

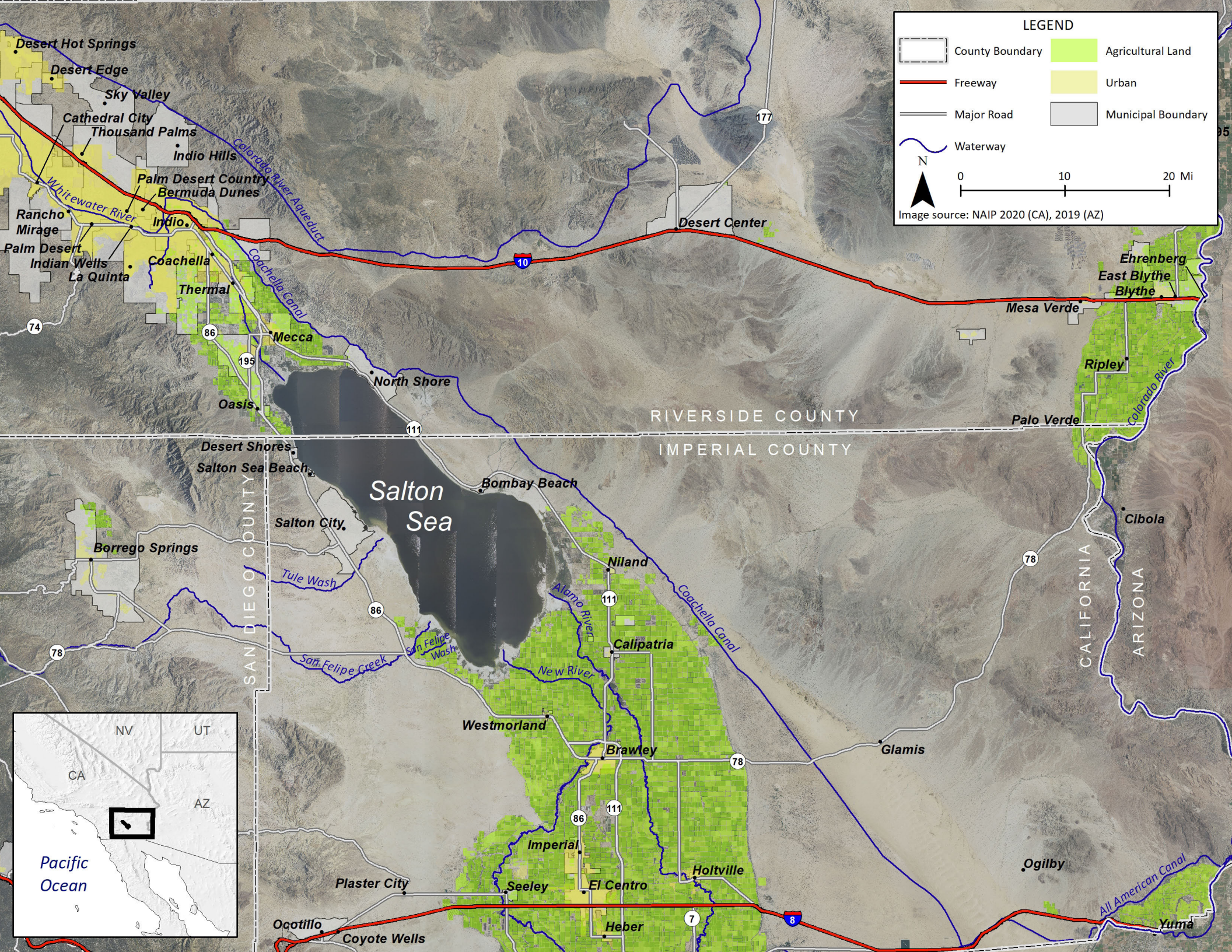


CALIFORNIA NATURAL RESOURCES AGENCY

Annual Report on the Salton Sea Management Program



February 2022



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February 2022

Prepared for:

State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Prepared in compliance with Order WR 2017-0134



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IN MEMORY

The Salton Sea Management Program and its partners were saddened by the passing of Bruce Wilcox, California's inaugural Assistant Secretary of Salton Sea Policy, in early 2022. Bruce was appointed to serve as Assistant Secretary of Salton Sea Policy within the California Natural Resources Agency in 2015. It was a new post within CNRA, created in the wake of Governor Brown's formation of a Salton Sea Task Force to recommend stepped-up efforts at the Sea. Bruce's efforts led to the formation of the SSMP, the State's approach to restoration at the sea. He led the creation of the program's 10-Year Plan to develop 30,000 acres of dust suppression and environmental habitat at the Sea and he brought the State closer to designing and implementing key habitat projects at the Sea. Bruce played a crucial role in coalescing efforts at the Sea into a path forward, bringing stakeholders around a shared goal at a difficult time. In all his work he brought a kind, genuine and gentle spirit. He was hardworking, friendly and open, making himself available to all. And he was relentlessly optimistic—always seeing the best in everyone and open to new ideas. He is remembered fondly by colleagues from all walks of life at the Salton Sea.



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PROJECT TEAM

This Annual Report was prepared by staff from the California Natural Resources Agency (CNRA), California Department of Fish and Wildlife (CDFW), the California Department of Water Resources (DWR), and the following consultants supporting the Salton Sea Management Program: Cardno, Environmental Science Associates (ESA), MWH, and Tetra Tech.

ACKNOWLEDGMENTS

We acknowledge data, maps, and photographs provided by the various organizations working at the Salton Sea, including the Imperial Irrigation District, Sonny Bono Salton Sea National Wildlife Refuge, Audubon California, and the Oasis Bird Observatory.

EXECUTIVE SUMMARY

The Salton Sea Management Program (SSMP) made significant progress in 2021. It broke ground on the largest restoration project in the Sea's history, advanced with partners several other community-oriented restoration projects around the Sea, started important vegetation management work on exposed lakebed to reduce dust emissions, and secured commitment from state leaders for an additional \$220 million in funding. This was made possible through partnerships with many other entities and by growing the SSMP Team, including several critical new hires.



Important progress was also made to advance programmatic permitting that will enable future work to happen more quickly. Outreach and engagement with local communities was strengthened so that local input can better shape the work of the SSMP. This included reinvigorating the Engagement Committee, re-establishing the Long-Range Planning Committee, and working to identify community amenities that local residents prioritize along with work directly to address the shrinking Sea.

With an eye toward the future, the SSMP established an independent panel of experts to evaluate the feasibility of a range of proposals for water importation, which will inform the **Long-Range Plan** for the Salton Sea. This Long-Range Plan will be submitted to the State Water Board by the end of this year (2022).

Amidst progress, significant work is needed to further suppress dust and restore habitat on exposed lakebed to catch up with the established targets. In all of these efforts, the SSMP Team remains focused on meeting the following goals:

- Drive implementation of the SSMP's Phase I: 10-Year Plan, which aims to improve conditions around the Sea by constructing 30,000 acres of projects to suppress dust from exposed lakebed and create habitat for fish and birds;

- Develop and submit the Long-Range Plan to the State Water Resources Control Board (SWRCB) by the end of 2022 to establish a long-term pathway for the Salton Sea beyond the Phase I: 10-Year Plan;
- Strengthen partnerships with local leaders, tribal governments, and communities to deliver projects and institutionalize inclusive community engagement within and across SSMP projects;
- Continue to build the SSMP Team to enable the State to deliver projects.

This report provides updates on the SSMP's activities in 2021 and future actions to achieve the goals outlined in State Water Resources Control Board Order WR 2017-0134.

Project Delivery

Construction is actively proceeding on the **Species Conservation Habitat (SCH) project**, the State's first large-scale project to reduce exposed lakebed and create environmental habitat at the Sea. The SCH project will create a network of ponds and wetlands to provide important fish and bird habitat and suppress dust emissions to improve regional air quality as the Salton Sea recedes. The project will cover approximately 4,100 acres, an increase over the previously estimated 3,770 acres due to an updated design.

Tangible progress is visible at the SCH site, and the project is expected to be completed by the

end of 2023. Important project components completed in 2021 include: construction of initial fill for key berms and levees; construction of initial fills for nesting islands at the East Habitat Pond; construction of interception ditches to collect and redirect agricultural runoff and enable desert pupfish migration and create 22 acres of new aquatic habitat; and construction of a causeway that will support a pump station to supply salt water to the project. In addition, interim dust control measures were implemented to stabilize approximately 500 acres of exposed lakebed within the SCH footprint in accordance with the Imperial County Air Pollution Control District (ICAPCD) guidelines and the approved construction Dust Control Plan. This \$206.5 million project, led by the design-build contractor Kiewit Infrastructure West Co., is located at the southern end of the Sea on both sides of the New River.

The SSMP Team continued its collaboration with the U.S. Bureau of Reclamation (Reclamation) to develop projects on land within the planning areas identified in the **2020 Dust Suppression Action Plan**. After securing state and federal permits as well as a land access agreement, work began on three sites where Reclamation administers 1,700 acres of land: Clubhouse, Tule Wash, and West Bombay Beach. The SSMP Team also collected local seeds from around the Salton Sea and worked with botanists to grow and test plants that can tolerate salinity present in the region. The initial phase of work began at the Clubhouse site in late 2021, including placement

of straw bales to create conditions for plant growth and survivorship by reducing wind speeds and dust emissions from across the lakebed. Planting of native vegetation following this initial treatment is expected to start in March.

The SSMP Team has identified a series of additional habitat and dust suppression projects around the Sea for advancement in 2022 to help achieve the goal of 14,200 acres of completed projects by 2024 as outlined in State Water Board Order WR-0134.

Partnerships

The SSMP Team recognizes the crucial role of partnerships in meeting its restoration goals, through facilitating project implementation, collecting data, and helping obtain funding sources. Close collaboration with local governments, including the Salton Sea Authority, Imperial County, Riverside County, Imperial Irrigation District, Imperial County Air Pollution Control District, South Coast Air Quality Management District, Coachella Valley Water District has proven essential to recent progress implementing projects. Likewise, close coordination and cooperation with State and federal agencies, including the Colorado River Basin Regional Water Quality Control Board, State Water Resources Control Board, California Air Resources Board, U.S. Army Corps of Engineers, U.S. Bureau of Reclamation and U.S. Fish and Wildlife Service, helped to move projects forward.

Construction at the SCH site: excavation of deep channel along northern berm of habitat pond.



The SSMP Team continues to work with local partners, including Riverside County and the Salton Sea Authority, to implement the approximately 160-acre **North Lake Pilot Demonstration Project**, which eventually could be integrated into a larger North Lake concept. The concept envisions construction of a larger horseshoe-shaped lake at the north end of the Sea to control dust and create habitat for fish and

birds. In April 2021, a \$19.25 million Proposition 68 funding agreement was finalized between the State and SSA to plan and construct the North Lake Pilot Demonstration Project. This project is expected to be completed by the end of 2023. Also in 2022, work will begin to plan and procure a contract to design and construct the larger North Lake concept.

The SSMP Team is also meeting with local stakeholders and partners to collaborate on a broad range of projects and planning activities. Examples of collaborative efforts include:

- The team has collaborated with Imperial County, Imperial County Air Pollution Control District, Reclamation and the Salton Sea Authority to advance the **Desert Shores Channel Restoration Project**. The project would create habitat and suppress dust by refilling currently dewatered channels with water at a salinity level that provides habitat for fish and supports piscivorous birds.
- The SSMP Team has been working with Audubon California to support a **900-acre wetland area at Bombay Beach** that would suppress dust while also creating managed wetland habitat on the east side of the Sea.
- The SSMP expects to coordinate with the Torres Martinez Desert Cahuilla Indians to identify collaborative restoration projects on tribal lands. The Tribe is working on a **Native Vegetation Restoration** project, with trees planted by the California Conservation Corps and funded by Proposition 1. This is a key opportunity to further partner with the Tribe and expand on this existing restoration work.
- Based on ongoing discussions with community members, leaders, and advocates, the SSMP secured resources to begin the development of a **Community Amenities Strategy Document**. This document will be developed collaboratively with direct input

and involvement from community members and representatives. The intent is to identify community needs to incorporate into SSMP projects (near-term and long-term) and related efforts when possible.

The SSMP Team continues to develop a broader strategy for federal funding and partnership opportunities to assist with implementation of the SSMP. The team entered into a funding agreement with Reclamation to support implementation of dust suppression projects. The team is also working with partners to pursue available federal funding sources, including the federal U.S. Department of Agriculture Natural Resources Conservation Service.

Community Engagement and Transparency

The SSMP Team continued to place a strong focus on community engagement in 2021. The SSMP Community Engagement Committee, consisting of representatives from community-based organizations, stakeholder groups, local leaders, governmental agencies, and tribal governments, held four meetings in 2021 and helped shape the State's public workshops, finalized the committee's charter, and evaluated how to improve language accessibility and outreach for upcoming committee and public meetings. In 2021, the SSMP expanded its team and contracts to add more capacity to support meaningful outreach and engagement.

In August and September 2021, the SSMP Team hosted two community meetings to formally launch the development of the Long-Range Plan, introduce the chair for the independent review panel for water importation and announce the upcoming community amenities effort. These meetings were convened on Zoom in English with live captioning and translation available via a Spanish channel. In addition, a telephone line was available, and the meeting was streamed on Facebook live in Spanish.

Early in December 2021, the SSMP Team hosted its first major tour of the SCH Project at the Sea in Imperial County. Tribal Governments, regional elected officials, and a wide range of Salton Sea stakeholders joined California Natural Resources Agency (CNRA) Secretary Wade Crowfoot and the SSMP Team to view progress on the State's first large-scale project of the program. The tour was followed by a presentation and question-and-answer session on next steps in the Phase I: 10-Year Plan, the long-term pathway beyond the 10-year plan, and the importance of building partnerships with tribal governments, local leaders, and communities.

The SSMP Team continues to update the SSMP website, www.saltonsea.ca.gov, to provide information on SSMP projects and opportunities to offer input. This year, the website was updated to include links to past meeting materials and recordings, a new webpage was added on the water importation independent review panel,

and an effort was initiated to improve the Spanish translation on the website and linked material. This work will continue into 2022 in conjunction with improving the site to become more user-friendly.

The State also continues to share news and updates via the CNRA Salton Sea Management Program Update e-newsletter that debuted in November 2019. While the e-newsletter updates can be found and translated on our website, the SSMP Team is committed to sending these updates out in Spanish in 2022. The Salton Sea Management Program Update provides information on project delivery, upcoming meetings, and other relevant information, offers opportunities for feedback, and is distributed through the California Natural Resources Agency Salton Sea Listserv.

The SSMP Team increased its physical presence at the Sea by establishing a temporary local Salton Sea Program office at the SCH site near Westmorland in Imperial County. The office is used by SSMP staff to work or conduct in-person meetings near the Sea, as needed. In 2021, the SSMP team added three positions to further enhance our presence in Imperial County, increasing a "boots on the ground" presence near the Sea. A goal to establish a permanent office in Imperial County is in progress, as local staffing increases, and Covid-related restrictions loosen.

Planning

The SSMP Team is partnering with the U.S. Army Corps of Engineers (Corps) to complete an Environmental Assessment (EA) under the National Environmental Policy Act by the third quarter of 2022. The Corps released a public notice for the project in March 2021 and invited five federal agencies to participate (Reclamation, Bureau of Land Management, U.S. Fish and Wildlife Service, Bureau of Indian Affairs, and the Natural Resources Conservation Service). Upon completion, this process will enable federal permitting for the full 30,000 acres of projects identified in the Phase I: 10-Year Plan document.

Because the State is not a significant landowner at the Sea, collaboration with various land-owning entities is critical to the SSMP Team's ability to implement projects. Land-access agreements and permits must be secured prior to conducting detailed soil testing or beginning construction work. Thus, the SSMP is prioritizing work to secure land access in areas with the highest emissivity potential to construct additional projects in strategic locations along the perimeter of the Sea. These will help control dust from exposed lakebed areas and limit Sea-related impacts on air quality for communities such as Salton City, Bombay Beach and North Shore.

While the SSMP Team is executing the Phase I: 10-Year Plan, it is simultaneously developing a path forward for long-term restoration and management of the Sea beyond the first decade.

This Long-Range Plan is required to be completed by CNRA and submitted to the State Water Board by the end of 2022, as required by State Water Board Order WR-0134. The SSMP contracted with the University of California, Santa Cruz in June 2021 to facilitate establishment of an independent review panel to conduct a feasibility assessment to evaluate water importation as a long-term strategy. The Independent Review Panel is in the process of reviewing 18 project proposals for water importation, including 11

submitted in 2018 and seven additional proposals submitted in 2021.

The results of the independent feasibility analysis will inform restoration options for the Long-Range Plan. The SSMP Team re-established the Long-Range Planning Committee to assist in developing the plan. Public engagement to launch the development of the Long-Range Plan began in August 2021—concurrently with the introduction of the independent review panel that will evaluate the feasibility of water

SSMP Team at the SCH site.



importation proposals. The Long-Range Plan will include an evaluation of possible restoration alternatives to restore habitat for fish and birds and protect public health. Options evaluated to inform this plan will include project buildout based on projected future water inflows within the Salton Sea watershed as well as water importation for a potential whole-Sea alternative, if importation is found to be feasible. The goal will be to develop a plan that protects or improves air quality, wildlife habitat, and water quality to prevent or reduce environmental and health consequences anticipated from long-term recession of the Salton Sea.

With the enactment of the 2021-2022 Budget Act, the State has now appropriated \$402.6 million in funding for Salton Sea-related activities since the execution of the Quantification Settlement Agreement in 2003. Through fiscal year 2020-2021, California has committed over \$270 million in funding for a broad range of critical habitat, dust suppression, and water quality improvement projects at the Salton Sea. The 2021-2022 Budget Act committed another \$220 million in near-term General Funds, including \$40 million appropriated for the 2021-22 fiscal year. The remainder will be appropriated in 2022-23 (\$100 million) and 2023-24 (\$80 million) through the annual budget act.

Funding to date has allowed the State to: administer the SSMP; grow organizational capacity for implementing future projects; complete environmental documents and acquire permits; procure contracts and agreements for goods and services; conduct surveys and studies; improve community engagement, outreach, and involvement; and allocate funds for several projects, such as the SCH Project, North Lake Demonstration Project, New River Improvement Project and various dust suppression and habitat projects, among others.

Going Forward

With the addition of six new staff for the SSMP during 2021, and the further planned addition of new staff in 2022, the program is building stronger institutional capacity to meet the growing demands of completing the wide range of projects now on the drawing board. The SSMP team continues to learn from the permitting, design, and land access challenges of advancing projects at the Salton Sea. This experience will help refine future work plans and implementation schedules in the coming years.

The team looks forward to working with local, state, tribal, and federal partners to expand the acreage of completed projects in the year ahead.

Although the acreage of completed projects is presently below annual targets identified in State Water Resources Control Board Order WR 2017-0134, the completion of land access agreements and major projects such as the SCH should help the team achieve the cumulative acreage target in the next three to four years. This document identifies a set of habitat and dust suppression projects that, if implemented in a timely manner between 2022 and 2024, will allow the SSMP Team to meet the cumulative WR 2017-034 goals.

Because the State is not a significant landowner at the Salton Sea, catching up with and achieving annual acreage targets continues to be dependent on focused collaboration between the State and major landowners to execute land access agreements in a timely way. Equally important is the ability of State projects to use water from surface inflows and groundwater at the project sites. The SSMP Team will continue to prioritize implementing projects on lands where the State has secured site control and has access to water rights, while it also works to develop and consolidate land use agreements to facilitate project delivery.

1 INTRODUCTION AND PURPOSE

The Salton Sea Management Program (SSMP) — led by the California Natural Resources Agency (CNRA) in collaboration with the California Department of Water Resources (DWR) and the California Department of Fish and Wildlife (CDFW) (the SSMP Team)— made progress in 2021 toward creating habitat and reducing exposed lakebed at the Salton Sea (Sea). Even amid challenges posed by the global COVID-19 pandemic, delivering projects that improve conditions for residents as well as wildlife at the Sea remains a key priority for the Newsom Administration. The SSMP Team worked with local, state, and federal partners to advance important work in 2021 and is poised to build on that momentum in 2022.



At the highest level, the SSMP Team remains focused on the following goals:

- Drive implementation of the SSMP's Phase I: 10-Year Plan, which aims to improve conditions around the Sea by constructing 30,000 acres of projects to suppress dust from exposed lakebed and create habitat for fish and birds;
- Develop and submit the Long-Range Plan to the State Water Resources Control Board (SWRCB) by the end of 2022 to establish a long-term pathway for the Salton Sea beyond the Phase I: 10-Year Plan;
- Strengthen partnerships with local leaders, tribal governments, and communities to deliver projects and institutionalize inclusive

Report Goals

This report highlights project planning and implementation activities during 2021 to meet the requirements of State Water Resources Control Board Order WR 2017-0134. While some continuing activities from the last year's report are included for context, the primary focus is on work completed in 2021 and plans for projects over 2022-2024, the growing capacity of the SSMP Team to meet future goals, and ongoing engagement with regional partners and local communities. This report also includes an update on the funding status of the program.

community engagement within and across SSMP projects;

- Continue to build the SSMP Team to enable the State to deliver projects.

1.1 Notable Highlights Since Preparation of 2021 Annual Report

Construction of the Species Conservation Habitat (SCH) project began in January 2021 and continued through the year. The SCH is the first major habitat project of the Phase I: 10-Year Plan and will encompass approximately 4,100 acres of exposed lakebed located at the southern end of the Salton Sea, east and west of the New River. The SCH will create a network of ponds with islands and areas of varying water depths to serve as fish and bird habitat. Tangible progress is visible onsite and the project is expected to be completed by the end of 2023. Important project components completed in 2021 include: construction of initial fill of berms and levees south of the habitat ponds and east of East Habitat Pond; construction of initial fills for nesting islands at the East Habitat Pond; construction of interception ditches for collecting and diverting agricultural runoff away from the project site and providing connectivity between agricultural drains, allowing Desert Pupfish migration between drains (constituting 22 acres of new aquatic habitat for a state and federally listed species); and construction of the causeway leading to the Saline Pump Station to supply salt

water to the project. In addition, the construction contractor implemented interim dust control measures to stabilize approximately 500 acres of exposed lakebed within the SCH footprint in accordance with the Imperial County Air Pollution Control District (ICAPCD) guidelines and the approved construction Dust Control Plan.

Through the SSMP Team's coordination with the U.S. Bureau of Reclamation (Reclamation), three sites, Clubhouse, Tule Wash, and West Bombay Beach, were prioritized for vegetation establishment and enhancement to create habitat benefits and reduce wind-blown dust. Collectively, these sites total approximately 1,700 acres. Land access was secured from Reclamation and project work began on exposed lakebed sites on the western shore of the sea in December 2021. In total, the project goal is to establish native vegetation using three vegetation establishment methods, including natural recruitment, seeding, and planting combined with wind protection such as straw bales and water to help protect and facilitate plant growth and improve plant survival rates. Work is actively continuing over the 2022 growing season.

The 2021-2022 Budget Act committed another \$220 million in near-term General Funds, including \$40M appropriated this fiscal year (2021-22). The remainder will be appropriated in 2022-23 (\$100M) and 2023-24 (\$80M) through the annual budget act. These additional funds will

support the development of multiple new habitat and dust suppression projects that are being envisioned as next steps in the SSMP Phase I: 10-Year Plan.

Six new staff positions were filled, including four based out of the Salton Sea region (three in Imperial County) and two in Sacramento.

The majority of SSMP 10-Year Plan projects are planned to be constructed on land owned by federal or local agencies, while a smaller portion is planned on privately owned land. Therefore, over the course of 2021, the SSMP Team worked with major landowning entities to develop formal land access agreements that would allow for project surveys and construction. One access agreement has been completed with Reclamation, with additional access agreements being pursued on federal lands and with the Imperial Irrigation District (IID). In addition, the SSMP Team continues their ongoing efforts to contact and work with private landowners to gain access to roads and land necessary to plan and implement projects.

