



EXHIBIT PCFFA-2

TESTIMONY OF WILLIAM M. KIER

**SAN FRANCISCO BAY-DELTA ESTUARY WATER QUALITY AND
FLOW CRITERIA NECESSARY TO PROTECT
SACRAMENTO RIVER
FALL-RUN CHINOOK SALMON**

SUBMITTED BY THE PACIFIC COAST FEDERATION OF
FISHERMEN'S ASSOCIATIONS AND THE INSTITUTE OF FISHERIES RESOURCES
INTO THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD'S 2010
INFORMATIONAL PROCEEDING TO DEVELOP FLOW CRITERIA FOR THE DELTA
ECOSYSTEM NECESSARY TO PROTECT PUBLIC TRUST RESOURCES

FEBRUARY, 2010

RECOMMENDATIONS OF THE PACIFIC COAST FEDERATION OF FISHERMEN'S
ASSOCIATIONS AND THE INSTITUTE FOR FISHERIES RESOURCES CONCERNING
SAN FRANCISCO BAY-DELTA ESTUARY WATER QUALITY AND FLOW CRITERIA
NECESSARY TO PROTECT SACRAMENTO RIVER FALL-RUN CHINOOK SALMON¹

BACKGROUND

I am Bill Kier. I am a certified fisheries scientist. I lead a consulting practice, Kier Associates <http://www.kierassociates.net>, engaged almost exclusively in the assessment of data concerning salmon population and salmon habitat conditions in California, the Pacific Northwest, and the Gulf of Maine, and in providing recommendations to state, local, federal and Tribal governments, and others, based on such assessments, about the measures necessary to improve salmon habitat and increase salmon populations.

Kier Associates has been providing these services for 24 years.

I am presenting the recommendations advanced here concerning the San Francisco Bay-Delta estuary water quality and flow conditions necessary to protect Sacramento River fall-run chinook salmon on behalf of the Pacific Coast Federation of Fishermen's Associations (PCFFA), the West Coast's largest organization of working fishermen and fisherwomen, and the Institute for Fisheries Resources (IFR), a non-profit public service research organization affiliated with PCFFA. I serve IFR as a senior science advisor.

I began my career as a fisheries scientist in the San Francisco Bay-Delta estuary for the California Department of Fish and Game 52 years ago. I am generally familiar with the state of fisheries and water quality science in the Bay-Delta estuary, and I have followed that science specifically as it relates to the conservation of Sacramento River fall-run chinook salmon.

I have appeared before the State Water Resources Control Board and its predecessor State Water Rights Board many times over the past 50 years, both as a California Department of Fish and Game scientist and manager, and as an expert witness for various parties. Most of these appearances have concerned the flow requirements necessary for the conservation of Central Valley salmon.

Sacramento River fall-run chinook salmon – referred to as 'SRFC', Sacramento River fall chinook, by the fishery regulatory agencies - are the backbone of the ocean fisheries from Santa Barbara, California north to Astoria, Oregon – a thousand miles of the nation's Pacific Coast, including dozens upon dozens of coastal communities dependent to some degree, some quite heavily, on the region's 150-year-old ocean salmon fishery.

¹Submitted on 16 February 2010 to the California State Water Resources Control Board in conjunction with the Board's 2010 'Informational Proceeding to Develop Flow Criteria for the Delta Ecosystem Necessary to Protect Public Trust Resources', to be presented orally by Mr Kier during that proceeding's hearings scheduled to begin in Sacramento, CA, on 22 March 2010.

The fishery has been shut down since 2008 due to the poor returns of adult SRFC to the Sacramento River.

The Pacific Fishery Management Council (PFMC) has set a conservation goal of 122,000-180,000 SRFC adult salmon returning – ‘escaping’ - to their natal Sacramento River basin streams. Spawning escapement of SRFC was estimated to be 88,000 in 2007; 66,000 in 2008; and 39,530 – the lowest number on record – in 2009. From all appearances, the PFMC will ban salmon fishing for a third straight year in 2010.

We have been here before

We have been here before. In the summer of 1968 the California Department of Fish and Game and Fish and Game Commission urged the closure of the fishery for SRFC salmon. The fishermen resisted – this was before the federal Magnuson Fishery Conservation and Management Act of 1976 elevated such decision-making to the four-state PFMC – the fishery continued, and the cause for the low SRFC numbers of the late 1960s was eventually laid by State and federal fishery experts in large part to the poor design of the fish ladders at the Central Valley Project’s Red Bluff Diversion Dam, forcing reconstruction of the ladders to allow adult fall-run chinook salmon to reach the quality spawning habitat above Red Bluff.²

It is not clear, of course, what may have happened to the fishery, nor to the public trust Sacramento River fall-run chinook salmon resource that supported it, had the fishermen failed to ‘speak truth to power’. They suspected that the SRFC decline had not resulted from over-harvesting of salmon and they insisted that the actual problems be addressed.

And we have been here before in the matter of determining the ‘flow criteria for the Delta ecosystem necessary to protect public trust resources’ – more than once.

What many of us believed would be the proceeding to determine the ‘flow criteria for the Delta ecosystem necessary to protect public trust resources’ to end all such proceedings was that conducted by the State Water Resources Control Board between 1986 and 1988, which produced the October, 1988 draft SWRCB ‘Water Quality Control Plan for Salinity, San Francisco Bay/Sacramento-San Joaquin Delta Estuary’ – ‘Phase 1’ of what was to have been a two-phase proceeding, the first to determine the water quality and flow criteria necessary to protect public trust resources, the second to make the adjustments to water project operations needed to meet those water quality and flow criteria in the estuary.

That 396-page 1988 draft Plan contains a great deal of science-based guidance concerning Delta water quality and flow criteria necessary to protect Sacramento River

² The CVP’s Red Bluff Diversion Dam, which began operation in 1967, continued to be so problematic for salmon conservation that it is in the process of being replaced by an alternative, non-barrier river diversion device

fall-run chinook salmon – which we will get to straightaway, as we conclude these introductory remarks.

The SWRCB's 1988 draft Plan for the Bay-Delta estuary, that contemplating a Phase 2 proceeding to consider the necessary adjustments to water project operations, created a political firestorm. For the first time in the SWRCB's then-20 year history the board came under direct fire from the Governor's office.³

The calumny heaped upon SWRCB chairman Don Maughan, a nationally recognized expert in water resources planning and policy, by the CVP and State Water Project contractors threatened his pending reappointment to his post.⁴ In order to quell the political ruckus created by the water project contractors and to salvage his reappointment Mr Maughan repudiated the board's 396-page 1988 draft Plan - the product of more than 40 days of SWRCB hearings that produced 14,000 pages of testimony and 44,000 pages of exhibits as 'merely a staff draft', and effectively suspended those Bay-Delta proceedings.

