IID Water Conservation and Transfer/Draft HCP Draft EIR/EIS
Draft Technical Review Comments Prepared by the Salton Sea Authority
April 26, 2002

Com No.	Page Number	Figure, or Table No.	Comment
1.	General	Baseline/ CEQA and Legal Aspects	Environmental impacts of the proposed project are significantly underestimated because project impacts are measured against baseline environmental projections that incorrectly assume roughly a 110,000-acre foot per year (AFY) reduction in baseline inflows to the Salton Sea. The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) describe existing environmental conditions as a "baseline" against which project impacts can be measured. The baseline must describe "real conditions on the ground" and not "hypothetical situations." Baseline cannot be established based on unsubstantiated opinion and narratives or bare representations by parties with a vested interest in establishing a baseline to facilitate project approval (*Save Peninsula Committee v. Monterey County* (2001) 87 Cal.App. 4th 99,121-122). The Draft EIR/EIS impact analysis is predicated on baseline inflows to the Salton Sea that are roughly 110,000 AFY below recent historical averages. Based on the assumption of reduced future inflows, the EIR/EIS project's baseline environmental conditions of salinity and Sea level that are significantly worse than those that would exist under maintenance of current inflow conditions. Project impacts have been significantly underestimated because they are measured against the degraded baseline projection. As indicated in the accompanying legal memo, the baseline should be present conditions; projected future conditions should be used to evaluate the impacts of no action, and project impacts should be considered in combination with the "no project" impacts.
2.	General	Adequacy of projected "no project" condition (identified incorrectly as baseline in the IID EIS/EIR)	The EIR/EIS does not contain adequate evidence to justify the 110,000-acre-foot reduction of future inflows. The draft EIR/EIS projects the following reduction of future inflows, compared with current conditions: • Reduction due to "entitlement enforcement": 56,856; • Imperial Irrigation District-Metropolitan Water District Transfer Agreement Number 1; and • Reduced inflows from the Coachella Valley Water District (CVWD) due to increased infiltration and other reductions. There is no evidence or documentation provided to support any of these reductions.
3.	General	Future "No Project" Inflows/ Entitlement Enforce-ment	The projected future inflow for the "no project" alternative, as shown in the document, has a severe impact on the Salton Sea. Although the effects of the proposed action on the Sea, when compared to this projected future inflow, are shown to be very severe, they would actually be more severe if they were compared to current conditions because it is appropriate that they be in a CEQA analysis. The document does not clearly lay out how the future inflow was achieved. Therefore, it is difficult to assess whether the projected future inflow calculations are reasonable or the calculations of impacts as compared to that projected future inflow. A more complete description of the components of the projected future inflow should be added to the main body of the document. This description should particularly discuss those components that affect the Salton Sea, such as the "inflow reduction due to entitlement enforcement."

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MEMORANDUM

To: Tom Kirk

From: Keith Wagner & Bill Yeates

Date: April 26, 2002

Re: IID Water Transfer HCP DEIR/DEIS - Legal Analysis / Comment (re: Baseline)

QUESTION PRESENTED

May IID and USBR in their Water Transfer DEIR/DEIS rely on the Salton Sea Accounting Model – a predictive database that simulates water levels and salt loads in the Salton Sea based on manipulating individual input factors over time – as a baseline for performing environmental analysis of proposed water conservation measures that will significantly reduce the inflow of agricultural drain water into the Sea and thereby allow the transfer of up to 200 KAFY of water to SDCWA and 100 KAFY of water to CVWD or MWD?

BRIEF ANSWER

No. CEQA and NEPA require that the *existing* environmental setting of a proposed Project, not a *future prediction* of environmental conditions, be used as the basis for environmental review. IID and USBR's reliance on the Salton Sea Accounting Model's 75-year predictive "baseline" for determining the proposed Project's environmental impacts violates CEQA's requirements and has tainted several key aspects of the Water Transfer DEIR/DEIS' analysis and findings.

FACTS

The Imperial Irrigation District ("IID") and United States Bureau of Reclamation ("USBR") have released for public review a Draft Environmental Impact Report/Environmental Impact Statement to analyze the environmental impacts of implementing the IID's proposed Water Conservation and Transfer Project ("Water Transfer DEIR/DEIS").[1]

At section 3.1.3, the Water Transfer DEIR/DEIS describes the "Existing Setting" for Hydrology and Water Quality for the proposed Project.[2] At section 3.2.3, the Water Transfer DEIR/DEIS describes the "Existing Setting" for Biological Resources for the proposed Project.[3] Both of these sections of the Water Transfer DEIR/DEIS provide excellent, highly detailed discussions culminating in the most recent studies documenting environmental conditions as they presently exist at and in the Sea.[4]

At section 3.1.4, the Water Transfer DEIR/DEIS analyzes impacts to Hydrology and Water Quality resources and mitigation measures to reduce or avoid those impacts.[5] A similar analysis for Biological Resources is provided at section 3.2.4.[6]

In each of these sections, the Water Transfer DEIR/DEIS describes its methodology for analyzing the proposed Project's environmental impacts on the Salton Sea and for evaluating

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[1] See Imperial Irrigation District & U.S. Bureau of Reclamation, Draft Environmental Impact Report (EIR)/Environmental Impact Statement (EIS), Imperial Irrigation District Water Conservation and Transfer Project and Draft Habitat Conservation Plan (State Clearinghouse No. 99091142, Jan. 18, 2002) (hereinafter "Water Transfer DEIR/DEIS).
[2] See Water Transfer DEIR/DEIS § 3.1.3, at pp. 3.1-9 to 3.1-89.
[3] See Water Transfer DEIR/DEIS § 3.2.3, at pp. 3.2-13 to 3.2-90.
[4] See Water Transfer DEIR/DEIS § 3.1.3.3, at pp. 3.1-66 to 3.1-89 (describing historical and present environmental setting for the Salton Sea's surface water resources); § 3.2.3.2, at pp. 3.2-22 to 3.2-88 (describing existing environmental conditions for biological resources in the IID water service area, All American Canal ("AAC"), and Salton Sea.
[5] See Water Transfer DEIR/DEIS § 3.1.4, at pp. 3.1-90 to 3.1-159.
[6] See Water Transfer DEIR/DEIS § 3.2.4, at pp. 3.2-89 to 3.2-203.

corresponding mitigation measures.[7] In particular, the Water Transfer DEIR/DEIS' explicitly states that it relies on the "Salton Sea Accounting Model"– a predictive assessment of the Salton Sea's hydrologic response to changing conditions over the next seventy-five (75) years – to determine the proposed Project's impacts and the impacts of various alternatives.[8]

The Salton Sea Accounting Model states that using historic water and salt budget data to predict the future under existing conditions "is not possible."[9] Instead, the Model states that development of present information for inflows of water and salt is required.[10] In calculating present inflow information from IID and CVWD, the Model takes into account "a pre-existing conservation program between IID and MWD, effects of priority 3 entitlement enforcement of Colorado River water, the need for increased leaching within IID due to forecasted increases in salinity at Imperial Dam, changes in water use patterns in CVWD, and changes in Coachella Aquifer interactions with the Salton Sea."[11] In calculating the present level inflows from other "unmeasured" sources, however, the Model uses an average of historic flows for the past ten years, plus 3% to account for increased salinity of the Colorado River.[12]

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[7] See Water Transfer DEIR/DEIS § 3.1.4.1, at pp. 3.1-98 to 3.1-101 (describing methodology for predicting hydrologic response of the Salton Sea); § 3.2.4.1, at pp. 3.2-100 to 3.2-102 (describing methodology for determining impacts to biological resources in and at the Salton Sea).
[8] See Water Transfer DEIR/DEIS at pp. 3.1-98 to 3.1-101 (confirming that the Salton Sea Accounting Model was used to predict hydrological responses, and briefly explaining what models were run); pp. 3.2-100 to 3.2-102 (confirming that the same models used for analyzing hydrologic response provide the basis for predicting impacts to biological resources); Appendix F (describing the methodology and assumptions used in constructing and running the Salton Sea Accounting Model).
[9] See Water Transfer DEIR/DEIS at Appendix F, § 4.0, p. 12.
[10] See *ibid*.
[11] *Ibid*.
[12] See Water Transfer DEIR/DEIS at Appendix F, § 4.1, p. 13.

Predicted baseline flows for water and salts into the Sea for the next seventy-five (75) years are generated by the Model from this set of assumptions and presented in table format.[13] In examining the Model's predictive tables for water and salt inflows, the following features stand out:[14]

- The annual baseline water and salt inflows from Mexico and "unmeasured" sources are calculated averages from the past ten years plus 3% "for increased salinity in [the] Colorado River."

- IID's Baseline annual water and salt discharge to the Sea fluctuates from year to year, but does not seem to show any progressional increase or decrease over the 75 year modeling period.

- The CVWD baseline for surface water flow to the Sea show a steep downward trend over the 75 year modeling period from 77 KAFY in 2000 down to 48.3 KAFY in 2074.

- Over the same time period, annual salinity loading from the CVWD flows progressively decreases from an annual addition of 94.4K tons of salt to an annual *subtraction* of 216.6K tons of salt. The model explains this shift from positive to negative salt inputs from CVWD occurs because the Sea will increasingly recharge the Coachella Aquifer as the aquifer level drops over time.[15]

- A constant 56.9 KAFY is subtracted from the Baseline inflow to reflect a "reduction due to entitlement enforcement." Corresponding to this constant subtraction of annual water inflow, a constant 71K tons of salt are correspondingly subtracted from the annual salt budget.

The Water Transfer DEIR/DEIS describes six different scenarios that were run under the Salton Sea Accounting Model: 1) Proposed Project; 2) Baseline; 3) Alternative 1: No Project; 4) Alternative 2: 130 KAFY; 5) Alternative 3: 230 KAFY; and 6) Alternative 4: 300 KAFY.[16] Of particular note, both the "Baseline" model and the "No Project" model rely on exactly the same model runs from the Salton Sea Accounting Model (Model Run 1c, which establishes a 12-year

[13] See Water Transfer DEIR/DEIS at Appendix F, Table 4.1, pp. 14-15.
[14] See Water Transfer DEIR/DEIS at Appendix F, Tables 4.1 and 4.2, pp. 14-18.
[15] See Water Transfer DEIR/DEIS at Appendix F, § 4.2, p. 13.

baseline, and Model Run 1d, which establishes as 75-year baseline) and, therefore, contain identical data.[17]

In analyzing the proposed Project and alternatives' impacts on the Salton Sea water levels and water quality, the Water Transfer DEIR/DEIS compares the proposed project and alternatives to this projected "Baseline."[18] Relying on this comparison, the Water Transfer DEIR/DEIS concludes that impacts to water quantity and water quality of the proposed project are either "less than significant," or that the project will actually have a beneficial impact on the Sea.[19] The same approach is used by the Water Transfer DEIR/DEIS for analyzing the water quantity and quality impacts of Alternatives 2, 3 and 4.[20]

In analyzing water quantity and quality impacts of the No Project Alternative, the Water Transfer DEIR/DEIS expressly conflates (treats as one and the same) the "No Project" alternative and the Salton Sea Accounting Model's "Baseline."[21]

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[16] See Water Transfer DEIR/DEIS at Table 3.1-13, p. 3.1-100.
[17] See Water Transfer DEIR/DEIS at Table 3.1-13, p. 3.1-100.
[18] See, e.g., Water Transfer DEIR/DEIS at pp. 3.1-120 (comparing change in the Sea's elevation under proposed Project [-22 feet over 75 years] with "the Baseline" [-7 feet over 75 years], 3.1-123 (comparing change in salinity under proposed Project [up to 162,000 mg/L TDS over 75 years] with the Salton Sea Accounting Model's Baseline of 86,000 mg/L TDS over 75 years]), 3.1-123 to 3.1-124 (describing various impacts related to selenium and pesticide deposition as a comparison between the proposed project and the Salton Sea Accounting Model's Baseline).
[19] See *ibid*.
[20] See e.g., Water Transfer DEIR/DEIS at pp. 3.1-138 to 3.1-141 (comparing Alternative 2's water quantity impacts to the Salton Sea Accounting Model's Baseline), 3.1-141 (comparing Alternative 2's water quality impacts to the Salton Sea Accounting Model's Baseline to conclude that Alternative 2 would have "less than significant impacts" on selenium and pesticide concentration in the Sea and its sediments), 3.1-147 to 3.1-148 (same for impacts to water quantity and quality with regard to Alternative 3), 3.1-156 to 3.1-159 (same for impacts to water quantity and quality with regard to Alternative 4).
[21] See Water Transfer DEIR/DEIS at pp. 3.128 to 3.1-131 (repeatedly referring to "No Project/Baseline" conditions). Merriam-Webster's Collegiate Dictionary defines "conflate" as "1a: to bring together: fuse b: confuse." (See Merriam-Webster's OnLine Collegiate Dictionary, at http://www.m-w.com, search term: "conflate.")

