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**Comments on the State Water Resource Control Board's
Draft Environmental Impact Report for
Implementation of the 1995 Bay-Delta Water Quality Control Plan (November 1997)**

April 1, 1998

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Environmental Defense Fund

Comments on the State Water Resource Control Board's Draft Environmental Impact Report for Implementation of the 1995 Bay-Delta Water Quality Control Plan (November 1997)

April 1, 1998

The following comments are submitted by the Environmental Defense Fund (EDF) in response to the State Water Resource Control Board's Draft Environmental Impact Report for Implementation of the 1995 Bay-Delta Water Quality Control Plan (November 1997).¹ They pertain generally to Chapters V, VI and XIII of the DEIR, but will also encompass other chapters and sections of chapters (e.g., Chapter XI on Economics, Chapter VIII on San Joaquin River Basin Salinity, etc.).

It is, however, EDF's view that it is not possible to separate the operational constraints addressed in chapters V and VI -- such as X2 and the export/inflow ratios -- from the total export capacity issues addressed in chapter XIII. We also find the DEIR's "compartmentalization" of alternatives into distinct but interdependent categories (including flow, salinity, Suisun marsh, south delta, dissolved oxygen, and joint point) extremely confusing, if not fundamentally flawed.

We therefore address a number of specific issues below, but reserve the right to comment further when the Board finalizes these and perhaps new sections of the DEIR into a single, hopefully coherent, amended document. We will also defer comment on a separate but related DEIR (involving the proposed consolidation of the CVP's authorized place of use) pending the Board's issuance of an amended and consolidated DEIR for implementing the 1995 Bay-Delta Plan.

1. Overview

The DEIR fails to consider a broad range of measures to meet the Board's statutory obligations to protect public trust resources throughout the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and watershed. It fails to address essential narrative objectives, including, for example, protective criteria for endangered winter-run salmon as well as spring-run salmon and other candidate species. In addition, many of the alternatives considered would not substantially meet even specified flow targets under the WQCP, especially during the spring pulse period at Vernalis.

These omissions are particularly egregious in light of the DEIR's consideration of several alternatives (Chapter XIII) which would increase the quantities of water exported from the Delta. Despite the fact that such increases would exacerbate conditions in the Delta and upstream that have devastated aquatic resources over the past twenty years, these proposals are included in the DEIR with woefully inadequate environmental impact analysis. Prior to considering any additional net exports (or other increased depletions) from this beleaguered system, the Board

¹ These comments have been cooperatively prepared by Tom Graff, Senior Attorney; David Yargas, Senior Analyst; Terry F. Young, Ph.D., Senior Consulting Scientist; Spreck Rosekrans, Hydrologic Analyst; and Dan Wright, Legal Intern.

must provide a scientifically credible ecological assessment of the effects of current export and depletion levels, including their cumulative and long-term effects, on essential functional and structural attributes of the Bay-Delta system.

The DEIR also contains a fundamental flaw with respect to its CEQA-mandated "No Project" alternative, resulting in serious errors in its analysis of both water supply and economic impacts. The Central Valley Project Improvement Act (CVPIA), signed in 1992 by President Bush, dedicated and required the annual management of 800,000 acre-feet of CVP yield for fishery restoration purposes (CVPIA, section 3406(b)(2)). Current practice and Interior policy "credit" any CVP impacts resulting from implementation of the WQCP towards the CVP's obligation to provide the dedicated project yield. Under this scenario, implementation of the WQCP does not increase the obligation of CVP contractors. If the Board sustains this interpretation, the impacts of alternatives for implementing the WQCP on CVP water supplies is ZERO.

On balance, the DEIR does little to alter our fundamental 1987 conclusion that "the current allocation of water between the Bay and Delta on the one hand and consumptive uses of water on the other is heavily out of balance, with the scales strongly tipped against the estuary." (Letter of December 14, 1987 to Interested Parties from EDF Attorneys John Krautkraemer and Thomas J. Graff.) Accordingly, there remains an outstanding need for the Board, and for water development agencies and users, "aggressively to pursue alternatives which would reduce the need for withdrawals from the Bay-Delta system" by, above all, "increasing the efficiency of use of already-developed supplies by the aggressive promotion of freer water marketing." Moreover, if water marketing and other efficiency investments continue to take hold as they have only begun to do in recent years, "much of the conflict between San Francisco Bay protection and the water consuming sectors of California's economy could be alleviated."