The next Governor, as it turned out, set the SWRCB up for another smack-down.

Newly-elected Governor Pete Wilson declared in 1991 that the Delta was 'broken' and directed the SWRCB to prepare a plan for its protection and restoration. That plan, draft 'Water Right Decision 1630: San Francisco Bay/Sacramento-San Joaquin Delta Estuary', was released in December, 1992. That draft Decision also had a lot to say about the 'flow criteria for the Delta ecosystem necessary to protect public trust resources'.

The 1992 draft Decision was, like its predecessor, attacked by the CVP and SWP contractors. In language better suited to gang warfare, a memo concerning testimonies by the State and federal fishery agencies from the State Water Project Contractor's general manager sneered 'It's time to take these folks on. They should be taken out.'⁵

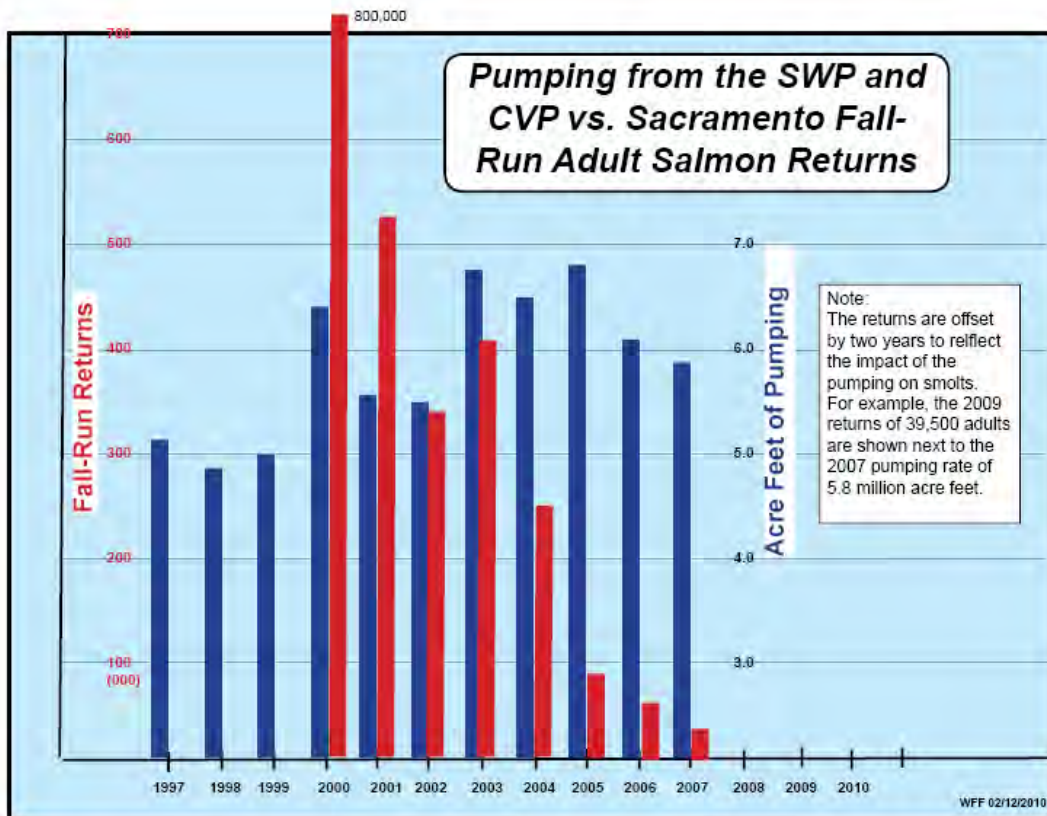
The Governor's Office rang the curtain down on D-1630 when he issued a 1 April 1993 stop-work order to the SWRCB⁶, claiming that the federal agencies had pre-empted Delta decision-making through the exercise of their Clean Water Act and Endangered Species Act responsibilities.

³ An earlier proceeding, that which resulted in the board's Decision 1379, a water quality control plan for the Delta and Suisun Marsh, the then-director of the California Department of Water Resources joined San Joaquin Valley interests in attacking; the Resources Secretary backed the board's Decision; and the Governor, Ronald Reagan, refrained from commenting publicly altogether.

⁴ Sacramento Bee article 'Reappointment of water board chief opposed', Attachment 1

⁵ Schuster memo, Attachment 2

⁶ Governor Wilson's letter, Attachment 3



This figure, prepared by Water for Fish, a fisheries advocacy organization, shows that as freshwater pumping from the Delta has increased returns of adult chinook salmon to their Central Valley home-streams has decreased dramatically.

Speak truth to power

California has a rich history, then, of political intervention in State Water Resources Control Board efforts to ‘develop flow criteria for the Delta ecosystem necessary to protect public trust resources’ – a Governor who threatened the board’s chair with removal from office if the board continued to identify and put in place protections for the Delta; and a Governor, who, after directing the board to fix the Delta because it was ‘broken’, hit the board with a stop-work order when the freshwater requirements of that ‘fix’ came under attack from federal and State water project contractors.

The decades of political dithering over the needs of the Delta are self-evident. If the Delta was ‘broken’ in 1991 it is far more ‘broken’ today.

Senate Bill 1 of the 2009-2010 Seventh Extraordinary Session of the California Legislature directs the State Water Resources Control Board, ‘pursuant to its public trust obligations (to) develop new flow criteria for the Delta ecosystem necessary to protect public trust resources’.

The legislation does not, as the board was counseled by Assembly Water Committee Chair Huffman on 7 January of this year,⁷ plunge the board into the politics of balancing the water quality and streamflow needs of public trust resources against those of the out-of-stream water users – the precise role for which the board was created in 1967, the role that has proven so problematic since 1988.

Our hope, then – the fishermen’s advice to the board – is that the board does precisely that requested of you by SB-1 and not try to ‘second-guess’ what issues its new flow criteria may present to the various new Delta factotums created by the legislation - or for the water contractors, for that matter. If anything is clear from the Bay-Delta estuary public trust resource protection experiences of the past twenty-two years, the ultimate power over the Delta is held by the Governor and Legislature, not by the ‘quasi-judicial’ State Water Resources Control Board that we all pinned our hopes on 43 years ago.

End SWRCB’s practice of shuffling the real Delta problems to the bottom of the deck.. Let those with the demonstrated power – the Governor and Legislature - answer to the nation and the world if the San Francisco Bay-Delta estuary, the most important estuary on the Pacific Coast of North or South America, continues its decline.

Look to the scientific truths available to this year’s proceedings and, in the words of the fishermen, ‘speak truth to power’.

