Alternative



SSWIFT (2015)

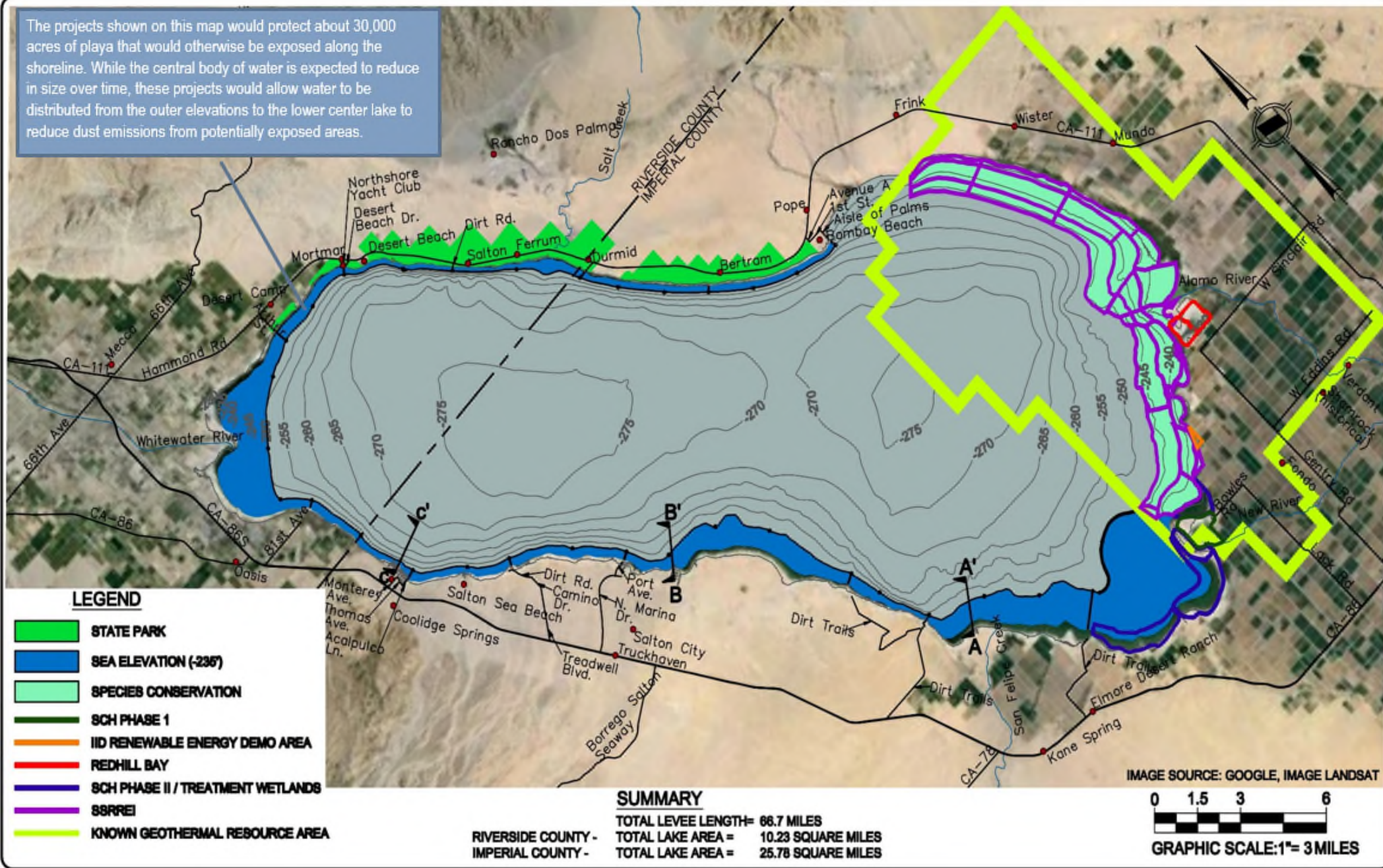
SS Salton Sea Authority Plan recognizes and works with

W limited Water

IF Incremental Funding

T limited Time

The projects shown on this map would protect about 30,000 acres of playa that would otherwise be exposed along the shoreline. While the central body of water is expected to reduce in size over time, these projects would allow water to be distributed from the outer elevations to the lower center lake to reduce dust emissions from potentially exposed areas.



