

IMPERIAL STREAMS AND SALTON SEA AQUATIC ECOSYSTEM RESTORATION FEASIBILITY STUDY

RIVERSIDE AND IMPERIAL COUNTIES, CALIFORNIA



The Salton Sea Authority

PROJECT OVERVIEW

LOCATION AND DESCRIPTION:

The study area includes the Salton Sea, its exposed lakebed, and tributaries suitable for restoration (Figure 1).

- The Salton Sea is a shallow, saline, terminal lake sustained by agricultural discharge from the Imperial and Coachella Valleys.
- The Sea provides significant habitat for birds along the Pacific Flyway; more than 400 resident, migratory, and special status species have been recorded at the Sea. It is also home to the endangered Desert Pupfish.
- The Sea is naturally receding due to evaporation and decreased inflows causing an increase in salinity and concentration of pollutants.
- As the Sea shrinks, it exposes lakebed and increases the potential for wind-blown dust. This fine particulate matter can make the already poor regional air quality worse, and adversely affect the health and safety of residents in Riverside and Imperial Counties.

AUTHORIZATION: Resolution of the US Senate Committee on Environment and Public Works, 114th Congress, 2nd Session (April 28, 2016).

NON-FEDERAL SPONSORS: The non-federal sponsors for the feasibility study are the California Department of Water Resources and the Salton Sea Authority.

COOPERATING AND PARTICIPATING AGENCIES:

Cooperating Agencies: Bureau of Land Management, Bureau of Reclamation, U.S. Fish and Wildlife Service, Bureau of Indian Affairs, Environmental Protection Agency Region 9, Department of Agriculture.

Participating Agencies: CA Natural Resources Agency, CA Department of Fish and Wildlife Inland Deserts Region.

STUDY PURPOSE AND SCOPE: This is a single-purpose aquatic ecosystem restoration (AER) study. The goal of an AER study is to restore degraded structure, function, and dynamic processes, to a less degraded, more natural condition. The study team will investigate and evaluate potential solutions that address ecological problems at the Salton Sea and reduce public health and safety risks. If a feasible AER solution is identified, it has the potential to receive a 65% federal cost share for construction.

CONGRESSIONAL INTEREST: Senators Padilla and Butler (CA), Kelly and Sinema (AZ) and Representatives Ruiz (CA-25), Calvert (CA-41), Issa (CA-48) and Lee (NV-3).