For SSMP projects on federally owned land or with impacts on federally managed resources, federal approvals must be secured to implement these projects. To facilitate those approvals as well as environmental permits, the SSMP Team and U.S. Army Corps of Engineers (Corps) are developing a National Environmental Policy Act (NEPA)

Environmental Assessment (EA) for the Phase I: 10-Year Plan. The Corps is the lead agency for the EA, which is intended to provide comprehensive NEPA compliance for 10-Year Plan projects. Completion of this comprehensive NEPA process upfront will allow the SSMP Team to seek federal permits and access rights to implement projects on federal lands more quickly than would be possible by undergoing NEPA compliance for each project individually. Significant progress was made on the development of the EA, and it is expected to be completed by the third quarter of 2022.

1.2 Updates for State Water Resources Control Board Order WR 2017-0134

Table 1 provides an overview of the reporting requirements defined in State Water Board Order WR 2017-0134. This annual report goes beyond the requirements in the order and provides an update on the extensive range of management, planning, permitting, and construction activities intended to support the delivery of future SSMP milestones. Information on environmental conditions at the Sea is summarized in Appendix A of the report.

1.3 COVID-19 Impacts and Responses

After initial travel disruptions in 2020 and into early 2021, COVID-19 restrictions have generally not limited field related work in support of SSMP projects. Work has continued with appropriate safety measures. Thus, as noted

above, construction of the SCH continued throughout 2021, and construction of the vegetation enhancement projects have begun. Also, necessary field data collection efforts across the region, such as for site characterization prior to project implementation, have occurred during 2021.

However, COVID-19 did affect many public-facing activities for the SSMP. All public meetings related to SSMP projects, including the State Water Resources Control Board annual workshops, conducted after mid-March 2020 have been held virtually, although the number of these meetings has not been reduced. SSMP public meetings were held with extensive outreach and simultaneous interpretation provided in Spanish, to make program updates as widely accessible as possible. The SSMP recognizes the digital divide across communities affected by the program's activities, especially in rural areas. Given the necessity of virtual meetings over this period, the SSMP Team worked with community partners to ensure we maximized our community engagement, outreach, and involvement.

1.4 Report Organization

This report is organized as follows. Chapter 2 summarizes land access status and project status. Chapter 3 describes the extensive partnerships across the region that have been formed to facilitate the development

of projects, including federal, State, and local agencies, tribal governments, and other non-governmental organizations (NGOs). Chapter 4 presents engagement with the community and stakeholders. Chapter 5 describes planning activities at various levels, such as program planning, environmental planning, and funding to support the future implementation of the Phase I: 10-Year Plan projects. Chapter 6 describes the near-term steps in project delivery and planning for meeting the longer-term targets of State Water Board Order WR 2017-0134. Appendix A contains a summary of data describing recent environmental conditions at the Sea, including inflows, water elevation, salinity, and bird and fish abundance. Appendix B provides a detailed breakdown of funding sources for the SSMP.

Table 1. Activities Identified in State Water Board Order WR 2017-0134

Item	Reporting Requirement	SSMP Activity
(i)	Completed projects and milestones achieved in the prior year.	<p>The following are key accomplishments in 2021:</p> <p>Construction of the \$206.5M SCH project, spanning an area of approximately 4,100 acres, began in January 2021 and continued throughout the year. The project is expected to be completed by 2023. Important project components completed in 2021 include: construction of initial fill of berms and levees south of the habitat ponds and east of East Habitat Pond; construction of initial fills for nesting islands at the East Habitat Pond; construction of interception ditches for collecting and diverting agricultural runoff away from the project site and providing connectivity between agricultural drains, allowing Desert Pupfish migration between drains (constituting 22 acres of aquatic habitat for a state and federally endangered species); and construction of the causeway leading to the Saline Pump Station to supply salt water to the project.</p> <p>Secured land access agreement with the Reclamation to facilitate delivery of up to 1,700 acres of enhanced vegetation projects at three sites on the western and eastern shores of the Sea. Construction was initiated in December 2021.</p> <p>Developed Phase I:10-Year Plan draft Project Description for the anticipated EA. The Corps released the draft project description Public Notice to announce the project and solicit public input into the NEPA and permitting process in March 2021.</p> <p>The SSMP Air Quality Monitoring Program was established beginning with the placement of monitors and instruments on the SCH site in January 2021 to monitor the performance of the temporary dust suppression projects. In December 2021, the program expanded to the north end of the Sea to the North Shore and Coachella Exposed Lakebed sites to collect data as described in the 2020 DSAP.</p> <p>In April 2021, the SSMP entered into a \$19.25M Proposition 68 funding agreement with the Salton Sea Authority, and in partnership with the County of Riverside, to plan and construct the approximately 160-acre North Lake Pilot Demonstration Project.</p> <p>Hired six new staff for the SSMP to enhance the capacity of the team to deliver on projects.</p> <p>A new interim local office was established in Imperial County, at the SCH project site in Westmorland. Three new program staff are based in Imperial County.</p>

Table 1. Activities Identified in State Water Board Order WR 2017-0134 (Contd.)

Item	Reporting Requirement	SSMP Activity
(ii)	Amount of acreage of completed work that provide dust suppression and habitat, broken down by habitat type.	<p>Vegetation Enhancement Projects: Designs developed for three project sites identified as Clubhouse, Tule Wash and West Bombay Beach. Land access was secured from Reclamation for 1,700 acres and construction began in December 21. Approximately 30 acres of dust suppression were completed through the end of January 2022.</p> <p>Species Conservation Habitat Project: Construction of SCH project (approximately 4,100 acres) began in January. Important project components were completed in 2021 and are summarized in the prior section (i).</p> <p>The State's contractor, Kiewit, completed interception ditches for agricultural drains creating approximately 22 acres of new Desert Pupfish habitat;</p> <p>Kiewit implemented interim dust control measures to stabilize approximately 500 acres of exposed lakebed within the SCH footprint in accordance with the Imperial County Air Pollution Control District (ICAPCD) guidelines and the approved construction Dust Control Plan. This is in addition to the 755 acres of temporary dust suppression completed in 2020.</p>
(iii)	Upcoming projects to be completed and milestones to be achieved prior to the next annual progress report.	<p>The following are some key activities planned in 2022:</p> <ol style="list-style-type: none"> 1. Continue construction of the SCH project. 2. Continue construction of the vegetation enhancement projects at Clubhouse, West Bombay Beach, and Tule Wash. 3. Complete the Final EA for the Phase I: 10-Year Plan. 4. Contingent upon securing land access agreements from different land-owning entities, implement 1,500 acres of vegetation enhancement projects and initiate permitting and preliminary design for another ~6,800 acres. The projects include: <ul style="list-style-type: none"> • North Lake Project, • San Felipe Fan Restoration Project, • Wister Unit Marsh Bird Habitat Restoration Project, • New River Expansion Project, • Bombay Beach Restoration Project, • SCH Vegetation Project

Table 1. Activities Identified in State Water Board Order WR 2017-0134 (Contd.)

Item	Reporting Requirement	SSMP Activity
(iii)	Upcoming projects to be completed and milestones to be achieved prior to the next annual progress report. (contd)	<p>5. Collaborate with Riverside County and SSA to complete design and permitting needed to initiate construction of the North Lake Pilot Demonstration Project.</p> <p>6. Pursue federal funding opportunities for SSMP projects qualifying for Farm Bill and other funding sources.</p> <p>7. Support advancement of other projects led by partner organizations as described in Chapter 2, including the Audubon Bombay Beach Restoration Project and the Desert Shores Channel Restoration Project.</p>
(iv)	Status of financial resources and permits that have not been secured for future projects.	<p>New funding commitments were made by the State Legislature and the Newsom Administration of an additional \$220M in near-term General Funds for Salton Sea-related activities over three years, including \$40M appropriated this fiscal year (2021-22). The remainder will be appropriated in 2022-23 (\$100M) and 2023-24 (\$80M) through the annual budget act. The financial status of the SSMP is described in Chapter 5, with additional details in Appendix B.</p> <p>Upon completion of the Phase I: 10-Year Plan EA, funding needs beyond 2024 will be better defined and updated accordingly.</p>
(v)	Any anticipated departures from the dates and acreages identified in Condition 24 of the State Water Board Order.	<p>There have been departures from project delivery dates as discussed in this report. Based on our current understanding of the steps required to implement additional projects, Chapter 6 describes anticipated dates to achieve the acreage schedule. However, because the State is not a significant landowner around the perimeter of the Sea, the timely implementation of all projects on the ground is contingent on expedited support from entities that do own or administer these lands.</p>

Table 1. Activities Identified in State Water Board Order WR 2017-0134 (Contd.)

Item	Reporting Requirement	SSMP Activity
(vi)	Progress toward development of the long-range plan described in Condition 26.	<p>The SSMP Team contracted with the University of California at Santa Cruz to convene an independent review panel to conduct a feasibility analysis for water importation. This panel will provide its recommendation by September 2022.</p> <p>The results of the independent panel will inform restoration options for the Long-Range Plan, currently under development by the SSMP Team. Public engagement to launch development of the plan began in August 2021 and will continue through 2022. In addition, a Long-Range Plan Committee has been formed to advise the State and had its first meeting in December 2021. The plan will be developed in collaboration with input from tribal governments, local governments and other stakeholders including community members. The goal will be to develop a plan that protects or improves wildlife habitat, air quality, and water quality to prevent or reduce environmental and health consequences anticipated from long-term recession of the Salton Sea.</p>
(vii)	Should an annual milestone shortfall exceed 20 percent of a year's annual obligation, the report will also include a plan that will cure the deficiency within 12 months.	<p>The State's vision for project delivery is described throughout this report and is summarized in Chapter 6.</p>



2 SSMP PROJECT DELIVERY

Since the California Natural Resources Agency (CNRA) last reported to the State Water Board in March 2021, the Salton Sea Management Program (SSMP) Team has continued to plan for the implementation of habitat and dust suppression projects and began construction of the Species Conservation Habitat (SCH), the first major habitat project at the Salton Sea. This chapter describes the current status of projects, beginning with a discussion of the land access process, which is a first step in all project delivery.



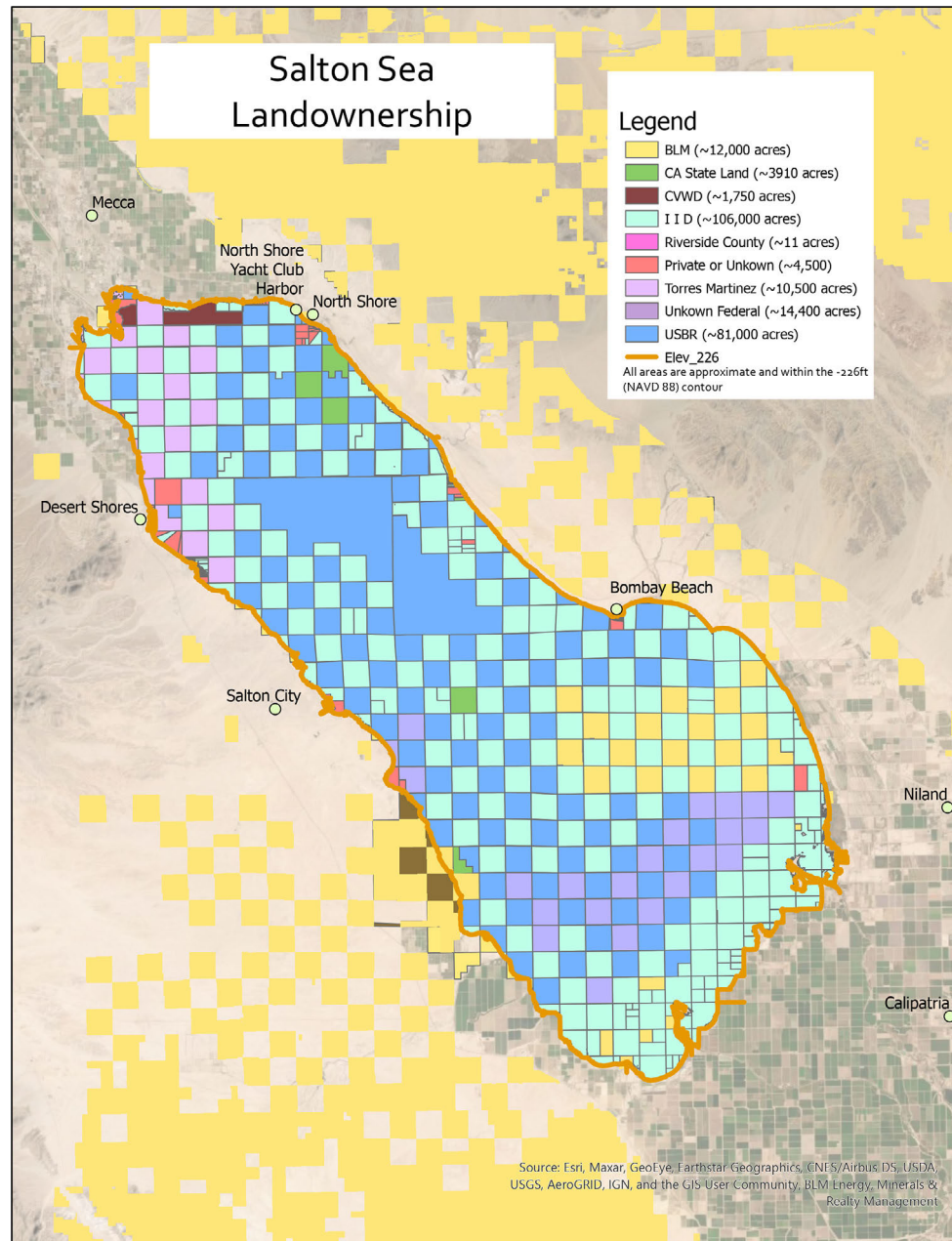
2.1 Land Access

Land access planning is a critical component of the SSMP. The State is not a significant landowner at the Salton Sea and continues to rely on voluntary landowner cooperation to obtain access permits and agreements to implement projects. The ability of the SSMP Team to meet the State Water Board's annual and cumulative acreage targets for aquatic habitat and dust suppression is contingent on this cooperation and the timely completion of land access agreements.

The SSMP Team has completed access agreements to implement projects with U.S. Bureau of Reclamation (Reclamation) (approximately 1,700 acres) and is working to complete similar agreements with Imperial Irrigation District (IID) (approximately 400 acres). In addition, the team is pursuing encroachment permits with other landowners to allow construction vehicles to access the project sites. The team has been actively engaged throughout 2021 to develop these agreements and permits. The status of current land access agreements is described in further detail below. Securing these access agreements is critical because formal site access is required before any project implementation can begin.

Progress was made to conduct site investigations that include soil sampling, wetland delineations, site reconnaissance for monitoring wells,

Figure 1. Landownership around the Salton Sea.



biological surveys and cultural resources surveys and to obtain permits for construction and implementation. Land access was given for these site reconnaissance activities. In addition, the SSMP worked with Coachella Valley Water District (CVWD) and IID and executed agreements to place air quality monitors on CVWD and IID land at the northern end of the Sea.

The SSMP Team will continue to prioritize land access with the goal of implementing as many projects a year as feasible until the acreage amount needed to fully implement all Phase-I: 10-Year Plan projects is achieved. However, an important factor causing the delay in acreage targets from State Water Board Order WR 2017-0134 is related to the time it has taken to secure land access for individual projects.

Land around the Salton Sea is owned by local, state, tribal and federal entities — all with differing processes and procedures for land access. There are also a significant number of private landowners on affected parcels. A template cannot be applied across the board to streamline the process. A breakdown of ownership on the roughly 235,000 acres of land around and under the Sea shows the following major landowners: IID (106,000 acres); Reclamation (82,000 acres); U.S. Bureau of Land Management (BLM) (12,000 acres); and the Torres Martinez Desert Cahuilla Indians (10,500 acres) (**Figure 1**). Of the remaining 25,000 acres, only 3,900 acres are owned by the State and the rest by other entities.

Because of this limited landownership, the SSMP must enter into a land access agreement(s) for each project site before project design can be finalized and implementation can begin. Varied landownership also impacts project timelines and increases costs for project delivery. Each project site may span multiple parcels under different ownership, so multiple land use agreements may be required for access to and implementation of a single project. This presents a significant challenge for the SSMP.

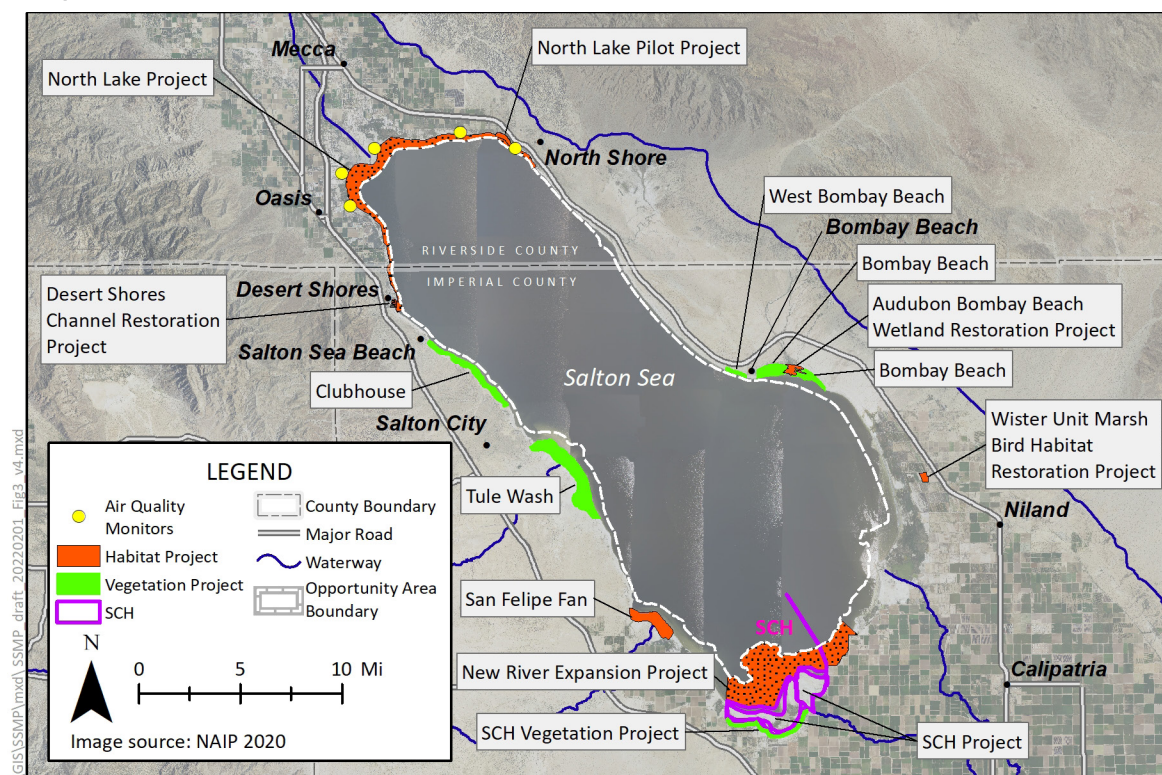
In issuing State Water Board Order WR 2017-0134, the State Water Board found that successful management of the Salton Sea would require cooperation from non-state property owners to ensure land use entitlements are secured expeditiously. Though the SSMP Team worked diligently to make progress on land access throughout 2021 such access was not received from all landowners. Moving forward, our ability to timely secure land access agreements from landowners will continue to dictate the planning and implementation schedule for delivering projects and will also affect the SSMP Team's ability to deliver on the State Water Board Order WR-0134 annual targets for habitat and dust suppression projects. Without complete and expeditious cooperation from non-state landowners, the SSMP will continue to experience delays in project delivery.

2.2 Project Updates

Projects in progress at the Salton Sea are shown in **Figure 2**, illustrating the wide range of activities currently being undertaken by the SSMP Team and its partners toward restoration of the Sea and its surrounding communities. The SSMP Team has undertaken an inclusive approach with public outreach at key steps to identify these future projects for development at the Sea.

- The SCH Project was developed through a comprehensive environmental planning process completed in 2013.

Figure 2. Projects in progress and potential future projects under consideration at the Salton Sea. Project areas with dotted patterns indicate approximate footprints. The Opportunity Area boundary indicates the portion of the Sea covered by the NEPA Environmental Assessment for the Phase I: 10-Year Program (described further in Chapter 5).



- Beginning in late 2019, projects related to dust suppression and vegetation enhancement were informed by outreach to landowners, agencies, and members of the public through a series of open meetings. The draft Dust Suppression Action Plan (DSAP), developed through this process was also subject to further public review and comment in 2020. CNRA engaged in a consultation process with tribes that may be affected by the DSAP and reached out to 25 Tribal Nations in 2020 to seek input on the draft document.
- The SSMP 10-Year Plan Project Description included these DSAP projects as well as other project concepts to be considered around the Sea. The draft Project Description was released to the public in August 2020 for comment,

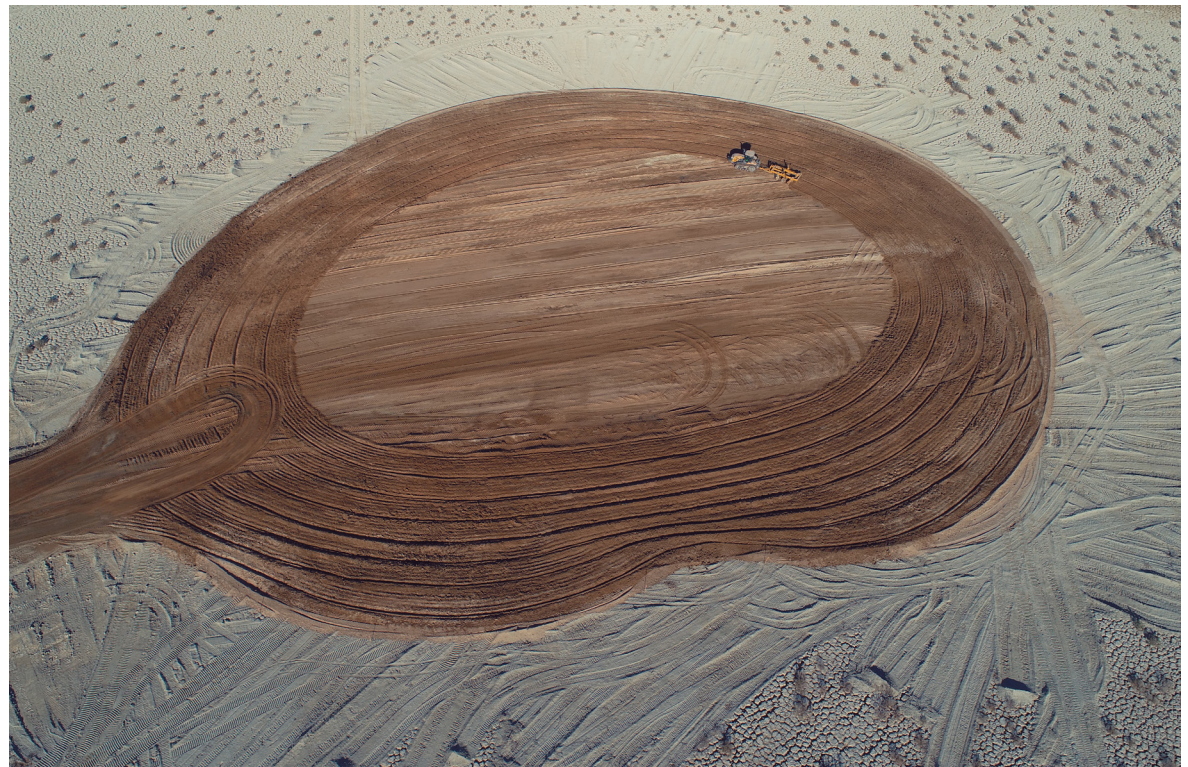
followed by three virtual workshops, held in September 2020, that were attended by more than 200 people. Through this process, the SSMP Team sought additional public input to further refine the draft Project Description and identify a range of project activities to be considered in the National Environmental Policy Act (NEPA) Environmental Assessment (EA). The State also sought feedback as to how the public would like to access the Sea and what compatible community amenities could be prioritized.

