September 1, 2017

Dear State Water Resources Control Board:

As a concerned citizen of the State of California, I’m writing to comment on the State Water Resources Control Board’s Draft Stipulated Order for Future Action concerning the Salton Sea (the “Draft Order”) and on the ecological and public health crisis unfolding at the Salton Sea.

I do not live in Imperial or Riverside County, or even in Southern California, and I do not rely on Colorado River water. I am not employed by any federal, state, or local agency or organization with a direct stake in issues related to the Salton Sea, the Quantification Settlement Agreement (QSA), or the allocation of Colorado River water. I have an educational background in science, philosophy, law, and public policy from Stanford University and Harvard Law School. I’m an attorney but, by choice, I no longer practice law. I am currently working as a freelance professional photojournalist and writer. For a dozen years I’ve visited the Salton Sea and the Imperial and Coachella Valleys frequently in order to photograph and research the many complex and intertwined issues relating to the past, present, and future of the Salton Sea and the surrounding region. I’m now working on a book about those issues, as well as some related scientific research. I’m explaining these things about myself because I want you to know that I have a foundation of both knowledge and objectivity for making the following comments.

A. The QSA water transfers & the obligations of the State of California regarding the Salton Sea ecosystem and public health

- Under Water Code section 1736, the SWRCB may approve a long-term water transfer if the Board finds that the transfer will not result in substantial injury to any legal user of water and will not unreasonably affect fish, wildlife, or other instream beneficial uses. The 2003 Quantification Settlement Agreement was predicated on the understanding of the parties and other stakeholders that the State of California would promptly proceed to formulate and implement appropriate, effective, and timely mitigation and restoration measures at the Salton Sea that would prevent the QSA water transfers from having harmful effects on the people living in the Salton Sea region and on the fish and wildlife reliant on the Salton Sea ecosystem.

- The 2002 EIR relating to the QSA projected that during the entire 75-year life of the QSA a total of 50,000 acres of Salton Sea dry lakebed (playa) would be exposed as a result of the QSA water transfers (in addition to 16,000 acres of playa that would otherwise have been exposed during that time). The most recent projection by the State of California, presented in the March 2017 Salton Sea Management Program Draft Phase I: 10-Year Plan (“Draft 10-Year Plan”), is for 48,300 acres of playa to be exposed just during the period 2018 to 2028 (in addition to the significant amount of playa already exposed as the Salton Sea has receded during the past 15 years).
In directing IID to provide “mitigation water” to the Salton Sea for fifteen years beginning in 2003 and ending on December 31, 2017, the Board’s Water Rights Order WRO 2002-0013 stated, “Fifteen years will allow the Secretary of Interior, Salton Sea Authority, Secretary of Resources, and the Governor of California sufficient time to study the feasibility of restoration of the Salton Sea and begin implementation of any identified feasible restoration measures.” (WRO 2002-0013, paragraph 5.2.7.)

Following the QSA, amendments to the California Fish and Game Code enacted in 2004 made explicit the intent of the Legislature to “undertake the restoration of the Salton Sea ecosystem and the permanent protection of the wildlife dependent on that ecosystem.” The amendments further specified in part that the State’s restoration plan “shall provide the maximum feasible attainment of the following objectives: (1) Restoration of long-term stable aquatic and shoreline habitat for the historic levels and diversity of fish and wildlife that depend on the Salton Sea.” (California Fish and Game Code Sections 2931(a) and 2931(c)(1).)

The State of California has had fifteen years in which to formulate and implement the mitigation and restoration measures it committed to in 2003, but it has not done so. Although the Salton Sea Management Program (SSMP) has made notable progress in its planning-related efforts during the past few years in comparison to the many years prior to that, the program does not appear to be funded and staffed sufficiently to accomplish the urgent Herculean responsibilities it is tasked with discharging. No on-the-ground projects have actually been completed at the Salton Sea by the State of California to address the public health and ecological crisis that is unfolding as the Sea recedes due to water deprivation. Furthermore, after several decades of discussions and countless abandoned proposals, no long-term plan for resolving the Salton Sea crisis in a manner that permanently protects people and wildlife has been formulated, let alone implemented.