THE DELTA AND ENVIRONS WATER QUALITY AND STREAMFLOW NEEDS OF SACRAMENTO RIVER FALL-RUN CHINOOK SALMON

The water quality and streamflow requirements of Sacramento River fall-run chinook salmon in the San Francisco Bay-Delta estuary and environs is documented in detail in the 204-page statement ‘The Needs of Chinook Salmon, Oncorhynchus tshawytscha, in the Sacramento-San Joaquin Estuary’ submitted to the State Water Resources Control Board as U.S Fish and Wildlife Service (USFWS) Exhibit 31 in the board’s 1987 ‘Water Quality/Water Rights Proceeding on the San Francisco Bay/Sacramento-San Joaquin Delta’.

This testimony by USFWS salmon scientist Dr. Martin Kjelson was vetted extensively among the Interagency Ecological Study Program agencies as well as with independent, non-agency scientists.

The recommendations presented here, drawn in large measure from Dr Kjelson’s Exhibit 31, will focus primarily on the water quality and flow criteria needed to enable juvenile Sacramento River fall-run chinook salmon – ‘downstream migrants’ – safe passage in their trip from the Sacramento River across the Delta to San Francisco Bay. The evidence presented by Dr Kjelson and others makes clear that adult ‘escapement’, the return of adult Sacramento River fall-run chinook salmon to their natal streams to

⁷ See Huffman presentation notes, Attachment 4

spawn, is determined in large measure by the survival – the safe passage – of juvenile salmon traversing from the Sacramento River successfully to San Francisco Bay.

Dr Kjelson lays it out clearly at page 2 of his testimony synopsis :

‘The evidence presented in this report will demonstrate that habitat alterations in the Delta limit salmon production⁸ primarily through reduced survival during the outmigrant (smolt) stage. These lower survivals are associated with decreases in the magnitude of flow through the estuary, increases in water temperatures and water project diversions in the Delta.

Smolt mortality in the Estuary will impact resulting adult salmon population levels. However, other factors that influence stocks and their measurement in upstream and oceanic waters make that impact difficult to quantify. Nevertheless, increasing smolt survival rates though the Delta is a critical step toward restoring natural salmon production in the Central Valley.’

He then goes on (page 3) to explain that the decade-long study he conducted as part of the Interagency Ecological Study Program found that:

‘Smolt survival increased with increasing Sacramento River flow at Rio Vista, with maximum survival observed at or above 20,000 to 30,000 cfs. This relation was based on two independent measures of survival.

Smolt survival is highest when water temperatures are below 66°F. Temperatures of 76°F or higher are lethal to salmon and stress would occur as temperatures approach that level.’

Dr Kjelson then went on to note that the SWRCB’s salmon flow standards in place at that time, those established by D-1485 in 1978, calling for flows at Rio Vista during the April-June smolt emigration period of between 1,000 to 5,000 cfs would yield from zero to 2% survival based on the relationship between smolt survival and flow established by his research.

Dr Kjelson concluded his synopsis of Sacramento River water quality and flow requirements by noting:

‘Water development in the Sacramento Valley has reduced inflow to the Delta during the April-June smolt migration period. These reductions combined with the present Delta diversions off the Sacramento River have been enough to reduce average smolt survival in the Sacramento Delta by at least 30% since 1940.

Potential measures to improve smolt survival through the Sacramento Delta include: increasing flows, closure or screening of the Delta cross channel, elimination of reverse flows in the lower San Joaquin and reducing Project export levels in the southern Delta.’

⁸ ‘Production’ is the term used by fishery managers to refer to the ‘total elaboration of new body substance in a stock in a unit of time, irrespective of whether or not it survives to the end of that time.’, i.e, both the ‘escapement’ of adult salmon, as used here, and their harvest

Applying the recommended Sacramento fall-run chinook salmon water quality and flow criteria to the Sacramento River and Delta

Where Dr Kjelson fixed his proposed Sacramento fall-run chinook salmon out-migrant flow recommendation at Rio Vista, we would recommend moving it – the 20,000-to-30,000 criterion – further upstream to take into consideration the combined effects of Georgiana Slough and possible Delta cross channel diversions of Sacramento River water, as well as the proposed hydra-headed ‘conveyance’ reportedly favored by the current Administration – up to, say, Freeport.

Our recommendation is to split the difference between Dr Kjelson’s 20,000-30,000 cfs, the levels at which optimum levels of juvenile Sacramento River fall-run chinook survival across the Delta occurs, and set a public trust resource protection flow criterion of a minimum of 25,000 acre-feet of Sacramento River flow past all points of diversion, present or future, from an upstream point at Freeport to a downstream point at Chipps Island from 1 April to 30 June of each year. These Sacramento River fall-run chinook salmon public trust resource protection flows should be managed adaptively so as to maintain water temperatures well below 66°F.

Adaptively managing the recommended Sacramento River fall-run chinook salmon public trust resource protection water quality and flow criteria

The Interagency Ecological Program should replicate Dr Kjelson’s Sacramento River fall-run juvenile salmon smolt survival studies of the 1970s-80s. The new study should use sonic tags on the study fish to strengthen the level of its scientific certainty.

The basic objective of any adaptive management of the flow criterion should, however, be the attainment of the Pacific Fishery Management Council’s well-established conservation goal for Sacramento River fall-run chinook salmon – a spawning escapement of 122,000-180,000 adult salmon.

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Reappointment of Water Board Chief Opposed

January 07, 1989

SACRAMENTO — Angry water distributors in the San Joaquin Valley and urban Southern California are campaigning against the reappointment of W. Don Maughan as chairman of the state Water Resources Control Board.

The opposition to Maughan stems from a proposal made by the water board staff Nov. 3 to set aside more water in the Sacramento and San Joaquin rivers for preservation of fisheries and to put a cap on future shipments of Northern California water to the south.

It has drawn fierce protests from the southern half of the state, and the question of whether Maughan should be reappointed has become a focal point for the anger, even though the board has not yet taken a position on the staff proposal.

"There are attorneys and water district managers up and down the state who figure the governor has a real problem," said Jason Peltier, managing director of the Central Valley Water Project Assn. "To say they're upset is an understatement. Outraged is more like it."

No Support

However, there is no support for Maughan from those environmentalists who believe the water board staff did not go nearly far enough in curbing water shipments to the south and saving water for the north.

"We are not that happy with the standards ourselves," said David Fullerton, spokesman for the Committee for Water Policy Consensus, in which most San Francisco environmental groups are represented. "We don't consider Don Maughan to be particularly on our side."

