February 7, 2006

FEB 07 2006 0049

Mr. Lester Snow
Director
Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236-0001

Mr. Kirk Rogers
Regional Director
U.S. Bureau of Reclamation
2800 Cottage Way, MP-100
Sacramento, CA 95825-1898

RE: South Delta Improvements Program Draft Environmental Impact Statement/Environmental Impact Report

Dear Director Snow and Regional Director Rogers:

On behalf of the San Luis & Delta-Mendota Water Authority's member agencies, I write to express our organization's support for the South Delta Improvements Program (SDIP), a critical water supply, water quality, and environmental project designed to improve California's ability to meet its diverse water needs. In October, DWR and USBR released a draft Environmental Impact Statement/Environmental Impact Report (EIS/R) for the SDIP, continuing an important public process. This letter is our response to the call for comments regarding the draft environmental documentation.

The San Luis & Delta-Mendota Water Authority consists of 32 water agencies[1] providing service for agricultural, urban, and wildlife management purposes in the western San Joaquin Valley, San Benito and Santa Clara counties. The Authority's members deliver water to more than 1.3 million acres of the nation's most productive farm lands, 1.7 million California residents, and over 150,000 acres of some of the State's most important wildlife refuges in the Pacific Flyway.

As stewards of this essential resource, our members are well aware of the mounting water supply challenges California is facing. We need an increasingly safe, reliable and high quality water supply to keep pace with our rapidly rising population and expanding trillion-dollar economy, while preserving our deeply valued agricultural and ecological

[1]Banta-Carbona Irrigation District, Broadview Water District, Byron Bethany Irrigation District (CVP), Central California Irrigation District, Centinella Water District, City of Tracy, Columbia Canal Company, Del Puerto Water District, Eagle Field Water District, Firebaugh Canal Water District, Fresno Slough Water District, Grasslands Water District, James Irrigation District, Laguna Water District, Mercey Springs Water District, Oro Loma Water District, Pacheco Water District, Pajaro Valley Water Management Agency, Panoche Irrigation District, Patterson Irrigation District, Pleasant Valley Water District, Reclamation District 1606, San Benito County Water District, San Luis Canal Company, San Luis Water District, Santa Clara County Water District, Tranquillity Irrigation District, Turner Island Water District, West Side Irrigation District, West Stanislaus Irrigation District, Westlands Water District, Widren Water District.

842 SIXTH STREET
SUITE 7
P.O. BOX 2157
LOS BANOS
CALIFORNIA
93635
(209) 826-9696
OFFICE
(209) 826-9698
FAX

eritage. This need is complicated by the geographic location of the limited water supplies in ur arid state, so we must best utilize our existing water resources and infrastructure; otherwise, ve put our communities, farms, environment, and businesses at undue risk. Two-thirds of California receives its water from the San Francisco Bay/Sacramento-San Joaquin Delta. Given its importance, we need to implement improvements to the Bay-Delta's water delivery system to maximize the benefit of the water for human and environmental uses. In short, we need to make every drop count.

In 2000, the state and federal governments initiated the historic CALFED Bay-Delta Program (Program) to address the Bay-Delta's water resources and ecosystem management in a comprehensive, collaborative, and balanced manner. A unique association of interests supported the Program including environmental organizations, water agencies, business interests, farmers, and state and federal water and fish agencies. To date, the Program has invested hundreds of millions of dollars in environmental efforts to enhance the Bay-Delta and SDIP is but the next step forward in this long-term effort. Furthermore, given its position within the Program, the full implementation of SDIP will assist in maintaining the Program's overall balance and help ensure future funding commitments from federal, state, and local interests alike.

In isolation, the SDIP through implementation of Stage 1 provides increased water supply reliability to local interests, enhances water quality in the South Delta region, and improves the safety of migration for many anadromous fish species of concern on the San Joaquin River. The Stage 2 facet not only provides opportunity to enhance the water supply and water supply reliability for human needs but also for environmental purposes, including South-of-Delta refuges deeply reliant upon water exported from the Bay-Delta to support essential areas of the Pacific Flyway. Aside from these direct benefits, the increased operational capacity promised by SDIP provides indirect benefit to other Bay-Delta management efforts, including the pelagic species, by allowing the project and management agencies greater operational flexibility. In and of itself, SDIP is a responsible and balanced plan to better utilize and integrate our existing water management infrastructure in the Bay-Delta. Collectively, it will improve our State's water supply and reliability, water quality, and the overall health of the Bay-Delta and San Joaquin River ecosystems.

The draft EIS/R is a comprehensive and complex document. In its attempt to explain the myriad of operational alternatives and affecting circumstances we occasionally find areas that could benefit from greater clarity and commitment. This is particularly true with respect to the relationship between the Environmental Water Account (EWA) and SDIP, and the Stage 2 decision.

The EWA was established to provide the fish agencies another tool to supply an additional level of protection for at-risk native fish species beyond the significant resources previously dedicated for this purpose by the CVP and SWP. The initial program had an anticipated duration of four years. A determination of a future EWA, if any, would then be informed by a comprehensive scientific review of the four year experiment. In 2004, the EWA was extended through 2007 to coincide with the end of the CALFED Stage 1 and with it the commitment to undertake a comprehensive scientific review of the program's efficacy was delayed.