Perimeter Lake

Comparison to Other Lakes



Lake Elsinore



Diamond Valley Lake

Big Bear Lake: 5 sq mi

Perimeter Lake North & South Areas



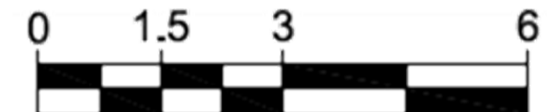
~7 sq mi

Riverside County: 10 sq mi

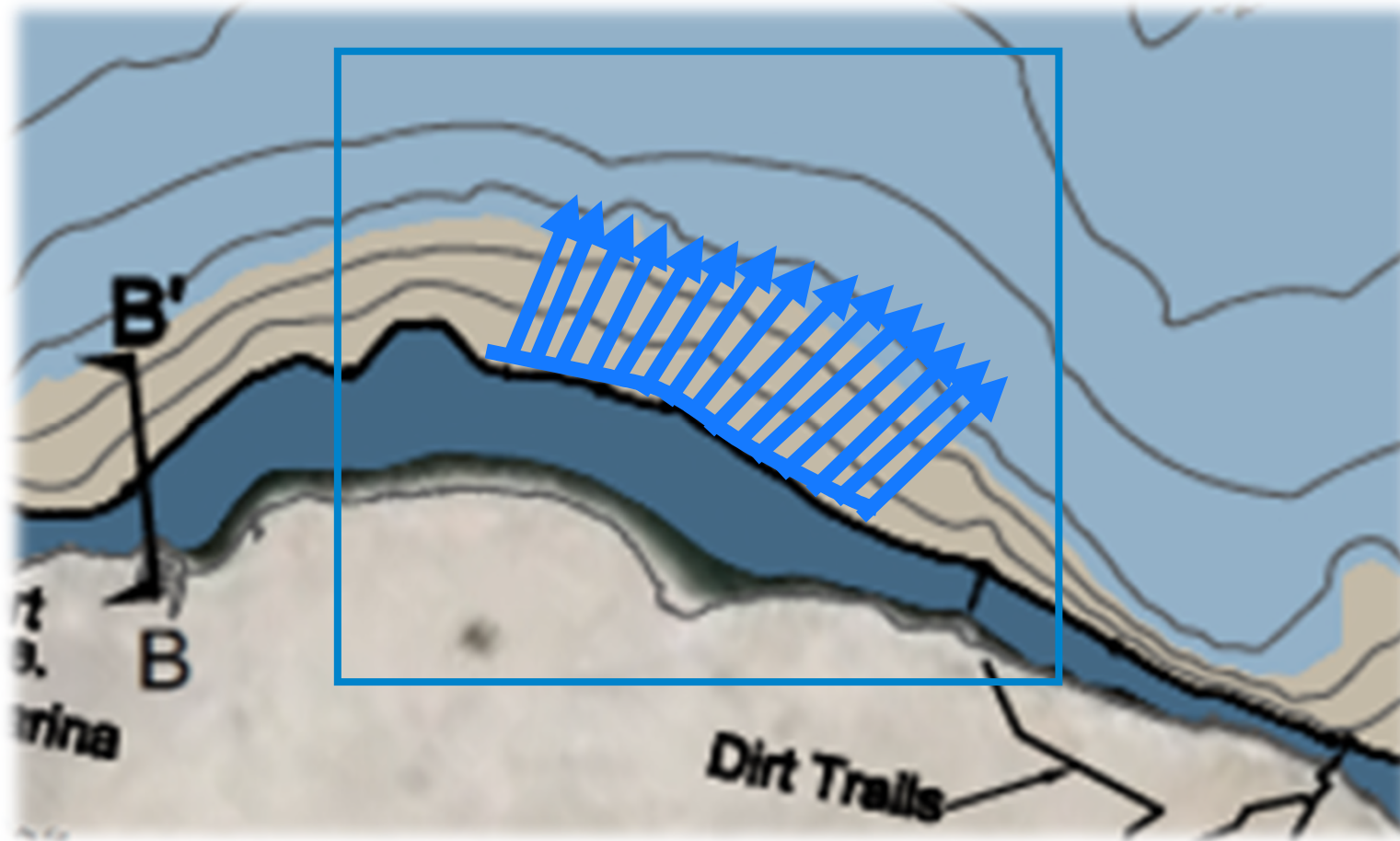


~10 sq mi

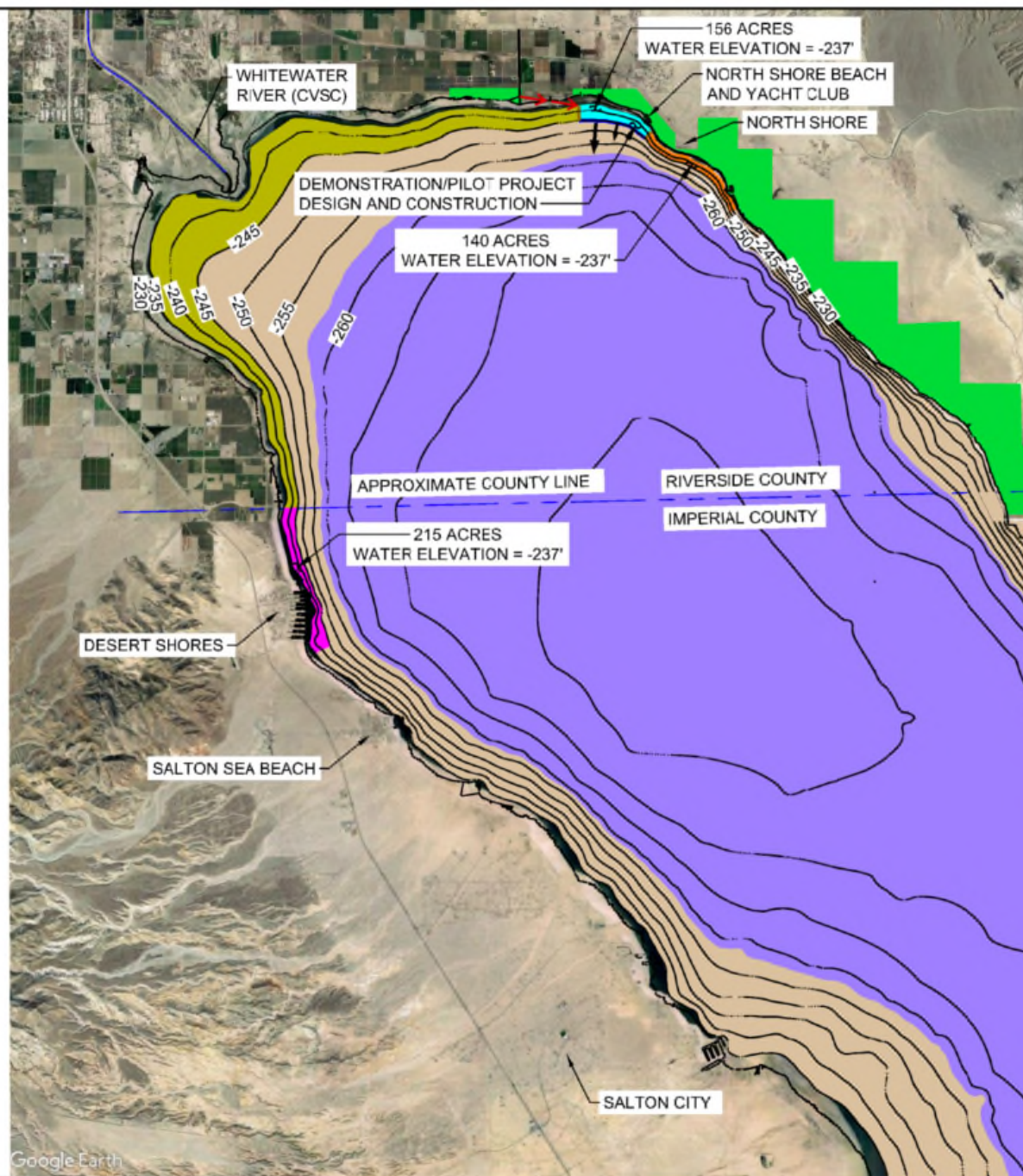
Imperial County: 25 sq mi



Irrigation System for Emissive Areas



North Lake Concept



LEGEND

- SOUTH WEST POND
- NORTH EAST POND
- PILOT PROJECT POND
- FUTURE EXPOSED PLAYA
- EXPOSED PLAYA (-245') FUTURE POND AREAS
- FUTURE BRINE POOL ELEVATION (-258')
- STATE RECREATION AREA
- MAJOR CONTOUR
- MINOR CONTOUR
- SURFACE CONTROL WEIR
- OVERFLOW CULVERT
- CAUSEWAY
- 10' HIGH BERM
- DRAINAGE COLLECTION CHANNEL

1. 8' DEEP POND
2. TOTAL POND AREA = 156 ACRES
3. TOTAL 10' BERM LENGTH = 6000 FEET
4. TOTAL CAUSEWAY LENGTH = 2100 FEET
5. SHORELINE LENGTH = 6800 FEET
6. PERCENTAGE OF POND DEEPER THAN 6' = ±15%