The powerful five-member board has the final say--short of the Legislature and the courts--on California water rights questions. The terms of Maughan and another member, Elisio Samaniego of Visalia, expire Jan. 15. All board members are appointed by the governor.

So far, there has been no indication from Gov. George Deukmejian's office whether either will be reappointed. Urban and agricultural water interests in the southern half of the state have expressed no opposition to Samaniego.

Stay on Job

When terms of water board members have expired in the past, it has been customary for the governor to ask them to stay on the job until a decision is made on filling the job.

PCFFA Exh 2_Att 2_Schuster memo

7-9-92

MEMO

To: State Water Contractors

From: Schuster

Subject: Initial reactions to the fishery agencies' testimony before the State Board in the interim standards hearings.

USF&WS:

Exhibit #8: USF&WS recommendation is to "attain a late 1960's to early 1970's level of fish protection." Great! The CVP and SWP export demand has increased by 5,000,000 acre-feet since then. So the only way to attain this agency's recommendation is to eliminate deliveries to the SWP and the CVP's San Luis Unit and to return to an era when the project's were used primarily for power production, recreation, and environmental protection. I operated the CVP during this time which should give me credibility when I attack this recommendation.

This is an irresponsible recommendation that plays right into our hands and that is exactly what we should say as a lead in to our own recommendations. The fishery agencies have decided to "cop out." They did not have the courage to recommend (except for Loudermilk on the San Joaquin) interim actions that would not fully restore the habitat because their respective constituencies would get mad. So they asked for the world knowing they wouldn't get it and will simply blame the Board when they don't get what they want. It's not their fault right? They have, knowingly or unknowingly, set up the Board and the Governor. Specific objectives they state they have are:

- "The entrapment zone located in Suisun Bay late winter and spring." Very high outflows regardless of year type. If we eliminate

exports as they recommend, why does the entrapment zone need to be in Suisun Bay?

- "Net reverse flows in San Joaquin River and in south Delta channels should not be allowed to occur." That means virtually no pumping except in wet years especially when this recommendation is coupled with the Delta Cross Channel and Georgianna Slough closure recommendations. The impact of their recommendations is getting closer to 6.5 million acre-feet or more.

- We agree with their screening recommendation.

- They recommend an Old River barrier, sort of. Why if we aren't pumping?

- They want coordinated operations of exports for the purpose of minimizing fishery impacts while taking the minimum level of export necessary. I wonder what they think "minimum export necessary" is other than zero given their other recommendation.

- They state that storing spring runoff is detrimental to fish. Less storage means less water supply. How are we going to restore habitat to the late 60's conditions when that storage provided those conditions in many years?

- They want to reduce upstream water diversions also.

- They want project storage to be dedicated to fish. I wonder who will pay for the SWP water supply that is dedicated to fish and wildlife (enhancement) which can not be charged to the water users under state law, USF&WS?

- During this interim period they want all discharges of contaminated drainwater to stop.

They seem to have decided that interim means ultimate protection until the long term solution is developed. They probably have some weird political logic that significant harm to California's economy will lead to the construction of facilities to help fish and help meet our water supply needs. A more likely scenario is that the people will get so angry that they will want to "kiss off" fish which would be a sad outcome since its unnecessary and triggered by the so called protectors of California's natural resources.

-They want to transfer Friant water users water to others to reduce Delta exports. Bottom line throughout this document is to take ag. lands out of production.

-They reject interim solutions we have submitted and solutions such as the Suisun Marsh agreement.

The only solution, in their opinion, is more water for fish and less pumping by the CVP and SWP. The fishery agencies have joined the "radical environmentalist" and adopted their cry for more water regardless of the impact on others. How can the Wilson and Bush administrations allow this type of advocacy to occur?

Unbelievable!!

Exhibit # 10: This is an agreement that reflects the interim recommendations made in Exhibit #8 and it's signed by USF&WS (Plenert), EPA (Saradarian), and NMFS (Fullerton). The effect of their recommendations, if implemented, would be to reduce water deliveries to ag and urban water users by 6-10 million acre-feet which would have a catastrophic economic impact on California.

This is the document we've been looking for politically. Its time for a letter writing campaign to Wilson (DF&G supports USF&WS's recommendations), the Secretary of Commerce, Reilly, Lujan and Bush to ask whether this type of devastation to the California economy is their policy. If not, what the hell is going on?

Exhibit #11: They state that delta smelt requires the following habitat conditions:

Salinities below 2ppt (bottom salinity) in the upper Suisun Bay area from March through mid-June.

Freshwater temperatures (inflow to the Delta I assume) from 7-15 C (45-59 F) from February through June.

Reduce number of days reverse flows occur in the lower San Joaquin River (whatever that means).

Water that is free of toxic concentrations from ag. and industrial discharges.

The above criteria, if implemented, would take all of the developed water in the Central Valley in many years. Besides the obvious economic impacts this criteria would also have devastating impacts on all other natural resources.

The fish guys seem to have gotten themselves into an illogical and inconsistent position. They want everything for every species regardless of the impact on California including the environment. I say fish guys because USF&WS, DF&G, and NMFS testimony was coordinated and they have agreed to each others recommendations. Its time to take these folks on. They should be taken out. I'm sure glad they are incompetent strategists. If they weren't, they could have hurt us. Instead they have proven themselves to be irrelevant to the Board process.

DF&G:

Exhibit #1: Entrainment losses. Who cares since the SWP losses are replaced through the 4-Pump agreement.

Exhibit # 2: This exhibit is the key technical testimony for DF&G. Stevens attempts to explain that his outflow/export relationship to striped bass survival is still valid. He argues that the relationship has simply moved downward and that is due to the significant increases in exports that have occurred since the early 70's to meet the SWP and federal San Luis Unit demand.

I don't have too much trouble with this testimony in the context of this hearing. We should be able to use it to our advantage to establish long-term objectives that can only be met by construction of the Peripheral Canal. We should try to accomplish the following through cross examination:

-See if Don can separate the effects of direct entrainment losses which we mitigate through the 4-Pump agreement from the effect of reverse flows.

-He states that better quality than 1.5 EC at Antioch is needed. Why? Probably to expand habitat which would have to be coupled with export constraints. Conversely then, no export constraints leads to no need to provide better quality.

-Since Don thinks that exports are the major culprit, there are only two solutions: stop pumping or construction of the Peripheral Canal. Does he agree?

-We should see what Don's thoughts are concerning outflow requirements after the canal is in operation. He should say he doesn't know since all of his data is based on the current Delta water transfer configuration.

Exhibit #3: Steven's model. Let others attack. Specifically DWR unless Chuck has something he wants to question. Exhibit #2 is key. Not this model.