The importance of the EWA comprehensive scientific review to guide the program's future scale and scope cannot be understated and yet the draft EIS/R touches this point only lightly. In fact, Section 6.1 states, "SDIP alternatives may allow increased pumping during periods when EWA actions to reduce entrainment would be taken under the baseline. Additional EWA assets, therefore, would be required to provide the same level of fish protection and water deliveries." What level of fish protection has actually been identified? How many fish have been saved? What kinds of fish? The answers to these questions remains elusive and the growing doubt regarding the efficacy of the EWA to protect fish, particularly pelagic species, is in sharp contrast to the stated assumption that the EWA must grow in simple concurrence with expanded diversion potential. The draft EIS/R would be better served by acknowledging that the overall benefit of the EWA, or some equivalent, remains in question and that the future size and purpose of the EWA will be dependent upon the findings of the long anticipated comprehensive scientific review.

The EWA treatment is also murky with respect to its relationship to the Stage 2 decision. The EWA program is not mitigation for the increased operational capacity that may be realized under Stage 2 and the Draft EIS/R aptly states that appropriate mitigation measures will be developed along with a Stage 2 preferred alternative. Yet, the draft also assumes that a larger EWA will be employed irrespective of any findings through the comprehensive scientific review process that may be contrary to such an action and in fact the draft goes so far as to state, "These mitigation measures [export curtailments, asset crediting] are designed to provide the identical level of EWA protections with the increased SWP Banks pumping (i.e., CCF diversion) limit. All of these SDIP mitigation measures would be incorporated into the expanded long-term EWA program, ***once it is adopted***. [emphasis added]. The concern with this statement, and other similar inferences, is that it suggests the EWA, or some increment, mitigates for an expanded diversion potential and pre-supposes conclusions from both the comprehensive scientific review and supplemental environmental analyses that will occur prior to the determination of a Stage 2 preferred alternative. The draft EIS/R would be better served by simply stating that the mitigation of Stage 2 will be developed along with a Stage 2 preferred alternative and that such measures will be informed and fully representative of the scientific research examining the Bay-Delta's health and the effect of project operations.

Regarding the Stage 2 decision, the lack of a firm temporal decision point is disquieting. While we accept the decision to bifurcate the SDIP's decision process into two stages, and acknowledge that the draft EIS/R contemplates in sweeping generalities a Stage 2 decision timeline, we believe the lack of commitment to firm decision points is unnecessary and counterproductive. The benefit in dividing the SDIP decision process into two components is premised upon three assumptions: 1) that project operations have a significant affect on the status of pelagic species, 2) that further intense study will provide timely insight on the factors affecting the Bay-Delta's health, and 3) that increasing permitted diversion capacity would result in greater harm to the Bay-Delta. In our view, these assumptions lack merit.

Data pertaining to the Bay-Delta and project operations has been collected for decades and no firm correlation between project operations and the status of the pelagic species has ever been

identified. In fact recently, some study on the subject has shown no statistically significant correlation between salvage and subsequent delta smelt abundance indices[2]. While a more comprehensive analysis of export effects on subsequent delta smelt abundance conducted by Dr. Bryan Manly for the Pelagic Organism Decline program concludes that such effects exist, and can produce both positive and negative effects, these influences are not important relative to changes in delta smelt abundance.[3] Anecdotal "evidence" abounds; however, in order to find a durable solution to the Bay-Delta health question we must be willing to follow the science, even at the risk of offending the conventional wisdom.

We strongly support the investment into understanding the cause(s) of this most recent decline in the health of the Bay-Delta, as exemplified by the diminishing population indices of the reliant pelagic species. However, our enthusiasm for the investment is tempered by our cautious optimism regarding its scope. For decades now, the thrust of effort to improve the Bay-Delta's condition has been unproductively narrow, if not outright distracting, and so we remain concerned that the emphasis of many will be to do more of the failed same, focus solely on project operations. Modern data strongly points to a limited effect, if any, from exports and far more convincingly suggest the true culprits to be invasive species and/or toxics from regional urban and agricultural discharges. Our optimism in the research effort is buoyed by those few willing to apply new thinking against the old paradigm in order to understand the cause of this most recent, if not cyclical, occurrence. We are, however, doubtful of a solution being presented in the timeframe generally suggested by the draft EIS/R and therefore remain concerned as to the unstated "next step" if such an understanding is not present at the completion of the Stage 1 decision process. For these reasons, and as a matter of accountability to SDIP proponents, the California electorate who chose to support funding for this project through the passage of Proposition 13 nearly six years ago, and other interested parties, we believe that firm decision points and contingency actions should be articulated in the draft EIS/R.

Lastly, and to the third bifurcation assumption, increasing the permitted diversion capacity at Clifton Court Forebay in and of itself will play no role in degrading or improving the Bay-Delta health. There are and will remain a plethora of overriding conditions that govern operations in a manner intended to produce the most beneficial outcome, primarily for the Bay-Delta ecosystem. Standards such as the export/inflow ratio and X2, and biologically based operational decisions such as storage releases or focused export curtailments, are in place whether the permitted diversion rate is 1 or 10,000 cubic-feet per second. It is incumbent upon us to operate responsibly and full implementation of SDIP will only enhance our potential to fulfill this obligation.

In conclusion, the state is currently constrained in its ability to utilize surplus water supplies. We have the infrastructure to move the water, but until SDIP is approved, the state's water managers

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[2] Attachment 1: The State of the Delta; What is Killing the Delta Smelt? Dr. BJ Miller, January 2006.

[3] Dr. Bryan Manly, personal communication to Dr. BJ Miller, January 25, 2006, ". . . although there are significant effects of hydrological and export variables on delta smelt, these seem non-linear [positive and negative], and do not seem to be able to explain the main long-term trends in delta smelt numbers. By that I mean that the hydrology and export effects seem to produce small wiggles on the trend lines. This is not saying that the effects are not statistically significant. It is saying that the effects don't seem to be important compared to other things going on."