The Water Transfer DEIR/DEIS repeats the same pattern – using the projected "Baseline" – in analyzing the proposed Project's impacts on Biological Resources in and at the Salton Sea.[22] With regard to certain biological impacts, the Water Transfer DEIR/DEIS drops all pretense of comparing the proposed Project to the "Baseline" and simply compares impacts to the "No Project" alternative.[23]

The Water Transfer DEIR/DEIS separately concludes that the loss of all of the Sea's fisheries is insignificant "[b]ecause all fish species are introduced, non-native species."[24] In a twelve page table, the Water Transfer DEIR/DEIS recites a litany of potentially significant impacts to biological resources, but remarkably determines that – with implementation of the Salton Sea portion of the Water Transfer DEIR/DEIS' proposed Habitat Conservation Plan – the project will have only beneficial impacts on the Biological Resources of the Salton Sea.[25]

ANALYSIS

The Water Transfer DEIR/DEIS' methodology for analyzing impacts to Hydrology and Water Quality and to Biological Resources is legally flawed. The Water Transfer DEIR/DEIS, in establishing the mandated "environmental setting" for the proposed Project, does provide an excellent review of the historical and present day conditions of these resources at and in the Salton Sea.[26] However, the Water Transfer DEIR/DEIS then abandons that environmental

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[22] See, e.g., Water Transfer DEIR DEIS at Table 3.2-1, p. 3.2-1 to 3.2-12 (conflating the No Project Alternative and the Salton Sea Accounting Model's "Baseline"); Id. at pp. 3.2-150 (comparing loss of fish under proposed Project to the Salton Sea Accounting Model's "Baseline" to determine that the accelerating the loss of all fish species in the Sea by 11 years is a "less than significant" impact), p. 3.2-155 (same for loss of fish as food source for birds), p. 3.2-157 (same for colonial nest/roost sites), p. 3.2-158 (same for available mudflat and shallow water habitat).
[23] See, e.g., Water Transfer DEIR/DEIS at pp. 3.2-140 (comparing proposed Project impacts on invertebrates to the No Project alternative to determine that impacts are "less than significant"),
[24] See Water Transfer DEIR/DEIS at p. 3.2-150.
[25] See generally, Water Transfer DEIR DEIS at Table 3.2-1, p. 3.2-1 to 3.2-12.
[26] See discussion at notes 2-4, *supra*.

setting, and instead relies on a predictive model to provide a future "Baseline" for determining the proposed Project and alternatives' impacts, the significance of those impacts, and the need for mitigation measures to reduce or avoid those impacts.[27] The Water Transfer DEIR/DEIS' methodology is in fundamental conflict with CEQA for at least the following reasons:[28]

I. FAILURE TO USE THE EXISTING ENVIRONMENTAL SETTING AS THE BASELINE

CEQA requires that a lead agency prepare an EIR for any project that it proposes to carry out or approve that may have a significant effect on the environment.[29] An EIR must include, among other things, a detailed statement setting forth "[a]ll significant effects on the environment of the proposed project."[30] CEQA statutorily defines the "environment" to be "the *physical conditions which exist* within the area which will be affected by a proposed project

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[27] See discussion at notes 18-25, *supra*.

[28] The following discussion focuses on CEQA's procedural and substantive requirements, and the implications of the Water Transfer DEIR/DEIS' erroneous use of a projected "baseline" for CEQA analysis. Although CEQA and NEPA do differ significantly in certain respects (see, e.g., discussion at pp. 31-36 of Remy, et al., Guide to the California Environmental Quality Act (10th ed., 1999) [hereinafter "Guide to CEQA"]), when both CEQA and NEPA apply to a project, they both require that the analysis begin from a baseline of physical conditions as they exist at the time of the proposed project. (Compare CEQA Guidelines, § 15125, subd. (a) [environmental setting of project normally constitutes "baseline" for analysis, and is established at time of notice of preparation], with 40 C.F.R. § 1502.15 [requiring succinct description of environment or area(s) to be affected].) Both CEQA and NEPA require analysis of a distinct No Project alternative as compared to the environmental setting/affected environment "baseline." (See CEQA Guidelines, § 15126.6; 40 C.F.R. § 15024.14.) And, CEQA and NEPA both require analysis of significant cumulative impacts of the proposed project when combined with other past, present and reasonably foreseeable future projects. (See CEQA Guidelines, § 15130, subd. (a); 40 C.F.R. 1508.7.) The analysis in this memorandum focuses on these synonymous aspects of the two statutes. As a result, the conclusions that this memorandum reaches with regard to CEQA should be the same under NEPA. And, if for some reason the NEPA result were to vary, the fact remains that the Water Transfer DEIR/DEIS is inconsistent with CEQA's requirements. Therefore, the Water Transfer DEIR/DEIS cannot be certified under state law in any event.

[29] See Pub. Resources Code § 21100, subd. (a).

[30] Pub. Resources Code § 2110, subd. (b)(1).

including land, air, water, minerals, flora, fauna, noise, [and] objects of historic or aesthetic significance."[31]

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."32 "This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant."33 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."[34]

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

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[31] Pub. Resources Code § 21060.5 (emphasis added).
[32] CEQA Guidelines, 15125, subd. (a).
[33] *Ibid*.
[34] *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."

against impacts that might foreseeably occur in the absence of the proposed project.[35] 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."[36]

The Water Transfer DEIR/DEIS does, in fact, provide an excellent – if not perhaps overly detailed – review of the existing environmental conditions at the Salton Sea with regard to Hydrology and Water Quality and to Biological Resources.[37] 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 DEIR/DEIS instead develops a future "baseline" based on a predictive model.[38] The model takes into consideration a bevy of past, present and future demands on the Salton Sea's water sources (while explicitly ignoring potentially beneficial contributions to the Sea through proposed Salton Sea conservation and restoration programs) to create a bleak, *future* "baseline" forecasting a Sea in terminal decline.[39]

The Water Transfer DEIR/DEIS' cannot be certified because it fails to use the *existing* environmental setting as the statutorily mandated baseline for environmental review. The Water

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[35] 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*").
[36] *EPIC*, *supra*, 131 Cal.App. 3d at p. 354.
[37] See discussion at notes 2-4, *supra*; CEQA Guidelines § 15125, subd. (a) (stating, "The description of the environmental setting shall be no longer than is necessary to an understanding of the significant effects of the proposed project and its alternatives."). Each of the environmental setting discussions in the Water Transfer EIR provides an incredible amount of detail regarding historical conditions at the Sea which does not appear, from its face, to contribute any substance to the discussion of how the present setting of the Sea will change under the proposed Project and its alternatives. Still, having such information does provide interesting background reading on the Sea's colorful and dynamic history, and is not faulted as a *per se* violation of CEQA in this memorandum.
[38] See discussion at notes 9-14, *supra*.

Transfer DEIR/DEIS has only analyzed the impacts of the proposed Project and its alternatives relative to the conditions that might occur in 75 years, as predicted by the Salton Sea Accounting Model. But, the forward-looking Model's predictions do not, and cannot, provide the statutorily required, frozen snapshot of the Sea's *existing* environmental conditions.

The environmental analysis in the Water Transfer DEIR/DEIS is inadequate as a matter of law because it does not disclose "the impacts of the project on *the environment*, defined as the *existing* physical conditions in the affected area" – instead, it only discloses the proposed Project's impacts on the Salton Sea Accounting Model's 75-year predictions.[40]

II. IMPERMISSIBLE CONFLATION OF "NO PROJECT" ALTERNATIVE AND BASELINE

CEQA requires that an EIR analyze a No Project alternative.[41] The CEQA Guidelines expressly state "The no project alternative analysis *is not the baseline* for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the *existing* environmental setting analysis which does establish that baseline."[42] In other words, the CEQA Guidelines expressly prohibit the use of the No Project alternative as the "baseline" for environmental analysis, except in the very unusual circumstance that, without the proposed Project, there will be absolutely no change in that environment over time.

The Water Transfer DEIR/DEIS instantly fails this fundamental requirement of law. The Water Transfer DEIR/DEIS expressly admits that the *exact same* model runs from the Salton Sea Accounting Model – model runs 1c and 1d – were used to develop the DEIR/DEIS' "No Project"

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[39] See discussion at note 11, *supra*.
[40] *EPIC*, 131 Cal.App. 3d at p. 354 (emphasis added).
[41] CEQA Guidelines, § 15126, subd. (e).
[42] CEQA Guidelines, § 15126, subd. (e)(1) (emphasis added, cross-reference omitted).

alternative and its future "Baseline" for environmental analysis.[43] Moreover, the No Project Alternative repeatedly uses the terms "No Project" and "Baseline" interchangeably.[44]

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 Water Transfer DEIR/DEIS repeatedly refers in its No Project alternative analysis to the "No Project/Baseline" conditions at the Sea.[46] The Water Transfer 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.

III. IMPROPER DISCOUNTING OF POTENTIALLY SIGNIFICANT IMPACTS CAUSED BY USING "NO PROJECT" ALTERNATIVE AS BASELINE

After making it perfectly clear that the No Project alternative is *not* the baseline for environmental analysis in an EIR, the CEQA Guidelines go on to explain "where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval . . . ."[47] As clarified by one noted CEQA treatise, "In some circumstances, even a 'no project' alternative might result in unavoidable, significant effects."[48]

In fact, it is clear from the available data that the No Project alternative may have *significant* adverse impacts on the Sea's Hydrology and Water Quality and on its Biological

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[43] See discussion at notes 17, *supra*.
[44] See discussion at notes 21-23 *supra*.
[45] CEQA Guidelines, § 15126, subd. (e)(1).
[46] See discussion at note 21 *supra*.
[47] CEQA Guidelines, § 15126.6, subd.(e)(3).
[48] Remy, et al., Guide to CEQA, *supra*, at p. 341.

Resources: without the implementation of the proposed Project, water levels may decline over the next 75 years – resulting in a variety of significant impacts to air quality, health and recreation. The amount that water levels would decline is subject to the future "No Project" inflows. Salt levels in the sea are predicted to rise to 60,000 mg/L by 2023 and may go as high as 86,000 mg/L by 2077 – levels which will probably kill all of the fish in the Sea and thereby have reverberating impacts throughout the ecosystem.[49] These projections are questioned in the Authority's draft comments regarding hydrological assumptions.

Since the Water Transfer DEIR impermissibly seeks to establish the Salton Sea Accounting Model's *future* No Project conditions as the "baseline" for purposes of analyzing the proposed Project's impacts, the Water Transfer DEIR/DEIS *must* remain mum – and again violate CEQA – with regard potentially significant impacts caused by the No Project alternative: having "nowhere left to go," the Water Transfer DEIR/DEIS cannot meaningfully analyze or make any findings of significance regarding the No Project alternative's impacts.

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.[50] "[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."[51] "An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects."[52]

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[49] See note 18, *supra*.
[50] CEQA Guidelines, § 15130, subd. (a).
[51] CEQA Guidelines, § 15130, subd. (a)(1).
[52] CEQA Guidelines, § 15130, subd. (b)(3).

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.[53] 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."[54] The appellate court flatly rejected the City's theory, and held that cumulative impacts analysis must asses 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 the standard for a cumulative impacts analysis is defined by the use of the term "collectively significant" in Guidelines section 15355 and the analysis must assess the collective or combined effect of energy development. The EIR improperly focused upon the individual project's relative effects and omitted facts relevant to an analysis of the collective effect this and other sources will have upon air quality.[55]

The Water Transfer DEIR/DEIS' use of its projected "baseline" stands this fundamental tenet of cumulative impacts analysis on its head. Rather than *cumulating* and then reviewing the impacts of the proposed Project along with all other source-depleting activities that are currently being undertaken or are planned by IID, CVWD and MWD, the Water Transfer DEIR/DEIS

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[53] *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692.
[54] *Kings County*, *supra*, 221 Cal.App.3d at p. 720.
[55] *Kings County*, *supra*, 221 Cal.App.3d 692, 721.

instead adds all of these other impacts together in its projected "baseline."[56] The Model's 12- and 75- year outputs are then improperly used as a starting-point comparison for deciding whether transferring an *additional* 130 KAFY to 300 KAFY out-of-basin might have significant impacts. Having ensured that the projected baseline already spells disaster for the Salton Sea, the Water Transfer DEIR improperly concludes that the transfers' acceleration of and "incremental" contributions to these other projects' impacts on Hydrology and Water Quality and on Biological Resources must be less than significant.

Having incorporated the adverse impacts of all other projects into its baseline for environmental analysis, the Water Transfer DEIR/DEIS' cumulative impacts analysis is unlawfully stunted and oversimplified: the improper inclusion of all other projects' impacts into the "baseline" leaves nothing to cumulatively analyze.

The Water Transfer DEIR/DEIS' "analysis" of cumulative impacts to Hydrology and Water Quality is a total of two paragraphs, and incredibly concludes that "[n]o significant cumulative impact would occur to hydrology and water quality of the Salton Sea with implementation of the Proposed Project and other related projects," despite the fact that the DEIR plainly states that the water level will fall some 22 feet (nearly 1/2 the current depth of the Sea) and result in salinity of up to 162,000 mg/L TDS (nearly four times the Sea's present salinity).[57]

The Water Transfer DEIR/DEIS' Biological Resources cumulative impacts analysis claims that *all* cumulative impacts will be "avoid[ed] and/or mitigate[d]" by implementation of the proposed Project's HCP component, and that implementation of the proposed Project and its

[56] See discussion at note 11 *supra*.
[57] Water Transfer DEIR/DEIS at p. 5-33. See note 18, *supra*.

proposed HCP will only have beneficial impacts on affected species.[58] However, the proposed HCP explicitly states that it is *only* designed to offset the proposed Project's incremental impacts: "It is unreasonable and impractical for the water conservation and transfer programs to bear the burden of restoring the Salton Sea. [¶]The level of mitigation should be scaled to the impact attributable to the water conservation and transfer programs."[59] Because the Water Transfer DEIR refuses to recognize and assess all other projects' negative impacts – instead burying them in the projected "Baseline" – the Water Transfer 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 Water Transfer DEIR/DEIS' analysis of cumulative impacts is factually erroneous and legally inadequate. The Water Transfer DEIR/DEIS cannot be certified until it actually "assess[es] the collective or combined effect of [water diversions from the Salton Sea]."[60]

V. FINDINGS OF LESS THAN SIGNIFICANT IMPACTS UNSUPPORTED BY SUBSTANTIAL EVIDENCE

When preparing an EIR, "[t]he decision as to whether a project may have one or more significant effects shall be based solely on substantial evidence in the record of the lead agency."[61] Substantial evidence includes "facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts."[62] Substantial evidence does not include "argument,

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[58] Water Transfer DEIR/DEIS at p. 5-34.
[59] Water Transfer DEIR/DEIS, Appendix C, Draft Habitat Conservation Plan IID Water Conservation and Transfer Project at p. 3-25.
[60] *Kings County*, *supra*, 221 Cal.App.3d 692, 721.
[61] CEQA Guidelines § 15064, subd. (f). See also Pub. Resources Code § 21082.2, subd. (a).
[62] Pub. Resources Code § 21082.2, subd. (c); CEQA Guidelines § 15064, subd. (f)(5).

speculation, unsubstantiated opinion or narrative, [or] evidence which is clearly inaccurate or erroneous . . . ."[63]

As demonstrated by this memorandum, the Water Transfer DEIR/DEIS erroneously relies on a *future*, worst-case-scenario, model to inaccurately trivialize the impacts that the proposed project will have on the *existing* environmental setting of the Salton Sea. The evidence in the record is therefore "clearly inaccurate or erroneous" and is not a reasonable basis for the Water Transfer DEIR/DEIS' repeated declarations that the proposed transfer will have less than significant impacts on the Hydrology and Water Quality and on the Biological Resources of the Salton Sea.