Exhibit #4: White catfish is a non-native fish. "Because the water project intakes are located in the south Delta, draw water from these key reproductive areas, entrain large numbers of catfish relative to the 1980 estimate of catfish are low relative to other species such as striped bass and threadfin shad, it seems reasonable to hypothesize that, as for striped bass, losses to water exports have caused the decline in white catfish abundance." Nice tight science isn't it?

We should ask if white catfish can be raised in hatcheries and if so why can't the impacts of exports be mitigated through the 4-Pump agreement as that agreement contemplated?

Exhibit #5: Splittail. So what! They are trying to establish a need for high Delta outflows to allow reproduction in the Suisun Marsh area. However, they state that the splittail's high fecundity and long breeding life allow this fish to maintain a viable population. Therefore, management of this fishery should be easy with no need to impact our water supplies. Simply optimize breeding during wet years which should occur again someday.

Exhibit #6: Same Bay fisheries data they used in Phase I.

Their data base too short and not reflective of most water years. Three of the wettest years in history and a drought.

The monthly average outflow numbers they are discussing are so large that this testimony is irrelevant. We should tell them they should be testifying before God and not the State Board since he/she is the only one that can make it rain.

Exhibit #14-22: Important exhibits. They support our recommendations for upstream actions. We can use these exhibits to point at actions upstream, specifically instream flow needs, that would be much more beneficial to salmon and less costly in terms of water than actions in the Delta.

Exhibit #25: San Joaquin salmon. "A program that provides additional tributary and mainstem San Joaquin River streamflows during fall and spring migrations, coinciding with and directly linked to physical and operational measures in the Delta, offer the greatest opportunity for interim improvements." This is an important policy statement. We should be able to use it as an important long-term objective for the San Joaquin River.

We should support their potential interim solutions for adult migration. We should support their potential interim and long-term solutions for yearling migrations.

I think we can also support their potential interim solutions for Delta survival. They call for higher flows, an Old River barrier and export constraints. They make it clear that all three must occur and implementing only one of the three doesn't make scientific sense. They state that they don't know what the export constraints should be if an Old River barrier is constructed and additional flows are provided and they recommend developing them through an open process. I think that with higher flows and a barrier in place the export constraints would be minimal plus we may even gain water through use of the increased flows for Delta outflow. Its worth a try plus it puts big pressure on the upstream guys to be reasonable for a change or else.

Exhibit #8: DF&G Recommendations.

DF&G starts out by agreeing with the Governor that the Delta is "broken." They go on to explain why it's broken and conclude that there has been widespread deterioration of fishery resources caused by water development. Isn't it interesting the way they conveniently ignore the rest of the Governor's policy? For example:

The Governor's reference to the Delta being broken was in the context of a long-term comprehensive water solution for California.

He was discussing the need for Delta facilities not the need to fix the Delta now at the expense of all other users of Delta water.

They completely ignored the Governor's repeated policy that no one sector will be allowed to get ahead of any other. He said that we will move forward together on a step by step basis and each sector will benefit with each step. So they recommend interim actions by the Board that could reduce the water supplies of other water users by anywhere from 4-10 million acre-feet or more. (DWR will conduct some "quick and dirty" studies to better quantify the potential impacts.)

DF&G's interim goal is to halt the decline in aquatic populations and begin recovery (regardless of the impact on others) which they go on to say they believe is consistent with the Governor's policy. They state that one measure of interim progress towards this goal is to reestablish the fish populations, not habitat as NMFS, EPA, and USF&WS had recommended, that existed during the late 60's and early 70's. This recommendation is even worse than the other fishery agencies because it assumes there are no other factors depressing the populations other than water development and since there are other factors affecting the fish we are being asked to mitigate the affects of those factors also. They say that "DF&G believes, however, that the late 1960's and early 1970's reflects a period in which the estuarine ecosystem was viable and healthy, and that this health and viability existed because the Delta had not been altered to its present extent." The alteration they are talking about is deliveries of water to the SWP water users, delivery of CVP water to the San Luis Unit water users, and increased demand (how much I don't know off the top of my head but it can be quantified easily by DWR) upstream of the Delta by water users other than CVP and SWP water users. So in summary DF&G like USF&WS, EPA, and NMFS believe that the Board should eliminate all deliveries to SWP contractors, all federal San Luis Unit contractors and reduce deliveries to all non-SWP and CVP San Luis Unit water users to early 1970's levels. I assume the deliveries to all non-SWP and CVP San

Luis Unit water users would be reduced even further if the fish populations do not recover because of other factors such as toxic discharges or the affects of exotic species recently introduced to the system.

I actually have trouble treating this policy position seriously because it seems so politically bizarre to me. The Governor said that it is time to stop the water wars so what does DF&G do they stake out a position that is so extreme that it insures those wars will continue. The Governor's only option is to reverse his own agencies position publicly which he will pay for dearly in political terms. It sure makes you wonder who is incharge, if anyone, of the Wilson administration.

I am even more convinced now that we should make the policy heads of these agencies (McGovern-EPA, Fullerton-NMFS, Plenert-USF&WS, and Gibbons-DF&G) publicly defend their policy by going to their bosses (Wilson, Wheeler, Bush, Riely, Lujan, and the Secretary of Commerce) through a public letter writing campaign (public in the sense that our letters go to the press the same day it is delivered).

The next 25 pages are recommended actions for various species of fish. The entire section can best be described as at best inconsistent. For example:

The DF&G recommendations do not reflect the policy goals discussed above. In all cases their recommendations would require more or less water than what would represent conditions in the late 60's or early 70's.

DF&G did not have the courage to make one recommendation per species. Instead, they have three alternative recommendations for each. They clearly decided to dump the problem in the Board's "lap" and will now sit back from their lofty environmental advocacy perch and take shots at that

Board. The trouble is they have not "set-up" the Board they have "set-up" the Governor.

The DF&G recommendations themselves are inconsistent between species. If specific recommendations for some species were actually implemented, the ability to protect other species would be eliminated with potential disastrous results for those species. For example, DF&G recommends flows for Bay fisheries such as an average daily flow in February in a below normal year of 34,400 cfs. First of all you don't know what type of water year you have in February. Assuming its been relatively wet in December and January but has not rained for two weeks, Delta outflow has dropped, and assuming 90 percentile rainfall from February on you would have a forecast for a below normal water year on February 1. Maintaining the 34,400 cfs requirement could cost the projects in this case about 1.3 million acre-feet in one month. The next month the forecast drops to dry, assuming it doesn't rain, and finally in April you get to a critical year forecast. The total cost in these three months could total 1.7 million acre-feet. What kind of effect would this loss of water have on the projects' ability to meet the other DF&G recommendations ignoring, of course as DF&G has the impacts on the water users? Ridiculous! DF&G couldn't even resolve policy conflicts between species within DF&G so they dumped that problem on the Board too.

