

**State of California  
The Resources Agency  
Delta Vision Committee**

Tuesday, July 31, 2007 Public Meeting  
Resources Building  
1416 Ninth Street, Room 1131  
Sacramento, CA

**Meeting Summary**

**Delta Vision Committee Attending:**

Mike Chrisman, Chair, Secretary for Resources  
Marjorie Berte, Undersecretary, Business, Transportation and Housing  
George Gomes, Deputy Director, Department of Food and Agriculture  
Linda Adams, Secretary, Cal-EPA  
Paul Clanon, Executive Director, California Public Utilities Commission  
John Kirlin, Executive Director, Delta Vision

**Honored Guests:**

Richard Frank, Delta Vision Blue Ribbon Task Force  
Jeff Mount, Ph.D., Delta Vision Science Advisor  
Jerry Johns, Deputy Director, Department of Water Resources

**Welcome and Introductions**

Secretary Chrisman began the meeting by welcoming the committee members and those attending and asked all to introduce themselves. After the introductions, Secretary Chrisman briefly reviewed the charge to the committee in the Governor's Executive Order; he also said that the work taking place, including efforts by the Blue Ribbon Task Force and the Stakeholder Coordination Group, is critically important to meet the ambitious deadline set out in the Executive Order.

At the Chair's request, John Kirlin, executive director of Delta Vision, gave a brief update: The Delta Vision process is at its midpoint, and the Blue Ribbon Task Force anticipates completing their recommendations by November 30. The Stakeholder Coordination Group continues to work on their visions that will be considered by the Task Force. Director Kirlin also handed out copies of "Delta Blues, California Style," an article from the July issue of *Science* magazine.

Secretary Chrisman thanked all of the presenters to the committee for being there and asked committee and audience members to feel free to ask questions at any time.

## **Update on Delta Vision Process: Blue Ribbon Task Force**

Blue Ribbon Task Force member Richard Frank, at the request of its chair, Phil Isenberg, gave the committee an update of the Task Force and its work.

Beginning with its first meeting in March, the Task Force has had six full days of meeting, including the recent two-day meeting in Antioch. The Task Force felt it was important to have one of their meetings in the Delta. The Stakeholder Coordination Group, in a parallel path, has had 11 days of meetings, and they are having a critical meeting August 1 and 2 in Stockton. The Task Force expects to receive two or three visions from the Stakeholder Coordination Group, as well as some recommendations for changes to water operations and upstream changes.

The Task Force also issued an invitation to the public to submit their visions; the deadline was last week and six or seven visions were received, ranging from 50 pages to 1 page. Staff is analyzing the various visions and the Task Force will provide a summary to the Delta Vision Committee.

As the Task Force moves forward, they will also consider key concepts from other initiatives such as the Public Policy of California's report, the Delta Risk Management Study report, the Bay-Delta Conservation Plan report and the Ecosystem Restoration Program's Conservation Strategy. The committee will be best served by the synthesis of these processes that the Delta Vision staff is preparing.

The key point is that the Task Force is well underway to completing its charge.

The next Task Force meeting, at the end of August, the heavy lifting will really begin. From March through July, most of the Task Force meetings were informational; at the next meeting the Task Force some information will be presented and the Task Force will start talking and charting the vision amongst ourselves. We anticipate having the recommendations in conceptual form by November 30 and meeting the January 1 deadline of a report to the committee.

Secretary Chrisman asked Mr. Frank to characterize the comments and conversation he has been hearing in terms of people's understanding of the Delta's sustainability and the complexity of the Delta.

Mr. Frank said that he has been involved in the Delta for about 30 years, and there is a major change in the type of comments he is hearing in the Delta Vision meetings. Past comments have been polemic or positional, but the commentary now is far more factual and detailed. Now there seems to be a working consensus that the status quo is not working and the conversation is not about how to maintain the status quo, but what kind of future is most beneficial to the myriad concerns of the many constituencies. Mr. Frank credited the PPIC report

with changing the conversation, and reiterated that the debate and commentary is more factual and focused than it has been.

Director Kirlin agreed with Mr. Frank that there is a lot of concreteness to the comments, and that no one is saying that the Delta can continue on the way it is going now. The other situation is that the Delta Vision is one of three active processes: Delta Risk Management Study and Bay-Delta Conservation Plan are also taking place concurrently with the Delta Vision process. This creates a bit of diffusion, and Delta Vision is trying to articulate what those other efforts are doing and to make certain that what comes out of the Delta Vision will work well with the other processes.

Dr. Mount, Delta Vision science advisor, said that two-and one-half or three years ago, this conversation would not have happened because it would have focused on keeping the Delta as it was. This is an extraordinary opportunity, and he hopes we take advantage of it.