CONCLUSION

The Water Transfer DEIR/DEIS is fundamentally, legally flawed, and cannot be certified as written. The Salton Sea Accounting Model establishes a future, worst-case-scenario baseline to declare – in advance – an already dead Salton Sea.

But that is not the case. The Sea is admittedly in need of restoration if it is to support its incredible and unique biological diversity into the future. But it is hardly, at this moment in time, the lost cause that the Water Transfer DEIR/DEIS would make it out to be.

The Salton Sea Accounting Model appears to be a very useful tool for predicting the Sea's response over time to a variety of changing environmental factors. The scientific ability of the Model to reasonably determine what might happen to the Salton Sea over the next 75 years is not at issue in this memorandum and legal analysis. What is at issue is whether the use of the projected "baseline" in the Model as the statutory "baseline" for CEQA analysis is legally correct. It is not.

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[63] *Ibid*.

In fact, the unlawful use of the Model's projected, future predictions as the baseline for environmental analysis taints every aspect of the Water Transfer DEIR/DEIS' analysis that it touches. The use of the projected, future baseline is inconsistent with CEQA's mandate that impacts be compared to the *existing* environmental setting; it has improperly "erased" the No Project alternative from the EIR; it has eliminated the ability to determine the true significance of the proposed Project's impacts on the Sea as it exists today; it has resulted in a legally deficient cumulative impacts analysis; it has resulted in inaccurate and erroneous evidence in the record upon which the EIR's findings of "less than significant impacts" are based.

While this memorandum has only addressed the problems that the Model creates for the Hydrology and Water Quality and Biological Resources sections of the EIR, there is no doubt that the same would apply for any other analysis in the EIR that relies, even if only indirectly, on the Model predicted, future baseline, including impacts to air quality, health and recreation.

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			Under the Seven Party Agreement, the agricultural district (Palo Verde Irrigation District, Imperial Irrigation District, Coachella Valley Water District, and the Yuma project) are limited to a combined total of 3.85 million acre-feet annually. Actual average consumption by these districts has been described as closer to 3.91 million acre-feet. This use of additional water by the agricultural districts presumably has been allowed because other lower basin states have not used their full entitlements and surplus water conditions have existed. In projecting the "entitlement enforcement" reductions of inflow, the EIR/EIS assumes, without supporting analysis, that it is inevitable that consumption by IID or CVWD will be reduced by the amount necessary to bring the agricultural districts within the 3.85 entitlement and that the consequent reduction in IID or CVWD consumption will result in a nearly equal reduction of inflows to the Salton Sea. Neither assumption is supported by the required analysis or documentation. The allocation of the 3.85 entitlement among the individual agricultural districts has been the subject of considerable controversy over a number of years. No one can predict with any level of certainty what quantity of water IID and CVWD would be entitled to consume if the water transfer/QSA failed. Also, surplus and flood flows will continue to periodically exist on the Colorado River and would likely be available to the districts. The allocation of surplus flows among the various entities that hold surplus water contracts would be the subject of considerable negotiation and controversy, the outcome of which is unpredictable. Consequently, any assumption regarding the existence or amount of "entitlement enforcement" is hypothetical, not reflective of the current "existing conditions on the ground" and inappropriate to include in a future inflow analysis. Furthermore, even if IID or CVWD were required to diminish their consumption by 56,856 AFY, that reduction may not be likely to result in an equivalent reduction in inflows to the Sea. Currently, about one-third of the water diverted by IID and CVWD and used for irrigation makes its way into the Salton Sea. The evapotranspiration process consumes the other two-thirds of the water. So even if IID and CVWD were required to reduce consumption, the impact on the Sea may be only a fraction of reduced consumption. The value of 56,856 AFY is provided as a constant reduction factor that is applied every year in the future to reduce the inflow to the Sea A footnote on the table in the hydrology appendix indicates that this constant value was provided by IID. The calculations to support this value should be included in the appendix. Is it the average of the past overages or is it a net average of the over and under amounts? The latter would be a smaller amount and would have less impact on the Sea. How would the inflow reduction due to entitlement enforcement be implemented? Who would be responsible and how would it be enforced? Is it related to some specific conservation project or projects? If it is related to some projects, then perhaps it should more appropriately be included as a project impact. If it is a result of projects that have been evaluated in other documents, then those documents should be cited and incorporated by reference. Additionally, as the Draft Environmental Impact Statement for the Implementation Agreement, Inadvertent Overrun and Payback Policy and Related Federal Actions states on pages 12 and 13 of Appendix C, "Currently, there is no specific quantification of the rights of each of the above-named irrigation districts. In any given year, the depletions by each of these agencies will vary, with the only restriction being that the total use by the four districts cannot exceed the 3.85 million

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			acre-feet per year (MAFY) cap in a normal year. An exception to this occurs under surplus determinations by the Secretary. The 1989 Approval Agreement among IID, CVWD, PVID, and MWD amended the 3.85 MAF cap by allowing MWD to access up to 110 thousand acre-feet/year (KAFY) of water conserved under the 1988 MWD/IID agreement**, provided that under certain specified conditions, CVWD would be given the right to use the first 50 KAF."** Those conditions are described under sections 3.1 and 3.2 in the 1989 approval agreement. The agreement describes those conditions: When the Secretary requires the agricultural agencies to reduce their diversions because they have exceeded the 3.85 MAFY (including the amount conserved and used by MWD). As the junior right holder of the four agricultural agencies that share the 3.85 MAFY, CVWD presumably included this provision in the subject agreement to guarantee its continued historic use of Colorado River water. Consequently, the no project scenario may conclude that 52 KAF or 59 KAF or a similar amount may be over the agricultural entitlement and subject to enforcement (provided documentation is included as described in other comments and above). If this amount would be reduced from CVWD, the analysis should also assume that CVWD would exercise the clause in the 1989 Approval Agreement that has MWD providing the "first increment of agricultural reduction required by the Secretary" of up to 50 KAF. This would seem to indicate that there would be either no net loss or a very small reduction in water delivered to IID and CVWD under "entitlement enforcement." Additionally, some of the additional negative impacts of reduced flows to CVWD might be avoided if CVWD were able to maintain its historic average use of Colorado River supply (although this is difficult to assess because no documentation of assumptions is provided for the CVWD contributions of inflow to the Sea and because the CVWD water management EIR is not available for public review).
4.	General	Future "No Project" Inflows / IID-MWD Transfer Number 1	IID-MWD Transfer Agreement 1 has a term of 35 years from the last conservation action, so its term would end in the later part 2020s. This could make more water available to the Sea during the last 45 or so years of the 75-year life of the new transfer project. The term of the agreement and its impact on the Sea should be evaluated under the no project alternative.
5.	General	Future "No Project" Inflows / Other Reductions	The other reductions are not supported by any evidence or analysis in the EIR/EIS. In projecting other reductions in future inflow inflows to the Sea, the EIR/EIS relies on numbers supplied by CVWD and IID. The document does not include supporting documentation or analysis for any of these numbers. As noted above, such information supplied by parties that have a vested interest in the project's implementation should not be accepted without supporting documentation.
6.	General	Biological Resources	The draft EIR/EIS fails to adequately address how wildlife will be able to respond to an accelerated decline of conditions at the Sea. The draft EIR/EIS assumes that the proposed habitat conservation plans (which may take up to 15 years to enact) will protect bird populations on the same temporal scale that the proposed water transfer will affect species; however, this may not be the case, and the proposed plan offers no details. It also assumes that mitigation projects will do what they are designed to do (for instance, created marshes will attract the same species being affected 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). In a number of places, the draft EIR/EIS 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 (Shuford

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			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.
7.	General	Biological Resources	The impact analysis fails to provide adequate discussion and delineation between short-term and long-term impacts. This is especially pronounced for biological resources because implementing the HCP and getting the measures fully functional will require more time than when water will begin to be transferred. Thus, while some long-term impacts would be mitigated, there may be short-term impacts that are unavoidable and significant. This must be acknowledged. Likewise, the impact analysis does not distinguish between direct and indirect impacts. There are many indirect connections that influence the ecological conditions of the Sea.
8.	General	Biological Resources	Many of the impact discussions use Mono Lake and the Great Salt Lake as models to assess the magnitude and intensity of impacts. While intuitively this may make sense, it is not accurate for the following reasons: 1. Neither Mono Lake nor the Great Salt Lake has the same evolution or history as the Sea; 2. The types of species and the ways they use these three waterbodies are very different (e.g., composition, distribution, timing, and life-cycle factors); 3. The Salton Sea is a much more complex system, so we cannot assume that it will evolve into the same system a Mono Lake or the Great Salt Lake.
9.	General	Visual	The document indicates that visual impacts will not be significant, yet the visual simulations show dramatic changes in the shoreline locations and large expanses of exposed sediments. These areas would be visible to residents and to motorists along the major highways that surround the Sea, highways 111 and 86. These impacts should be classified as significant. By way of comparison, we believe that if this project were to cause a 20-foot drop in Mission Bay in San Diego, such that the bay essentially were reduced back to a mudflat, as it was before the bay was dredged, then that would be considered a significant visual impact. A similar impact should be considered significant in Riverside and Imperial counties.
10.	General	Air Quality	The document states that air quality dust effects from exposed sediments could be significant. However, the document also states that these impacts are not mitigable. The Salton Sea is already in a nonattainment status for PM_{10}. The experience at Owens Lake demonstrates that mitigation measures are available and necessary, but they come with a very high price tag. See the comment number 15 on mitigation below.
11.	General	Environ-mental Justice	The document seriously understates the EJ impacts. The benefits of the project are largely realized in the more affluent San Diego County, whereas the majority of the most significant adverse impacts will be felt in Imperial County. The greatest intensity of those impacts will be felt in the communities immediately adjacent to the Salton Sea, whose residents of these communities are primarily lower income families of retirement age. The impacts to these communities will experience, for example, the most intense air quality impacts, odors from exposed sediments and dying fish, recreational impacts, visual impacts, and death of the fishery, which will come within the residents' lifetimes. The impacts on the Torres Martinez Desert Cahuilla Tribe should be specifically evaluated and addressed. The EJ impacts should be considered adverse and very significant. Mitigation measures should be included, and specific measures should be proposed.
12.	General	Irreversible and Irretriev-	The discussion of irreversible commitment of resources is inadequate. Under recent historic inflows or even the projected future inflow proposed in the document, the Salton Sea could be restored. Under the proposed action for the transfer program, the

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		able Commit-ment of Resources	Sea would deteriorate so rapidly and severely that there is little likelihood that a restoration program would be feasible. The unique habitat with its life forms that are specially adapted to high saline conditions of the Sea would be lost. The food source for the millions of fish-eating birds that use the Sea as a food source would be lost. The Salton Sea Authority's testimony and exhibits to the State Water Resources Control Board hearings on the transfer of water provide much of the detail on the potential for irreversible commitment of resources. Further discussion of this point is provided in comment number 116 related to page 5-49.
13.	General	Odors	The transfer EIR/EIS makes no attempt to quantify the increase in objectionable odors expected due to the death of flora and fauna or the increase of algae blooms. Instead, the EIR/EIS dismisses the impact by stating that, while increased odors can be expected, the impact would be insignificant because of the small number of people that would be subjected to such odors. Approximately 140,000 live in Imperial County, and 300,000 live in the Coachella Valley. In addition, as discussed below, a large number of visitors are attracted to the Salton Sea area each year. Even under current conditions, the Imperial and Coachella Valley communities are subjected to occasional offensive odors. In fact, complaints of odors have come from as far away as Yuma, Arizona, 29 Palms, and Moreno Valley. The likelihood of increased objectionable odors is of particular concern to the communities of the Coachella Valley whose economic viability depends on maintaining its reputation as a world-class tourist destination. The EIR/EIS should at a minimum attempt to quantify the likely increase in odors so that decision-makers and the public can gauge the potential effect of this impact.
14.	General	Cumulative Impacts	The discussion of cumulative impacts is inadequate. The EIS/EIR provides little discussion of the cumulative impacts of the transfer project with the Salton Sea restoration project. Significant coordination with the transfer team has been conducted, along with information transfer and briefings about restoration alternatives. The IID even provided a copy of the Salton Sea Restoration Project Draft Alternatives Report to the State Water Resources Control Board as part of its testimony related to the project. In addition, a draft EIS/EIR was published in 2000. Yet, the document states that discussion of cumulative impacts would be speculative.
15.	General	Mitigation	The proposed action would have environmental consequences for almost all aspects of the human environment around the Salton Sea, including virtually all natural and social resources. Even compared to the future inflow, the proposed action would cause a drop of about 15 feet or more in water surface elevation and exposure of about 80 square miles of sediments. The EIR/EIS admits that this would have significant impacts on air quality but states that they cannot be mitigated. It would also result in loss of all current shallow water foraging habitat, including the large shallow water habitat at the south end of the Sea, and loss of the fishery in about 10 or 12 years. While other shallow water habitat would be established at the lower elevation, it would be much smaller. There would be visual impacts, recreation impacts, and socioeconomic impacts. No measures have been proposed that would adequately mitigate the full spectrum of impacts expected at the Sea, yet measures are available. The EIR/EIS states that the air impacts cannot be mitigated, but at Owens Lake similar impacts are being mitigated By installing a wetting system. To date, $100 million has been spent on mitigation, and the cost of full implementation of this system is estimated at $400 million. In addition, the program will require several million dollars per year in Operations, Maintenance, Energy and Replacement (OMER) costs and a 25,000-acre-feet per year water requirement. This system is being used to control dust on an area that covers only a small portion of the 100 square miles exposed at Owens Lake. This is equivalent to the total area that would be exposed at the Salton Sea when the projected future inflow effects are included. By simple scaling, if a larger proportion