Consequently, the harm that the State of California agreed years ago to prevent is now materializing and rapidly worsening. The Salton Sea fishery – previously one of the most productive fisheries in the world – is collapsing, the survival of an endangered Salton Sea fish is at risk, and more than 400 species of migratory and resident birds reliant on the Salton Sea ecosystem – including species listed as threatened and endangered, and species designated as of special conservation concern – are being deprived of essential resting, feeding, and breeding habitat, and are being subjected to adverse environmental conditions that imperil their health and continued existence. Furthermore, crucially, as the Salton Sea’s desiccating lakebed is increasingly exposed to the region’s strong winds, and as the condition of the remaining lake deteriorates, residents of the Imperial and Coachella Valleys are obliged to endure hazardous dust storms and hydrogen sulfide irruption events that threaten their physical and psychological health, harm their quality of life, impair their property values, and adversely affect the economic well-being of their communities.

The current situation prompts a question worth considering: Would IID have agreed to the QSA – on behalf of the farmers and other residents of Imperial County for whom it holds the relevant water rights in trust – if IID had known in 2003 that the State of California would fail to live up to its commitment to develop and implement appropriate mitigation and restoration measures at the Salton Sea during the next fifteen years? Viewed objectively, the publicly available documents concerning this matter – including IID’s 2014 Petition to Modify Revised Order WRO 2002-0013 (“2014 Petition”) and its 2017 Motion for an Evidentiary Hearing (“2017 Motion”) – imply that the agency may very well not have agreed to enter the QSA under those circumstances, and would not have moved forward with the plan to transfer hundreds of thousands of acre-feet of water annually from the Salton Basin to Southern California urban areas.

At this point, IID has transferred and continues to transfer the very large amounts of water it committed in the QSA to move, but the crucial conditions based upon which it originally agreed to do so have not
been met by the State of California. As a consequence, the people of the Salton Sea region, and the wildlife dependent on the Salton Sea, are being victimized. As the transferred water supports sprawling development in urban and suburban areas elsewhere, Salton Sea wildlife and the people of Imperial County and southeastern Riverside County are being subjected to serious harm that has continued to increase in severity as the days, weeks, months, and years have passed without implementation of mitigation or restoration measures by the State of California at the shrinking Salton Sea. And now, imminently, there will be a dramatic increase in the magnitude of that harm beginning on January 1, 2018 when the water transfers commence ramping up significantly – again, under circumstances (the failure of the State of California to live up to its commitments) that IID did not anticipate when it agreed to the transfers.

B. The terms of the Draft Order and related provisions of the Draft 10-Year Plan

The Draft Order and the related Draft 10-Year Plan as currently formulated do not provide sufficient assurances that the State of California will now finally live up to its obligations to protect the people and wildlife of the Salton Sea region in a full and timely (albeit very belated) manner.

1. The provisions of the Draft Order indicate that the only consequences for a failure by the California Natural Resources Agency (CNRA) to meet the annual milestones specified in paragraph 23 by the specified deadlines are: (a) any shortfall in implementation of the specified acreage of dust mitigation and habitat measures will simply be shifted to the next deadline (para. 26); and (b) if there is a shortfall greater than 20% for “more than two consecutive years” (which could be interpreted to mean at least three years, based on the structure of the requirements) then CNRA has an additional 12 months in which to come up with a plan to cure the shortfall (para. 27). It is noteworthy that the Draft Order does not require the shortfall to be cured within an additional 12 months; it only requires CNRA to come up with a plan within 12 months. These provisions of the Draft Order do not ensure accountability, and leave wide open the possibility of additional lengthy delays in on-the-ground implementation of the necessary mitigation and restoration measures. Every such delay causes actual serious harm to the people of Imperial County and southeastern Riverside County and to wildlife dependent on the Salton Sea ecosystem.

2. The acreage amounts specified in the lettered items in paragraph 23 appear to be in addition to the acreage involved in the projects (Red Hill Bay, Species Conservation Habitat, Torres-Martinez wetlands) that are already planned (but not implemented); however, the wording of that paragraph is not sufficiently clear to avoid misinterpretation of that issue.