DF&G has also scattered water policy recommendations throughout this exhibit. The most important are the following:

They support efforts to develop "new water" and to have that water shared among the urban, agriculture and environmental water users.

They state that progress on ag. water conservation is occurring in the AB 3616 process so the Board should expect water savings from ag conservation in their deliberations.

The Board should consider criteria for new water facilities in the Delta in this hearing. They don't use the name but the facility they are recommending is the Peripheral Canal.

They state that their recommended standards for striped bass and salmon are sufficient to protect delta smelt (that's a relief isn't it?).

In my opinion, Mr. Gibbons, DF&G Director, in his short tenure has been able through this testimony and his decisions on striped bass and salmon hatchery issues to reduce DF&G's credibility to levels that challenge USF&WS's. He has done that by deciding DF&G's role is not to help the state solve problems but is instead to be an advocate for the environment. Too bad. All DF&G will be now is a technically competent EDF. The result of his leadership in these hearings is that DF&G will be irrelevant and it will be very difficult, if not impossible, for the Board to make a decision that is not politically damaging to the Governor regardless of the substance of that decision.

For your information I have combined DF&G's recommendation for striped bass, fall-run salmon, and winter-run salmon into one set of standards for their high level of protection alternative recommendation and their low level protection alternative. I have also included the existing D-1485 standards, if applicable, so you can compare the relative changes DF&G is recommending. I have not included the DF&G Delta outflow recommendations for Bay fish because the recommended requirements are ridiculously high and are based on no credible science.

High level of protection alternative:

1) Close Delta Cross Channel gates from February 1 through June 30 in all years. D-1485 requires the Cross Channel to be closed whenever Delta outflow is greater than 12,000 cfs for salmon during the period Jan.1-Apr 15 and for 20 days during the period Apr 16-

May 31 for striped bass when the outflow is greater than 12,000 cfs but for no more than two days out of any four day period.

2) Close Georgianna Slough from February 1 through June 30 in all years. No D-1485 criteria for Georgianna.

3) Install barrier in Old River from February 1 through June 30 and September 1 through November 30 in all years.

4) The minimum flow at Rio Vista (just downstream of the Cross Channel) should be 6,000 cfs in all years. The average D-1485 Rio Vista requirement for the period Jan 1 through Dec 31 is 3,600 cfs for wet years, 2,400 cfs for above and below normal years, and 1,500 cfs for dry and critical years.

5) Minimum flow at Jersey Point in cfs (The objective is to eliminate reverse flows and maintain a positive net downstream flow):

Water Year Type	2-1 through 4-30	5-1 through 6-30
Critical	2,000	1,000
Dry	2,000	1,500
Below Normal	2,000	2,000
Above Normal	2,500	2,500
Wet	3,000	3,000

There is no D-1485 criteria.

6) Export Constraints. The total allowable pumping rate for the CVP and SWP would be the following on a daily basis in cfs:

Water Year	Apr thru Jun	July	Aug thru Mar
Critical	0	500	1,100
Dry	0	1,000	2,900
Below Normal	0	1,500	3,700
Above Normal	0	2,000	4,600
Wet	0	3,000	5,100

The D-1485 criteria is 6,000 cfs in May and June and 9,200 cfs in July. There are no constraints in the other months of the year.

To give you an idea of the impact of this one recommendation the CVP and SWP demand south of the Delta is about 6,800,000 acre-feet. The maximum amount of water that can be pumped by year type under this recommendation is 240,000 acre-feet in a critical year (96.5% cut), 1,460,000 acre-feet in a dry year (79% cut), 1,880,000 acre-feet in below normal years (72% cut), 2,340,000 acre-feet in above normal years (66% cut), and 2,640,000 acre-feet in wet years (61% cut).

7) Minimum daily Delta outflow requirements in cfs:

Water Year Type	Apr thru Jul	Aug thru Dec
Critical	6,700	3,700
Dry	10,800	8,000
Below Normal	14,400	10,200
Above Normal	23,000	11,000
Wet	43,000	14,300

D-1485 average daily Delta outflow requirements for the same period in cfs:

Water year Type	Apr thru Jul	Aug thru Dec
Critical	4,100	3,200
Dry	6,500	3,300
Below Normal	8,500	4,000
Above Normal	9,750	4,100
Wet	8,300	4,200

8) DF&G has a criteria that states that the above outflow recommendations may be too low in some years because of flow patterns and too high in some dry years again depending on flow patterns. They don't explain how you would decide that and who

would make that decision. In either case they have established Delta outflow limits that if broken (outflow is less than their recommendation), all diversions to storage and all exports would be stopped. Those outflows in cfs are:

Year Type	Apr	May	Jun	Jul
Dry	11,400	11,400	9,200	9,300
Below Nor.	11,400	11,400	10,300	10,000
Above Nor.	16,300	18,100	14,200	11,900
Wet	22,000	29,000	21,000	15,000

Year Type	Oct	Nov	Dec
Dry			20,000
Below Normal		9,500	26,000
Above Normal		12,900	27,000
Wet	14,200	16,300	28,000

No criteria in D-1485

9) Maintain a daily mean flow of not less than 13,000 cfs at Sacramento from April 15 through May 31 in all years.

No criteria in D-1485

10) Minimum Vernalis flows (Vernalis is on the San Joaquin River where that river enters the Delta.): 2,000 cfs in critical years, 4,000 cfs in dry years, 6,000 cfs in below normal years, 8,000 cfs in above normal years, and 10,000 cfs in wet years.

No criteria in D-1485 other than a water quality standard (500 TDS) at Vernalis that is to be met by New Melones. I don't know what the flow requirements for that standard are.

