

AUDUBON EXHIBIT 18



April 25, 2002

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Re: Comments – Imperial Irrigation District Water Conservation and Transfer Project and Draft Habitat Conservation Plan, Draft Environmental Impact Report/Environmental Impact Statement (State Clearinghouse No. 99091142, Jan. 18, 2002) (“IID DEIR/DEIS”)

Dear Mr. Ellis & Mr. Grubaugh:

Cabazon Band of Mission Indians, Defenders of Wildlife, Endangered Habitats League, National Audubon Society – California, National Wildlife Federation, Pacific Institute for Studies in Development, Environment, and Security, Planning and Conservation League, and Sierra Club submit the following comments on the DEIR/DEIS prepared for IID’s water conservation and transfer project. The organizations included on this letter may provide individual letters, but this comment letter is intended to provide an overall comment on the IID DEIR/DEIS from the interested organizations listed above, and are referred to in this comment letter collectively as “the organizations.”

INTRODUCTION

The organizations recognize the need for the proposed project and support the general objective of reducing California’s reliance on surplus Colorado River water. In the long run, reducing California’s reliance on such surplus water can provide Colorado River water for other environmental needs, among other uses. However, the reallocation of surplus or conserved water must be carried out in a way that reduces or avoids significant environmental and socio-

(avoiding technical jargon) so that the public may rapidly understand the document.³ The following excerpt from the explanation of the Salton Sea accounting model⁴ speaks for itself:

The Salton Sea Accounting Model incorporates the ability to perform stochastic and deterministic simulations of Salton Sea conditions. The Salton Sea Accounting Model operates on an annual time step. Deterministic simulations of the Salton Sea Accounting Model assume that the hydrologic and salt load variability of the Sea would repeat in the future exactly in the same pattern each time the Salton Sea is simulated. Stochastic implies that different hydrologic conditions are sampled and used in each simulation.

The EIR/EIS consultants have simply written a document for their peers and not for the general public. This ponderous document is simply inaccessible to the average reader. The sheer size and the technical nature of the writing precludes rather than includes public participation and review. Because the proposed project will have significant adverse irreversible effects on the area's quality of life, both IID and BOR have an obligation to reach out to the communities affected. The proposed project's significant adverse impacts on the Salton Sea will adversely affect tribal lands and traditions. Since many of the workers employed in the predominantly agricultural communities within the project areas are Hispanic, at least the Executive Summary should have been translated into Spanish.

The CEQ Recommendations on Environmental Justice encourage the BOR to "use innovative approaches to overcome linguistic, institutional, cultural, economic, and historic barriers to effective participation, including: [¶] translate important documents." The Environmental Justice section of the DEIR/DEIS focuses on the project's impacts on low income and minority populations, but the document fails to reach out to these communities and improve their opportunity to effectively participate in the environmental review of the proposed project.

The organizations believe the DEIR/DEIS should be rewritten consistent with the CEQ Regulations and CEQA Guidelines and then recirculated for public review and comment, so that its information is more accessible to the general public. Otherwise, we believe that the communities that will be affected by the significant adverse environmental consequences of the proposed project have been precluded from any meaningful opportunity to participate in the process.

II. ENVIRONMENTAL SETTING AND BASELINE

At section 3.1.3, the DEIR/DEIS describes the "Existing Setting" for Hydrology and Water Quality for the proposed project.⁵ At section 3.2.3, the DEIR/DEIS describes the "Existing

³ 40 CFR 1502.8; CEQA Guidelines, § 15140.

⁴ DEIR/DEIS, p. 3.1-99.

⁵ See DEIR/DEIS § 3.1.3, at pp. 3.1-9 to 3.1-89.

which exist within the area which will be affected by a proposed project including land, air, water, minerals, flora, fauna, noise, [and] objects of historic or aesthetic significance.”¹¹

In elucidating and implementing these statutory mandates, the CEQA Guidelines require that an EIR include “a description of the physical environmental conditions in the vicinity of the project, *as they exist* at the time the notice of preparation is published.”¹² “This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant.”¹³ In other words, CEQA *statutorily requires* that the “baseline” for environmental analysis of a proposed Project consist of a snapshot of the physical environment, frozen at that moment in time where contemplation begins of the proposed project’s potentially significant environmental effects. Equally seductive arguments about establishing the baseline based upon predicted future events or activities have been rejected by the California courts. As one court concluded:

The better approach . . . [is] to follow the general rule expressed in the Guidelines and cases that baseline conditions are normally to be determined as of the time environmental review is begun. This most closely describes the environment ‘as it exists before the commencement of the project.’¹⁴

For example, in the planning and zoning context, California’s Appellate Court has stated that CEQA requires that the impacts of a proposed project are *not* to be incrementally measured against impacts that might foreseeably occur in the absence of the proposed project.¹⁵ Rather, they are to be measured against the existing condition of the environment: “CEQA nowhere calls for evaluation of the impacts of a proposed project on an existing general plan; it concerns itself with the impacts of the project on the environment, defined as the existing physical conditions in the affected area.”¹⁶

The DEIR/DEIS does, in fact, provide an overly detailed review of the existing environmental conditions at the Salton Sea with regard to Hydrology and Water Quality and to Biological Resources. However, rather than follow CEQA’s statutory command that this snapshot of existing conditions be used as the baseline for environmental analysis, the Water Transfer

¹¹ Pub. Resources Code § 21060.5 (emphasis added).

¹² CEQA Guidelines, 15125, subd. (a) (emphasis added).

¹³ *Ibid.*

¹⁴ *Save Our Peninsula Committee v. Monterey County Board of Supervisors* (2001) 87 Cal.App.4th 99, 126; see *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 955, “[a]n EIR must focus on impacts to the existing environment, not hypothetical situations.”

¹⁵ See CEQA Guidelines, § 15125, subd. (e); *Environmental Planning and Information Council v. County of El Dorado* (1982) 131 Cal.App.3d 350, 354 (hereinafter “EPIC”).

¹⁶ *EPIC, supra*, 131 Cal.App. 3d at p. 354.

The DEIR/DEIS states that under the No Action alternative, "IID would not be obligated to limit its annual diversions . . . to 3.1 MAF . . ." ²¹ The quantification of IID's consumptive use right would facilitate the measurement of conservation efforts within the district, by providing for a benchmark against which future consumptive use, and transferred water, can be measured. Absent this benchmark, there is little reason to believe that IID's use, including water transferred to MWD, would change from historical levels, or that inflows to the Salton Sea would decrease as projected by the baseline/No Action alternative.

The Quantification Settlement Agreement (QSA) would cap IID's consumptive use at 3.1 MAFY. Water transferred to MWD under the 1988 agreement would be subtracted from this cap, as shown in DEIR Table 2-1. ²² This cap would enable IID to continue to consume annually the average volume of water it has used in the past twelve years (2.92 MAFy), and transfer an additional 0.1 MAFy to MWD, without exceeding the cap. If in some year IID's use approached the cap, presumably some of that additional water would flow to the Sea, roughly balancing any decrease of inflows to the Sea due to actual conservation efforts. ²³

Thus, the assumption that the 1988 IID/MWD conservation program will decrease inflows to the Sea by some 0.1 MAFy is wrong for three reasons:

- it contradicts the historical record, which shows no such decrease over the life of the 1988 conservation program;
- if the proposed IID-SDCWA transfer is not approved ("no action"), then the QSA will likely not be implemented, meaning that IID's use will not be capped at 3.1 MAFy and therefore there will be no baseline against which to measure IID conservation, reducing the likelihood that any measurable conservation would occur in the future; and
- even if the QSA were implemented, the 3.1 MAF cap is sufficiently high to permit IID to continue to use water at or above historical levels, *and* transfer 0.1 MAF to MWD, without exceeding the cap.

The 1988 IID/MWD water conservation program has been on-going for more than 12 years; records clearly demonstrate that it is wholly unreasonable to assume that this conservation program will decrease inflows to the Sea, even with new state and federal actions, such as quantification of IID's water right. An accurate baseline should reflect a continuation of IID drainage flows to the Salton Sea at historical levels.

²¹ DEIR/DEIS, § 2.0, p. 2-55.

²² DEIR/DEIS, § 2.0, p. 2-6.

²³ Since 1955, IID's annual consumptive use has exceeded 3.1 MAF only four times (1974, 1996-1998), the last three times in years when the Secretary of the Interior had declared a "surplus condition" for the Colorado River (data from Bureau of Reclamation and Colorado River Board of California).

Existing Setting reflects results from the period of record from 1987-1999 (3.1-92). Yet the salinity used for the baseline assumes *maximum* concentrations (of 879 mg/L) "over the life of the Proposed Project" (3.1-93), a salinity 14% higher than existing conditions. This biased assumption minimizes the potential impacts of the proposed project relative to a baseline based upon reasonable assumptions.²⁹ The DEIR/DEIS' misleading assumptions generate the projection that the Salton Sea's baseline salinity would reach 60,000 mg/L by 2023 (3.0-15), rather than a salinity of 57,900 mg/L *after 50 years*, as projected by the to-be-published paper on Salton Sea salinity cited by the DEIR/DEIS in Appendix F.³⁰

Recommendation – The baseline alternative should assume that salinity of the Colorado River at Imperial Dam remains relatively constant, at roughly 771 mg/L.

To its credit, the DEIR/DEIS Salton Sea Accounting Model accounts for the current precipitation or biological reduction of 0.7 – 1.2 million tons of dissolved solids within the Sea each year, meaning that the Sea's salinity is increasing more slowly than previously estimated.³¹ It is not clear, from either the DEIR/DEIS or from the draft paper it cites, how such precipitation / biological reduction rates might vary at the higher salinities projected for the Salton Sea if inflows decrease. Potentially, such precipitation rates might increase as the saturation thresholds of other salts are approached with the Sea's rising salinity, decreasing the overall rate of increase. This suggests that the model's sampling from a uniform probability distribution may tend to overestimate the rate of increase, particularly at higher salinities.

Recommendation – The Salton Sea Accounting Model should be modified to reflect potentially higher precipitation rates at higher salinities.

At one point, the DEIR/DEIS claims that "The Sea currently has an average salinity of approximately 44,000 mg/L," while later it claims "The existing salinity of the Sea is approximately 46 g/L."³² Assuming a higher current salinity minimizes the impacts of the Proposed Project, especially given the biased salinity and inflow assumptions present in the baseline model. That is, assuming a higher starting salinity decreases the "temporal impact" attributable to the water conservation and transfer programs.

²⁹ The Colorado River Basin Salinity Control Program works actively to implement programs to reduce the river's salt load. Interior's *Quality of Water: Colorado River Basin Progress Report No. 19* (Jan. 1999) notes that planned and potential salinity control programs could result in a *downward* trend in Colorado River salinity at Imperial Dam (rather than upward as asserted by the DEIR (3.1-93)), suggesting that it would be entirely reasonable for the DEIR to assume that salinity remains constant at current levels.

³⁰ DEIR/DEIS, Append. F, p. 20.

³¹ DEIR/DEIS, Append. F, p. 20.

³² Compare DEIR/DEIS p. ES-15 with p. 3.0-15.

The Salton Sea now receives flow from the Colorado River after that water has been put to use on the surrounding agricultural fields. The drainage from these fields provide the necessary inflows that maintain the current Salton Sea. The protection of those flows for the protection of the Salton Sea is a matter that the DEIR/DEIS has ignored. Yet, the California Supreme Court has stated:

The state as sovereign retains continuing supervisory control over its navigable waters and the lands beneath those waters. This principle, fundamental to the concept of the public trust, applies to rights in flowing waters as well as to rights in tidelands and lakeshores; it prevents any party from acquiring a vested right to appropriate water in a manner harmful to the interests protected by the public trust.³⁶

By dismissing the water necessary to maintain the Salton Sea, the DEIR/DEIS has failed to fully evaluate the environmental consequences of the proposed transfer project on those interests protected by the public trust.

G. ASSUMPTIONS USED IN DEVELOPING BASELINE IMPERMISSIBLY AVOID IMPACT ANALYSIS AND MITIGATION

The document states that the elevation today is -228'. According to the restoration draft EIR/EIS (January 2000) and SSDP's shoreline delineation, the Sea elevation has been determined to be relatively stable at -227 for the past ten years. A stable elevation indicates that evaporation loss from the Sea is equal to inflow over that period (1.36Maf). The document reads that *without implementation of the project*, the Sea will be seven or eight feet lower than it is today. Nowhere here does it say anything about why the "Sea is projected to continue to decline" by the seven or eight feet drop (depending upon the elevation baseline you use) to -235 that the document uses as its baseline. It assumes that 25 (more if you take it from -227) square miles of surface area of the Sea will be exposed *with or without* the project (and therefore not responsible for that impact).

The document assumes that these impacts have already occurred or are going to happen anyway, thereby effectively eliminating the impacts that occur between -227 and -235. This area includes most of the existing wetlands around the Sea today, as well as Mullet Island—the bird nesting island that is only separated by 7 feet deep of water from the mainland.

H. NO PROJECT AND OTHER ALTERNATIVES

Both NEPA and CEQA require the action agency to evaluate alternatives to the proposed project; "this section is the heart of the environmental impact statement."³⁷ However, the DEIR/DEIS fails to adequately explain the alternatives other than the proposed project. NEPA requires that the agency "devote *substantial* treatment to *each* alternative considered in detail including the

³⁶ National Audubon Society v. Superior Court (1983) 33 Cal.3d 419, 445.

³⁷ 40 C.F.R. § 1502.14.

"Baseline" for environmental analysis. Moreover, the No Project Alternative repeatedly uses the terms "No Project" and "Baseline" interchangeably.

Model runs 1c and 1d, forecast a Sea in constant change from its present, existing condition. Since these "No Project" model runs plainly disclose that the Sea will change over time without the proposed Project, the "No Project" alternative cannot be "identical to the *existing* environmental setting analysis which does establish [the Project's] baseline."⁴⁵ Yet, the DEIR/DEIS repeatedly refers in its No Project alternative analysis to the "No Project/Baseline" conditions at the Sea. The DEIR/DEIS' interchangeable use of these two, distinct CEQA concepts is an error as a matter of law that skews the DEIR/DEIS' analysis by improperly shifting the "baseline" to a future period.

IV. FAILURE TO PROPERLY ANALYZE CUMULATIVE IMPACTS DUE TO USE OF "NO PROJECT" ALTERNATIVE AS BASELINE

CEQA requires that an EIR analyze a proposed Project's significant cumulative impacts.⁴⁶ "[A] cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts."⁴⁷ "An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects."⁴⁸

An EIR cannot dismiss cumulative impacts simply because other projects and activities are already severely impacting the existing environment. For example, in *Kings County Farm Bureau v. City of Hanford*, the City of Hanford sought to approve a proposed coal-fired cogeneration power plant in an area where other activities had already resulted in degraded air quality.⁴⁹ The City, in its EIR, claimed that the project's cumulative air quality impacts were insignificant, because they were "relatively minor when compared with other sources."⁵⁰ The appellate court flatly rejected the City's theory, and held that cumulative impacts analysis must assess the collective or combined effects of the proposed project with other past, present and reasonably foreseeable future projects:

We find the analysis used in the EIR and urged by [the Project applicant] avoids analyzing the severity of the problem and allows the approval of projects which, when taken in isolation, appear insignificant, but when viewed together, appear startling. Under [the applicant's] "ratio" theory, the greater the overall problem, the less significance a project has in a cumulative impacts analysis. We conclude

⁴⁵ CEQA Guidelines, § 15126, subd. (e)(1).

⁴⁶ CEQA Guidelines, § 15130, subd. (a).

⁴⁷ CEQA Guidelines, § 15130, subd. (a)(1).

⁴⁸ CEQA Guidelines, § 15130, subd. (b)(3).

⁴⁹ *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692.

⁵⁰ *Kings County*, *supra*, 221 Cal.App.3d at p. 720.

all other projects' negative impacts – instead burying them in the projected “Baseline” – the DEIR/DEIS' cumulative impacts analysis fails to disclose the truth: cumulative impacts to the Sea's Biological Resources will, in fact, remain significant *despite* implementation of the proposed Projects' parsimonious HCP.

To put it in the kindest possible light, the DEIR/DEIS' analysis of cumulative impacts is factually erroneous and legally inadequate. The DEIR/DEIS cannot be certified until it actually “assess[es] the collective or combined effect of [water diversions from the Salton Sea].”⁵⁵

V. ADDITIONAL COMMENTS ON WATER QUALITY ANALYSIS

A. SELENIUM

The DEIR finds that selenium concentrations currently exceed fresh water quality criteria in surface drains and at the outlets of the Alamo and New Rivers, and that such concentrations would increase under the Proposed Project.⁵⁶ Yet the DEIR claims a finding of *unavoidable* impact.⁵⁷ This is patently false. The increases in selenium concentrations are significant impacts that could and should be mitigated. Various on-going selenium mitigation programs exist within California and within the Upper Colorado River basin, undermining the DEIR's questionable finding. Such mitigation could be implemented within the Imperial Valley, through wetland management programs based upon current programs in California's Central Valley that may have reduced selenium concentrations by as much as 90%.⁵⁸ IID could also contribute to Colorado River Upper Basin source reduction programs. A pilot project in the Montrose Arroyo Basin of western Colorado reported a decrease of selenium loadings by 28%.⁵⁹

Recommendation – Identify and develop an appropriate program to mitigate for the increase in selenium concentrations due to the Proposed Project, via one or more of: wetland management programs, targeted efforts at disproportionately high sources of selenium within the Imperial Valley, and/or support for Upper Colorado River Basin selenium source reduction programs.

B. TEMPERATURE

The temperature of the Salton Sea affects many of the species in the Sea, with low winter temperatures causing tilapia mortality and high summer temperatures further decreasing the availability of oxygen, stressing aquatic life. Because the Sea is a broad and shallow body of

⁵⁵ *Kings County, supra*, 221 Cal.App.3d 692, 721.

⁵⁶ See DEIR/DEIS, Table ES-1, pp. FS-17-18; Table 3.1-4, p. 3.1-56.

