

## Salton Sea Research Project

**LOCATION:** Imperial and Riverside Counties, California.

**DESCRIPTION/JUSTIFICATION:** The Salton Sea (Sea) is a terminal hypersaline (69 parts per thousand (ppt) vs. average 35ppt for ocean water), nutrient-rich lake in southeastern California. The Sea's source water is primarily agricultural drainage from the Imperial (CA), Coachella (CA), and Mexicali (Mexico) Valleys, with smaller contributions from municipal effluent and storm water runoff. Annual inflow to the Sea averages about 800,000 acre-feet per year. As part of a complex checkerboard land ownership pattern, the Bureau of Reclamation owns approximately 90,000 acres of land in and immediately adjacent to the Sea for the primary purpose of a suitable agricultural discharge location. The Sea covers about 376 square miles (970 km<sup>2</sup>), making it the largest saline lake in California. Due to over 90 percent loss of previously suitable habitat elsewhere in California, the Sea has become a major resting, feeding, and breeding stop for millions of migratory and resident birds along the international Pacific Flyway.

A combination of naturally decreasing water surface elevation, decreased water quality, increased salinity, and reduced inflows due to system conservation and agriculture to urban water transfers has resulted in the collapse of the existing (tilapia) fishery and associated ecosystem, as well as exposed playa that may contribute to dust emissions and public health concerns related to declining air quality. This issue has particular urgency as mitigation flows for agricultural to urban water transfers under the 2003 Quantification Settlement Agreement (QSA) ended in December 2017, accelerating the Sea's decline. This dramatic and predictable change is adversely impacting wildlife habitat, human health, economic opportunities, and recreational values of the Sea and surrounding region. In order to successfully identify and develop the most efficient and reasonable adaptation strategies to cope with the complex problems of the Sea, a continuing program of engineering, physical and biological planning, research, construction projects, and evaluation has been implemented by entities in the State of California.

Congress enacted P.L. 105-372, the Salton Sea Reclamation Act of 1998 (Act), which authorized the Secretary of the Interior (Secretary), acting through Reclamation, to conduct a feasibility study on restoration options for the Sea. All reporting requirements of the Act were met in January 2000 when the Secretary transmitted to Congress the Salton Sea Restoration Project Draft Alternative Appraisal Report prepared by Reclamation, the Draft Environmental Impact Statement/Environmental Impact Report, an Overview and Summary Report, and a Strategic Science Plan prepared by the Salton Sea Science Subcommittee. These provided a detailed description of the scope and results of scientific studies undertaken during an 18-month period. These documents provided a menu of alternatives, associated environmental impacts, alternative cost estimates, and a summary of findings and recommendations for future management actions by stakeholders.

In January of 2003, Reclamation transmitted to Congress a Salton Sea Study Status Report which contained the most current information available on various proposals for full and partial restoration/management concepts for the Sea. This report built on the information developed and transmitted to Congress in January 2000.

In 2003, the Quantification Settlement Agreement (QSA) water transfer agreement between the Imperial Irrigation District (IID) and the San Diego County Water Authority was executed. The QSA led to the passage of several California laws which required the California Natural Resources Agency (CNRA), through the Department of Water Resources (DWR) and the California Department of Fish and Wildlife, to complete a Salton Sea Ecosystem Restoration Study and a Programmatic Environmental Impact Report for delivery to the State Legislature by December 31, 2006. The DWR released a draft Programmatic Environmental Impact Report in October 2006, and a subsequent Final Ecosystem Restoration Study and

Final Programmatic Environmental Impact Report in May 2007. The CNRA's preferred alternative would have been an estimated \$8.9 billion in 2007 dollars. Because of its prohibitive cost, the State did not take further action at that time. The CNRA continues to be the lead agency and works cooperatively with the DWR, the Department of Fish and Wildlife, the State Air Resources Board, and the State Water Resources Control Board.

On October 25, 2004, Congress passed P.L. 108-361, Water Supply, Reliability and Environmental Improvement Act, which required the Secretary, in coordination with the State of California and the Salton Sea Authority, to complete a feasibility study on a preferred alternative for the Sea's restoration by December 31, 2006. A Summary Restoration Report and supporting Comprehensive Restoration Report were finalized and released in December 2007 and January 2008, respectively. These reports present information on five action restoration alternatives and a no action alternative. Estimated cost of the alternatives ranged from \$3.5 billion to \$14 billion in 2006 dollars.

In late 2015, the CNRA hired a Deputy Secretary for Salton Sea Policy to reinvigorate the State's Salton Sea management program in response to a 2014 petition by IID to the State Water Resources Control Board (which sought State of California implementation of Salton Sea restoration, as contemplated by the suite of agreements associated with adoption of the 2003 QSA water transfer). In 2016, the State of California identified a goal of 25,000 acres of wildlife habitat, air and water quality projects, and other projects as necessary to minimize human health and ecosystem impacts at the Sea in the mid-term (through 2025). In August 2016, goals for habitat and dust-suppression projects to be implemented by California were referenced in a 10-year Memorandum of Understanding (MOU) between the Department of Interior and the CNRA. In January 2017, the Department and the CNRA signed an addendum to the MOU further clarifying specific points regarding air quality actions and renewable energy and economic development coordination. In March 2017, the State released the Salton Sea Management Program Phase I 10-year Plan which will be used to guide investments at the Sea that protect public health and ecosystem values.

