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PUBLIC HEARING ON THE SALTON SEA
LITTLE HOOVER COMMISSION

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Thank you for inviting me to testify about the state’s management of the Salton Sea. In the following I provide a brief description of the Pacific Institute, background on my involvement with the Salton Sea, and my responses to the Commission’s questions on:

1. My role in the Salton Sea Management Program planning processes;
2. My assessment of the planning process;
3. Progress in implementing short-term projects and existing barriers that impede progress;
4. The value of the shovel-ready projects submitted to the Legislature pursuant to AB 1095;
5. The value and feasibility of the Salton Sea “perimeter lake” proposal; and
6. The state’s progress in managing the Salton Sea since the formation of the Salton Sea Task Force.

I have been working on Salton Sea issues for more than 18 years with the Pacific Institute. The Institute is one of the world’s leading nonprofit research and policy organizations working to create a healthier planet and sustainable communities. Based in Oakland, California, we conduct interdisciplinary research and partner with stakeholders to produce solutions that advance environmental protection, economic development, and social equity – in California, nationally, and internationally. We work to change policy and find real-world solutions to problems like water shortages, habitat destruction, global warming, and environmental injustice. Since our founding in 1987, the Pacific Institute has become a locus for independent, innovative thinking that cuts across traditional areas of study, helping us make connections and bring opposing groups together. The result is effective, actionable solutions addressing issues in the fields of freshwater resources, climate change, environmental justice, and globalization. More information about the Institute and our staff, directors, funders, and programs can be found at www.pacinst.org.

I have written or co-written three Institute reports on the Salton Sea: *Haven or Hazard: The Ecology and Future of the Salton Sea* (1999), *Hazard: The Future of the Salton Sea with No Restoration Project* (2006), and *Hazard’s Toll: The Costs of Inaction at the Salton Sea* (2014); all are available at no cost on the Institute’s website. My Salton Sea-related work has included organizing workshops, writing opinion pieces and responding to media inquiries, commenting on proposed local, state, and federal actions, developing an early habitat creation proposal, participating on various formal and informal advisory committees, testifying before state and federal committees, and generally striving to compel and

expedite the construction of on-the-ground habitat and air quality projects at and around the Salton Sea.

I currently serve on the Salton Sea Management Program's agency stakeholder committee, as well as the Funding, Long Range Planning, and Project advisory committees (see resources.ca.gov/salton-sea/). I have written or co-written several letters regarding this process to the State Water Resources Control Board and to the Assistant Secretary for Salton Sea Policy (attached, for your reference). As a member of the Long Range Planning committee I sat through two full days of presentations on proposals to import water from the ocean to the Salton Sea, and then wrote detailed reviews of each of these proposals. Previously, I had reviewed the general concept of import/export plans and posted this review at pacinst.org/publication/salton-sea-importexport-plans/.

My assessment of the planning process

The governor created the Salton Sea Task Force last May, prompted by the Imperial Irrigation District's (IID's) petition to the State Water Resources Control Board (SWRCB) in November, 2014 that implicitly threatened to destabilize coastal Southern California's water supply reliability if the State did not meet its obligations under the Quantification Settlement Agreement, and by the subsequent SWRCB workshop on the Salton Sea in March, 2015. Last September, the state filled the newly-created position of Assistant Secretary for Salton Sea policy. In October, 2015, the Task Force released its "Agency Actions," setting short- and medium-term acreage targets for habitat creation and dust suppression projects, as well as directing related agency actions. The governor's accompanying press release (at <https://www.gov.ca.gov/news.php?id=19161>) defined "short-term" as the period ending in 2020. Since then, the Natural Resources Agency's Salton Sea Management Program efforts have included three full "agency stakeholder" meetings, plus meetings of several of the advisory committees. The Task Force itself apparently has met several times since the October release of the Agency Actions. In January, the governor proposed \$80 million for Salton Sea-related activities, an important and very valuable signal of the state's commitment to fund short-term Salton Sea projects.

The full agency stakeholder committee has not met since late January. The initial meetings included helpful materials such as schedules, lists of existing permits, and a general review of the existing short-term plans and concepts for Salton Sea activities, most notably IID's Salton Sea Restoration and Renewable Energy Initiative and the Salton Sea Authority's perimeter lake concept. However, there has been limited communication with the agency stakeholders as a whole since the January meeting. With the exception of IID's infrastructure backbone, progress has slowed stalled. The Task Force Agency Actions established a goal of 9,000-12,000 acres of habitat creation and dust suppression projects at the Salton Sea by 2020. The Natural Resources Agency's April 8th, 2016 "Report on Salton Sea Projects: Per requirements of AB 1095" suggests that fewer than 1,150 acres of habitat will be constructed by 2020. If this is correct, the current planning process will not achieve the Task Force's short-term habitat objectives, indicating that additional urgency needs to inform the state's efforts.