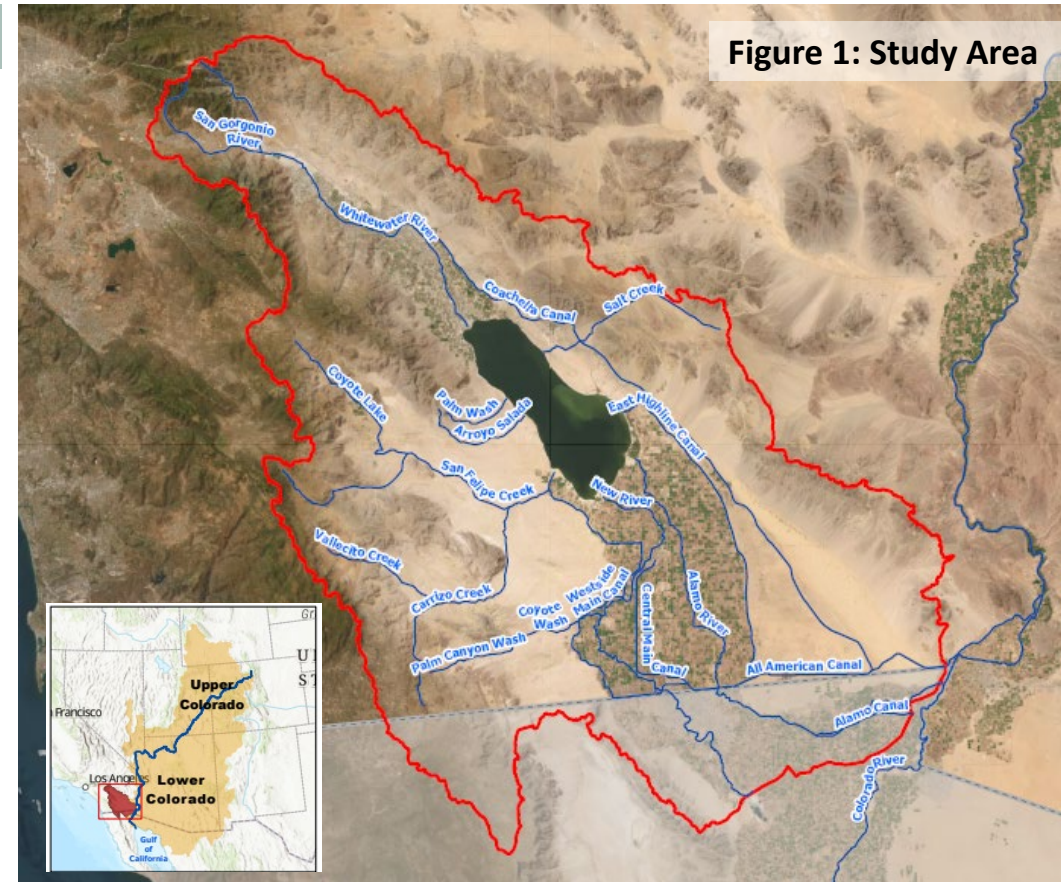


Figure 1: Study Area

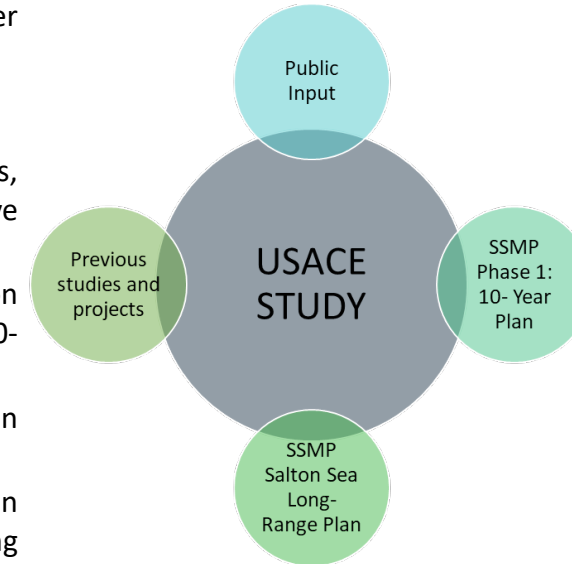
HOW IS THIS STUDY DIFFERENT THAN PREVIOUS STUDIES?

The US Army Corps of Engineers (USACE) recognizes that the Salton Sea and surrounding areas have been the focus of many studies, projects, and programs over the last 30+ years.

This study will:

- Consider all existing studies, projects, and programs in formulating alternative plans
- Consider public comments received on the Salton Sea Management Program 10-Year Plan and Draft Long-Range Plan
- Apply USACE six-step planning process in accordance with regulation and policy
- Adjust existing Long-Range Plan alternatives to meet USACE planning objectives and address identified problems and opportunities
- Develop a hydraulic model of the Sea