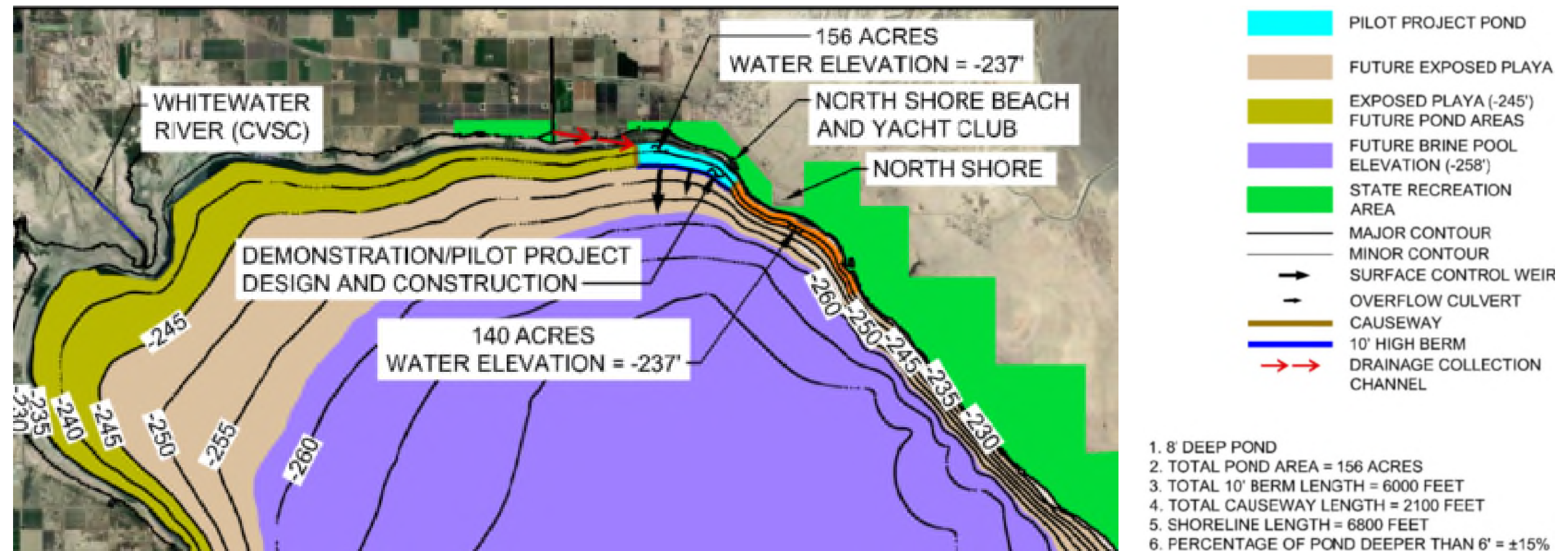
NOTE:
WHITWATER RIVER ALSO KNOWS AS COACHELLA VALLEY STORMWATER CHANNEL (CVSC)

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DEPARTMENT OF WATER RESOURCES			
DESIGNED BY: J.W.	DATE: 05/2020	PROJ. NO.: 000-000	
DRAWN BY: C.L.M.			
CHECKED BY: J.W.			
APPROVED BY: J.W.			

SALTON SEA WHITEWATER	NORTH LAKE CONCEPTUAL PLAN
FIGURE 8.1C	

Proposed Demonstration/Pilot Project



Advantages In Imperial County

- 26 square mile lake with areas up to 25 feet deep
 - Lake with cleaner, lower salinity water
 - Stable shoreline for Imperial County communities such Bombay Beach, Desert Shores, Salton City & Salton Sea Beach
 - Dredging will allow access to existing marinas
 - Preserves deep reservoir in south for micro-climate for agriculture
 - Preserves shallow habitat zone along nearly 30 miles near existing shoreline
- Habitat/dust control in south area allows full access to KGRA
- Works with existing IID Air Quality Control Plan
 - Provides irrigation source for emissive playa

Advantages In Riverside County

- ~10 square mile lake with deep habitat areas
 - Preserves shallow habitat zone along about 12 miles near existing shoreline
- Provides lake with cleaner, lower salinity water
 - Stable shoreline for Riverside County areas including the State Recreation Area
 - Dredging will allow access to existing marinas such as North Shore Yacht Club
- Provides irrigation source for emissive playa