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cannot fully or responsibly use the existing system. SDIP predicts only a nominal 3-5% increase in the average amount of water pumped from the Delta. More significantly, SDIP will provide the agencies precious flexibility to shift the timing of water deliveries to periods of less environmental sensitivity when necessary. SDIP is a good project for California – it does not require building major new infrastructure, it maximizes the value of under utilized assets, and provides a multitude of important environmental benefits, all with funding already secured through passage of voter approved bonds in 2000 (Proposition 13).

Given all these points it is no wonder why SDIP is also supported by a broad, statewide coalition of water, agricultural, business, planning organizations, and local government officials including the Association of California Water Agencies, State Water Contractors, California Chamber of Commerce, California Business Properties Association, and the Western Growers Association.

Water is the lifeblood of California – critical to our families, communities, and quality of life. It is our responsibility to use this precious resource wisely through all possible best management practices, including water conservation, recycling and storage to ensure California's future. To successfully do so, it is imperative that we have a more flexible water delivery system to maximize the benefit of existing though limited water supplies.

Again, we strongly support the SDIP and encourage all key stakeholders to help advance this critically needed project.

Sincerely,

Daniel G. Nelson
Executive Director

CC:

San Luis & Delta-Mendota Water Authority Board of Directors
San Luis & Delta-Mendota Water Authority Member Agencies
Terry Erlewine, General Manager, State Water Contractors
Steve Hall, Executive Director, Association of California Water Agencies

ATTACHMENT 1

The State of the Delta: What is Killing the Delta Smelt?

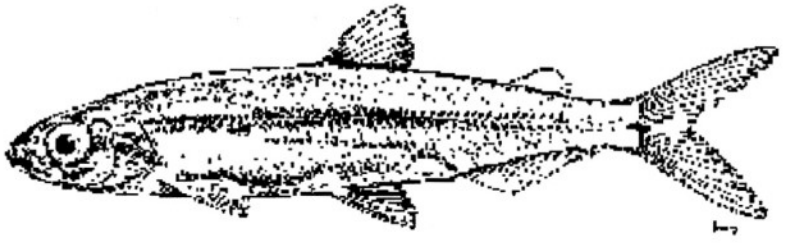
By Dr. B.J. Miller

January 2006

Introduction

Recent declines in delta smelt, a pelagic (open water) fish of the San Francisco Bay Delta ecosystem, have generated significant interest in the scientific community. Delta smelt are designated as a threatened species under both the state and federal Endangered Species Acts. Some of these small fish enter state and federal pumping facilities in the southeastern Delta from which water is exported to farms and cities throughout California. Exports are curtailed when too many delta smelt enter the pumping plants, making this small fish among the most important in California.

The focus on the delta smelt has highlighted the fact that, despite decades of data collection by state and federal fish agencies and hundreds of millions of dollars spent on habitat restoration, we know little about the major determinants of the abundance of fish residing in the Delta. Only now, with the delta smelt abundance index[1] at its lowest point in 40 years, are we beginning to understand the interactions between flows, fish, food and water quality in the vast and complex Delta ecosystem.



What we now know, based on research described in this paper, is that the delta smelt's declining abundance appears to be closely linked to localized declines of an alien (non-native) zooplankton called Pseudodiaptomus that has been the delta smelt's primary food source in the summer. When Pseudodiaptomus are scarce in the areas of the Delta where smelt congregate during the critical late summer and early fall period, the subsequent fall abundance index is low. What causes these localized declines in Pseudodiaptomus remains unclear, although there are indications that the decline is linked to alien species, including consumption by the Amur River clam, contamination by toxins produced by an alien blue-green algae, Microcystis, or competition with another alien zooplankton, Limnoithona. Contamination by a new class of pesticides, less harmful to humans but more harmful to fish, is another possibility.

This new research further demonstrates that despite years of exhaustive research, scientists have yet to identify any link or correlation between water exports – the water sent by aqueduct to farms in the San Joaquin Valley and cities throughout California – and abundance of delta smelt.

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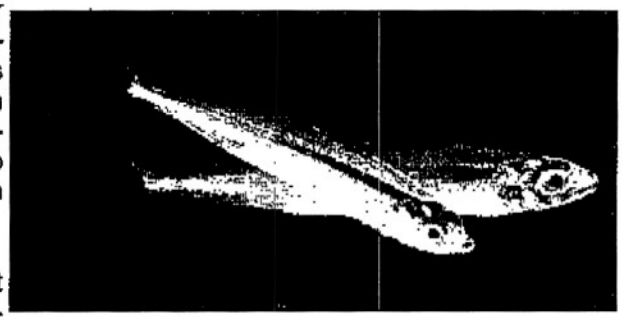
1. State and federal fishery managers do not use population estimates in connection with delta smelt. Instead, they use an "abundance index" to estimate whether there are more or less of the fish in the Delta than in previous surveys. The "official" index of abundance for delta smelt is the Fall Midwater Trawl index of sub-adult abundance, obtained from surveys made in September through December.

Delta smelt background

The delta smelt is a fragile fish that typically grows to only two to three inches as adults, although some have been recorded with lengths up to five inches. Delta smelt have a bluish hue and appear almost translucent. They are found only in the Sacramento-San Joaquin Delta and have been found as far upstream as the mouth of the American River on the Sacramento River and Mossdale on the San Joaquin River. They extend downstream into San Pablo Bay. Delta smelt live primarily in brackish water with salinity around two parts per thousand.