Figure 2: Study Inputs



PLANNING FRAMEWORK

PROBLEMS	OPPORTUNITIES	OBJECTIVES	CONSTRAINTS
<ul style="list-style-type: none"> • The quality and quantity of habitat at the Salton Sea has degraded and continues to degrade due to: <ul style="list-style-type: none"> • Reduced inflows / smaller footprint of the Sea which supports less habitat • Increasing salinity beyond tolerance of plant and fish species • Introduced nutrients such as nitrogen and phosphorus which can lead to harmful algal blooms • Concentrating selenium which can lead to bioaccumulation in species • Increasing development in the Imperial and Coachella Valleys • Exposed emissive seabed contributes to dust storms, reduced air quality, and impacts the health and wellness of local residents 	<ul style="list-style-type: none"> • Utilize a watershed approach • Improve habitat for migratory birds • Improve habitat for federally listed, endangered pupfish • Create recreation opportunities in conjunction with ecosystem restoration • Create local jobs through improved recreation opportunities • Reduce impacts to the quality of life of nearby communities negatively affected by exposed lakebed particulates • Incorporate Indigenous Ecological Knowledge into potential ecosystem restoration efforts • Improve interagency collaboration for watershed systems management 	<ul style="list-style-type: none"> • Improve the quality, quantity, and complexity of aquatic, wetland, and riparian habitat to support increased populations and diversity of fish and wildlife • In conjunction with aquatic, wetland, and riparian habitat restoration, reduce the surface area of exposed emissive seabed to reduce the harmful effect of dust storms • In conjunction with aquatic ecosystem restoration, improve recreation opportunities to benefit local communities, as well as support job creation and local tourism 	<ul style="list-style-type: none"> • Water availability • Avoid introducing flood risk • Avoid constructing projects on other federal agency lands • Avoid recommendations that adversely impact communities • Avoid negatively impacting ESA listed species or Essential Fish Habitat • USACE policy related to HTRW may limit actions in areas with high concentrations of selenium • Avoid negatively impacting existing and planned restoration features
			CONSIDERATIONS
			<ul style="list-style-type: none"> • To the extent practicable, avoid inhibiting agricultural practices • Seismic implications • To the extent practicable, avoid jeopardizing lithium mining opportunities

Problem, opportunity, objective, and constraint statements are the foundation of any USACE planning investigation ([Guidance](#)).

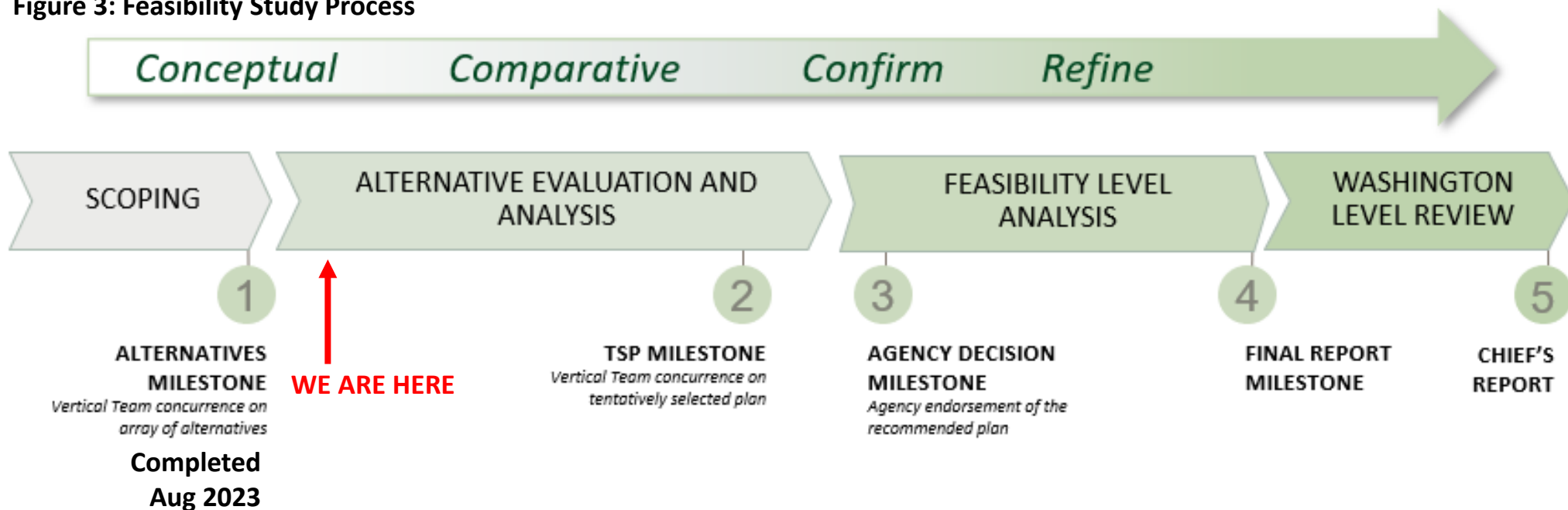
These statements were developed by the USACE study team, CA Dept of Water Resources, Salton Sea Authority, and other interested stakeholders and were presented at public scoping meetings held in May 2023 ([Link](#)).