⁵⁷ See DEIR/DEIS, p.3.1-111 (stating “This impact cannot be mitigated.”)

⁵⁸ Agrarian Research and Management Company, Ltd., cited in 2002 SWRCB California Regional Water Quality Control Board-CRBR Exhibit No. 2.

⁵⁹ Butler, David L. 2001. *Effects of piping irrigation laterals on selenium and salt loads, Montrose Arroyo Basin, western Colorado*. U.S. Geological Survey Water Resources Investigations Report 01-4204. 14 pp.

Additionally, the DEIR/DEIS' assessment of biological impacts is not consistent with that of the January 2002 draft programmatic EIR for Implementation of the Colorado River QSA, which finds that "The accelerated change in the natural habitat of the desert pupfish is considered a *potentially significant impact*. *Significant impacts* would occur to the California brown pelican, black skimmer, double-crested cormorant, and other resident and migratory birds that forage on fish."⁶³

The DEIR/DEIS notes that "Impacts associated with a decline in [the Salton Sea's] elevation are discussed in Sections 3.3 Geology and Soils, 3.6 Recreation, 3.7 Air Quality, and 3.11 Aesthetics," failing to recognize the potential impacts to biological resources associated with a decline in elevation.⁶⁴ Such impacts would include a loss of valuable shoreline habitat, the exposure of land bridges connecting existing island rookeries to the mainland, and loss of connectivity between pupfish populations. cursory discussions of such impacts are relegated to Appendix C, but they should be appropriately summarized and described within Section 3.2 Biological Resources.

Recommendation – include an adequate description of the potential impacts to biological resources associated with a decline in the Salton Sea's elevation within Section 3.2.

A. FISH

The DEIR/DEIS inconsistently addresses the salinity tolerance of tilapia, at one point suggesting that tilapia can be expected to survive in the Salton Sea until its salinity reaches 120 g/L, while later suggesting that the loss of the tilapia fishery will occur at or near 60 g/L, and that the loss of all fish (including desert pupfish) could occur at about 80 g/L.⁶⁵ The use of apocalyptic salinity thresholds or triggers as stark determinants of species' viability ignores the absence of empirical evidence of any such salinity thresholds; population abundance or productivity would be expected to change continuously in response to increases in salinity.⁶⁶ Table 3.2-43 appropriately reflects the uncertainty of specific impacts and thresholds, though it fails to define its generalized probabilities (i.e., does "extreme" indicate a probability >99% and "high" a probability >95%? Or are these purely qualitative terms and if so, how are they defined?). Additionally, this table inconsistently lists the probability of the reproductive failure of tilapia as "high" at both 45 and 55 g/L, while the text later suggests that tilapia "could acclimate to and reproduce at a salinity level of 60 g/L."⁶⁷

⁶³ Draft QSA DPEIR, Table ES-1, p. ES-45-46.

⁶⁴ DEIR/DEIS, p. 3.0-15.

⁶⁵ Compare DEIR/DEIS, p. 2-5, with p. 3.2-147. The counter-intuitive assertion that "tilapia have been collected at a salinity as high as 120 ppt" warrants documentation and explanation.

⁶⁶ Hurlbert, SH. 1991. Salinity thresholds, lake size, and history: a critique of the NAS and CORI reports on Mono Lake. *Bulletin of the Southern California Academy of Science* 90: 41-57.

⁶⁷ DEIR/DEIS, p. 3.2-149.

result in a prolonged survival of this fishery. The DEIR/DEIS must also investigate the possibility that, as proposed in two peer-reviewed papers in the Journal of Ecological Modeling, this excess crowding of tilapia leads to an excessive number of diseased fish, resulting in heightened avian mortality.

B. BIRDS

Shorebird counts at the Salton Sea exceed 78,000 individuals in fall, 68,000 in spring, and 27,000 in winter, with large numbers of black-necked stilts, American avocets, western sandpipers, and dowitcher species reported. These shorebirds are concentrated primarily on unvegetated beaches and alkali flats along the Sea's south shoreline.⁷¹ The DEIR/DEIS reports that such unvegetated areas constitute 25% of the adjacent wetlands at the Salton Sea, yet fails to quantify the loss of such habitat due to the projected decline in the Sea's elevation, or assess how the loss of such habitat might impact shorebirds.⁷² In the air quality section, the DEIR/DEIS contends that a fairly stable salt crust would form on exposed lakebed, suggesting that the Salton Sea's newly exposed shoreline would not provide suitable habitat for the species that shorebirds currently prey upon.⁷³

Recommendation – quantify the decrease in unvegetated shoreline habitat due to the proposed project and assess the impacts this will have on shorebirds.

Recommendation – Develop an adequate mitigation plan for these impacts.

The Salton Sea provides valuable habitat for a significant percentage of the North American population of American white pelicans, as well as other special status fish-eating birds. The proposed project would greatly accelerate the loss of the Salton Sea's fishery, destroying important habitat for these birds. This potential loss of habitat is especially alarming given the loss of more than 90% of California's wetlands, dramatically limiting the options available to these birds. The proposed mitigation for impacts to fish-eating birds is defined inadequately and is unlikely to provide any real benefits for such birds.

C. ADDITIONAL COMMENTS ON PROJECT'S IMPACTS ON BIRDS.⁷⁴

⁷¹ Shuford, W.D., Warnock, N., et al. 2002. Patterns of shorebird use of the Salton Sea and adjacent Imperial Valley, California. *Studies in Avian Biology* (forthcoming).

⁷² DEIR/DEIS, Append. C, p. 2-43.

⁷³ DEIR/DEIS, p. 3.7-35.

⁷⁴ These following comments were prepared by Dr. Nils Warnock of the Point Reyes Bird Observatory and pertain primarily to avian resource issues at the Salton Sea and the surrounding Imperial Valley in reference to the proposed water transfer. These comments are based on Dr. Warnock's extensive experience at and around the Salton Sea via a year-long avian reconnaissance survey in 1999 for which he was the principal investigator, prior survey work on various shorebirds at the Sea in the late 1980s, and extensive knowledge of wetland bird issues

i. DEIR/DEIS OVERVIEW

The DEIR/DEIS fails to adequately address how wildlife will be able to respond to an accelerated decline of conditions at the sea. The DEIR/DEIS assumes that the proposed habitat conservation plans (which may take up to 15 years to develop) will protect bird populations on the same temporal scale as the proposed water transfer will impact species, yet this may not be the case and the Proposed Plan offers no alternatives. It also assumes that restoration projects will do what they are designed to do (for instance, created marshes will attract the same species being impacted by water diversions), yet this is another undocumented assumption. For instance, there is reason to believe that Black Rails will not respond to the proposed marsh construction plans (see comments below). The DEIR/DEIS assumes that water conservation actions taken in the agricultural fields will not significantly impact species because agricultural habitat is abundant, despite the fact that the Proposed Project could reduce the amount of available agricultural habitat by approximately 15%. Given that potentially one third to one half of the world's population of Mountain Plovers winter in the agricultural fields of the Imperial Valley alone (see below), with a host of other species dependent on the fields (Shuford et al. 2000), this may be a naïve assumption. Finally, in a number of places, the DEIR/DEIS assumes that the conditions at the Salton Sea created by the accelerated impacts of the proposed water transfer will not have significantly different effects on wildlife at the Salton Sea compared to a no-action alternative, yet this is also undocumented. Given the documented international importance of the Salton Sea and its surrounding lands, particularly to birds (i.e. Shuford et al. 2000, Patten et al. in press, Shuford et al. in press), the number of untested assumptions that this document relies on to justify no significant impact conclusions is troubling.

Most of these comments pertain to Alternatives 2-4 also.

ii. SECTION 3.2 BIOLOGICAL RESOURCES (PAGES 3.2-1 THROUGH 3.2-203)

(a) IMPACT BR - 1 THROUGH IMPACT BR - 7

The current evaluation of the potential impacts of the water transfer on various Lower Colorado Region (LCR) wetlands and wetland associated habitats assumes that restoration of habitat would compensate for direct habitat loss. However, there is no documentation that restorations will actually work in attracting birds. Seep areas with shallow water are particularly important for Black Rails (Evens et al. 1991, Flores and Eddleman 1993, Eddleman et al. 1994) in the LCR and Salton Sea area, and the decline of Black Rails in this region is likely the result of seeps being eliminated through lining of canals and pumping (Evens et al. 1991). Current managed wetlands in the LCR and Salton Sea area have few Black Rails, probably because water levels in managed wetlands around the sea are maintained at deeper levels than Black Rails prefer, and maintaining very shallow water on marsh sites is difficult (Eddleman et al. 1994). If restoration projects are less than successful, impacts on rails and other species may be significant.

South Africa. Unpublished Ph.D. dissertation. University of Capetown, South Africa.

Warnock, N., W. D. Shuford and K. Molina. Annual distribution pattern of waterbirds at the Salton Sea, California, 1999. accepted. Studies in Avian Biology.

(g) HCP (SALTON SEA PORTION) APPROACH 2: USE OF CONSERVED WATER AS MITIGATION.

DEIR/DEIS suggests up to 15% of agricultural lands could be fallowed. Need to address Mountain Plover issue (see comments above).

(h) IMPACT BR-42 REDUCED SEA ELEVATION COULD AFFECT THE ACREAGE OF ADJACENT WETLANDS DOMINATED BY TAMARISK AND SHORELINE STRAND.

DEIR/DEIS suggests that no significant impacts will occur despite the potential loss of much of the vegetation associated with the riparian zone that would impede the use of wildlife nursery sites (see 3.2.4.2 Significance Criteria DEIR/DEIS). Colonial waterbirds nested at 21 sites along the Salton Sea in 1999 (Shuford et al. 2000). Much of the nesting occurred in *Tamarix*. Water levels under the Proposed Project would undoubtedly drop faster than *Tamarix* would recolonize which has the potential to significantly impact colonial breeders.

(i) IMPACT BR - 44. CHANGES IN THE INVERTEBRATE COMMUNITY COULD AFFECT SHOREBIRDS AND OTHER WATERBIRDS.

DEIR/DEIS suggests that a less than significant impact will occur to shorebirds and other waterbirds when the invertebrate community of the sea collapses to a few species. Mono Lake is provided as an example of what the sea might look like if the invertebrate community changes to one found in a hypersaline system (brine shrimp and flies). Mono Lake attracts large numbers of a few species, but it does not attract large numbers of a lot of species as does the Salton Sea. For instance, very few Marbled Godwits are found at Mono Lake (D. Shuford pers. comm.), whereas the Salton Sea attracts relatively large numbers (1000 + birds during most times of the year, Shuford et al. 2000). Mono Lake attracts very few Black-necked Stilts (D. Shuford pers. comm.), whereas the Salton Sea attracts large numbers (over 15,000 in August 1999, Shuford et al. 2000). Overall, Mono Lake does not hold many waterfowl, while the use of the Salton Sea by waterfowl is diverse (Shuford et al. 1999, 2000). In 1999, Ruddy Duck numbers in the winter ranged over 30,000 birds at Salton Sea, whereas winter counts of Ruddy Ducks at Mono Lake generally count fewer than 1,000 birds (DEIR/DEIS 2002). Changes in the invertebrate community will have significant impacts on the shorebirds and other waterbirds that use the Salton Sea.

(j) IMPACT BR - 46. REDUCED FISH ABUNDANCE WOULD AFFECT PISCIVOROUS BIRDS.

DEIR/DEIS suggests that a less than significant impact will occur to the piscivorous birds. The proposed project will accelerate various processes that will negatively impact fish-eating birds at the Salton Sea (reduced water levels, reduced fish supplies). No discussion is made of what will happen to the largest breeding colony of Double-crested Cormorants in California and one of the largest in the West (Carter et al. 1995). Double-crested Cormorants that breed at the Salton Sea are birds from a distinct subspecies, *Phalacrocorax auritus albociliatus*, and this subspecies does not appear to go east of the Rockies (Hatch 1995, Carter et al. 1995). The California coastal population is estimated at only 10,000+ pairs. The 5425 nesting pairs documented at the Salton

to the Sea" (2-52). Given local opposition to "replacement water" following,⁷⁵ the likelihood of legal challenge to such use of water from other water users (especially in light of Decision 1600 and the California Colorado River Water Use Plan), and the additional socio-economic and environmental justice impacts of such following, such an approach seems unlikely to be implemented.

Yet these ill-defined, preliminary approaches are the basis for a finding of "No significant impacts (after mitigation) to biological resources" (Table ES-1). This specious assertion of complete mitigation, based upon a vague description of a proposed action, misleads the public and subverts the CEQA/NEPA process. Essentially, the reliance on this vague, yet-to-developed mitigation measure is illegal, as it defers meaningful evaluation of the proposed mitigation strategy prior to project approval.⁷⁶ The concept-level HCP approaches included in the DEIR fail to meet the standard of an informative and legally sufficient EIR. This inadequate approach prevents the public from providing informed feedback, and suggests the lead agencies intend to present an un-reviewed HCP, perhaps based on the concepts provided here and perhaps based on something completely different, in a final EIR as a *fait accompli*, precluding any meaningful public review or input.

Recommendation – Provide a detailed HCP, with sufficient information to support the DEIR's finding that the HCP would provide full mitigation for all biological impacts at the Salton Sea.

VIII. OVERRELIANCE ON HCP TO MITIGATION PROJECT'S IMPACTS ON SALTON SEA

The DEIR/DEIS presents a Habitat Conservation Plan as an alternative to mitigate the proposed project's impacts on the Salton Sea, but the mitigation largely focuses on threatened, endangered and other covered species. All the other beneficial uses of the Sea are essentially ignored, including, but not limited to, boating, water sports, and the local economy. In general, this approach seems unbalanced, and biased against wholly restoring the Sea and all its beneficial uses.

A. HCP

In reference to the potential effects of the proposed project on listed species, the DEIR/DEIS offers the disclaimer, "IID recognized and considered the following: ... The level of mitigation should be scaled to the impact attributable to the water conservation and transfer programs."⁷⁷ This is a reasonable standard, assuming that the projected impacts are credibly and comprehensively assessed. The DEIR/DEIS fails to do this, partly by relying on the biased assumption that baseline conditions at the Salton Sea will represent a marked change from

⁷⁵ The IID Board itself adopted a resolution opposing following for the purpose of providing the water to help restore the Salton Sea, as have the City of Calexico, the City of El Centro, the City of Imperial, and Imperial Valley United, among others.

⁷⁶ *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359, 1396.

⁷⁷ DEIR/DEIS, § 2.0, p. 2-49.

- Would hatchery-raised fish be raised in diluted Salton Sea water, or in Colorado River water? How would such fish be acclimated to Salton Sea water, particularly as the Sea's salinity approaches adult tolerances? Would this require a longer growing period and therefore a larger facility (and more water and other resources)?
- How would the temperature of the fish ponds be regulated to limit tilapia mortality? January minimum temperatures in the Imperial Valley (<40 ° F) are well below the tolerance of tilapia. Small (160-640 acre fish ponds at 5-6' deep) would be unable to buffer the low air temperatures, leading to large-scale fish kills in winter months, the very time when avian use of the Sea is at its peak. It is unclear from the description of HCP Approach 1 whether IID would artificially heat the water in the fish ponds to minimize temperature-generated mortality, or how this could be reasonably accomplished over 5,000 acres of ponds.
- The intent of the ponds as described is too general. "The objective of creating ponds would be to maintain a level of foraging habitat that would help ensure that piscivorous birds would continue to be represented at the Salton Sea."⁸² At least 16 of the covered avian species eat fish. How would this approach ensure that the foraging needs of all of these species are met? Certain species (e.g., gulls) are much more aggressive and might be expected to dominate the feeding ponds, potentially to the exclusion of other, covered species. How would this approach be managed to ensure that the covered species are fed? Are there any estimations of how many individuals of each covered species might be fed by such ponds?
- Water use for the ponds was estimated at close to 30 KAFy.⁸³ Was there any assessment of whether such use would be considered reasonable and beneficial? Were any additional estimates developed of how much additional water would be required for flushing and water circulation, to minimize the concentration of selenium?

B. ESA COMPLIANCE

There are several misstatements regarding the level of coverage afforded by the 2001 biological opinion (BO). This BO covers the ISG and the change in point of diversion of up to 400 KAF/yr. Contrary to several statements, mitigation to biological resources and cumulative impacts is not as extensive as claimed, and must be revised. For example, the BO *does not* provide ESA compliance for the aggregate LCR impacts of the proposed project, QSA, IA and ISG.⁸⁴ While we would have liked this to be the case, the BO was completed long before issuance of the QSA, or its related NEPA and CEQA analyses. At least one element of the QSA with LCR impacts, the IOP, has not undergone ESA compliance.⁸⁵

⁸² *Id.* at pp. 2-50 – 2-51.

⁸³ *Id.* at p. 2-51.

⁸⁴ DEIS/DEIR, p. 5-21.

⁸⁵ See also DEIR/DEIS, p. 3.2-134 (italicized language, referring to implementation of the IOP in the BO, is unintelligible).

Suggesting that the improbable HCP Approach 2 would be the only effective means of mitigating such emissions is disingenuous at best.

Recommendation – Develop an adequate dust control plan to mitigate for fugitive dust emissions arising from exposed Salton Sea lakebed. Such a plan could include shallow flooding and/or managed vegetation atop exposed lakebed.