Jason Peltier, representing Westlands Water District and a member of the Stakeholder Coordination Group, said that the group is working hard on two different visions of the Delta, and he wanted to make sure that people's expectations of these work products were appropriate. The visions are "visions"—they are not modeled or tested—they are new ideas, new packaging on some ideas, and new ways of looking at things. It is important to recognize, he said, that no one has reconciled the 50,000 foot view with on-the-ground efforts. Mr. Peltier said, to reiterate, that this is the broad view. Some people think there is a hierarchical system, but there is not; and some think that all of the ideas will mesh, but that isn't necessarily the case. To illustrate his concern, he told the story of how, when sailing, if you are one degree off, at first it doesn't seem like such a big deal, but by the end of a 100 mile trip, you can be way off course.

Director Kirlin said that there will be uncertainty even in September and October about what these things mean, and all of this work is preparatory to developing a Strategic Plan, etc. It is critical for people to understand that this is the first year of what will be a several year effort, and there will be several opportunities to agree and disagree, to fight, and to come to consensus.

### **Information Being Brought Into Delta Vision**

The next presenter was Dr. Jeff Mount. In addition to being one of the Delta Vision science advisors, Dr. Mount is chair of the CALFED Independent Science Board. He was giving the presentation for Dr. Mike Healey, who drafted the "Ecological Principles to Guide Delta Vision." There are 12 guiding principles to guide the Delta Vision, some of which are statements of the obvious and often challenge thinking about the status quo.

*First principle:* The physical environment (hydrology, climate, chemistry, landforms) of the Delta establishes the template within which the ecosystem mosaic is formed.

What this means from the policy implication point of view is that the current physical template is not sustainable, and at the top of the list is the ecosystem. It also means that we probably cannot fix the Delta without physical modifications of the system.

*Second principle:* The natural environment of delta/estuaries is dynamic and variable and the organisms that live there are adapted to that variability.

What this means is that dynamic conditions favor native species. Change is good; stasis is not. In terms of managing estuaries, this means recognizing and promoting that change.

*Third principle:* Climate and weather are primary drivers of the physical environment of the Delta/estuary, and climate is becoming warmer, drier, and more variable.

What this means is that with climate variability, management must be robust to meet these changes. This means changes about timing of flows, temperatures, etc. Presently, the management is not adaptive enough to make those changes.

*Fourth principle:* Individual species have particular tolerances for temperature, salinity, etc., that have changed in the past and will continue to change in the future to the point that they exceed some species tolerances.

This seems pretty obvious, that individual species have differing tolerances to ranges of salinity, etc. The Delta smelt, for example, has a narrow tolerance range. The point here is to maintain the biodiversity of the Delta.

*Fifth principle:* Humans and human created landscape units are integral to the ecosystem mosaic of the Delta and have profound influence on the overall ecosystem dynamics.

What this refers to is the management of human activity. Some have the magical view that if we remove people from the Delta, then everything will be better, but humans are integral to the Delta—the Delta is people as well as fish and land, etc. We can manage things differently, however.

*Sixth principle:* Green plant production drives ecological production in the Delta. Local plant production is the most important food source in the estuary but aquatic plant production is unusually low.

What this means is that the Delta is hurting for food. Photosynthesis in the Delta is most important for species of concern.

Is the low productivity of the Delta because it is now being managed as a freshwater system rather than a variable system? Dr. Mount said no, the issue is that water needs to stick around in the Delta, and how to do this to improve primary productivity is a question to answer. The seventh principle is closely related to this, and could be lumped together with the sixth principle.

*Seventh principle:* There are various pathways through which green plant production can sustain the food web. In the aquatic ecosystems of the Delta, an inefficient path through microbes is the most common path.

What this means is that plant production moves through the food web, to the highest predator. It is complicated, and includes microbial organisms. The question here is how to improve and shorten those pathways.

*Eighth principle:* “Keystone” species in an ecosystem have effects that cascade through the food web and determine structure. Humans often act as a keystone species.

What this means is that keystone species, including people—a top predator—change the food web and that management of the keystone species will affect the entire ecosystem, whether it is striped bass or humans.

*Ninth principle:* The dynamics of individual species is determined by the balance of births and deaths.

What this means is that there is that not killing smelt is only half the equation, they need to successfully have babies too. You have to be born to die.

*Tenth principle:* The estuary/delta is a mosaic of terrestrial and aquatic ecosystems that interact in important ways.

This means how you plan is going to be very important. We tend to view the Delta as a bunch of pipes without recognizing that the terrestrial and aquatic ecosystems are linked. From a management perspective, we’ve been looking at the Delta as if these two were removed from each other, like it was a homogenous system. We need to restore the mosaic and connectivity—the exchange of energy and organisms between the two.

*Eleventh principle:* Invasive species are capable of disrupting ecosystem processes and can have serious negative effects on native species.

There is no happy story here with invasive species. Invasive species will continue to bedevil us; some suggest that this estuary is the most invaded. That may or

may not be accurate, but it certainly well studied and is highly invaded and is prone to invasions because of how we use the estuary. The question is how we establish a good invasive specie management plan that includes reducing the arrival of invasive species, aggressively attacking them when they arrive, and long-term management to eradicate them when they become established. There is a new invasive species about every two weeks.