- The U.S. Army Corps of Engineers (Corps), which is leading the NEPA EA for the 10-Year Plan, released the revised project description for comment in 2021. The draft EA document, to be released later in 2022, will also be subject to public review and input. The Corps will hold 2-3 public meetings during the review period. The draft EA will cover most of the projects described below, with the exception of the SCH Project and a subset of dust suppression and vegetation enhancement projects on Reclamation land, for which environmental compliance has been completed separately.

2.2.1 Species Conservation Habitat Project (approximately 4,100 acres)

Implementation of the SCH project, via a design-build contract, was initiated in 2021 and is moving forward at full steam. The SCH project will restore approximately 4,100 acres of shallow water habitat lost as a result of the Salton Sea's

Figure 3. Aerial view of a nesting island within the boundary of the East Habitat Pond of the SCH.



increasing salinity and reduced area as the Sea recedes. It is the state's first large-scale project and will create a network of ponds and wetlands to provide important fish and bird habitat while suppressing dust emissions to improve regional air quality as the Salton Sea continues to recede.

The SCH project is the first of many projects the SSMP team will implement as part of the Phase I: 10-Year Plan. It was chosen as the first large-scale project in part because water-balance models show that, as the Sea recedes, the southern end

of the Sea will experience some of the earliest lakebed exposure given its shallow bathymetry.

In 2021, work completed on this project included the following:

- Design of project elements at 90% completion.
- Construction of initial fill of berms and levees south of the habitat ponds and east of East Habitat Pond.
- Construction of initial fills for nesting islands at the East Habitat Pond (**Figure 3**);

Figure 4. Aerial view of the completed causeway to the saline pump station, looking north toward the Salton Sea from the New River.



Figure 5. Construction of New River diversion to allow construction of the of intake structure for the SCH.



- Construction of interception ditches for collecting and diverting agricultural runoff away from the project site and providing connectivity between agricultural drains, allowing Desert Pupfish migration between drains. These ditches constitute 22 acres of new aquatic habitat for a state and federally endangered species;
- Construction of the causeway leading to the Saline Pump Station to supply salt water to the project. An aerial image of the causeway is shown in **Figure 4**.
- Construction of the New River Diversion to begin construction of the New River Intake structure, shown in **Figure 5**.
- Excavation of a large portion of the sedimentation/mixing ponds
- There is currently 500 acres of exposed lakebed at the SCH that has been stabilized using interim dust control measures in accordance with the Imperial County Air Pollution Control District (ICAPCD) guidelines and the approved construction Dust Control Plan. This is in addition to 755 acres of temporary surface roughening for dust control, completed in 2020.

Construction on the project will continue through 2022, with completion expected by the end of 2023.

2.2.2 Dust Suppression Action Plan Projects in Progress

The SSMP Team released the DSAP in July 2020 to accelerate priority SSMP projects that limit dust emissions and restore habitat at the Sea (CNRA, 2020). The DSAP serves as a high-level roadmap that charts necessary tasks, coordination, and timelines to plan and execute projects. It was shaped by important input received from local communities, stakeholders, and regulatory

agencies. The DSAP identifies up to 9,800 acres of project planning areas on exposed or soon-to-be exposed lakebed around the Sea, describes potential dust suppression concepts, and outlines the steps needed to transition from concept to on-the-ground implementation over the next few years. As described below, design and implementation of several of these projects occurred in 2021, and additional projects will be initiated in 2022.

2.2.2.1 U.S. Bureau of Reclamation and SSMP Collaborative Projects (approximately 2,600 acres)

The SSMP Team continued its collaboration with Reclamation to develop projects within the planning areas identified in the DSAP. Three sites, with significant Reclamation-administered land, Clubhouse, Tule Wash, and West Bombay Beach (**Figure 2**), were prioritized. Two sites are located near the community of Salton City: Clubhouse (approximately 400 acres) and Tule Wash (approximately 1,215 acres) (**Figure 6** and **Figure 7**). The third site is located near the community of Bombay Beach (approximately 90 acres) (**Figure 8**). Collectively, these sites total approximately 1,700 acres. Clubhouse and Tule Wash were identified in the DSAP; West Bombay Beach was added because it was determined to be a good candidate due to its emissivity potential and proximity to the community of Bombay Beach.

The specific objective of the projects is to enable the creation of an Iodinebush Wet Shrubland Alliance community across the three sites. This vegetation community is dominated by *Allenrolfea occidentalis* with other associated species, and is widely observed across the arid Southwestern U.S., especially in the vicinity of saline lakes. This plant community is also widely observed all around the Salton Sea.

As part of the project implementation, the SSMP Team will enhance the growth of existing vegetation stands and promote new growth in currently open areas. The treatment at existing vegetation stands will consist of weed removal and addition of water and compost to promote growth. Open areas of the lakebed will be supplied with water, plants,

Figure 6. Initial layout of vegetation enhancement project at the Clubhouse site (see Figure 3 for general site location). The colored areas within the site are Reclamation-administered land, with the colors indicating the extent of vegetation cover and whether the land is below the ordinary high-water mark or an aquatic habitat.



Figure 7. Initial layout of vegetation enhancement project at the Tule Wash site (see Figure 3 for general site location).

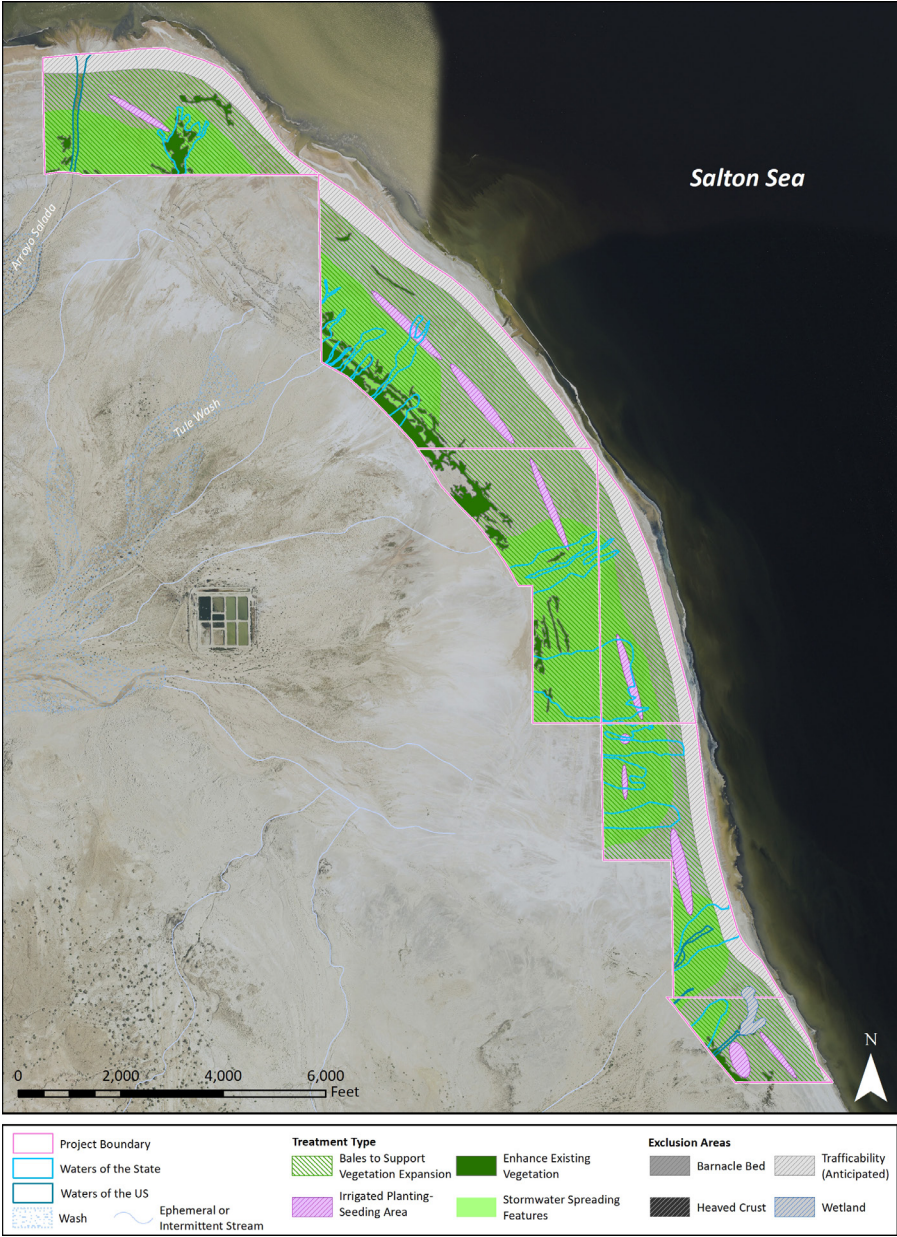


Figure 8. Initial layout of vegetation enhancement project at the West Bombay Beach site (see Figure 3 for general site location).



seeds and physical modifications to promote growth of native vegetation.

Temporary engineered roughness, in the form of straw bales placed at a regular density across portions of the site, will be used as an initial measure to create conditions for plant growth by reducing wind speeds and thus dust emissions from across the lakebed. Straw bales were selected because they achieve our design goal while also allowing the State to source natural material from the region and minimize site disturbance. This approach has been used in other arid, sandy landscapes.

Initial water supplies will be obtained through the spreading of stormwater in local creeks, and through trucked-in water for early germination at selected sites. In addition, groundwater is expected to be a supplemental water supply for irrigation in 2022 and beyond.

Three vegetation establishment methods are planned, including: natural recruitment, seeding and planting. Vegetation will be combined with the above engineered roughness and stormwater spreading methods in the form of seeding or planting (potted plants or plugs grown in a nursery). The palette of plant species to be considered for the project include: Iodine Bush (*Allenrolfea occidentalis*); Big Saltbush (*Atriplex lentiformis*); Salton Saltbush (*Atriplex canescens* var. *macclenta*); Bush Seepweed (*Sueda nigra*); Western Sea-purslane (*Sesuvium verrucosum*);

Cattle Saltbush (*Atriplex polycarpa*), and other opportunistic species.

The SSMP team began harvesting local seeds from around the Salton Sea in early 2021. Working with botanists, plants have been grown and tested to tolerate the salinity that is present in the region. Work to determine the best-suited plant species and the ideal time to harvest the seeds is ongoing.

The following is a project overview for each of the sites.

Clubhouse: This site provides a good test case for illustrating the approach to be used by the SSMP Team to implement vegetation across a complex landscape. The project area for this site is approximately 400 acres. The existing land cover at the site is presented in **Figure 6**, showing exposed lakebed areas that are covered by vegetation, below the current water level, or consisting of aquatic habitat. Project work at this site was initiated in 2021.

Tule Wash: The project area for this site is estimated to be 1,217 acres. The existing land cover at the site is presented in **Figure 7**. As above, work will be initiated in 2022 as a project supporting existing vegetated and wetland areas. Project design includes the use of water and vegetation combined with wind protection such as straw bales to help protect and facilitate plant growth and improve plant survival rates.

West Bombay Beach: West Bombay Beach includes approximately 90 acres of Reclamation property which is leased by the California

Department of Parks and Recreation (**Figure 8**). The site is planned as a vegetation enhancement project using a combination of stormwater spreading, engineered roughness using straw bales, and surface roughening.

Project activities in 2021 included development of conceptual and detailed designs for the three projects, purchase of straw bales for placement across the sites, securing land access from Reclamation, completion of California Environmental Quality Act (CEQA) addendum for the three project sites, collection of seed and growth of plants in a nursery, and selection of a contractor to begin in the first stage of the work. A NEPA Categorical Exclusion and a land access agreement were finalized for these sites obtaining necessary permits from state and federal agencies. The initial phase of work was started at the Clubhouse site in late 2021, including placement of straw bales to create conditions for plant growth and survivorship by reducing wind speeds and dust emissions from across the lakebed. Planting of native vegetation following this initial treatment is expected to start in March.

Planned work for 2022 includes physical modification across the three project sites, planting and seeding of project sites, development of detailed designs for stormwater spreading, establishing water supplies to support and irrigate vegetation at the three sites, and selection of an additional contractor to implement remaining components of the work. The project

implementation is expected to continue through 2022 and into the growing season of 2023.

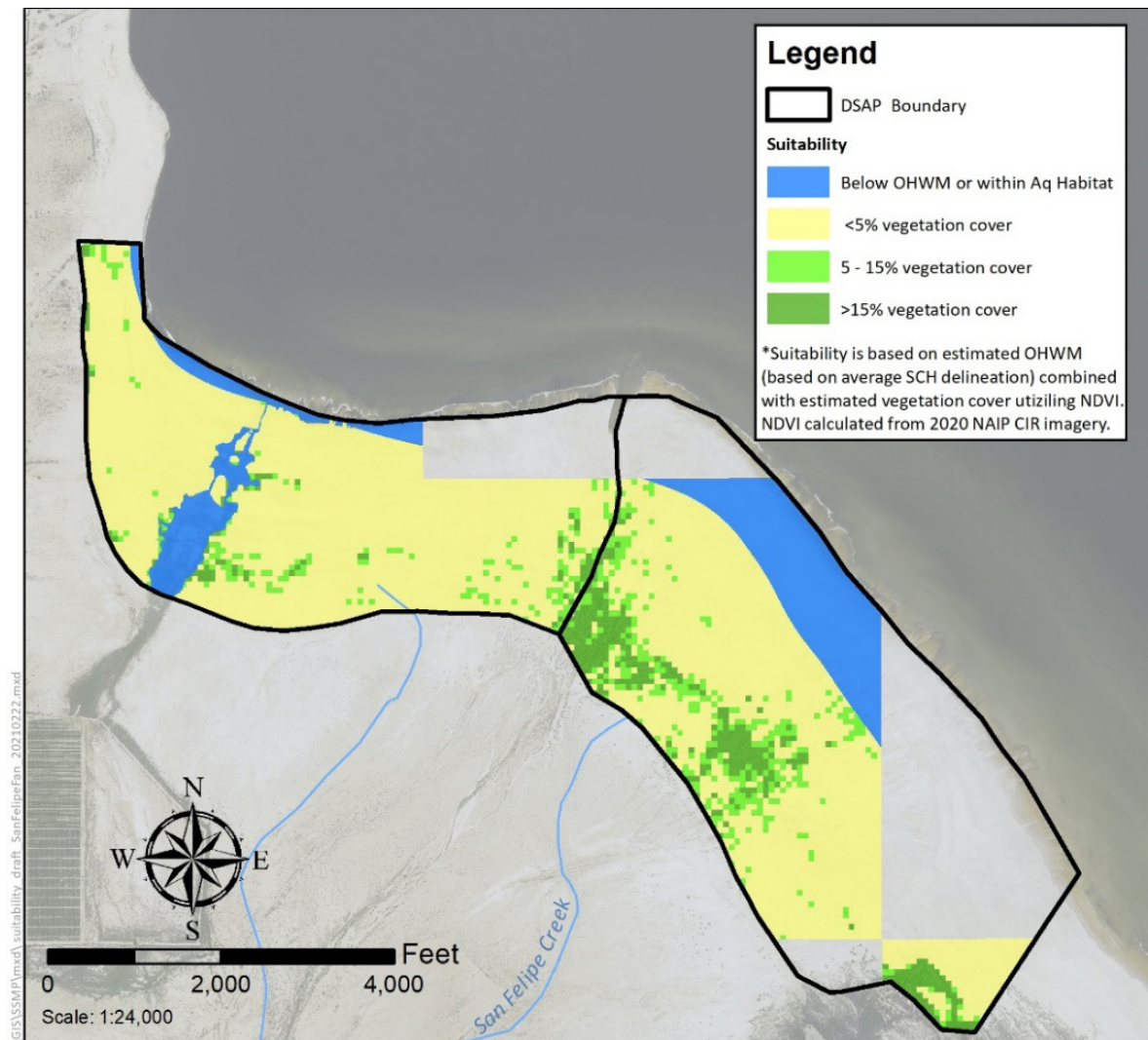
Additional project work, totaling approximately 900 acres, are proposed on Reclamation-administered lands at San Felipe Fan, Bombay Beach, and North Shore. Planning to advance these projects will be completed in 2022 as described below.

San Felipe Fan Restoration Project (660 acres)

The San Felipe Fan is an area of exposed lakebed where the San Felipe Creek flows into the Salton Sea. The project design concept at this location involves the spreading of inflowing water to support vegetation. Initial conceptual designs involve construction of lateral ditches perpendicular to the creek and along the contours so that stormwater can be retained in the ditches and infiltrated into the soil for vegetation uptake. The water withdrawal using stormwater flooding will need to be designed to enhance and support habitat for the endangered desert pupfish in San Felipe Creek. Because this would require more complex environmental compliance, it could not be part of the NEPA Categorical Exclusion for the three sites described earlier (Clubhouse, Tule Wash, and West Bombay Beach). This project will be covered by the NEPA EA being developed for the Phase I:10-Year Plan.

Key next steps and anticipated timeline include (quarters referred to below are calendar year quarters):

Figure 9. Proposed project area of Reclamation-administered land for vegetation enhancement at the San Felipe Fan site (see Figure 2 for general site location).



- 2022 Q2: Complete project description and develop conceptual design of project
- 2022 Q3 – 2023 Q1: Complete environmental compliance and permitting
- 2022 Q3 – 2023 Q1: Secure land access and water supply
- 2022 Q3 – 2023 Q1: Develop bid package and secure contractor
- 2023 Q2: Start construction

Bombay Beach (250 acres)

The Reclamation planning area for this site is estimated to be 250 acres and is being designed to complement the areas that are slated for the Audubon California wetland restoration project. The land cover at this site and the adjacent Bombay Beach West site is shown in **Figure 8**. This project will be designed around the restoration project on up to the entire 250-acre parcel. The proposed site design includes vegetation planted in the furrows to provide long-term dust suppression and habitat compatible with and enhancing the wetland habitat on the site. This project could utilize existing water sources from the ephemeral wash using a water agreement or a potential groundwater well in the future, as needed, to enhance the existing wetted acres and provide water to enhance upland and wetland vegetation at the site. Planning work at this site is proposed for 2022.

North Shore (24 acres)

The North Shore project includes approximately 24 acres. Land cover for this site is shown in

Figure 10. Proposed project area of Reclamation-administered land for vegetation enhancement at the Bombay Beach site.

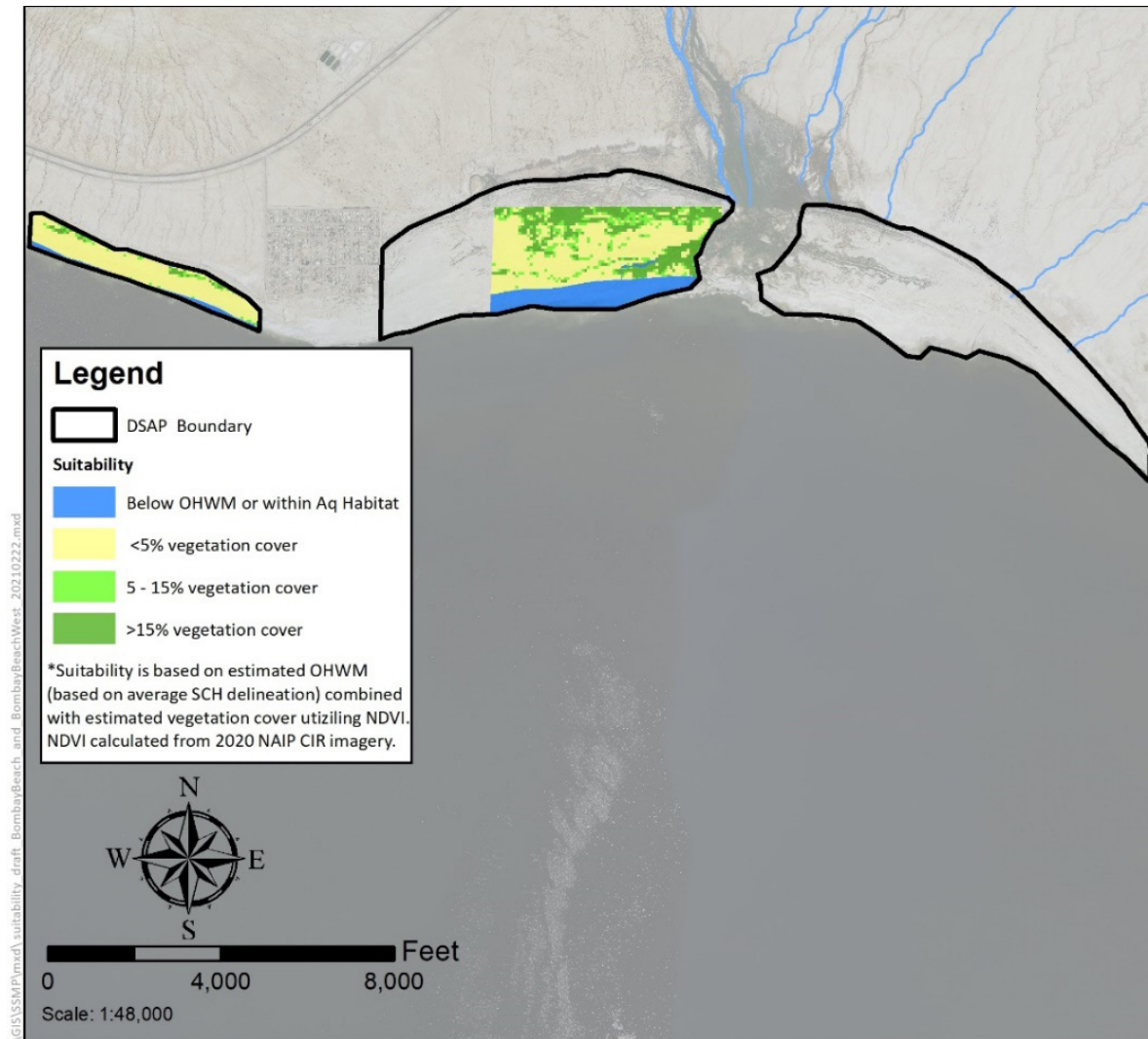
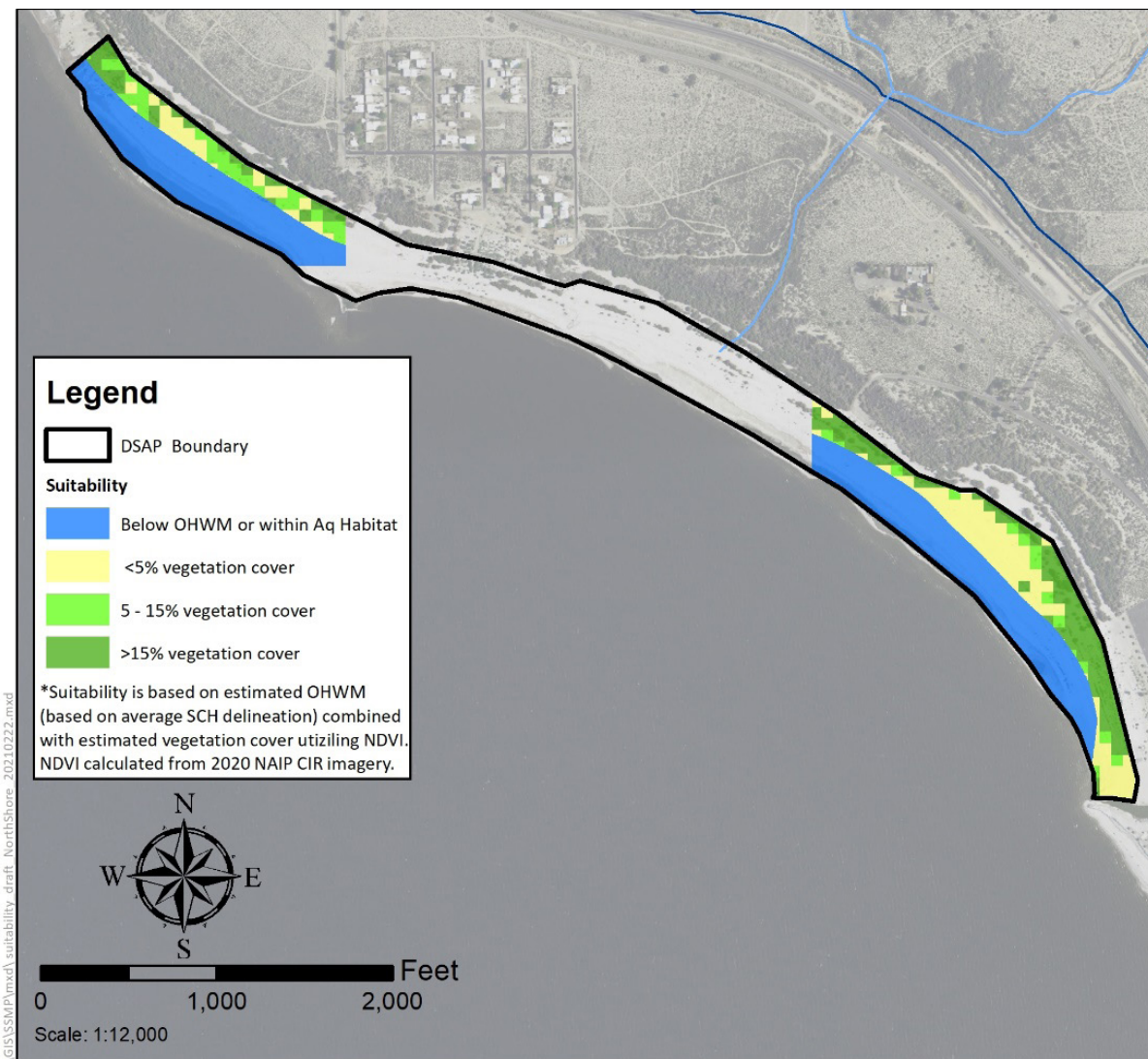


Figure 9. Based on community input during the DSAP development process in early 2020, this site was identified as a potential emission

source. Prior to any project being implemented at this location, air quality monitoring is being conducted (three of the five monitors shown

Figure 11. Proposed project area of Reclamation-administered land for vegetation enhancement at the North Shore site.



network will be reviewed on a quarterly basis. It will be used to create a year-end report to inform future management actions and projects at the Sea.