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			of the total exposed area at the Sea would need to be mitigated, the cost could be substantially more costly than the program at Owens Lake. The air quality mitigation measures mentioned above would not mitigate the full spectrum of impacts that would occur at the Sea. Elevation changes at the Sea could be mitigated by constructing in-Sea diking systems. These are discussed in a report by the Salton Sea Authority entitled, "Assessment of Salinity and Elevation Control." A diking system that would have a total enclosed area of 80 square miles would mitigate a loss of inflow of 300,000 acre-feet. The cost model presented in the report suggests that an in-Sea diking system of this size would have a total present value of about $2.4 billion. The costs are high because for a system of this size, much of the construction would have to be in water depths of 20 to 25 feet or more. While such a system would mitigate most of the impact of the transfer, it would have its own impacts, which would need to be assessed. Mitigation by fallowing could be accomplished in such a way that virtually all significant natural resource impacts to the Sea could be eliminated; however, there would be socioeconomic impacts that would need to be addressed.
16.	TOC	Appendices	The Appendices are not listed in the TOC, making it difficult to find individual items in them. For example, Appendix F contains four distinct items. An expanded TOC should be provided, listing the titles of each of the items in the appendices.
17.	ES-3		The region of influence (ROI) should be expanded and better defined. The document identifies the ROI to include the Salton Sea and its shoreline back to 0.5 foot around the Sea. This definition seems inconsistent with the discussions in Chapter 3 and the HCP. If the ROI truly is only 0.5 foot from the waterline, it is inadequate to fully assess impacts to shoreline habitat and vegetation. Hydrophytic and facultative plants depend on shallow groundwater, which in turn, is influenced by the Sea elevation. Such plants can extend a great distance from the watermark of the Sea. Any drawdown of the Sea would affect not only those plants 0.5 foot from the watermark, but all plants connected with the groundwater. Likewise, the groundwater supports mudflats and moist soils in some areas around the Sea, and this habitat supports insects and birds. The ROI should be enlarged to fully capture biological impacts. It appears that much of the HCP and document (e.g., Figure 3.2-8) recognize the importance of surrounding lands.
18.	ES-3, 2-42, & HCP		The HCP does not provide a good definition of what area is included for the Salton Sea, and the map is at such a scale that one cannot infer the area. How much shoreline is included? If it is 0.5 foot, it is inadequate (see comment above).
19.	ES-3 & 2-42		The HCP recognizes five main habitats, one of which is the Salton Sea. While it is important to simplify the approach for readability, the distinct habitat types at the Sea, as discussed in the HCP, should be presented.
20.	ES-7		USFWS's Purpose and Need: Not sure why this is included. The text focuses on USFWS's role with ESA compliance, but this is not a "purpose of" nor a "need for" the project. If there is no project, then USFWS has no need for the HCP. The USFWS is not an advocate nor beneficiary of the project. It may have a NEPA-related purpose and need, given that is a coop agency and that it administers lands that might be affected by the proposed action, but this discussion is silent on those issues. Recommend deleting or moving to the HCP.
21.		Table ES-1	The approach in this table is inconsistent. The title is Summary of Significant Impacts and Mitigation. Some resources sections properly address both significant impacts and mitigation, but others do not list any significant impacts (assuming mitigation would be implemented). For example, Section 3.2 Biological Resources "No significant impacts (after mitigation)."To understand the impacts on a temporal scale, there should be a discussion of significant impacts, followed by the mitigation, then a revaluation of the impacts if mitigation were applied. Thus, Section 3.2 in the table should list all significant impacts, followed by mitigation as related to the

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			specific impact (e.g., habitat modification for candidate, sensitive, or special status species would occur and is a significant impact per Section 3.2.4.2 Significance Criteria, the mitigation would be ???). Note: Impact BR-46 and BR-51 are determined to be significant and unavoidable in Chap. 3.
22.	ES-18	Table ES-1	3.2 Biological Resources states that no significant impacts were identified. However, impacts R-8 and R-9 (listed later in the same table) identify recreation impacts that are directly related to adverse impacts to fish and birds. This is an inconsistent approach.
23.	2-49 & HCP		The HCP recognizes that there are 25 species with insufficient information to develop a conservation strategy. A research program is proposed to better study these species and to develop conservation measures. No timeline is provided as to when the research program would have enough information to develop these measures. Such a timeline should be provided, and no action should be taken that could impair these species. Given that over 40,000 hours went into preparing the draft EIS/EIR, additional time to ensure the protection of these species seems reasonable. The discussion of mitigation measures for impacts to the 25 species is not adequate. The response to question 19 in the *CEQ's Forty Most Asked Questions* provides guidance on the level of discussion that should be included…"The mitigation measures discussed in an EIS must cover the range of impacts of the proposal. The measures must include such things as design alternatives that would decrease pollution emissions, construction impacts, aesthetic intrusion, as well as relocation assistance, possible land use controls that could be enacted, and other possible efforts. Mitigation measures must be considered even for impacts that by themselves would not be considered 'significant.' Once the proposal itself is considered as a whole to have significant effects, all of its specific effects on the environment (whether or not 'significant') must be considered, and mitigation measures must be developed where it is feasible to do so…All relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperating agencies, and thus would not be committed as part of the RODs of these agencies. Sections 1502.16(h), 1505.2(c). This will serve to [46 FR 18032] alert agencies or officials who can implement these extra measures, and will encourage them to do so. Because the EIS is the most comprehensive environmental document, it is an ideal vehicle in which to lay out not only the full range of environmental impacts but also the full spectrum of appropriate mitigation."
24.	2-49		IID states that the level of mitigation should be scaled to the impact attributable to the water conservation and transfer program, but how this scale is determined or will be determined is not provided. In many instances, the impact analysis does not provide enough quantification on which to assess scale. Likewise, the trends in projected future inflow conditions are never clearly provided, which might serve as a proxy to measure changes related to the project vs. no project.
25.	2-52		The technical and legal mechanisms for using conserved water as mitigation under HCP Approach #1 should be described.
26.	2-50 and HCP		Last paragraph states, "The purpose of these ponds would be to maintain **some** foraging opportunities at the Salton Sea…." "Some" needs to be defined. What are the targets?
27.	2-50 and HCP p. 3-25		HCP Approach 1: "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." Given that some of the birds are federally protected, it seems that the goal should not be just "representation" but to maintain a viable population. No discussion is provided on what would constitute a viable population. It is hard to assess the effectiveness of the mitigation to meet ESA requirements without such an assessment.

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28.	2-50 & 51 and HCP		HCP Approach 1 proposes to develop 5,000 acres of five-foot deep ponds. There is no evidence presented to suggest that this would be a benefit to the affected species. Trying to consolidate the ecological output of the 235,000-acre (365-square-mile) Sea into 5,000 acres of small ponds poses a number of risks and is not a long-term solution or appropriate mitigation. Creating a number of small and relatively shallow ponds does not represent the characteristics that make the Sea so productive (e.g., mild temperatures and a high morpho-edaphic index). The ponds would likely experience high temperatures, as the five-foot depth would not provide adequate thermal regulation (the Sea generally has thermal stratification at depths greater than five feet). Any thermal stratification would likely be minor. This could result in eutrophic conditions, low dissolved oxygen levels, and fish kills.
29.	2-50 & 51 and HCP		The carrying capacity of the ponds should also be discussed. Consolidating food for piscivorous birds into such a small and confined area could increase the vectors for the spread of disease, especially if the system is stressed.
30.	2-52 and HCP		Approach 1 would include construction of islands for nesting shorebirds, but where the islands would be located is not discussed. Location is import to determine the predator-prey interactions. Nesting sites should be close to food sources. The discussion of impacts mitigation is not specific and is inadequate. See the response to the comment number 23 related to page 2-49 for a discussion of the required specificity of mitigation measures that should be provided.
31.	2-52 and HCP		Overall, Approach 1 lacks details on which to base an analysis or conclusions.
32.	3.1-8	Sec. 3.1.2 Regulatory Framework	At the end of the second paragraph "Approved Basin Plan Amendment for TMDLs" it is explained that, "The TMDL proposal establishes corresponding waste load allocations and load allocations for point and nonpoint sources of pollution, respectively." However, the implications of a TMDL relative to project actions may not be clear to readers based on this description. It would be helpful to also discuss implementation measures.
33.	3.1-69; 3.1-71; 3.1-73	3.1-24	It appears that the Figure 3.1-24 referenced in the text on page 3.1-69, which should show tributaries to the Salton Sea, is missing. Another Figure 3.1-24, on page 3.1-71, is actually a graph of average monthly elevations and inflows to the Salton Sea, 1950-1999. This figure is cited correctly in the second paragraph of page 3.1-73.
34.	3.1-69, 3.1-70, 3.1-73 (second paragraph)	3.1-24; (also 3.1-14)	When describing the environmental "baseline," it would be helpful to put the current conditions into better historical context. The text gives the impression that existing conditions are relatively stable, and that the projected future inflow would result in a small change in elevation. A figure in Appendix F, in the discussion of the SS Accounting Model, shows a graph of the historical Sea level. It would be helpful to show how the no project elevation would continue or deviate from the historic hydrograph of the Sea. Similarly, this could be applied to the salinity. In any case, a graph of the historic elevation and salinity should be included in the discussion of existing conditions and/or no action.
35.	3.1-75		The discussion of COCs lacks an appropriate focus. When it is later concluded that the inflow reductions caused by the project would have no significant impact on the Sea, this is largely because there is no discussion of the pertinent aspects of the chemistry of the Sea to its health and beneficial uses. More of an attempt should be made to highlight the chemical and biochemical interrelationships that have become established in the Sea and that could be threatened by project actions, such as a reduction in inflow. Instead, the report provides a large amount of data without much explanation of its significance. "Nutrients and other organic parameters" covers an overly broad range. The text does not explain which constituents should be included under the heading of nutrients. The RWQCB considers nutrients to be important enough to the beneficial uses of the Sea that it reprioritized the nutrient TMDL for the Sea and scheduled it for completion by 2004. Therefore, nutrients should be included in the first list, and the

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			water board's definition of nutrients should be provided. The term "other organic parameters" is too vague to be meaningful. Sediment is not listed as a topic of discussion in the beginning of the section, although it is discussed in the text. The section should be reorganized and made more readable and more relevant.
36.	3.1-75	Second paragraph	The statement that saltwater criteria are more appropriate for the Salton Sea should be supported and explained. In many ways, the Salton Sea is a unique environment, with its own issues, to which neither freshwater nor ocean water standards would necessarily be appropriate or protective. The EIR/EIS is trying to fit a square peg in a round hole by using standard water quality criteria as a measure of the significance of impacts.
37.	3.1-81	Sediment	The discussion of sediment in the Sea should address both mineral sediment and deposition of organic matter. A large portion of the sediment load to the Sea is organic matter, and a large part of the sediment deposited on the Sea bottom is organic matter produced in the Sea.
38.	3.1-101	Sec. 3.1.4.2	Although the significance criteria lists many criteria, most of them have nothing to do with the project. The significance criteria should be thoughtfully reexamined to identify representative criteria by which an accurate appraisal of the effects of the project on the Sea can be made. The EIR/EIS should not rely on irrelevant regulatory standards as a means of evaluating these effects. Other qualitative approaches could be used. Under the heading of significance criteria, significance criteria for the Salton Sea should be called out separately so that they are not confused with criteria that may apply to more standard waterbodies, like the Lower Colorado River or the Salton Sea tributaries.
39.	3.1-133 3.1-139 3.1-149, and 3.1-157	Figures 3.1-31, 3.1-33, 3.1-35, and 3.1-37	The projections of elevation, area, and salinity are plotted at different scales in these four figures. This makes comparisons of the proposed action and alternatives to the no project alternative difficult and makes them look deceptively similar. Comparable graphs on all four figures should be plotted at the same scale to provide for fair comparisons.
40.	Existing vs. Baseline	Figure 3.1-16 and 3.1-30	The text does not make clear what accounts for the 49- KAFY reduction in the inflow to the Salton Sea under the baseline relative to existing conditions. Compare figures 3.1-16 and 3.1-30 and note that they show that the reduction from the river would be 52 KAFY. The discussion of the derivation of the baseline inflow to the Salton Sea lacks sufficient detail. Instead of vaguely referring to "adjustments" that were made in the Salton Sea accounting model to account for assumptions about future baseline conditions, the adjustments should be described. Note that the value of 49 KAFY seems to be inconsistent with the value of 56,856 acre-feet given for entitlement enforcement in Appendix F. There is also a graphical error on Figure 3.1-30 in that the value of 2,803 KAFY at Mesa Lateral 5 does not match the value shown on the arrow below the text box.
41.	3.1-106	Impact WQ-2, WQ-4, WQ-5, and WQ-7 (Selenium) ; and WQ-3, and WQ-6	The discussion of impacts of selenium is a bit confusing since it includes discussions of TDS and TSS, without explaining the relationship (if any) to selenium. The result is that the significance of selenium (and TSS and TDS) is obscured. The water quality criterion of 5 µg/L needs a reference. What is this criterion intended to protect? The *concentration* of selenium is not the only issue; selenium *loading* is also important. The development of a selenium TMDL for the Alamo River, Imperial

