

**Before the
Committee on Natural Resources, Subcommittee on Water and Power
United States House of Representatives**

Oversight Field Hearing on “Extinction is not a Sustainable Water Policy: The Bay-Delta Crisis and the Implications for California Water Management”

**July 2, 2007
Vallejo City Council Chambers, Vallejo, California**

WRITTEN STATEMENT OF JAMES A. CRETTOL

I. Background

My name is Jim Crettol. I am a third generation California farmer, born, raised and live in Wasco, California. I appear here today representing my family, Crettol Farms, which I am a partner of, and the Semitropic Water Storage District, for which I serve as a Board member and Secretary.

We appreciate the subcommittee holding this hearing in California on the very important and much misunderstood topic. I appreciate the opportunity to provide this testimony.

Despite the best efforts of the various federal and state agencies, and the efforts of water agencies throughout the State, I am here today to inform you what you already know—the Delta is in Crisis.

My family primarily grows almonds, carrots, cotton, and wine grapes. Our farm is located in the Semitropic Water Storage District and the Shafter-Wasco Irrigation District (a Friant Division CVP contractor). I have been involved in various agriculturally related organizations and from 2000 to 2004 was a board member of the California Workforce Investment Board.

Semitropic is the second largest member unit of the Kern County Water Agency (KCWA), contracting for a portion of its contracted water supply with the California Department of Water Resources (DWR). In addition to its long standing program to import water from the State Water Project (SWP) and thereby attempt to stabilize groundwater conditions, Semitropic has developed what I believe is the largest water banking project in the State, and probably the world, in conjunction with various “Banking Partners” throughout the State. These urban and agricultural partners have recognized the benefits of banking available water supplies, generally in wet years, in Semitropic, and in turn having access to banked water returned from Semitropic, generally in dryer years. This program has also provided benefits to Semitropic farmers. We long ago recognized the benefits of working with partners to improve water management throughout the State.

KCWA is the second largest SWP contractor. KCWA contracted with the DWR for delivery of approximately 1 million acre-feet of SWP water. KCWA contracts with thirteen local water districts, including Semitropic, which provide water for domestic purposes and approximately 675,000 acres of irrigated farm land in Kern County. On June 13, KCWA declared a water supply emergency because of concerns about likely impacts to the Kern County economy if pumping at the State Water Projects' Banks Pumping Plant was shutdown. KCWA staff, working with its local water districts, estimated the economic impact of a 30-day shut down of Banks Pumping Plant could be over \$400 million.

II. Impacts on operations of the SWP

On May 31, DWR voluntarily stopped pumping water at the Banks Pumping Plant and immediately began using water that had been previously stored within the SWP storage facilities to meet delivery requests of the SWP contractors. By June 13, when KCWA declared a water supply emergency for Kern County, DWR was struggling to meet all of the SWP contractors' delivery requests. Both the CVP and SWP were withdrawing water from San Luis Reservoir (San Luis) at an alarming rate. In fact, the amount of water that could be released from San Luis had to be curtailed to ensure continued safe operation of the reservoir. DWR was so concerned with the drawdown rate that they informed KCWA that they would not be able to meet all of its contractors' water needs. These "shortage allocations" would have resulted in a significant reduction of water to Kern County. KCWA staff estimated the shortage to be about 1,000 cubic feet per second (cfs), or one-third of KCWA's total demand.

III. Potential impacts to Kern County

Following, I will describe the potential impacts in Kern County of shut downs of the Banks Pumping Plant. This information is provided only to illustrate the problem—other water agencies throughout the State have and would be suffering similar or even more severe consequences. Probably the areas most significantly impacted are (1) CVP agricultural contractors South of the Delta, which for the most part have little groundwater resources and unlike Semitropic and Kern County, generally have limited access to water banks, and (2) CVP and SWP urban contractors located north of San Luis Reservoir, including the greater Bay Area, where storage is limited.

KCWA staff analyzed the potential impacts to Kern County that would result from a 30-day shut down at Banks Pumping Plant. The analysis was based on information provided by Kern County farmers and DWR of impacts in Kern County overall. These impacts would primarily occur on the Westside of

Kern County where groundwater is not available and where significant portions of irrigated lands are planted to permanent crops. Areas such as Semitropic, with groundwater resources, would be less impacted, but as discussed below, our ability to meet the needs of our banking partners will be curtailed. From the analysis, KCWA concluded the following:

