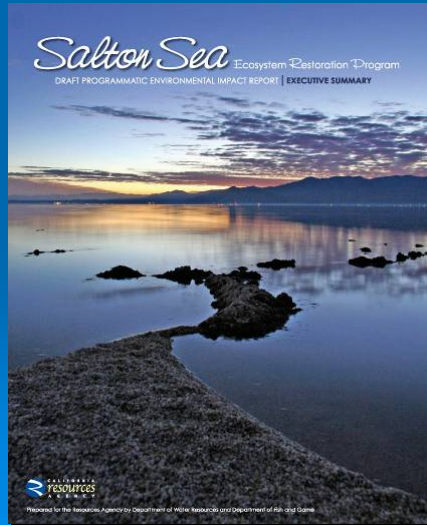


## Presentation Overview



- Background
- Legislation and Legislative Goals & Objectives
- Stakeholder and Public Involvement
- Project Components
- Range of Alternatives Considered
- Preferred Alternative
- Moving Forward – Five Year Plan

## Background on the Salton Sea

- Environmental problems at Salton Sea are becoming worse
  - Nutrients cause eutrophication contributing to fish kills, bird die offs, and odor problems
  - High salinity and hydrogen sulfide concentrations contribute to fish kills, odor problems, and is a human-health hazard
  - High selenium can harm fish, birds, and people
  - Soils exposed over time can contribute to air quality problems
- Reduced flows due to implementation of the Quantification Settlement Agreement (QSA) will increase the severity of these problems

## Restoration Study Legislation

- The implementing legislation for the State Salton Sea Restoration Act of 2003 (adopted to facilitate approval of the QSA):
  - Senate Bill 277 (Ducheny)
  - Senate Bill 317 (Kuehl)
  - Senate Bill 654 (Machado)
  - Senate Bill 1214 (Kuehl)

*“It is the intent of the Legislature that the State of California undertake the restoration of the Salton Sea ecosystem...”*



## Legislative Goals & Objectives

- To provide the maximum feasible attainment of the following objectives:
  - Restoration of long term stable aquatic and shoreline habitat for the historic levels and diversity of fish and wildlife that depend on the Salton Sea
  - Elimination of air quality impacts from the restoration projects
  - Protection of water quality
- Major program components achieve restoration objectives



## Ecosystem Restoration Planning Process and Documents

- Programmatic Environmental Impact Report (PEIR)
  - Provides a programmatic-level analysis of the environmental impacts of implementing a restoration project
  - Conceptual in nature
  - Draft PEIR released for public review in October 2006
  - Final PEIR is under preparation
- Ecosystem Restoration Study
  - Provides detailed information on alternatives
  - Included as an appendix to the Draft PEIR
- Funding Plan
  - Identifies potential funding sources
  - Currently under preparation
- Preferred Alternative Recommendation
  - Secretary recommends a Preferred Alternative to the Legislature
  - Anticipated to occur in early May 2007



## Working Together to Restore the Salton Sea

- Shared Objective
  - Improving the conditions at the Salton Sea
- State's Commitment
  - The State is committed to addressing the major environmental concerns at the Salton Sea
- Stakeholder Process
  - The State is committed to an open and objective process
  - State staff is working closely with stakeholders through the Salton Sea Advisory Committee and its various Work Groups
- Building Broad Acceptance to Select Preferred Alternative
  - Critical for successful implementation