A. OZONE AND PM₁₀ EMISSIONS

CEQA requires that an EIR focus, describe and analyze both direct and indirect significant adverse environmental impacts of a proposed project.⁹² CEQA also requires that an EIR describe and analyze cumulative impacts “when a project’s incremental effect is cumulatively considerable.”⁹³ The purpose of an EIR is to identify significant impacts, identify alternatives and to describe mitigation measures that will mitigate or avoid those significant impacts.⁹⁴

The DEIR/DEIS fails to follow CEQA’s mandatory requirement by failing to adequately address the project’s direct, indirect and cumulative impacts to air quality. The DEIR/DEIS provides that, unquestionably, the proposed project will contribute additional emissions including coarse particulate matter (PM₁₀) and ozone (ROC and NO_x). The Salton Sea Air Basin and Imperial Valley (western two-thirds of Imperial County) and the entire County of Riverside are currently at nonattainment levels for both PM₁₀ and ozone.⁹⁵

The DEIR/DEIS provides that for direct and indirect impacts from construction and implementation of the proposed project, the impact is considered significant if the impact exceeds the federal *de minimis* threshold.⁹⁶ The proposed project is considered to be a significant impact on air quality if total direct and indirect emissions would “*violate any air quality standard or contribute substantially to an existing or project air quality violation.*”⁹⁷ The DEIR/DEIS identifies that ozone and PM₁₀ levels within the project are already exceeding the state standards.⁹⁸ It appears from the DEIR/DEIS that the current standard allows for up to 5 tons per year of ozone for the Salton Sea Air Basin (Riverside County) and up to 27 tons per year of PM₁₀ emission.⁹⁹ According to the thresholds, any additional contribution of PM₁₀ and ozone must be considered significant. At the very least, the proposed project will contribute

⁹² CEQA Guidelines, § 15126.2, subd. (a).

⁹³ CEQA Guidelines, § 15130, subd. (a)

⁹⁴ Pub. Resources Code, § 21002.1, subd. (a).

⁹⁵ DEIR/DEIS, Table 3.7-3, p. 3.7-6; see also p. 3.7-14.

⁹⁶ *Id.* at 3.7-24. (Federal *de minimis* threshold is 100 tons per year); p. 3.7-29.

⁹⁷ *Id.* at 3.7-23, emphasis added.

⁹⁸ *Id.* at pp. 3.7-17-3.7-19.

⁹⁹ *Id.* at p. 3.7-25 (Table 3.7-9).

bite-size pieces which, individually considered, might be found to have no significant effect on the environment.¹⁰⁶

IID's DEIR/DEIS commits this same error by inappropriately separating the proposed project's impacts on the area's air quality into on-farm emissions, conservation measures emissions and Salton Sea dry-bed emissions. Like the EIR invalidated in *Kings County*, the DEIR/DEIS is invalidly segmenting the project into "bite-size[d] pieces."¹⁰⁷ The amount of ozone emissions, viewed as a whole, even without the additional secondary emissions caused by the dry Salton Sea bed, exceeds federal and state thresholds. Furthermore, the failure to provide any quantitative measurement for additional emissions caused by the foreseeable Salton Sea dry-bed dust makes it impossible for the public and public decision-makers to determine the project's significant adverse environmental impacts on air quality. As was aptly noted by the Court of Appeal in *Kings County*, "although it is accurate to describe emissions as coming from separate sources, it is inaccurate and misleading to divide the project's air emissions analysis into on-site and secondary emissions for purposes of invoking the presumption the project will have no significant impact."¹⁰⁸ CEQA requires that an EIR's analysis "assess the collective or combined effect" of the project's impact on air quality.¹⁰⁹

D. THE DEIR/DEIS INAPPROPRIATELY MINIMIZES THE PROPOSED PROJECT'S SIGNIFICANT ADVERSE DIRECT, INDIRECT AND CUMULATIVE AIR QUALITY IMPACTS

The DEIR/DEIS, also finds that the additional emissions contributed by the project are less than significant by comparing the project's additional contribution to the larger Federally "acceptable" de minimis threshold of 100 tons per year. The DEIR/DEIS ignores the fact that, cumulatively, the Federal threshold is violated – ozone by more than 4 times the federal threshold. Even without considering the emissions of PM₁₀ and ozone from exposing the Salton Sea bed, the cumulative ozone emissions violate both the federal and state standards. The DEIR/DEIS, therefore, fails to comply with CEQA's requirements.¹¹⁰

Any additional ozone and PM₁₀ emissions contributed by the project is significant because of the region's current nonattainment status. As the Court of Appeal held, an EIR must measure "whether any additional amount of precursor emissions should be considered significant in light of the serious nature of the ozone problems in this air basin."¹¹¹

¹⁰⁶ *Kings County, supra*, 221 Cal.App.3d at pages 716-717.

¹⁰⁷ See *Ibid*.

¹⁰⁸ *Kings County, supra*, 221 Cal.App.3d at p. 717. (Emphasis in original.)

¹⁰⁹ See *Kings County, supra*, 221 Cal.App.3d at p. 721; see also CEQA Guidelines, § 15355.

¹¹⁰ See *Kings County, supra*, 221 Cal.App.3d at pp. 717-718.

¹¹¹ DEIR/DEIS, p. 3.7-6, (Table 3.7-3); p. 3.7-13 (Table 3.7-4); pp. 3.7-17 – 3.7-19; *Kings County, supra*, 221 Cal.App.3d at p. 718.

The EIR/EIS states that factors such as moisture, dried algal mats, efflorescent salt crust and the presence of sulfate salts “would inhibit the suspension of dust” (IID 2002, pg. 3.7-34). These are precisely some of the factors that make the dust problem at Owens Lake so bad. High levels of soil moisture transport saline shallow groundwater to the surface where the water evaporates and a puffy, emissive salt crust can form [citation]. Algal mats are often not stable when they dry, crack and curl. Then in addition to salt and soil, the dust contains algae particles. The sodium sulfate salts present form a very unstable surface when they form at temperatures below about 50 °F [citation]. This means that stable crusts will form during the heat of summer, but puffy, unstable crusts will form during the colder temperatures of winter, when winds typically are stronger and more frequent.

The EIR/EIS also states that the “low frequency of high wind events...would inhibit the suspension of dust.” Then in the next paragraph, “On occasion, existing concentrations of PM-10 in the Salton Sea area violate national and state ambient air quality standards” (IID 2002, pg. 3.7-34). These violations are caused by the wind. The Salton Sea area has a serious nonattainment status of both the federal and state PM-10 standards (IID 2002, pg. 3.7-6). And the largest component in the PM-10 emission inventory is “fugitive windblown dust” (IID 2002, pg. 3.7-13). Great Basin’s research at Owens Lake has shown that unstable lake bed surfaces typically begin emitting dust at about 17 miles per hour (7.5 meters per second) [citation]. The windrose diagrams in the EIR/EIS (Figs. 3.7-6 and 3.7-6) both show that there are winds present above the typical threshold wind speed used at Owens Lake. Even if these winds are infrequent, they may well be sufficient to cause dust emissions—local winds certainly cause dust emissions elsewhere in the air basin, as evidenced by the emission inventory. Adding 70 square miles of potentially emissive surface in an area that already experiences violations of the PM-10 Standard due to wind is not a potential significant environmental impact to be “qualitatively” explained away.

The EIR/EIS attempts to compare the Salton Sea to Owens Lake and states, “Fortunately, conditions found to produce dust storms on dry salt lake beds, such as Owens Lake, were not found to be present at the Salton Sea.” The document then presents one page of semi-technical discussion arguing why Owens Lake is not like the Salton Sea. Only one reference is provided and much of the information is simply incorrect (IID 2002, pg. 3.7-34 and 35). With regard to soil chemistry, they argue that because the types of salts are different at each lake, Salton Sea will not form the unstable crusts found at Owens Lake. While it may be true that Owens Lake salts tend to form very emissive surfaces, I am not convinced that the salt crusts that will form on Salton Sea sediments will be completely stable. The sodium sulfate salts present at Salton Sea can also form emissive crusts under the correct conditions (the presence of soil moisture and low temperatures). The EIR/EIS states that “the frequency of high wind events at the Salton Sea is less than at Owens Lake.” That may be true, but winds strong enough to cause dust emissions must occur at the Salton Sea. The fact that

omission of such discussion in the DEIR/DEIS is a fatal flaw and must be corrected and recirculated for public review and comment prior to any final determination.

G. RECOMENDATIONS

Even though the DEIR/DEIS finds that the impacts are less than significant, mitigation measures or best management practices are proposed to minimize emissions. Prior to identifying feasible mitigation measures, however, it is absolutely necessary that the project's significant adverse direct, indirect and cumulative air quality impacts are identified, as a whole, to ensure that all proposed mitigation measures are considered prior to project approval.¹²⁰ The DEIR/DEIS's identification of direct, indirect and cumulative air quality impacts fails to follow CEQA's mandatory requirements and must be corrected and recirculated prior to any final determination.

X. DEIR/DEIS FAILS TO EVALUATE IMPACTS ON RECREATION ADEQUATELY

The DEIR/DEIS grossly understates impacts on recreation at the Salton Sea, and where significant impacts are recognized, provides either inadequate mitigation or no mitigation at all. The following discussion tracks the DEIR/DEIS discussion of impacts on recreation at the Salton Sea.

For Impact R-5, Reduction in amount of Salton Sea area available for water-related recreation, the DEIR/DEIS employs a quantitative approach to demonstrate that, on a visitors per square mile basis, the reduction in the Sea's surface area will not lead to crowding of recreationists at the Sea. Although quantitative analyses can and do usefully inform many of the issues at stake in the transfer, in this case, they add nothing and obscure issues of substance. Crowding on the surface of the Sea is not a currently top issue of concern, and it will not be an issue of concern if the Sea's surface becomes smaller.

However, the quality of the overall recreational experience at the Sea *will* be an issue of concern if the Sea's surface becomes smaller. A whole host of recreational experiences will simply become unavailable if the Sea is dramatically reduced in size. It will not be possible, or at least easy, to walk along the shore of the Sea because that shore will be hundreds of yards from existing access points. Photography of the Sea, and especially its dramatic sunsets, will be affected along with access. As the simulated views in the chapter on Aesthetics show, from current vistas the Sea will be a thin blue line on a distant horizon, with exposed, salt-encrusted playa surfaces standing between the viewer and the shoreline and presenting an extraordinary deterrent to access. Sightseeing and photography opportunities will be limited as well. (IID DEIR/DEIS, Figures 3.11-5a through 3.11-5l.) These are significant impacts and should be discussed accordingly.

The DEIR/DEIS finds that *Impact R-6: Increase in exposed playa could be used as additional recreation area,* may actually be a positive impact. The DEIR/DEIS states that exposed playa, "could provide more area for land-based recreation activities, including camping and picnicking.

¹²⁰ CEQA Guidelines, §§ 15126, 15126.2, subd. (a), 15126.4.

The DEIR/DEIS correctly includes the SDCWA service area within the region of influence, but then incorrectly asserts that "there would be no impacts in the SDCWA service area geographic subregion," based on the misleading claim that SDCWA would receive the same blend of water that it currently receives.¹²¹ The pertinent question is not the origin of the water received by SDCWA, but its reliability. The adoption of SB 221 in October 2001 changed California's statutory climate, clarifying the proposed project's growth-inducing impacts at the points of delivery. SB 221 prohibits approval of new developments of at least 500 units, unless the applicable public water system verifies that a sufficient water supply is available or, in addition, a specified finding is made by the local agency that sufficient water supplies are, or will be (including transferred water¹²²), available prior to completion of the project. A 1999 IID newsletter¹²³ specifically notes the objective of increasing reliability: "The proposed Project is designed to ... 3) provide SDCWA with a reliable, long-term and cost effective water supply to provide drought protection and to accommodate current *and projected* demands for municipal and agricultural water." (emphasis added) Under S.B. 221, the approval of the water transfer would enable SDCWA to demonstrate a reliable supply of water sufficient to supply large new developments; without the water transfer, SDCWA would not be able to demonstrate such reliability, preventing the approval of such new developments. The proposed water transfer would, thus, have clear growth-inducing impacts within the SDCWA service area.¹²⁴ The DEIR/DEIS itself states that the Proposed Project "would improve the reliability of SDCWA's water supply."¹²⁵

Recommendation – Include a comprehensive assessment of the full range of potential impacts to the SDCWA service area, due to the reliability of supply of up to 300 KAF/year of water under the Proposed Project and Alternative 4 and offer viable potential mitigation solutions to

¹²¹ Compare DEIR/DEIS, § 1.0, p. 1-14 with § 3.0, p. 3.0-2 and Table 3-1, pp. 3.0-5 – 3.0-7.

¹²² California Government Code Section 66473.7. (a)(2)(D) "The amount of water that the water supplier can reasonably rely on receiving from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state, and local water initiatives such as CALFED and Colorado River tentative agreements...."

¹²³ IID and SDCWA Water Conservation and Transfer Project, "Project Newsletter," p.1, dated November 1999.

¹²⁴ The Nature Conservancy and the Association for Biodiversity Information has designated much of the SDCWA service area as one of the six greatest hotspots for imperiled species in the U.S., supporting at least 138 endemic species and 158 imperiled species. Habitat loss and fragmentation, due to residential and urban development, is a principal cause of species endangerment. The National Wildlife Federation's *Paving Paradise: Sprawl's Impact on Wildlife and Wild Places in California* (Feb. 2001) found that urban sprawl is the leading cause of species endangerment in California. The proposed water transfer would enable the continued urbanization of the SDCWA service area and the destruction of a large proportion of the remaining native habitat in the area.

¹²⁵ DEIR/DEIS, § 5.0, p. 5-4.

The San Diego County Water Authority has reached two agreements that will make available to the San Diego region *a new supply* of up to 200,000 acre-feet of water annually well into the 21st century.¹²⁸

The drought and this assessment indicated that the Authority needed to diversify its water supplies *to meet future demands and improve existing supply reliability*.¹²⁹

San Diego will gain a *new water source* that helps to ensure the reliability of its supply well into the next century.¹³⁰

The DEIR/DEIS itself recognizes that it continues to be true, today and into the future when it states:

All of the projections [for growth in the San Diego region] are based on the assumption that the necessary water supplies would continue to be available to the region in the future.¹³¹

The growth-inducing effect of water availability are even more apparent in light of the California Legislature's recently adopted Senate Bill 221: Water suppliers and distributors now are directly and explicitly involved in the determination of whether urban development can proceed based on water supply availability. Urban developments may not proceed without the water agencies' determination, making the availability of water a necessity for development as a matter of law, and giving the water agencies an active role in growth management. This project, in providing a new, expanded and independent water supply, and/or improving reliability, will make it directly possible for water suppliers to authorize new urban growth. The DEIR/DEIS entirely fails to consider S.B. 221.

B. GROWTH INDUCEMENT IS A CRITICAL ENVIRONMENTAL IMPACT THAT MUST BE CONSIDERED

An action's potential for inducing growth is a specific environmental consideration that must be addressed and analyzed in an EIR pursuant to CEQA and an EIS pursuant to NEPA.¹³² Thus, Guideline section 15126.2(d) provides the following mandate for the content of an EIR:

¹²⁸ Water Transfer and Exchange Agreements, "Water Management" section of the San Diego County Water Authority web site, August 23, 2001. (Emphasis added).

¹²⁹ *Ibid.* (emphasis added).

¹³⁰ *Ibid.* (emphasis added).

¹³¹ DEIR/DEIS, § 5.2.2, p. 5-37; see also DEIR/DEIS at § 2.0, p. 2-55; "The reliability of Colorado River supplies to SDCWA, CVWD, and MWD, which is an integral part of the QSA, would not increase [in the no action alternative]."

¹³² CEQA Guidelines, § 15126(d), 15126.2(d); 40 C.F.R.1508.8(b).

Likewise, Appendix G to the CEQA Guidelines (the Environmental Checklist Form) provides that growth inducement is a potential environmental impact that must be considered in an EIR:

XII. POPULATION AND HOUSING. Would the project:

- a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?¹³⁹

C. THE PROJECT IS GROWTH INDUCING BECAUSE IT HAS THE POTENTIAL FOR INCREASING THE AMOUNT OF WATER SUPPLIED TO SAN DIEGO COUNTY

The DEIR/DEIS bases its conclusion on the presumption that the project will not increase the amount of water supplied to the SDCWA service area. There is no evidence to support this assumption, however. Currently, under normal conditions, SDCWA has the right to essentially import all its needed water from MWD pursuant to the Metropolitan Water District Act¹⁴⁰ and MWD's Administrative Code.¹⁴¹ When MWD's supplies are inadequate, SDCWA maintains a "preferential right" to a certain percentage, less than 15%, of MWD's water supplies pursuant to section 135 of the Act.

The proposed project, however, adds to these supplies an extra 200,000 afa from the IID transfer, with the option of up to 100,000 afa more under certain circumstances.¹⁴² These additional supplies are independent of SDCWA's right to MWD water. As noted in SDCWA's 2000 Urban Water Management Plan, "under the exchange agreement with Metropolitan, the Authority's water acquired from IID will be treated as independently owned local water in the same manner as independently owned local water supplies of other Metropolitan member agencies."¹⁴³ Neither the proposed project, the MWD exchange agreement, nor any other project or agreement we are aware of, alters or limits the amount of water SDCWA can obtain from MWD. Accordingly, the 200,000-300,000 afa supplied by the IID transfer not only increases the reliability of the supplied water, it also adds to the water supplies already available to SDCWA, rather than supplanting a portion of its current supplies.

Thus, the project can substantially increase the amount of water available to San Diego County to support its future growth. These additional water supplies will assist SDCWA in meeting the

uses); *City of Davis v. Coleman* (9th Cir. 1975) 521 F.2d 661, 674-675 (EIR required for project constructing highway interchange in an agricultural area where no connecting road currently exists because it will have growth-inducing effect).

¹³⁹CEQA Guidelines, App. G, § XII(a).

¹⁴⁰ Water Code App. § 109 et seq.

¹⁴¹ MWD Administrative Code § 4202.

¹⁴² DEIR/DEIS, § 2.0, p. 2-35.

¹⁴³ SDCWA 2000 Urban Water Management Plan, p. 6-4.

D. THE PROJECT IS GROWTH-INDUCING BECAUSE IT SECURES A RELIABLE SOURCE OF WATER

In addition to creating an additional source of water, the project will have growth-inducing impacts as a result of SDCWA's securing of a reliable source of water. The securing of a more reliable source of water inherently encourages and induces growth.¹⁵⁴

Crucial to understanding the impact on potential growth is an understanding of SDCWA's current guaranteed supplies of water and that supply's inability to meet the current and future demands for water within its service area.

