

**PROTECTING SACRAMENTO/SAN
JOAQUIN BAY - DELTA WATER
SUPPLIES AND RESPONDING
TO CATASTROPHIC FAILURES
IN CALIFORNIA WATER DELIV-
ERIES**

OVERSIGHT HEARING

BEFORE THE
SUBCOMMITTEE ON WATER AND POWER
OF THE
COMMITTEE ON RESOURCES
U.S. HOUSE OF REPRESENTATIVES
ONE HUNDRED NINTH CONGRESS
SECOND SESSION

Thursday, April 6, 2006

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**OVERSIGHT HEARING ON “PROTECTING
SACRAMENTO / SAN JOAQUIN BAY - DELTA
WATER SUPPLIES AND RESPONDING TO
CATASTROPHIC FAILURES IN CALIFORNIA
WATER DELIVERIES”**

**Thursday, April 6, 2006
U.S. House of Representatives
Subcommittee on Water and Power
Committee on Resources
Washington, D.C.**

The Subcommittee met, pursuant to call, at 10:05 a.m. in Room 1334, Longworth House Office Building, Hon. George Radanovich [Chairman of the Subcommittee] presiding.

Present: Representatives Radanovich, Pombo, Napolitano, Calvert, Costa, and Cardoza.

**STATEMENT OF THE HON. GEORGE P. RADANOVICH, A
REPRESENTATIVE IN CONGRESS FROM THE STATE OF
CALIFORNIA**

Mr. RADANOVICH. The Subcommittee on Water and Power will come to order.

The Subcommittee is meeting today to hear testimony on protecting Sacramento/San Joaquin Bay-Delta water supplies and responding to catastrophic failures in the California water deliveries.

I want to welcome everybody to today's hearing. And I would especially like to welcome the many who are here with the San Joaquin County Council of Governments.

As we learned from the Jones Tract levee failure, all of California's water supplies are very vulnerable to disruption. Hurricane Katrina was a stark reminder of what could happen in the Delta and to the 22 million Californians who depend on it. In fact, my district depends on water pumped from the north, so it is safe to say that what happens in the Delta doesn't always stay in the Delta.

This Subcommittee held a hearing on ways to protect our state's water supplies from catastrophic disasters in October of last year. We determined our vulnerabilities and the state of our infrastructure. We also learned that we should leave everything on the table as it relates to controlling floodwaters.

We have a host of potential solutions to pursue, including a new or added water storage, levee improvements, streamlined work

when health and human safety is compromised, and others. And as a result, we have a draft roadmap that the Corps of Engineers has put together to help rebuild levees and the Bureau of Reclamation continue to update its studies on new storage. But we still have much to do, and that is what this hearing is all about.

You will hear today from a host of Federal, state, and local agencies who are charged with protecting our regions from floods and their destructive effects. They are also on the front lines of responding to a levee break.

The goal this morning is to be proactive in understanding the chain of responsibility in the event of a natural disaster. We want to learn from Katrina and ensure that California is well-prepared to address a flood situation or other disruption. We owe the people of California answers and results, especially when it comes to protecting their livelihoods and property.

Today's hearing is an important part of meeting that goal. And with that, I look forward to hearing from today's very qualified witnesses, and also from my colleagues.

I now defer to Full Committee Chairman, Richard Pombo, for his opening statement. Richard.

[The prepared statement of Mr. Radanovich follows:]

**Statement of The Honorable George Radanovich, Chairman,
Subcommittee on Water and Power**

Welcome to today's hearing. I would especially like to welcome the many who are here with the San Joaquin County Council of Governments.

As we learned from the Jones Tract levee failure, all of California's water supplies are very vulnerable to disruption. Hurricane Katrina was a stark reminder of what could happen in the Delta and to the 22 million Californians who depend on it. In fact, my district depends on water pumped from the north, so it's safe to say that what happens in the Delta doesn't stay in the Delta.

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The goal this morning is to be pro-active in understanding the chain of responsibility in the event of a natural disaster. We want to learn from Katrina and ensure that California is well-prepared to address a flood situation or other disruption. We owe the people of California answers and results, especially when it comes to protecting their livelihoods and property. Today's hearing is an important part of meeting that goal. With that, I look forward to hearing from today's very qualified witnesses and from my colleagues.

STATEMENT OF THE HON. RICHARD W. POMBO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. POMBO. Thank you, Mr. Chairman. I will be brief, and enter my entire statement into the record.

I want to thank you for holding this hearing today. And I would especially like to welcome the many folks from San Joaquin County who joined us here today. I look forward to hearing from San

Joaquin County Supervisors Jack Sieglock and Victor Mow, and Stockton Vice Mayor Gary Giovanetti on what is a very important issue.

I think most of us know that in the last several days we have had heavy rain in California. It has caused several small levee breaks, but more rain is expected. So far we have been able to avoid any major levee breaks or failures in the Delta. But with seven days of this projected rain coming, it is going to be a long week for us.

This is, I believe, the fourth hearing that we have held on the levee system in California on the San Joaquin Delta, and it is a problem that is getting more attention from other Members of Congress. But it is time that we did something about it. So I appreciate you holding this hearing today. And I yield back my time.