3. Paragraph 24 provides that it will be acceptable if just 50% of the exposed playa provides “habitat benefits for fish and wildlife that depend on the Salton Sea ecosystem.”

   a) What is the justification for specifying 50% as the required minimum rather than a larger percentage? When the 50% figure is considered in relation to the very large area of playa projected to be exposed during the next ten years as the Salton Sea shrinks, it appears that the amount of habitat created will be a small fraction of the amount of habitat lost.

   b) Use of the present tense “depend” appears to be inconsistent with 2004 California legislation concerning Salton Sea restoration, which referenced historical diversity and numbers of birds as the benchmark, not diversity and numbers currently dependent on the ecosystem as of the time that mitigation and restoration measures are finally undertaken. Based on the current wording of paragraph 24, the improper argument could conceivably soon be offered that fish-eating birds and certain other species don’t
“depend” on the Salton Sea ecosystem anymore and therefore no obligation to serve their needs exists any longer.

c) Why does paragraph 24 use the phrase “habitat benefits” instead of the word “habitat”? The phrase “habitat benefits” is not defined and is therefore conceivably open to being stretched to encompass improper and even ludicrous claims. (For example: Moat-and-row plowing has recently been used on some of the exposed playa near the southeast shore of the Salton Sea in pilot projects targeted at controlling dust, and some of the furrows now have water in them – either because the water table in those spots is extremely shallow and there has been seepage up into the furrows or because there’s seepage or trickling flow horizontally from elsewhere nearby. Conceivably someone might claim that those wet furrows provide “habitat benefits” and can therefore be counted toward the 50% requirement. However, the reality is that furrows filled with stagnant hypersaline water do not provide true replacement habitat for bird or fish species reliant on the shriveling Salton Sea.)

4. What is the meaning of the words ‘develop’ and ‘development’ as used repeatedly in paragraph 25? Without explicit clarification of what those words mean, all of the requirements set forth in paragraph 25 become essentially meaningless. (For example, ‘development’ might just mean that State of California personnel begin having meetings and discussing what to do. That process could continue for years with no real on-the-ground progress.)

5. Paragraph 25 mentions “Phase II,” but that phrase is not defined. Is “Phase II” the work to be done during the ten years following the work identified in paragraph 23? Since the lettered items in paragraph 23 appear to correspond with the details of the Draft 10-Year Plan, which is labeled a “Phase I” plan, it seems that the lettered items in paragraph 23 of the Draft Order collectively constitute “Phase I.” However, assuming that is correct, it needs to be made explicit. Both “Phase I” and “Phase II” should be clearly defined for purposes of the Draft Order. Moreover, instead of using the vague language “with the development of each phase commencing no later than midway through each current phase” (emphasis added), paragraph 25 should specify dates by which creation of the Phase II plan must begin and must be completed.

6. Based on paragraph 25, CNRA is not obliged to “develop” a long-term plan until Dec. 31, 2022. Does that mean CNRA must simply be working on figuring out the long-term plan as of 12/31/22? Or does it mean that CNRA must have a plan completed and ready to implement by 12/31/22? If the first interpretation is the intended meaning, the extraordinary delay involved in creating and then implementing the long-term plan would clearly be unreasonable and extremely harmful to people and wildlife in the Salton Sea region. If the second interpretation is the intended meaning, it is still an unacceptably long period of time (five and a half years) in which to “develop” the plan, particularly in light of the fact that the State of California has already had fifteen years in which to fulfill its obligations (not to mention several decades prior to that fifteen years, during which the problems materializing today were fully anticipated).

7. The phrase “a smaller but sustainable Salton Sea” is used repeatedly in the Draft Order – and, importantly, pursuant to this proposed order it will be added to Water Rights Order 2002-0013 – without any definition being presented. (It has also been repeatedly used during hearings and workshops without any definition presented.) There will be important practical and legal ramifications of the use of that phrase in this order and in revised order WRO 2002-0013, and it therefore should be defined. A hypersaline brine sink is not a “smaller but sustainable Salton Sea” by any reasonable stretch of the imagination, yet currently the plan seems to be for the CNRA to take more than ten years to control dust on only a portion of the exposed playa and create small areas of wildlife habitat, while leaving the rest of the basin to become a
hypersaline toxic brine sink surrounded by hazardous dust-emitting desiccated lakebed. Without a definition of the phrase “smaller but sustainable Salton Sea,” the substance of this order and revised WRO 2002-0013 will create little, if any, accountability for failure to implement appropriate mitigation and restoration measures, and will unjustly impair redress of harm that results from such failure.

8. Where will the water come from to achieve the milestones specified in the Draft Order and Draft 10-Year Plan? The Draft 10-Year Plan states, “There is no issue with water availability for the Phase I Plan.” However, because there is no specification of where the water will come from, it is impossible to evaluate the accuracy of that statement.