2. Outstanding obligations under the narrative objectives

The DEIR has failed to address alternatives for implementing both the narrative salmon objective and the narrative Suisun Marsh objective of the 1995 WQCP. This failure is a significant shortcoming of the DEIR since the immediate implementation of the narrative objectives is a non-discretionary duty of the Board. Given that duty, EDF finds the Board's reasoning for failing to implement the objectives to be wholly unsatisfactory.

The Board has a duty to immediately implement the narrative objectives: The Board's duty to implement the narrative objectives in the upcoming hearing is set forth in the "Program of Implementation" of the WQCP (the Program). The Program states that the "SWRCB will initiate a water rights proceeding following adoption of this water quality control plan. The water rights proceeding will address the water supply-related objectives in this plan through the amendment of water rights The water supply-related objectives include those for Delta outflow, river flows, export limits, . . . and fish and wildlife. The water right decision, which is anticipated before June 1998, will allocate responsibility for meeting the objectives." (WQCP page 27.) Given that the Program speaks of only a single proceeding, and that the Program in no way limits which water supply-related objectives

are to be met, the only plausible reading of the Program is that it mandates the Board to allocate responsibility for meeting all "water supply-related objectives" in the upcoming hearing.

The water supply-related objectives include, by the very terms of the WQCP, the narrative objectives. The Program explicitly states that "the water supply-related objectives include those for . . . fish and wildlife." (WQCP page 27). Both the salmon and Suisun Marsh narrative objectives are listed in the WQCP as "Water Quality Objectives for Fish and Wildlife Beneficial Uses." (WQCP page 18.) Independent of such definitions in the WQCP, it should be more than clear that both the salmon and Suisun Bay narrative objectives are water supply-related. While different in character than the numerical objectives, nothing in the WQCP indicates that the narrative objectives are to be considered secondary standards in comparison to the numerical standards of the WQCP.

Having adopted the WQCP, the Board does not now possess the authority to implement only selected objectives in direct contravention of the Program of Implementation. Compliance with the WQCP, as well as its Program of Implementation, is mandated by California Water Code section 13247, which states that state "boards, in carrying out activities which may affect water quality, shall comply with water quality control plans approved or adopted by the state board unless otherwise directed or authorized by statute." As was stated regarding a requirement that a city prepare a general plan, "the Legislature must have intended that the city would comply with whatever general plan elements it had adopted." Friends of "B" Street v. Hayward, 106 Cal.App.3d 988, 998 (1980).

The Board's duty to allocate responsibility for the narrative objectives is further supported by the Notice of Public Hearing for the upcoming proceedings. The notice states that the hearing will be convened for the purpose of receiving evidence on "the assignment of responsibilities for meeting the flow-dependent objectives in the Water Quality Control Plan." The notice proceeds to define "flow-dependent objectives" as including "all objectives that could be met by the flow of water or by changes in the operations of facilities, notwithstanding that such objectives also could be met entirely or partially through other means . . ." (Notice, footnote 1.) This definition clearly applies to the narrative objectives. Accordingly, EDF expects the Board to make a decision on assigning responsibility to meet the narrative objectives in the forthcoming public hearings.

The DEIR fails to assess alternatives for meeting the narrative objectives: Given that the SWRCB has the duty, in the upcoming hearing, to assign responsibility for meeting the narrative objectives, the DEIR must be revised to assess alternatives for meeting those objectives. All that the DEIR states in this regard is that implementation of the non-narrative objectives "may be sufficient" to implement the narrative objectives. (DEIR pg. II-15.) EDF believes that any such assertion is, at best, highly speculative, and it is certainly not supported by rational or objective analysis. Moreover, even were it theoretically conceivable that implementation of the numerical objectives could, concurrently, result in implementation of the salmon and Suisun Marsh narrative objectives, merely stating that the numerical objectives "may be sufficient" falls far short of analyzing alternatives specifically designed to meet those objectives. Both the salmon and Suisun Marsh narrative objectives state that water quality standards "shall be maintained . . . sufficient" to achieve the prescribed criteria. The gap between standards that

"may" and "shall" be sufficient needs no further clarification. The DEIR must be revised to analyze alternatives that will be sufficient.