Low level protection alternative:

- 1) Close the Delta Cross Channel gates from February 1 through April 30.
- 2) Install a barrier in Old River from April 1 through May 31 and September 1 through November 30.
- 3) Minimum flow at Rio Vista of 2,500 cfs from April 1 through June 30.
- 4) Minimum daily net downstream flow at Jersey Point in cfs:

Water Year Type	4-23 through 5-16	4-15 through 4-22 & 5-17 through 6-15
Critical	1,000	1,000
Dry	2,000	1,000
Below Normal	2,000	1,000
Above Normal	2,500	1,000
Wet	3,000	1,000

5) Maximum allowable CVP + SWP exports in cfs:

Year Type	Feb-1 through Mar-31	Apr 1 through Apr 22	Apr 23 through May 5	May 6 through Jul 31	Aug 1 through Jan 1
Critical	3,000	2,600	2,000	2,600	8,600
Dry	3,000	3,000	3,000	4,500	9,800
Below Normal	3,000	3,000	4,000	6,000	10,000
Above Normal	3,000	3,000	5,000	7,400	10,500
Wet	3,000	3,000	6,000	8,800	11,200

The annual amount of water that can be pumped, if the water is available, by year type is:

Water Year Type	Maximum Pumping Allowed 1,000,000's AF	% Shortages for CVP and SWP contractors south of the Delta
Critical	4.1	40
Dry	4.9	28
Below Normal	5.3	22
Above Normal	5.7	16
Wet	6.2	9

6) Minimum daily Delta outflow requirements in cfs:

Water Year Type	Apr thru Jul	Aug thru Dec
Critical	4,500	3,700
Dry	7,200	8,000
Below Normal	9,600	10,200
Above Normal	15,300	11,000
Wet	29,000	14,300

7) If the Delta outflow falls below the following minimums all diversions to storage and exports must stop (same as high level of protection alternative):

Year Type	Apr	May	Jun	Jul
Dry	11,400	11,400	9,200	9,300
Below Nor.	11,400	11,400	10,300	10,000
Above Nor.	16,300	18,100	14,200	11,900
Wet	22,000	29,000	21,000	15,000

Year Type	Oct	Nov	Dec
Dry			20,000
Below Normal		9,500	26,000
Above Normal		12,900	27,000

Wet 14,200 16,300 28,000

8) Maintain flow at Sacramento of 13,000 cfs from April 15 through May 31 in all years (same as high level alternative).

9) Minimum Vernalis flows same as high level of protection alternative.

Summary: The high level of protection is relative easy to evaluate. The CVP and SWP deliveries south of the Delta will average about 25% of the current level demand or less. Don't forget that I ignored DF&G's "off the wall" recommendations for Bay fish which would likely increase the negative impact of this recommendation on the water users of California (the people).

The low level of protection alternative recommended by DF&G (minimum action they think the Board should take) is more difficult to evaluate. Unlike the high level alternative, the export constraints are not so severe that all of the other recommended actions become irrelevant. Therefore, you would have to do studies to determine the impact of the outflow recommendations as well. That will be difficult because many of DF&G's recommendations are not well thought out from a project operations standpoint which they stated. Also we don't know how the obligation to meet the outflow obligations would be allocated. However, in my opinion the average delivery to SWP contractors would average 50% of the current demand, probably less, if DF&G's minimum recommendation were adopted by the Board.

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APR- 1-93 THU 10:11 SWROB-CLPA

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Dept:	Phone #	
Fax #	Fax #	

GOVERNOR PETE WILSON

April 1, 1993

Mr. John Caffrey
 Acting Chairman
 State Water Resources Control Board
 901 P Street
 Sacramento, California 95814

Dear Mr. Caffrey:

I had not intended to communicate with you prior to the Board's decision on D-1630, but feel compelled to do so now because of the actions of the federal government and statements made by federal officials at your March 22nd workshop. I extend my thanks to you, and the other board members for the tremendous energy which you have given to fulfilling my request that the Board set interim protection standards for the Sacramento-San Joaquin Delta.

I have every confidence that were you able to pursue my charge to the Board free of the constraints imposed by federal law and federal agencies, the result would advance the goals set forth in my statement of water policy in April of 1992.

The cornerstones of that policy and in fact the condition precedent to its implementation is state control and administration of all California's water resources, both state and federal.

Now regrettably, the federal government has made your completion of my request to you for interim standards all but impossible - or perhaps, more accurately, made it irrelevant. And, to judge by the stated intentions of the federal officials at the March 22nd workshop, there exists a threat of federal action that will so undermine essential elements of our comprehensive water policy as to make impossible its implementation.

My intent in requesting interim standards was to provide additional protection for the fisheries in the interval before we are prepared to put in place a permanent solution for the Delta to be recommended by the Bay-Delta Oversight Council (BDOC). Now, for all practical purposes, the two federal fisheries agencies have set interim standards under authority of the Endangered Species Act for protection of the Winter-run Chinook

APR- 1-93 THU 11:30 LODI NEWS-SENTINEL
 APR- 1-85 THU 10:12 SMCROB-DLPA
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Mr. John Caffrey
 April 1, 1993
 Page two

The National Marine Fisheries Service and the U.S. Fish and Wildlife Service, acting under the virtually unlimited powers of the Endangered Species Act, have set limitations on the operations of the Central Valley Project and the State Water Project. At the Board's workshop on March 22, 1993, federal government officials said that federal standards would build on the proposed D-1630, but might also go far further. Federal officials stated that anywhere from one to three million additional acre-feet beyond flows prescribed by D-1630 could be required by FEA to protect the Delta smelt.


So imprecise a statement gives rise to great suspicion as to the quality of the science being employed. Moreover, it is the ESA which permits the federal government to preempt the State in the allocation of water resources. The U.S. Supreme Court's interpretation of the Act makes clear that it is a blunt instrument that can't be used to achieve a judicious balancing of the needs of endangered species and of California's endangered economy. Instead, it has been interpreted as demanding that the needs of endangered species be pursued absolutely without regard for any other consideration.

In light of these events, I believe the wisest course is for the Board to turn now to the effort of establishing permanent standards for protection of the Delta.

It is my strong intention to return control of California's water allocation process to the State and to your Board. I believe the Board can provide a needed forum for resolving scientific questions and unresolved jurisdictional issues.

Regrettably, despite the diligent efforts of the Board, additional action by the State to provide interim standards at this juncture would serve only to increase the regulatory confusion surrounding this issue. What is paramount is that the State proceed to identify a permanent standard and a permanent solution for the Delta, which will permit all of California's major water-user groups -- urban, agricultural and environmental -- to enjoy assurances of adequate water resources as well into the 21st century.

Sincerely,



PETE WILSON

PR- 1-93 THU 11:31 LODI NEWS-SENTINEL
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GOVERNOR'S OFFICE

PR931247

GOVERNOR ASKS WATER BOARD TO STOP WORK ON INTERIM STANDARDS,
MOVE FOCUS TOWARD DEVELOPMENT OF PERMANENT REGULATIONS

FOR IMMEDIATE RELEASE
April 1, 1993

CONTACT: Kevin Eckery
Frank Winger
916/445-4571

SACRAMENTO--Governor Pete Wilson, citing "unacceptable" federal preemption of California water policy and the need to end short-term regulatory confusion, today asked state water officials to stop work on interim standards and shift their focus to establishing permanent standards designed to protect San Francisco Bay and the Sacramento-San Joaquin Delta.

The interim standards being worked on by the Board are moot, Wilson said, because federal agencies "for all practical purposes, have set interim standards under the authority of the Endangered Species Act."