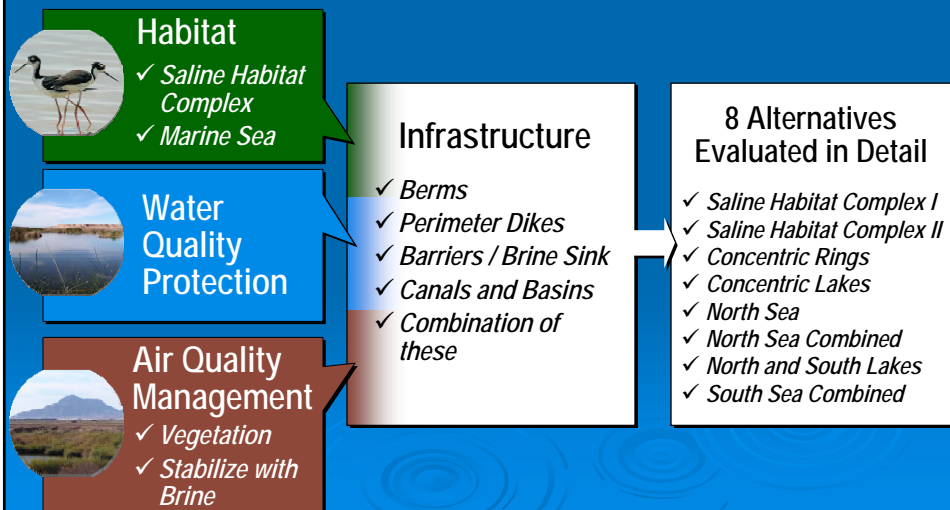


## Commitment to an Open Public Process

- 95 stakeholder and public meetings held since early 2004 (average of 2.5 meetings per month)
  - 24 Advisory Committee meetings
  - 34 Work Group and Technical Committee meetings
  - 37 public outreach meetings
- Newsletters and mailing materials
  - Distributed to over 1,500 people on project mailing list
- Project website updated regularly
  - [www.salttonsea.water.ca.gov](http://www.salttonsea.water.ca.gov)
- Approximately 34,000 comment letters received on the Draft PEIR



## Components of All Alternatives



## Project Component: Marine Sea

- Salinity between 30,000 and 40,000 mg/L, similar to typical ocean water
- May be able to support a recreational fishery
- More recreational opportunities



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## Project Component: Brine Sink

- Provides the “outlet” necessary to manage elevation and salinity
- Expand and contract seasonally
- Salinity would eventually exceed 200,000 mg/L (over 6 times saltier than ocean water)



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SALTON SEA RECREATION BOARD

## Project Component: Saline Habitat Complex

- Provides wildlife habitat
- Berms would create 1,000-acre cells
- Cells would have habitat of varying depths, salinities, and structural features

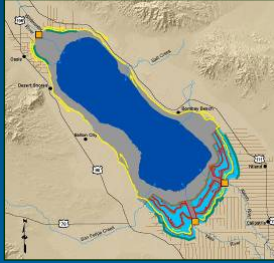


## Project Component: Air Quality Management Tool Box

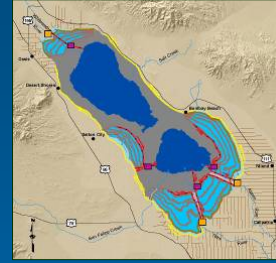
- Options that require water
  - Salt crust
  - Water-efficient vegetation
  - Event-driven irrigation
  - Regular watering
  - Seasonal surface wetting
- Options that require minimal water
  - Gravel cover
  - Chemical stabilizers
  - Tillage
  - Sand fences



## Alternatives Considered in the Draft PEIR



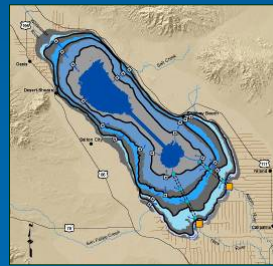
**Alternative 1:  
Saline Habitat Complex I**  
Construction = \$2.3 billion  
O&M = \$91 million/year Phase IV



**Alternative 2:  
Saline Habitat Complex II**  
Construction = \$3.3 billion  
O&M = \$108 million/year in Phase IV

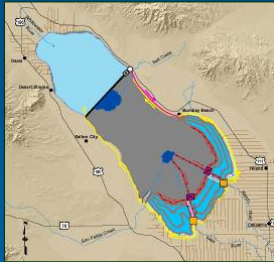


**Alternative 3:  
Concentric Rings**  
Construction = \$4.9 billion  
O&M = \$138 million/year  
in Phase IV



**Alternative 4:  
Concentric Lakes**  
Construction = \$2.3 billion\*  
O&M = \$20 million/year in  
Phase IV

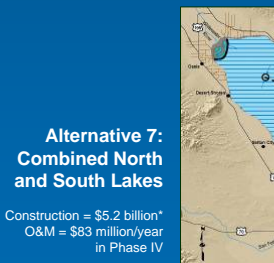
## Alternatives Considered in the Draft PEIR