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		(TSS and TDS and other COCs)	Valley drains, and the Salton Sea should be mentioned, and any project-related changes in loading should be discussed. While the discussion of the water quality impact of selenium might be reasonably limited in this section to exceeding a promulgated water quality standard, the practical impact of selenium would be on wildlife. The EIR/EIS should provide a more realistic and critical evaluation of the significance of the increased levels of selenium. If TMDLs are to be developed, then it seems reasonable that some sort of limits on loadings might be imposed. While it is probably too soon in the development process to know what the implementation approach might be, the EIR/EIS should at least address the issue. Referring the reader to the biological impact evaluation might be helpful.
42.	3.1-112 – 1.1-119	Impact WQ-8	This impact appears to include two different impacts; one is effects to Imperial Valley groundwater hydrology, and the other is inadvertent overrun and payback policy. The description of the latter suggests that it was recently included in the proposed project, and that may explain why it doesn't have its own impact number. If these are intended to be separate impacts, this should be corrected. The impacts of the IOP should be referenced to the IOP EIS/EIR (Reclamation 2002). The nature of the interrelationship of the IOP EIS/EIR and the IID/SDCWA EIR/EIS is unclear. For example, there are several unreconciled differences with respect to the quantities of water assumed for their respective baseline conditions. If the 59 KAFY for the IOP is "now part of the proposed project," then would this require a reevaluation of the appropriateness of deducting 56 KAFY for "entitlement curtailment as a result of river administration" from the baseline, as was apparently done in the baseline modeling? Data presented in the IOP EIS/R should be incorporated by reference and summarized in the transfer EIR/EIS. The differences or linkage between the 56 KAFY entitlement enforcement value shown in the appendix—the 59 KAFY IOP amount listed here and the 49 KAFY that can be determined by comparing figures 3.1-16 and 3.1-30—should be discussed, or the inconsistencies should be eliminated. It appears that the IOP will offset the entitlement enforcement and that the IOP could be accomplished by a number of means, including fallowing, which would have a less severe effect on the Sea than other conservation measures. If decisions are yet to be made about how the IOP will be accomplished, then the entitlement enforcement correction should be removed from the project baseline, and the impacts of IOP should either be included as part of the proposed action or in the cumulative impact section.
43.	3.1-120	Salton Sea Water Conserva-tion and Transfer. Water Quantity Impacts	The second paragraph states that the elevation of the Salton Sea is expected to drop approximately 7 feet over a 75-year period under the baseline assumptions. Previous comments have been directed at understanding how the baseline assumptions were derived. Due to the inherent complexity of the issues and the lack of clarity with which the EIR/EIS describes them, we remain skeptical of the assumptions that result in the Salton Sea losing 7 feet of elevation under the no action alternative. However, given these assumptions and the results presented, modeling indicates that the proposed project would cause the Sea elevation to fall to –245 feet (from the current elevation of –227.8 feet) in 2030. This would constitute about a 17-foot drop over 30 years. (Note that the water surface elevation is projected to continue to fall approximately 5 more feet, to an elevation of –249.7 feet msl, over the next 45 years.)

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			The corresponding decrease under the baseline is not stated in the paragraph, but the modeled elevation appears from Figure 3.0-1 to be about –233 ft msl, about a 5-foot drop. Thus, the difference between the project and no action is about 12 feet over 30 years. The project would more than double the rate of elevation decline. The rate of decline is important because the baseline contains inherent uncertainty and is based on a number of assumptions that may be either incorrect or represent a worst case scenario for the Sea. However, if the baseline is incorrect, the total decline in the Sea will remain close to that described for the project. Thus, if measures are taken to reduce the rate of the Sea's decline under the No Action Alternative, and the Sea declines by only two feet over 30 years, that would not affect the assumptions of the project, which show that the Sea would still decline rapidly within the first 30 years. By assuming the worst case for the baseline, the relative project impacts have been minimized in the EIR/EIS. The EIR/EIS incorrectly ignores the effects of an increased rate of decline in elevation on the Sea. This should be described as a significant impact because it significantly accelerates the severe impacts to the Sea that should be described under other resource chapters in the document (for example, recreation, biology, and aesthetics) and makes restoration of the Sea nearly impossible.
44.	3.1-120	Salton Sea water quality impacts	A rapid decrease in inflow would result in a rapid decrease in volume and elevation of the Sea and would greatly accelerate the increase in salinity of the Sea in the model. If the assumptions of the No Action Alternative overestimate the impacts of no action, the resultant effects of the project would appear much more significant. However, even if the no action assumptions were accepted, the project would greatly accelerate the increase in salinity of the Sea relative to no action; for this reason, the impacts of the project on water quality should be considered significant. These impacts are primarily related to salinity, but any other contaminants, such as selenium and TSS, would also become concentrated. Therefore, additional water quality impacts that are not addressed in the EIR/EIS should be addressed. These include effects on circulation and mixing, dissolved oxygen, temperature, nitrogen and sulfur speciation, biological activity and chemical precipitation, and pathogens, among others. The continued viability of the Sea as an agricultural drain might be ultimately affected if the Sea cannot process the wastewater drained to it. The EIR/EIS does not discuss the restoration program, but by accelerating the decline in water quality of the Sea, the project would have significant impacts on the restoration program. The discussion of water quality impacts should indicate that these impacts would occur. By focusing the discussion of water quality impacts on selenium and herbicides/pesticides, the EIR/EIS rather ingenuously avoids the more difficult evaluation of the impacts that would actually occur.
45.	3.2-105 - 110		**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 restoration will actually attract 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

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			prefer, and maintaining very shallow water on marsh sites is difficult (Eddleman et al. 1994). If mitigation projects are not successful, impacts on rails and other species may be significant.
46.	3.2-112		**Impact BR - 10 Reduced Flows in Drains and Impact BR - 14 Installation of Seepage Recovery Systems** Reduced flows in drains that result in smaller and fewer seeps will likely significantly affect black rails, as has already been documented for the region (Evens et al. 1991).
47.	3.2-129		**Impact BR - 26 Water quality changes in the drains and impacts on sensitive species** The draft EIR/EIS suggests selenium levels will rise in the drains and this could affect clapper rails (as well as other species); the plan suggests that implementing the HCP would reduce this potential to less than significant. However, no support is given that birds will actually move to protected areas. This needs to be addressed.
48.	3.2-133		**Impact HCP-BR-32 Creation of managed marsh habitat would benefit wildlife associated with drain habitat**. Creation of marsh habitat is anticipated to take 15 years to complete, but water transfer would take place in a much shorter time frame. The draft EIR/EIS needs to evaluate how the interval between when water is transferred and when marshes are created will affect wildlife. Most animals cannot wait 15 years.
49.	3.2-137		**Impact BR-41. Reduced Drain Flow Could Affect Wetlands Dominated by Cattail/Bulrush Vegetation.** This does not discuss how the habitat is tied to the groundwater, which could be influenced by the Sea elevation. While inflows may not change, the dynamics of the groundwater table may be influenced, which could affect the health and viability of the species.
50.	3.2-138		**Impact BR-42 Reduced Sea elevation could affect the acreage of adjacent wetlands dominated by tamarisk and shoreline strand.** The draft EIR/EIS suggests that no significant impacts will occur despite the potential loss of much of the vegetation associated with the riparian zone, which would impede the use of wildlife nursery sites (see 3.2.4.2 Significance Criteria Draft EIR/EIS). Colonial waterbirds nested at 21 sites along the Salton Sea in 1999 (Shuford et al. 2000), much of which occurred in *Tamarix*. Water levels under the proposed project would undoubtedly drop faster than *Tamarix* would colonize, which could significantly affect colonial breeders.
51.	3.2-138		**Impact BR-42 Reduced Sea elevation could affect the acreage of adjacent wetlands dominated by tamarisk and shoreline strand.** This is listed as less than significant because "no special-status species depend on tamarisk." This is not true. Throughout the southwest, research is finding that where native vegetation is being out-competed by tamarisk, birds (notably the southwestern willow flycatcher) are adapting to tamarisk. Granted, it is not ideal habitat, but it is providing a function for this protected species. This point is also expressed on page 3.2-45 – "Bird species potentially using tamarisk scrub and other riparian habitat include yellow warbler, southwestern willow flycatcher…" Likewise, Section 2.3.4.2 of the HCP recognizes that tamarisk is the primary riparian vegetation and is important in that role. Given that colonization of exposed shoreline would not occur as fast as the drawdown, and, as acknowledge in the discussion, soil salinity may prevent colonization along exposed shoreline, the impact should be recognized as significant, at least during the short-term. (Per CEQA, there is a mandatory finding of significance for impacts on habitat of listed species [15065a]).
52.	3.2-141 to 148		**Impacts BR-43 & 45.** The analysis for salinity does not assess the increase in salinity that could occur from the physical process of a smaller Sea size. Specifically, a smaller size could be subject to more mixing throughout the water column from wind and other climatic events. This could disturb Seabed sediment and stir up salinity, selenium, insecticides, boron, and nutrients on the Sea bottom, thereby speeding up the time in

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			which chemical thresholds are exceeded.
53.	3.2-141 to 148		**Impacts BR-43 & 45.** Selenium, insecticides, boron, and nutrient loads could likely affect invertebrates. This is not discussed or disproved.
54.	3.2-141		**Impact BR - 44. Changes in the invertebrate community could affect shorebirds and other waterbirds**. Draft EIR/EIS 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 diverse waterfowl use the Salton Sea (Shuford et al. 1999, 2000). In 1999, ruddy duck numbers in the winter ranged over 30,000 birds, whereas winter counts of ruddy ducks at Mono Lake generally count fewer than 1,000 birds (Draft EIR/EIS 2002). Changes in the invertebrate community will have significant impacts on the shorebirds and other waterbirds that use the Salton Sea. While the no project alternative would ultimately lead to a condition at the Sea that would be comparable to Mono Lake, the proposed action would quickly result in conditions that are much saltier than Mono Lake.
55.	3.2-141		**Impact BR - 44. Changes in the invertebrate community could affect shorebirds and other waterbirds.** The discussion does not address how other water quality constituents could affect invertebrates and avian species. Of special concern are winds and water column mixing disturbing the Seabed sediment.
56.	3.2-148		**Impact BR - 46. Reduced fish abundance would affect piscivorous birds.** The draft EIR/EIS suggests that a less than significant impact would occur to the piscivorous birds. The proposed project would accelerate various processes that would negatively affect 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 5,425 nesting pairs documented at the Salton Sea in 1999 would represent over 50 percent of the entire California coastal population. The accelerated loss of water in the Sea under the proposed project would provide this population and other fish-eating birds significantly less time to find other suitable breeding sites (if this is even possible) than the baseline project. No discussion is made of this.
57.	3.2-153		**Impact BR-47: Changes in selenium in the Salton Sea would not affect fish and birds.** While it has generally been shown that today selenium mostly concentrates in sediment, the analysis fails to (1) analyze how wind and other climatic events would influence currents in the smaller-sized Sea; (2) how currents would disturb sediment; (3) how the sediment would be transported in the water column; and (4) how the sediment would be introduced into the food chain. With a smaller shallower Sea, would the selenium hot spots in the sediments of the Sea be more bioavailable? See