2.2.2.2 IID and SSMP Coordinated DSAP Projects (approximately 380 acres)

The SSMP is seeking to formalize its coordination with IID in order to plan, implement, and monitor dust suppression projects around the Salton Sea. Close coordination with IID will allow the SSMP Team to continue to learn from IID's experience. Over 2020 and 2021, the SSMP Team met regularly with IID to coordinate activities on dust suppression projects. Through that coordination, the SSMP Team adopted a set of sites identified by IID in their Proactive Dust Suppression Plan (PDCP). These were identified in the DSAP with the intent to implement these as high priority sites.

The SSMP Team also submitted a draft land access agreement to IID for additional acreage on parts of the Clubhouse and Tule Wash sites. The portions of these sites that are owned by Reclamation are currently being developed, and access to the adjacent IID portions would allow the expansion of these projects using similar design concepts and using the same access and water supply infrastructure. The total acreage owned by IID for which the SSMP has requested access is approximately 380 acres. Land access discussions with IID are ongoing, and further planning and project implementation at these sites is contingent on securing land access.

in **Figure 2** have been installed and the remaining two will be installed in early 2022). The monitoring will involve real time measurement

of saltation activity and particulate matter concentrations at different locations across the planning area. The data acquired through this

Box 1. Monitoring to Support Vegetation Enhancement and Dust Suppression Projects

Soil Monitoring

The SSMP Team performed site-wide soil monitoring in 2021 at the Tule Wash, Clubhouse, and Bombay Beach to understand conditions for plant growth and water spreading. Monitoring was performed on the surface and at depth to characterize moisture content, water infiltration rate, soil salinity, and soil nutrient concentrations.

DSAP Groundwater Monitoring

Installing groundwater monitoring wells to observe the spatial and temporal changes of groundwater levels and salinity is an essential step for planning and management of vegetation in dust suppression areas.

Initial surveys in 2021 were used to characterize sediment quality at potential well locations, and to determine whether they were hazardous. Concentrations of elements of concern (such as arsenic and selenium) were well below levels of concern.

In 2022, deep water test wells are being advanced for installation at the Clubhouse, Tule Wash, and West Bombay Beach project areas. If the water yield and quality are found to be adequate, these test wells can be converted to production wells to irrigate vegetation. Additional shallow monitoring wells are will also be placed near the deep wells to evaluate impacts to shallow groundwater. Continuing work will include finalizing the land access agreements with landowners, securing water rights access, developing the well construction specifications to solicit bids from drilling contractors, and installing wells.

Air Quality Monitoring

Monitoring is required to quantitatively evaluate performance effectiveness of dust controls. Measurements are needed at multiple locations to understand natural and anthropogenic causes of dust and sand transport variability for surfaces. Typical measurements include: (1) saltation activity (frequency and magnitude), (2) ambient concentrations of particulate matter 10 micrometers or less in diameter (PM10), and (3) meteorology (i.e., wind speed, wind direction, relative humidity, temperature, barometric pressure, precipitation, and soil moisture). For future monitoring, a 360-degree camera will also be used to collect a time series of panoramic photos to aid in dust source-area identification.

In 2021, air quality data were collected on the SCH site to monitor the performance of the interim dust suppression work that was completed in 2020. Data were collected for approximately six months and showed that the site treatment was effective at controlling dust emission from the surface.

Additional monitoring by the SSMP Team is also planned along the northern shore of the Sea, and sensors were installed in 2 locations in late 2021. Three additional sensors will be installed in early 2022 to assess emissivity from Coachella exposed lakebed and North Shore sites.

Vegetation Monitoring

In 2022, following seeding and planting of new vegetation and enhancement of existing vegetation, we will perform monitoring to assess germination of seeds, growth of seedlings, survivorship of plantings, and growth and condition assessment of existing stands. This monitoring will be performed on-the-ground by field biologists and through aerial imagery.

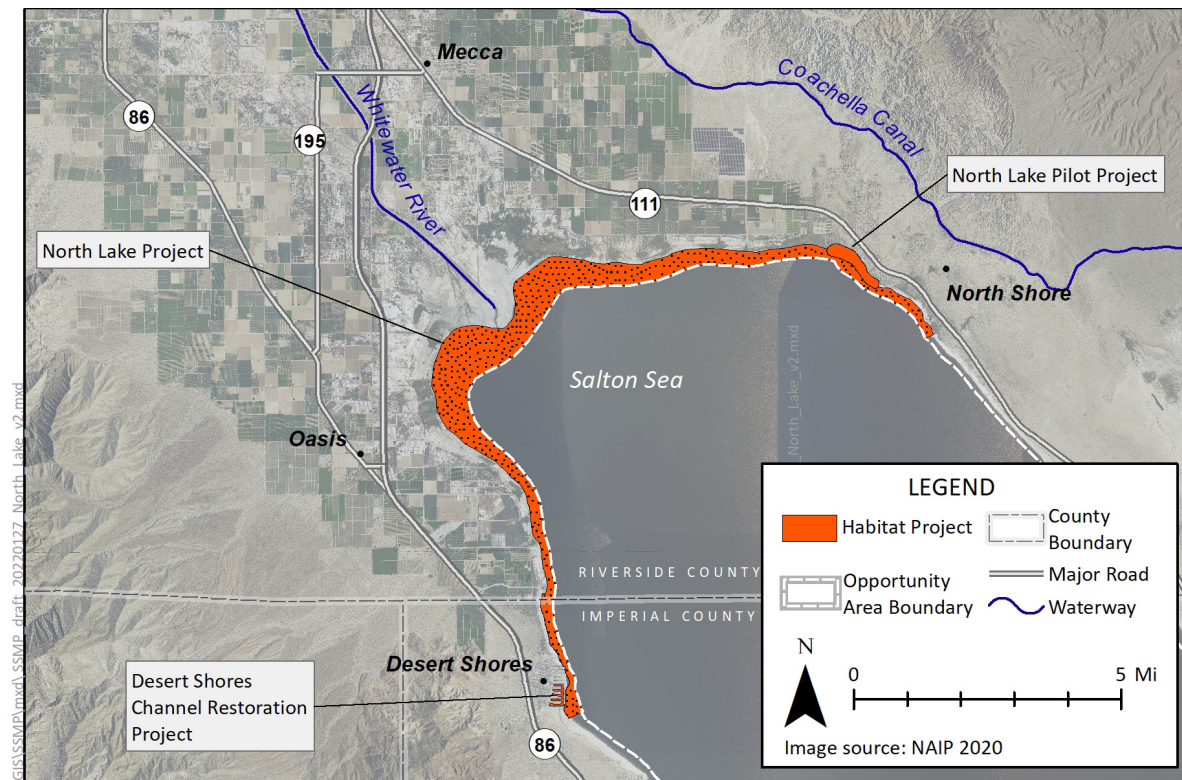
2.2.3 North Lake Pilot Demonstration Project (approximately 160 acres)

In April 2021, the State entered a \$19.25M (Prop 68) funding agreement with the Salton Sea Authority (SSA) to plan and construct the North Lake Pilot Demonstration Project. This project will be jointly developed by the SSMP, the SSA, and Riverside County. The project consists of an approximately 160-acre lake located at the northern end of the Salton Sea, in Riverside County near the unincorporated community of North Shore (Figure 12). The project will provide both shallow and deep-water habitat, suppress dust by the creation of the lake, and provide recreational benefits. The project could be designed as either freshwater or brackish water habitat. The State will analyze the project alternatives as part of the EA process for the Phase I: 10-Year Plan. An addendum for this project was completed to provide CEQA compliance for this project. This project could be integrated into a larger North Lake concept, described as a separate project below.

Riverside County has issued a Request for Proposal (RFP) package for engineering design and environmental services in January 2022 for implementation of this project. Key next steps include:

- 2022 Q3: Complete project description and develop conceptual design of project
- 2022 Q2 – Q3: Complete environmental compliance and permitting

Figure 12. Proposed project area of Reclamation-administered land for vegetation enhancement at the North Shore site.



- 2022 Q2 – Q3: Secure land access and water supply
- 2022 Q2 – Q3: RFP and secure contractor
- 2022 Q4 – 2023 Q1: Start construction

2.2.4 Desert Shores Channel Restoration Project (approximately 30 acres)

The Desert Shores Channel Restoration Project is included as a project in the 10-Year Plan NEPA EA. The project is located adjacent to

the Desert Shores community in the marina that has become disconnected from the Sea (Figure 12). Implementation of the Desert Shores Channel Restoration Project would refill the five southernmost boat channels in the Desert Shores Marina. The SSMP Team is collaborating with Imperial County, Reclamation, and SSA on this project. Reclamation has committed \$1.25M in funding and is working with SSA to develop a funding agreement that the Authority will administer (expected to be executed in early 2022).

The project aims to meet the project goals of habitat restoration and dust suppression by refilling the channels with water at a salinity level that provides habitat for fish and birds. In addition, habitat benefits are anticipated through revegetation.

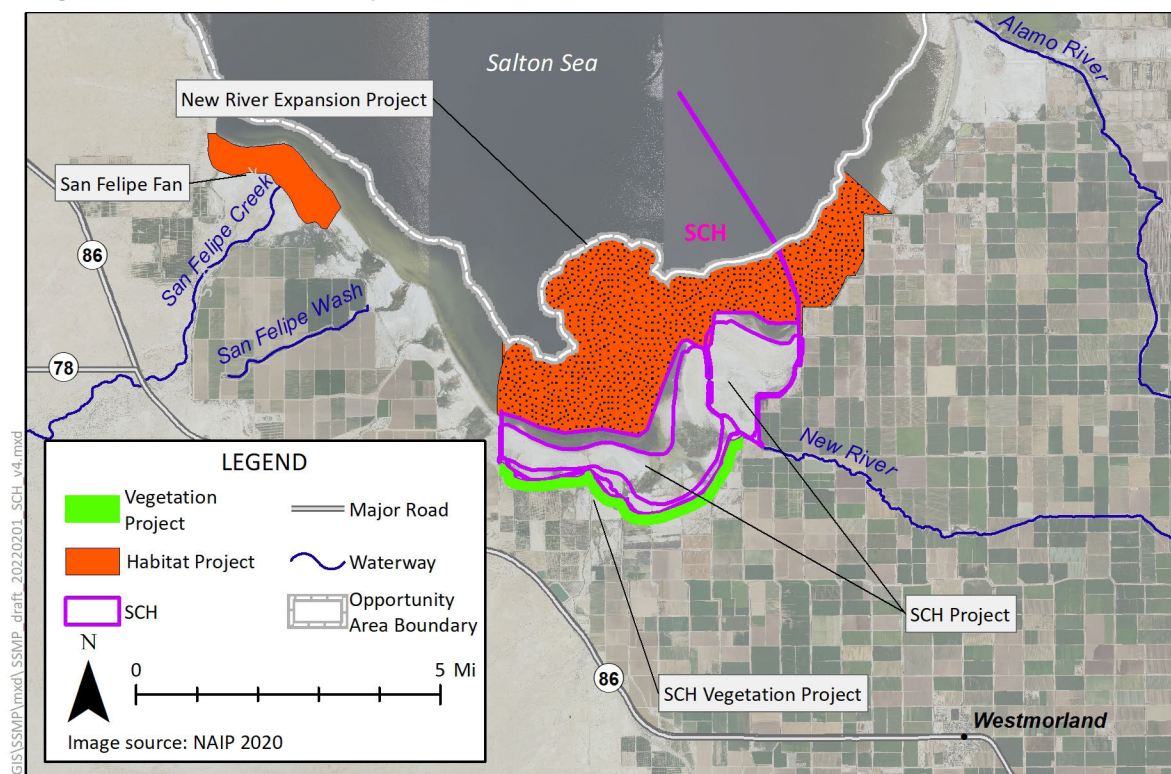
The project would construct a berm across the former boat channel connection to the Salton Sea. Water would then be pumped from wells into the channels contained by the berm at a rate sufficient to refill the channels, offset losses from evaporation and seepage, and circulate water.

This project is an example of the partnerships between local, State, and federal agencies. Over the next several months, Imperial County will lead efforts to complete compliance under CEQA and obtain permits. In addition, the SSMP will analyze the project under NEPA as part of the EA process underway for the SSMP Phase I: 10-Year Plan. Design and implementation will be within the responsibilities of local agencies. Work on the Desert Shores Project is expected to start in 2022 upon completion of the environmental compliance and permitting process.

Key next steps for this project include:

- 2022 Q2: Complete project description and develop conceptual design of project
- 2022 Q2 – Q3: Complete environmental compliance and permitting
- 2022 Q2 – Q3: Secure land access and water supply

Figure 13. Approximate location of projects along the southern shore of the Salton Sea. The Opportunity Area boundary indicates the portion of the Sea covered by the NEPA Environmental Assessment for the Phase I: 10-Year Program (described further in Chapter 5).



- 2022 Q2 – Q3: Prepare construction bid package and secure contractor
- 2022 Q3 – Q4: Start construction

2.2.5 New River Expansion Project (approximately 3,500 acres of aquatic habitat)

The goal of this project is to create aquatic habitat downstream and adjacent to the SCH

using the Environmental Assessment Aquatic Habitat Opportunity Area as a general guide (see **Figure 13**). Portions of this area may currently be underwater but are expected to become exposed as the elevation of the Sea declines. The SSMP Team will prepare a project description containing the conceptual design for this project, defining the specific layout, water elevation and depth, water sources to be used, target salinity,

and habitat types to be created. This project description will be useful in securing land access and water rights with landowners. This project will be covered by the NEPA EA being developed for the Phase I Plan.

Next steps to advance this project are outlined below:

- 2022 Q2: Complete project description and develop conceptual design of project
- 2022 Q2 – Q4: Complete environmental compliance and permitting
- 2022 Q2 – Q4: Secure land access and water supply
- 2022 Q2 – Q4: Prepare construction bid package and secure contractor
- 2023 Q1 – Q2: Start construction

2.2.6 North Lake Project (approximately 1,000 – 1,500 acres of aquatic habitat)

Similar to the SCH project, a large habitat project is also proposed for the northern shore of the Sea. This project is conceived as a horseshoe-shaped lake (**Figure 12**) that will provide aquatic habitat, using water from the Whitewater River, agricultural drains, and the Salton Sea. Future work will define the area(s), the water sources, and the types of aquatic habitat to be created for this 1,000 to 1,500-acre project that will lie within a larger 4,200-acre horseshoe-shaped planning area. The design and implementation of this

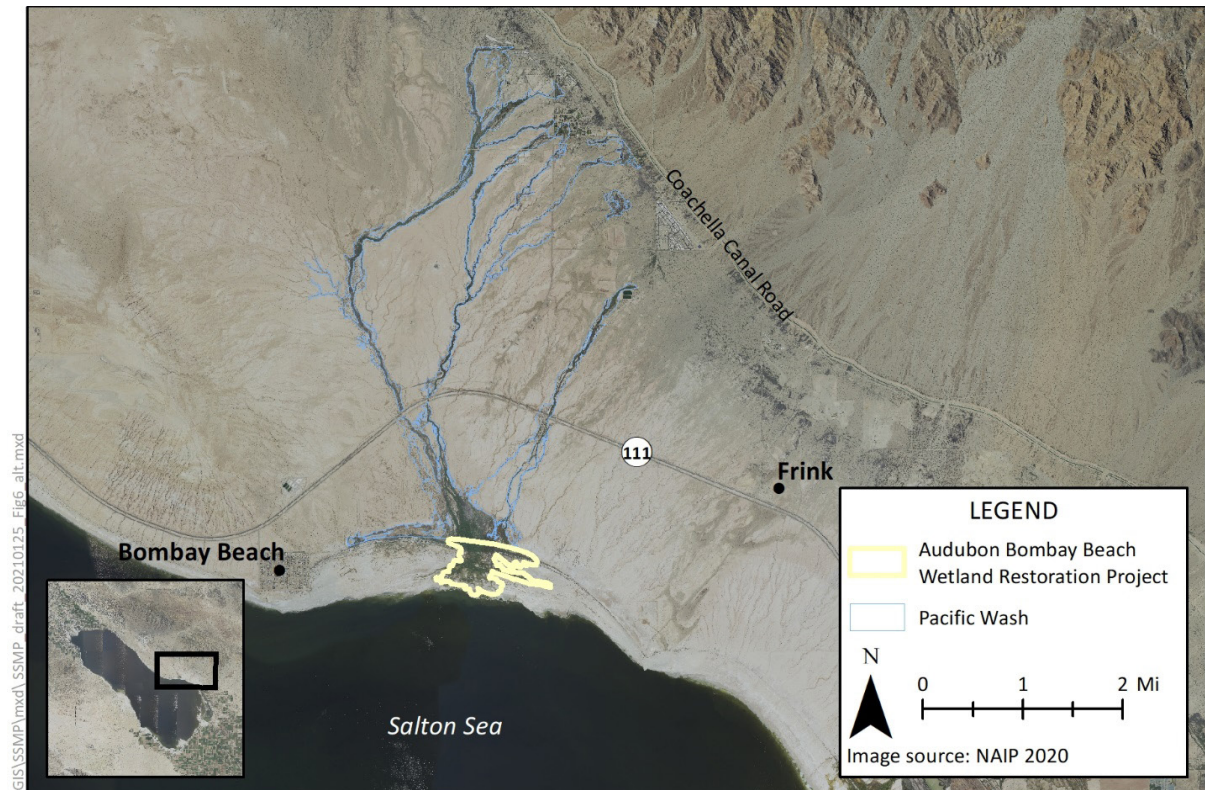
project will be informed by the lessons learned through the ongoing SCH Project. The North Lake Project will be covered by the NEPA EA being developed for the Phase I Plan. As laid out, the 160-acre North Lake Demonstration Project could become a part of the larger North Lake Project.

Next steps to advance this project include:

- 2022 Q3: Complete project description and develop conceptual design of projects

- 2022 Q4 – 2023 Q2: Complete environmental compliance and permitting
- 2022 Q4 – 2023 Q2: Secure land access and water supply
- 2022 Q3 – 2023 Q2: Prepare construction bid package and secure contractor
- 2023 Q3: Start construction

Figure 14. Audubon Bombay Beach Wetland Restoration Project.



2.2.7 Audubon Bombay Beach Wetland Restoration Project (approximately 900 acres)

The SSMP Team is coordinating with Audubon to advance the Bombay Beach Wetland Project which aims to stabilize, preserve, and enhance an existing emergent wetland and surrounding area over approximately 900 acres adjacent to the community of Bombay Beach (**Figure 14**). As the Sea's elevation has declined, water from a confluence of surface water flow and groundwater discharges have created wetlands along the exposed lakebed that provide habitat for waterbirds including shorebirds and rails. However, under natural conditions, these habitats tend to drain and dry out and tamarisk, a non-native shrub, has invaded the upslope areas, consuming large amounts of the available water and degrading the habitat quality. An opportunity exists to stabilize and enhance these existing habitat areas, and to divert and disperse water for additional aquatic and wetland habitat creation and dust control.

The project would stabilize, preserve, and enhance (where feasible) native emergent wetland and brine pool habitat on the exposed lakebed and make surplus water available for additional aquatic and wetland habitat and vegetation-based dust control on the adjacent exposed lakebed. The project is being designed as a multi-benefit project to protect and enhance existing habitat, provide additional habitat,

protect public health through dust suppression and provide opportunities for recreational use, education, and community involvement. The project would also demonstrate approaches to the optimization of environmental water use in the Sea environment.

The project is being included for analysis as part of the EA process for the 10-Year Plan. It consists of a wetland and surrounding vegetated area that has developed where several prominent washes converge and groundwater is discharged, providing sufficient water for development of emergent wetland and pond habitat for waterbirds (shorebirds, waterfowl, and rails) and algal-based invertebrates.

This is an example of a partnership with Audubon and the State Team, where Audubon is leading the effort on design, biological surveys, community engagement, with funding through Reclamation, and the State Team is assisting with permitting the project and collaborating on the process to secure land access. While Audubon will lead the project implementation, important steps and timelines are expected as follows:

- 2022 Q2: Complete project description and develop conceptual design
- 2022 Q2 – Q4: Complete environmental compliance and permitting and final design
- 2022 Q2 – Q4: Prepare construction bid package and secure contractor
- 2023 Q1 –Q2: Start construction

2.2.8 Wister Unit Marsh Bird Habitat Restoration Project (approximately 150 acres)

A bird habitat restoration project is proposed for development at the Wister Unit of the Imperial Wildlife Area. The area has historically been operated for waterfowl and other wildlife. The area has a series of reservoirs and ponds that gravity flow from east to west and are managed are by the CDFW. The project envisions ponds that may support wetland species such as Ridgeway's Rail, Black Rail, other secretive marsh birds and other avian species. There may also be an opportunity to include a Desert Pupfish pond. The project may include interpretive signs, walking trails, and a viewing platform to support recreational use of the marsh. Land access is not required at this site because this is part of a CDFW wildlife area.

Next steps in project implementation include:

- 2022 Q3: Complete project description and develop conceptual design of projects
- 2022 Q4 – 2023 Q2: Complete environmental compliance and permitting
- 2022 Q3 – 2023 Q2: Prepare construction bid package and secure contractor
- 2022 Q4 – 2023 Q1: Start construction

2.2.9 SCH Vegetation Project (approximately 600 acres of vegetation enhancement/dust suppression)

This vegetation project is envisioned to cover 600 acres south of the current footprint of the SCH project and to serve as a buffer between aquatic habitat and agricultural lands further south (**Figure 13** shows the approximate location of this project). The SSMP Team will develop the project description and layout of this project, the water sources to be used, and the types of vegetation to be targeted to support the next steps in land access and permitting. This project will be covered by the NEPA EA being developed for the Phase I Plan.