**Alternative 5:  
North Sea**  
Construction = \$4.5 billion  
O&M = \$133 million/year in Phase IV



**Alternative 6:  
North Sea Combined**  
Construction = \$5.9 billion  
O&M = \$149 million/year in Phase IV



**Alternative 7:  
Combined North  
and South Lakes**  
Construction = \$5.2 billion\*  
O&M = \$83 million/year  
in Phase IV



**Alternative 8:  
South Sea  
Combined**  
Construction = \$5.8 billion  
O&M = \$145 million/year in  
Phase IV

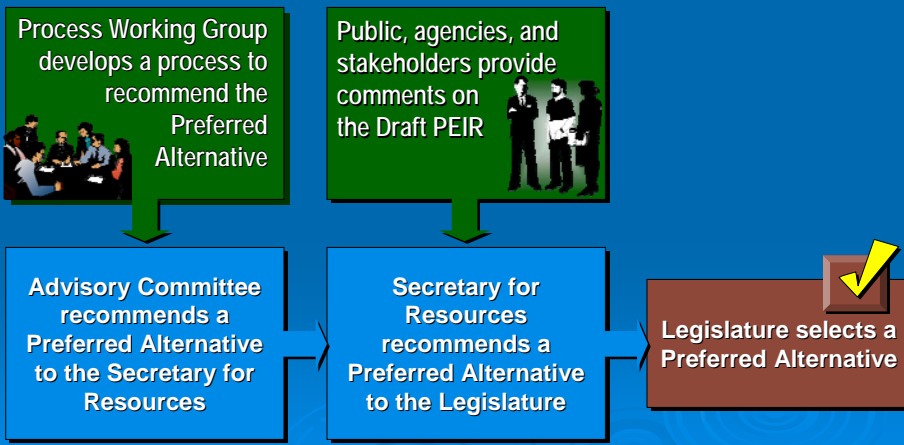
## Alternatives Considered in the Draft PEIR No Action Alternative-Variability Conditions



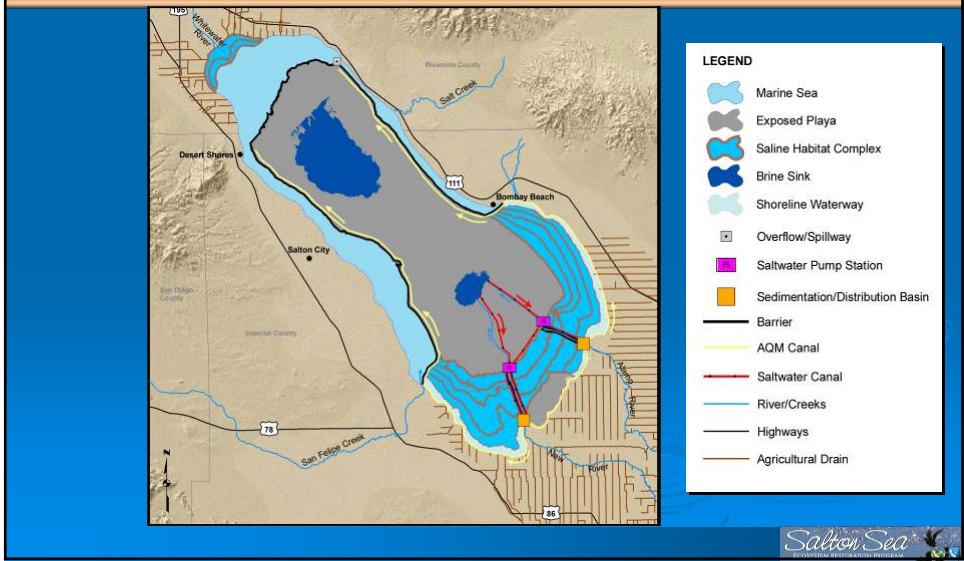
- Includes implementation of mitigation measures for the QSA and IID Water Conservation and Transfer Project such as:
  - Air Quality Management actions
  - Protection of desert pupfish
  - Modification of recreational facilities
  - Delivery of water to the Salton Sea until 2017
- Construction = \$801 million
- O&M = \$49 million/year in Phase IV



