

STATE WATER RESOURCES CONTROL BOARD  
COMMENTS REGARDING THE ISSUES IDENTIFIED FOR THE  
WORKSHOP SCHEDULED FOR JULY 13-14, 1994

MERCED IRRIGATION DISTRICT

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1. WHAT FISH AND WILDLIFE STANDARDS SHOULD THE SWRCB  
EVALUATE AS ALTERNATIVES TO THIS REVIEW?

The Delta Tributaries Agency Committee of which Merced ID is a member, in its comments for the June 14, 1994, workshop, identified several factors which have, and continue to, impact delta fisheries and wildlife habitat.

The recent Framework Agreement executed by Club Fed and the State Board among others, pledges in paragraph 2 of the agreement body to minimize "... overall costs in water and dollars for achieving environmental protection..." in meeting the requirements of State and Federal Law. No analysis of standards for fish and wildlife enhancement can be of any use unless all factors contributing to the decline of the Bay-Delta are considered.

Specifically any standards developed should consider the probability that additional water alone cannot "fix" the problems of the Delta. The issues which should be addressed in any standards set for the Delta include, but certainly are not limited to:

A. Introduced Species.

According to Karl P. Winkler, Chief, Delta Planning Branch, Department of Water Resources, between 90-95% of all aquatic species in the Delta are non-native species with the benthic community approaching 100% exotic species. This information comes from several sources including the pump salvage reports and various trawl studies.

It would appear, because of the competitive success that introduced species have realized in the Delta, that merely supplying more water to the Delta will not protect native species to any great extent. That is particularly true in light of introduced predatory species such as the Striped Bass.

B. Striped Bass Index.

The proposed standards issued by the Environmental Protection Agency suggest the use of Striped Bass as one prong of a three-point test to measure the health of the Delta habitat. This test should be rejected by the State Board in favor of a series of tests on a variety of species; and should, if some improvement may be achieved, be concentrated on non-predator, native species.

If a biologist knows the predator/prey relationship between lions and zebras in a given district, she can probably roughly estimate the size of the zebra population by counting the lions in the district. That is the idea of monitoring the Striped Bass

population in the Delta; to obtain a rough idea of the health and number of other Delta species. However -- to leap from that relationship to the conclusion that if we just breed more lions we will have more zebras defies logic. In the absence of an overpopulation of zebras, the introduction of more lions will not help preserve the zebra population. In the same way, logic dictates that providing more water to enhance the habitat of Striped Bass on the San Joaquin River will not increase but rather may decimate the populations of native fish species.

C. Endangered Species Act.

As the Board is well aware, the SWP and CVP pumps are now essentially operated to conform with the Biological opinions issued by USFWS for the Winter Run Chinook Salmon and Delta Smelt and, which will most likely be joined by the Sacramento Split-Tail.

Despite the undertaking by the EPA to determine and finalize its standards for the Bay-Delta under the Clean Water Act, the enormous efforts of this Board to determine State standards and what promise to be interesting water right hearings to enforce those standards next year, despite the efforts of the federal agencies to coordinate their responses to Delta issues through Club Fed, and despite the new Framework Agreement between Club Fed and various State agencies; -- there is no guarantee, indeed even a likelihood, that the project pumps will not continue to be managed by the biological opinions for endangered species.

Therefore, any standards the Board adopts for the Delta should include the likelihood that curtailed pumping by the projects at exceptional levels and the resulting lack of water transfers south of the Delta will continue.

D. Transfers.

In the absence of extraordinary changes to the transfer process, the State Board should not assume any substantial water transfers from upstream of the Delta, through the projects south, to dampen the effects of either water supply shortages or the economic impact of such shortages.

As the Board is aware, Merced ID entered into an Agreement to transfer up to 60,000 a/f to Westlands Water District in 1993. The Board approved the transfer in July 1993. To date, no transfer has taken place because of artificial capacity restrictions on the projects. Those limitations arise because the biological opinions prohibit pumping during some months and during others DWR and the Bureau understandably are scrambling to move as much of their own water as possible south of the Delta.

In the Spring of 1994, Merced ID and Westlands WD agreed to extend the timeframe for the transfer, if possible.

After spending thousands of dollars on the environmental and engineering reports, the Merced ID and Westlands WD met with six (6) Federal and State agencies involving twenty-three (23) different representatives on several different days in an effort to complete the transfer.

As the net result of those meetings, Merced ID transferred to the Bureau 30,000 a/f which was used to enhance Delta outflow which acted as additional "flushing" water for the outmigrating fall run salmon smolts. The remaining 30,000 a/f have yet to be transferred as capacity is still not available due to pumping restrictions.