The stated justification for failing to address the narrative objectives is unpersuasive: The Board's principle reason for failing to address the narrative objectives is that "a period of actual operation to the numerical objectives, coupled with adequate monitoring, is required before a determination can be made whether additional implementation measures are needed." (P. II-15). EDF questions the apparent underlying assumption that setting standards for compliance with the narrative objectives will somehow be easier, or even better informed, as part of "the next triennial review of the Bay-Delta Plan." EDF acknowledges that it may be difficult to determine precisely what flows and related restoration measures will be necessary to assure not less than a sustainable doubling of naturally reproducing salmon. However, given the much-degraded condition of these species at present, it is likely that only immediate flow and operational improvements will ensure their long-term survival. Thus, interim improvements in support of the narrative objectives can, and must, be made, perhaps even coupled with "adequate monitoring" to determine whether still additional implementation measures are needed.

Note that a wide array of flow, water quality, fishery, and related monitoring activities have been underway for many years, and that the Board has already had three years since the 1995 WQCP was adopted to help determine the needs of the chinook salmon. EDF seriously questions whether three more years of monitoring will provide significantly more clarity as to the needs of the chinook salmon in particular. Given the unlikelihood of collecting conclusive information over that time period, EDF believes that delaying implementation in order to collect further data is wholly unjustified. Moreover, public trust resources should not be denied water that belongs to the public merely because the Board has failed to act in a timely manner, whether during the past three years or over the past several decades. The same holds true for the Suisun Marsh narrative objectives.

The Board must err in favor of protecting the public trust: If the Board must err to some degree in meeting the narrative objectives -- a likely result given the massive extent to which the Bay-Delta environment has been adversely impacted by water development activities and operations to date -- the Board must err in favor of the near- and long-term protection of public trust resources. As noted above, the narrative objectives state that water quality conditions "shall be maintained ... sufficient" to meet the narrative criteria. This language in the WQCP clearly creates a presumption in favor of stronger -- rather than weaker -- water quality standards, for only water quality standards that provided at least a doubling of the natural production of chinook salmon will be "sufficient" to meet the narrative criteria. Likewise, only standards that at least meet the criteria set forth in the Suisun Marsh narrative objective can be considered "sufficient."

3. Flow Alternatives

As explained above, the current interim implementation of the WQCP does not adequately address many of California's legally mandated fishery needs, let alone important additional public trust obligations for which there are no explicit statutory requirements. Unfortunately, several of the flow alternatives would clearly not satisfy even the minimum statutory requirements.

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Flow Alternative 1 (reverting to D1485 and D1422) would violate the Federal Water Pollution Control Act and Endangered Species Act, as well as the limited but fundamental flow, export, and ecosystem improvements established under the 1992 CVPIA. Implementation of such an alternative would also lead to the oft-threatened promulgation of water quality standards by the Environmental Protection Agency and to significant shutdowns of the export pumps under the Endangered Species Act.

As mentioned above, even if the Board were to abrogate their legal obligations to protect fisheries, additional measures beyond the minimal protection provided under D1485 and D1422 would be undertaken by the Department of the Interior pursuant to the CVPIA. While the scope of CVPIA measures may be uncertain and is presently the subject of litigation, the Board cannot reasonably argue that D1485 and D1422 adequately characterize a "No Project" alternative.

While EDF generally supports the operational criteria in the WQCP, its long-term implementation as *Flow Alternative 2* contains several significant flaws. First, as explained above, it does not address the broad range of fishery restoration objectives required by law. Second, adoption of flow alternative 2 would not meet obligations on the San Joaquin River at Vernalis, where a flow requirement exists, but with no effective implementation mechanism.

In addition, the interim implementation of the WQCP has been inconsistent with its negotiated foundation, under which, absent third party sharing, the CVP and the SWP were to share the obligation equally. Yet modeling studies have consistently shown that the CVP, on a long-term average basis, has approximately 2/3 of the obligation for meeting the incremental obligations of the WQCP.² This overcommitment by the CVP, relative to the SWP, in combination of the provision of the Bay-Delta Accord which stated --- possibly in contravention of the Central Valley Project Improvement Act --- that all CVP contributions to the Bay-Delta should be "credited towards", or more properly charged against, the CVPIA's dedication of 800,000 acre-feet of annual yield, has resulted in less CVP water being available for fishery improvements. A decision by the Board, limiting the CVP's obligation for these measures to at most one half of the total obligation, would allow additional flexibility within the CVP, either after Interior's current five year plan expires or as a result of pending litigation, to accomplish additional fishery measures as intended by the CVPIA.