Delta smelt California Department of Fish& Game

During the late winter to early summer, delta smelt spawn throughout much of their range. Females produce approximately 1,000 to 2,600 eggs that sink to the bottom and attach to plants and other material. Larvae hatch 10 to 14 days after the eggs have been released. Delta smelt are fast growing with the majority of growth in the first seven to nine months of life. Most smelt die after spawning in the early spring although five percent or so survive to a second year.

Fish abundance and recent declines

Since 1967, California Department of Fish and Game biologists have conducted surveys of fish species at numerous locations throughout the Delta. These surveys provide a nearly 40-year record of abundance trends for delta smelt and several other species These surveys show wide swings in abundance from year to year, with some species showing recent declines while others appear to be doing well. Indeed, recent swings in the abundance index for delta smelt (Exhibit A), recorded in surveys between 1998 and 2003 are less dramatic than changes to the abundance index recorded in the early 1980s and early 1990s. However, because the most recent swing brought the abundance index to a historically low point, scientists have focused on determining what caused this change.

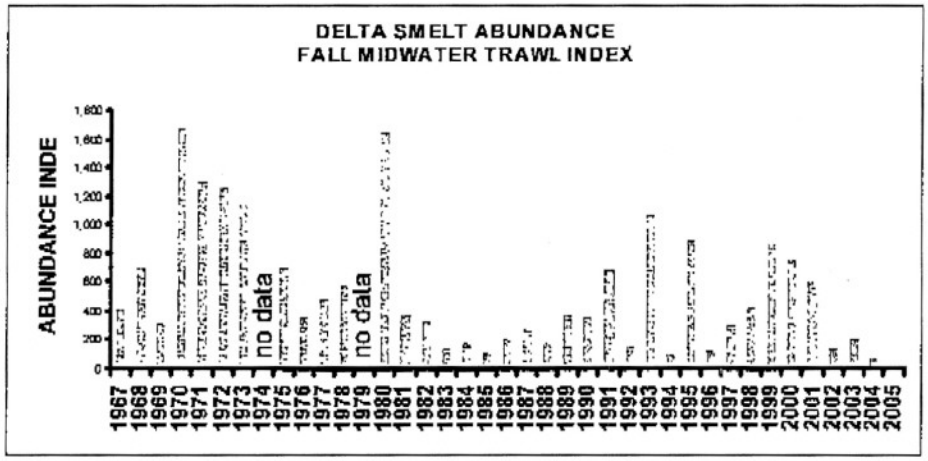


Exhibit A California Department of Fish & Game

The complex nature of the Delta ecosystem is further highlighted by the recovery that appears to be underway by anadromous salmon, also surveyed extensively by the Department of Fish and Game since 1952 (Exhibits B and C). From these data it is clear that whatever factors caused the decline in delta smelt did not have a similar effect on salmon.

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The State of the Delta: What is Killing the Delta Smelt?