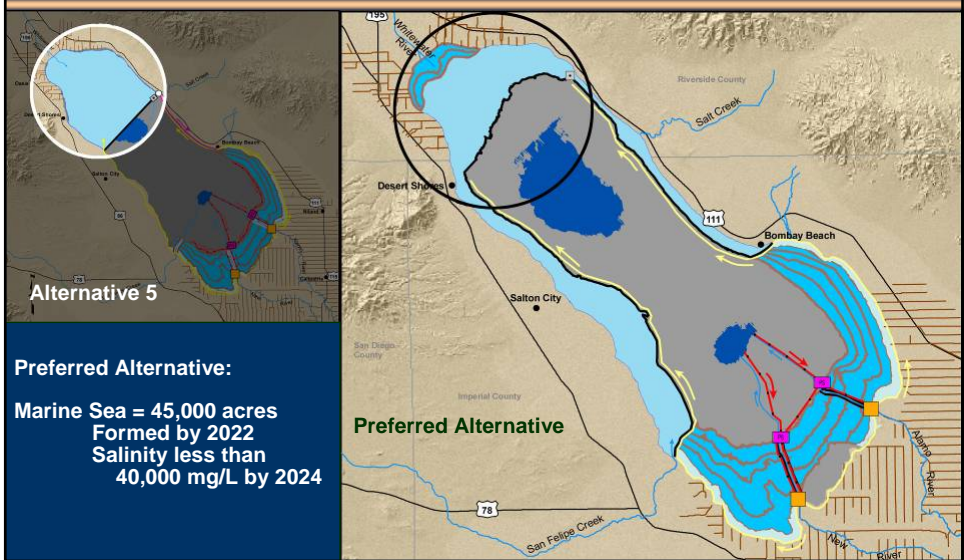
## Steps for Selecting a Preferred Alternative