The priority system established under *Flow Alternatives 3 and 4* appears to have some merit. EDF finds no legal justification, however, in Alternative 3's characterization of the delivery of San Joaquin River water into the Tulare Lake Basin and the Kern River watershed as "inbasin." Indeed, EDF objects to the Board's continued refusal to require instream flows of any magnitude on the stretch of the San Joaquin between Friant Dam and the Merced River confluence.

² Table V-1 in the DEIR, based on comparative studies completed by DWR staff using the DWRSIM model; Department of the Interior's November 20, 1997, decision shows a very similar result, though Interior's modeling used the PROSIM model and was completed by USBR and USF&WS staff.

Flow Alternative 5, under which monthly average flow requirements are established for the major streams which are tributaries to the Delta, also has some merit and is the only alternative that would require maintenance of flows in the San Joaquin River below Friant Dam. Additionally, this alternative addresses not only environmental objectives within the Bay-Delta but those upstream as well. If the Board is to take a serious approach to its implementing the narrative objective for salmon, it must extend its purview upstream of the Delta and into tributaries.

Alternative 5, however, may not satisfactorily address area of origin and other water right concerns. For this reason, EDF recommends that the Board investigate and analyze an alternative which combines Alternative 4's methodical approach to meeting environmental objectives while respecting the relative legal priorities of water users and Alternative 5's allocation of responsibility according to tributary of origin.

EDF opposes *Flow Alternative 6*, the "recirculation alternative". We believe that the proposed increase in exports, particularly during the April-May period, allegedly to protect fish in the San Joaquin River, would be damaging to the resources it is designed to protect.

EDF also opposes *Flow Alternative 7*, under which flow targets at Vernalis would be partially met by the "Letter of Intent" flows. These flows are far lower than those specified by the WQCP and would not offer an equivalent level of protection for outmigrating San Joaquin River salmon.

4. Proposed San Joaquin River Agreement

It is EDF's understanding the Board will evaluate the proposed "San Joaquin River Agreement". We have reviewed this agreement and, while we find *some* elements of the Agreement promising, we have significant concerns as summarized below and discussed in some length in our March 23, 1998, letter to Deputy Secretary John Garamendi (attached). Our concerns include:

- a. The Agreement has been characterized as a panacea for the problems of the San Joaquin River. The San Joaquin River has been depleted, polluted and degraded, perhaps more than any other of California's major rivers. The Agreement pertains to only the flow target at one point on the river during a 31 day period.
- b. The criteria for determining the Vernalis flow targets are based on an "existing flow" forecast which may prove to be ambiguously defined in many years, and result in serious disputes and/or lower than projected flows at Vernalis. In our letter to Mr. Garamendi, we suggest an alternative approach.
- c. The Agreement makes inappropriate use of environmental restoration funds.
- d. The Agreement may require construction of a controversial hatchery on the Tuolumne River. Reliance on hatchery production can significantly diminish naturally reproducing anadromous fish.

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5. Other Negotiated Agreements

In addition to the proposed San Joaquin River Agreement, EDF is aware of parties who are currently negotiating agreements for the Yuba River, the Mokelumne River and Suisun Marsh. There may be others as well.

EDF has not had the opportunity to review these other proposals, but we anticipate doing so with the same critical eye that we have regrettably found necessary in conjunction with the so-called San Joaquin River Agreement. We urge the Board to carry out its responsibility to hold evidentiary hearings in all matters before it, notwithstanding the existence of such proposed agreements (including the San Joaquin River Agreement), and explicitly to fulfill its obligations to establish operating criteria for all water projects as well as conditions upon all water rights which will serve to protect the Bay-Delta's environmental resources in accordance with the laws of the State of California and the United States.

6. Joint Point of Diversion Alternatives

Joint Point of Diversion alternatives 5, 7 and 8 would significantly increase the ability of both the CVP and the SWP to export water from the Delta. These alternatives include not only the use of the SWP pumps by the CVP (and vice versa), but they also would allow unfettered use of 3,500 CFS of additional installed export capacity (i.e., a combined total of up 14,900 CFS or 10.8 MAF/year) whose use is currently distinctly limited. While the impact to ecosystem resources as a result of increased exports would vary according to the protective measures in place, impacts would nonetheless surely occur, especially to the winter- and spring-run salmon that are most at risk during periods when the full physical capacity of the Delta export pumps would most often be used. As pointed out earlier, the ecological impacts of these alternatives are not analyzed adequately in the DEIS.