Progress in implementing short-term projects

The state has demonstrated limited progress to date in implementing short-term projects. The state initiated scoping for its Salton Sea Species Conservation Habitat (SCH) project on June 21, 2010. It issued

the final EIR/EIS in July, 2013 and the Notice of Determination in August, 2013. Funds from Proposition 84 and Proposition 50 have been secured for SCH. Apparently, the state has secured all necessary permits for the SCH project. Some initial preparation of the SCH site has occurred, primarily the removal of saltcedar, but construction of the SCH project has yet to begin. According to the April 8th “shovel ready” report, the state now plans to start project construction early next year, some seven years after project conception.

At the local level, IID has further developed the design of its Infrastructure Backbone project, initially released last July. This project represents a critical path forward for Salton Sea activity and will be the foundation for future habitat and dust suppression projects. According to the state, construction level plans and specifications are anticipated in second quarter 2018 and final permitting should be completed in the same timeframe. The state anticipates construction will begin in late 2018.

Existing barriers that impede progress

Many barriers and challenges impede the state’s progress, including but not limited to:

1. The new Assistant Secretary has not been vested with sufficient resources or authority to design and expedite state efforts.
2. The Management Program lacks a dedicated, experienced project manager to track and supervise the many deliverables, schedules, and tasks required to achieve the goals established by the Salton Sea Task Force Agency Actions.
3. The State has not prioritized Salton Sea activity. The Natural Resources Agency Secretary should direct all appropriate Agency staff to prioritize Salton Sea activities and expedite the implementation of proposals to implement habitat creation and dust suppression projects.
4. The Salton Sea Management Program has yet to define its goals and objectives, beyond the acreage targets described in the Task Force Agency Actions. At minimum, the state has not posted an analysis and summary of existing statues directing Salton Sea activities and planning, and might not have conducted such an analysis.
5. The structure and decision-making authority within the Salton Sea Management Program is not clearly defined, particularly with regard to the several state agencies represented on the Salton Sea Task Force.
6. The Management Program lacks a multi-year funding plan that identifies potential funding sources and projected annual expenditures.
7. Skepticism and distrust continue to hinder discussions between the state and key stakeholders.
8. Apparently, the state has yet to institute mechanisms to expedite the transfer of funds, pursuant to existing contracts, to reimburse costs fronted by other stakeholders.
9. There is no defined long-term governance structure for Salton Sea program management, including construction management, operations, monitoring and measurement, adaptive management, and contracting authority.

Shovel-ready projects

The Natural Resources Agency's April 8th report to the Legislature notes that " Since the nature of the Salton Sea Management Program is incremental and adaptive, many of the projects presented here are the first phase of a multi-phased implementation approach." The "shovel-ready" projects described in the report will be important steps in meeting the Task Force's short-term goals, but their implementation must be accelerated if they are to meet these goals in a timely fashion. These habitat projects require clear objectives and operational criteria, but in concept can offer an initial step towards meeting the needs of many of the species that depend upon the Salton Sea. The report does not, however, describe how these and other projects will or should be structured to meet the varying habitat needs of resident and migratory birds or listed species.

Perimeter Lake Concept

The state's report on "shovel-ready" projects mentions the "Salton Sea Perimeter Lake Concept" on two occasions but does not describe it. The concept was presented at the Salton Sea Authority's September board meeting, and has been further developed and appraised in a new, internal feasibility assessment. In October, the Authority's consultant released a preliminary review draft of the *Geotechnical Feasibility Study: Salton Sea Perimeter Lake Low Profile Levee Alternative*, though the levee design may have been modified since that time. According to the Management Program's February status report,

The preliminary feasibility analysis for the Perimeter Lake project was completed by Tetrattech Consultants, for the Salton Sea Authority in February, 2016. The state Division of Engineering (DOE) will review the feasibility analysis in the coming weeks. Findings from this analysis will be shared with the project committee once completed.

As of April 8th, the project committee had not seen either the feasibility analysis or DOE's findings.

According to the September presentation, the Perimeter Lake concept would include 65 miles of dikes impounding 36 square miles of lake (about 10 % of the Salton Sea's current size). The perimeter lake would extend from roughly the New River delta all the way around to Bombay Beach. In some areas the lake would be several miles wide, but along most of the shoreline it would be less than half a mile wide. Maximum depth would be about 25 feet.

The perimeter lake concept shares some characteristics with the "Concentric Lake" alternative that was evaluated in the 2006 Ecosystem Restoration Program EIR/EIS and with a "Proposal to Preserve and Enhance Habitat at the Salton Sea" the Pacific Institute submitted to the Salton Sea Authority in October, 2001. The USGS Salton Sea Science Office convened a multi-day workshop to review the Institute's proposal and identified a large number of significant problems, rendering the proposal "very unsatisfactory." The full USGS review is attached to this testimony, for your reference.

