

ATTACHMENT C



CENTRAL DELTA WATER AGENCY

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December 17, 1993

VIA AIRBORNE EXPRESS AND
FACSIMILE NO. (310) 980-4027

Gary Matlock
Acting Regional Director
NMFS, Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

Re: Advance notice of proposed rulemaking - Endangered
Species, Screening of Water Diversions to Protect
Sacramento River Winter-Run Chinook Salmon

Dear Sir:

The Central Delta Water Agency encompasses approximately 120,000 acres of primary agricultural lands within the central portion of the Sacramento/San Joaquin Delta. The boundaries of the agency are shown on the attached map.

Delta agricultural diversions vary as to time and duration and cannot be equated to Delta agricultural consumption or channel depletion.

Most of the land in the Central Delta Water Agency is below the level of the water in the adjoining channels and is irrigated by way of siphons. The water table is high and constant drainage pumping is needed to keep the water table below the surface of the ground. Although we do not have an accurate count of the number of diversions, we believe that the estimate of 1600 to 1800 for the Delta as a whole is probably correct. The time and duration of diversions through the various siphons and pumps varies substantially depending upon the area served, the crops, rainfall and availability of water due to seepage. The reference to Delta annual consumptive water use is misleading since much of the water needed by crops is provided by rainfall and seepage which do not involve the possibility of entrainment. In 1992, we conducted a fish screen test in cooperation with the California Department of Fish and Game, Department of Water Resources and the California Striped Bass Association on McDonald Island. The siphon which was picked for the test was a 12-inch siphon on Turner Cut which served a field

planted to wheat. Due to the availability of moisture from rainfall and seepage, the farmer only diverted water through the siphon for a four (4) day period in the later part of May. Although we were allowed to operate the siphon at other times for test purposes, our experience highlights the need for a rational approach to screening based on evaluation of each diversion. The results of the test provided to us by DWR are attached. No Striped Bass, no Delta Smelt, no Sacramento Split Tail and no Salmon were diverted.

We are familiar with the DWR study by Randall Brown referenced in your notice. Although we agree with a number of his conclusions, we believe his assumptions as to the timing and magnitude of Delta diversions are in error and overstate the potential for entrainment of eggs, larvae and fish. Delta depletions which utilize moisture from rainfall or seepage cannot result in the diversion of eggs, larvae or fish. There is no substitute for proper testing and study by an unbiased party. Mr. Brown warns us with his statement, "I was forced to make a lot of assumptions and to stretch the available data past comfortable limits. Because of the above limitations, the report contains only suggestions as to the magnitude of fish losses and the costs of screening."

Not all diversion facilities entrain fish or eggs.

The assumption that small diversions will divert fish, eggs and larvae from the channel in proportion to the amount of water diverted does not appear to be supported by previous study results. The 1972 sampling by David H. Allen of seven siphons on Sherman Island appears to confirm that some siphons don't divert any Striped Bass fish or eggs while others do. See attached Table 1 from such study. Possible important variables could be depth of intake, configuration of intake, channel flow characteristics and desirability of habitat near the intake.

Geological distribution of endangered fish in the Delta is certainly not uniform and probably not complete.

Test results and logic support the proposition that there is a greater possibility of diversion of endangered fish by way of diversions from locations containing the greatest numbers of such fish. It doesn't make sense to install fish screens to protect Winter-Run Chinook in areas where Winter-Run Chinook numbers are small or non-existent.

Screen Technology.

Technology and hardware appear to be available to screen small fish (1 inch or greater in length) but not eggs and larvae. Clogging and effectiveness in saving fish need further evaluation.

Cost

Our screen test leads us to believe that installation cost will exceed \$50,000 per siphon site. A major component is bringing electrical power to the site. Operation and maintenance costs are unknown. If we assume 1600 siphons, the installation cost estimate would be about \$80,000,000.00.

Rational Approach to Screening.

A rational approach to the screening of Delta diversions would be as follows:

- 1) Evaluate the cost and benefit of screening intakes vs. other measures to protect and enhance the desired fish species. Consideration should be given to other methods of reducing the diversion of fish such as baffles, reconfiguration of intakes and sonic devices along with increased flushing flows, increased outflow, hatcheries, etc. Such an evaluation should include identification of proven screening devices and related screen efficiencies.
- 2) Assuming screening diversions is the desired approach, determine which intakes should be screened and establish a priority list. For example, screening some intakes along the Sacramento River might be more beneficial than screening others in Turner Cut.
- 3) Identify the devices to be installed including a method whereby the device can be easily bypassed if plugging occurs so that crop loss can be avoided.
- 4) Provide the funding for installation, operation, maintenance and replacement without cost to Delta farmers.