Both projects demanded refill criteria for Lake McClure which included compliance with all current biological opinions for endangered species in the Delta and for those which might be issued during the refill period.

If water upstream of the Delta on the San Joaquin River cannot be transferred, no upstream water can be transferred. Merced ID desired to transfer water during periods that provide beneficial instream uses for migrating fall run Chinook Salmon, water quality benefits at Vernales, which do not affect Q-West reverse flows and do not divert other migrating fish populations. Unfortunately, the curtailed pumping opportunities and the refill criteria are likely to prevent any substantive water transfers across the Delta.

## 2. HOW SHOULD THE ECONOMIC AND SOCIAL EFFECTS OF ALTERNATIVE STANDARDS BE DETERMINED?

In what is undoubtedly a significant understatement, the Board is quite right in its conclusion that "Standards for the Bay-Delta Estuary have the potential to affect a large portion of the state" (Notice of Public Workshop, Fourth, dated June 14, 1994).

Merced ID does not, at this time, intend to undertake an economic analysis of alternative standards for the Delta; however, it may undertake such an analysis of proposed standards upon the publication of the Draft Standards by the State Board.

However, in considering how the effects of any set of standards proposed by the State Board for the Bay-Delta Estuary would impact the economy of California, it would be instructive to review the approach and analysis of the Draft Regulatory Impact Assessments (DRIA) conducted by the Environmental Protection Agency regarding its proposed Bay-Delta Standards issued December 15, 1993.

Within that analysis several erroneous assumptions are made which lead directly to faulty conclusions, some of which are:

### A. UNDER-ESTIMATION OF GROSS INCOME LOSSES IN THE POTENTIAL

## IMPACT AREAS.

The DRIA analyzes the agricultural impact based upon three (3) scenarios:

\* Scenario 1 - assumes the entire implementation of the proposed standards will be borne by the farmers of the San Joaquin service area of the CVP. It assumes a 0.6 MAF water reduction in average years with 1.1 MAF reductions in critically dry years (this assumption exists for all scenarios).

The summary of results is set forth in terms of production revenue losses defined in the DRIA as "gross revenue losses". For Scenario 1 the water is essentially taken from 213,000 acres of fallowed land in average years. The impact is said to be \$80 million (p.4-8) or about \$375 for each acre taken out of production. This is literally ridiculous. Some areas of impact in Scenario 1 have water costs to agriculture which alone equal what is predicted as the gross revenue loss.

A more precise analysis would show per acre gross revenue losses in excess of \$1500 per acre. This is particularly true in cotton and permanent crop areas.

In critically dry years the DRIA estimates the following of 277,000 acres for a \$293 million loss.

What this essentially means is that, by EPA calculations, the last 64,000 acres fallowed causes \$213 million in economic damage (\$3328 per acre) or 75% of the total economic loss.

This analysis is based on the Zilberman Water Rationing model, which assumes that water is shifted by farmers or water purveyors progressively from "poor land" (i.e. lowest economic return) to "good land" as water becomes scarce. It further assumes that water allocation is regionally based and not dependent on water contracts, or water rights. Finally, it assumes that water districts may discriminate against owners of "poor" land in favor of "good" (and that the difference can be objectively determined) or that each farmer owns some of each type of land so that water reallocation can be optimized annually even under rationed conditions.

None of these assumptions is correct which results in vastly underestimating the impact of the proposed rule.

\* Scenario 2 - has many of the same faults.

Unfortunately, the results cannot be compared because the analysts switched to the California Agricultural Resources Management (CARM) model. That model by its very nature is designed to optimize farmers net operating revenues by crop rotation and water availability. The model assumes that land can and will be shifted from "low value" to "high value" crops. The model therefore assumes that significant amounts of land capable of supporting high value crops is now dedicated to low value production. If such a condition ever existed, after the recent drought such conditions do not exist on the quantity of land necessary to achieve the reported results.

\* Scenario 3 - is similar except that the application of the water impact is expanded from the San Joaquin Valley to include the Greater Central Valley. In this scenario, presumably because of greater water flexibility, the average losses drop to a mere \$10 million with critically dry years resulting in 130,000 acres of fallowed land and a \$48 million impact, most of which is assumed to be taken from the production of hay and pasture, said to be low value crops. This represents gross revenue loss of \$369 per acre on fallowed land. However, no analysis of the impact on dairy, beef, poultry or egg production, all high value "crops" dependant on feed production, is provided.