The demand for water within SDCWA's service area in 2000 was 695,000 afa and for the years 1995-2000 averaged approximately 622,000 afa.¹⁵⁵ However, given the inadequate local water supplies, SDCWA has historically imported 75-95% of its needed water supplies from outside sources.¹⁵⁶ MWD is the sole source of imported water for SDCWA.¹⁵⁷

MWD has an obligation to supply water to SDCWA pursuant to the Metropolitan Water Act. However, the amount of water to which SDCWA is entitled, or guaranteed, from MWD is fixed pursuant to SDCWA's preferential rights under section 135 of the Act. SDCWA's preferential right to MWD's supply is less than 15%.¹⁵⁸ The impact of this is noted by SDCWA in its 2000 Urban Water Management Plan:

At any time under preferential rights rules, Metropolitan could allocate water without regard to historic water use or dependence on Metropolitan. *This could leave [SDCWA] short by more than half of its water supply in a hypothetical 20 percent shortage.*¹⁵⁹

This situation is exacerbated by the relatively small amount of water which MWD can guarantee its member agencies will be available in any given year, i.e., its "firm supply." MWD's current "firm supply" is 2.1 million afa, which amount would need to be apportioned among all of MWD's 27 member agencies, including SDCWA, the City of Los Angeles and the Metropolitan Water District of Orange County.¹⁶⁰ Pursuant to SDCWA's preferential rights, it is entitled to less than 15% of this firm supply, or slightly more than 300,000 afa, whereas its water needs in

¹⁵⁴ *Ibid.*

¹⁵⁵ SDCWA 2000 Urban Water Management Plan, p. 2-3.

¹⁵⁶ *Id.* p. 3-1.

¹⁵⁷ *Ibid.*

¹⁵⁸ SDCWA disputes MWD's contention that its preferential right is 15%, and contends it should be somewhat more, about 22%. However, SDCWA's lawsuit against MWD on this issue, which was filed in January 2001, was recently dismissed, but may still be appealed by SDCWA.

¹⁵⁹ SDCWA 2000 Urban Water Management Plan, p. 3-14.

¹⁶⁰ *Id.* at pp. 3-5 to 3-6.

would place almost fifty percent (50%) of SDCWA's water supply at risk, and would cause SDCWA irreparable harm in that *it would destroy business confidence, undermine investment, translate directly into lost production, reduce income, cause lost jobs and result in a weakening economy in San Diego County.*¹⁶⁵

As acknowledged by SDCWA, a reliable source of water supply is essential to accommodate the growth planned for San Diego County. Absent a reliable source of water, growth in the region would be slowed or stalled as local businesses make decisions whether to expand or stay within the region and other businesses decide whether to move into the County.¹⁶⁶ For example, the biotechnology industry is one of San Diego's most important and fastest growing industries, and it needs a reliable supply of water to survive and grow. In a September 1999 public hearing before CALFED regarding its Bay-Delta program, Alan Smith of Biocom/San Diego, the trade association for the life science industry in San Diego County, made the following remarks regarding that industry's need for reliability in its water sources:

*If life science companies are going to prosper, grow, and survive in California, we need assurance that there will be a consistent quantity of water, Monday through Friday, winter, spring, summer and fall. IDAK [sic] Pharmaceutical, for example, has been contemplating for some time a manufacturing plant that would jump them from 65,000 gallons of water a day as an R and D to 750,000 gallons a day as a manufacturing facility.*¹⁶⁷

Mr. Smith's comments were echoed by those of Don Parent, the chairman of the board of the East (San Diego) County Development Council. Mr. Smith emphasized the importance of reliability of water supplies to "high-tech and biotech firms in our area. They contribute billions to our regional economy and will suffer financially unless CALFED makes significant improvements in its program."¹⁶⁸

Likewise, a reliable source of water is necessary to support the projected increased population in the region. As noted by the project's DEIR/DEIS, all of SANDAG's and SCAG's population forecasts "are based on the assumption that the necessary water supplies would continue to be available to the region into the future."¹⁶⁹ This assumption, however, simply cannot be made given the current uncertainty of SDCWA's water supplies.

It is precisely for this reason that SDCWA is seeking this long-term transfer of water: to obtain an increased amount of secure, reliable water supply to support the growth planned for the

¹⁶⁵ *Id.* at p. 28 (emphasis added.)

¹⁶⁶ Exhibit 1.

¹⁶⁷ CALFED 9/1/99 Transcript of proceedings, p. 80; see also Exhibit 1.

¹⁶⁸ *Id.* at p. 70; see also Exhibit 1.

¹⁶⁹ DEIR/DEIS, § 5.0, p 5-3.7.

supplies exist to support the project, and that verification must be supported by substantial evidence.¹⁷⁷ "Sufficient water supply" is defined by the statute to be:

the total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection that will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses.¹⁷⁸

The determination of the availability of sufficient water supply must take into account factors such as the historic availability of water supplies over the last 20 years and the amount of water that the water agency "can reasonably rely on receiving from other water supply project."¹⁷⁹

The basis for Senate Bill 221 was the realization that water supplies are insufficient to support the projected growth in California, and that new development should not proceed unless and until a sufficient water supply was assured. The bill's legislative history notes this basis:

California's increasing population and limited water supply virtually guarantee a future of insufficient water supply to support California's forecasted growth.

While this bill provides a much needed link between the planning decisions made by cities and counties and the amount of water available for development, it does not address the state's fundamental need for additional water supplies.¹⁸⁰

The legislative history is also replete with evidence linking the need for additional, reliable water supplies and the ability to accommodate planned growth, for example:

Under present conditions, the [State Water Project] and the [Central Valley Project] currently have greater demands than they are able to meet. According to the Department of Finance, California's population will double by 2040. Supporters [of the bill] contend that approving new development faster than new water supplies are developed puts existing customers at risk during future droughts. Supporters also maintain that the bill will encourage the development of new supplies at the local level *in conjunction with the reality of growth needs in the region.*¹⁸¹

According to the sponsor, East Bay Municipal Utility District, forecasters expect between now and 2020, California is expected to add over 15 million more

¹⁷⁷ Gov't Code § 66473.7(b)-(c).

¹⁷⁸ Gov't Code § 66473.7(a)(2).

¹⁷⁹ *Id.*

¹⁸⁰ Sen. Ag. & Water Resources Comm., 4/24/01, SB221 Bill Analysis, p. 4 (emphasis added.)

¹⁸¹ Assem. Comm. On Water, Parks & Wildlife, 7/10/01, SB221 Bill Analysis, p. 6 (emphasis added.)

CEQA, however, requires that a project's impacts be measured against the actually existing conditions, not hypothetical conditions envisioned in a General Plan or other projections.¹⁸⁴

Furthermore, the argument incorrectly assumes that the projected growth has been planned for. It has not. Rather, the projections relied upon in the DEIR/DEIS are merely SANDAG's population projections for 2020. The DEIR/DEIS does not rely upon the growth planned by San Diego County's General Plan. Indeed, the County's General Plan 2020 Update is not even near completion or approval. Contrary to the implication in the DEIR/DEIS, the growth projections which will be served by these additional water supplies have not been comprehensively planned for.

Finally, the analysis is based upon transparent circular reasoning. The DEIR/EIS explicitly acknowledges that the growth projections relied upon in the DEIR/DEIS "are based on the assumption that the necessary water supplies would continue to be available to the region into the future."¹⁸⁵ Thus, these projections will not be met if the necessary water supplies are not available. The entire purpose of this project is to ensure that this condition is met, by obtaining additional and more reliable water supplies for the future.

Likewise, the DEIR/DEIS acknowledges that its growth projections "do not assume significant seasonal or year-to-year variability in the water supply. Rather, they are predicated on an assumed consistency in water quantity and quality."¹⁸⁶ Again, the project is specifically designed to insure against the potential for "seasonal or year-to-year variability in the water supply" and to insure a consistent water quantity. In other words, this project enables the growth projections cited in the DEIR/DEIS. Accordingly, the DEIR/DEIS' circular reasoning cannot support its conclusion that this project will not be growth-inducing.

G. WATER TRANSFER-INDUCED URBAN GROWTH WILL SIGNIFICANTLY HARM GLOBALLY IMPORTANT SAN DIEGO COUNTY BIOLOGICAL RESOURCES

i. SAN DIEGO COUNTY CONTAINS GLOBALLY IMPORTANT BIOLOGICAL RESOURCES

The concept of "biodiversity hotspots" has been used to identify biogeographic trends and conservation priorities. These analyses invariably identify south-coastal California, including coastal San Diego County, as a global hotspot for species diversity, endemism, endangerment, and conservation priority.

South-coastal California is considered a hotspot for nearly every group of species, including plants, invertebrates, birds, mammals, and reptiles. A version of a recent hotspot map for the continental United States and Hawaii produced by The Nature Conservancy in cooperation with

¹⁸⁴ *Christward Ministry v. Superior Court* (1986) 184 Cal.App.3d 180, 190.

¹⁸⁵ DEIR/DEIS, § 5.0, p. 5-37.

¹⁸⁶ *Id.* at p. 5-39 – 5-40.

wildlife species, including coastal sage scrub, chaparral, riparian habitats, oak woodlands, vernal pools, grasslands, and coastal salt marshes and succulent scrub habitats. Unique soil types, such as clays and gabbros, support a variety of endemic plant species. San Diego County is also characterized by the confluence of several biogeographic provinces, including elements more common in Baja California and the Sonoran Desert. San Diego County is known to support over 380 rare and sensitive species, nearly 40 of which are listed as endangered or threatened.¹⁹¹

ii. THE GENERAL EFFECTS OF URBANIZATION ON BIOLOGICAL RESOURCES

The principal causes of species endangerment are the direct removal of habitat and fragmentation of remaining habitat areas into smaller and more isolated areas.¹⁹² Recent reviews have found that about 85% of imperiled species in the U.S. are affected by habitat loss¹⁹³, and in Southern California the principal causes of endangerment are residential and industrial development, exotic species, heavy equipment use, and livestock grazing¹⁹⁴. Loss of habitats is known to differentially affect species with large area requirements. These large area-dependent species (e.g., mountain lions, mule deer, golden eagles) are often left with too little habitat to complete their life cycles (e.g., find adequate food, breeding habitat, allow seasonal migrations) and are pushed into greater proximity to roads and developments. Losses of habitat also result in decreases in total population size of species with reduced habitat area requirements, leaving the remaining individuals at a greater risk of local extinction due to stochastic events (e.g., fire, weather patterns, disease outbreaks) and adverse genetic effects from inbreeding.

Aside from the direct removal of natural habitats, development produces a variety of indirect impacts to remaining habitats. As development fragments habitat areas into smaller patches, the amount of habitat edge increases. Habitat edges are the interfaces between natural habitats and adjacent human land uses. This interface is where many adverse indirect impacts to remaining natural open space originate.¹⁹⁵ Indirect impacts include increases in lights and noise, exotic

¹⁹¹ U.S. Fish and Wildlife Service. 2001. Threatened and endangered species system (TESS). Updated December 8, 2000.

¹⁹² Noss, R.F., M.A. O'Connell, and D.D. Murphy. 1997. *The Science of Conservation Planning: Habitat Conservation under the Endangered Species Act*. Island Press, Washington, D.C.; Flather, C.H., M.S. Knowles, and I.A. Kendall. 1998. Threatened and endangered species geography: characteristics of hot spots in the coterminous United States. *BioScience* 48: 365-376; Stein, B.A., L.S. Kutner, and J.S. Adams, eds. 2000. *Precious heritage: the status of biodiversity in the United States*. Oxford University Press. 399 pp.; Czech, B., P.R. Krausman, and P.K. Devers. 2000. Economic associations among causes of species endangerment in the United States. *BioScience* 46.

¹⁹³ *Ibid* Stein *et al.* 2000.

¹⁹⁴ *Id.* Flather *et al.* 1998.

¹⁹⁵ Lovejoy, T.E., R.O. Bierregaard, Jr., and A.B. Rylands. 1986. Edge and other effects of isolation on Amazon forest fragments. Pages 257-285 in *Conservation biology: the science of scarcity and diversity*, Soulé, M.E., editor. Sunderland, MA: Sinauer Associates; Yahner, R.H. 1988. Changes in wildlife communities near edges. *Conservation Biology* 2:33-339.

across roadways to reach fragmented habitat patches. Road crossings by wildlife often result in increased mortality from road kill on busy roadways.¹⁹⁸ This is particularly true on newly constructed roads that cross existing movement corridors. This increased source of mortality, coupled with reduced habitat quantity and quality from direct and indirect impacts, may be enough to produce local extinction of some species.

Most upland vegetation communities in southern California have evolved with fire, which is thought to have burned at intervals of 20-50 years.¹⁹⁹ Overly frequent fires can type-convert shrub habitats to grassland habitats. The establishment of non-native grasses provides a fuel load that decreases the return interval between fires, creating a positive feedback loop that continues to favor non-native grasses over native species.²⁰⁰ On the other hand, human fire suppression can lead to overly mature habitats and increased fuel loads, which result in larger, hotter, fires when a burn does occur. Development and fragmentation of habitats does not allow natural fire regimes to continue without placing adjacent homes and businesses at risk, thereby increasing pressure on fire protection agencies to suppress wildfires. In addition, in natural open space areas, fire frequency has actually increased due to human sources of ignition (e.g. off-highway vehicles, cigarettes, homeless campfires).

Residential developments in close proximity to natural open space areas generally result in increased disturbances from foot, bicycle, and motorized vehicular traffic. Establishment of unauthorized trails is a large management issue in most open space areas in San Diego County, resulting in the loss of vegetation and compaction and erosion of underlying soils. These trails are also routes for the invasion of non-native species. In some instances (e.g., Otay Mesa), these disturbances can produce severe, virtually permanent habitat degradation.

It is well known that storm water runoff from developed areas can carry significant loads of urban pollutants.²⁰¹ Runoff from impermeable surfaces such as buildings, streets, and landscaped areas transports a number of water quality constituents, such as metals, fertilizers, herbicides, and pesticides, to downstream water bodies. These constituents have been shown to cause toxicity to aquatic organisms and cause eutrophication of receiving waters. Less studied, but potentially as significant, is the influence of altered stream hydrology on riparian biological communities. Many species have evolved under specific hydrologic regimes and can be sensitive to changes in the magnitude, frequency, and duration of flows. There is increasing

¹⁹⁸ Beier, P. 1993. Determining minimum habitat areas and habitat corridors for cougars. *Conservation Biology* 7:94-108; Beier, P. 1993. Determining minimum habitat areas and habitat corridors for cougars. *Conservation Biology* 7:94-108.

¹⁹⁹ Keeley, J.E. 1986. Resilience of Mediterranean shrub communities to fires. Pages 95-112 in B. Dell, A.J.M. Hopkins, and B.B. Lamont (eds.) *Resilience in Mediterranean-type ecosystems*. Dr W. Junk Publishers, Dordrecht, Hetherlands.

²⁰⁰ Minnich, R.A. and R.J. Dezzani. 1998. Historical decline of coastal sage scrub in the Riverside-Perris plain, California. *Western Birds* 29(4):366-391.

²⁰¹ Paul, M.J. and J.L. Meyer. 2001. Streams in the urban landscape. *Annual Review of Ecology and Systematics* 32:333-365.

development. Three highly sensitive vegetation communities in San Diego County -- coastal sage scrub, southern maritime chaparral, and grasslands -- have all experienced significant losses due to development. These are good examples of three of the rarest vegetation communities in California -- urbanization has reduced southern maritime chaparral to a mere 5% of its former extent -- and support key sensitive species such as the California gnatcatcher, San Diego horned lizard, and golden eagles, as well as numerous plant species that occur nowhere else in the world.

It is anticipated that of the 8,569 acres of coastal sage scrub estimated to still exist in the North County incorporated cities, 3,398 acres (40%) will be directly lost to development, leaving much of that remaining in small, relatively isolated fragments. There are currently 5,209 acres of grasslands in the cities, of which, 3,612 acres (69%) are expected to be lost to development. It is also anticipated that 198 acres of the 968 acres remaining of southern maritime chaparral will be lost to development. These vegetation community losses directly affect the species that rely on them as habitat.

Sightings of golden eagles are becoming increasingly rare in western San Diego County and nesting locations are largely restricted to inland locations, likely as a result of direct and indirect impacts of existing developments. Golden eagles require large areas of open scrub and grassland areas for foraging. In the North County incorporated cities, future development is expected to eliminate 69% of the remaining grassland habitats potentially used by eagles for foraging. In addition, the development of infrastructure (e.g., electrical transmission lines) to support new population growth has also shown to be a source of mortality to eagles, as are other human impacts such as shooting and nest disturbances that are associated with increasing frequency of human recreation and contact.

The California gnatcatcher has been the focus of much conservation attention because of its reliance on rapidly disappearing coastal sage scrub habitats. Within the North County incorporated cities, there is a total estimated population size of 400 to 600 California gnatcatcher pairs. It is estimated that development associated with future growth will result in the loss of 38% of the total estimated population of gnatcatchers, and 42% of the highest quality gnatcatcher habitat. In addition, habitat fragmentation for this species will increase and core habitat size will decrease, resulting in increasing pressure on remaining gnatcatchers from adverse edge effects.

The San Diego horned lizard has declined significantly along the coast in the last 50 years because of increasing loss of habitat and human impacts. It is conservatively estimated that 5,986 acres of the 13,922 acres (43%) of potential horned lizard habitat in the North County incorporated cities will be lost to future development. Because of the unique microhabitat requirements of this species, the actual loss of occupied habitat is likely to be higher. Existing and future development also substantially fragments horned lizard habitat, likely eliminating potential gene flow across the planning area. The movements of this species, as with many other reptiles and smaller wildlife species are likely blocked by even small roads. Thus, small, isolated patches of habitat in which this species becomes locally extinct are unlikely to be re-colonized from other areas. In addition, irrigation runoff from landscaping is known to encourage the invasion of Argentine ants into natural open space areas. Argentine ants out-compete native ant species and are inedible by horned lizards. Thus indirect impacts of human developments can

and all required measures shall be capable of successful implementation; (c) the permit is consistent with any DFG regulations; (d) the applicant shall ensure adequate funding to implement mitigation and monitoring; and (e) the issuance of the permit will not jeopardize the continued existence of the species.²⁰⁷

Based upon our review of the proposed Habitat Conservation Plan/Section 2081 permit ("HCP") for the water transfer, the HCP fails to meet the statutory requirements under both the federal and state endangered species acts for the reasons described below.