Salmon abundance 1952– 2004

San Joaquin River and Sacramento River

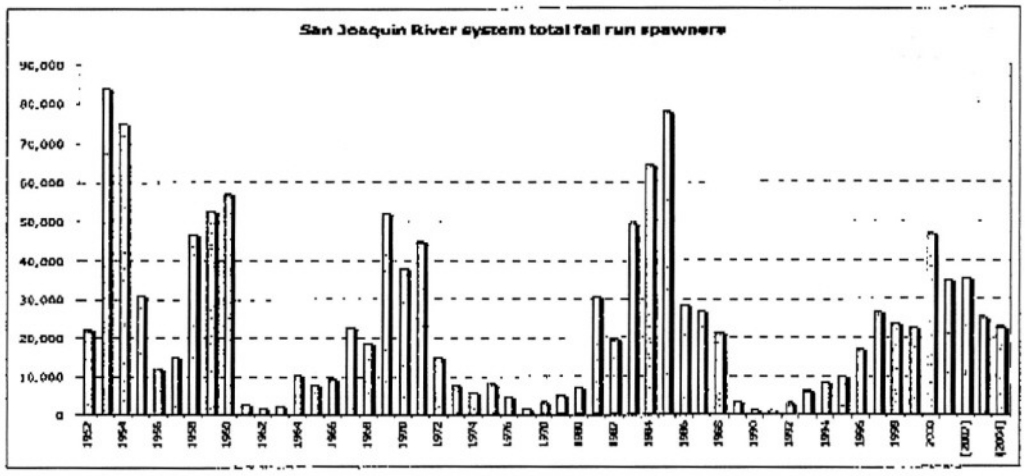

Exhibit B

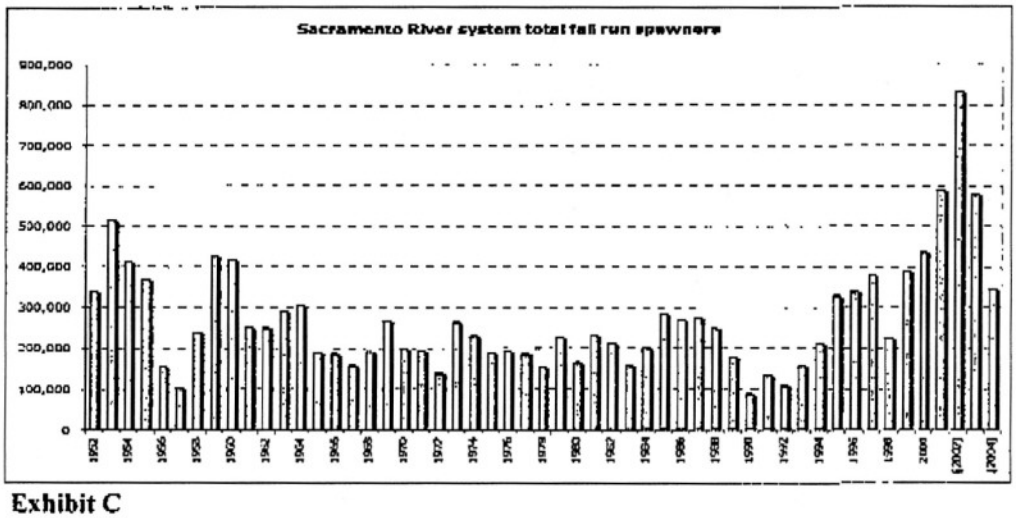

Exhibit C

Factors that influence delta smelt mortality

Export Operations

As the scientific community looked at the delta smelt's life cycle, the focus immediately turned to water export operations. For decades, water exports have been suspected as a major cause of fish mortality in the Delta, especially with regard to delta smelt. Consequently, state and federal fishery managers have regularly curtailed exports in the belief and hope that doing so would help the species recover.[2]

2. The focus on exports as a fishery management strategy has been an evolving issue within the scientific community. Once believed to have significant effects on salmon populations, exhaustive research and data analysis have led to a growing consensus among scientists that exports have very limited to no effect on salmon. Consequently, export curtailments are no longer viewed as an effective means of managing salmon populations on the Delta.

To better understand the relationship between exports and delta smelt, I and other scientists began looking for correlations to help us determine how exports affect the fish species.[3] Fortunately, there was a robust body of data to aid in this research. Since the late 1960s, the Department of Fish and Game has conducted an annual Fall Midwater Trawl survey of several pelagic fish species that make the Delta and Suisun Bay their home. Additionally, the California Department of Water Resources and the United States Bureau of Reclamation have extensive records of the amount of water exported daily from the Delta.

We first looked for a correlation between export volumes from the Central Valley Project (CVP) and the State Water Project (SWP) and the numbers of sub-adult smelt counted during annual surveys conducted each fall by the Department of Fish and Game. Surprisingly, we were unable to find any correlation between export volumes and the delta smelt abundance index (Exhibit D). In other words, in some years when exports were high, the delta smelt abundance index also was high. In other years, a low volume of exports was followed by a low fish abundance index.

Export volumes compared to delta smelt abundance index
No correlation

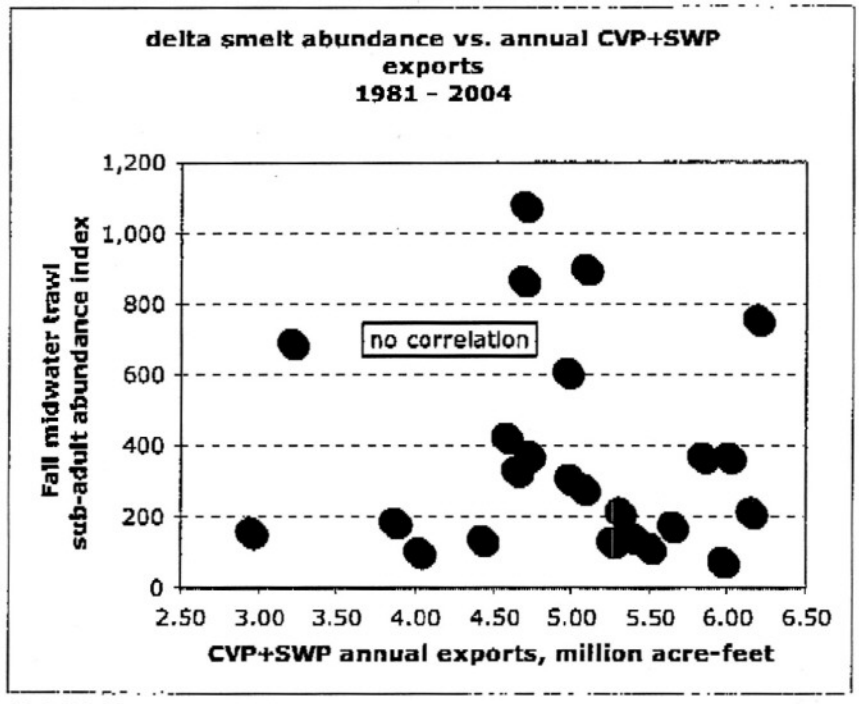

Exhibit D

We then conducted more exhaustive analysis. Rather than look only at export volumes, we looked for correlations between the numbers of adult delta smelt salvaged (or counted) at export pumping facilities and the subsequent Fall Midwater Trawl. We also looked at the numbers of larval and juvenile delta smelt entrained (or killed) at export facilities during pumping operations and the subsequent abundance index found in the Fall Midwater Trawl. This investigation followed a logical assumption that significant numbers of delta smelt, especially larval and juvenile fish, killed or trapped at export pumps during the spring when export volumes are at their highest, would result in low adult abundance indices during the following Fall Midwater Trawls.

In both adult and juvenile studies, we were unable to find any correlation (Exhibits E and F). In years when very few adult and/or juvenile delta smelt were counted or killed at export pumping facilities, there was an equally good chance that the subsequent Fall Midwater Trawl would record high abundance indices as low abundance indices.

3. While correlations do not tell the entire story, they are an important and useful indicator of the major determinants of causation. When we find correlations between actions and effects, we can and should conduct additional research to better understand how those relations should be reoriented. However, the absence of correlations or clear relationships suggests that research resource may be better focused elsewhere.