Next steps in developing this project include:

- 2022 Q3: Complete project description and develop conceptual design of projects
- 2022 Q4 – 2023 Q2: Complete environmental compliance and permitting
- 2022 Q4 – 2023 Q2: Secure land access and water supply
- 2022 Q3 – 2023 Q2: Prepare construction bid package and secure contractor
- 2023 Q3: Start construction

2.3 Non-SSMP Project Updates

Additional major restoration work, that are not identified as SSMP projects, continues to be performed by partner organizations while also

benefiting the Salton Sea environment. Some key projects are noted below.

2.3.1 Quantification Settlement Agreement Mitigation

As part of the mitigation for the Quantification Settlement Agreement (QSA) water transfer, IID is required to perform environmental mitigation. Important projects related to this include burrowing owl monitoring for operation and maintenance activities, marsh habitat creation and the Salton Sea Air Quality Mitigation Program. The habitat goals for the QSA include 959 acres of aquatic habitat, including 341 acres

of non-emergent vegetation and 618 acres of open water/emergent vegetation. This goal was met in 2021 and more than 1,000 acres of marsh have been created for species that would otherwise have used the drainage systems for habitat. The Salton Sea Air Quality Mitigation Program has the goal of proactively controlling potential dust emissions from exposed Salton Sea lakebed. This program has been operational since 2016 and includes an annual emissions monitoring program, preparation of annual proactive dust control plan to identify and locate projects, as well as implementation and performance monitoring of proactive dust

Native tree planting at Torres Martinez site.



control measures to prevent specific project sites from becoming emissive. This approach allows effective use of resources to help protect the public health of communities near and around the Salton Sea.

2.3.2 Torres Martinez Wetland and Vegetation Restoration Projects

The Torres Martinez Desert Cahuilla Indians have a goal of preserving and enhancing desert habitat around the Sea, and of re-developing, expanding and upgrading tribal lands for the benefit of tribal members and area residents. Several projects are being designed and implemented in support of these goals. One of these projects is a restoration and wetland rehabilitation project on tribal land near the mouth of the Whitewater River (a similar wetlands project on the site was constructed in 2003 but destroyed by a major flood in 2012). This rejuvenated project will create deep water culture fish hatcheries, use proven vegetation for phytoremediation, and develop a recreational area for local residents.

A second project saw the Torres Martinez Desert Cahuilla Indians Tribe successfully remove 15 acres of non-native vegetation and reintroduce 1,782 native trees in 22-acres of exposed playa in December 2021. The area, located near the community of Mecca, was cleared of mature stands of Salt Cedar (*Tamarisk spp.*) and revegetated with equal amounts Honey Mesquite (*Prosopis glandulosa*) and Palo Verde

(*Cercidium floridum*). Trees were planted within a 5-gallon, biodegradable water reservoir known as a “cocoon” which leaches water from the bottom, therefore directing the root straight down towards the water table. All trees and cocoons were planted by the California Conservation Corps, Inland Empire crew (funded by Proposition 1). This project was developed to conserve groundwater, develop climate resiliency, restore native habitat, suppress dust and reestablish traditional food sources of the Cahuilla people. Additional revegetation projects at other locations along the Sea are also being envisioned by the Torres Martinez Tribe.

2.3.3 New River Improvement Project

The New River contains untreated waste and other solid pollutants from Mexico as it flows north through the city of Calexico before emptying out into the Salton Sea. This polluted waterway is a threat to human health and ecosystems and limits economic development in the Imperial Valley. To address this long-standing problem, a project has been conceived that encases the polluted water as it bypasses Calexico, minimizing direct or indirect human contact, as well as an automated trash screen at the border to remove solid waste. The project will also reroute wastewater from the Calexico treatment plant to restore flow in the river channel through the city and construct

wetlands to improve water quality. The New River Improvement Project is being funded with \$28 million from State funds and will be managed by the City of Calexico.

2.3.4 Middle Salt Creek Tamarisk Removal

The Living Desert Zoo and Gardens (based in Palm Desert, California) has begun a project to remove invasive tamarisk trees across approximately 19.6 acres of the middle reaches of Salt Creek, within Riverside County. The tamarisk removal activities reduced shading of the water and reduced water consumption at the stream to improve habitat quality for Desert Pupfish. Revegetation of native plant species is also expected to enhance the riparian habitat for other native species and thus limit future tamarisk growth. Native plants were planted at the project site during the fall of 2021 and planting will continue through spring of 2022.

3 PARTNERSHIPS

Partnerships with community partners, tribal governments, stakeholders, local, State, and federal agencies are crucial to help fulfill the goals of the Salton Sea Management Program (SSMP). The SSMP Team is working with partners to pursue available funding sources, develop projects, share data, improve community engagement, outreach, and involvement, and streamline planning and approval processes. In addition, the team is collaborating with partners to develop templates for land access, water availability, and public access opportunities and other elements key to the success of the SSMP. The SSMP Team is also engaging with partners to address scientific data gaps and identify priorities that can be incorporated into a Monitoring Implementation Plan (MIP) for the SSMP.



Based on these partnerships the SSMP Team is able to bring together multiple stakeholders and regional leaders to support the work of the different committees advising the SSMP, notably the Community Engagement Committee, the Long-Range Planning Committee, and the Science Committee. Most recently, the partners were invited to a tour of the Species Conservation Habitat (SCH) project, to get a close look at the construction completed to date (see Chapter 4).

3.1 Audubon California

The SSMP Team has continued to partner with Audubon California to address data gaps and develop new projects. Audubon California has continued to conduct monthly shoreline surveys. They have collaborated with the SSMP during the development of the Salton Sea MIP and helped identify strategies to streamline data sharing between SSMP partners. In addition, the SSMP Team has been working with Audubon California to support the 900-acre Bombay Beach Wetland Project, which would suppress dust while also creating managed wetland habitat on the east side of the Sea (additional details on this project are provided in Chapter 2). The SSMP Team will support this project through incorporation into the National Environmental Policy Act (NEPA) Environmental Assessment (EA) being developed for the Phase I: 10-Year Plan.

The SSMP Team and partners at the December SCH tour.



3.2 Bureau of Land Management

The SSMP Team will work on land access and permitting documents to support dust suppression projects on U.S. Bureau of Land Management (BLM) land. BLM is a cooperating agency in preparing the EA for the Phase I: 10-Year Plan. The State will continue to coordinate with BLM when projects are being designed and implemented on BLM land. The current anticipated footprint of dust suppression projects on BLM land is 132 acres. Also, a portion of the ongoing SCH Project is being constructed on BLM land.

3.3 California Air Resources Board

The California Air Resources Board (CARB) continues to be an active participant in vegetation enhancement, dust suppression project, performance monitoring, and air quality monitoring activities with the SSMP Team. CARB staff helped in the preparation of the air quality

monitoring plans and reports. On an ongoing basis, CARB staff are working with the SSMP Team to identify and review dust control strategies and monitoring requirements at individual project sites.

3.4 Coachella Valley Water District

The Coachella Valley Water District (CVWD), which owns land along the northern shore of the Sea, as well as drains with inflows into the Sea, is a partner for the SSMP Team and has provided access to the team to install air quality monitoring equipment at four sites to evaluate the potential for dust emissivity. The State will continue to work with CVWD as projects planned along the northern shore are advanced in 2022 and beyond.

3.5 Colorado River Basin Regional Water Quality Control Board

The construction or operation of some SSMP projects may have impacts on water bodies that are regulated by the Colorado River

Basin Regional Water Quality Control Board (CRBRWQCB). This may include direct discharges of pollutants (regulated by the National Pollutant Discharge Elimination System permit) or stormwater discharges from project areas (requiring a Stormwater Pollution Prevention Plan or SWPPP). Depending on the project, applications have been filed with the CRBRWQCB. The SSMP received a Waste Discharge Permit in December 2021 for the vegetation enhancement projects on U.S. Bureau of Reclamation (Reclamation) land.

The SSMP Team has increased coordination with CRBRWQCB to discuss SSMP program milestones and progress, upcoming permit needs, and to provide input into CRBRWQCB planning processes. A regular standing meeting has been established to provide ongoing collaboration for project permitting and implementation and has led to a more efficient permitting process.

3.6 Imperial Irrigation District

The SSMP Team and Imperial Irrigation District (IID) have been collaborating on a broad range of Salton Sea management priorities, including the SCH Project, land access permits and agreements, dust suppression project planning and implementation, air quality monitoring, biological monitoring, data management strategies, and public engagement.

In addition to collaborating on projects, IID has been supporting the SSMP Team with biological monitoring and developing an approach for sharing data among stakeholders. California Department of Fish and Wildlife (CDFW), IID, and other partners have been cooperating to develop a pupfish interconnection plan that will be implemented around the Salton Sea and may eventually be integrated into SSMP projects.

The SSMP Team is working with IID to develop an easement for land access to develop vegetation enhancement and dust suppression projects.

3.7 Imperial County

Imperial County and the SSMP Team have significant and complementary interests regarding the development and enhancement of activities that restore the Salton Sea, and Imperial County has sought to assist the SSMP Team with its restoration goals by soliciting Statements of Interest from local landowners willing to implement dust suppression projects on their property.

The SSMP Team organized regular interagency meetings on the Desert Shores Channel Restoration Project which includes Imperial County and the Salton Sea Authority (SSA). Imperial County has taken a lead role in California Environmental Quality Act (CEQA) compliance and to develop a hydrologic analysis for groundwater availability for the project. Imperial County has been an invaluable partner in furthering the Desert Shores Channel Restoration Project. Imperial County also serves as the co-chairs of the SSMP Community Engagement Committee with Alianza Coachella Valley. In this role, the County and Alianza Coachella Valley assist the SSMP Team with scheduling, developing agendas, reviewing materials and presentations and meeting facilitation.

The SSMP Team recognizes that partnership with local agencies could provide substantial public benefits and will continue to coordinate with Imperial County to identify lands and projects that may be eligible for funding opportunities.

3.8 Imperial County Air Pollution Control District

Imperial County Air Pollution Control District (ICAPCD) is a key partner for the SSMP Team in implementing projects around the Sea. ICAPCD has regulatory authority over the contribution or control of anthropogenic fugitive dust emissions in the Salton Sea region within Imperial County. In July 2020, California Natural Resources Agency

(CNRA) and the ICAPCD signed a Memorandum of Understanding (MOU) documenting their intent to coordinate and collaborate on the Desert Shores Channel Restoration Project described in Chapter 2. The project proposes to refill channels located between residences on the Salton Sea shoreline in the disadvantaged community of Desert Shores to provide habitat and air quality benefits. Under the MOU, CNRA will analyze and document the project's public benefits as part of the NEPA EA for the Phase I: 10-Year Plan and as required for funding under the SSMP. Over 2021, there were regular senior level meetings between CNRA, ICAPCD and Imperial County to coordinate over major project needs, including the Desert Shores Channel Restoration Project and vegetation enhancement projects being implemented on Reclamation lands. Furthermore, ICAPCD staff serve as members of the Long-Range Planning Committee and MIP Working Groups.

3.9 Natural Resources Conservation Service

The Natural Resources Conservation Service (NRCS) of the U.S. Department of Agriculture has entered a Cooperative Agreement with CNRA to provide \$650,000 for the development of a Watershed Plan for the Salton Sea 10-Year Plan project area. This plan needs to follow a specific format outlined in the NRCS's National Watershed Program Manual for approved projects to be

eligible for future NRCS funding. The SSMP Team is working with the NRCS as a Cooperating Agency to incorporate the Watershed Plan into the NEPA process being undertaken with the U.S. Army Corps of Engineers (Corps) and is identifying the scope of projects and funding levels that may be available for future SSMP projects. The funding can be applied to projects on tribal lands and non-federally owned lands. Approval of the Watershed Plan by NRCS allows the SSMP to apply for up to \$25M to support dust suppression and habitat projects.

3.10 Riverside County

The SSMP Team continues to meet regularly with the County of Riverside to coordinate project and planning priorities. In 2021, in partnership with the SSA and the County, a grant agreement for the North Lake Pilot Demonstration Project was finalized as well as the associated Outreach Plan for the project. The SSMP Team assisted the County and SSA with the review of several project alternatives, including a preferred alternative. More information about the project can be found in Chapter 2. The project is planned to be the initial phase of a larger North Lake concept that envisions the construction of a horseshoe-shaped lake at the north end of the Salton Sea in Riverside County as described in Chapter 2. The North Lake concept is part of the EA document being developed for the SSMP. The SSA is also part of this process as described below.

3.11 Salton Sea Authority

The SSA is a Joint Powers Authority with a focus on protecting human health and revitalizing the environment and economy of the Salton Sea. The SSA's board members represent five of the major stakeholders at the Sea: Coachella Valley Water District, County of Imperial, County of Riverside, IID, and Torres Martinez Desert Cahuilla Indians. This representation makes the Authority uniquely positioned to assist in planning and implementation of the SSMP.

CNRA and the SSA have entered an MOU outlining how the parties will coordinate and consult to support the broader goals of Salton Sea restoration and the SSMP. The MOU contemplates continued close coordination between the Authority and the SSMP to ensure prompt communication of local priorities to CNRA through the Authority, as outlined in the MOU, and to seek out federal funding opportunities for projects that will help restore the Sea. CNRA staff hold regular standing meetings with SSA, serve as ex officio members on the SSA Board, provide monthly updates at Board meetings, and coordinate on planning, funding, and public outreach.

As noted in Chapter 2, the Authority is leading the North Lake Pilot Demonstration Project, working with Riverside County. The North Lake Demonstration Project received \$19.25M to plan, design, and implement the approximately 160-acre lake in partnership with the State and Riverside County.

3.12 South Coast Air Quality Management District

The South Coast Air Quality Management District (SCAQMD) has regulatory authority over the contribution or control of anthropogenic fugitive dust emissions in the Salton Sea region within Riverside County. The SSMP Team coordinated with the SCAQMD during the development of the DSAP, especially related to project areas in Riverside County.

The State works collaboratively with the SCAQMD prior to project construction, has coordinated with them on monitoring station locations in their jurisdiction, and participates in air quality community meetings led by SCAQMD as part of AB-617 requirements.

3.13 Torres Martinez Desert Cahuilla Indians

The Torres Martinez Desert Cahuilla Indians have ancestral lands in the Salton Sea area and are a major landowner along the northern shore of the Salton Sea in the vicinity of the Whitewater River.

As an important partner in the region, CNRA is committed to regular government-to-government consultation and partnership with the Tribe on all projects impacting the Salton Sea. Initial conversations on potential partnerships on northern shore projects have begun and the State looks forward to working with the Tribe to implement projects to support their priorities

Torres Martinez Tribal Chairman Thomas Tortez, Jr. plants the first tree of the native tree planting project with assistance from California Conservation Corps Conservationist Yuritizi Renteria.



and gather field data to help evaluate potential alternative approaches for dust suppression. The State plans to work with the Tribe to identify collaborative projects to expand on existing restoration work on exposed lakebed that is being funded by the Coachella Valley Mountains Conservancy. Tribe members are also represented on the Long-Range Planning Committee and the Engagement Committee. The Tribe also hosted one of the DSAP community workshops in March 2020.

3.14 Government-to-Government Consultations and Partnership with California Native American Tribes

CNRA, California Department of Water Resources (DWR), and CDFW are all committed to meaningful and timely consultation with all California Native American tribes with ancestral ties to the Salton Sea area. The CNRA Tribal Consultation policy requires the SSMP to provide tribes with an opportunity for government-to-government consultation early in project planning

and development to ensure tribal input is considered and cultural resources are protected.

CNRA initiated a formal government-to-government consultation process with 25 tribal nations that may be affected by projects described in the DSAP and completed the consultation process in July 2020. CNRA's goal is to better understand tribal priorities, interests, and concerns early in the development of conceptual SSMP projects. Throughout the implementation and operation of SSMP projects, CNRA remains committed to meaningful consultations and development of partnership with all tribes with interests and concerns with SSMP projects. These 25 tribal nations were invited to the SCH tour in early December 2021, several of which participated.

3.15 U.S. Army Corps of Engineers

The Corps and DWR entered into an agreement under the Water Resources Development Act to facilitate funding of the NEPA process as well as permitting for SSMP projects. The Corps is the lead agency on the preparation of the NEPA EA and released the Project Description for public comment in March 2021. The SSMP Team is working closely with the Corps with the goal of completing the EA in the third quarter of 2022. The Corps has continued to prioritize development of the EA and engaged the federal cooperating agencies and SSMP team in regular meetings to further the NEPA and permitting process.

Corps staff are also working closely with the SSMP team to prioritize project review most recently completing the Aquatic Resources Determination for the vegetation enhancement projects at Clubhouse, West Bombay Beach, and Tule Wash so that construction could begin before the end of 2021. Corps staff are also working to support permit requirements for the New River Water Quality Improvement Project (described in Chapter 2).

In addition to the staff-level meetings, there is also senior-level coordination between the Corps and CNRA to advance Salton Sea project goals.

3.16 U.S. Bureau of Reclamation

The SSMP Team meets regularly with Reclamation to advance the implementation of the vegetation enhancement projects described in Chapter 2. The SSMP has obtained land access agreements with Reclamation to develop and implement habitat and dust suppression projects on up to 1,700 acres at Clubhouse, West Bombay Beach, and Tule Wash. As these projects are implemented, the State plans to develop additional project areas on Reclamation lands, notably, as associated with the San Felipe Fan (identified in Chapter 2).

Reclamation staff serve on the Long-Range Planning Committee and the MIP Working Group.

The SSMP Team has also entered into a funding agreement with Reclamation for \$870K to support implementation of dust suppression projects. The funds will be used to research, implement, and monitor various options to mitigate dust emissions that originate from the exposed lakebed. DWR will lead this effort and will coordinate with the appropriate State, federal, and local agencies, tribal governments, and stakeholders to plan and implement dust suppression projects at the Salton Sea. The grant provides a framework for how state and federal funds can be leveraged to provide additional public health and environmental benefits at the Sea.

3.17 U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service (USFWS) operates the Sonny Bono Salton Sea National Wildlife Refuge in Imperial County. USFWS partners with the SSMP Team on monitoring and information sharing and collaboration on desert pupfish relocation as part of the SCH Project. The USFWS also plays a key regulatory role for all SSMP activities that may affect federally

listed species at the Salton Sea. The USFWS is also a cooperating agency in preparing the EA for the Phase I: 10-Year Plan. USFWS staff serve on the Long-Range Planning Committee, the MIP Working Group, and chair the Science Committee. The USFWS is also an active member of the Quantification Settlement Agreement (QSA) Implementation Team and participates in quarterly meetings. This team is responsible for implementing the mitigation requirements of the QSA water transfer.

During 2021, a working group was formed with participants from the USFWS, CDFW, U.S. Geological Survey (USGS), DWR, University of Idaho, and Reclamation. The purpose of the group is to discuss the current selenium research and the various construction/ proposed projects affecting the marshes around the Salton Sea. A priority for this group is to identify risks, constraints, and opportunities for wetland enhancement and restoration around the Sea. This effort will also help create comprehensive documents to identify research needs and results, as well as standard protocols for data collection.

4 COMMUNITY ENGAGEMENT

The Salton Sea Management Program (SSMP) Team continued to place a strong focus on community engagement throughout 2021. With the advice and support of the Community Engagement Committee, the team jointly developed the Community Engagement Committee Charter 1.0. The goal of the Charter is to identify roles and responsibilities for this committee, as well as recognize the expertise that lies within the community and the members that comprise this committee. The SSMP Team seeks to develop and actively maintain an engagement program that enables consistent open lines of communication to be intentional at serving and engaging the frontline communities of the Salton Sea region, creating opportunities for community members to share concerns and provide input, and ultimately contribute to the delivery of projects that improve conditions for communities around the Salton Sea.



The SSMP Community Engagement Committee serves as the hub and primary venue to plan engagement activities and identify best outreach and involvement strategies for SSMP public events this includes coordination with the SSMP Long-Range Planning and the Science committees. The Community Engagement Committee consists of representatives from community-based organizations, stakeholder groups, local leaders, governmental agencies, and tribal governments. It enlists leaders of local community groups and NGOs to help guide SSMP engagement efforts, reach community members through varying communications channels, and increase community engagement in SSMP planning activities.

4.1 Community Engagement Committee Charter and Engagement Schedule

While the SSMP Team continues to work with the Community Engagement Committee to refine the Community Engagement Plan, key elements already are being implemented as the SSMP Team works to solicit input from community members and incorporate that input in to SSMP decisions. The Community Engagement Plan is aimed at institutionalizing practices to keep community members informed and actively engaged in the planning and implementation of the SSMP.

As identified during the development of the draft Community Engagement Plan in 2020, the Community Engagement Committee Charter 1.0 was developed during 2021. The Committee provided verbal and written input, as well as discussed it during the Committee meetings to support the SSMP Team to develop the Charter. This document lays out the Committee's charge in its advisory role, the Committee's composition, and how the Committee is determined to being inclusive of all by implementing accepted principles underlying equity and environmental justice.

The SSMP team also developed the engagement schedule for the year 2022 (**Figure 15**). This tentative schedule will help identify upcoming engagement opportunities as well as help prepare and coordinate with the Community Engagement Committee suitable outreach strategies and engage and involve community members to participate during these opportunities.