Recognizing the State of California's role as lead on Salton Sea management efforts, Reclamation has developed a strong relationship with the State and other partners, and will continue to work collaboratively with stakeholders at the Sea to identify achievable milestones, and develop activities that protect air quality, reduce habitat impacts, and maintain a secure Colorado River Water Supply.

**AUTHORIZATION:** Reclamation Act of 1902, June 17, 1902; P.L. 102-575, Title XI, Reclamation Projects Authorization and Adjustment Act, October 30, 1992; P.L. 105-372, Salton Sea Reclamation Act of 1998, November 12, 1998, as amended by P.L. 108-7, Energy and Water Development Appropriations Act, 2003, Section 213, February 20, 2003; and P.L. 108-361, Water Supply, Reliability and Environmental Improvement Act, October 25, 2004.

**COMPLETION DATA:** As of September 30, 2019, this project funding has been 75 percent expended.

**SUMMARIZED FINANCIAL DATA****Program Financial Data**

Activity	FY 2020 Enacted	FY 2021 President's Budget
Water and Energy Management and Development	\$300,000	\$300,000
Request	\$300,000	\$300,000
Non-Federal	\$0	\$0
Prior Year Funds	\$222,801	\$0
Total Program	\$522,801	\$300,000
Prior Year Funds/Non-Federal	(\$222,801)	(\$0)
Total Reclamation Allotment	\$300,000	\$300,000

**Total Cost Information**

	Total Estimated Cost	Total to 9/30/19	FY 2020	FY 2021	Balance to Complete
Reclamation <sup>1/</sup>	\$45,000,000	\$39,113,869	\$300,000	\$300,000	\$5,286,131
Adjustments <sup>2/</sup>	\$10,350,000	\$2,518,584	\$0	\$0	\$7,831,416
Total	\$55,350,000	\$41,632,453	\$300,000	\$300,000	\$13,117,547

<sup>1/</sup> Includes research costs of \$10 million under P.L. 102-575; estimated feasibility costs of \$25 million under Title I of P.L. 105-372; and river reclamation and other irrigation drainage water treatment actions along the New and Alamo Rivers of \$10 million under Title II of P.L. 105-372.

<sup>2/</sup> Includes cost-sharing of \$2,168,584 from the Salton Sea Authority, a joint powers authority of Imperial and Riverside counties, Imperial Irrigation District (IID) and Coachella Valley Water District (CVWD), and the Torres-Martinez Tribe for research. Also includes \$350,000 from the State of California, Department of Water Resources for the feasibility study.

**OTHER INFORMATION:**

On February 27, 2014, the Department of the Interior (DOI) and Salton Sea Authority entered into a Memorandum of Understanding (MOU) for collaboration and exchange of Technical and Scientific information regarding the resources of the Salton Sea. On August 31, 2016, DOI and the State of California signed an MOU to facilitate coordination regarding specific, incremental and sequential projects in a timely manner that improve upon air and water quality, existing obligations to Native American communities, fish and wildlife habitat, water security, resource management processes and decision-making economic opportunities, and collaboration of scientific research efforts. Coordinating limited resources will be necessary to achieve common goals that address the natural resources and regional interests associated with the Sea. Depending upon specific actions taken by the State of California at the Salton Sea, Reclamation may have a significant funding need in future years to address Reclamation managed lands.

The Great Basin Unified Air Pollution Control Districts (GBUAPCD) Owens Lake air quality mitigation program conducts the most similar Clean Air Act compliance program in proximity to the Sea. The GBUAPCD reports air quality mitigation establishment costs at approximately \$38 million per square mile (averaged over all types of mitigation) and annual maintenance costs of approximately \$500,000 per square mile. Reclamation estimates that approximately 8.75 square miles of Reclamation-owned lands

will be emergent from the Sea as it recedes over the next 10 years. Even using extremely conservative estimates related to the costs at Owens Lake, Reclamation may still have significant air quality mitigation costs related to any applicable Clean Air Act requirements as the Sea recedes.

**APPROPRIATION CEILING:** The appropriation ceilings for this Project are as follows:

- Appropriations authorized under P.L. 102-575 are \$10,000,000. The comparable Federal obligation is \$10,000,000. Any future project development under this authorization would require an increase in the ceiling.
- Appropriations authorized under P.L. 105-372 (Title I) have no ceiling connected to the authorized feasibility work. The comparable Federal obligation for the feasibility work is \$25,000,000.
- P.L. 105-372 (Title II), as amended by P.L. 108-7, provides a ceiling associated with work for river reclamation and other irrigation drainage water treatment actions (New and Alamo Rivers) in the amount of \$10,000,000. This authorization is adequate to cover the river reclamation and other irrigation drainage water treatment actions as currently proposed.

**WORK PROPOSED FOR FY 2021:**

**Water and Energy Management and Development** - Continues coordination and exchange of technical expertise with the CNRA, the Salton Sea Authority, the Torres-Martinez Desert Cahuilla Indians and other area Tribes, and other stakeholders, including IID and CVWD. Continues to monitor air and water quality data trends and coordinate actions regarding expenditure of limited resources to achieve common goals that address the natural resources and regional interests associated with the Sea.

**Reclamation Request**

**\$300,000**