Recommendation: The proposed HCP must be substantially revised to include the identification, analysis and mitigation of a number of impacts at the Sea and surrounding areas, the removal of the fish pond mitigation and replacement with non-speculative, fully analyzed and detailed mitigation measures for impacts at the Sea and surrounding areas, improved adaptive management and monitoring, further in-depth analysis of a number of species proposed to be covered, identification of specific and secured funding for the proposed plan, and the inclusion of a number of foreseeable events that should not be classified as "unforeseeable" for purposes of receiving "no surprises" assurances.

A. THE PROPOSED HCP FAILS TO IDENTIFY ALL PROJECT IMPACTS.

The FWS Habitat Conservation Planning Handbook ("HCP Handbook") states that the project applicant should include in an HCP all actions that (1) are likely to result in incidental take; (2) are reasonably certain to occur over the life of the permit; and (3) for which the applicant has some form of control.²⁰⁸ Here, the project applicants have failed to identify all of the impacts to the species at the Salton Sea and surrounding areas from the reduction of flow of water to the Sea due to the implementation of on farm conservation. In addition to the increase in salinity and decrease in the size of the Sea, as discussed *supra* under Biological Impacts, the Sea will also experience wide fluctuations in temperature and water quality. The Regional Water Quality Control Board ("RWQCB") from Region 7 has submitted testimony to the State Water Resources Control Board that states that on farm conservation will result not only in an increase in selenium in drains leading to the Sea, but it may have a significant impact in the Sea itself.²⁰⁹ Both the RWQCB and other experts, see discussion *supra* under Biological Impacts, explain that a decline in inflow to the Sea and subsequent reduction in fish at the Sea, may result in an imbalance in the Sea's equilibrium. Due to unknown factors, the Sea has previously been successful in keeping Selenium levels relatively low. There is no discussion in the HCP regarding impacts from possible Selenium increases at the Sea.

In addition, temperature fluctuations, including significant increases in temperature, and a decline in water quality (e.g., increased eutrophication, pesticides, etc.) are likely to lead to an

²⁰⁷ Fish and G. Code § 2081.

²⁰⁸ FWS, Habitat Conservation Planning Handbook (1996) at 3-12.

²⁰⁹ See Exhibit 2: Written testimony by Phil Gruenberg, Executive Officer, California RWQCB (March 22, 2002) (attached).

As for impacts that the HCP did identify, there is a chronic problem through the HCP in which project applicants have failed to set forth specific mitigation strategies. “[T]he law establishes that the FWS cannot comply with the strict ESA mandate that the HCP ‘minimize and mitigate’ the effects of the projects to the ‘maximum extent practicable’ simply by relying on speculative future actions by others.”²¹² The HCP currently fails to state when and how much area would be created as island nesting and roosting habitat so it is impossible to assess whether or not there is sufficient mitigation. In addition, the HCP fails to contain any specific information on the adaptive management and monitoring plan for desert pupfish, which is a key part of the mitigation for the pupfish. Finally, as discussed at length under Sections VII and VIII, the HCP fails to provide any details on exactly how the fish pond mitigation strategy would be implemented. This thinly-described and yet-to-be-developed fish pond mitigation scheme is the epitome of “speculative” mitigation.

In addition to speculative mitigation, the HCP also fails to provide adequate mitigation for impacts to species from on-farm conservation. CESA required that the project applicants “fully mitigate” for impacts to species. Under the federal ESA, the adequacy of mitigation is determined, in part, by analyzing the quality of the habitat sacrificed with the quality of the habitat used for mitigation.²¹³ Not only is the fish pond mitigation scheme speculative, but there has been no analysis weighing the quality of the habitat sacrificed (e.g., the Sea) with the quality of the habitat used for mitigation (e.g., the fish ponds). There is also no discussion as to how and to what degree the fish ponds will provide replacement habitat for the numerous fish-eating birds.²¹⁴ In addition, the HCP fails to include any analysis to determine whether or not the replacement habitat for the Sea and its shoreline, wetlands, mudflats and tamarisk scrub as well as the drain areas will meet the needs of the impacted species. As discussed *supra* under Biological Impacts, there is reason to suspect that the loss of drain habitat will impact black rails and the loss of gently sloped shallow water habitat around the Sea will impact snowy plover, which has the largest inland breeding population in the West at the Sea.

There is also no discussion of how the permit applicants will keep wildlife away from the 42 acres of drains contaminated by selenium. There appears to be an assumption that the birds will naturally move from the contaminated drains to the replacement habitat. However, as discussed *supra* under Biological Impacts, there has been no analysis as to whether the replacement habitat will be successful. Finally, the HCP also fails to provide adequate mitigation for impacts to species from fallowing. As discussed, *supra* under Biological Impacts, approximately 42% of the world population of mountain plovers utilize agricultural lands at the Sea. As lands are taken out of production – up to 75,000 acres – to provide water for the transfer, there will be impacts to mountain plover. The HCP fails to provide any discussion of how the HCP will fully mitigate

²¹² *Sierra Club v. Babbitt*, 15 Fed. Supp.2d 1274, 1282 (S.D. Ala. 1998). See also *National Wildlife Federation v. Babbitt*, 128 F.Supp. 2d 1274 (E.D. Cal. 2000) (discusses strict requirements for establishing that a project fulfills mitigation requirement under ESA).

²¹³ *NWF v. Babbitt, supra*, 128 F.Supp.2d at 1299.

²¹⁴ See *supra* at VIII.A.

A species may be covered in an HCP as long as the plan addressed the conservation of the species and its habitat as if the species were listed pursuant to the ESA.²¹⁹ Here, there are a number of unlisted species for which the HCP lacks even the most basic information to show that the conservation of the species is being provided for in the HCP. This is particularly acute for those bird population that rely heavily on the Sea and surrounding areas for their continued existence – e.g., the American White pelican (20-30% of the North American population utilize the Sea), mountain plover (30-50% of the world's population utilize the Sea), eared grebe (90% of North America's population utilize the Sea), Black skimmers (40% of California's breeding population utilize the Sea), gull-billed terns (the largest colony in the Western U.S. exist at the Sea) and double-crested cormorant (the largest breeding colony in California exists at the Sea). In addition, the HCP lists a number of bat species to be covered for which there is no information in the HCP other than a commitment by IID to provide \$600,000 for unspecified research and mitigation.

Recommendation: Do not list unlisted species as covered by the HCP if there is no solid information from which we can gather that the species are being adequately protected.

E. THE HCP LACKS ADEQUATE FUNDING.

In order to issue an ITP under both the federal and state ESA, the HCP must ensure that there is a reliable funding source for the plan's mitigation measures.²²⁰ Here, the HCP identifies \$22.5 million in money committed by the permittees. However, the cost of this plan, while not specified, will far exceed \$22.5 million. The HCP is vague regarding how additional monies would be secured. The HCP states that "[a]ny mitigation costs in excess of the \$22.5 million . . . could be funded through one or a combination of the following: revenue generated through conservation and transfer of water, additional funds contributed by the water agencies, and grants or funding provided by the federal and state governments."²²¹ Thus, without a specified amount to fully fund mitigation and without the identification of secured funding for all of the mitigation, the proposed HCP fails to fulfill the federal and state endangered species acts' requirement for "adequate funding."

Recommendation: The HCP must quantify the full cost of mitigation for the take of all covered species. It must also identify the sources of secured funding.

F. PERMITTEES HAVE NOT SATISFIED THE REQUIREMENTS TO RECEIVE "NO SURPRISES" ASSURANCES UNDER FEDERAL REGULATORY POLICY.

²¹⁹ HCP Handbook at 4-1, quoting H.R. Report No. 97-835, 97th Congress, Second Session, and 50 Federal Register 39681-39691.

²²⁰ See *NWF v. Babbitt*, supra, 128 F.Supp.2d at 1291 (court held that the FWS acted arbitrarily when it issued an ITP for a plan that failed to identify the specific source of secured funding); *Sierra Club v. Babbitt*, supra, 15 F.Supp.2d at 1282 (court held that the FWS could not rely on funding from an "unknown source for an unknown amount").

²²¹ HCP at 5-2 (emphasis added).

The DEIR/DEIS divides potentially impacted areas into geographic subregions, including the IID water service area subregion, the Salton Sea subregion, and the SDWCA service area subregion. The DEIR/DEIS confines its environmental justice analysis to the question of whether the Proposed Project would cause adverse impacts that affect communities differently within each subregion. And as the DEIR/DEIS points out repeatedly, because the Proposed Project is regional in scope, its environmental impacts are likely to affect different communities within subregions equally. This is the justification that the DEIR/DEIS uses to conclude that the Proposed Project has no environmental justice implications.

The DEIR/DEIS does not even address the far more troubling question of disparate environmental impacts of the Proposed Project between subregions, even though it predicts that some subregions (the SDWCA service area) will experience no adverse environmental impacts), while others (Salton Sea and the IID water service area) could or will experience unmitigable adverse environmental impacts. One potential impact of concern to people who live in the Salton Sea and IID water service area subregions (and in other communities near the Sea but not included in the DEIR/DEIS analysis) is the health and regional economic impact of regional air quality deterioration that could be caused by the proposed project.

B. THE DISPROPORTIONATE IMPACTS OF THE PROPOSED TRANSFER ON THE SALTON SEA SUBREGION PRESENT A QUINTESSENTIAL ENVIRONMENTAL JUSTICE PROBLEM

In the Salton Sea subregion, the DEIR/DEIS states that "the Proposed Project would accelerate the decline of the Salton Sea's elevation and water quality, and induce other environmental effects that have been described elsewhere in this DEIR/DEIS."²²³ Presumably, the almost inevitable dust storms and air quality problems that would affect communities situated at the receding shoreline of the Salton Sea are among the "other environmental effects" that would be induced by the transfer. However, the DEIR/DEIS concludes that there would be no significant environmental justice effect from significant air quality deterioration in the Salton Sea subregion because all communities within the subregion would find that their environment had been equally degraded. This conclusion defies logic. People who live in the Salton Sea subregion could face very serious health risks and quality of life impairments from the implementation of the proposed project. The proposed project primarily benefits Southern California water users on the urbanized and politically powerful coast. This is an environmental justice issue that merits honest analysis, as required by EO 12898.

C. THE PROPOSED PROJECT WOULD HAVE A SIGNIFICANT DISPROPORTIONATE EFFECT ON THE TORRES MARTINEZ TRIBE.

The DEIR/DEIS notes that the Torres Martinez Indian Reservation is within the area that would be impacted within the Salton Sea subregion. However, the DEIR/DEIS concludes that there would be no disparate impact on the Tribe because all other communities within the subregion would be equally affected. Even under the completely flawed analysis provided in the

²²³ DEIR/DEIS, p. 3.15-14.

has subscribed to the conservation program, making it extremely unlikely that any water will be conserved or transferred this calendar year.²²⁵

Recommendations - Table 2-5 and all other pertinent tables should be updated to show the transfer beginning in 2003. Additionally, all projections within the text that are based on the incorrect starting date of 2002 should be corrected.

Figure 1-11 is incorrect; the Colorado River basin extends into Mexico. The revised figure should account for the full basin.

In the cumulative impacts discussion of the LCR MSCP, the species proposed for coverage number approximately 60, not 100 as stated at page 5-22.

XV. OTHER RECOMMENDATIONS

The law of the river discussion must be revised to distinguish between apportionment and entitlement; the two are not the same.²²⁶ Furthermore, it contradicts the DEIS for the IA, IOP and related federal actions, which is included by reference.²²⁷

The Appendices should contain the full text of both the QSA and transfer agreement, as promised at Appendix C, page 1-4.

XVI. CONCLUSION

For all of the forgoing reasons, the Environmental Groups find that IID and USBR's DEIR/DEIS for the proposed water transfer between IID and SDCWA fails to meet the standards of either NEPA or CEQA. Our groups oppose any water transfer unless – as an integral part of such a project – adequate, reliable and enforceable avoidance and mitigation measures are incorporated into the project to reduce or avoid the projects impacts on public health, wildlife and biological resources throughout Southern California, including the project's growth inducing impacts.

Thank you,



J. William Yeates
Attorney at Law

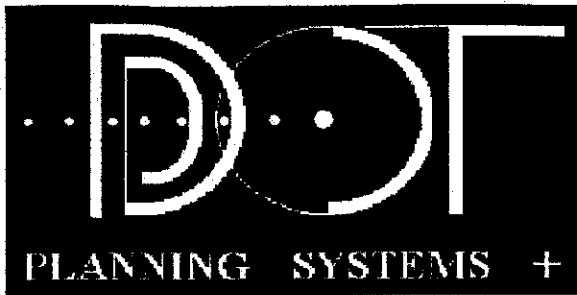
on behalf of:

²²⁵ DEIR/DEIS, § 2.0, Table 2-5, p. 2-3.7.

²²⁶ See DEIS/DEIR, p. 1-23.

²²⁷ See IA DEIS at 1-14.

EXHIBIT 1



Craig B. Jones, Principal
10055 Wildlife Road
San Diego, California 92131

Telephone (858) 695-1998

April 9, 2002

Division of Water Rights
State Water Resources Control Board
P.O. Box 2000
Sacramento, CA 95812-2000
Attn: Andy Fecko

Re: Comments on Draft EIR/EIS, Imperial Irrigation District Water Conservation & Transfer Project

Dear Members of the State Water Resources Control Board:

This submittal is made on behalf of The National Wildlife Federation; I am acting as their consultant in these comments. A statement of my professional qualifications is attached. This submittal is based on a review of the following documents: Select portions of the Imperial Irrigation District/San Diego County Water Authority Water Transfer Agreement draft EIR/EIS (Abstract, Executive Summary, Purpose and Need, Objectives and Background, Project Description, and Growth-Inducing Impacts); select pages from SDCWA's web site (Water Transfer and Exchange Agreements); Summaries of the IID/SDCWA Transfer Agreement and the Proposed Quantification Settlement Agreement; and 2001 Calif. Legislative Session Senate Bill 221 (Calif. Gov. Code Sec. 66473.7).

In southern California where water is an imported resource, it is inherently true that in urbanizing areas, any increase in the available quantity of, or improvement in the reliability of water, is growth-inducing. While it may be deemed desirable to secure a more reliable water source, it is at the same time inherent that this improved reliability encourages and induces growth. This is historically obvious in the development history of southern California. And it is not just my professional opinion: The dEIR/EIS itself recognizes that it continues to be true, today and into the future: "All of the projections [for growth in the San Diego region] are *based on the assumption* that the *necessary* water supplies would continue to be available to the region in the future." [emphasis added] (dEIR/EIS Sec. 5.2.2, p. 5-37) Water is especially important for the support and expansion of industrial land use, including the most contemporary growth sectors of industry, high-tech and biotech. Industrial development is fundamental to all other urban growth and development. In support of the critical importance of water to industrial growth note the following three citations:

Nonresidential water use accounts for 53 percent of total water use in U.S. community water supply systems. Of that, over 70 percent is delivered to commercial, industrial, and institutional water users. Moreover, self-supplied commercial and industrial facilities use about as much water as all public and private community water systems put together. (Rocky Mountain Institute, <http://www.rmi.org/sitepages/pid276.php>)

Bayer Corporation's Berkeley facility is the global headquarters for Bayer Biotechnology. The facility houses research as well as manufacturing operations. Currently, the manufacturing plant produces second generation re-combinant DNA technology based drug (Kogenate-FS) to treat Hemophilia The manufacturing operations are complex not only from the technology point of view but also due to regulatory constraints For most of the manufacturing processes, Water is a critical utility. All equipment and rooms are cleaned using water, most of the processes use Water for dilution and formulation of process ingredients. Of course Water does not come for free and requires elaborate water treatment. Also, it has limited life. Hence producing, distributing and storing Water to satisfy various demands is a critical success factor for consistent manufacturing. In the middle of year 2000, the facility started to increase production and Water emerged as a scarce commodity. On one particular day, the production operations had to be halted due to Water unavailability. (from *Proceedings of the 2001 Winter Simulation Conference*, BIOTECH INDUSTRY : SIMULATION AND BEYOND, <http://www.informs-cs.org/wsc01papers/109.PDF>)

The San Diego region has the third largest concentration of biotech companies in the United States. In order to support this growing life sciences industry cluster and to attract new biotech and biomedical firms to choice locations within Chula Vista, the City has established a designated High Tech / Biotech Zone. Part of the EastLake masterplanned community, the Zone offers select companies several benefits, including a series of incentives intended to meet the specialized needs of high-tech and biotech firms [such as an uninterrupted water supply]. (http://www.cvbizsite.org/targetedindustry_biotech.html)

The growth inducement effect of making water available and reliable is all the more true, given the 2001 adoption and January 1, 2002 effective date of State S.B. 221 (attached): Water suppliers and distributors now are directly and explicitly involved in the determination whether urban development is allowed to proceed, based on the availability of their water supply. Developments may not proceed without the water agencies' determination, making the availability of water a necessity for development as a matter of law, and giving the water agencies an active role in growth management. This Project, in increasing water supplies and/or improving its reliable flow, will make it directly possible for water suppliers to allow growth development. Note that the dEIR/EIS fails to take S.B. 221 into account.

Given this, it seems incredible that the dEIR/EIS concludes that there is no potential growth-inducement impact from this Project. This conclusion is clearly erroneous, as follows.

The dEIR/EIR's conclusion is based on several presented arguments:

- (a) "No additional water would be supplied, and maintenance of current and historic water supply levels does not constitute removal of an existing barrier to growth." This is further explained, "the QSA was negotiated to quantify the amount of water available to *all of southern California* from the Colorado River." [emphasis added] (dEIR/EIS Sec. 5.2.1, p. 5-37) In other words, since the total amount of water drawn from the Colorado River to all of southern California would not increase, there would be no additional water to induce growth.