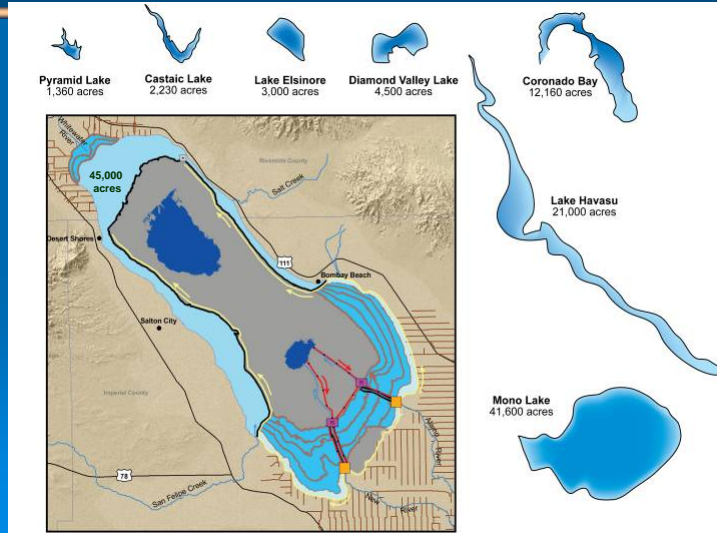
# Preferred Alternative



# Incorporates Marine Sea Concept from Alternative 5



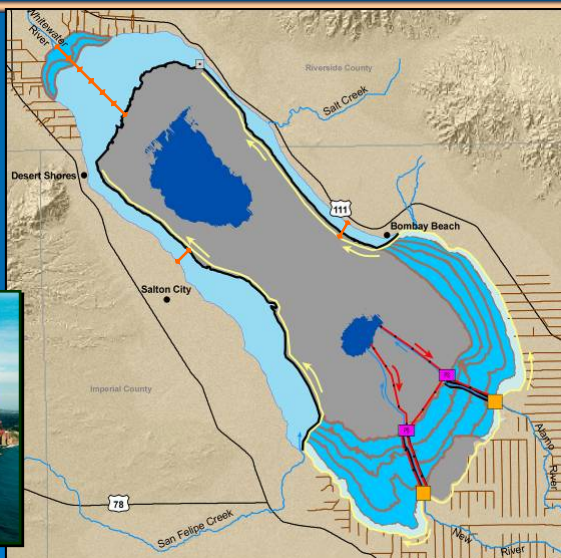
# Comparison to Other Waterbodies



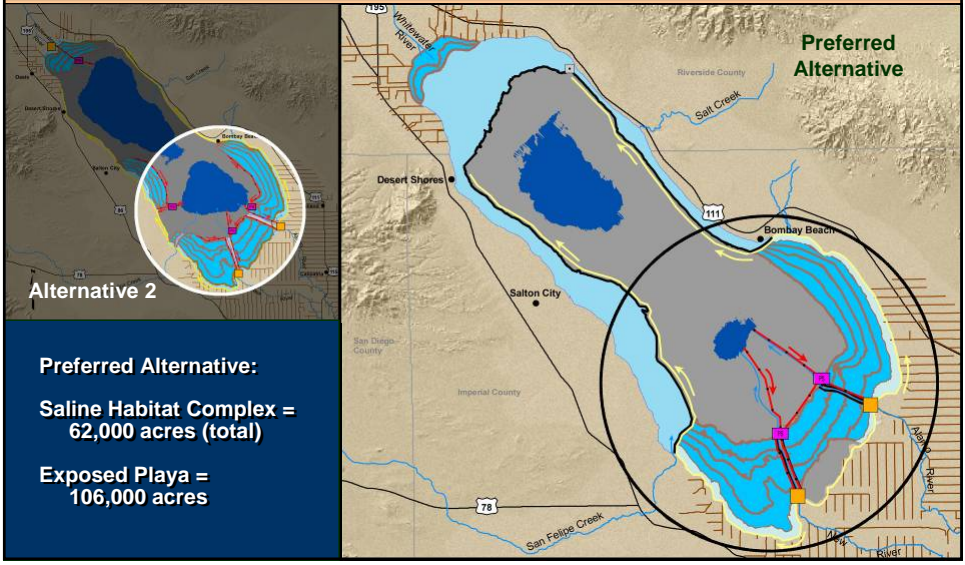
Salton Sea

# Preferred Alternative Marine Sea Distances

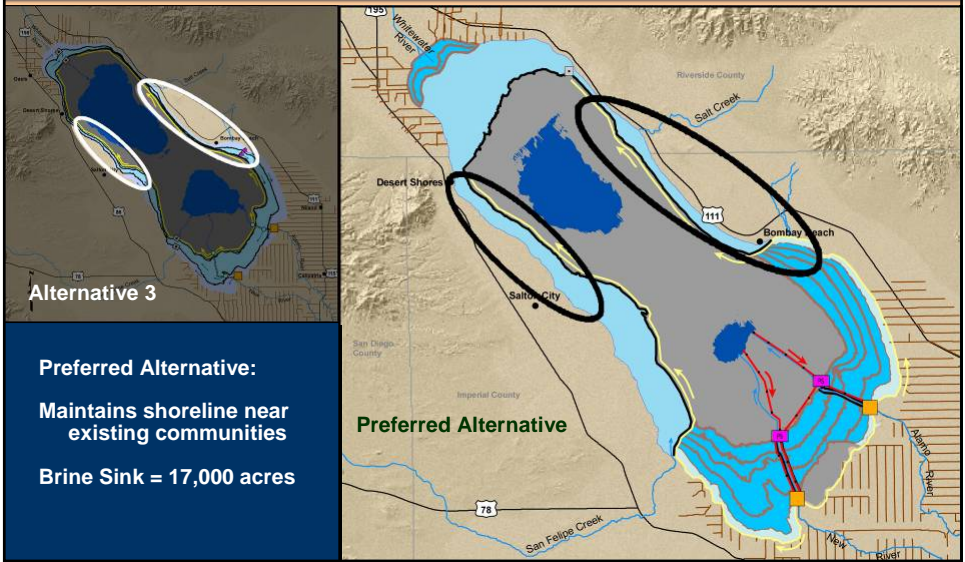
As a comparison, the Golden Gate Bridge is approximately one mile long.