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			the Levine Fricke Recon report available through the Salton Sea Authority for details on the location of selenium in the Seabed. Without a more detailed analysis of selenium, a no impact determination is invalid.
58.	3.2-154		**Impact BR - 48. Reduced Sea elevation could affect nesting/roost sites.** The draft EIR/EIS suggests that a less than significant impact on biological resources would occur. One species that is not adequately evaluated is the snowy plover. The Salton Sea supports the largest inland breeding populations of snowy plovers in the west (Shuford et al. 2000). Changes to the shoreline slope, if it becomes steeper, could negatively affect the breeding birds, and this should be evaluated, particularly on the southeast, south, and southwest sides of the Sea where plovers are known to concentrate and breed. For most of the colonial breeders, there is little discussion about what the potential impacts of having no snags in the water will do to breeding populations. The draft EIR/EIS makes the statement that "Because of the small temporal difference in the snag connecting to the mainland, and considering that herons and egrets nest and roost in snags that are not surrounded by water, the Proposed Project would not significantly affect communal rookeries in snags or trees at the Salton Sea" (p. 3.2-157). No documentation is given to support this statement. Currently, most arboreal breeders at the Sea are nesting either over the water or next to it at places like *Tamarix* groves along the mouth of the New and Alamo rivers (Shuford et al. 2000).
59.	3.2-155		**Impact BR-47. Changes in selenium in the Salton Sea would not affect fish and birds.** As noted here, natural processes of uptake and sedimentation or precipitation act to remove selenium effectively from the water column. The impact assessment assumes that the same natural processes would be in place in the smaller saltier Sea that then may occur with implementation of the proposed project. Is there any foundation for such an assumption? Have any selenium experts been consulted to determine the fate of selenium under these scenarios?
60.	3.2-157		**Impact BR - 49. Reduced Sea elevation could affect mudflat/shallow water habitat.** The draft EIR/EIS suggests that a less than significant impact on biological resources would occur. It has been well demonstrated that water depth can be predictive of waterbird species (Velasquez 1992, 1993; Elphick and Oring 1998). Shorebirds generally do not feed in water at depths much greater than about 10-15 cm (Warnock et al. in prep.), and most prefer water depths under about 4 cm (Isola et al. 2000), except for those that swim, like the phalaropes. The bathometric models are probably not accurate enough to evaluate changes in shallow water habitat of less than 1 foot. It is especially troubling that the shallow impounded areas around the southern and southeast side of the Sea would be rapidly lost under the Proposed Project because most shorebirds (over 75 percent, Warnock, Shuford and Molina in prep.) at the Salton Sea are found there. Effects on shallow water habitat in this area, as well as at the north end of the Sea, should be better evaluated.
61.	3.2-159		**Impact BR-50: Water quality changes could increase the incidence of avian disease.** Impact analysis does not assess the effect of sediment disturbance and relationship to water quality. See comment number 57 related to BR-47.
62.	3.2-160		**Impact HCP-BR-52 Maintenance of fish resources would benefit piscivorous birds.** This section does not address other impacts related to the mitigation in and of itself. For example: • Having smaller ponds could result in increased nutrient loading, making them more eutrophic than the Sea, and influencing dissolved oxygen; • Smaller ponds are likely to experience higher maximum water temperatures

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			in summer and lower minimum temperatures in winter, which would likely influence survivability fish; • A system of small ponds could increase the vector for avian disease. The Salton Sea Science Office recently convened a panel and workshop to review a proposal put forth by the Pacific Institute. That proposal involved the construction of wetlands and relatively small impoundments. Some of the conclusions of the panel would likely apply to the impoundments proposed for this mitigation measure: • Desert pupfish movement would likely be reduced. • Existing saltwater species, with the possible exception of tilapia, would not survive in the new impoundments. Tilapia would be subject to greater temperature extremes and would likely suffer increased die-offs. • The impoundments would likely serve as suitable freshwater fish habitat, with possible species ranging from only carp and catfish to more diverse species, depending on management. • They would likely serve as selenium traps. • The freshwater fish would almost certainly be subject to raised levels of selenium and other chemical concentrations, which would pose a health risk for human consumption. • Fish-eating birds, especially pelicans, would be affected by the change in fish species, the reduction in numbers of fish, and the loss of about 95 percent of the open water habitat offered by the current Sea. • They would likely have human health impacts from concentration of microbes, organochlorines, and pesticides, and mosquitoes could serve as a vector for encephalitis. • They would require intensive management to reduce problems they could cause. The impacts of the fish hatchery and pond system need to be evaluated so the decision-maker can determine if the benefits outweigh the costs.
63.	3.2-158		**Impact HCP-BR-52 Maintenance of fish resources would benefit piscivorous birds.** The discussion should provide a measure (e.g., number of fish produced v. current and project populations) to determine if the scale of mitigation is appropriate (IID requirement "the level of mitigation should be scaled to the impact attributable to the water conservation and transfer program"). Not enough detail to make this determination.
64.	3.2-158		**Impact HCP-BR-53: Creation of nesting/roosting islands.** There is no analysis on effectiveness of the islands. Will they be of sufficient size and number to meet needs? Will they be located near food sources? What happens to islands as food sources decline?
65.	3.2-158		**Impact HCP-BR-54: Creation of native tree habitat.** This is an appropriate mitigation measure, but the analysis may be overly optimistic and ignores temporal functionality. As discussed in the EIS/EIR, Impact BR-42, there is a chance that exposed soils from the receding Sea will be too saline for tamarisk. If it is not good enough for tamarisk, then natives will surely not survive, which makes this mitigation inappropriate for much of the Sea. Strongly recommend soil tests be conducted and included in the analysis to determine suitability. If soils are too saline, an unavoidable take of threatened and endangered habitat would have to be acknowledged.

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			Second, a short-term significant impact to riparian habitat would still occur because it would take a couple of years for scrub habitat and at least ten years for trees to become functional. Until then, the loss of habitat would be significant and unavoidable.
66.	3.6-16		Impact R-5 measures the reduction in area of the Sea available for water-related recreation by calculating visitors per square mile of Sea. Recreationists however do not disperse themselves evenly through any area. there are areas likely to be far more attractive for water-based recreation than others, such as near boat facilities, near the NWR, and near sources of freshwater. Therefore a reduction in the overall acreage of open water in the Sea is likely to have even greater impacts than calculated here, as the user density would be significantly greater in some areas than in others.
67.	3.6-17		The EIS/EIR implies that the impact of exposed playa is self-mitigating because the exposed playa (nearly 78 square miles) would provide more area for land-based recreational uses. However what uses would these be? As the water level in the Sea drops and salinity increases, salts become encrusted on the surrounding shoreline, producing vegetation-free salt flats rather than pleasant beaches. Exposed bottomland is odoriferous, frequently muddy, and generally unattractive. This impact would constitute a substantial physical degradation of public recreation uses of the shoreline of the Salton Sea. This is, in fact, not a beneficial impact at all for land-based recreation uses, unless local agencies or IID committed to undertake to revegetate these areas and to provide recreation facilities for visitors and local residents.
68.	3.6-19		The mitigation for the significant impact on boating facilities providing access to the Sea is to relocate these facilities to the new shoreline as the Sea recedes, or to implement HCP Approach 2. The mitigation by relocation of boating facilities is insufficiently developed. How often would these facilities be relocated? How would the work be funded? What about facilities that are currently out of reach of the water? What entity would be responsible for doing so? The lead agency must commit to this mitigation or identify the appropriate party.
69.	3.6-21		Mitigation for the significant impact on campgrounds and other facilities adjacent to the Salton Sea is also relocation. The same issues are implicated in this as for the boating facilities.
70.	Page 3.7-3	Table 3.7-1	Table 3.7-1 categorizes potential windblown dust problems at the Salton Sea under alternatives 2, 3, and 4 as potentially significant and unavoidable, but the discussion of mitigation measure AQ-7 says that the impact could be avoided (page 3.7-36). If there is an identified way to avoid the impact, then it is not unavoidable. The failure of the project proponent to adopt an identified and feasible mitigation measure should not be camouflaged by characterizing the impact as "unavoidable." Impact AQ-7 is potentially significant but avoidable if mitigation measure AQ-7 is implemented.
71.	General Comment on Section 3.7.3 and Section 3.7.4		The internal organization of sections 3.7.3 and 3.7.4 is needlessly confusing and redundant. Discussions are presented for three geographic subareas: Lower Colorado River area, IID Service Area, and areas within half a mile of the Salton Sea. What is the logic for such subdivisions, and how do the subdivisions relate to air quality issues? (Note: The executive summary defines the Salton Sea subarea as the Sea plus areas within half a foot (not half a mile) of the shoreline.) The Salton Sea per se has obvious relevance for hydrology, water quality, and fish and wildlife issues. But the Salton Sea per se is not a useful geographic unit for air quality issues. Regulatory issues, environmental setting data, and air quality impact issues simply don't categorize themselves into the geographic subareas presented here. Clearly, the more relevant geographic subareas are simply the lower Colorado River area and the Salton Sea air basin. If there is any need to distinguish Imperial County and Riverside County portions of the air basin, that is easily done within the framework of a unified air basin discussion. Similarly, any discussions limited to the IID service

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			area are easily put in the context of the Salton Sea air basin. The format used in the draft EIR/EIS results in needless duplication of discussions and considerable confusion in the text presentation because subheadings are duplicated without any internal indication of which major geographic area is being discussed. Table 3.7-4 addresses emission estimates for the entire Salton Sea Air basin, but it is presented in the discussion of attainment status designations for the IID service area. The same meteorological information gets repeated for the IID service area and the Salton Sea vicinity, but all of the details are in the IID service area subsection even though one of the meteorological stations is in Riverside County. Oddly, ambient air quality monitoring data gets its own subsection without any geographic subareas.
72.	General Comment on Section 3.7		There is no real discussion in Section 3.7 concerning federal agency roles in the proposed action and no discussion of the extent to which the general conformity rule applies to federal agency actions associated with this project. This EIS/EIR needs to address that issue directly. The applicability of the general conformity rule is not always easy to determine. But mitigation measure AQ-4 relies on the general conformity rule to mitigate an otherwise significant impact. Thus, it is essential that the applicability of the conformity rule be thoroughly addressed in this EIS/EIR. If the general conformity rule is applicable, then there needs to be an analysis that demonstrates compliance with the conformity rule. No such analyses are presented in the current document. Note also that the general conformity rule has specific requirements for coordination with relevant local, state, and federal agencies. In addition, there are requirements for public notice and availability of the conformity analyses. The general conformity rule recommends inclusion of the conformity analysis in NEPA documents to simplify compliance with agency coordination, public notice, and analysis review requirements. If the general conformity rule is applicable to federal agency involvement in this project, those agencies cannot take action on the project until the requirements of the conformity rule are met. No federal agency ROD can be issued until any required conformity determination is finalized. Now would appear to be the time when analysis of project-specific conformity requirements is necessary. If federal agencies are addressing the conformity rule issue independently of this EIS/EIR, that needs to be clearly explained.
73.	Page 3.7-14		The description of meteorological monitoring site locations should be improved. CIMIS station 154 is on the northeast shore of the Salton Sea, but it is not close to Bombay Beach, which is along the middle part of the eastern shore of the Salton Sea, not at the northeastern corner. CIMIS station 127 is at Salton City, but Salton City is not on the southwestern shoreline of the Salton Sea; it is at the middle part of the western shoreline of the Salton Sea.
74.	Page 3.7-14		The wind speed data presented in this section are misleading and not consistent with information presented elsewhere in the document. The discussion on this page says that wind speeds never exceeded 7 meters per second (15.7 mph). Page 3.7-35 says that wind speeds exceeded 22 knots (11.3 meters per second, 25.3 mph) for 0.1 to 0.2 percent of the time (9 to 18 hours per year) at these stations. The standard height for anemometers is 10 meters, but the CIMIS stations use a much lower height (2 meters for most stations, approximately 5 meters for station 154). As a result, CIMIS data need to be adjusted to reflect equivalent 10 meter wind speeds before any comparison can be made with other locations or with such factors as threshold wind velocities for wind erosion processes. Even without the important measurement height adjustment, it is difficult to believe that all measured wind speeds were below 7 meters per second (15.7 mph). If windblown dust is the dominant contributor to monitored PM_{10} problems (see Table

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			3.7-4), how does it get into the air if the wind never exceeds the threshold velocity for wind erosion? Clearly, something is wrong with the wind speed statistics presented on page 3.7-14. Data from CIMIS stations 127 and 154 for 1997 showed unadjusted hourly average wind speeds of up to 12.9 meters per second (28.9 mph) for station 127 and up to 12.5 meters per second (28.0 mph) for station 154. Maximum equivalent 10-meter wind speeds were up to 16.0 meters per second (35.8 mph) at Salton City (station 127) and up to 13.9 meters per second (31.0 mph) at the state park site (station 154).
75.	Page 3.7-14		The last sentence in the second paragraph appears to have a typo. The statements that summer winds at Salton City (station 127) shift to the northeast probably should be that winds shift to the southeast.
76.	Page 3.7-15	Figure 3.7.5	The directional pattern shown on this figure is not consistent with the directional patterns reported from this station for 1997, which showed a high frequency of winds from the southeast. During 1997, southeast winds were dominant for spring and summer and significant in fall. As a result, southeast winds were co-dominant with northwest winds as an annual average. If southeast winds disappeared during 1998 and 1999, that indicates much greater variability in wind direction patterns than is seen when comparing 1997 and 1998 data for the Salton City CIMIS station. For the Salton City site, west-southwest winds were more prominent during winter and spring in 1998 than in 1997. Nevertheless, summer patterns, fall patterns, and overall annual wind pattern frequencies were very similar for 1997 and 1998.
77.	Page 3.7-17		The first paragraph of Section 3.7.3.4 indicates that ambient air quality monitoring station locations are identified in Figure 3.7-4. The monitoring stations seem to be indicated in figures 3.7-1 through 3.7-3, but not in Figure 3.7-4.
78.	Page 3.7-24		The impact significance criteria discussion of Clean Air Act conformity issues for the Imperial Valley on page 3.7-24 is not consistent with the previous discussion of conformity requirements. Additionally, the discussion presented in this portion of the EIS/EIR is somewhat confusing. It could be read to imply that the Imperial County APCD has permit authority over the proposed project, or it could be read as implying that the APCD is the agency responsible for the conformity determination. Conformity determinations are a responsibility of federal agencies undertaking or approving various actions. Conformity requirements are independent of any APCD permit or approval authority, and the existence of conformity requirements does not confer any new permit or approval authority on a local APCD. Local APCDs, the California Air Resources Board, and EPA Region IX have review and comment authority, but the federal agency proposing an action is responsible for demonstrating compliance with the conformity rule.
79.	Section 3.7.4		Pages 3.7-6 through 3.7-7 provided a basic discussion of Clean Air Act conformity requirements. De minimis emission thresholds related to the requirements of the general conformity rule are presented in pages 3.7-24 through 3.7-26. Additional requirements of the general conformity rule are presented as mitigation measure AQ-4. But there is no impact assessment discussion in Section 3.7.4 to demonstrate the extent to which conformity requirements apply to any federal agency or the way in which federal agencies will demonstrate compliance with the requirements of the general conformity rule. The air quality impact discussion needs to address the applicability of the general conformity rule to federal agencies involved with this project. If the rule is applicable, there needs to be an analysis of how these agencies will demonstrate compliance with general conformity requirements.
80.	Section 3.7.4		The general conformity rule is supplemental to and does not alter the more general impact assessment requirements of NEPA and CEQA. Beyond the issue of federal agency compliance with the EPA general conformity rule, there is the larger issue of overall consistency with state and federal air quality management plans. This topic is not addressed clearly in the present document. Will the proposed action make it more difficult to achieve federal and state PM_{10} standards? If it will, then mitigation