\* Each scenario assumes that rationed water may be annually moved between "good land" and "poor land" without regard to:

- (1) Water Rights;
- (2) Secondary environmental impacts such as ground water overdrafts and upstream wildlife habitat destruction (analysis of which was omitted in the DRIA);
- (3) Land Ownership;
- (4) Issues of water agency discrimination, among farmers and crops;
- (5) Place of use limitations, and
- (6) Local politics.

**B. CAPITAL REQUIREMENTS NECESSARY TO SIGNIFICANTLY CHANGE AGRICULTURAL PRACTICES DEEMED ESSENTIAL EVEN BY THE DRIA TO LIMIT ECONOMIC DAMAGE ARE NOT NOW AVAILABLE IN THE AGRICULTURAL ECONOMY.**

Efficiency increases assumed in all scenarios of the DRIA will require vast amounts of new capital available to farmers and water districts to acquire and implement new, low-water farm technologies. The DRIA identifies

this problem admitting that agricultural lenders now look to water allocation as an element any loan approval. Change from "low value" to "high value" crop patterns and/or to low water use systems requires a "substantial cash investment".

However, loans may be denied because of increased debt/equity ratios for large loans, low net yield increases for small loans, unsuitable soil for high value crops, and continuing uncertainty over water allocation.

\* In the absence of an arrangement to purchase the water taken under the proposed rule, neither farmers, water agencies, nor their communities are likely to obtain the capital necessary to change to the required optimal levels predicted.

- C. NO ANALYSIS OF THE CUMULATIVE ECONOMIC IMPACT IN A PROTRACTED DROUGHT IS PROVIDED, RATHER THE ANALYSIS COMPLETELY RELIES UPON SINGLE YEAR REVIEWS.

Under certain circumstances compliance with any proposed rule in an extended drought such as that of 1987-1992, where several critically dry years occurred consecutively, could reduce water storage below levels needed to sustain agriculture (in whole regions of California) and meet Delta Standards.

\* During 1991, after consecutive drought years, many of the state's water agencies were faced with the possibility of zero surface water deliveries. Additional demands for water in such years could decimate agriculture far beyond the effects predicted for the elusive "average" year or the single critically dry year. Unhappily, critically dry years tend to string themselves together in California. The cumulative effect of drought should be studied rather than single year shortages.

- D. THE DRIA UNDERTOOK NO ANALYSIS OF THE ECONOMIC MULTIPLE OF PRODUCTION.

No analysis of secondary economic losses is made or attempted in the DRIA. It discusses "Welfare" losses in terms of "food prices" without analysis of local economics;

It discusses "Equipment Displacement" as "temporary idling" without analysis of lost sales of new or used equipment, fuel, insurance, seed, groceries, etc.;

\* It discusses labor in terms of farm worker jobs lost without analysis of processing, storage and distributive

job losses. Jobs lost in banks, stores, suppliers, construction and especially transportation and export are completely ignored.

If the economic multiple of gross agricultural production is five (5) for example, the DRIA numbers themselves, as faulty as they may be, represent Billion Dollar losses in critically dry years. This number soars dramatically if the water cost is two to three times greater than predicted as suggested by the California Department of Water Resources.

E. THE DRIA RELIES HEAVILY ON VOLUNTARY WATER TRANSFERS AFTER MEETING DELTA STANDARDS TO MITIGATE ECONOMIC IMPACT.

Recent experience suggests that water transfers (assuming water is available to transfer after meeting Delta standards) on the scale suggested in the DRIA simply are not possible in the regulatory environment.

F. \* SUMMARY: The DRIA economic analysis is fatally flawed because:

- (1) Many of the assumptions made in the various models cannot be achieved on a system-wide basis.
- (2) It ignores state water law and flexibility limitations on districts and farmers.
- (3) It dismisses land ownership patterns opting instead to assume water can be moved between "good" and "bad" land quickly and easily.
- (4) It completely ignores operating requirements for water agencies.
- (5) It mentions then dismisses as apparently irrelevant, capital access realities, ground water overdrafts, and secondary upstream habitat loss.
- (6) It completely ignores the cumulative effects of drought and the economic multiple effects of gross production loss.
- (7) Finally, it relies very heavily upon illusive water transfers to mitigate economic impacts.

The State Water Resources Control Board should carefully examine the flaws of the DRIA analysis before conducting any



economic impact analysis on alternative standards for the Bay-Delta Estuary.

3. SHOULD THE SWRCB REQUEST THE CVP AND SWP TO IMPLEMENT PORTIONS OF THE DRAFT STANDARDS PRIOR TO ADOPTION OF A WATER RIGHTS DECISION?

Paragraph 6 of Exhibit "A" to the Framework Agreement recently executed by the Bureau, DWR and this Board would appear to have decided this issue.

Respectfully Submitted,

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