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TO: Ms Dale Hoffman-Floerke	Fax No: 916-654-4925	
FROM: Carol Roberts	Fax No: (760)431-5902 Phone No: (760) 431-9440	
SUBJECT: Comments on the Salton Sea Ecosystem Restoration Program Draft Programmatic Environment Impact Rpt		
COMMENTS:		

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California Gnatcatcher



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Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
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In Reply Refer To:
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Ms. Dale Hoffman-Floerke
Department of Water Resources
Colorado River & Salton Sea Office
1416 9th Street, Room 1148-6
Sacramento, California 95814

Subject: Comments on the Salton Sea Ecosystem Restoration Program Draft Programmatic Environmental Impact Report

Dear Ms. Hoffman-Floerke:

The Fish and Wildlife Service (Service) has reviewed the Salton Sea Ecosystem Restoration Program Draft Programmatic Environmental Impact Report (PEIR) provided by your office in October 2006. Overall, we found the document to be very comprehensive and well written. We would like to thank the Department of Water Resources, the Department of Fish and Game, and CH2MHill for putting forward such an outstanding effort in dealing with the complex issues associated with Salton Sea restoration. The purpose of this letter is to respond to elements of the PEIR that concern us relative to their potential impact to fish and wildlife trust resources and to National Wildlife Refuge lands.

The Salton Sea National Wildlife Refuge (Refuge) was established in 1930 (renamed in 1998 the Sonny Bono Salton Sea N.W.R.) "...as a refuge and breeding ground for birds and wild animals" by President Herbert Hoover, recognizing then the many wildlife values that the Salton Sea and adjacent lands provided to resident and migratory birds. However, as the surface elevation of the Sea rose during the ensuing decades, the Refuge was forced to find new lands to manage for wildlife upslope of the Sea, leaving inundated Refuge lands as lesser productive but still important areas for birds. In total, 32,406 acres of Service owned lands have remained as sanctuary, feeding and loafing area inundated on the southern end of the Sea. The Service is concerned that any of the proposed restoration alternatives, if implemented, will convert many thousands of acres of Refuge land into brine sink, salty exposed playa or both. Brine sink areas, as terminal repositories for excess salty water, would eventually attain salinity levels greater than 200,000 mg/L, a salinity level at which invertebrate life declines severely and ultimately is eliminated. Consequently, these areas will be very limited in their ability to provide foraging

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opportunities for most species of birds that currently inhabit the Salton Sea. Ultimately, as the brine sink becomes saltier, bird species coming into contact with the brine may suffer from salt encrustation on their feathers to the point where flight is compromised and drowning may occur.

Exposed playas will be areas that, having been inundated by the Sea for many years, will have soil that contains a large amount of salt. In a dry condition, these soils may be subject to salt concentration on their surface (as seen on existing lands around the Sea that have been flooded by the Sea in the recent past), and consequently may be vulnerable to frequent wind events that can suspend these salts into the air, potentially creating a very unhealthful environment for wildlife, people and possibly valley agricultural crops. This land would likely retain very little wildlife value, unless expensive and intensive management programs were initiated. Given that Imperial County is currently designated as a State non-attainment area for PM₁₀, fugitive dust emissions from exposed playas would immediately exceed local air district significance thresholds. As required under local air district regulations and requirements, landowners may be required to implement dust control measures on their land that becomes emissive. This requirement could make the Refuge responsible for dust control on thousands of acres of land.

For these reasons we consider the alternatives that create brine sink and exposed playa conditions on existing Refuge land inappropriate management actions relative to the purposes for which the Refuge was established. We are open to potential land exchanges where wildlife habitat is likely to be established in the Salton Sea basin in the future if, because of topography or other physical limitations, existing Refuge lands will likely become unsuitable as wildlife habitat.

Another issue that concerns the Service is the various expectations of the Refuge after a restoration alternative is implemented. All of the proposed alternatives contain large amounts of infrastructure on land currently owned or leased by the Refuge that would presumably require maintenance in perpetuity. Neither the Refuge nor the Service in general is currently able to assume any of the staffing or financial commitments required to actively manage any inundated lands that the Service owns to the degree described in any of the proposed restoration alternatives. As a preferred alternative is selected, outside funding is secured, and land ownership and wildlife management concerns are addressed, the Service would be glad to participate in or help lead a Salton Sea habitat management entity, of which the Refuge may be a part. Based on the amount of land within the Salton Sea basin and the amount of habitat, exposed playa, brine sink and infrastructure that would be established if a proposed alternative is implemented, it will likely be necessary for a cooperative approach to management of the basin by numerous entities.

Regarding the specific restoration alternatives, the Service recognizes some alternatives or components of alternatives that, as described, appear to be superior to other alternatives in meeting the legal requirements of the state Salton Sea Restoration Act. The Act requires that "The preferred alternative 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;

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- (2) Elimination of air quality impacts from the restoration projects; and
- (3) Protection of water quality."