Many of the problems identified with the Institute's 2001 proposal would also arise with the Perimeter Lake currently under review. Extrapolating from the review of the Institute's proposal, the perimeter lake would be a sluggish extension of the New and Whitewater rivers, choked with vegetation along the shoreline and presenting very poor water quality. Much of the perimeter lake would be essentially stagnant and would likely support large numbers of disease-bearing mosquitoes. Hydrodynamic modeling performed during the 2006 PEIR process indicated that water deeper than 10 feet increased

the probability of stratification of the water column, in which anoxic water collected at the bottom, supporting bacteria that produce hydrogen sulfide. The narrow perimeter lake along much of the shoreline could exacerbate the formation of stratified conditions, though periodic high-wind events would mix the water and release the accumulated hydrogen sulfide gas, extirpating most of the fish and macro-invertebrates in the water column. Actual conditions in the perimeter lake will depend upon several factors, including total volume, nutrient loads, and salinity of inflows, residence time in the lake, depth of the lake, and wind-generated mixing. Additional information on these factors would improve our understanding of future conditions.

Construction of the perimeter lake's 65-mile long dike would be extremely challenging. The October geotechnical feasibility study states that the levees should be built in the dry ("This will require a phased approach to construction that would involve stockpiling, dewatering and spreading excavated soils, drying the material to near optimum moisture content, and mechanical placement and compaction of the material"). Presumably, this means that construction of the levees themselves would not begin until the surface of the existing Salton Sea fell to below -245'. This could delay the start of construction and project completion. The October study and a related water balance indicated that the dikes would permit a lot of water to pass through as seepage. Presumably, this could, over some period of time, erode the toe of the levee. Closer to the river inflows, the lower salinity of the seepage water could also promote vegetative growth. This would interrupt the wind and diminish dust emissions, but potentially could compromise the stability of the dikes themselves.

State progress in managing the Salton Sea

The state has improved its public outreach efforts in the past two months, holding several public briefings and posting a new Salton Sea Management Program website that includes some valuable information and updates. The current planning process, and the state effort generally, lacks the urgency and focus needed to meet the short-term Task Force objectives. The initial activity that surrounded the hiring of the new Assistant Secretary has slowed since January; we need to recapture that initial energy and re-invigorate the process.

Recommendations

I recommend that the state should take the following action to improve the Salton Sea Management Program and help the state achieve the Task Force Agency Actions on time:

- The Salton Sea Task Force should clarify its role and decision-making authority, and should vest the Assistant Secretary with greater authority and resources to direct Management Program activities in specific departments, by the end of May.
- The Natural Resources Agency should assign or detail a full-time project manager to work under the Assistant Secretary through at least the end of 2017, to track and supervise the many deliverables, schedules, and tasks required to achieve the goals established by the Salton Sea Task Force Agency Actions, by the end of May.
- The Natural Resources Agency Secretary should direct all appropriate Agency staff to prioritize Salton Sea activities and expedite the implementation of proposals to implement habitat creation and dust suppression projects, by the end of May.

- The Salton Sea Management Program should adopt and promote the Salton Sea goals already codified in statute, and should develop appropriate objectives and milestones for each goal, to direct the program and provide criteria for evaluating progress, by the end of May.
- The state should develop and execute memoranda of agreement or contracts with local partners related to funding and operating Salton Sea projects, by the end of May.
- The Management Program should establish regular meeting times for its various advisory committees and should develop clear objectives and action items for each meeting, by the end of May.
- The local Regional Water Quality Control Board should summarize existing regulations and water quality parameters for the Salton Sea and major tributaries and deliver this summary to the Assistant Secretary, to assist in the evaluation of Salton Sea proposals and to ensure consistency among state agencies' responses and reviews of such proposals, by the end of May.
- The Management Program should develop and post consensus information on Salton Sea elevation and salinity to its website, as well as information on annual and monthly inflows to the Salton Sea, by the end of May.
- The Management Program should develop a multi-year funding plan that identifies potential funding sources and projected annual expenditures, and work with key legislators to develop long-term funding mechanisms, by the end of July.
- The state should develop a long-term governance structure for Salton Sea program management, including construction management, operations, monitoring and measurement, adaptive management, and contracting authority, by the end of July.
- The State of California should enter into a Memorandum of Understanding with the U.S. Department of the Interior and with the Army Corps of Engineers, by the end of July, to improve collaboration between state and federal entities, share available technical and scientific information and expertise, facilitate more efficient permitting, and to prioritize partnerships to improve resource conditions in and around the Sea.
- The State Water Resources Control Board should revise Revised Order WRO 2002-0013 to reflect the final language of the QSA as signed on October 10, 2003, and the clear language adopted by the legislature in 2003 in Senate Bill (SB) 277, SB 317, and SB 654, in SB 187 in 2008, and in SB 51 in 2010, by the end of 2016.
- The Natural Resources Agency should develop and circulate a long-range plan to address the air, wildlife, and water quality problems at the Salton Sea, by the end of 2016.
- The State of California should execute a Memorandum of Understanding (MOU) with the Department of the Interior and Department of the Army (Army Corps of Engineers) articulating the federal government's role in planning and permitting projects at the Sea, providing technical and scientific support, and identifying federal funding sources.

Thank you for inviting me to testify. I would be happy to answer any additional questions posed by the Commission, either at the hearing itself or at a later time.