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			measures should be identified. Are the air quality implications of the proposed project being addressed by current air quality management plans? If not, CEQA mandatory findings of impact significance would seem to apply to the general issue of consistency with the state implementation plan and other local air quality management programs.
81.	Pages 3.7-27 through 3.7-30		The discussion of impact AQ-2 appears to be limited to equipment exhaust emissions. Fugitive dust emissions generated by construction activities seem to be ignored. Since most of the mitigation measures for impact AQ-2 are targeted toward fugitive dust issues, some quantification of construction-related fugitive dust emissions should be provided. Those emissions could then be compared to Table 3.7-4 and other information to assess whether or not current air quality planning efforts are adequately anticipating the extent of construction-related fugitive dust that would be generated by the proposed project.
82.	Page 3.7-31		The EIS/EIR concludes that impact AQ-3 would be less than significant with mitigation. The discussion of Mitigation Measure AQ-3 states that as lands are fallowed, at least one of four basic BMPs "must" be implemented. But the discussion fails to identify the parties responsible for implementing the mitigation measures or any mechanisms for ensuring that the measures are properly implemented. Without such details, it is not possible to determine that any mitigation would be implemented, let alone effective in addressing this impact.
83.	Pages 3.7-31 through 3.7-32		Impact AQ-4 addresses IID and landowner actions. Mitigation Measure AQ-4 reiterates the requirements of the general conformity rule. How do federal agencies (and which federal agencies?) become responsible for mitigating this impact? There is no clear connection between this mitigation measure and impact AQ-4. Without a specific conformity analysis, it is not at all clear that federal agency actions would mitigate impact AQ-4.
84.	Page 3.7-33		The mitigation measure for impacts associated with HCP2 (mitigation measure HCP-AQ-6) depends on implementing mitigation measures AQ-2 and AQ-3. As noted above, responsibilities for implementing mitigation measure AQ-3 are not identified, nor are any mechanisms identified for ensuring effective implementation of that measure. The EIS/EIR needs to describe the basis for assuming actual implementation of mitigation measures.
85.	Pages 3.7-34 through 3.7-36		Although impact AQ-7 is characterized as potentially significant, much of the discussion gives readers the general impression that fugitive dust emissions from exposed lakebed areas will be minimal. Comparisons with Owens Lake can be misleading because conditions there are so unusual compared to other desert basins in the US. Other factors deserve mention to provide a more balanced perspective on the potential for windblown dust from exposed shoreline areas. The large size of the area that would be exposed by lowered lake levels and the variability of conditions around the Salton Sea deserve more emphasis. The absence of air quality monitoring stations near shoreline areas of the Salton Sea means that localized episodes of significant windblown dust can go undetected. Staff of the Salton Sea Science Office recently photographed a localized but relatively intense dust storm along the south shore of the Salton Sea. Many of the accessible shoreline areas are disturbed by dune buggies and similar off-road vehicles, which would increase the wind erosion potential on exposed lakebed areas.
86.	Page 3.7-34		The discussion of impact AQ-7 mentions natural desert soils and vehicle travel on unpaved roads as the predominant sources of fugitive dust emissions around the Salton Sea. Natural desert soils typically have a low wind erosion rate; disturbed desert soils, on the other hand, can be a significant source of fugitive dust.
87.	Page 3.7-34		The dust situations at Owens Lake and Mono Lake provide insight into dust storm mechanisms under conditions where there are extensive deposits of sodium sulfate and sodium carbonate salts. They do not, however, provide a general indication of conditions required to produce windblown dust events. There are differences in

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			climactic and soil conditions and other factors that could make the conditions at the Sea either worse or better than at either of these lakes. For example, the Salton Sea is generally more accessible to greater numbers of people than Owens Lake. If the exposed area were used for off-road vehicle use, surface crusts would be damaged and excessive dust could be created that would exceed conditions at Owens Lake. A more in-depth analysis of possible dust formation needs to be provided. It is important to recognize that salt deposits are not required to create a windblown dust problem. Any barren sediment or soil area with surface conditions susceptible to wind erosion can be a source of windblown dust. Phoenix gets periodic national news coverage for occasional massive dust and sand storms that originate in surrounding desert areas without the presence of anything like Owens Lake or Mono Lake. If comparisons are going to be made to Owens Lake or Mono Lake, one of the important comparisons is the size of the area involved in producing dust storms. Although the total playa area at Owens Lake is about 100,000 acres, only about 30,000 acres (47 square miles) are involved in generating dust storms. More importantly, the area producing individual dust storm events is a small fraction of that 30,000 acres at any one time. The primary source of dust storms at Mono Lake is only about 5,000 acres, and individual dust storms arise from only limited portions of that area. Although it may take unusual circumstances (such as those at Owens Lake) to produce dust storms of regional significance, it does not take a huge area to generate localized dust storms.
88.	Page 3.7-35		The discussion of soil chemistry and salt crusts has a serious error. Sodium sulfate salts undergo the same type of mineralogical phase changes as do sodium carbonate and sodium bicarbonate salts. And sodium sulfate salts undergo these phase changes over a broader range of substrate temperatures than do the sodium carbonate and sodium bicarbonate salts. The localized dust storm photographed by staff from the Salton Sea Science Office appears to have been produced from a localized deposit of sodium sulfate salts. It is unclear whether that local area of salt deposits resulted from Salton Sea waters, general groundwater conditions, or localized geothermal conditions. But the high sodium sulfate content of Salton Sea waters is an indicator that there is the potential for localized deposits of highly erosive salts.
89.	Page 3.7-35		Most of the threshold wind speeds mentioned in this discussion do not represent normal conditions. The typical threshold wind speeds identified by portable wind tunnel studies at Owens Lake and Mono Lake are 15 to 17 mph, which is consistent with most of the literature on wind erosion processes. Major dust storms typically involve stronger winds, but the wind erosion process is typically initiated at wind speeds of between 12 and 20 mph. Cemented soils or moist soils would exhibit threshold wind speeds of about 30 mph, but those would not be typical conditions. Moreover, most of the accessible shoreline areas around the Salton Sea show evidence of off-road vehicle activity, indicating that there is a significant potential for disturbance of exposed lakebed areas. The fact that PM_{10} standards are exceeded throughout the Salton Sea air basin is clear evidence that local wind speeds are high enough to initiate wind erosion processes.
90.	Page 3.7-35		The discussion of recession rate issues is misleading in its implications that there will be extensive vegetation establishment on exposed lakebed area or the formation of extensive nonerosive salt crusts. Natural vegetation establishment is a slow process in desert areas and is even slower if soils or local groundwater are saline or alkaline. It is also uncertain if stable sand dunes should be expected in an area where there is off-road vehicle activity. Any such activity would further inhibit vegetation establishment and would rapidly destroy any stable salt or calcium carbonate crust that might form on exposed lakebed sediments.

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91.	Page 3.7-36		Mitigation measure AQ-7 is described as selecting and implementing HCP Approach 2. As noted, fallowing additional agricultural land and using the conserved water to maintain the level of the Salton Sea would avoid air quality impact AQ-7. Since HCP2 has been presented as an option in the HCP, it is not an infeasible option. Consequently, impact AQ-7 should not be categorized as unavoidable because it is an impact for which feasible and effective mitigation has been identified. Failure of the project proponent to implement identified and feasible mitigation measures should not be disguised by calling the impact "unavoidable."
92.	Page 3.7-36		The third paragraph under mitigation measure AQ-7 suggests that IID negotiate a monitoring and mitigation plan with SCAQMD and ICAPCD. Monitoring may be an essential component of mitigation, but by itself monitoring does not mitigate anything. And saying that agencies should find a way to mitigate the problem is not mitigation either. Is there any commitment on the part of IID to actually develop the suggested agreement with SCAQMD and ICAPCD? Have any practical approaches to mitigating windblown dust been identified?
93.	Page 3.7-37		The last sentence of the top paragraph (end of no project impact discussion) cross-references impact AQ-3. AQ-7 appears to be the more relevant impact discussion.
94.	Page 3.7-38		Mitigation A2-AQ-2 is essentially the same as mitigation AQ-7. The previous comments on mitigation AQ-7 apply to mitigation A2-AQ-2 also.
95.	Page 3.7-39		Mitigation A3-AQ-2 is essentially the same as mitigation AQ-3. The previous comments on mitigation AQ-3 apply to mitigation A2-AQ-2 also.
96.	Page 3.7-40		Mitigation A3-AQ-3 is essentially the same as mitigation AQ-7. The previous comments on mitigation AQ-7 apply to mitigation A3-AQ-3 also.
97.	Page 3.7-41		Mitigation A4-AQ-1 is essentially the same as mitigation AQ-3. The previous comments on mitigation AQ-3 apply to mitigation A4-AQ-1 also.
98.	Page 3.7-42		Mitigation A4-AQ-2 is essentially the same as mitigation AQ-7. The previous comments on mitigation AQ-7 apply to mitigation A4-AQ-2 also.
99.	3.11-22		The discussion of Impact A-1 notes that "the exposed area (from the receded shoreline of the Salton Sea) would look like the existing beach and would eventually revegetate..." How long would it take for these 78 square miles of exposed Seabottom to revegetate? Not all of the current shoreline has positive aesthetic value; an increase of the proportion described in the EIS/EIR would result in vast expanses of unattractive salt flats. If revegetation is depended on to reduce the impact, there should be a discussion of such revegetation—how long would it take, would any local entities plant vegetation, and so forth.
100.		Section 3.11	Aesthetic impacts in general appear to be limited to the changes perceived from scenic viewpoints and public roadways. While these are important elements of a visual analysis, local residents can also be considered sensitive receptors, and scenic viewpoints have little relevance in any discussion of odor impacts. The discussion should therefore include the visual impact on local residents, many of whom are low-income and/or minority (see EJ comments above), as well as the odor impacts on both local residents and visitors. Odor impacts would not be restricted to particular scenic viewpoints, of course, but would be endemic wherever Sea bottom would be exposed or individuals could approach the coastline.
101.		Section 3.11	The odor impact analysis is difficult to analyze, as the copy of the EIS/EIR on the CH2M Hill Web site appears to have about 12 blank pages in the middle of it. Thus it's difficult to determine whether analysis is missing.
102.	3.11-26		Odor impacts are substantially understated and should be considered adverse and significant. Odor impacts are presumed to be caused only by water quality problems increasing animal die-off and algae bloom. While these do in fact affect odor, another odor source is exposed Salton Sea sediments, which would be measurably greater under the proposed project than under the no action alternative. Additionally, the rapid decline and shrinkage of the Sea under the proposed action would cause all the fish in the Sea to die-off over a period of perhaps 10 to 15 years. During this

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			same time frame, all nutrients and other constituents in the Sea would concentrate, probably by a factor of two or more, thus increasing the extent and number of algal blooms. In addition, because odor is such a subjective issue, the difference may be sufficient to cause controversy, which should be examined more closely. Therefore, the impacts to odor should be considered significant, unless additional analyses are provided to demonstrate otherwise.
103.		Section 3.11	Odor impacts often depend on prevailing wind and weather conditions. In addition, particular areas of the Salton Sea have greater odor issues than others. This discussion should be amended to address possible seasonal variations in odor, particular if the water transfer project would effect seasonal variations in inflow to the Salton Sea. In addition, the Science Office Committee on eutrophication in the Sea concluded that loss of the fishery may increase algal activity. Therefore, accelerating the decline of the fishery could increase algal activity and associated odors and could decrease the ability the restoration project to control eutrophication.
104.		3.14.	The Salton Sea is a recreation resource for both visitors and residents, but these recreationists tend to be low income or minority. EO 12898 would require that recreation impacts be analyzed with an eye to the demographic and income makeup of the community in question. This has not been done. Additionally, aesthetic impacts should be evaluated in the light of EJ concerns. Low-income residents and recreationists of the Salton Sea would experience disproportionately the impacts to the aesthetic value of the Salton Sea (both visual and olfactory) . The aesthetic impacts on the Torres Martinez Tribe specifically should be addressed. The visual simulations indicate that 78 square miles of Salton Sea bed would be exposed as a result of reduced water flow into the Sea; this would have significant impacts on the aesthetic value of the Sea to local residents and recreationists, many of whom would be low income or minority.
105.		3.15 Environ-mental Justice	The assumption that all revenue from the transfer would go to the farm community has EJ consequences. Benefits of the program would go to farmers, while lower income residents near the Sea would bear the worst of the impacts. This factor needs to be included in the EJ section. The transfer EIS/EIR states that "all transfer revenues not spent by IID on water delivery system improvements, program administration, or environmental or mitigation measures pursuant to the final EIR/EIS or HCP will be passed on to participating farmers." This assumes that whether or not the IID pursues farm conservation measures or fallowing, no transfer revenue will go to the community at large. The effects of these payments going to one class of people compared to the community at large should be considered in the EJ section. Preferably the analysis would include alternatives that assume various shares of the transfer revenue being distributed to the community under farm conservation versus fallowing alternatives.
106.	3.15-3	Environ-mental Justice	There are no demographic breakdowns or income data provided in the EJ section. While EO 12898 does specify "minority and low-income," it would be helpful for reviewers to know the demographic and income-related breakdown of the community, in comparison with the greater community within the ROI.
107.		3.15.4.2, Salton Sea discussion	The EJ analysis focuses solely on fallowing leading to loss of jobs. What about the impact of reduced water levels in the Salton Sea, which would reduce tourism/recreation (the services industry is likely to be staffed by primarily minority/low income) as discussed in the socioeconomics section? The Draft EIS/EIR for the Salton Sea Restoration Project identifies an EJ impact from the no action alternative deriving from the loss of recreation-related jobs. This document does not presume the Salton Sea Restoration Project would be implemented; therefore, it is logical that EJ impacts would be aggravated by this proposed project.
108.		3.15.4.2, Salton Sea discussion	The EJ analysis also doesn't mention the impact of reduced fishing opportunities for low-income recreationists and low-income residents who eat fish from the Salton Sea. Reduced inflow into the Salton Sea would damage the fishery through the