4.2 Engagement Activities

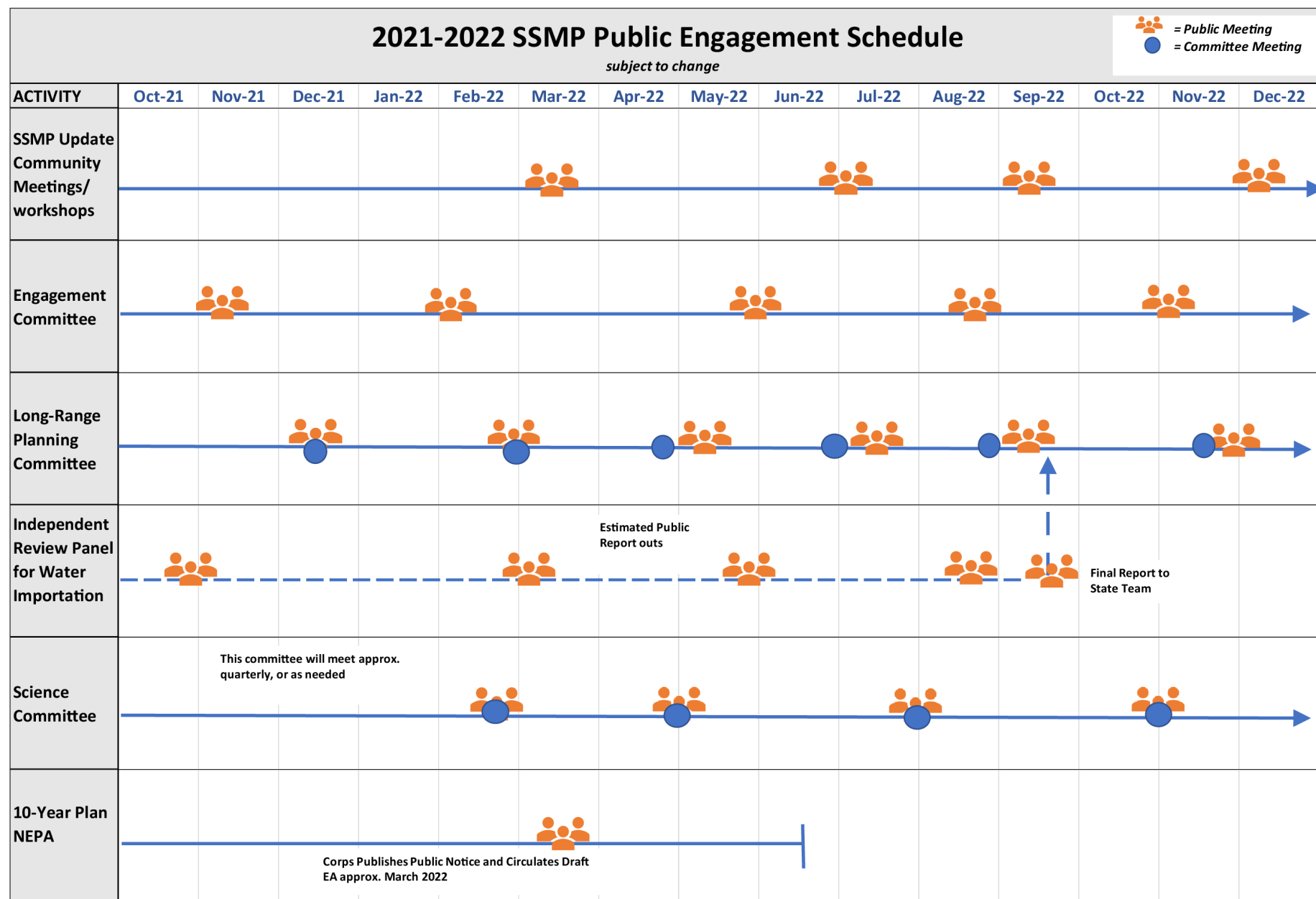
Public engagement through virtual meetings has occurred as a part of all major ongoing SSMP activities (virtual meetings have been required during this period on account of State and local public health guidelines during the COVID-19 pandemic). Over the past year, the SSMP Team has been involved in the following engagement activities:

- **Community Engagement Committee Meetings:** These meetings are held approximately every two months; in 2021 four meetings were held in April, June, September and November.
- **Long-Range Plan Meetings:** The SSMP Team hosted two public meetings to kick-off the plan development in August/September 2021. The Long-Range Plan Committee meetings are also open to the public, including the first set of meetings in December 2021.
- **National Environmental Policy Act (NEPA) Environmental Assessment (EA):** The U.S. Army Corps of Engineers (Corps) released the Phase I: 10-Year Plan project description for public comment in March 2021.
- **Independent Review Panel Meetings:** The Independent Review Panel hosted a virtual public workshop in October 2021. The Panel hosted a public "Meet and Greet" to connect with the community in November 2021 at locations in Imperial and Riverside Counties near the Sea.
- **Monitoring Implementation Plan Meetings:** A working group to advise the SSMP Team on monitoring needs for the restoration of the Sea met virtually twice.
- **Species Conservation Habitat (SCH) Project Outreach:** Kiewit Infrastructure West, the design-build contractor for the SCH project, developed a Community Outreach Plan that describes its community outreach

activities, being performed independently of and in coordination with State activities. The intent is to foster long-term community awareness of the work at the Salton Sea; inform the local community and stakeholders regarding the design, construction, and schedule of the SCH; foster cooperation and understanding of neighboring property owners and community organizations regarding construction impacts such as traffic and air quality mitigations; and communicate employment and other economic opportunities. Kiewit has provided tours of the site for members of the press and local community leaders and provides a regular construction update with a biweekly newsletter.

- **SCH Project Tour:** Early in December 2021, the SSMP team hosted its first major tour of the SCH Project. Tribal governments, regional elected officials, and a wide range of Salton Sea Partners joined California Natural Resources Agency (CNRA) Secretary Wade Crowfoot and the SSMP Team to view progress on the State's first large-scale project. The tour was followed by a presentation highlighting next steps in the Phase I: 10-year Plan, the long-term pathway beyond the 10-year Plan, and the importance of building partnerships with Tribal governments, local leaders, and communities. The visit also featured a question-and-answer session facilitated by Secretary Crowfoot and the SSMP Team.

Figure 15. Planned public engagement across different SSMP activities.



• **State Water Resources Control Board (SWRCB) Annual Workshop:**

The SSMP Team presented an update of last year's activities in April 2021 and developed the 2021 Annual Report.

In addition, the SSMP Team members participated in and provided updates at various other regional meetings and forums, including:

- Monthly Salton Sea Authority (SSA) Board meetings
- Quarterly Quantification Settlement Agreement (QSA) Joint Powers Authority (JPA) meetings
- Colorado River Basin Regional Water Quality Control Board SSMP update in October.
- North Shore community meeting in summer hosted by Leadership Council
- South Coast Air Quality Management District (SCAQMD) Community Air Quality meetings, hosted as part of the State's AB 617 requirements for air pollution reporting in disadvantaged communities.

Based on feedback from the Community Engagement Committee, stakeholders, and the public, the SSMP Team continues to improve and increase the ways we plan and conduct outreach and engagement. The SSMP Team combines various outreach strategies and tactics with the goal of reaching more people and improving the accessibility and meaningfulness of our outreach and engagement work. As previously acknowledged, the COVID-19 pandemic limited

our ability to organize in-person public meetings; and as a result, most meetings were held online. This was a challenge for the SSMP Program because broad-band internet can be limited or unreliable within the region. The SSMP Team worked with the Community Engagement Committee, partner organizations, local legislative representatives, faith-based groups, consultants, and others to help distribute meeting information online and directly within the region. This work included distributing information in English and Spanish on websites, social media, radio ads, television ads and grassroots canvassing. This year in addition to conducting meetings on Zoom with the call-in option, the SSMP Team worked with partners to stream meetings on Facebook Live—a platform that could be better accessed within the region compared to Zoom. Also important, the SSMP Team is intentionally considering other regional planning processes in its scheduling, to minimize conflicts and to enable the greatest possible attendance from interested stakeholders.

The SSMP Team continues to update the program website, www.saltonsea.ca.gov, to provide information on SSMP projects and opportunities to offer input. This year, the website was updated to include links to past meeting materials and recordings, a new webpage was added on the water importation independent review panel, and an effort was initiated to improve the Spanish translation on the website and linked material. This work will continue into 2022 in conjunction with improving the site to become more user-friendly. The State also continues to share news and

updates via the CNRA Salton Sea Management Program Update e-newsletter that debuted in November 2019. While the e-newsletter updates can be found and translated on our website, the SSMP Team is committed to sending these updates out in Spanish in 2022. The Salton Sea Management Program Update provides information on project delivery, upcoming meetings, and other relevant information, offers opportunities for feedback, and is distributed through the CNRA Salton Sea Listserv.

Comité Cívico del Valle (CCV), a community-based organization, has a contract with the State to perform a Salton Sea community outreach, education, and engagement campaign. The objectives of this campaign are to provide outreach and education to local residents about Salton Sea conditions, solutions, and management, and to engage community members and encourage participation in the decision-making process through attending meetings and workshops. In 2021, CCV assisted with outreach and implementation of the community workshops, conducted outreach via social media and advertising, drafted and distributed press releases, and produced and distributed radio and television ads and public service announcements. CCV also provided information about the SCH project, conducted a school flag program to educate students and families regarding air quality, and maintained a website and social media accounts with information. In early December 2021, CCV played

SCH site visit in December 2021.



a key role in assisting the SSMP in our first major tour of the SCH site for Salton Sea partners.

The State has contracted with the Better World Group (BWG) to facilitate community engagement towards the goal of developing feasible amenity projects that address the needs of community members and the State's funding parameters. BWG is conducting focused outreach with local communities and governmental and non-governmental organizations around the Sea to identify community amenities that could be developed.

4.3 Update on Local Salton Sea Presence

The SSMP Team increased its physical presence at the Sea by establishing a temporary local Salton

Sea Program office at the Species Conservation Habitat site near Westmorland, CA in Imperial County. The office is used by SSMP staff to work or conduct in-person meetings near the Sea, as needed. In 2021, the SSMP team added three positions to further enhance our presence in Imperial County, increasing a "boots on the ground" presence near the Sea. A goal to establish a permanent office in Imperial County is in progress, as local staffing increases, and Covid-related restrictions loosen.

4.4 Contacting the SSMP Team

We encourage the public, community partners, tribal nations, and other interested parties to get involved!

There are many ways that we encourage participation.

- Attend workshops and committee meetings: Most meetings are open to the public and are accessible virtually. There are updates on future meetings through newsletters, flyers, and announcements in traditional and social media.
- Communicate via email: Interested individuals can reach out by email at cnra-saltonsea@resources.ca.gov.

Website updates and newsletter: Information on current and future updates is provided on the SSMP website: <https://saltonsea.ca.gov/>. Interested individuals may also sign up to receive regular email updates about the SSMP.



5 PLANNING

In 2021, the Salton Sea Management Program (SSMP) Team intensified its planning activities on three main fronts to continue its strategic vision for delivering dust suppression and habitat projects in the remaining years of the Phase I: 10-Year Plan.



- Environmental planning involved the preparation of the draft Environmental Assessment (EA) for the Phase I: 10-Year Plan, being developed with six federal agencies, which will provide comprehensive National Environmental Policy Act (NEPA) compliance and streamline permitting and land access.
- The SSMP Team continues the process to meet its commitment for long-term planning beyond Phase I through the development of the Long-Range Plan to be submitted to the State Board by December 2022.
- The SSMP Team is developing a Monitoring Implementation Plan (MIP), to be finalized by spring 2022, to support the scientific understanding of current and future environmental conditions at the Sea, and to support future restoration.

This chapter also presents an overview of the current funding status and financial plan for the program. Additional planning efforts to enhance stakeholder engagement are described in Chapter 4.

5.1 Environmental Planning

Federal approvals for SSMP projects must be secured to implement any of these projects on federal lands or that require a permit from a federal agency. Accordingly, our team is working with the U.S. Army Corps of

Engineers (Corps), as the federal lead agency and five federal Cooperating Agencies (U.S. Bureau of Reclamation, Reclamation; U.S. Bureau of Land Management, BLM; U.S. Fish and Wildlife Service, USFWS; Bureau of Indian Affairs, BIA; Natural Resources Conservation Service, NRCS) to prepare an Environmental Assessment (EA) for the Phase I: 10-Year Plan. The EA will provide NEPA compliance for up to 30,000 acres of habitat and dust suppression projects as well as coverage for a Watershed Plan that will allow eligible projects to qualify for \$25M of federal farm bill funding through the U.S. Department of Agriculture, NRCS. This environmental document will cover projects and activities such as creation of aquatic habitat at the Alamo, New and Whitewater Rivers, the North Lake Pilot Demonstration Project, the Desert Shores Channel Restoration Project; the Audubon Wetland Restoration Project, as well as a variety of other dust suppression and habitat projects (**Figure 16**). Completion of this comprehensive NEPA process upfront will allow the SSMP Team to seek federal permits and access rights to implement projects on federal lands faster than would be possible by undergoing NEPA compliance for each project individually.

The draft Project Description for the Phase I: 10-Year Plan was released to the public in August 2020 for a 30-day comment period. Through this process, the SSMP Team sought additional public input to further refine the draft Project Description and identify a range of project alternatives to be considered in the EA. The State also sought feedback as to how the public would

like to access the Sea and what compatible community amenities should be prioritized. The SSMP Team held three virtual public meetings. Approximately 400 pages of oral and written comments and attachments were received and subsequently posted on the website.

The Corps initiated the formal NEPA scoping process in March 2021 by releasing an updated project description for public review. Going forward, the Draft EA will be released for public review in the first quarter of 2022, and the Corps will hold 2-3 public meetings during the review period. The EA is scheduled to be completed in the third quarter of 2022.

Concurrent with the preparation of the EA, discussions with regulatory agencies are ongoing to advance and obtain regulatory authorizations/permits, such as the USFWS Section 7 Consultation for endangered species impacts and the State Section 401 Certification. This comprehensive NEPA compliance and permitting approach will enable the SSMP to proceed with full implementation of Phase I: 10-Year Plan projects in a more streamlined manner.

5.2 Long-Range Planning Beyond SSMP Phase I: 10-Year Plan

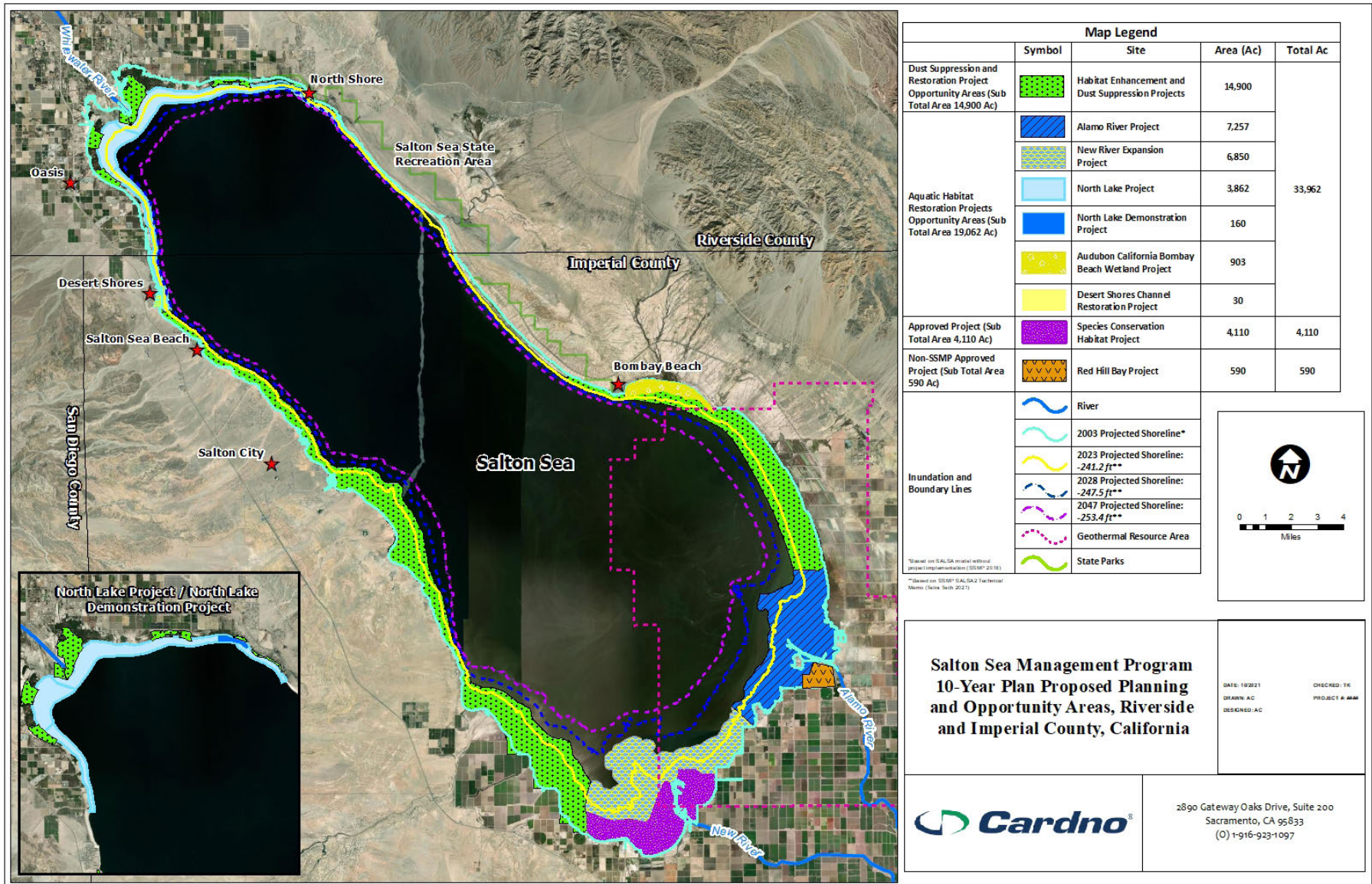
While the SSMP Team is executing the Phase I: 10-Year Plan, it is simultaneously developing a path forward for long-term restoration and management of the Sea beyond the first decade. The State Water Board Order WR-0134 requires that a Long-Range Plan be submitted by the

California Natural Resources Agency (CNRA) to the Water Board by 2022. One key input for the Long-Range Plan is a review of water importation concepts for the Sea. The SSMP contracted with the University of California, Santa Cruz (UCSC), in June 2021, to facilitate the establishment of an expert Independent Review Panel to conduct a feasibility study of water importation strategies for the Salton Sea. The outcome of this study will determine the technical, environmental, and economic feasibility of water importation for a potential whole-Sea solution. UCSC will also provide research and analytical support. By August 2021, UCSC established an independent water importation review panel. The Independent Review Panel is chaired by Dr. Rominder Suri, Professor and Chair of the Department of Civil and Environmental Engineering at Temple University and founding director of Temple University's National Science Foundation-funded Water, Environment, and Technology (WET) Center. The panel website¹ provides additional details on the schedule and biographies of panel members. UCSC has contracted with Kennedy Jenks Consulting and other specialty subcontractors to serve as a support team to an Independent Review Panel to provide research and analysis.

The Independent Review Panel will review project concepts for water importation that were submitted in 2018. The Panel also invited submissions for new concepts for water

¹ <https://saltonsea.ca.gov/planning/water-importation-independent-review-panel/>

Figure 16. Salton Sea project areas included in the NEPA EA process.



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importation in addition to those submitted in 2018, as well as updates to the 11 proposals submitted in 2018. Seven additional proposals were received. The results of the independent review will inform restoration options for the Long-Range Plan and are expected to be presented to the State by September 2022.

Two community meetings were held virtually in late August and early September to seek public input on the Long-Range Plan. The Independent Review Panel hosted a public workshop on October 27, 2021, also virtually. The public workshop began with a brief introduction to the Panel's charge, process, and timeline, after which the floor was opened to the public's comments. Subsequently, the Panel hosted a public "Meet and Greet" to connect with the community on November 7th at locations in Imperial and Riverside Counties near the Sea.

In December, the SSMP Long-Range Planning Committee was re-established and met for two kickoff public meetings to initiate the development of the Long-Range Plan. The purpose of this Committee is to assist the SSMP in its development of the Long-Range Plan by reviewing restoration actions and submitting recommendations to CNRA. The committee will seek input from the public and collaborate with the Community Engagement Committee to identify how to best engage with interested community members, community-based organizations, stakeholders, local leaders, tribal

governments, and others to incorporate feedback into the development of the plan.

Once completed, the plan will establish a strategy for long-term restoration. Options evaluated to inform this plan will include project build-out based on projected future water inflows within the Salton Sea watershed as well as water importation for a whole-Sea alternative, if importation is found to be feasible.

5.3 Organizational Capacity

In continued support of Salton Sea restoration, Governor Newsom proposed, and the Legislature approved, the addition of 10 staff positions dedicated full time to implementing the SSMP in the 2020-2021 fiscal year. Eight of these staff are expected to be based near the Salton Sea with at least six team members based in Imperial County.

The planning and implementation of restoration on such a large scale requires a variety of specialized expertise in planning and management efforts. This includes robust public communication and meaningful community engagement, outreach and involvement, efficient project management, effectiveness and compliance monitoring, air quality expertise, and biological monitoring and assessment. The addition of these positions will help the SSMP to fulfill these needs and meet the accelerated project delivery schedule. This will allow the SSMP to build and maintain momentum as the amount of work around the Sea necessarily increases to deliver projects. In addition, the establishment of

additional local Salton Sea presence will enhance business operations and allow the program to serve the public and surrounding communities more effectively.

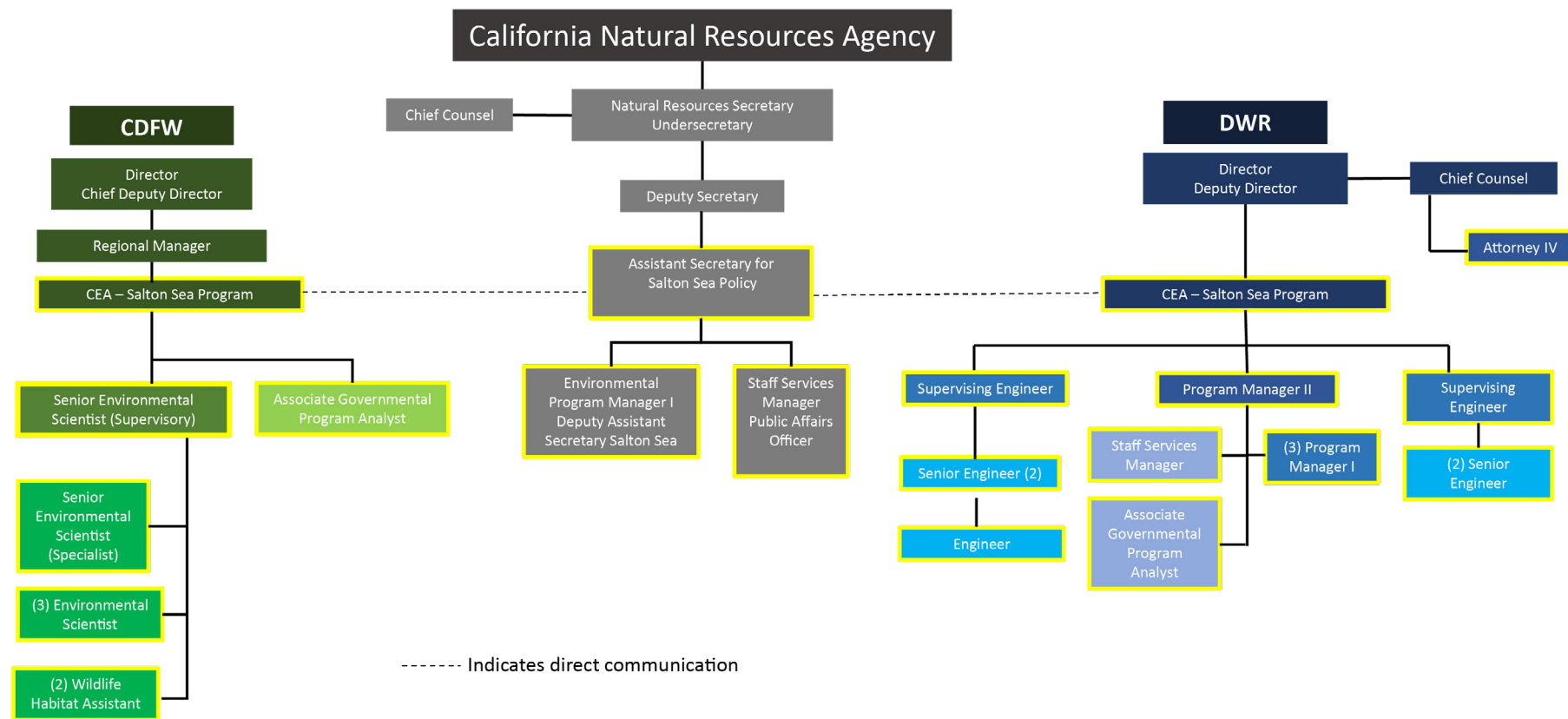
In 2020, the SSMP Team was reorganized as shown in **Figure 17**. Teams at California Department of Water Resources (DWR) and California Department of Fish and Wildlife (CDFW) are each led by a Career Executive Assignment (CEA) position. The SSMP Team consists of 27 positions assigned full time, and includes staff from CNRA (three positions), CDFW (nine positions), and DWR (15 positions) as shown in Figure 16. The SSMP Team filled several existing vacancies in 2021. CNRA filled a Deputy Assistant Secretary and a Public Affairs Officer position. CDFW and DWR each filled CEA leadership positions. DWR filled an Associate Governmental Program Analyst and Program Manager I positions. New staff members are presented in **Box 2**.

Additional recruitments are underway for six vacant positions. Besides increasing the number of staff on the SSMP Team, the SSMP has access to specialized staff through contracted services for planning, environmental analysis, engineering, outreach, and dust project implementation. This contract capacity is in addition to that in place for the Species Conservation Habitat (SCH) Project.