This argument entirely misses the point of the proposed project: While no additional water from the Colorado for all of southern California would magically be created, a substantial part of that already taken (from an absolute minimum of 130,000 to as much as 300,000 acre-feet per year, dEIR/EIS pp ES-2, ES-3, 1-1, 1-2, et. seq.) would be diverted - from current agricultural use in the Imperial Valley, to the more coastal regions of southern California (coastal San Diego County and, perhaps, the greater Los Angeles/Orange County area). Diversion to these more coastal areas in order to serve urban development is the whole point of the project. This diversion from agricultural use (Sec. 5.2.3.2, p. 5-38) and delivery to urban development districts, inarguably sets the stage for additional urban growth. It does not matter that no net new water would be drawn from the Colorado; what matters is how that water would now be newly distributed to areas where it will, in all reality, encourage urban growth.

- (b) The proposed project "would reallocate the existing water supply to ensure drought reliability of that supply." (dEIR/EIS Sec. 5.2.3.4, p. 5-39) This argument is that the purported use of this newly-diverted water is as drought "insurance," rather than for development purposes.

Notwithstanding this description, there is nothing either within the structure of this project or independent of it which would require, or even encourage, this diverted water to be only, or even partially, for "drought insurance." No provision of statute or of the agreements described as part of the project, and no policy adopted by the San Diego County Water Authority or by its customer water delivery agencies, insures that this project's diverted water, or any other water received by these agencies, shall be used as stockpile to insure against drought "lean years." Indeed, representatives of the San Diego County Water Authority have frankly admitted this to community representatives, including this author. Simply saying that this Project would be for "drought insurance," as does the dEIR/EIR, does not make it so; and ignores the reality that this Project's diverted waters are to be stored for urbanization by the SDCWA (see following item).

- (c) The dEIR/EIS further states that "the proposed project would not alter the capacity of MWD's CRA, nor would it entail any expansion of SDCWA's existing water delivery and storage systems;" and "the Proposed Project would not involve any construction in the SDCWA service area, such as new water pipelines or aqueducts that would facilitate population growth or open undeveloped areas to construction." (Sec. 5.2.3.4, p. 5-39) In other words, it is argued, the Project will not induce growth since it will not directly provide additional water storage or delivery infrastructure.

What is not mentioned is that SDCWA is now undertaking, as a separate project, its erroneously-titled "Emergency Storage Project," which is the construction of just such infrastructure. (Ref. SDCWA Web site page, <http://www.sdcwa.org/infra/esp-faq.phtml>) Contrary to its name, the SDCWA Emergency Storage Project will not be restricted to storage or delivery capacity solely for "emergencies." In fact, as admitted by SDCWA representatives, this additional storage and delivery capacity will be available for ongoing urban development. Thus, the diverted water in the IID/SDCWA Transfer Project would feed into SDCWA's expanded capacity, to provide precisely the growth-inducement for increased urban development which the dEIR/EIS tries to say does not exist.

- (d) "SDCWA and MWD have entered into the SDCWA/MWD Exchange Agreement to implement the transfer of conserved water to SDCWA Currently, SDCWA purchases all of its imported water from MWD. Under the SDCWA/MWD Exchange Agreement, SDCWA would receive, for use in the SDCWA service area, the same blend of water from MWD that it currently receives from MWD. That is, the blending of Colorado River water with SWP water and other MWD water resources would remain the same, and no measurable change in water quality or quantity would occur in the SDCWA as a result of implementing the Proposed Project and the SDCWA/MWD Exchange Agreement." (Sec. 2.2.5.2, p. 2-40) The dEIR/EIS seems to be saying that the SDCWA/MWD Exchange Agreement would effectively limit the amount of water made available by the Project for urban use, to no more than would otherwise be available.

Frankly, this statement is not clear to the reader, and without clarity on this matter, this EIR/EIS can be considered inadequate (Calif. Gov. Code Secs. 15002, 15003, 15121 et. seq.). That aside, what seems to be said here is that the "blend" of all water from MWD to SDCWA, limited by the Exchange Agreement, has the effect of limiting the quantity of water to be delivered. This is by no means necessarily the case, however. This conclusionary statement is not supported by evidence in the record; we maintain, nothing in the agreements which make up this Project limits the amount of water from other sources that SDCWA may obtain from MWD. A number of scenarios are reasonably conceivable whereby waters from other sources are made available in amounts not limited by this Project, so as to always guarantee that the total quantity of water is below a net increase to SDCWA. In these scenarios, the conclusion of no growth

inducement by this Project cannot be made, because in fact a net increase in total amount of water would apply.

Nonetheless, let us assume for argument's sake that, somehow, limits would apply such that the amount of water resulting from the Project and other sources, is not a net increase above "past historical amounts." This amount is still hundreds of thousands of acre-feet above the amount of water SDCWA and, perhaps, MWD will receive without this Project. Again, the whole purpose of the Project is to assure and make reliable delivery of water for urban use in amounts to assure that substantial projected growth WILL be achieved (above citation). Again, this is not just opinion: Per the dEIR/EIS itself, substantial growth projections for San Diego County assume the amount of water needed for this growth will not be restricted (Sec. 5.2.3.4, p. 5-39). Thus, this Project is intended to induce substantial growth by guaranteeing, at minimum, the amount of water needed for that growth, and in more reliable annual amounts. Irrespective of whether the amount of water flowing to urbanizing San Diego would remain the same compared to past "normal years," the important point, and the very purpose of the Project, is to assure the reliable amount of water necessary for this growth. On this point alone, this Project must be concluded to be growth-inducing.

(e) The dEIR/EIS appears to try to argue that land development and growth are exclusively controlled by cities and counties, without regard to the availability of resources such as water, and unaffected by government actions to bring water to urbanization. (Sec. 5.2.2, pp. 5-37 and -38; Sec. 5.2.3.4, pp. 5-39 and -40)

This, again, ignores the reality that the availability and reliability of development-supporting water, the very purpose of this Project, is in fact an inducement to growth. In projecting potential growth, agencies such as SANDAG and SCAG take into account the availability of growth-supporting resources, including water. This argument also ignores the effect of S.B. 221 (see above and attached), in giving water agencies a direct determination in the approval or denial of development based on the availability of water. Moreover, the dEIR/EIS's own argument supports the finding of growth inducement: The potential growth projected in land use planning, does "not assume significant seasonal or year-to-year variability in the water supply. Rather, they [growth projections] are predicated on an assumed consistency in water quantity and quality." (p. 5-40) By providing a reliable and an increased volume of development-available water, this very Project is inducing this growth.

Under the dEIR/EIS's own language, there can be applied "two tests to make a growth-inducement determination. First, would the Proposed Project remove a barrier to growth, and second, could the Proposed Project provide additional water for consumptive use, thereby fostering population or economic growth or new construction"? The answer to both of these is yes. The failure of the dEIR/EIS to conclude growth inducement is a blatant shortcoming.

Sincerely,

Craig B. Jones
Principal

EXHIBIT 2



Winston H. Hickox
Secretary for
Environmental
Protection

California Regional Water Quality Control Board

Colorado River Basin Region



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CRWQCB-CRBR EXHIBIT No. 2

TO: Phil Gruenberg, Executive Officer

FROM: Jose L. Angel, P.E.
Watershed Protection Division Chief

SIGNATURE: 

DATE: March 22, 2002

SUBJECT: REGULATORY CONCERNS REGARDING PROPOSED IID/SDCWA WATER TRANSFER

I am concerned that the proposed IID transfer of conserved water and resultant conservation measures as currently envisioned in the document entitled Imperial Irrigation District Water Conservation and Transfer Project, Draft Habitat Conservation Plan, Draft Environmental Impact Report /Environmental Impact Statement, January 2002 (hereafter referred to as "draft EIS/EIR") would trigger the creation or in itself create conditions that run counter to existing State and Federal laws, regulations, and policies; and against the State's Strategic Plan. Specifically, and as discussed in detail in the following paragraphs, I am concerned that the conditions would (1) exacerbate violations of the selenium water quality objective (WQO) that the State's Water Quality Control Plan for the Colorado River Basin prescribes for the surface waters in Imperial County and the Sea, and the WQO that the State's Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California prescribes for inland surface waters; (2) potentially violate State Board Resolution No. 88-16 (a.k.a. the "Antidegradation Policy"); (3) make compliance difficult with the Total Maximum Daily Load requirements contained in the Federal Water Pollution Control Act (a.k.a. the Clean Water Act; U.S.C. 1251 et seq.); and (4) explicitly run against the State's Strategic Goal No. 2, as it applies to our Region. Although largely based on the documentation and analyses presented in the draft EIS/EIR, the purpose of this memorandum is not to provide you with detailed comments on the draft EIS/EIR¹. Its purpose is to bring to your attention relevant and significant regulatory matters that should be factored in during the upcoming State Board hearings on the transfer. CRWQCB-CRBR Exhibit Nos. 3 and 4 (attached) support this memorandum.

Discussion

The State Board's and USEPA's approved Clean Water Act Section 303(d) List for the Colorado River Region identifies the Salton Sea as water quality limited, in part, because selenium concentrations violate the 5 ppb WQO contained in the Basin Plan (CRWQCB-CRBR 1993). The List also identifies the Alamo River and Imperial Valley drains as impaired by selenium among other pollutants. The impacts of selenium on aquatic ecosystems are well documented. CRWQCB-CRBR Exhibit No. 3 details the impacts. Division staff prepared the Exhibit based on a review of published literature on the matter. Pertinent literature references are identified in the exhibit too. Suffice to say that selenium is a significant water quality issue because even at relatively low concentrations (< 3 ppb) it is toxic to biological resources. For example, adverse impacts to birds and pupfish include failure of eggs to hatch and possible compromise of bird immunity systems (Lucas et al. 1999). Other well-documented impacts include bird eggshell thinning and embryo abnormalities (Bennett 1998).

¹ As you know, we are also preparing and transmitting to IID and USBR detailed comments on their draft EIS/EIR.

California Environmental Protection Agency

Revised 11/98

Phil Gruenberg
IID/SDCWA Water Transfer

-3/22/2002-

-2-

The draft EIS/EIR acknowledges that the transfer as envisioned will likely cause selenium concentrations to increase from current levels and cause significant selenium impacts on the drains and rivers. That is to say, it characterizes the selenium impacts as significant for the purposes of CEQA. However, it concludes that the transfer as proposed would not likely have significant selenium impacts on the Salton Sea itself. Further, it concludes that the significant impacts in the aforementioned Salton Sea tributaries are "unavoidable" and "unmitigatable" (see Table ES-1 of draft EIS/EIR). I cannot subscribe to those conclusions. Here is why.

Regarding the projected selenium concentrations in the aforementioned waters, we estimate that the increases in selenium concentrations in the drains and in the Alamo and New River would be significantly greater than the increases projected by the draft EIS/EIR as a result of the proposed transfer. CRWQCB-CRBR Exhibit 4, prepared by Division staff under my supervision, contains our estimates and assumptions used for the estimates. Specifically, the draft EIS/EIR projects that selenium in the Alamo River outlet to Sea would be about 7.8 ppb, and that there would be no significant impact for the New River delta with the Sea. For one thing, the historic selenium data included in the draft EIS/EIR show that selenium concentration in the water column in New River outlet area is already about 7 ppb (see Table 3.1 of draft EIS/EIR), which in itself contradicts the conclusion. This notwithstanding, we estimate that selenium in the rivers' delta areas with the Sea could be as high as about 10 ppb for the Alamo River delta and as high as 7 ppb for the New River delta. Also, research conducted by USGS (Setmire et al. 1993) shows that tilewater averages about 25 ppb in selenium. As one cuts down the tailwater that currently dilutes the selenium concentrations found in tilewater, selenium concentrations in the drains could also increase significantly. In fact, the same USGS study documented that there are drains whose tilewater already has selenium concentrations of up to 300 ppb. Considering that there are over 1200 miles of open drains in Imperial County, whose beneficial uses include REC I, REC II, and WARM, the consequences of having over 1200 miles of selenium-laden drains could be of catastrophic proportions. The Region's Basin Plan selenium WQO for those waters is 5 ppb, which is the same level as the selenium objective contained in the State's Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. The difference between our calculations and the EIS/EIR's notwithstanding, both the EIS/EIR's and our projections show that the transfer as proposed would cause further water quality degradation, which fails to comply with the WQO. Based on this, we therefore believe the transfer as proposed would exacerbate current selenium impairments in the rivers and drains, which would further violate the Basin Plan WQO and violate Resolution No. 88-16:

Regarding the impacts on the Sea, the draft EIS/EIR conclusion seemingly runs counter to logic based on the acknowledged impacts on the tributaries and the preceding analysis. Perhaps more importantly, it also lacks supporting documentation for the purposes of CEQA—a fact implicitly acknowledged by the draft EIS/EIR (see p. 3.1-99 of the draft EIS/EIR). While the selenium concentrations in the Sea water column are in the order of 1-2 ppb, which suggest that selenium is precipitating and/or being volatilized, it is nevertheless impairing the Sea's beneficial uses as shown by over 15 years of fish tissue data collected through the State's Toxic Substances Monitoring (TSM) Program. That data are available online at the State Board's web site and are incorporated herein by reference. Again, the Sea is already on the Section 303(d) List because of the significantly elevated selenium concentrations in fish tissue as demonstrated by the TSM data. In fact, an advisory for consumption of fish from the Sea has been in effect since the early 90s because of the threat to public health posed by the selenium concentrations in fish tissue. That is to say, current selenium levels already impair the REC I and WARM habitat beneficial uses established for the Sea in the Basin Plan—a fact acknowledged by the Regional Board, the State Board, and USEPA through the Section

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Phil Gruenberg
IID/SDCWA Water Transfer

-3/22/2002-

-3-

303(d) List². Another significant concern here is that uses being further impaired are defined as "Exiting Uses" pursuant to provisions contained in Title 40 of the Code of Federal Regulations (40 CFR Part 131.3(e)). Unless a more stringent use is established in lieu of the designated use, Title 40 CFR prohibits the removal of a use (i.e., cannot redesignate a use defined in the Basin Plan) if the use is an Existing Use or the use will be attained by the implementation of technology based effluent limits for point sources of pollution and implementation of BMPs to control nonpoint sources of pollution (40 CFR, Part 131.10(d)). After the implementation of limits and controls, if an Existing Use cannot be attained, a Use Attainability Analysis is required prior to modification of the use (40 CFR, Part 131.10(j)).

One has to also question the foundation of the conclusions that selenium impacts are "unavoidable" and "unmitigatable." Those statements implicitly summarily dismiss the requirements of the Section 303(d) of the Clean Water Act, which dictate implementation of BMPs to address the existing selenium impacts. Through the TMDL process we have learned that there are BMPs available to mitigate the selenium impacts that irrigated agriculture causes on surface waters. BMPs are actually being implemented in California's Central Valley and Colorado's Gunnison River Basin to address similar impacts.

Stakeholders in the Central Valley are using an algal-bacterial process to reduce selenium in surface waters in the Panoche Water District near Los Banos. Preliminary results from that project suggest that selenium reductions could be as much as 70% (Stuart 2001). Also, in the Broadview Water District near Firebaugh in the Central Valley, stakeholders are using wetland management to address selenium impairments in that area. Data from that project suggest that reductions could be as much as 90% (Agrarian Research and Management Company, Ltd. 2001). In Imperial County itself the Citizens Congressional Task Force on the New River is also implementing wetland pilot projects to address overall surface water pollution. Preliminary data from the Task Force show selenium reductions in the order of 20-50%. In Colorado, the Uncompahgre Water Users Association has been working to address the selenium impairments that 12,000 acres of irrigated farmland within the Gunnison River Basin are causing on the Upper Colorado River Basin. Specifically, the Association has established a target selenium reduction of about 6,200 lbs/year for the Uncompahgre River, which is also 303(d) listed, based on recent research conducted by the USGS. The research demonstrated that the simple lining of water laterals in the Montrose Arroyo, located in the Uncompahgre River Basin, minimizes leaching of selenium, which in turn reduces the selenium loading on the Uncompahgre River, a tributary to the Colorado River, by as much as 28% (USGS 2001). The point here is that there are BMPs available to mitigate selenium impacts. Also, consideration of farmland fallowing must be given more consideration than it has been given thus far, as it would have less selenium impacts than the proposed methods of water conservation, which rely heavily on tailwater recovery systems.

Another concern is that draft EIS/EIR proposes the creation of 5,000 acres of fishponds to mitigate certain environmental impacts. There are those who would argue that based on the Law of the River, Colorado River water cannot be used for environmental mitigation within the context of the proposed transfer. If it is not going to be fresh Colorado River water, the alternative must likely be agricultural runoff, which would be laden with selenium, which would, based on the preceding

² Based on the State Board decision on the TOSCO case (State Board Order WQ 2001-06, one may argue that the fact that the surface waters are 303(d) listed does not imply in itself a lack of assimilative capacity. I believe that that argument, however, is inappropriate in this case because the TSM Program data for the Sea consistently show elevated selenium concentrations and because even the draft EIS/EIR projects violations of the WQO throughout the drains and at least one of the rivers.

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-3/22/2002-

-4-

discussions, may also pose a hazard to the biological resources and aquatic ecosystem created by, sustained by, or using the ponds.

Conclusions and Recommendations

I believe the significance of the aforementioned concerns cannot be overlooked from a regulatory perspective. Whether the transfer can proceed or not in light of these concerns is not the point here. The purpose of raising the concerns is to alter you and the State Board of issues that must be addressed during the transfer proceedings. The transfer as proposed conflicts with our Basin Plan, the Clean Water Act Section 303(d) requirements, State Board Resolution No. 68-16, the Strategic Plan. Therefore, we respectfully suggest you bring them to the attention of the State Board during its upcoming hearings on the proposed transfer. In the meantime, and at the staff level, we are sending separate and detailed comments to the IID and United State Bureau of Reclamation addressing other significant concerns regarding their draft EIS/EIR.