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			increase in salinity, particularly if the Salton Sea Restoration Project were not implemented (as assumed by this analysis). This would have significant adverse impacts on the Sea's ability to sustain a fishery, and thus on the opportunities for local residents and visitors to catch fish that are safe to eat.
109.		3.15.4.2, Salton Sea discussion	The analysis indicates that fallowing would inevitably lead to a loss of jobs, but the EIS gives no indication of what type of jobs would be lost and under which circumstances.
110.		3.15.4.2, Salton Sea discussion	The EIS claims effects "would generally impact all communities along the shoreline in an equal fashion" and therefore would not implicate EJ concerns. This argument seems flawed. A significant percentage of the shoreline of the Salton Sea is occupied by minority or low-income communities. The impact to each minority or low-income resident along the shores of the Salton Sea is not greater than the impact to each nonminority resident, but the impact felt by the minority community *as a whole* is greater than the impact to the nonminority community as a whole. The document should address impacts on the Torres Martinez Tribe specifically, whose members are disproportionately of lower income households.
111.		3.15.4.2, Salton Sea discussion	The area around the Salton Sea is heavily minority and low income, in comparison to other communities in the overall ROI, which extends from the Colorado River to San Diego County. These demographic distinctions should be recognized in the EIS and impacts analyzed to account for EJ issues. The scale of this project is large enough that it could be argued that the Salton Sea /Imperial Valley area is receiving all the environmental damage of a project that primarily benefits the San Diego area. The demographic differences between the Salton Sea and Greater San Diego should not be glossed over, as this is precisely the sort of situation EO 12898 was designed to address.
112.		3.15.4.3, 3.15.4.4, 3.15.4.5, 3.15.4.6	Salton Sea discussions do not acknowledge the impact of the reduced water flow to the Salton Sea. Again, the implication is that the only impacts of interest are fallowing and loss of farm employment, but there are impacts as a result of the reduced Sea elevation deriving from changes in recreational opportunities, loss of fishery resources, increased odors, aesthetic impacts, and decline of property values.
113.	Chapter 5	Cumulative Impacts/ Hydrology	It is not clear, in some cases, which related projects have been accounted for in the EIR/EIS under existing conditions (presumably anything implemented through 1999), or the baseline, presumably any projects that have been implemented since the end point for existing conditions but prior to the implementation of the IID/SDWCA transfer project. For example, it is not clear how the EIR/EIS accounts for the transfers and conservation measures in the 1988/89 IID/MWD transfer agreements (see general comments).
114.	5-14	Cumulative Impacts	The cumulative impacts section implies that because no specific restoration measures have been identified for the Salton Sea Restoration Project, "any conclusions regarding potential cumulative impacts would be speculative." This appears to be an overstatement; as of April 2002, the Salton Sea Restoration Project EIS/EIR is at the public draft stage, and therefore the project itself should be considered reasonably foreseeable, even if specific measures have not been identified as yet. CEQ guidelines say that "cumulative impacts" include incremental impacts of the proposed project "when added to other past, present, and reasonably foreseeable future actions..." (40 CFR 1508.7). Under this definition, the water transfer EIS/EIR should consider the incremental effect of the proposed project on the Salton Sea restoration, inasmuch as the more probable elements of the Salton Sea Restoration Project can be identified. One of the major issues in the Salton Sea restoration is the level of salinity in the Sea, which influences the feasibility and cost of the restoration effort. Any reduction in inflow to the Salton Sea as a result of the water transfer project would inevitably have an adverse impact on the restoration project and the survival of the Salton Sea fishery. A significant reduction in inflow would increase salinity to the point that the

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			Restoration effort would require purchasing more water to reduce salinity or implementing other highly expensive methods to reduce salinity sufficient to keep the fishery alive. (See the *Assessment of Salinity and Elevation Control for Varied Inflow* [Salton Sea Authority 2002] for a detailed discussion.) Additionally, the life of the Salton Sea fishery depends on maintaining the delicate balance between inflow and evaporation. If inflow were reduced, evaporation would outstrip inflow, salts would be concentrated, and the fishery would be threatened. Cumulative impacts of the proposed project, therefore, should reflect how the reduced inflow to the Salton Sea would adversely affect the Salton Sea Restoration Project and the fishery (and habitat) it is designed to preserve.
115.	5-14	Cumulative Impacts	A more complete discussion of cumulative impacts of the transfer project with the Salton Sea Restoration Project should be provided. The cumulative impact section states that there would be no cumulative impact because the individual impacts on water quality, air quality, or hydrology would be "less than cumulatively considerable." However, as noted in the CEQ guidelines, cumulative impacts "can result from individually minor but collectively significant actions taking place over a period of time." A 110 KAFY reduction in inflow to the Salton Sea over 75 years, during which period the Salton Sea Restoration Project would be underway, could have a significant impact on water quality in the Salton Sea, hydrology in the general area, and air quality as a result of exposed bottomland in the Sea and the interaction between the reduced inflow and the restoration project.
116.	5-49,	Section 5.6.1	The discussion of irreversible commitment of resources is inadequate. Under recent historic inflows or even the baseline proposed in the document, the Salton Sea could be restored. Under the proposed action for the transfer program, the Sea would deteriorate so rapidly and severely that there is little likelihood that a restoration program would be feasible. The unique habitat with its life forms that are specially adapted to high saline conditions of the Sea would be lost. The food source for the millions of fish-eating birds that use the Sea as a food source would be lost. Salinity of the Salton Sea can be controlled by using one of several methods to remove salty water, evaporate the water, and dispose of the salt residue. The least expensive of these methods appears to be on-land solar ponds. Solar ponds at the Salton Sea would be similar to the evaporation ponds that are used to produce salt in San Diego Bay, San Francisco Bay and at the Great Salt Lake. While solar ponds on land would be the least expensive, constructing ponds on land would not assist in maintaining the water surface elevation, if the inflow to the Sea is reduced in the future. Constructing solar ponds within the Sea would help maintain water surface elevation but would be significantly more expensive than on-land ponds. In-Sea ponds would reduce the evaporative surface area of the Sea and thus would compensate for reduced inflow. With a reduced surface area, a new balance between inflow and evaporation could be achieved without a decline in elevation. For historic inflows, an on-land solar pond system could be constructed to reduce the salinity to about 43,000 mg/L in 30 years, with about a five foot drop in elevation. The cost of this action, could be less than $250 million. With the addition of some in-Sea ponds, salinity could be reduced to 40,000 mg/L and elevation could be maintained at –230 feet msl, just three feet below the Sea's current level, for about $400 million. Under the proposed transfer project, the shrinking Sea would cause the salts to concentrate. To understand how this would happen, consider the top five to six feet of the Sea, which contain about 100 million tons of salt. If the Sea were to drop by just five or six feet, these 100 million tons would concentrate in the remaining waters

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			of the Sea. The proposed action for the transfer project would cause the Sea to drop over 15 feet. The rate of rise in salinity would increase by more than a factor of about five. In other words, instead of rising by one part per thousand over four years, it would rise that much in less than a year. With the baseline condition in the transfer EIS/EIR, salinity and elevation can still be controlled, but it would be more difficult and more expensive. The draft EIS/EIR suggests that under this inflow condition, the elevation in the Sea would ultimately drop about 7 feet, and about 25 square miles of sediments would be exposed. With the proposed action, the average inflows to the Sea would be reduced to 0.93 million acre-feet per year, compared to the present inflow of 1.34 million acre-feet per year. At this inflow level on-land evaporation pond systems would not be effective in controlling salinity. Even with very large systems, occupying over 100 square miles, the peak salinity would exceed 60,000 mg/L, which would cause at least a temporary loss of the fishery. Eventually the salinity level could be returned to a healthy level for fish, but the Sea would shrink by more than a third in area and by two-thirds by volume. The Sea elevation would drop about 20 feet without any restoration actions, and with on-land ponds, it would drop about 30 feet. About 140 square miles of bottom sediments would be exposed to possible wind erosion. An in-Sea pond system could control salinity at an estimated present value of nearly $2 billion, but there would be an 18-foot drop in elevation. With additional in-Sea ponds, salinity could be reduced to 40,000 mg/L and elevation could be maintained at –230 ft, msl, but the present value cost would rise to about $3.4 billion. At this level, the in-Sea construction project would become so large that a number of technical and environmental issues would render it at least impractical and possibly infeasible. 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 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. The EIR/EIS 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 (refer to H.R. 2764, Colorado River Quantification Settlement Facilitation Act) and provides a mechanism to apply that funding to restoring the Sea, if restoration is authorized. Whether the proposed project's contributions 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? At this time it unlikely that Congress and the State of California are willing to fund a multibillion dollar restoration project. Even if the federal and state governments fund such a project, restoration is unlikely under a significantly reduced inflow scenario. It will take time to marshal the necessary massive authorizations and appropriations

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			from government. And it will take time to design and permit an enormous project, as described above, to address a Sea that is becoming much smaller and saltier requires ever larger restoration responses. And it will take time to build a large, complicated project and probably to do so in the deepest, most expensive, and most seismically risky areas of the Sea. 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. These facts should be addressed and either fully mitigated or acknowledged as irreversible commitments of resources.
117.	Appendix F	SSAM, Table 4.2	Table 4.2 in the SSAM report in Appendix F contains a column headed "Inflow Reduction Due to Entitlement Enforcement," with 56.856 KAFY deducted each year beginning in 2000. The footnote for this column says that this value was provided by IID. The development of the deducted value should be discussed in the text. A reduction by 56,856 KAFY in the amount of agricultural drainage to the Salton Sea implies a larger reduction in the diversion from the Colorado River or some methods of conservation that are not discussed. Also, the beginning year of 2000 seems inappropriate because it is already 2002. Are these the actual values for 2000 and 2001 or are they out-of-date projections? This issues should be clarified or corrected in the text.
118.	Appendix F	Figure 3.1-30; Table 4.2 of SSAM; and Figure 3.1-16	The average values shown in Figure 3.1-30 do not correspond very closely to average values reported in Table 4.2 of the Salton Sea Accounting Model (Appendix F). For example, Table 4.2 indicates that the average combined net baseline discharge from Mexico and IID would be 1,154 KAFY. Figure 3.1-30 shows the average net inflow from Mexico, groundwater, IID drains, and the New and Alamo Rivers, as 1,100 KAFY. The difference is 54 KAFY. If Figure 3.1-30 were derived from the average values in Table 4.2, then it would appear that the "Inflow Reduction Due to Entitlement Enforcement" in Table 4.2 must account for the difference in the inflows to the Sea shown on Figure 3.1-30 versus those in Table 4.2. If the amounts shown in Figure 3.1-30 are actually based on the model results in Table 4.2, then losses due to evaporation and phreatophyte use applied to the inflow from Mexico must account for about 8.4 KAFY. Removing the Mesa Storm Inflows and the inflow from Mexico (and its portion of the evaporative losses), the net discharge to the Salton Sea derived from surface drain discharge from IID is about 916 KAFY. This represents about 32.7 percent of the water measured at Lateral 5 (2,803 KAFY). Comparison of figures 3.1-16 and 3.1-30 indicates that 52 KAFY less water on average are assumed to be delivered to the AAC under the baseline than under existing conditions. The figures indicate that this would reduce drainage to the Salton Sea by 49 KAFY. Thus, the figures imply that the reduced delivery expected under the future baseline results in nearly a one-to-one reduction in discharge to the Salton Sea. Based on Figure 3.1-30, drainage to the Salton Sea represents about 33 percent of the deliveries at Lateral 5 under the baseline (see previous comment). If this is the case, then a decrease in deliveries of 52 KAFY should result in a reduction in drainage to the Salton Sea of 17 KAFY, not a reduction of 49 KAFY. In any case, the entitlement enforcement should be better defined.
119.	Appendix F	SSAM, Table 4.2; Table 3.1-16	In Table 4.2, the column headed "Baseline Aquifer Flows from CVWD" contains negative values averaging –2.45 KAFY. A negative value here has the effect of reducing the volume of the Sea, so it appears that the assumption is made that there is salt water intrusion to the aquifer from the Sea in this amount. The magnitude of the aquifer flows appears to be inversely proportional to the value of the CVWD baseline discharge to the Sea. This suggests that, as the CV aquifer is drawn down by pumping, not only does the amount of water pumped from the aquifer decrease, but

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			the inflow from the aquifer increases. CVWD apparently provided the values used in the model. Additional explanation for the derivation of these numbers should be provided in the EIR/EIS.

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