*Twelfth principle:* Ecosystems are complex, dynamic, and self-organizing. The Bay-Delta ecosystem is human dominated and any sustainable vision needs to incorporate both its human and the non-human dimensions.

What this means is that natural systems will self-organize, but this system and past policies have locked this system in place. The question is how to restore dynamic self adjusting behavior when the policy is to force it to keep static.

Secretary Chrisman said that the last point, about restoring a dynamic, self-adjusting system, is clearly the big challenge given the situation today. He asked Dr. Mount for his perspective of the available options.

Dr. Mount replied that over the last few weeks, the Ecosystem Restoration Program has released some information about is conservation plan and it recognizes the idea of gradients, which are critical to a dynamic ecosystem. He does not think the situation is hopeless, if the system has the opportunity to reestablish gradients and variability. Some locations will reestablish the ability to self-adjust, for example, Suisun Marsh and the North Delta. Determining what areas could self-adjust is something Delta Vision will need to sort out.

Mr. Gomes said that the self-adjusting Delta was at a time when it was not used to transfer water between northern and Southern California. How can the Delta be both self-adjusting and a place of water transfer?

Dr. Mount said that was the fundamental question facing everyone in the room, and people are working hard to answer that.

Jerry Johns, deputy director for the Department of Water Resources, gave the next presentation, entitled "Alternative Delta Conveyance as Part of a Comprehensive Bay-Delta Conservation Plan."

Mr. Johns said that water conveyance is a big part of what happens in the Delta and the State, and that the Delta is many things to many people. In the past the policy was to keep it static, but everyone realizes now that doesn't work. The CALFED Bay-Delta Program tried to keep the Delta sustainable and keep through Delta water conveyance, but there is still the pelagic organism decline and other problems. The Delta is ever changing, and those changes make it challenging to sustain the Delta.

The focus of this presentation is the tension between water supply and fisheries, but other threats to the Delta include: seismic issues, sea level rise, subsidence, random levee failure; and drinking water quality concerns.

The decline in the Delta smelt population is one of the many other organisms that are also of concern, such as threadfin shad, striped bass, and longfin smelt. There are also many other organisms, such as zooplankton, to consider as well.

The Interagency Ecological Program (IEP), funded by the Department of Water Resources and the U.S. Bureau of Reclamation, first noticed the pelagic organism decline (POD) in 2005. Since then, about \$25 million a year has been spent studying the POD by the IEP, along with the CALFED Science Program, State Water Project and Central Valley Project.

Fish abundance—the birth rate as well as death rate—of fish is affected by many factors such as: fecundity, invasive species, food availability, predation, water supply and water quality. The key is to tease apart all of these factors to find out what is really affecting the fish.

Mr. Johns said that the phytoplankton crash coincides with the *Corbula* clam invasion. The *Corbula* clams filters water at an incredible rate, about the size of Suisun Bay in less than a day. This is likely a reason why the estuary is not getting the primary production as it has in the past. Even though the clams are a saltwater species, they can and do withstand fresh water flows.

Zooplankton species in the Delta have been replaced several times from different invasive species, but for the most part, still were a source of food. However, the last invasive zooplankton, from mid-1990's, is not a good source for the native pelagic organisms.

Timing of water deliveries and toxicity from herbicides and fertilizers are also an issue with POD. Water project operations, for example, create a reverse flow on the Old and Middle rivers that bring the Delta smelt down to the pumps, rather than pushing them away from the pumps.

The Delta is a complex system that is changing, and there needs to be a holistic approach to fixing it. The Bay-Delta Conservation Plan is looking at four options to convey water that works with the natural system.

Mr. Peltier said that invasive species have been at the top of the list of Delta problems for decades. He asked where is the concentrated body of work regarding invasive species? Perry Herrgesell, from the Department of Fish and Game, said that there is not a lot being done to study the invasive species problem, most of the work is focused on after a species is introduced.

Secretary Chrisman said that dealing with invasive species is critical, and momentum has been lost largely due to budget constraints. Invasive species control is phenomenally expensive; prevention is clearly the most cost effective, but that has also been pushed aside for other public policy concerns. It seems that the policy is to ask, "What do we do with an invasive species when we get it?" We tend to deal with invasive species on a species-by-species basis.

Mr. Johns added that the Delta no longer has the big, flushing flows like it did in the 1920's. Dr. Mount said that larger issues have subsumed the issue of invasive species, and science, for its part, has been hamstrung in its ability to make large scale experiments to address this issue; hopefully the issue of invasive species management will get elevated as part of the Delta Vision process.

An audience member asked Mr. Johns what effect a peripheral canal would have on water quality. Mr. Johns said that the engineers needed to look at the numbers, so he really couldn't say, but Contra Costa Water District may need to move its intake.

### **Public Comment**

Secretary Chrisman asked for other questions. None were forthcoming. He thanked all the presenters and reminded people that the next Delta Vision Committee meeting is September 18.