5.4 Funding Status and Planning

With the enactment of the 2021-2022 Budget Act, the State has now appropriated \$402.6 million in funding for Salton Sea-related activities since

Figure 17. Salton Sea Management Program organizational chart. Highlighted boxes indicate positions dedicated to the program.



the execution of the Quantification Settlement Agreement in 2003. Through fiscal year 2020-2021, California has committed over \$270 million in funding for a broad range of critical habitat, dust suppression, and water quality improvement projects at the Salton Sea. The 2021-2022 Budget Act committed another \$220 million in near-term General Funds, including \$40 million appropriated

this fiscal year (2021-22). The remainder will be appropriated in 2022-23 (\$100 million) and 2023-24 (\$80 million) through the annual budget act.

This section provides a high-level summary of expenditures and projects funded to date. A detailed breakdown of sources and expenditures of SSMP funding from a variety of State and federal sources are shown in Appendix B. Funding to date

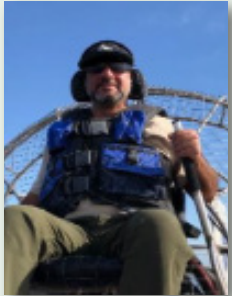
has allowed the State to: administer the SSMP; grow organizational capacity as described above; complete environmental documents and acquire permits; procure contracts and agreements for goods and services; conduct surveys and studies; improve community engagement, outreach, and involvement; and allocate funds for several

Box 2. Meet the New SSMP Staff.

Miguel Hernández was hired in September to be the SSMP's new public affairs officer at CNRA. Miguel is stationed in Imperial County and leads the SSMP's local outreach and communications efforts.



Tonya Marshall was previously the Senior Environmental Scientist (Supervisory) for CDFW within the SSMP. In December, she was promoted to the Salton Sea Program Manager for CDFW. She coordinates across the program and oversees all areas of the CDFW program.



Dr. Nasseer Idrisi rejoined the SSMP in November as a Program Manager I for DWR. Nasseer previously worked for CDFW in the Salton Sea Program in 2018. Nasseer will lead the DWR effort in developing the Monitoring Implementation Program as well as the Operations & Maintenance for the SCH to ensure ecological integrity of operations within the SSMP.



James Newcomb began serving as an Assistant Deputy Director and lead the Salton Sea team at the DWR in September. James will work with leadership across state government and oversees all areas of DWR at the Salton Sea.



Mario Llanos joined the SSMP team late in September as the Deputy Assistant Secretary for CNRA. Mario is based out of Imperial County and will provide leadership and interface with stakeholders and local leaders to advance projects at the Salton Sea that improve ecosystem health and protect air quality.



John Palenko joined the SSMP in July as an Associate Governmental Program Analyst. John works closely with SSMP's Budget, Contracts, Financial Processes, various DWR Programs and California Departments, and external stakeholders.

projects. Key areas where funding has been spent or allocated are summarized below:

- Implementation of the SCH Project, \$206.5 million (currently under construction).
- North Lake Pilot Demonstration Project, \$19.25 million in Proposition 68 funding. This project will be jointly developed by the SSMP, the Salton Sea Authority, and Riverside County. The Salton Sea Authority and the State completed a funding agreement for this project in 2021.
- The New River Improvement Project, \$28 million. The funding includes \$18 million in one-time General Fund support and \$10 million from Proposition 68.
- Habitat enhancement and dust suppression projects, \$20 million (approximately \$10 million has been allocated to the three vegetation enhancement projects that are currently underway on Reclamation lands).
- Additional expenditures of \$24 million have been committed for technical and administrative support over fiscal year 2021-2024, and specialized contractor support for environmental compliance planning and permitting, project design and analysis, monitoring implementation, and the long-range planning.

The next tranche of projects as described in Chapter 2 will be funded with \$220 million of new funding through 2024 and any remaining unused funds from previously authorized funding sources. For example, \$24.6 million of Proposition

68 funds is currently being used as a contingency fund for the SCH Project and approximately \$10 million of the \$20 million allocated for habitat enhancement and dust suppression projects described above are still not committed to a specific project. Completion of the NEPA EA and associated Watershed Plan is expected to allow the SSMP to secure an additional \$25 million for eligible projects that qualify for federal farm bill funding through the U.S. Department of Agriculture, NRCS.

The SSMP Team anticipates these existing funding sources will cover only a portion of the funding needed to meet all commitments identified in the 10-Year Plan. The SSMP Team intends to update funding requirements after completing the Phase I: 10-Year Plan EA in 2022 as project types, operations, locations, and other costs will be better defined and will allow more accurate cost estimates.

In recognition of the funding needs, the SSMP Team continues to develop a broader strategy for federal funding and partnership opportunities to assist with implementation of the SSMP. The NRCS has extended a \$650K cooperative agreement to assist the SSMP to prepare a Salton Sea Watershed Management Plan under the NRCS Watershed Flood Prevention Operations Program. As mentioned above, this will enable the State to qualify for \$25 million of additional NRCS funding for implementation of projects included in the plan. Reclamation has also awarded a \$870K grant to the SSMP to proactively research,

identify and implement options to mitigate dust emissions from exposed Salton Sea lakebed. These projects are in furtherance of meeting the SSMP 10-Year Plan targets. The grant may be amended to increase the funding award and includes a state cost share, providing a model framework for how state and federal funds can be leveraged to provide additional public health and environmental benefits at the Sea.

5.5 Program Management

Two broad-range efforts are underway to assist the SSMP Team with tracking projects, gathering environmental data, and data management for a Salton Sea science program.

5.5.1 Program Management Tool

The SSMP Team has developed a Program Management Tool (PMT) to track tasks and the schedule of major SSMP elements: planning and permitting, project delivery, engagement and outreach, and administration and budget planning. The PMT allows managers to identify critical path elements and staffing needs across SSMP elements. Information on individual projects is captured in a framework (based on Microsoft Project Online) to show the detailed tasks, durations, and dependencies for planning and implementation. The information used in the PMT will be used to inform future development of a public facing interface that will be advanced in 2022.

5.5.2 Salton Sea Science Program and Monitoring Implementation Plan

As the SSMP Team is working to initiate projects, it is collaborating and coordinating with federal, state, and local partners to collect environmental conditions data at the Sea. The SSMP Team is in the process of developing a comprehensive and integrated science program that will prioritize, coordinate, and oversee monitoring, data collection, data analysis, and an adaptive management strategy to support restoration actions at the Salton Sea. Variables to be monitored will include biological resources (avian, fish, plankton, and macroinvertebrate), hydrology and water-quality, geography and geology, air-quality, and socioeconomics. Understanding the success of restoration actions at the Salton Sea and long-term trends in environmental conditions will depend on current and reliable information collected in partnership with other regional stakeholders. While the additional staff positions provided to the SSMP (as discussed in Section 3.3) will support these efforts, a strong stakeholder presence is also seen as key for establishing a successful comprehensive Salton Sea science program.

A Monitoring Implementation Plan (MIP) is being developed and will guide measurement of important resources at the Salton Sea, as described above. The MIP will provide

a monitoring framework and priorities for environmental indicators at the Salton Sea. In 2021 the MIP was further developed through Working Groups with input from agencies and stakeholders with expertise and monitoring experience in hydrology, air quality, water quality, biology, and socioeconomics. The MIP Working Groups included members from CDFW, DWR, Imperial Irrigation District (IID), Coachella Valley Water District (CVWD), Imperial County Air Pollution Control District (ICAPCD), South Coast Air Quality Management District (SCAQMD), Salton Sea Authority, Regional Water Quality Control Board, Reclamation, the Desert Institute, Pacific Institute, California Audubon, Comité Cívico del Valle (CCV), and Alianza. The revised draft MIP will be sent to a newly reconvened Science Committee in early 2022 for scientific review and comment. The final MIP is expected to be completed in Spring 2022.

Data management is also a component of the implementation of the MIP. California Assembly Bill 1755 (Open and Transparent Water Data Act, AB 1755) requires state agencies to make data publicly available and to develop protocols for data sharing, documentation, quality control, and promotion of open-source platforms and decision support tools related to water data. Managing the large amount and variety of data collected for the Salton Sea program in an organized, efficient, and

useful manner will be important for maximizing the utility of the data, allowing reporting for internal and external users over the many years that the program is planned to be in existence, and helping to meet the statewide AB 1755 goals related to open data access. Public access to Salton Sea data will be via the CNRA Open Data Platform, online at data.cnra.ca.gov.

To achieve the data access goals, a separate SSMP data management system (SSMP-DMS) is envisioned to centralize access to all DWR and CDFW data associated with the Salton Sea, to provide streamlined import and export of these data, and to provide tools for data visualization, analysis, and reporting. Because of the large volume of data that will be collected by multiple partner organizations, the system will automate data imports to the SSMP-DMS where possible. For example, the SSMP-DMS could be set up to automatically access any data being collected via sensors (e.g., high frequency data on air quality related parameters that are related to performance of the planned dust suppression projects). For other types of data, an easy-to-use data import interface will be developed. To ensure data are of the highest quality, the SSMP-DMS will include tools to streamline the quality assurance of these data. The first phase of development of the Salton Sea database management system is expected to be completed in 2022.

6 NEXT STEPS

In the near term, the Salton Sea Management Program (SSMP) Team is fully focused on completing the projects in progress, and on developing project concepts necessary to complete the vision outlined in the Phase I: 10-Year Plan.

With the benefit of experience of projects completed and in progress, the team has made advances in developing schedules for project development, from conceptual design and permitting to final design and construction. As the State is not a significant landowner at the Salton Sea, the SSMP Team is involved in extensive engagement with a wide range of landowners around the perimeter of the Sea, reflecting recognition of the critical role of land access.



Also related is the issue of accessing water rights for projects that require surface water for completion as well as land access needed for the installation of groundwater wells. The SSMP Team is prioritizing project construction based on success in securing the necessary land access and associated water rights. As a schedule driver, land access processes with multiple landowners were initiated in 2020 and for the Reclamation sites the land agreements were secured at the end of 2021. Other long-term easements are still in process.

This chapter highlights the key next steps to be taken in the years ahead, in terms of project development and positioning for future elements of the Phase I: 10-Year Plan. While specific project concepts for future years are outlined to show the SSMP Team's approach to meet the State Water Board Order WR 2017-0134 targets, the team is open to meaningful engagement with the community to further refine and revise each of these concepts.

6.1 Key Program Activities in 2022

The year 2022 will be a period of major advancement in constructing the Species Conservation Habitat (SCH) project. As noted earlier in this report, major components have been constructed such as the causeway for the saline water intake, initial fill of certain berms and levees, and an interceptor ditch to provide Desert pupfish connectivity among Imperial Irrigation

District's (IID's) agricultural drains. Construction activities will continue through 2022. The SCH project will cover approximately 4,100 acres, and construction is expected to be completed by the end of 2023.

Significant progress on vegetation enhancement projects on Reclamation land at Clubhouse, Tule Wash and West Bombay Beach will occur (~1,500 acres), including completion of physical modifications to help protect and facilitate plant growth and improve plant survival rates, seeding and planting, and development of water supplies for vegetation. This year will also include additional collaboration with Reclamation to develop groundwater supplies for irrigation, and with the State Board to develop surface water rights.

The SSMP Team and U.S. Army Corps of Engineers (Corps) will work on completing the Environmental Assessment (EA) for the Phase I: 10-Year Plan. The EA will provide comprehensive National Environmental Policy Act (NEPA) compliance for subsequent Phase I: 10-Year Plan projects. The EA is scheduled to be completed by the third quarter of 2022. Upon completion, this comprehensive NEPA compliance process will enable the SSMP to proceed with project-specific permitting and access agreements on federal lands in an expedited manner. In addition, the Watershed Plan will be completed and allow the SSMP to leverage federal Farm Bill funding opportunities for future qualifying SSMP projects.

The SSMP Team will complete the Long-Range Plan for submission to the State Water Board in

2022. Related to this effort, the Independent Review Panel will prepare its report on the feasibility of long-term water importation options by September 2022.

The North Lake Demonstration project (~160 acres, supported by a contract between California Department of Water Resources [DWR] and the Salton Sea Authority [SSA]) will progress, including selection of a contractor to design and construct the project. Under current plans, construction is expected to begin by late fall/ winter of 2022.

Other projects led by partner organizations will be advanced in 2022. Audubon California will move forward on implementing a wetland project spanning ~900 acres near the town of Bombay Beach. Conceptual designs for this project will be developed, and environmental compliance for this project will be addressed through the EA being developed for the Phase I: 10-Year Plan. The Desert Shores Channel Restoration Project (~30 acres) will move toward implementation in 2022. In total, ~1,090 acres of partner-supported projects are expected to advance, including securing of contractors for construction.

Concepts for additional projects will be advanced by the SSMP Team, including the development of project descriptions to seek land and water access and permits. The following projects, all within the footprint of the opportunity area of the EA will be advanced: the North Lake Project (consisting of 1,000 – 1,500 acres of aquatic habitat); New

River Expansion Project (to include ~3,500 acres of aquatic habitat); the San Felipe Fan Restoration Project (~660 acres); the Wister Unit Marsh (~150 acres); and the SCH Vegetation Project (~600 acres). These constitute up to 6,400 acres of SSMP-led projects. Additional smaller projects, described in Chapter 2, may also be developed, pending land access agreements with a target of ~6,800 acres.

On the science front, the final Monitoring Implementation Plan (MIP) will be published in spring 2022 and will guide ecosystem-wide air, water, and biota monitoring activities around the Sea.

Based on the need for meeting future year State Board Order targets, the SSMP seeks to have 4,000 – 5,500 acres of additional land access to start planning additional aquatic habitat and vegetation enhancement/dust suppression projects. Given existing land access for the SCH and the vegetation restoration projects, the team expects to have land access for a cumulative ~10,300 acres.

These and related projects are expected to be supported with the additional commitment of the \$220M of state funding over 2022-2024.

6.2 Key Program Activities in 2023

Of the aquatic habitat projects underway, the SCH Project is expected to be completed in 2023. Other project concepts initiated in 2022 will also advance toward completion, such as the North Lake Pilot Demonstration Project and the Audubon

wetlands project. The vegetation enhancement projects on Reclamation land at Clubhouse, Tule Wash and West Bombay Beach are expected to be completed.

The SSMP Team's goal is to obtain an additional 4,000 – 5,000 acres of land access in 2023 to implement future aquatic habitat and vegetation enhancement/dust suppression projects (cumulative acreage of ~14,800 acres).

Permitting is expected to be completed, designs developed, contractors secured, and construction begun for the remaining projects identified in Section 6.1 (North Lake Project, New River Expansion Project; the San Felipe Fan Restoration Project; the Wister Unit Marsh; and the SCH Vegetation Project), most of which are led by the SSMP.

6.3 Key Program Activities in 2024

To meet the annual State Water Board targets, the SSMP Team goal is to obtain an additional 2,000 – 3,000 acres of land access in 2024 to implement future projects (cumulative ~17,300 acres). Specific locations and landowners will be identified, subject to the actual exposure of lakebed which is dependent on uncertain inflows.

Projects begun in 2023 are expected to be completed or nearing completion, including the North Lake Project, New River Expansion Project, the San Felipe Fan Restoration Project, the Wister Unit Marsh, and the SCH Vegetation Project. Additional shallow habitat projects may be developed at other locations around the Sea



on newly exposed lakebed. Current analysis of satellite data suggests several thousand acres of potential wetland locations around the perimeter of the Sea will be sustained and enhanced through the activities of the SSMP.

6.4 Meeting State Water Board Order WR 2017-0134 Targets

The State Water Board Order sets out annual targets that the SSMP Team has been actively working toward. While the completion of projects has been lower than the acreage targets, the team anticipates a significant increase as some major projects are completed in coming years, as shown in **Table 2**.

A comprehensive project pipeline and schedule will be developed following completion of the 10-Year Plan NEPA EA process in 2022 to forecast the project delivery schedule into the future through 2028. The team is working diligently toward the acreage targets in the order through building in-house technical capacity and through partnerships with other interested entities all around the perimeter of the Sea. Ongoing efforts for project implementation over the past two years have highlighted the need for landowner cooperation and timely land and water access as a key step in the SSMP Team meeting its annual commitments to the State Water Board.

Table 2. SSMP Projects Summary Table

Year End Goal	WR 2017-0134 Target Acres	Cumulative WR 2017-0134 Target Acres	Completed and Planned Land Access Acres	Cumulative Land Access Acres	SSMP Completed Acres	SSMP Cumulative Completed (Mid-Range)	Project Status
2018	500	500					
2019	1,300	1,800	4,100	4,100			
2020	1,700	3,500	4,100	4,100	755	755	Three interim dust suppression projects (755 acres) completed in 2020
2021	3,500	7,000	1,700	5,800	522	1,277	<p>SCH Project (approx. 4,100 acres) – Under construction. To be completed in 2023. (Note: 22 acres of Desert Pupfish habitat created and 500 acres of interim dust control implemented within the SCH footprint in 2021.)</p> <p>Three Vegetation Restoration Projects on Reclamation Lands (Approx. 1,700 acres) – in planning (environmental compliance, permitting, land access, water supply). Construction started in late winter 2021:</p> <ul style="list-style-type: none"> • Clubhouse Vegetation Enhancement Project (399 acres); • Tule Wash Vegetation Enhancement Project (1,217 acres); • Bombay Beach West Vegetation Enhancement Project (91 acres)
2022	1,750	8,750	4,000 – 5,000	10,300	1,500	~2,800	<p>Partial completion of vegetation restoration projects on Reclamation lands (~1,500 acres).</p> <p>Implementation of the following projects (~1,090 acres):</p> <ul style="list-style-type: none"> • North Lake Pilot Demonstration Project (160 acres) – in planning (environmental compliance, permitting, land access, water supply). Anticipated construction start date in 2022. • Desert Shores Channel Restoration Project (30 acres) – in planning (environmental compliance, permitting, land access, water supply). Anticipated construction start date in 2022. • Audubon Bombay Beach Wetland Project (900 acres) – in planning (environmental compliance, permitting, land access, water supply).

Table 2. SSMP Projects Summary Table (Contd.)

Year End Goal	WR 2017-0134 Target Acres	Cumulative WR 2017-0134 Target Acres	Completed and Planned Land Access Acres	Cumulative Land Access Acres	SSMP Completed Acres	SSMP Cumulative Completed (Mid-Range)	Project Status
2022 (contd.)							<p>Initiate permitting and preliminary design of the following projects (~6,800 acres):</p> <ul style="list-style-type: none"> • New River Expansion Project (~3,500 acres): Initial planning, land access, water source identification, preliminary design. • North Lake Project (~1,000-1,500 acres): Initial planning, land access, water source identification and preliminary design. • San Felipe Fan Restoration Project- wetland and vegetation enhancement (~660 acres – Reclamation parcels only) – in planning (environmental compliance, permitting, land access, water supply). • Wister Unit Marsh Bird Habitat Restoration Project (~150 acres) – in planning (environmental compliance, permitting, land access, water supply). • SCH Vegetation Project (~600 acres): Initial planning, land access and preliminary design. • Vegetation Enhancement Projects on IID parcels at Tule Wash and Clubhouse (~400 acres): Land access and detailed design. <p>Identify additional projects, such as Bombay Beach, North Shore and other emergent wetlands (~500 acres).</p>
2023	2,750	11,500	4,000 – 5,000	14,800	5,300 – 6,300	7,500*	<p>SCH Project Completed (~4,100 acres).</p> <p>*1,255 acres of interim dust control in 2020 and 2021 are not double counted here.</p> <p>Begin construction of Audubon Wetland Project. Complete vegetation enhancement projects on Reclamation lands (~200 acres)</p> <p>Complete an additional 1,000-2,000 acres of habitat and dust suppression projects, from the set of projects initiated in 2022.</p>

Table 2. SSMP Projects Summary Table (Contd.)

Year End Goal	WR 2017-0134 Target Acres	Cumulative WR 2017-0134 Target Acres	Completed and Planned Land Access Acres	Cumulative Land Access Acres	SSMP Completed Acres	SSMP Cumulative Completed (Mid-Range)	Project Status
2024	2,700	14,200	2,000 – 3,000	17,300	6,900	~14,200	GOAL is to complete all projects listed above by end of 2024 to achieve 14,200 acreage target in State Water Board Order WR 2017-0134.
2025	3,400	17,600			A comprehensive project pipeline and schedule will be developed following completion of the 10-Year Plan NEPA EA process in 2022.		
2026	4,000	21,600					
2027	4,000	25,600					
2028	4,200	29,800					

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ACRONYMS AND GLOSSARY

BIA	Bureau of Indian Affairs	EA	Environmental Assessment, part of the National Environmental Policy Act (NEPA) compliance process
BLM	U.S. Bureau of Land Management	ICAPCD	Imperial County Air Pollution Control District
CARB	California Air Resources Board	IID	Imperial Irrigation District
CCV	Comité Cívico del Valle, a community-based organization	JPA	Joint Powers Authority (see QSA JPA)
CDFW	California Department of Fish and Wildlife	NEPA	National Environmental Policy Act
CEQA	California Environmental Quality Act	NGO	nongovernment organization
CNRA	California Natural Resources Agency	NRCS	Natural Resources Conservation Service
Corps	U.S. Army Corps of Engineers	O&M	operations and maintenance
CRBRWQCB	Colorado River Basin Regional Water Quality Control Board	PM	particulate matter, in this context refers to suspended dust in the air
CVWD	Coachella Valley Water District	BIA	Bureau of Indian Affairs
DSAP	Dust Suppression Action Plan	PM10	coarse suspended particulate matter, less than 10 microns
DWR	California Department of Water Resources	PMT	Program Management Tool

QSA	Quantification Settlement Agreement, an agreement among state, federal, and local agencies allowing the transfer of irrigation water from IID to the San Diego County Water Authority, Coachella Valley Water District, and Metropolitan Water District of Southern California for urban use	SCH	Species Conservation Habitat
QSA JPA	Joint Powers Authority, created to fund mitigation activities to address impacts of agricultural-to-urban water transfers from the QSA	Sea	Salton Sea
Reclamation	U.S. Bureau of Reclamation	SSA	Salton Sea Authority
RFP	Request for Proposal	SSMP	Salton Sea Management Program
SCAQMD	South Coast Air Quality Management District	SSRF	Salton Sea Restoration Fund
SCCSD	Salton City Community Services District	SWPPP	Storm Water Pollution Prevention Plan
		SWRCB	State Water Resources Control Board
		TMDCI	Torres Martinez Desert Cahuilla Indians
		USFWS	U.S. Fish and Wildlife Service
		USGS	U.S. Geological Survey





APPENDIX A. CURRENT CONDITIONS AT THE SALTON SEA

This appendix provides an update on current conditions in the Salton Sea region, including Salton Sea inflows, elevation and salinity, exposed lakebed, water quality, and data on bird and fish abundance.

A.1 Inflows

Table 3 presents water inflow to the Salton Sea by year and river for the calendar years 2016 to 2021. Despite the ending of mitigation water flows at the end of 2017, total estimated inflows to the Salton Sea remain stable overall. In 2021, total inflow was 1,060 thousand acre-feet, slightly higher than the inflow in 2020. While recent inflows (2016–2021) have remained relatively stable, they are nonetheless much lower than the rate of evaporative loss from the surface of the Sea. For this reason, the Sea continues to decline in elevation.