"I believe the wisest course is for the board to turn to the effort of establishing permanent standards within the California Environmental Quality Act and parallel to the effort of the Bay-Delta Oversight Council," said Wilson.

The National Marine Fisheries Service and the U.S. Fish and Wildlife Service have both sought to exercise jurisdiction on state water matters based on the federal Endangered Species Act (ESA) and their efforts to protect winter-run salmon and the Delta smelt.

This competition for jurisdiction stands in sharp contrast to promising nature of state and federal efforts announced last week to protect the California quabotcher. That announcement was hailed in Washington and California as a model of government cooperation.

Federal biologists told the water board last week that the federal standards will go beyond those offered in the board's draft Bay-Delta decision, with possible water supply reductions of 1 to 3 million acre-feet to protect the smelt. According to the Department of Water Resources, water reductions of this magnitude represent more than half the water supplies jointly provided by the State Water Project and the Central Valley Project during a dry year.

APR--1-93 THU 12:00

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APR-1-93 THU 10:13 SHRCB-DLPA

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"This action by the federal government provides yet another illustration of why the Federal Endangered Species Act needs to be amended to take into consideration social and economic factors," said Wilson.

"It is my intention to conduct hearings in California in an effort to form a consensus around needed changes to the Endangered Species Act," said Wilson. "I call on President Clinton to join me in proposing common sense revisions to the Endangered Species Act."

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SWRCB Meeting – Remarks:

This is an auspicious moment for California water and for the Delta, ~~the most important estuary on the west coast of the Americas.~~ ^{most important estuary} Because the public trust flow analysis you are beginning today – without exaggeration – could very well be the lynchpin to saving the Delta from its current ecological freefall.

Last year, as part of the historic water policy reform legislation, the Legislature mandated that the State Board undertake a unique and rather unprecedented task – under its public trust authority, SWRCB is required to determine, in an accelerated, focused proceeding, the instream flows necessary to protect the Delta's fish and wildlife resources. As one of the authors and negotiators responsible for this legislation, I wanted to be here this morning to underscore the importance of the work on which this board and your staff are embarking today, to provide some context, and to very specifically remind you and the stakeholders who are present today of the legislative charge that has been given.

As you all know, the State holds the fish and wildlife of the Bay-Delta estuary in trust for its Citizens. Unfortunately, that public trust has not been well kept. For the first time in the history of this great state, our salmon returns were so low that the entire fishery was closed – for two consecutive years, and this year doesn't look much better. Populations of native fish that once thrived in the delta have crashed, requiring numerous listings under the state and federal Endangered Species Acts. There is plenty of blame to go around – various agencies and institutions ^{our trustee agencies and} ~~of the state and federal government entrusted with protecting the Delta,~~ ^{have} instead allowed it to spin into a death spiral under their watch; the legislature failed to act until a third consecutive drought year elevated the Delta's ecological crisis to a political imperative; and many, many other interests – whether through water diversions, discharges of pollutants, or any number of other activities – contributed their share to the demise of the Delta environment.

~~not about pinning blame, its~~
This historic proceeding is an opportunity to make amends, and to carefully determine the needs of fish and wildlife in the estuary to inform future plans and proceedings – so that regardless of our failures to uphold the public trust in the past, going forward we can get it right.

As you know, the Legislature's efforts last year were strongly influenced by the Delta Vision Strategic Plan. The legislation itself, as well as the legislative history – starting with the informational hearing I convened a year ago, and continuing with the various drafts of what became the Delta Restoration Act – make that very clear.

And a key conclusion of Delta Vision was that protecting salmon and other public trust resources in the Delta will likely require greater flows – particularly in the Spring and Fall. There is a wealth of new scientific information on the Delta that has been generated since Decision 1641, and I am encouraged that the Board will be carefully considering this scientific information and considering the information provided ^{by} expert fishery agencies, as well as stakeholders.

Ultimately, this proceeding is critical to the success of that Legislative package and related processes, ^{including} ~~like~~ the Bay Delta Conservation Plan, which is awaiting your guidance on the “volume, quality, and timing of water necessary for the Delta ecosystem under different conditions.” Toward that end, I would emphasize the following points:

1. PROCESS:

- a. This was specifically intended to be an informal, informational process -- NOT a formal adjudicatory proceeding. Time is of the essence. My legislative colleagues and I designated this as a 9-month informational proceeding so that the **Board could develop public trust flow criteria in time to shape key assumptions and decisions in the BDCP.** The expectation is that the board will allow public participation, but will also do its own homework and utilize the considerable body of **available scientific information in developing these flow criteria.**
- b. Some stakeholders may urge you to adopt all of the trappings of a more formal evidentiary hearings – including sworn testimony, cross-examination, rebuttal, etc. They urged us to require these things too – and we said NO. If Legislature had wanted a formal adjudicatory process, I assure you the legislation would have been written very differently – and the flow criteria resulting from the proceeding would have been legally binding.

2. SUBSTANCE and SCOPE:

- a. **Your charge from the Legislature is to weigh in on public trust flow needs of the Delta ecosystem.** We’ve had proceedings and studies looking at particular pieces of the picture – single species requirements under ESA, various water quality parameters, salmon doubling, etc. In this case, however, the Legislature is ^{asking for} ~~directing the Board to look at the broad ecosystem health needs of the estuary.~~

Something more - not about trying to avoid ~~take or~~ extinction for the smelt, or a particular salmon run, or minimum standards for a certain use - This is about looking at the broad ecosystem health needs of the estuary - it brings fish & wildlife back to good condition.

~~We are broad in your public trust charge,~~
b. In that regard: I'm glad the board intends to look at Delta outflows. However, your inquiry should not be limited to just that. Because your charge is to develop flow criteria necessary to protect the public trust resources of the whole estuary, you will also need to consider information regarding flows coming into the Delta from both the Sacramento and San Joaquin Rivers.

c. Lastly, I'm glad to see the Board is reserving to itself the right to exclude information that is not relevant to the proceeding. Frankly, that is the only way you can complete the ambitious task of developing these public trust flow criteria within the time allowed. In that regard, it's important to remember that this proceeding is not about water rights or operations. The legislation is clear that no changes to anyone's water rights may occur without the full array of procedures to which water rights are entitled under current law. There may be future proceedings where the Board ^{grapples w/ the interplay b/w} attempts to reconcile public trust flow needs ~~with~~ ^{and} water rights, or operational issues, but that is not within the legislative charge you have been given here.

Thank you for the opportunity to address the board this morning. It is indeed an auspicious moment for the Delta ecosystem, and I have every confidence that this board and your capable staff will fulfill the duties that have been entrusted to you by the legislature. If I can be of any assistance to you in the critical months ahead, please let me know.