Attachments: CRWQCB-CRBR Exhibit No. 3
CRWQCB-CRBR Exhibit No. 4

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IID/SDCWA Water Transfer

-3/22/2002-

-5-

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CRWQCB-CRBR EXHIBIT No. 3

TO: Jose L. Angel, Division Chief
Watershed Protection Division

FROM: Maria De La Paz Carpio-Obeso, PhD
Environmental Scientist

DATE: March 22, 2002

SUBJECT: REVIEW OF LITERATURE REGARDING SELENIUM IMPACTS ON BIOLOGICAL RESOURCES

SIGNATURE: 

At your request, I conducted a review of literature addressing selenium impacts on biological resources. This memorandum provides you with my review findings.

Findings

Selenium (Se) is widely distributed in the environment and essential in trace concentrations for human, animals, and possibly plants. The range in concentrations between "required" and "toxic" is very narrow (Jacobs, 1989). Processes that control Se distribution are intimately linked to its speciation: selenate (Se^{+6}); selenite (Se^{+4}); elemental selenium (Se^0), and selenide (Se^{-2}). The concentration, speciation, and association of Se are dependent on the pH, redox condition, solubility of Se minerals, Se ability, and biological interactions. Selenium can occur in all oxidation states in aquatic environments, with specific physical and biological properties determining the relative abundances of the various species. The mechanisms by which Se accumulates in plants and animals, its metabolic pathways, and its modes of action are not well known. However, Se was identified as the major pollutant in Kesterson Reservoir that caused teratogenic impacts to waterfowl due to its bioconcentration, bioaccumulation, and biomagnification in the aquatic food chain.

Bioaccumulation and Effects on Wildlife

In aquatic systems, Se commonly bioconcentrates in plant and animal life. Selenium levels in plankton typically exceed Se concentrations in water 500 to 2,000 times. Selenium levels in benthic invertebrates exceed Se concentrations in water 800 to 2,000 times, and in fish they exceed selenium concentrations in water 1,000 to 35,000 times, depending on the species and tissue sampled. Selenium concentrations in sediments typically range from 200 to 400 times concentrations in water.

The biomagnification of selenium progressively increases with successive trophic levels (Lemly, 1989). One significant effect of Se toxicity that occurs in all levels of the food chain, is a decrease in the ability to reproduce.

Algae

Selenium toxicity in algae is usually determined by measuring alteration in cell division rates. The concentration of Se in algae ranges from 0.01 to 5 ppm depending on the variety. Blue algae

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Se Impacts

-3/22/2002-

-2-

bioconcentrates 5-50 ppm Se as selenate or selenite, and is more tolerant than green algae which bioconcentrates 0.01-0.5 ppm Se as selenate (Knight, 1987, 1988). Inorganic Se is toxic to algae, more as selenite than selenate. The no-effect concentrations of Se for algae range from 0.01 to 10 ppm as selenate, and are species dependent.

Knight 1989, compared the bioavailability of selenite, selenate and selenomethionine in common freshwater algae. The Se species that accumulate in algae at the highest concentration is selenomethionine, followed by selenite and then selenate. Selenomethionine decreased algal growth at 0.1 ppm, and halted growth at 0.3 ppm. Selenite and selenate significantly decreased growth at 3 ppm, and halted growth at 5 ppm (UC Salinity Task Force, 1992).

Knight and Kliffney 1990, studied the comparative bioaccumulation of selenite, selenate and seleno l-methionine in the cyanobacterium *anabaena flosaqueae*. They found selenite more toxic than selenate, and selenomethionine more toxic than inorganic species.

Invertebrates

Invertebrates are important components of the aquatic food chain that produce energy assimilated by primary producers. They also provide a source of food for higher trophic levels. Similar to algae, invertebrates biomagnify Se, and transfer Se to secondary consumers.

Daphnia exposed to 200 to 800 ppb Se showed decreased growth rates, and longer times for first reproduction. Decreased feeding rates among filter feeders were observed by Knight, 1988. Maier et al., 1993 evaluated the acute toxicity of inorganic and organic forms of Selenium using selenate, selenite, seleno-di-methionine and seleno-di-cystine. The results indicate selenate and seleno-di-cystine are equally toxic to Daphnia; selenite is highly toxic, and seleno-di-methionine is the most toxic.

Maier et al., 1993 also evaluated the effects to Daphnia at various sulfate concentrations under the same toxicological conditions. Sulfate concentrations of 10.2 to 162.7 mg/L decreased Daphnia mortality associated with selenate. The mortality caused by selenite increased from 10.2 to 81.5 mg/L sulfate, and decreased at levels greater than 81.5 mg/L. Sulfate concentrations did not affect seleno-di-methionine Daphnia toxicity (Maier, 1993).

Fish

The effects of Se in fish are dependent on the species. Typically, excess exposure to Se causes decreased growth, edema, and abnormal development of various tissues such as bone, liver, kidneys, and ovaries. High Se levels decrease blood iron concentrations and red cell volumes. Lesions formed from Se exposure are not reversible (Lemly, 1989). The threshold concentration that triggers symptoms of Se toxicity in warm water fishes is 12 µg/g (Saiki, 1992).

Birds

The adverse effects of Se exposure on waterfowl is widely publicized given that abnormalities in bird embryos are multiple and readily apparent. These deformities were fatal for the birds inhabiting the Kesterson Reservoir (Ohiendorf, 1990).

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Se Impacts


-3/22/2002-

-3-

Skorupa, 1992, investigated Se thresholds for waterbirds by evaluating the relationship between Se concentrations, waterbird eggs, and the frequency of teratogenesis. The results indicate mean egg Se concentrations greater than 3 ppm represent an increased risk of teratogenesis, and that mean egg concentrations greater than 20 ppm reflect a high level of risk to reproductive success. Estimated risk thresholds of 10 ppm (upper threshold for background levels) and 50 ppm (lower for high risk of embryo deformity) are used for individual eggs.

If you have any questions about this, I am available to discuss this matter at your convenience.

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-3/22/2002-

-4-

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CRWQCB-CRBR EXHIBIT No. 4

TO: Jose L. Angel, Division Chief
Watershed Protection Division

FROM: Nadim Zeywar, P.h.D
Environmental Scientist

SIGNATURE:

DATE: March 22, 2002

SUBJECT: ESTIMATES OF SELENIUM CONCENTRATIONS FROM PROPOSED IID/SDCWA
TRANSFER

At your request, I have reviewed the draft EIS/EIR projected selenium concentrations and prepared an estimate based on our data and assumptions. I then compared the estimates with the draft EIS/EIR projected concentrations. My estimates are different from the projected levels, and, at least for the New River, they are significantly different. CRWQC-CRBR Table Nos. 1 through 6 show my estimates and comparisons.

I am available to discuss the matter if you wish at your convenience.

Attachment: CRWQCB-CRBR Table Nos. 1 through 6

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ST-1

CRWQCB-CRBR Exhibit No. 4

Summary Tables

CRWQCB-CRBR Table 6: Summary of Projected and Estimated Se Concentrations (ppb) for Alamo River Outlet to Salton Sea

Parameter	Table 3.1-15 of Draft EIS/EIR	CRWQCB-CRBR Estimate
Baseline (ppb)	6.25	7.7
With proposed project (ppb)	7.86	9.77
% difference	25.76	26.88

CRWQCB-CRBR Table 7: Summary of Projected and Estimated Se Concentrations (ppb) for New River Outlet to Salton Sea

Parameter	Table 3.1-16 of Draft EIS/EIR	CRWQCB-CRBR Estimate (no reduction of flow at International Boundary)	CRWQCB-CRBR Estimate (w/ a reduction of flows of 7% at the International Boundary)
Baseline (ppb)	3.3	7.1	7.2
With proposed project (ppb)	3.77	8.41	8.6
% difference	14.24	18.45	19.44

NR-1

CRWQCB-CRBR Exhibit No. 4

Selenium Estimates on New River Watershed

Assumptions:	References
1. Approximately 300,000 AFY would be transferred	(1)
2. New River Flow inputs to Salton Sea would be reduced by 22% (100,000 AFY)	(1)
3. On-farm conservation measures would account 67% of reduction of inputs (or 67,000 AFY)	(1)
4. Improvements to Water Delivery System would account for 33% reduction of inputs (or 33,000 AFY)	(1)
5. Leaching requirements remain the same (i.e. tilewater quantity remains approximately the same)	(1)
6. No significant reduction in flows at the International Boundary	(1)
7. A reduction of 7% of flows at the International Boundary due to Power Plants in Mexicali	(3)
8. Selenium remains in suspension in the drainage system	(3)
9. Selenium concentrations remains the same at International Boundary	(3)

CRWQCB-CRBR Table 1: Current Flows and Se Conditions in the New River			
Parameter	Flows		Selenium
	AFY	References	Se (ppb) References
Tailwater (TA)	107,000	(1)	2.5 (1)
Tilewater (TI)	112,400	(1)	20.3 (3)
Rainfall, municipal and industrial and operational discharges and seepage (RMIQ)	68,000	(1)	2.5 (3)
New River at International Boundary (ARIB)	165,000	(1)	3 (1)
Total (outlet to the Sea) (TO)	452,400	(1)	7.10 See Note Below

Note: The Baseline conditions according to the draft EIS/EIR is 3.3 ppb, but the historic data included in the EIS/EIR shows that the level is 7.1 ppb. Therefore, 7.1 is used.

NR-2

CRWQCB-CRBR Exhibit No. 4

CRWQCB-CRBR Table 2: Regional Board staff Estimates of Project Impacts on Flow and Selenium Conditions in the New River (no reduction in flows at the International Boundary)				
Parameter	Flows		Selenium	
	AFY	References	Se (ppb)	References
Tailwater (TA)	40,000	Calculated from previous table (107000-67000) and Assumption Nos. 2 and 3	2.5	(1)
Tikewater (TI)	112400	Based on Assumption No. 5	20.3	(3)
Rainfall, municipal and industrial and operational discharges and seepage (RMIO)	35,000	Calculated from previous table (68,000-33000) and Assumption Nos. 2, 3, and 4	2.5	(3)
New River at International Boundary (ARIB)	165000	Assumption No. 6	3.0	(1)
Total (outlet to the Sea) (TO) Equation No. 1:	352400		8.4	Estimated by Staff using Equation No. 1, below
$\text{Se conc. of TO} = (\text{Se conc. of TA} \times \text{Flow of TA}) + (\text{Se conc. of TI} \times \text{Flow of TI}) + (\text{Se conc. of RMIO} \times \text{Flow of RMIO}) + (\text{Se conc. of ARIB} \times \text{Flow of ARIB}) \div (\text{Flow of TO})$				

NR-3

CRWQCB-CRBR Exhibit No. 4

CRWQCB-CRBR Table 3: Regional Board staff Estimates of Project Impacts on Flow and Selenium Conditions in the New River (w/ a 7% reduction in flows at the International Boundary)				
Parameter	Flows			Selenium
	AFY	References	Se (ppb)	References
Tailwater (TA)	40,000	Calculated from previous table (107000-67000) and Assumption Nos. 2 and 3	2.5	(1)
Tilewater (TI)	112400	Based on Assumption No. 5	20.3	(3)
Rainfall, municipal and industrial and operational discharges and seepage (RMIO)	35,000	Calculated from previous table (68,000-33000) and Assumption Nos. 2, 3, and 4	2.5	(3)
New River at International Boundary (ARIB)	153450	Assumption No. 7	3.0	(3)
Total (outlet to the Sea) (TO) Equation No. 1:	340,850		8.6	Estimated by Staff using Equation No. 1, below
$\text{Se conc. of TO} = (\text{Se conc. of TA})(\text{Flow of TA}) + (\text{Se conc. of TI})(\text{Flow of TI}) + (\text{Se conc. of RMIO})(\text{Flow of RMIO}) + (\text{Se conc. of ARIB})(\text{Flow of ARIB}) / (\text{Flow of TO})$				

AR-1

CRWQCB-CRBR Exhibit No. 4

Selenium Estimates on Alamo River Watershed

Assumptions:	References
1. Approximately 300,000 AFY would be transferred	(1)
2. Alamo River Flow inputs to Salton Sea would be reduced by 175,000 AFY	(1)
3. On-farm conservation measures would account 67% of reduction of inputs (or 117,250 AFY)	(1)
4. Improvements to Water Delivery System would account for 33% reduction of inputs (or 57,750 AFY)	(1)
5. Leaching requirements remain the same (i.e. thwwater quantity remains approximately the same)	(1)
6. Alamo River flows at the International Boundary remain same	(1)
7. Selenium remains in suspension in the drainage system	(3)

CRWQCB-CRBR Table 4: Current Flows and Se Conditions in the Alamo River

Parameter	Flows		Selenium	
	AFY	References	Se (ppb)	References
Tailwater (TA)	216,000	(1)	2.5	(1)
Tilewater (TI)	228,000	(1)	16.5	(3)
Rainfall, municipal and industrial and operational discharges and seepage (RMIO)	168,000	(1)	2.5	(3)
Alamo River at International Boundary (ARIB)	4,000	(1)	5.9	(1)
Total (outlet to the Sea) (TO)	616,000	(1)	7.70	(1)

included in the EIS/EIR shows that the level is 7.1 ppb. Therefore, 7.1 is used.

AR-2

CRWQCB-CRBR Exhibit No. 4

CRWQCB-CRBR Table 5: Regional Board staff Estimates of Project Impacts on Flow and Selenium Conditions in the Alamo River (no reduction in flows at the International Boundary)			
Parameter	Flows		Selenium
	AFY	References	Se (ppb) References
Tailwater (TA)	98,750	Calculated from previous table (216000-117250) and Assumption Nos. 2 and 3	2.5 (1)
Tikewater (TI)	228,000	Based on Assumption No. 5	16.5 (3)
Rainfall, municipal and industrial and operational discharges and seepage (RMIO)	110,250	Calculated from previous table (168,000-57750) and Assumption Nos. 2, 3, and 4	2.5 (3)
Alamo River at International Boundary (ARIB)	4000	Assumption No. 6	5.9 (1)
Total (outlet to the Sea) (TO)	441,000		Estimated by Staff using Equation No. 1, below

Equation No. 1:

$$\text{Se conc. of TO} = (\text{Se conc. of TA} \times \text{Flow of TA}) + (\text{Se conc. of TI} \times \text{Flow of TI}) + (\text{Se conc. of RMIO} \times \text{Flow of RMIO}) + (\text{Se conc. of ARIB} \times \text{Flow of ARIB}) + (\text{Flow of TO})$$

AR-3

CRWQCB-CRBR Exhibit No. 4

References

- (1) IID Water Conservation and Transfer Project/ Draft Habitat Conservation Plan/ Draft EIR/EIS 2001
- (2) USGS. Water Resources Investigations 93-4014: Detailed Study of Water Quality, Bottom Sediment, and Biota Associated with Irrigation Drainage in the Salton Sea Area, California. 1988-90. 1993
- (3) Se conc. for Tilewater and Rainfall, municipal and industrial and operational discharge and seepage were derived using data in table 3.1-4 of the IID's Water Transfer EIR/EIS 2001:
- (4) Se conc % difference was calculated as % Difference= (Se conc. with proposed project - Se conc. with current conditions)*100/(Se conc. With current conditions)

EXHIBIT 3

SSA-Exhibit #1, Revised April 12, 2002
Written Testimony by Tom Kirk, Executive Director, Salton Sea
Authority

Introduction

My name is Tom Kirk. I am the Executive Director of the Salton Sea Authority. The Salton Sea Authority is an agency that was established in 1993 under the State of California's joint powers agency statutes. The Salton Sea Authority was formed to direct and coordinate actions related to improvement of water quality and stabilization of water elevation and to enhance recreational and economic development potential of the Salton Sea and other beneficial uses. Notably, the Authority was formed by four agencies with direct and significant stakes in the region and the health of the Salton Sea: Imperial Irrigation District, Imperial County, Coachella Valley Water District and Riverside County. State legislation passed last year will allow the Torres Martinez Desert Cahuilla Tribe to be a full member of the Authority in the future.

I was hired as the Authority's first and only executive director in late 1997. Since that time, I have managed and co-managed the Salton Sea Authority's environmental compliance, engineering design, lobbying, and scientific efforts. I have an extensive background in environmental policy and planning (see Exhibit 2, Tom Kirk's Qualifications).

Background

The Salton Sea Authority is not opposed to the Quantification Settlement Agreement nor, necessarily, to the transfer of water from the Imperial Irrigation District (IID) to the San Diego County Water Authority and the Coachella Valley Water District and/or Metropolitan Water District of Southern California. The

Salton Sea Authority understands the need and generally supports the implementation of the California 4.4 Plan, which is designed to reduce California's use of Colorado River water. However, the Salton Sea Authority is deeply concerned about how water will be transferred and the environmental effects of the water transfers. The Salton Sea Authority resolves to:

- Oppose projects which significantly lower the level of the Sea;
- Insist that water transfers comply with environmental laws;
- Urge that water transfers are accomplished consistent with the goals and objectives of full Sea restoration.

(see Exhibit 5: Salton Sea Authority Resolution No. 02-02)

The Salton Sea is one of the most important ecological places in the United States (see Exhibit 6: Excerpts from the Guide to the Salton Sea Restoration Project Alternatives). As proposed, water transfers could make restoration of the Salton Sea infeasible.

The proposed project (Proposed Project) described in the IID Water Conservation and Transfer Project Draft Environmental Impact Statement/Environmental Impact Report and Draft Habitat Conservation Plan (Transfer EIR), contractual provisions in the agreement between IID and San Diego County Water Authority (see Appendix A of the Transfer EIR) and public pronouncements suggests that water conservation will occur through reducing or eliminating tall water and improving delivery systems in the Imperial Valley. Most of my comments and concerns relate to the implementation of such a proposed project.

If conservation methods are mitigated as suggested under the Transfer EIR's Habitat Conservation Plan 2 and/or implemented through a water generation alternative that employs fallowing, most of the concerns I am summarizing will vaporize or diminish. The reason: water generated through fallowing is mostly,

and can be completely, associated with crop evapotranspiration. Hence, most, if not all of the water generated and transferred would not have ended up in the Sea anyway, it would have been consumed in the growing process.