Table 3. Water Inflow by Year and River, in thousand acre-feet

Year	Whitewater River	Alamo River	New River	Sum of River Inflow	Inflow including drains, small creeks, and GW
2016	47	548	421	1,016	1,116
2017	46	534	398	979	1,075
2018	45	572	330	947	1,041
2019	52	557	317	927	1,019
2020	51	552	327	930	1,022
2021	47	580	338	964	1,060

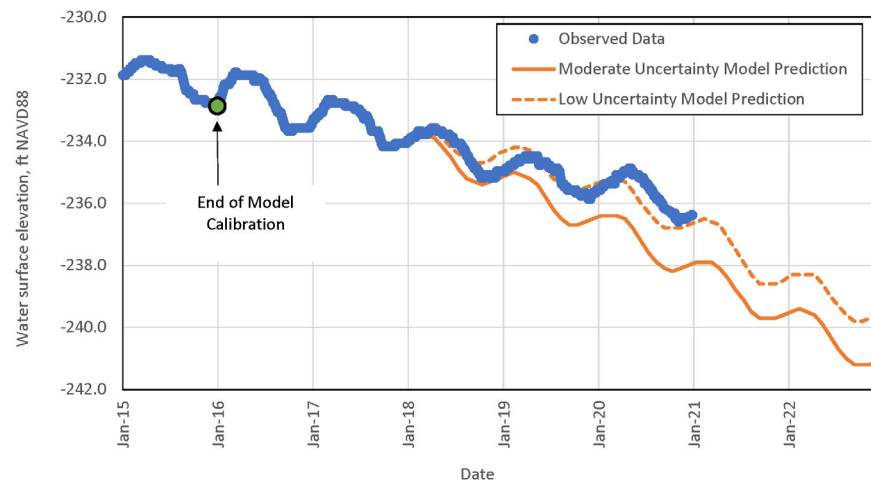
A.2 Salton Sea Elevation and Salinity

The elevation of the Sea is measured daily, and lakebed exposure can be estimated from the elevation-area relationship of the Sea. For the SSMP, there is a need to develop future projections of lakebed exposure, on the timescale of 5-10 years, because a large fraction of the State Board Order WR-0134 project construction will likely occur on land that is currently underwater. Thus far, the SSMP Team has used a computer program developed by IID called SALSA2 (Salton Sea Elevation Model version 2) to estimate future changes in elevation. SALSA2 assumes projected future

inflows to calculate the elevation and salinity of the Sea. Because future flows are only estimates, the SALSA2 model runs consider two flow ranges, one with conditions similar to what they are currently and another that assumes a larger reduction in inflows. These model outputs can be used to bracket near-term expected elevations and lakebed exposure for planning purposes.

The water surface elevation measured on December 31, 2021, was 237.1 feet below mean sea level. **Figure 18** illustrates the observed Salton Sea water surface elevation compared with SALSA2 model predictions. The water surface elevation

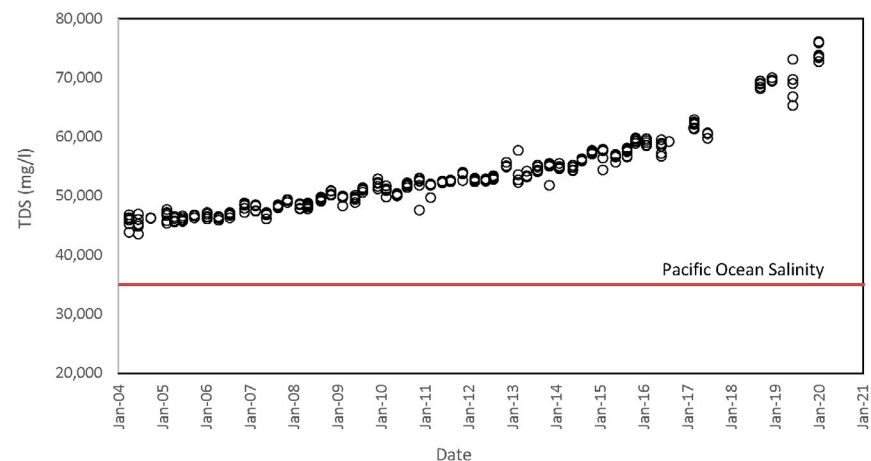
Figure 18. SALSA2 model prediction and actual water surface elevation (NAVD88 Datum).



in 2020 was generally consistent with model predictions assuming “low uncertainty” flows (i.e., inflows similar to current levels). However, the water surface elevation in 2021 has begun to deviate from the low uncertainty line. The actual water surface elevation as measured at the end of 2021 is approximately 1-foot higher than that predicted by the low uncertainty flow model run, largely because 2021 inflows have remained higher than the low uncertainty flow projections. If future flows decline following the low uncertainty projections, another five feet of elevation decline is expected over the next five years. If flows remain at current levels, there will still be a decline, albeit less than 5 feet.

Salinity data are collected by Reclamation (**Figure 19**). For each date when data are collected, there are typically six data points representing surface and bottom samples taken at three separate locations at the Sea. Salinity at the Sea has continued to increase over the past two decades and appeared to show a more rapid increase over the most recent period. The most recent reported salinity levels sampled in January 2020 average 74,000 mg/l, greater than twice the salinity of ocean water. The January 2020

Figure 19. Observed salinity (expressed as total dissolved solids, or TDS) at the Salton Sea (2004-2020).



average salinity of 74,000 mg/l is a large increase over the prior average salinity value of 69,000 mg/l, measured in June 2019. Salinity sampling at later dates in 2020 was not conducted because of COVID-19 restrictions and because of challenges in boat ramp access due to declining Salton Sea elevations, it is not yet evident whether the increasing salinity trend continued in 2021.

A.3 Exposed Lakebed Area

Since 2003, there has been a steady decline in the surface water elevation of the Salton Sea. IID used satellite imagery to estimate 23,917 acres of exposed lakebed at the end of 2019, with a baseline of 0 in 2002 (IID, 2021, Attachment 1). After 2019, exposed lakebed area estimates have not been reported using satellite imagery. Lakebed exposure may be estimated using measured water elevations and elevation-area relationships. Given the reported elevation changes in the prior section, an additional lakebed exposure of 2,400 and 2,200 is estimated for the years 2020 and 2021, respectively. Therefore, 28,500 acres of lakebed may be estimated to have been cumulatively exposed between 2003 and 2021. The emissivity of the

exposed lakebed is not uniform and depends on local sediment conditions. Approximately 4,700 acres of the exposed lakebed has developed a vegetation cover, making it less likely to be emissive.

A.4 Bird Survey Data

Audubon California facilitated surveys during August through November of 2020 across 14 points located around the Salton Sea shoreline which focus on shorebirds, waterfowl, wading birds, and seabirds (**Figure 20**).

Regular Fall surveys of the shorebird population at the Salton Sea has been coordinated by Point Blue Conservation Science for the past 9 years. Results of Salton Sea shoreline surveys of shorebird populations by Point Blue Conservation Science from 2012 to 2020 are presented in **Figure 21** and **Table 4**. Data shown are summed for all locations around the perimeter of the Sea. The shoreline has been challenging to access, owing to the receding water and increased vegetation growing at the drain mouths. Surveys for 2021 have been conducted, but data has not yet been summarized.

Figure 20. Locations of 2020 Audubon waterbird survey sites (Audubon, 2020)



Figure 21. Bird shoreline survey counts at the Salton Sea from 2012 to 2020

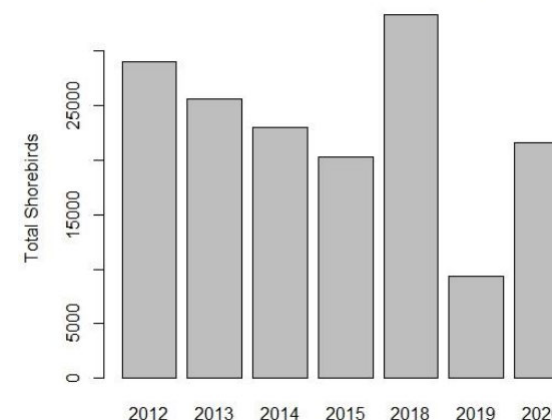


Table 4. Bird Shoreline Surveys at the Salton Sea from 2012 to 2020

Year	Method	Segments (partial or complete)	Total Shorebirds
2012	airboat	19	29000
2013	airboat	18	25566
2014	airboat	19	23035
2015	airboat	19	20336
2018	foot + atv	12	33305
2019	foot	9	9330
2020	foot + atv	11	21552

Burrowing Owls have continued to be observed in burrows at areas of created surface roughening and exposed lakebed where piles of debris or vegetation are located. Pre-construction monitoring occurred across the SCH site and identified many Burrowing Owls utilizing the site. Project activities were coordinated to prevent any impact on the species.

CDFW staff continued to monitor several wetland habitats that are establishing around the southern shoreline of the Sea and conducted marsh bird surveys at several locations. Yuma Ridgway's Rails and California Black Rails were confirmed within the SCH project site and project activities were coordinated to prevent impacts to the species, allowing the birds to utilize the habitat for another breeding season.

Monitoring of colonial nesting birds continued around the lake including the nearby managed areas. An increased number of Egrets, Herons and Double-crested Cormorants successfully nested and fledged young at the Ramer Lake Unit of the Imperial Wildlife Area compared to past years. As the lake continues to recede large snags and features such as Mullet Island lose the protective water surrounding them and these other nearby water bodies are of increased importance.

USFWS Staff conducted regular surveys for a variety of biological resources on and around their property during 2021 including White Goose and Sandhill Crane counts, marsh bird surveys, and nesting seabird surveys.

Imperial Valley White Goose and Sandhill Crane surveys are carried out throughout the Valley where the species is present. White geese surveys are conducted as point count at the refuge, local hunt clubs, the shoreline, and the Wister Unit over the course of the day by the refuge staff. Sandhill Crane counts are even roost surveys conducted at Unit 1 and Keystone.

Marsh bird surveys were conducted on the refuge in 2021 and detected an increase in Yuma Ridgway's Rails and Virginia Rails, as well as a significant number of Black Rails. It is expected that various marsh birds will be displaced from the current SCH site as construction continues and these individuals may move to nearby suitable habitat including the Sonny

Figure 22. Wintering geese surveys from 1979-present

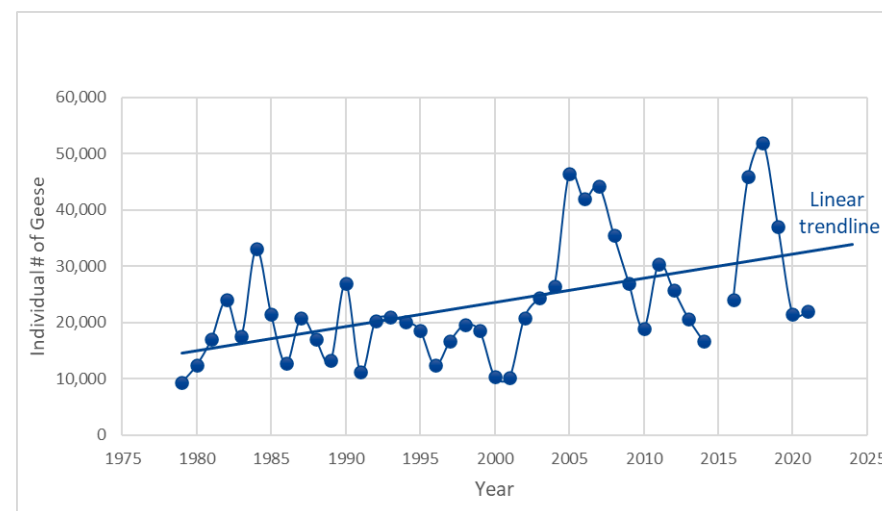


Figure 23. Fall and evening roost Sandhill Crane surveys from 1984-present

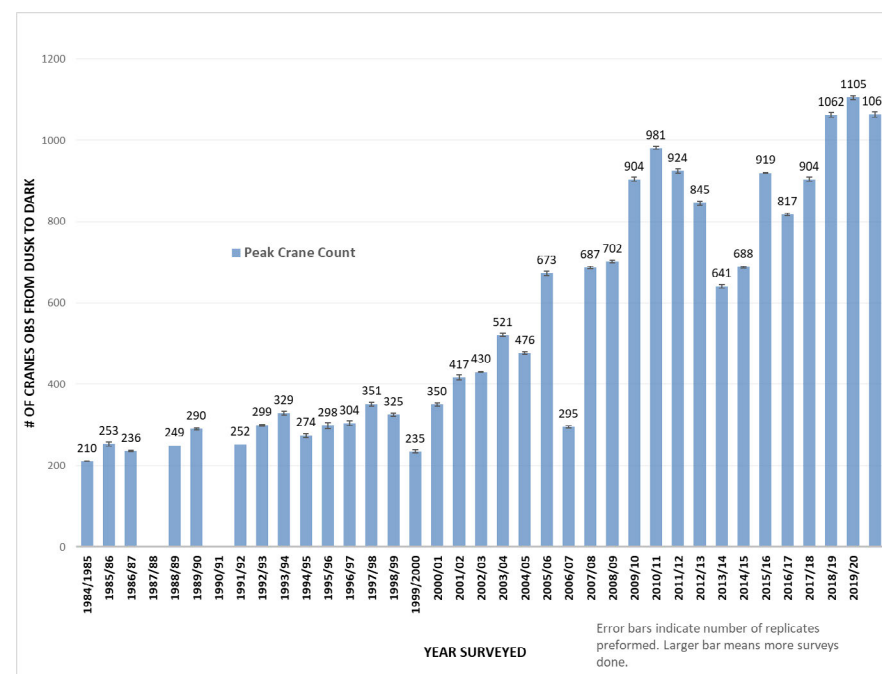
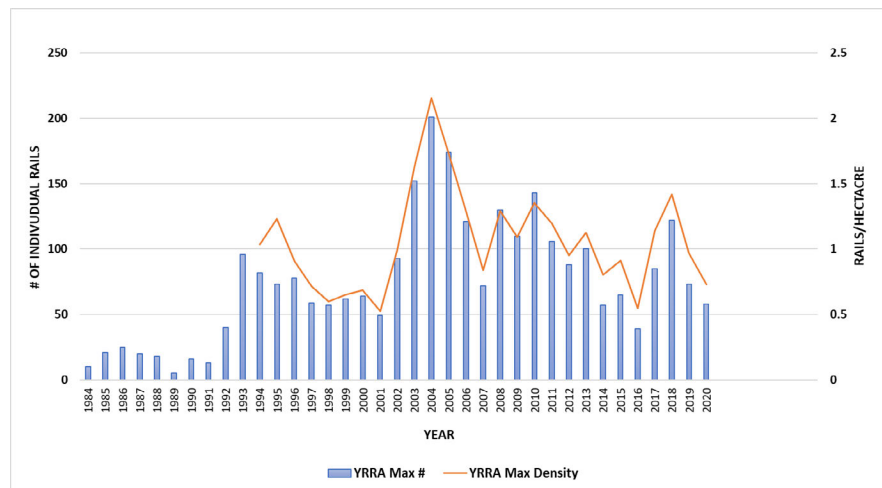


Figure 24. Sonny Bono Salton Sea NWR Yuma Ridgeway Rail surveys 1984-present



Bono Refuge. It is anticipated that we may see an increase in rails detected during the USFWS marsh bird surveys in 2022.

Compared to last year (2020) all nesting seabirds (Laridae) arrived and departed a month earlier. For Gull-billed Terns there were 68 more adults, 82 more nests, and 26 more fledglings compared to last year. Island vegetation removal combined with the installation of chick shelters contributed towards the increased nesting success. Coastal laridae colonies reported seeing lesser numbers of Gull-billed Terns and it is assumed that more birds decided to remain at the Salton Sea due to better nesting conditions. For Caspian Terns there were 55 more adults, 56 more nests, and 8 more fledglings compared to last year. For Black Skimmers, there were 29 fewer adults, 28 more nests, and 19 fewer fledglings compared to last year. Both Caspian Tern and Black Skimmer showed signs of heat stress; most Caspian Tern chicks died within weeks of hatching while the Black Skimmer single egg nest abandonment was a common occurrence.

The Idaho Cooperative Fish and Wildlife Research Unit initiated a study in 2020 with biologists from Sonny Bono Salton Sea National Wildlife Refuge to better understand the selenium risk to Yuma Ridgeway's

Figure 25. Locations surveyed in Harrity 2020



rails in unmanaged marshes around the Salton Sea (**Figure 25**). The project aims to document the frequency, phenology, and destination of annual migratory and dispersal movements by Yuma Ridgeway's rails and determine the selenium risk to Yuma Ridgeway's rails in managed and

unmanaged marshes around the Salton Sea. Results from 2020 include the first documented migrations from rails that bred in marshes near the Salton Sea (Harrity, 2020). This work continued throughout 2021 and has been a centerpiece in understanding how the new wetlands establishing along the Salton Sea support sensitive marsh birds and what potential risks may be associated with the water sources.

A.5 Fish Survey Data

Pupfish: Limited surveys occurred in 2021 because staff have been extremely busy trapping and relocating pupfish from SCH Project construction sites. Surveys were conducted in portions of south end drains located within the SCH project footprint. Abundant pupfish populations were found in Trifolium Storm, Trifolium 1, Trifolium 12, Vail Cut-off, and small USFWS refuge drains. Pupfish have been captured in surveys conducted in the recently constructed interceptor ditch in the vicinity of Trifolium 13 Drain.

In 2021, few pupfish were captured in upper Salt Creek, but pupfish were abundant in the lower Salt Creek (west of Highway 111) until the creek dried during the summer. Crayfish abundance continues to threaten pupfish populations, especially in upper Salt Creek.

Few pupfish were captured in San Felipe Creek, which once again dried completely in the vicinity of the monitoring site. CDFW and BLM have discussed changing the location to an upstream site starting in 2022. However, numerous tilapia were observed in this location in 2021.

Surveys were also conducted in some of the pupfish refuges but were limited due to time constraints.

Other Fish: The most abundant non-native fishes captured during surveys of various waters were mosquitofish, sailfin molly and porthole livebearer (the latter at the north end drains/pools only). Species comprising a much smaller percentage of the catch included tilapia (likely

three species), red shiner, and bluegill. One species (jumping guabine) was found in only one habitat (Hot Mineral Spa Creek). Movement of fishes in some drains and pools may be hindered by dense vegetation in the upper playa. CDFW did not conduct protocol fish surveys in the lake, but some fish are still present in the Salton Sea. Various bird species have been observed successfully foraging on small fish near the eastern shoreline. It is suspected but not confirmed that young fish such as tilapia are not reproducing in the lake but are instead entering the Salton Sea from irrigation drains.

Other Species: Other species captured included red swamp crayfish, bullfrog tadpoles, Rio Grande leopard frog tadpoles, and assorted snail species. Spiny soft-shelled turtles, adult bullfrogs, and adult Rio Grande leopard frogs were observed in some areas.

APPENDIX B. FUNDING STATUS

Table 5. Funding Available for the Salton Sea Management Program (in millions)

Agency and Source	Authority	Authorized for Appropriation	Appropriated/ Committed	Expended as of 9/30/2021	Available for Additional Commitments	Use
DWR - Prop 50^a	WC - 79567	\$19.3	\$19.2	\$19.20	\$0.0	2003-2007 Programmatic EIR/EIS and related studies and planning activities (completed).
DWR via WCB - Prop 50	WC - 79568	\$8.75	\$8.75	\$0.0	\$0.0	\$8.75M of \$14M allocated/reserved specifically for the Salton Sea for Species Conservation Habitat (SCH) construction.
DWR & IID via WCB - Prop 50	WC - 79565	\$4.8	\$4.8	\$4.3	\$0.0	\$1M to DWR 2008 Salton Sea planning \$3.3M allocated to IID for construction of power lines to Species Conservation Habitat project (completed) \$0.5M of \$14M allocated to DWR and reserved for SCH construction.
DWR via WCB - Prop 12	5096(a)(7)	\$4.75	\$4.75	\$0.0	\$0.0	\$4.75M allocated/reserved for SCH.

Table 5. Funding Available for the Salton Sea Management Program (in millions) (Contd.)

Agency and Source	Authority	Authorized for Appropriation	Appropriated/ Committed	Expended as of 9/30/2021	Available for Additional Commitments	Use
DWR via CDFW - Prop 84	WC - 75050(b) (3)	\$44.1	\$39.4	\$18.2	\$4.7	Since 2008, SCH planning, design, and staffing (\$14.5M), plus \$21M allocated/reserved for SCH construction, \$900K for construction management, and \$3M for Financial Assistance Program projects including Red Hill Bay, Seawater Marine Habitat Pilot, and Torres-Martinez Wetlands.
DWR (State Operations) - Prop 1	WC - 79736(c)	\$20.0	\$20.0	\$17.7	\$0.0	Staffing and other design costs for SSMP projects. (Of the \$20M appropriated, \$5.5M is committed to existing Salton Sea Projects.)
DWR (Construction)- Prop 1	WC - 79736(c)	\$60.0	\$60.0	\$36.6	\$0.0	Construction of SCH projects.
CNRA - Prop 68	PRC - 80116	\$165.7	\$141.1	\$0.2	\$24.6	\$111.16M for construction of SCH projects, \$20M for Habitat Enhancement and Dust Suppression Projects. Approximately \$7-10M for staffing and administration. \$24.6M contingency funds for SCH.
DWR - General Fund	Budget Act of 2021	\$40.0	\$40.0	\$0.0	\$0.0	The 2021-2022 Budget Act committed another \$220M in near-term General Funds, including \$40M appropriated this fiscal year (2021-22). The remainder will be appropriated in 2022-23 (\$100M) and 2023-24 (\$80M) through the annual budget act. Funding will be used for next tranche of SSMP projects as described in Chapter 2.
City of Calexico - General Fund	Budget Act of 2020	\$18.0	\$18.0	\$0.0	\$0.0	\$18M to implement New River Improvement Project.
City of Calexico - Prop 68	PRC-80110(a) (1)	\$10.0	\$10.0	\$0.0	\$0.0	\$10M to implement New River Improvement Project.
Salton Sea Authority^b - Prop 68	PRC- 80110(a)	\$19.25	\$19.25	\$0.00	\$0.0	\$19.25M to implement North Lake Pilot Demonstration Project.

Table 5. Funding Available for the Salton Sea Management Program (in millions) (Contd.)

Agency and Source	Authority	Authorized for Appropriation	Appropriated/ Committed	Expended as of 9/30/2021	Available for Additional Commitments	Use
Revive the Salton Sea Fund	R&T - 18736	\$0.2	\$0.0	\$0.0	\$0.2	Tax Check Off Box - \$191K balance per State Controller's Office 6/30/2020 Report.
General Fund/ Reimbursements	Budget Act	\$0.35/\$0.15 annually	\$0.35/\$0.15 annually	\$0.35/\$0.15 annually		CDFW receives \$300K, CNRA \$200K for positions supporting the Salton Sea annually.
CDFW Water Agency Contribution (Salton Sea Restoration Fund)	2003 QSA Agreements	\$68.5 ^c	\$17.3	\$17.3	\$51.2^c	Annual surveys to monitor bird and fish populations at the Sea, including state and federal endangered species, staff development of various implementation and monitoring plans, issuance of Section 1600 permits, CEQA review, QSA Implementation Team staffing, etc.
State Total		\$414.9	\$402.6	\$113.5	\$80.8	
Federal						
	NRCS (to state) & Bureau of Reclamation	\$1.5	\$1.5	\$0.0	\$0.0	Planning activities including preparing a Watershed Plan and implementation of dust suppression projects.
Federal Total		\$1.5	\$1.5	\$0.0	\$0.1	
Overall Total		\$416.4	\$404.1	\$113.5	\$80.9	

SSMP = Salton Sea Management Program, NRCS = National Resources Conservation Service, QSA = Quantification Settlement Agreement

Footnotes:

^a Bond Funds provided reflect the bond allocations available after statewide bond costs and outyear amounts already committed to by the Legislature. Statewide bond costs are authorized "off the top" in each bond act for things like the State Treasurer's Cost of issuing the bonds, Department of Finance's Costs of auditing bond expenditures, etc. Exact amounts are published on the CNRA bond accountability website.

^b The Salton Sea Authority is a Joint Powers Authority (JPA) of local stakeholder groups including the Torres Martinez Desert Cahuilla Tribe, two water agencies, and two county governments.

^c \$68.5 million is the total of planned water agency contributions. While this amount will ultimately be available, additional revenues will need to be collected and appropriated between 2022 and 2047 to support any expenditures from the fund. For this reason, the total amount is not included in State total under "Authorized for Appropriation." It is, however, included in the column "Available for Additional Commitments." Expenditures are monitored to ensure expenses do not exceed available cash.

Prepared for:

State Water Resources Control Board
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