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The State of the Delta: What is Killing the Delta Smelt?

Correlation analysis of delta smelt juvenile and adult salvage at export facilities 1994—2005

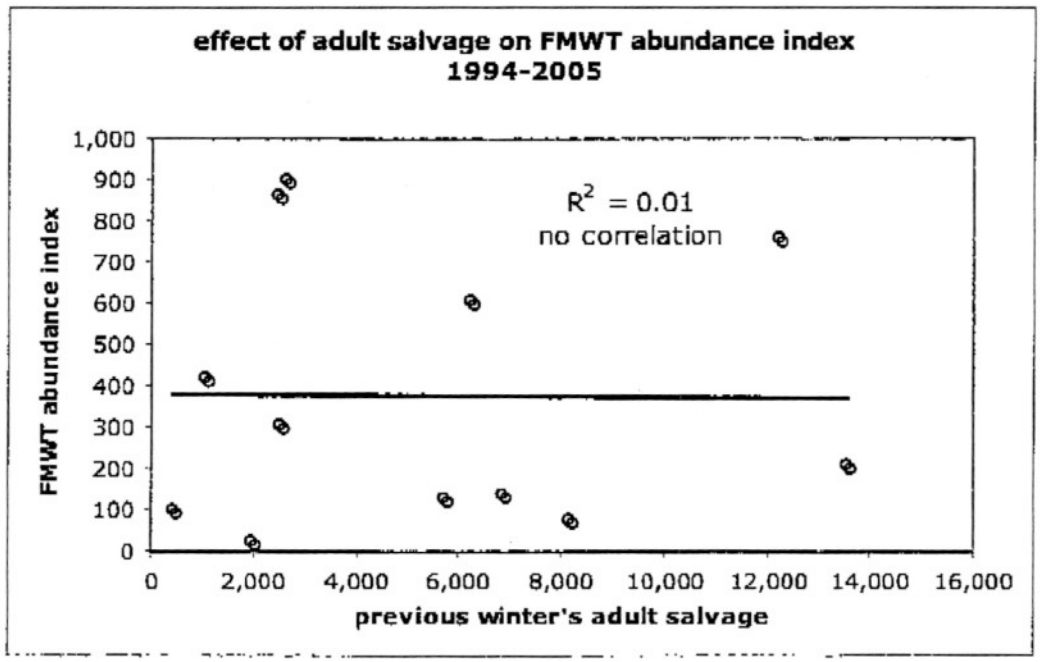

Exhibit E

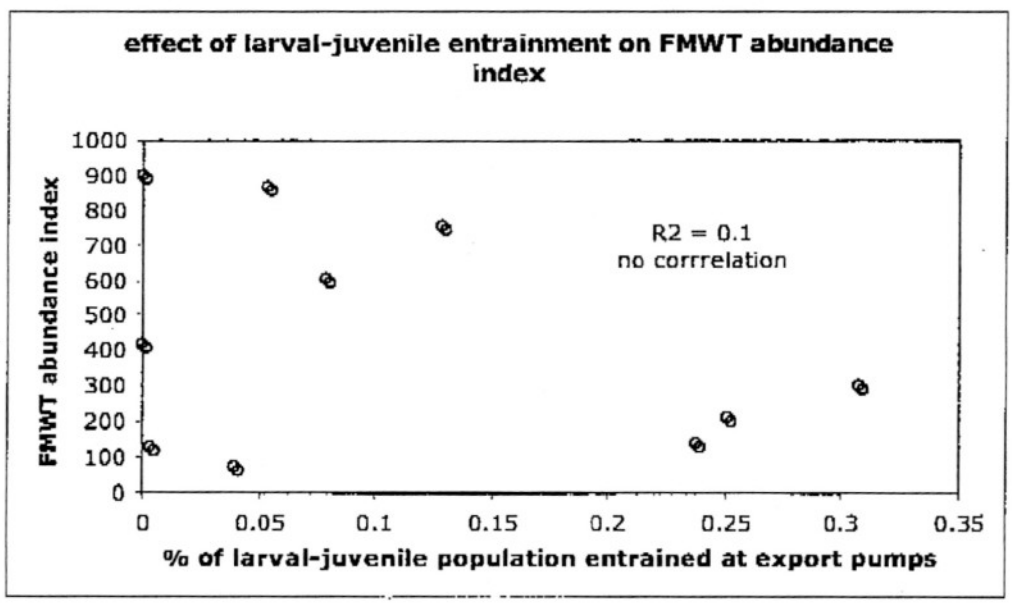

Exhibit F

Finally, we estimated the percentage of the total population of delta smelt in the Delta counted at export facilities during numerous years to determine if high percentages of fish counted at these facilities was followed by a low abundance index during the subsequent Fall Midwater Trawl. Again, we were unable to find any correlation, suggesting again that exports do not have a significant effect on delta smelt abundance (Exhibit G).