EDF supports Joint POD alternative 4, similar to that defined in Board Order 95-6, in which the use of a joint point of diversion is allowed only if it is done to protect ecological resources, and does not result in a net increase in exports.³ We urge the Board to adopt such an approach in its water rights hearings. Before such a policy can be implemented, however, it is imperative that unambiguous "baseline" export limitations (as well as the other flow, operational, and financial requirements discussed below) be firmly established -- so that net changes in exports can be objectively measured and enforced. EDF also recommends that the Board add a scenario to this alternative under which space in San Luis Reservoir is dedicated to fish and wildlife, for the banking of any and all "joint point" water for subsequent use in reducing Delta exports at critical times.

³ See attached letter to Walt Pettit from EDF and 4 other environmental organizations (February 18, 1998).

7. Defining Baseline Criteria

Under current conditions, lack of a clearly defined baseline has inhibited protection of environmental resources and resulted in unwarranted contention between stakeholders in several areas. EDF urges the Board, through its water rights hearing, to eliminate these ambiguities to the extent possible.

For example, the WQCP contains flow targets at Vernalis, but without an accompanying allocation of responsibility to ensure that the targets will, in fact, be achieved. The "San Joaquin River Agreement" (discussed above) proposes to largely meet the flow targets (or, more accurately, targets which are deemed to provide equivalent long-term ecosystem protection benefits as part of an adaptive management experiment), but only if the water users – certainly those upstream, and perhaps even the exporters themselves – are paid to do so with public environmental and/or taxpayer funds. However, the funds most clearly targeted in the Agreement – those provided through the CVP Restoration Fund – can only be used lawfully to acquire water supplies which supplement, rather than supplant, the fundamental "baseline" obligations of CVP water users. As part of the water rights allocation process, the Board should ensure that ecosystem funds are used to provide similar supplemental or "above baseline" environmental benefits – i.e., what flow requirements are necessary without compensation (in partial fulfillment of public trust obligations), and under what conditions, if any, compensation is allowed.

Similarly, the current dispute over the joint point of diversion has arisen in large part due to a disagreement between the Department of the Interior and the State of California over Interior's efforts to manage and account for "CVP yield" dedicated to fishery restoration purposes under the 1992 Act. While the Department's November 1997 decision on this matter is now the subject of litigation, the fundamental public trust obligations of both the SWP and the CVP remain. Accordingly, the Board should not wait for the courts to act, however, and should instead proceed to implement an equitable apportionment⁴ of overall "baseline" obligations as between the State and Federal projects in particular.

Important "baseline" questions have also been raised regarding proposals to transfer water which has not been historically consumed by the seller, either to the environment or for consumptive purposes. Such "paper water" transfers raise the specter that market-based transfers will be used as a means to facilitate the further depletion of Bay-Delta waters, rather than to re-allocate supplies between willing sellers and buyers in a way that stabilizes, and ideally reduces, existing depletion pressures. We ask the Board to establish a robust environmental baseline which ensures that (1) transfers which result in increased depletions by the transferee are accompanied by equivalent and bona-fide reductions in depletions by the transferor, and that (2) transfers (or direct acquisitions) for non-depletive environmental purposes can be used to re-regulate existing supplies lawfully controlled by the transferor and/or to reduce the transferor's (and hence systemwide) baseline depletions.

In addition, in order to support a water market, it is essential to set up and maintain a flow monitoring and accounting system that can distinguish changes in flow due to decreased diversions and purchase of water for instream use. Furthermore, in order to protect acquired supplies, compliance with standards

⁴ See discussion of flow alternative 2.

should be measured *without* including additional flows purchased for instream use. (In other words, water purchased in the upper watershed for instream use should be allowed to flow all the way to the Bay. It should not be pumped by someone else downstream.) Yet the current standards (Chloride, EC, NDOI, flow rate, combined export rate) would allow just that, because the amount of water that can be diverted is calculated as some proportion of flow. One of the easiest ways to address this shortcoming is to determine compliance with standards by subtracting the flow purchased specifically for instream use from the measured flow referenced by the standards. The DEIS analysis should address this policy decision.