Responsibility for Cost of Screening or Other Mitigation.

We do not believe that Delta farmers should be asked to pay for installation, operation, maintenance or replacement of fish screens. The delta lands were fully developed and irrigated long before there was a fishery problem. With the subsidence of the peat soils, we believe that each year more of the water used by Delta crops comes from seepage and thus

the amount directly diverted has probably substantially decreased since the late 1960's. The evidence indicates that high populations of competing species of Salmon and Striped Bass co-existed until about the time that the State Water Project (SWP) commenced operations. Both the CVP and SWP at times reduce Delta outflow and/or draw water away from the natural river courses thereby forcing fish, eggs and larvae from their natural areas and routes. In the case of both the Delta Smelt and Winter-Run Salmon, such actions appear to increase the possible exposure to diversion into the Delta. We recognize the probability that other actions coinciding with the operation of the SWP have adversely affected the fisheries, however, we know of no such action attributable to Delta farmers. The cost of screening Delta diversions is very substantial and well beyond the payment ability of Delta farmers. Imposition of such a burden would unjustly destroy Delta agriculture and the resulting benefits to waterfowl and other wildlife. With the destruction of agriculture, the ability to maintain levees will also be lost.

By law and agreement, only water surplus to the needs of the Delta and other watershed of origin areas was to be exported by the SWP and CVP and the Delta was to be maintained as a common fresh water pool. Additionally, the SWP and CVP were to provide salinity control for the Delta and a master drain was to be constructed for the San Joaquin Valley. See generally California Water Code Sections 1215 through 1222, 10505, 11460, 12201 through 12205 and Public Law 86-488, 74 Stat. 156.

The involvement of both the Federal and State governments as the instruments for export of water from the Delta has eliminated the possibility of unbiased regulatory action by our State and Federal agencies. This bias unfortunately permeates every aspect of water in California.

The burden for correcting the adverse impacts caused by the SWP and CVP should not be imposed upon others. The projects should mitigate all of their damages; they should be required to meet the affirmative obligations related to salinity control; and their exports should be limited to water which is truly surplus. Only after such steps are taken can the rightful burden of others be properly and fairly ascertained.

We recognize that many steps are being taken to attempt to correct the wrongful actions of the SWP and CVP, some of which would appear to alter the possible impact of un-screened diversions.

Gary Matlock

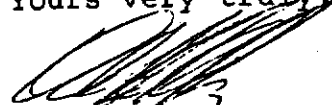
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Although we have preliminarily concluded that there is little justification for screening the multitude of small diversions in the Delta or even along the Sacramento River,

we are willing to positively participate in developing a rational and fair approach to screening agricultural diversions in the Delta and along the Sacramento River.