The Saline Habitat Complex (SHC) is intended to provide habitat that is similar to historic shoreline habitat of the Salton Sea, albeit with a broader range of salinities (20,000 to 200,000 mg/L). The shoreline is the aquatic zone of the Salton Sea that includes the greatest diversity of birdlife in the area. Table 8-25 in the PEIR summarizes how each alternative may change representative birdlife of the Salton Sea relative to historic abundance. Alternative 2, composed of large expanses of SHC, clearly ranks highest (index value = 57) among all the alternatives in its ability to increase bird habitat capacity of the Salton Sea. This indicates that an emphasis on shallow aquatic habitat is likely to result in the greatest returns in migratory bird abundance and diversity. Given the range of salinities and the design of these components, they are expected to offer a fish and invertebrate forage base suitable for a wide range of bird species. Because of the smaller scale of the required infrastructure, the ability to use on-site materials, and the modular (or cellular) nature of the SHC, it can be developed in phases in an adaptive manner. Each phase can be modified in response to information gathered in the previous phase(s). This approach offers many advantages in the context of a program in which inflows at a set volume are not guaranteed.

Birds are, by far, the most diverse wildlife group at the Salton Sea. However, how fish will be affected by restoration alternatives must also be addressed. The only species native to the system is the desert pupfish (*Cyprinodon macularius*). Each alternative has components that address the connectivity of the various sub-populations occupying the drains and creeks that flow into the Salton Sea, but they differ in the level of connectivity achieved by these components. While Alternative 3 offers the best physical connectivity (all sub-populations connected in the first ring), the Service has concerns regarding what other fish species would be occupying this ring and how that might impact the desert pupfish through predation, competition and/or interference. Particularly given the deeper water associated with this ring, as opposed to the channels or shoreline waterways of other alternatives, there may be conflicts between long-term conservation of desert pupfish and maintenance of a fishery. Any Preferred Alternative identified needs to include the development of management options to provide for long-term conservation of pupfish in the context of that alternative's physical mode of connectivity. The Service would like to continue working with your staff and the staff of the Department of Fish and Game to address this critical conservation issue.

The Act requires "elimination of air quality impacts from restoration projects". Air "pollutants of greatest concern in the Salton Sea Air Basin", as identified in the PEIR, include particulate matter (PM₁₀) and NO_x emissions. These are of concern to the Service because we have staff that live and work in this environment, and we are concerned about the potential impacts such pollutants may cause in wildlife. As a consequence of any construction event in such an arid environment, soil disturbance will likely generate and add to existing particulate matter, and NO_x emissions will result from use of construction related motorized equipment. It is clear from information in the PEIR (e.g., Figure 10-6) that "elimination" of air quality impacts from any restoration effort is not possible. Even No Action Alternatives will result in air quality impacts (PM₁₀). Figures 10-5 and 10-6 help enumerate forecasted PM₁₀ emissions during peak construction and operations phases of each alternative. As shown in these figures, the

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alternatives composed of SHC produce the lowest peak construction and long-term fugitive PM₁₀ emissions. The peak construction year in each alternative will provide the largest amount of NO_x emissions (Figure 10-7). Only those alternatives based on SHC will maintain emissions below the 50 ton/yr local significance threshold in those years.

The Act requires that the restoration program preserve water quality. Without significant improvements in the quality of the inflows, those alternatives that include a Deep Marine Sea may continue to be plagued by the deep anoxic conditions and hydrogen sulfide and ammonia release events that regularly result in fish kills in the Salton Sea today. Those alternatives that rely on shallow aquatic habitats, while still experiencing some continuous degradation of water quality, are not expected to be subject to these catastrophic events as based on the water quality modeling. These shallow aquatic habitats show significant water quality improvements with moderate reductions in inflowing nutrients. This suggests that the shallow habitats are more likely to provide consistent conditions supporting aquatic life.

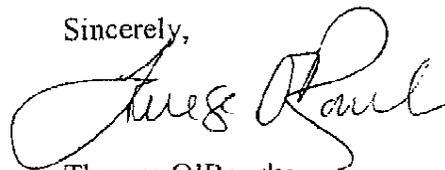
Selenium, while of concern in all alternatives, appears to pose at most a moderate risk to the target receptors evaluated in the Ecological Risk Assessment. The risks posed would not appear to help discriminate among the alternatives at this point. However, this situation does warrant continued monitoring and ongoing efforts to reduce the loading of selenium into the system.

The PEIR currently identifies three potential sources of the rock and gravel required in various amounts for the alternatives: Mesquite Mine, Eagle Mountain Mine, and Coolidge Mountain. Please be aware that the use of any of these sites as rock/gravel sources for the project may result in adverse impacts to species listed and/or critical habitat designated under the Endangered Species Act of 1973 (as amended). To date, no analysis of these impacts has occurred, and no authorization of incidental take of listed species associated with the use of these sites has been granted. Such an analysis, and authorization of incidental take as appropriate, is a necessary step in the process prior to implementing a preferred alternative.

The Service encourages the Department of Water Resources to incorporate a significant acreage of saline habitat complex or similar habitat features into its preferred alternative for the reasons identified above. The Bureau of Reclamation is considering a range of alternatives in their Feasibility Study process which appear to offer components and/or configurations not included in the PEIR. We recommend that these configurations/components also be considered in the development of the preferred alternative.

If you have any questions regarding these comments, please contact Carol Roberts of my staff at (760) 431-9440 or Chris Schoneman of the Sonny Bono Salton Sea National Wildlife Refuge at (760) 348-5278.

Sincerely,



Therese O'Rourke
Assistant Field Supervisor

Ms. Dale Hoffman-Floerke, Department of Water Resources

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cc: Steve Thompson, Fish and Wildlife Service, California/Nevada Operations Office
Dan Walsworth, Fish and Wildlife Service, California/Nevada Operations Office
Kim Nicol, California Department of Fish and Game, Bermuda Dunes Office
Mike Walker, Bureau of Reclamation, Yuma Area Office