## Incorporates Saline Habitat Complex Concept from Alternative 2



## Incorporates Concentric Ring Concept from Alternative 3



## Preferred Alternative – Estimated Costs

**Estimated Costs For Preferred Alternative**  
(In Million Dollars, 2006 Dollars)

Items	Pre-Construction Period	Major Construction Period		Construction Completion Period		Operations and Maintenance Period	Total
	2011-2013	2014-2020	2020-2025	2025-2030	2030-2035	2035-2078	
Early Start Habitat	\$76.4						\$76.4
Barriers		\$6,101.5					\$6,101.5
Saline Habitat Complex		\$67.5	\$462.5	\$382.1	\$170.6		\$1,082.70
Water Conveyance*		\$156.7	\$10.2	\$58.3	\$32.2		\$257.40
Air Quality Management			\$218.3	\$192.6	\$950.3		\$1,361.20
<b>Total Capital Costs<sup>b</sup></b>	<b>\$76.4</b>	<b>\$6,325.7</b>	<b>\$691.0</b>	<b>\$633.0</b>	<b>\$1,153.1</b>		<b>\$8,879.20</b>
<b>Annual Operations and Maintenance</b>	<b>\$0.7</b>	<b>\$4.8</b>	<b>\$52.2</b>	<b>\$70.9</b>	<b>\$141.9</b>	<b>\$141.9</b>	<b>\$141.9</b>

Note: Costs do not include cost of permits, land or easement acquisition, or the cost to borrow funds.

a. Water Conveyance costs includes Sedimentation/Distribution Basins, Air Quality Management Canals, Saltwater Conveyance, Marine Sea Outlet, and roads associated with conveyance facilities.

b. Capital costs include 5% for unlisted items, 30% for contingences, and 12% for engineering, administration, and legal.

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## Actions Needed to Implement a Preferred Alternative

- State actions:
  - Adoption of a Preferred Alternative and implementing legislation
  - Appropriation of funding
  - Identification of an Implementing Entity
- Related federal actions needed due to federal and Tribal ownership of lands currently inundated by the Sea

*Saltwater Sea*  
SALINITY MANAGEMENT AND RESTORATION

## Immediate Next Steps – Five Year Plan

- Identifies actions that could occur during the first five years
- Being developed in coordination with the Final PEIR
- Actions include the following:
  - Coordinate with the Torres Martinez Tribe
  - Coordinate with appropriate partners
  - Initiate project-level CEQA analysis
    - Seek Federal involvement for project-level NEPA analysis
  - Continue public and stakeholder outreach
  - Identify appropriate permits and initiate discussions with permitting agencies
  - Initiate site access agreements
  - Initiate hazards investigations



## Immediate Next Steps – Five Year Plan Actions

- Biological Actions:
  - Continue demonstration project for Saline Habitat Complex
  - Implement Early Start Habitat
  - Initiate biological monitoring and possible adaptive management actions
- Water Quality Actions:
  - Initiate water quality monitoring and modeling
  - Conduct nutrient, selenium, and hydrogen sulfide investigations (including sediment sampling)



## Immediate Next Steps – Five Year Plan Actions (con't)

- Air Quality Actions:
  - Initiate air quality monitoring
  - Install additional monitoring stations
  - Conduct playa testing for emissivity
  - Conduct hydrogen sulfide analyses
  - Evaluate effects to crops from salt and dust
  - Evaluate microclimate effects
- Feasibility Study, Design, and Related:
  - Initiate bathymetric survey
  - Initiate feasibility studies
  - Initiate final design



## Contact Information:

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