In sum, EDF believes that the Board should use the current proceeding to establish improved flow objectives and operational criteria consistent with its statutory and public trust obligations in order to define, at long last, a clear and robust "environmental baseline." Such a baseline will, of necessity, include improved minimum instream flows, improved Delta outflows, and key operational constraints, as well as (and/or in addition to) sustained mitigation payments based on the continued storage, diversion, depletion, export, and pollution of Bay-Delta water supplies. Such a well-defined and comprehensive environmental baseline would serve as the foundation for the purchase of supplemental water supplies, for the proper and efficient functioning of a regulated water market, and for the long-term financing and implementation of the ecosystem improvements necessary to support fishery and other ecosystem needs and requirements over the long term.

8. Economics

Chapter XI of the DEIR, titled "Economics," is actually a limited analysis of the potential economic impacts of implementing the various proposed flow alternatives. Nowhere, however, are the likely ecosystem or related economic benefits of the various flow alternatives even mentioned, nor such important factors as the historic and ongoing environmental impacts (or water user benefits) of water price subsidies, including the long-standing "give-away" of public water. All of these factors would, if taken into account, substantially if not wholly offset the alleged economic impacts of implementing the flow alternatives. Also, as noted above, the failure to incorporate provisions of the CVPIA into the no-action alternative (Flow Alternative 1) results in a significant overestimate of water supply (and thus related economic) impacts.

What some may find surprising, however – particularly given the shortcomings noted above -- is that the conclusions of even this analysis suggest so little in the way of economic impacts in any event. For example, in assessing the impacts on agricultural water users, the analysis concludes that, "as a percentage of average crop production from 1990 to 1995, impacts do not exceed five percent in dry years or one percent when averaged over all years (page XI-8)." Indeed, it appears that the average annual fluctuation in total crop production values (approximately \$570m per year based on a \$6.7B low and an \$8.6B high) exceeds anticipated production impacts under all alternatives (\$50-\$150m per year) by as much as an order of magnitude. Similarly, in the urban sector, the expected cost of mitigating impacts through voluntary transfer arrangements was expected to amount to "about four tenths of one percent of the total retail cost of water delivered to urban users in southern California (p. XI-9)."

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Given these results, it is difficult to understand why voluntary water transfers were not looked at more broadly, and in more detail, both within agriculture and across sectors, as a readily available and cost effective measure for helping to address and mitigate potential dislocations (as well as regular market-based changes) over time. As Dr. Richard Howitt testified to the Board back in 1987, "[I]n assessing the impact on agriculture, you should take into account that effects, such as market-like arrangements, will tend to lower the impact of the reduction in these supplies and spread them in a more equitable and efficient manner." SWRCB Bay Delta Estuary Hearing, Program of Implementation, Reporter's Transcript of Proceedings: Volume LVII, page 138:7-11.

The same can be said for the lack of consideration given to investments in conservation and efficiency across the board - they are mentioned as a potential "mitigation" in Chapter XII, but they are expressly not included in the impact analysis itself (even though they are certainly more likely to occur than rationing, which actually is analyzed in some detail). Similarly, the DEIR assesses "the capacity for water transfers" in section D of Chapter V, but only in the context of cross-Delta transfers - no consideration appears to have been given to the many other options also available (e.g., export area to southern coast, interior south to southern coast, north valley ag-to-ag, etc.). These omissions should be rectified.

In Chapter XII, a number of potential mitigation measures are discussed, and we certainly concur that "water transfers are the most promising way of closing the gap between water demands and dependable water supplies" over at least the next ten years. (We are inclined to add "price" to the list, along with efficiency and conservation investments and groundwater banking, if coupled with meaningful groundwater management.) It should, however, be noted that, whatever the associated impacts of implementing the numerical (and in our view narrative) water quality objectives, the obligations of water users pursuant to the public trust and other legal requirements do not give rise to "mitigation" requirements - they are, in some sense, merely part of what one would expect in attempting to incorporate long-overdue public trust considerations into a water rights allocation system that has long favored, with subsidies and too often with subterfuge, development and depletion of Bay-Delta waters.