Yours very truly



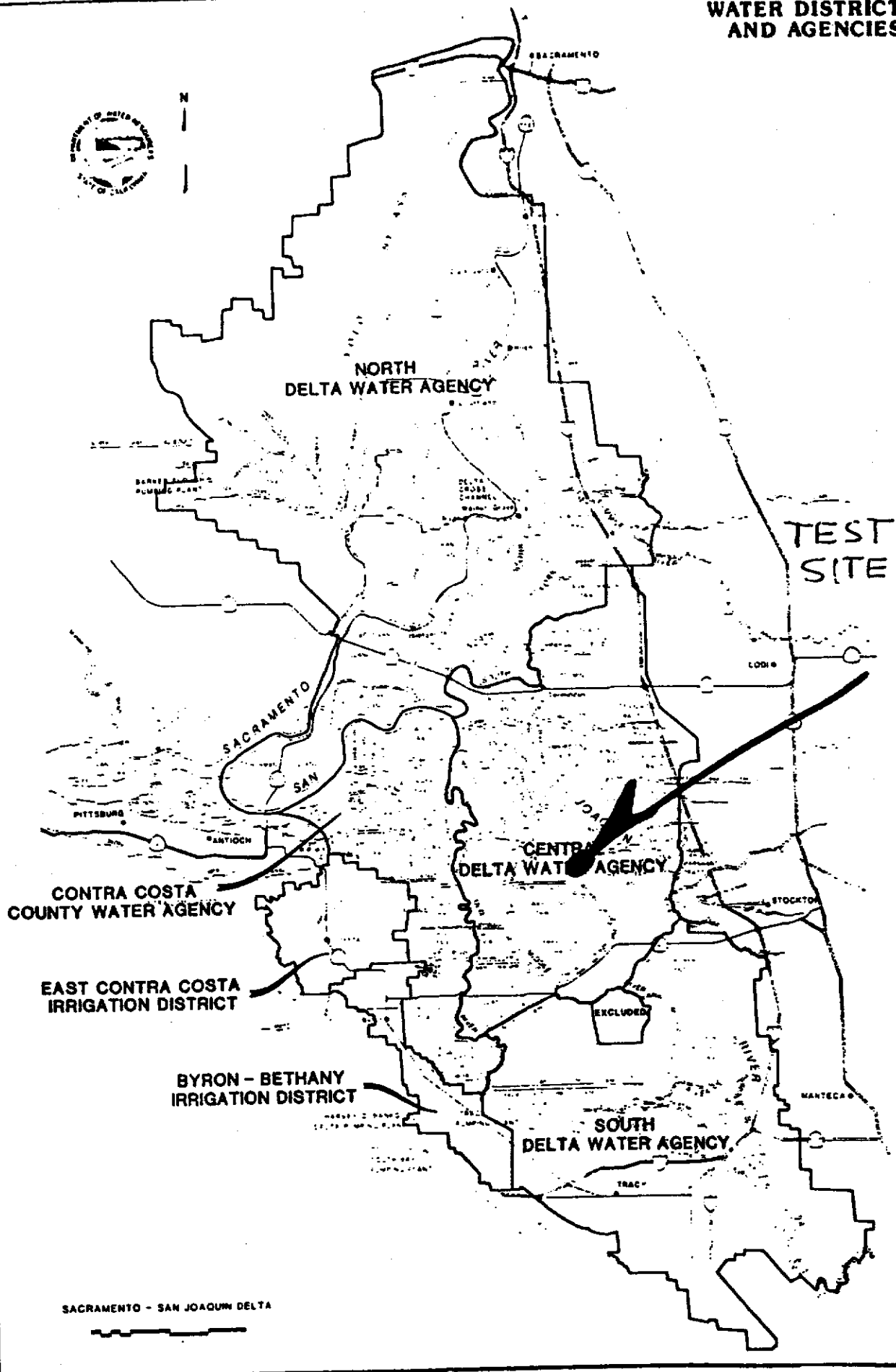
DANTE JOHN NOMEILLINI
Manager and Co-Counsel

DJN:ju
Enclosures

**WATER DISTRICTS
AND AGENCIES**



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1992 AGRICULTURAL DIVERSION FISH IMPACT STUDY
MCDONALD TRACT

NUMBER OF FISH CAUGHT
MAY - AUGUST JUNE - AUGUST

Larval Fish Juveniles and Older

Species	*FISH SCREEN			*FISH SCREEN		
	Off	On	Total	Off	On	Total
Chameleon goby	1276	589	1865	0	0	0
Threadfin shad	1766	60	1826	0	0	0
Striped bass	0	0	0	0	0	0
Centrarchids	9	0	9	2 ¹	1 ²	3
Delta smelt	0	0	0	0	0	0
Sacramento splittail	0	0	0	0	0	0
Mosquitofish	3	0	3	4	23	27
TOTALS:	3054	649	3693	6	24	30
Eggs:						
Striped bass	0	0	0	0	0	0
Threadfin shad	4	14	18	0	0	0
TOTAL EGGS:	4	14	18	0	0	0

¹ Green sunfish

² Bluegill

* Sampling Times were equal for Screen off and on.

David H. Allen
1972 Sampling

Total Catches of Striped Bass Eggs and Young
From Agricultural Diversions on Sherman Island

TABLE 1

Date	Total Catch Striped Bass Young Siphon							Total Catch Striped Bass Eggs Siphon								
	S-2	S-3	S-4	S-6	S-7	S-9	S-10	Total	S-2	S-3	S-4	S-6	S-7	S-9	S-10	Total
5-3							3	3								0
5-5						3	0	3								0
5-9						3	4	3						0	0	0
5-11						9		13						49	0	49
5-15						0		0					131			131
5-17						0		0					7			7
5-19			8			1		8		35			5			40
5-23		11	1			0		12		2	1			0		3
5-25		59	3					62		74	15					89
5-31		64	20					123		4	3					8
6-2		43	2					64			1		1			2
6-14							22	22						0		0
7-7		2			2			4		0		0				0
7-11		4						4		0						0
7-14								2								0
Total	2	191	20	2	58	13	32	324	0	115	20	0	2	132	0	329