U.S. ARMY CORPS OF ENGINEERS STUDY PROCESS

Figure 3: Feasibility Study Process



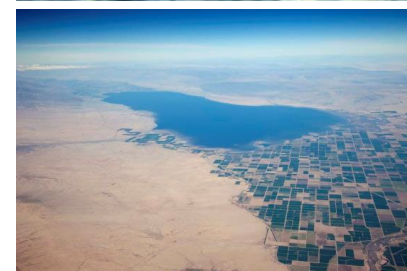
STUDY SCOPING STATUS

- The Water Resources Reform and Development Act of 2014 codified internal expedited project delivery processes for feasibility studies in law by limiting the time and funding to produce a Chief's Report to 3 years and \$3 million, known as the "3x3x3 Rule."
- Based on the size of the study area which exceeds typical restoration projects, and the complexity of the issues facing the Salton Sea, the study team is seeking an exemption to the "3x3x3 Rule" by requesting additional time and funding to execute the recommended study scope; exemption request approval is pending final agency decision.
- The recommended study scope will likely take between 6-8 years to complete for approximately \$12-\$16 million, dependent on funding availability and complexity of analyses; scope approval is pending final agency decision.

WHAT'S NEXT?

The study team is working together with subject matter experts in the fields of hydrology, climate, biology, agriculture, and water and land use policy to develop a hydrologic and hydraulic model of the Sea.

- A sound assessment of future conditions is a prerequisite to developing and evaluating potential solutions to aquatic habitat losses and other problems facing the study area.
- A range of assumptions will be developed and used to model future hydrologic and hydraulic conditions at the Salton Sea over a 50-year period of analysis.
- The study team seeks to understand how policies such as Colorado River operations, and local land use and development may change over time and impact water availability.



KEY MILESTONES AND MEETINGS

MILESTONE AND/OR MEETING	DATE
Feasibility Cost Sharing Agreement Signed	16 December 2022
Interagency Meeting	16 March 2023
Public Meetings	18 May 2023
Non-Governmental Organization Pre-Scoping Meeting	22 May 2023
Environmental Justice Pre-Scoping Meeting	1 June 2023
Alternatives Milestone Meeting	23 August 2023
Vertical Team Alignment Memo Signed	26 November 2023

ENVIRONMENTAL COMPLIANCE

- ✓ Sent letters inviting Cooperating and Participating agencies 07 March 2023
- ✓ Conducted NEPA pre-scoping
- ✓ Held Interagency meeting on 16 March 2023
- ✓ Held 2 public meetings during afternoon and evening of 18 May 2023
- ✓ Held 30-day public comment period, closed 06 June 2023
- ✓ Began coordination of study schedule with Cooperating and Participating agencies
- ✓ Initiated informal consultation with U.S. Fish and Wildlife Service
- ✓ Began development of U.S. Fish and Wildlife Service Fish and Wildlife Coordination Act formal Scope of Work Agreement
- ✓ Distributed initial Section 106 Consultation letters 26 May 2023; 26 Tribes identified

DECISION-MAKING CRITERIA

The following criteria will be used to evaluate alternative plans and eventually select a Recommended Plan that is supported by USACE leadership, non-federal sponsors, and the community:

- Effectiveness of achieving study objectives
- Cost efficiency
- Acceptability as defined in [Guidance](#)
- Duration to achieve restoration benefits
- Resiliency to future inflow scenarios
- Acres of emissive seabed managed
- Environmental Justice benefits
- Recreation benefits
- National Economic Development
- Regional Economic Development