9. Salinity Control Measures in the San Joaquin River Basin

The draft EIR omits any mention of the potential for reducing San Joaquin River salinity using the Regional Water Quality Control Board's regulatory authority to require decreases in agricultural discharges. This omission is striking because: 1) it is so obvious; and 2) an analogous program, already successfully underway, to control selenium discharges is currently reducing the amount of salt that is reaching the San Joaquin River.

The selenium control program is currently driven by the Agreement for Use of the San Luis Drain⁵ (Agreement), and the environmental commitments contained in the associated Finding of No Significant

⁵ Agreement for Use of the San Luis Drain. United States Department of Interior Bureau of Reclamation Agreement No. 6-07-20-W1319. November 3, 1995.

Impact⁶. The Agreement provides in part that: 1) selenium discharges to the San Joaquin River will be limited to amounts no greater than historical discharges through September, 1998, and will decrease by 5% per year for the following three years; 2) the dischargers will form a regional entity with sufficient authority to limit regional discharges to these levels by September, 1998; and 3) the dischargers will receive a Waste Discharge Requirement with effluent limits equivalent to those in the Agreement by September, 1998. While early implementation of this program was not smooth, the results of the first year and a half demonstrate clearly that the farmers can successfully meet these goals.

The drainage control efforts undertaken during the past 12 months include economic signals such as tiered water pricing and a variety of innovative drainage reduction methods undertaken by both districts and farmers. In the near future, spurred by a grant from the Environmental Protection Agency (and administered by the SWRCB and the Regional Water Quality Control Board) these districts will test the expanded use of tiered water pricing, as well as the use of tradable discharge quotas to manage discharges.

In short, in response to a clear mandate, the farmers and districts in the region have demonstrated that they can be accountable for meeting a specific discharge target, and they have demonstrated that the flexible, locally-controlled implementation scheme fosters the use of cost-effective and innovative methods.

To an interesting degree, this program mirrors that proposed by the Environmental Defense Fund (EDF) in its 1994 study, Plowing New Ground⁷. In this study, EDF demonstrates in theory that the use of economic incentives such as tiered water pricing and tradable discharge permits to meet a specified pollutant load limit provides the most effective, cost-effective, and equitable mechanism to decrease pollution loads from agricultural drainage discharges. The current program is providing the on-the-ground implementation experience to validate these conclusions.

Accordingly, we recommend that the DEIR be revised to include analysis of the use of a Waste Discharge Requirement (WDR) to set load limits for salt discharge into the San Joaquin River, combined with a requirement to establish legally accountable regional management groups in order to limit the total number of WDRs. The load limits should correspond to the salinity reductions required to meet current standards. Implementation mechanisms that should be considered include the optimum mix of input pricing (such as tiered water pricing), tradable discharge permits, participation in land retirement programs, and similar economic mechanisms. The financial analysis of this option should recognize that using less water costs less money, and the resulting savings defray the expense of drainage reduction. Testimony on this issue was presented by the Environmental Defense Fund at the

⁶ Finding of No Significant Impact and Supplemental Environmental Assessment, Grassland Bypass Channel Project. U.S. Bureau of Reclamation Mid-Pacific Region. November, 1995.

⁷ Young, T. and C. Congdon. 1994, *Plowing New Ground: Using Economic Incentives to Control Water Pollution from Agriculture*. Executive Summary. Environmental Defense Fund. Oakland, CA.

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last round of water rights hearings⁸. Although the specific cost figures may have changed in the intervening 6 years, the overall conclusion remains applicable.

In sum, the DEIR's realization of an option that uses WDRs and economic incentive based implementation mechanisms is unwarranted, both in theory and because the system is working in practice. The omission is particularly egregious given the fact that out-of-valley transport (the Master Drain), change in point of diversion (the Peripheral Canal), and discharge timing (no net reduction of discharge)-- all of which are of questionable feasibility-- are each seriously considered.

A second major omission in the DEIR analysis is its failure to analyze the impact of proposed reallocation schemes on salt discharges to the San Joaquin River. Clearly, importation and use of less irrigation water on the west side of the San Joaquin Valley will have an impact on salt loads delivered to the River.

⁸Testimony of Terry F. Young, Ph.D. and Chelsea Congdon, M.A. on behalf of the Environmental Defense Fund, Hearings on Consideration of Interim Water Rights Actions before the State Water Resources Control Board, Sacramento, California. July 1992.