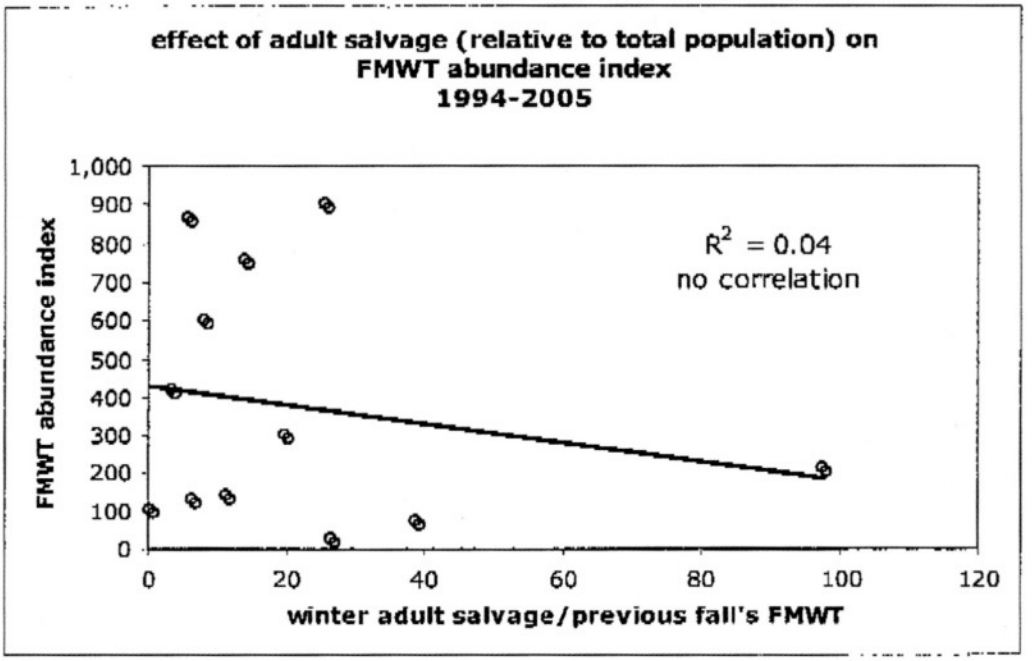

Exhibit G

od Abundance

Having ruled out exports as a major factor in the smelt's mortality, we then turned our attention to food sources. One of the earliest indications that od deprivation is important for delta smelt occurred in 1999. Dr. Bill Bennett f the University of California at Davis, Bodega Marine Laboratory, analyzed a arge number of delta smelt caught in the Delta in an effort to determine the ause of high rates of mortality between the fish's juvenile and adult stages. Dr. Bennett found large numbers of the fish with significant signs of malnourishment in the late summer and early fall. Put simply, the fish were starving to death.

With the focus shifting to food deprivation, it became important to understand what delta smelt eat. All indications are that delta smelt historically have relied primarily on two zooplankton for their food, both of them non-native or alien species.

During most of the 20th Century, the delta smelt's primary food source appears to have been *Eurytemora affinis*, a zooplankton (small floating animal). Although the origins of Eurytemora are not known, some researchers believe it was introduced into the Delta in the latter part of the 19th Century along with striped bass.

In 1986, the voracious Amur River clam (*Corbula amurensis)* was introduced into the Delta from the bilge water of ocean going vessels. Within two years, the Amur River clam took over large portions of Suisun Bay and the western Delta, and with the ability to filter nutrients from enormous volumes of water, the Amur River clam essentially eliminated Eurytemora during parts of the year.[4]

4. In the deeper water regions of the Delta, the Asian clam can filter the entire water column over the channels more than once per day and over the shallows almost 13 times per day.

Fortunately for the delta smelt, another alien zooplankton, *Pseudodiaptomus forbesi*, made its appearance in the Delta from China about the same time as the Amur River clam. As the population of Eurytemora plunged, the population of Pseudodiaptomus increased dramatically, and it rapidly became the delta smelt's primary food source (Exhibit H).

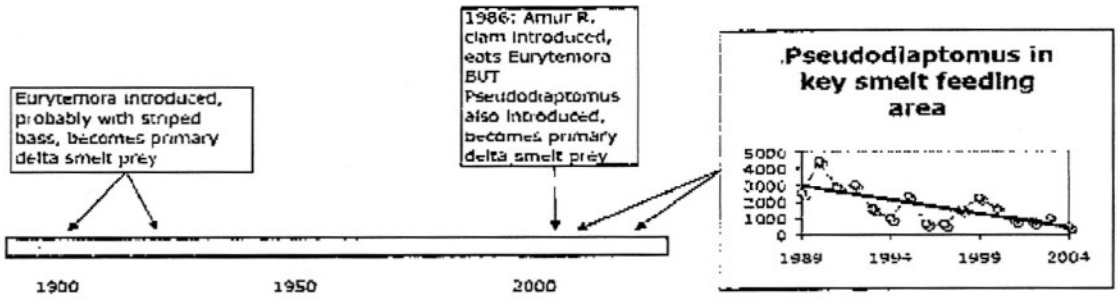

Exhibit H

For many years, biologists from the Department of Fish and Game have sampled the Delta in numerous locations and recorded the presence of zooplankton and other fish food sources in the water. Again, this survey data going back many years provides a rich resource to help us determine when and where the delta smelt's main food supply is found in the Delta.

It became clear to us that the abundance of delta smelt in the fall (as measured by the Fall Midwater Trawl abundance index) did not depend simply on their abundance in the summer. Nor did it depend simply on the summer abundance of prey (primarily Pseudodiaptomus). It seemed that abundance in the fall depended on the right combination of delta smelt and prey in the summer. In other words, it did no good to have lots of smelt where there was little prey or lots of prey where there were no smelt. Delta smelt juveniles and their prey had to co-occur in the summer to produce high abundance of delta smelt sub-adults in the fall.

Following this line of reasoning, we found an excellent correlation between the co-occurrence of smelt juveniles and their prey in July and the subsequent abundance of sub-adults in the fall (Exhibit I). As of now, this is the only correlation that anyone has found between the Fall Midwater Trawl index and any other factor using data from the last quarter of a century.