- A 30-day shut down of Banks Pumping Plant in July would reduce delivery of water to KCWA, and its local water districts including Semitropic. By the start of July, releases from San Luis would be limited to about 15,000 acre-feet (af) per day due to the drawdown criterion which limit the amount of water that can be taken out of the reservoir to a drawdown rate of 2 feet per day. By the middle of July, drawdown would be limited to about 11,000 af per day. Assuming that 11,000 af per day would ultimately be the average San Luis Reservoir release rate for July, and understanding that DWR would prorate deliveries to the SWP contractors based upon their individual contractual rights, KCWA would receive less than 1,600 af of SWP water per day for delivery to Kern County during the height of the irrigation season. The amount of this shortage was reduced by supplementing the water supply with groundwater withdrawals from our groundwater banking programs. However, even with those extraordinary efforts KCWA staff estimates the shortage in deliveries to KCWA would be about 3,000 af per day.
- These severe shortages would result in immediate crop loss in Kern County. KCWA staff worked closely with its local water districts to determine how a reduction in SWP deliveries would impact local crop yields. Based on the water supply analysis, KCWA concluded that water deliveries to local water districts would immediately be reduced by about 25%. A reduction of this magnitude at the height of the irrigation season would impact permanent crop yields by about 10%. The 10% reduction in crop yield would have varying economic impacts based upon the type of crop and how the quality of each crop would be affected. For example, grapes would suffer about a 75% loss in the first 30 days while almonds would suffer about 10% loss. KCWA staff also looked at how crops would be impacted next year if a similar interruption in irrigation deliveries occurs. For example, while the current year economic impact to almonds would not be as great as that realized from grapes, almonds would also suffer a similar loss next year.
- As noted above, Kern County and Semitropic are well known as groundwater banking regions. Semitropic and other Kern County districts have groundwater banking programs with other water districts from the San Francisco Bay Area to Los Angeles. These groundwater banking projects were developed in part to protect their regions from drought. As a result, groundwater banking projects are designed to store water in wet years and withdraw it in dry years. During those dry years water can be

withdrawn over a period of eight to ten months and the withdrawal capabilities are designed for a rate of withdrawal that can last for up to 12 months. However, groundwater banking programs are not designed to withdraw very large amounts of water over a short period of time. While our groundwater banks were invaluable to us during the recent pumping shutdown, they are not designed for emergency shutdowns such as what occurred this year because it is not possible to withdraw enough water fast enough to meet the shortages. This is compared to a surface reservoir where larger quantities can be withdrawn quickly.

- Additionally, groundwater banking projects are managed conjunctively with diversions from the Delta; therefore, their utility to local water districts and out-of-county banking partners may be limited when such diversions from the Delta are limited. This is certainly true for Semitropic which has banking partners stretched from the Bay Area to Southern California. The Semitropic Banking Program is an in-lieu and direct recharge program whereby banking partners deliver their SWP water for use in Semitropic. This allows farmers within the district to use surface water and reduce their reliance upon groundwater. During dry years when the banking partners desire to get some or all of their water out of Semitropic, the District will make water available to them in two ways. First, Semitropic can “return” banked water by delivering its SWP water back to the banking partners and relying upon the water that was left in the ground to meet local irrigation demands. To the extent SWP water allocations to KCWA and Semitropic are curtailed, the ability to return banked water is curtailed. The second way that water is “returned” to banking partners is for Semitropic to physically pump water from the ground and convey it to the California Aqueduct. Once again, the ability to use groundwater wells within the district to return water to banking partners is limited by the amount of water needed for irrigation purposes within Semitropic and the amount of SWP water that has been allocated to the district. Regardless of the method for returning banked water, the Bay Area banking partners (which include Alameda County, Zone 7 and Santa Clara), are particularly vulnerable to curtailment of pumping in the Delta because they have no other means for receiving their water other than by exchange through the California Aqueduct.
- Emergency shutdowns are also a very poor way to manage precious water supplies. Kern County’s groundwater banking programs were developed to protect the region from a drought caused by dry hydrologic conditions. When water agencies use water from their groundwater banks to make up for shortages that result from regulatory shutdowns it significantly reduces the amount of water that will be available during an actual drought. Using groundwater supplies to cover shortages from emergency shutdowns leave our region and the rest of the State at much greater risk during droughts.

IV. Solving the problem – The State of California cannot continue to operate on such an uncertain water supply any more than the Delta environment can thrive on a continued diet of marginal actions. The State, with its federal partner, must take actions on three different levels to restore the Delta ecosystem while providing California’s families, farms and businesses with a clean, safe, reliable water supply that meets our State’s growing demand.

Immediate actions – The State can no longer afford to look at pumping reductions as the only way to improve the Delta fishery. For decades the answer to any ecosystem problem in the Delta has been to reduce pumping. This strategy has resulted in a declining Delta fishery and increasing economic impacts from Tracy to San Diego. Such a status-quo-on-steroids approach will neither restore the Delta nor provide the water supply the state needs.

Other factors that stress the Delta species must be addressed. Programs must be developed to reduce the effect of invasive species on the Delta ecosystem. Invasive species have a dramatic effect on native species. The loss of the macro-invertebrate *eurystemora*, the Delta smelt’s preferred food is a direct result of the Asian clam, brought to the Delta in the early 1980’s and which is now one of the most pervasive species in the Delta ecosystem.