9. In its March 2017 Motion for Evidentiary Hearing concerning potential modification of Revised Order WRO 2002-0013 (“IID’s Motion”), IID noted its concern that “[t]he current draft of the SSMP identifies an unfunded obligation on the part of the State of California in excess of $300 million over the next decade.” In IID’s Motion the agency sought, among other things, an “explicit commitment” by the State of California to obtain the funds required for dust mitigation and habitat restoration on the Salton Sea playa that will be exposed during the next ten years. The Draft Order contains no such commitment. In fact, the Draft Order provides no assurance that any of the mitigation or restoration activities described in it will ever actually be done, because it does not provide any explicit assurance that the necessary funding to do so will be sought, obtained, and actually utilized for the specified purposes.

10. The acreage of playa projected to be exposed during the period 2018 to 2028 is much larger than the amount of acreage to be “treated” with dust control and habitat measures pursuant to the Draft Order and the Draft 10-Year Plan. According to Table 2 of the Draft 10-Year Plan, which forms the basis for the lettered items in paragraph 23 of the Draft Order, a total of 18,500 acres of playa will be exposed between 2018 and 2028 but will not be “treated” with dust control or habitat measures. These 18,500 acres of desiccated wind-swept lakebed – which will be primarily located on the east and west sides of the Salton Sea in the vicinity of inhabited areas – will expose people living in the region to risks of serious harm. In addition, there will also be significant harm to wildlife resulting from loss of this Salton Sea habitat. (The harmful consequences include, but are not limited to, detrimental impacts on the important native sub-populations of desert pupfish living in Salt Creek and San Felipe Creek, which will likely become completely cut off from all other pupfish sub-populations as the Salton Sea recedes. The drying deltas of Salt Creek and San Felipe Creek are not within the areas designated for restoration measures.) Neither the Draft Order nor the Draft 10-Year Plan commits the State of California to addressing this major shortfall in the amount of “treated” playa. Also of concern is the fact that the projection of the amount of acreage to be exposed may be an underestimate.

a) Accuracy of the projections concerning the amount of playa that will be exposed as the Salton Sea continues to shrink in the coming years is crucial for the development and implementation of appropriate dust mitigation and habitat restoration measures for the protection of people and wildlife. But – as the Draft 10-Year Plan itself makes clear – for many years there has been no consensus regarding the propriety and accuracy of the hydrologic models used by different stakeholders at different times to make such projections.

b) It appears that the modeling of playa exposure originally done in support of the QSA – modeling that the QSA parties relied upon in agreeing to the terms of that pact – may have significantly underestimated the amount of playa that would become exposed during the long life of that water transfer agreement. The 2002 EIR projected that the additional area of playa exposed as a result of the QSA – during the entire 75-year life of the agreement – would be 50,000 acres. (This was in addition to the baseline amount
of 16,000 acres that was projected to become exposed regardless of the QSA.) But from 2003 through 2017 very large regions of playa have already been exposed (possibly a total of more than 22,000 acres, depending on which data are used to compute the area), and the current estimate of the additional amount of playa to be exposed during just the period 2018 to 2028 is 48,300 acres.

c) The Draft 10-Year Plan states on page 6, “The exposure projections currently listed for the 10-year period differ from the projections for the original 2003 and later environmental document prepared as part of the QSA Water Transfer. As was noted previously, the State will evaluate the latest hydrology data and make the results of that evaluation available for review. There will be periodic comparisons of the actual playa exposed against what the model predicts will be exposed.” However, neither the Draft 10-Year Plan nor the Draft Order specifies what, if any, remedial actions will be taken by the State of California in the event that the actual amount of playa exposed is significantly greater than the area projected to be exposed.

I have attached several of my photographs, along with captions, in order to illustrate for the Board’s benefit what is actually occurring at the Salton Sea related to some of the issues discussed above.

In light of all the foregoing, I respectfully suggest that defects in the Draft Order and Draft 10-Year Plan should be cured, and both documents should then be released again for additional public comment.

Thank you for your consideration of these comments.