We also found that the three areas where delta smelt and prey typically co-occurred in July were the lower Sacramento River, from just upstream of Threemile Slough to the confluence with the San Joaquin River, the area around and just downstream of the confluence of the two rivers, and farther downstream in Suisun Bay. The lower Sacramento River area was by far the most important.

What has been going on with delta smelt prey in those areas? What factors control prey abundance there? We have an answer to the first question: Prey abundance has been declining and is trending down toward zero. As for the second question, we have not been able to identify the cause of the decline in prey abundance.

We found no correlations between prey abundance and either river flow, salinity, water clarity, or water temperature. We and others continue to search for the cause of the prey decline in the key areas of co-occurrence in the summer.

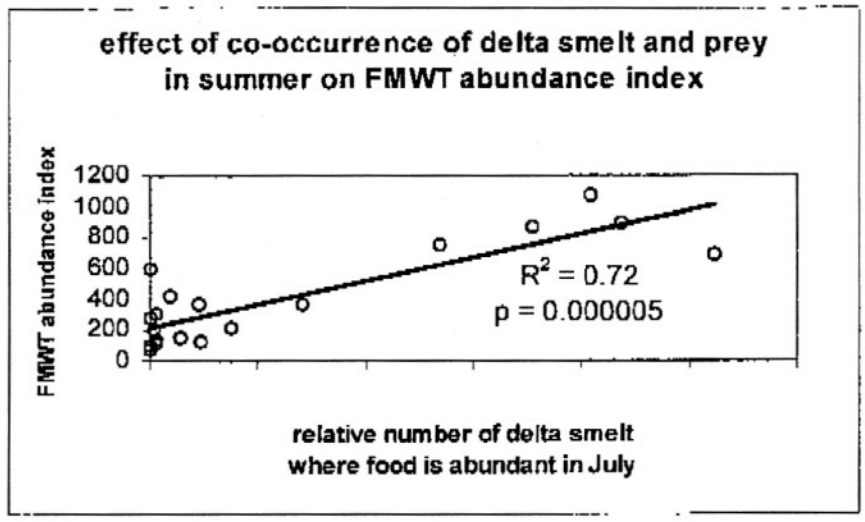

Exhibit I

Export operations and food supply

A logical question that arises from these findings is, to what extent do export operations effect Pseudodiaptomus in the Delta. While this may be an area worthy of additional research, the co-occurrence analysis suggests it

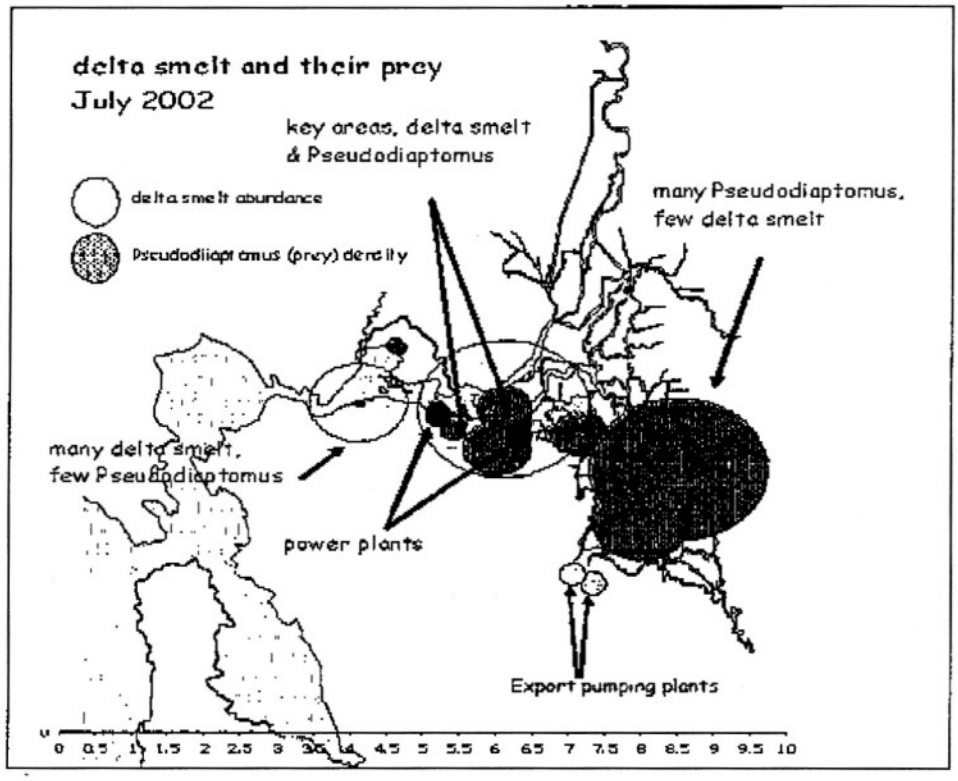

Exhibit J

February 7, 2006

Mr. Paul A. Marshall
Department of Water Resources
South Delta Branch
1416 9th Street, 2nd Floor
Sacramento, CA 95814

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FAX: (916) 653-6077

Ms. Sharon McHale
U.S. Bureau of Reclamation
Mid-Pacific Region
2800 Cottage Way
Sacramento, CA 95825

FAX: (916) 978-5094

RE: South Delta Improvement Program, Draft Environmental Impact Statement/Environmental Impact Report Comments

842 SIXTH STREET

SUITE 7

P.O. BOX 2157

LOS BANOS

CALIFORNIA

93635

(209) 826-9696
OFFICE

(209) 826-9698
FAX