The Asian clam is only one example of an invasive species that negatively affects the Delta. The striped bass was introduced to the Delta ecosystem by humans in the early 1900s to provide a sport fishery. Now the Delta is one of the premier striped bass fisheries in the world, but it was developed at the expense of the Delta’s native species. Striped bass eat both juvenile salmon and the Delta smelt. In spite of this direct conflict between striped bass and native protected species, the State of California continues to foster the striped bass fishery. The sport fishing industry is important in California, but its contributions to the declining Delta ecosystem must also be weighed.

During the past year it has become apparent that toxic runoff from urban and agricultural areas in and around the Delta play a significant role in the declining Delta ecosystem. Earlier this year a series of toxic events occurred in the north Delta in areas where the Delta smelt are known to spawn and rear. Those events occurred at a critical time in the development of the smelt. While it appears likely that the toxic events had a significant role in this year’s severe population decline, it is difficult to verify this because of a lack of scientific data. Because we have little factual data about the toxics involved in this year’s events, officials are unable to quickly develop strategies to mitigate the impacts of those events and haven’t been able to develop strategies to ensure that they don’t happen again next year. The State must re-double its efforts to understand and respond to the significant effect toxics have on the Delta ecosystem.

Other Delta water diversions also affect the Delta ecosystem. There are more than 1,800 water diversions in the Delta that provide water to the Delta urban and agricultural water users. The vast majority of these diversions are small, but in total they are estimated to be comparable to the 4,600 cubic foot per second capacity of the Jones Pumping Plant, and virtually all of them are unscreened. Few if any studies have been done on these diversions to determine if they draw in the Delta smelt when they are operating. But it is easy to understand that Delta smelt larvae and juveniles are just as likely to be sucked into the in-Delta diversions as they are the larger State and federal pumps. The State must examine the effects that in-Delta pumping has on the Delta ecosystem and develop actions to reduce the effect in-Delta pumps have on the Delta ecosystem.

Interim Actions – The State must develop a long-term solution to the conflict between water supply and the Delta ecosystem. But it is likely that such a solution will require ten or more years to implement. In the interim the State must develop a strategy for maintaining California’s water supply while helping to recover the Delta smelt. A variety of options are possible but developing these actions must start now. One of these ideas being discussed is construction of a small siphon under Old River at Clifton Court Forebay that would connect the Forebay to Middle River. When paired with rock barriers at strategic locations in the Delta the siphon allows the State and federal pumps to draw water from the Sacramento River more efficiently without drawing in smelt located at the western edge of the Delta. Attached is a map (Figure 1) showing in concept how such an interim plan would be implemented. It is estimated that this idea, sometimes referred to as the “Eco-crescent”, could be designed and constructed in a relatively short period of time, perhaps as quickly as two years, at a relatively modest cost estimated to be between \$20 million to \$40 million. There is still a lot of work that needs to be done to analyze this idea, but that work must begin now and must be a priority for all of the State and federal agencies that would be involved.

Long-term Actions - The State has made an admirable effort to develop a series of processes that if successful will result in a decision on a long-term fix for the Delta. Unfortunately the current water supply and ecosystem crisis in the Delta do not give us two years simply to make a decision. The State must accelerate its decision making process and move out of the bureaucratic decision-making mode and into a leadership role that makes decisions on the information at hand and follows through by implementing those decisions.

I believe that the State can no longer afford to focus on modifying how the State and federal pumps are operated and hope that the ecosystem gets better and the economy stays healthy. It is time to act based on what we know. If “take” at the pumps is causing a problem for the Delta smelt then we need to construct a canal and move pumping intakes to an area that is less ecologically

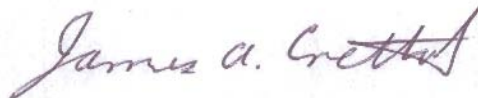
sensitive and that can be constructed using the newest screening technology. If levee failure due to earthquakes is a risk then we need to separate the state's water supply from those risks by constructing a canal that moves the state water supply around the Delta rather than through it. If continually declining water quality is a risk for the State's urban water suppliers then we need to construct a canal to move a more healthful water supply to the State' urban areas from Silicon Valley to San Diego.

What we cannot afford to do is wait. Constructing a canal around the Delta will take years to plan and design and several years to construct. There are interim actions the State can take to maintain the Delta ecosystem and the State's water supply, but none of them provide a long-term solution for the Delta smelt or the State's 25 million people that depend on the Delta for some or all of their water supply. The time to act to protect the Delta smelt and the State's water supply is now.

I encourage you and other representatives of the Federal government to work with the State and water agencies to promptly address the crisis in the Delta in a manner that restores the Delta ecosystem and provides necessary water supplies for the growing demands of California's families, farms and businesses.

Thank you for your time and consideration.

Respectfully submitted,

A handwritten signature in dark ink, reading "James A. Crettol". The signature is written in a cursive style with a large initial "J".

JAMES A. CRETTOL

Figure 1

Immediate / Reversible Delta Smelt Protection Actions Eco-Crescent / Old River Corridor Concept