Sincerely,

Jenny E. Ross

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Attachments 1-10: Photographs and Captions.
Attachment 1 - Photographs ©Jenny E. Ross

Mullet Island and breeding double-crested cormorants at the Salton Sea, shown in March 2012 when the receding waters of the lake had not yet fully exposed a land bridge connecting the island with desiccated Morton Bay along the southeast shore. Until that land bridge was exposed, Mullet Island hosted the largest breeding colony of double-crested cormorants in California, and the second largest colony in North America. Exposure of the land bridge enabled predators to reach the former island, forcing the birds to abandon their colony.
Mullet Island in February 2016, devoid of birds. As the Salton Sea receded, exposure of a land bridge connecting the former island to desiccated Morton Bay enabled predators to reach the former island and forced the birds to abandon their colony. Since then they have been unable to establish a breeding colony anywhere else in the region.
Aerial views of the delta of Salt Creek on the northeast shore of the Salton Sea in March 2017. An important native sub-population of the endangered desert pupfish lives in Salt Creek and utilizes the shallow water habitat of the Salton Sea here. As the Sea continues to shrink, it is likely that Salt Creek will soon not reach the edge of the lake. Then the pupfish living in the creek will be cut off from habitat in the Salton Sea and will become genetically isolated from all other sub-populations in the region. All the shore area shown in the images became exposed during the past 15 years.
Aerial views of the dry delta of San Felipe Creek on the southwest shore of the Salton Sea in May 2017 (above) and March 2017 (below). As the Salton Sea recedes, San Felipe Creek often fails to reach the edge of the lake. The important native sub-population of endangered desert pupfish living in San Felipe Creek and San Sebastian Marsh upstream will soon be completely cut off from shallow-water habitat in the Salton Sea, and will become genetically isolated from all other pupfish in the region. All of the land shown in the images became exposed in the past 15 years.
Aerial view of a portion of Desert Shores, on the west shore of the Salton Sea. As the lake has receded, large areas of playa have been exposed here, and “keys” that previously connected the private docks with the lake have become cut off from it. Stagnant hypersaline water in the keys is now filled with algae and bacteria, emits noxious odors, and poses a public health hazard. Property values here and elsewhere alongside the Salton Sea have plummeted in the past 15 years.

Aerial view of the high-and-dry public boat launch at Johnson’s Landing near Salton City on the west shore of the Salton Sea. All of the playa shown in the image became desiccated during the past 15 years as the lake receded.
Aerial view of a portion of a moat-and-row dust mitigation pilot project on playa in Morton Bay near the southeast shore of the Salton Sea where there is an extensive cluster of fumaroles and mud volcanoes. This region, previously entirely submerged, was exposed several years ago as the Salton Sea receded. (Note the tire tracks for scale.)

Low aerial view of a portion of a moat-and-row dust mitigation pilot project. Vertical seepage from shallow groundwater and horizontal seepage from nearby agricultural drains has filled the furrows with hypersaline stagnant water. Algae and bacteria color the water green, yellow, and red.
Aerial view of a portion of the New River delta in November 2015. All the land shown in the photograph became exposed and desiccated during the past 15 years as the Salton Sea receded.

Desiccated Red Hill Bay at the southeast shore of the Salton Sea in March 2017. A planned habitat restoration project here, to be constructed by the U.S. Fish & Wildlife Service and IID, was delayed for several years but has recently commenced.
Dust blowing off of the desiccated playa at Red Hill Bay clouds the air throughout the region in 2015. The wind was blowing from the west at approximately 20-25 miles per hour, a common occurrence in the Salton Basin. (Note the dead tree for scale.)

Hazardous particulates cloud the air in Calipatria southeast of the Salton Sea as dust blows off of the playa at desiccated Red Hill Bay in 2015. The wind was blowing from the west at approximately 20-25 miles per hour, a common occurrence in the Salton Basin.
View across dry Red Hill Bay in November 2015, in the late afternoon on a clear day with little wind.

The same view across dry Red Hill Bay at the same time of day in April 2014 during a dust storm. Hazardous particulates cloud the air, blown off of the playa by 20-25 mph winds from the west. Although the playa was completely desiccated before the dust storm, the image shows a narrow strip of water between the geothermal plant and the foreground playa. The water was blown eastward more than a mile from the receding shore of the Salton Sea.
View across dry Red Hill Bay in November 2015, in the late afternoon on a clear day with no wind.

The same view across dry Red Hill Bay at the same time of day in April 2014 during a dust storm. Hazardous particulates cloud the air, blown off of the playa by 20-25 mph winds from the west-northwest.