On the other hand, "efficiency" improvements are targeted at "waste". Unfortunately for the Sea, the term "waste" is popularly applied to the Sea's inflows. Under efficiency improvements, virtually all the water generated for the transfer is generated from reductions of inflow to the Sea, and none from crop evapotranspiration. Exhibit 7, Conservation Methods Powerpoint Presentation, illustrates the different hydrological impacts of fallowing and efficiency improvements.

While fallowing or land management may seem like a silver bullet, it is not. It may minimize or eliminate the environmental impacts of water transfers but it may significantly aggravate the difficult economic conditions in the Imperial Valley. Fallowing has economic impacts; specifically job impacts. The aforementioned Salton Sea Authority resolution (Exhibit 5) recognizes the balance between addressing environmental and economic issues when it urges that:

- water transfer solutions must properly mitigate impacts on the Salton Sea and address economic and social impacts in the Imperial and Coachella Valleys.

Proposed Project's Implications for Restoring the Sea

I have asked Bill Brownlie to describe to you the implications of the proposed project upon restoring the Sea (see Exhibit 3: Written Testimony by Dr. Bill Brownlie). This is an important element for consideration during your deliberations. It is an element that is largely ignored in the Transfer EIR and associated environmental documents.

Mr. Brownlie's testimony clearly demonstrates the tremendous cost implications that a reduction of inflows will have on restoration efforts. Restoration is projected to cost about \$250 million, present value, under "current inflows", and balloon to \$1.7 billion or more under reduced inflows. Whether restoration costs start at \$250 million or \$500 million or some other amount, reduced inflows have a dramatic effect on restoration costs; a Sea that is made smaller and saltier is very difficult to "restore". That delta, or difference, between restoring the Sea under current inflows and restoring the Sea under reduced inflows is staggering. Put another way, the impact of reducing inflows on restoration costs range between \$200 and \$300 per acre-foot of water reduced per year. This, of course, is the approximate value, identified in the agreement between the IID-SDCWA, of the water in the first place. You can understand why the QSA parties do not want to link restoration and the Proposed Project; such a link would likely sink the deal.

The Proposed Project makes little allowance for accounting for this incremental impact. There is some discussion about applying the estimated costs for the Proposed Project's habitat conservation plan, assumed in the Transfer EIR to be between \$350 million and \$800 million, to the restoration project, if a restoration project is authorized. More recent estimates of the Proposed Project's environmental costs have been quoted in the low one hundred million dollars. Federal legislation has been introduced to fund the environmental costs associated with the Proposed Project; the legislation caps those costs at \$60 million (see Exhibit 8: H.R. 2764, Colorado River Quantification Settlement Facilitation Act) and provides a mechanism to apply that funding to restoration of the Sea, if restoration is authorized. Whether the Proposed Project's and/or legislative financial contributions to restoration are \$60 million or \$160 million, if the Proposed Project's impact on the Sea is well over \$1.5 billion, who will pick up the difference?

It has been suggested that the 1998 Salton Sea Reclamation Act was designed, in part, to fix the Sea under reduced inflow conditions (see Exhibit 9, Salton Sea Reclamation Act of 1998). The Act actually says that the Secretary:

"shall apply assumptions regarding water inflows into the Salton Sea Basin that encourage water conservation, account for transfers of water out of the Salton Sea Basin, and are based on a maximum likely reduction in inflows into the Salton Sea Basin which could be 800,000 acre-feet or less per year."

The Secretary was to develop a report, with the Salton Sea Authority, that evaluated restoration options under reduced inflow conditions. Such a report is still forthcoming. In a recent letter to the Secretary of Interior, even the Sea's greatest legislative supporters acknowledge that the report should evaluate multiple inflow conditions (see Exhibit 10, Letter to Secretary Norton from Congressional Salton Sea Task Force). Evaluating those conditions is an order of magnitude less committal than paying for restoration under those conditions.

Based on my experience working the halls of government to seek support for restoration, I find it unlikely that Congress and the State of California are willing to fund a multi-billion dollar restoration project. But let's assume that federal and state government comes to the rescue under this scenario. The next question is can restoration even be viable under a significantly reduced inflow scenario? My answer is no. In large part, the answer is no because of the large parts. To marshal the necessary massive authorizations and appropriations from government will take time. To design and permit an enormous project, as Mr. Brownlie (Exhibit 3, Written Testimony of William Brownlie) and the Draft Assessment of Salinity and Elevation Control for Varied Inflow report (Exhibit 11) describe, to address a Sea that is becoming much smaller and saltier requires ever larger restoration responses, will take time. And to build a large, complicated project and probably to do so in the deepest, most expensive and

most seismically risky areas of the Sea will take time. Even if all of the political and financial support were available within a few years, it is unlikely that restoration could occur in time to preserve a fishery at the Sea and the values that the fishery supports.

If not full restoration, let's try partial restoration or build fish ponds/hatcheries

The next solution is one proposed by the Pacific Institute: create a small impoundment to provide a fishery for fish-eating birds. The Pacific Institute proposal assumes that the alternatives to on-farm conservation, some form of fallowing, will not occur and that major reductions of inflow are inevitable. It is a serious proposal, serious enough that the Salton Sea Science Office assembled a group of experts to evaluate the concept. Their evaluation is provided in Exhibit 12, Evaluation of a Proposal for Conversion of the Salton Sea Ecosystem. It may take a while to digest the findings in that report, one researcher summarized his feelings at the recently held Salton Sea Symposium, "we trashed the proposal". One of the major concerns was the proposal's likelihood of creating a Selenium sump, an issue that is generally addressed in the testimony of Phil Gruenberg, Regional Water Quality Control board, CRBR. Another issue was channelling nearly the same nutrient load into a body of water that is much smaller than the Sea and aggravating eutrophic conditions. Another issue is the additional shoreline exposure around the remaining, hypersaline water body that would become exposed because of evaporative losses of the partial fix and constructed wetlands. Lastly, this was no easy, cheap fix. Cost estimates ranged well over \$1 billion. The partial-Sea solution carries a full-Sea restoration price tag.

If the proposed project is implemented, and done so without fallowing to generate the water for the transfer or to provide mitigation for the Sea, it is proposed to use HCP method #1, Hatchery and Habitat Replacement to mitigate impacts. Presumably, the impacts are derived by calculating the temporal impact

of speeding up the decline of the marine system in the Sea and the resulting impacts on birds, particularly fish-eating birds. Next, it appears that the total number of birds affected and their needs are identified. Lastly, some thousands of acres of pond habitat are proposed to mitigate the impacts. How many birds would be supported by such a system? How long would they be supported? The Transfer EIR provides little in the way of details, stating instead "the specific approach for minimizing and mitigating the impacts ...on birds have not been defined". Unlike the Pacific Institute proposal, the conceptual plans associated with HCP #1 have not been "put on the table", have not been reviewed by the Salton Sea Science Office, nor, to my knowledge, been subject to any outside peer review. The Transfer EIR is a disclosure document that does not adequately disclose the details of mitigation. And this partial solution is hardly an inexpensive one either, the Transfer EIR estimates its costs at \$350 to \$800 million (estimated costs have ranged from over one hundred million dollars to the low billions).

The Claim that the "Proposed Project Merely Speeds the Inevitable Up"

The Transfer EIR addresses the various resource areas that would be affected by the Proposed Project. However, much of the public discussion about the effects of the transfer revolves around "temporal" impacts. These are the impacts associated with speeding up the decline of a declining resource.

If restoration is not implemented, the Sea's fishery will collapse (see Exhibit 13, Salton Sea Fact Sheets). Under a projection of historic average inflows, of about 1.34 million-acre feet per year, the Sea's fishery will collapse around 2050 (see Exhibit 11, Draft Assessment of Salinity and Elevation Control for Varied Inflow). The Transfer EIR does not measure its impacts against the historic average, instead, a new baseline is defined. The new baseline is about 1.23 million-acre feet per year. Under the new baseline, the fishery collapses by about 2023 (see Exhibit 11, Draft Assessment of Salinity and Elevation Control for Varied Inflow).

Under the Proposed Project, the temporal impacts associated with the collapse of the fishery compared to historic average inflows is about 40 years. When the Proposed project is compared, as the Transfer EIR does, to the new baseline, the impact is 11 years. I have some serious concerns about the baseline used in the Transfer EIR. My concerns will be expressed in formal comments on the Transfer EIR. I believe the baseline used significantly understates the temporal and other inflow-related impacts.

The argument still stands that if the Sea is going to die anyway, and the transfer speeds the process up, what is the harm? This is the "you are going to die anyway in fifty years, mind if I shoot and kill you today argument." To add another wrinkle to the argument, assume that you were going to die in fifty years of cancer. By killing you today, or in eleven years, I foreclose the opportunity that may come in the future to develop the cure for cancer. In the same way, accelerating the decline of the Sea and making it that much more complicated and expensive to restore the Sea forecloses an opportunity to cure its ailments.

At the risk of extending my medical analogy a little too far, one more comparison is relevant. Not only would the transfer sentence the patient to death in 11 years, but it would also make it virtually impossible to provide any reasonable form of life support to extend the patient's life. Under historic inflows, the life of the fishery (i.e. keeping salinity under 60 PPT) could be extended into the next century with a relatively small project, with construction cost estimated at less than \$100M. Even with the baseline inflow shown in the Transfer EIS, the life span of the Sea could be extended 100 years with a construction project of less than \$200M (see Exhibit 11). With the proposed project, it's not likely that even a billion dollars would provide meaningful life support.

The temporal impacts are not the only impacts. The transfer document identifies impacts on other resource areas. I have significant concerns about the adequacy

of impact assessment and mitigation in many other resource areas. I am not addressing many of these areas in my testimony as I am drafting my comments for the Transfer EIR and the Authority's Board of Directors has not reviewed those comments. I request that those comments eventually be made a part of your record and are considered during your deliberations. The concerns that I have with the document are similar to those expressed through Resolutions of Concern Regarding the Effect of Water Transfers on the Salton Sea (see Exhibit 5, Salton Sea Authority Resolution No. 02-02 and Exhibit 14, Coachella Valley Association of Governments Resolution No. 02-002).

CVAG adopted its resolution after hearing about potential for airborne dust. The resolution was developed in consultation with the development community, the Coachella Valleys' cities, Riverside County, the water district and the tribal community.

The Authority's resolution is similar. The Salton Sea Authority Board of Directors unanimously approved it on March 28, 2002. The Board passed the resolution after hearing testimony from CVAG's representative, residents around the Sea and the environmental NGOs. Notably, residents around the Sea were able to compile a petition of more than 1100 names within two weeks to present to the Salton Sea Authority Board to urge adoption of the resolution (see Exhibit 15: Petition to the Board of Directors' of the Salton Sea Authority, Resolution of Concern Regarding the Effect of Water Transfers on the Salton Sea). Through their resolutions, both the Salton Sea Authority and Coachella Valley Association of Governments resolve to oppose projects that significantly lower the level of the Salton Sea. Both resolutions stress compliance with environmental laws and adequate mitigation of impacts.

Is Restoration Possible Anyway?

Yes. There are proven methods to withdraw salt from salt water. Restoration is very feasible under inflows close to the historic average (see Exhibit 11: Draft Assessment of Salinity and Elevation Control for Varied Inflow). Solar evaporation ponds have been used for millennia to extract salt from salt water. The Salton Sea Authority, in partnership with the Bureau of Reclamation, has constructed a solar evaporation pond pilot project at the Sea and is testing salt disposal techniques at another pilot project at the Sea (see Exhibit 16, December 2001, Sea Notes, and April/May 2001, Sea Notes, and Exhibit 18, Tom Kirk and Mike Walker, Bureau of Reclamation, Power Point Presentation given to Salton Sea Symposium IV on January 9, 2002). Under continuation of historic average inflows, restoration is certainly possible.

Is it politically possible? Ten years ago, there may have been many voices that said no. Today, there is a larger chorus of voices that say yes. Five years ago, the Salton Sea Authority had assembled less than \$100,000 to support restoration. Today, over twenty million dollars has been authorized, appropriated and/or expended to support restoration (see Exhibit 16, Newsletters, for a description of projects and programs underway). Ten or fifteen years ago, how many national and statewide environmental groups would have participated in a hearing like this? Today nearly every major environmental group in the state is weighing in on the importance of the Sea, as evidenced in the parties participating in the petition process. The work of late Congressmen Sonny Bono and George Brown began much of the restoration initiatives underway.

After the untimely death of Sonny Bono, the Salton Sea Reclamation Act was passed (see Exhibit 9, Salton Sea Reclamation Act of 1998). The Act, for the first time, put the federal government on record to proactively plan for restoration. The Act and the Secretary of Interior kicked off an intensive scientific process

that has provided a wealth of information and insight about this valuable and complex ecosystem (see Exhibit 17: EPA 98 2001 Annual Progress Report).

Congresswoman Mary Bono and other members of the Congressional Salton Sea Task Force have continued their support for restoration. Support for addressing Salton Sea related issues has increased by the state of California as well, with Secretary of Resources Mary Nichols supporting a budget change proposal that ultimately provides additional resources to the Department of Fish and Game, Department of Water Resources and Regional Water Quality Control Board to address Salton Sea issues.

Conclusion

The Sea is a critical environmental resource. Restoration of the Sea is made extremely costly and, very likely, impractical with major reductions of inflow. The Proposed Project has significant detrimental impacts on the Sea. Those impacts should be avoided, through pursuing conservation alternatives that do not reduce inflows to the Sea, or that are fully mitigated.

CRWQCB-CRBR Exhibit No. 1
IID/SDCWA Petition

**CRWQCB-CRBR Exhibit No. 1: Written Testimony by Phil Gruenberg,
Executive Officer, California Regional Water Quality Control Board,
CRBR**

Although I am not opposed to the transfer of water from Imperial Irrigation District, and recognize the need for the transfer to accommodate California's obligation to not exceed usage of Colorado River water in excess of 4.4 m af/y, I want to present some concerns relevant to the transfer.

The primary concern regards the Salton Sea. The Salton Sea is California's largest inland body of water and supports many beneficial uses including water contact and non-contact recreation, warm freshwater habitat, wildlife habitat, and threatened/endangered species. The Sea has become a critical component of the Pacific Flyway as historic wetlands have diminished. Over 400 species of birds are known to visit or reside at the Salton Sea National Wildlife Refuge. Additionally the Sea is considered California's most prolific fishery. The fishery supports multitudes of fish-eating birds plus a sportfishery. Future protection of these beneficial uses is dependent upon the Sea receiving adequate replenishment of freshwater and upon implementation of a project to stabilize the Sea's increasing salinity.

The Salton Sea is located in a closed basin, so due to evaporation, salts are concentrated. Since the 60's the salt buildup has been recognized and several studies have identified projects which if implemented could stabilize salinity. Due to the priority and cost (all viable projects are estimated at over \$100 M, and many much more) there has been no action to address Salton Sea restoration until fairly recently.

On November 12, 1998, HR 3267, The Sonny Bono Memorial Salton Sea Reclamation Act became law. The law directs the Secretary of the Interior to undertake a project to reclaim the Salton Sea that shall 1) reduce and stabilize the overall salinity of the Salton Sea; 2) stabilize the surface

elevation of the Salton Sea; 3) reclaim, in the long term, healthy fish and wildlife resources and their habitats; 4) enhance the potential for recreational uses and economic development of the Salton Sea; 5) ensure the continued use of the Salton Sea as a reservoir for irrigation drainage. Thus the passage of this Act breathed new life into the likelihood of a Salton Sea restoration, and must be taken into account during any decision making process pertinent to the Sea.

A secondary concern regards potential degradation to the water quality of the drainageways within the Imperial Irrigation District that empty into the Salton Sea. These drainageways are almost 1500 miles of channels designated as supporting the following beneficial uses in the Regional Board's Water Quality Control Plan: freshwater replenishment; limited recreational use; warm water habitat; wildlife habitat; and threatened/endangered species habitat in some instances. These waterways and beneficial uses are primarily sustained by drainage from irrigated cropland in Imperial Valley. This Regional Board has long recognized this drainage flow as serving an important beneficial use as freshwater replenishment for natural or artificial maintenance of surface water quantity or quality. Attached for the record are staff memoranda (CRWQCB-CRBR Exhibit Nos. 2 to 4) for details on some water quality and other regulatory impacts.

Transfer of water out of Imperial Irrigation District can have a wide array of negative water quality impacts depending on how the transfer of water is accomplished. Most significantly, if it is implemented by reducing or eliminating surface runoff or tailwater off the cropland, selenium concentrations in the drains will rise. Selenium concentrations up to 300 ug/l have been detected in subsurface tile drainage feeding these drains. The selenium largely originates from drainage in Colorado, and magnifies in tile lines due to evaporation during cropland irrigation. Tailwater is thus presently diluting the selenium to more acceptable levels. However wildlife biologists have projected that increases in present selenium concentrations could have disastrous consequences in the drains and Salton Sea. CRWQCB-CRBR Exhibit No. 3 details some potential impacts.

Thus in summary, if water conservation in Imperial Valley is pursued through a combination of either tailwater return systems, canal lining in Imperial Valley, or operational spill reduction the most significant impacts would be twofold:

- A reduction in freshwater replenishment to the Salton Sea making a restoration project more costly, and at some point unreasonable.
- An increase in selenium concentrations in Imperial Valley drainageways.

As an alternative, if the water transfer was accomplished by marginal cropland retirement, the above two impacts would be eliminated or at least reduced, with the following results:

- Selenium discharge off non-irrigated cropland would cease.
- The Sea would lose only 1/3 as much freshwater since the 2/3 used consumptively by the irrigated cropland would be transferred instead of applied to the marginal ground that is retired.

In conclusion, my point is not that a transfer should not proceed, but that the means of freeing up the water for transfer will have a tremendous bearing on the fate of the Salton Sea and its tributaries. These results need to be fully recognized and considered carefully before selecting a course of action. The fate of the Salton Sea is at a crossroads, and a decision is needed soon to provide appropriate direction on a wide array of interconnected water issues. Leadership is desperately needed to untangle the present complicated situation. Unfortunately it is unlikely that the final results are going to provide a win win outcome.