[The prepared statement of Mr. Pombo follows:]

**Statement of The Honorable Richard Pombo, Chairman,
Committee on Resources**

I commend Subcommittee Chairman Radanovich for holding this important hearing. Today's proceeding is yet another hearing on the Bay-Delta. It's the third in the last month alone.

I would especially like to welcome the many folks here from San Joaquin County who have taken time out of their busy schedules to attend this hearing. We are also fortunate to have San Joaquin's Supervisors Jack Sieglock and Victor Mow and Stockton's Vice Mayor Gary Giovanetti who will provide their expertise to the Subcommittee today. I commend you and the other San Joaquin COG folks who have traveled across our great Nation to be part of this process.

The Delta is something special for all of us. It serves as a recreational and environmental treasure, a vital part of our shipping and transportation links and drinking and irrigation water source to millions of Californians. Most importantly, it serves as our home, our backyards where generations of us continue to live and work.

The Delta is also one of the most flood-prone areas in the world. In recent days, heavy rains in California have caused several small levee breaks. More rain is expected in the coming days, adding to an already strained system. Fortunately there have not been any serious breaks so far this year. However, under current conditions, it is not a question of "if" there will be a serious failure but "when." This is unacceptable.

Since this Subcommittee's hearing on levees last October, we have made progress on turning this situation around. We secured appropriations and we now have a Corps of Engineers draft plan in place to begin the long process on repairing our levees. This is the first of many steps that we will have to take to secure our levees.

I would also like to commend Chairman Jerry Lewis for committing to work for more critical funding in this year's Energy and Water Appropriations bill. I appreciate his willingness to put this year's bill on an accelerated schedule, so that we can begin work as soon as possible.

While we take those steps, governments at all levels must be prepared to respond to an unthinkable, but very possible massive levee failure. As we witnessed during the Jones Tract levee failure in 2004, there was some confusion in terms of what agencies should respond and how. The appropriate agencies adapted, overcame and performed well, but that initial confusion was an eye opener for many of us. And we all know about the chaos surrounding Hurricane Katrina.

We have an opportunity—and a serious responsibility—to be fully prepared if the Delta levees fail. That's why Senator Feinstein—who has been with me on this issue from the beginning—and I recently sent a letter to the Department of Homeland Security, FEMA and the State of California's Office of Emergency Services to ask for a comprehensive and coordinated emergency preparedness plan specific to the Delta. Human life, property, the environment and the future of California depend on such a plan.

Ways to maintain and rebuild our levees, provide more flood control through storage and emergency preparedness will be our focus for this hearing. We will not solve everything today, but this hearing represents another step towards protecting our region its people and its way of life. I commend you, Chairman Radanovich, for

holding this important hearing and look forward to hearing from our distinguished panels of witnesses.

Mr. RADANOVICH. Thank you, Mr. Chairman. I will now recognize the distinguished Ranking Minority Member, Grace Napolitano, for any statements that she may have.

Grace.

STATEMENT OF THE HON. GRACE NAPOLITANO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA.

Ms. NAPOLITANO. Thank you, Mr. Chairman. And as you and Chairman Pombo have so rightly put it, the rains are making us very nervous, not a little nervous, but very nervous, because of course, in Southern California, we rely on the levees.

We really have not paid as much attention to the Delta as we should have, and Katrina has forced all of us to really understand what can happen, reality, and that the Delta levees play a significant role in the water delivery for all of California. Of course, we all know Southern California relies upon about a third of that water to come through those areas.

And I do know that the local governments are the ones on the front lines, and I believe that they are here as witnesses this morning. And I certainly want to let them know that I have been a helpful government official, and I know from experience how we must try to be accountable to the citizens we represent.

But at the same time, it is hard to get the attention of state and Federal agencies as to the urgency of the matter. And I welcome you to the hearing, and hope that this will convince our agencies to act more sufficiently.

Mr. Chair, I thank you, and I look forward to the testimony.

Mr. RADANOVICH. Thank you, Grace.

Before we get on with the other opening statements, as we all know, it is raining very heavily in California, and it looks like it is going to continue. It is going to be an interesting spring. And I think because of that, it has made this hearing a little more timely. And because of that, we have got more people in the room than would probably normally be here.

I want to invite some of the folks that are standing, if you want to use this lower dais to sit down and listen to the hearing, you are more than welcome to use it. Just don't think that you can ask questions of the panel when we get to questions. But just to provide some seating, if you would like to take advantage of that, please feel free to do so.

I now recognize the honorable past Chairman of this Subcommittee, Mr. Ken Calvert. Ken.

Mr. CALVERT. Mr. Chairman, I would love to hear from the witnesses.

Mr. RADANOVICH. Thank you, thank you. Mr. Costa.

STATEMENT OF THE HON. JIM COSTA, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. COSTA. Thank you very much, Mr. Chairman. I think it is appropriate and timely that the Subcommittee is holding this

hearing this morning, given the recent six weeks of rain. It is either feast or famine in California.

In January, we thought we might be looking at a dry year, or below average. And now in the last six weeks, we are not only above average, but we have had the potential threat of floods, and we have had some minor levee breaks.

And, therefore, I was pleased to find that the Bureau of Reclamation, Mid-Pacific Region, along with the Department of Water Resources and the Army Corps of Engineers, has reconstituted their triage team to provide sort of an instant response if they can, coordinating the different water projects to protect against potential flooding.

The title of this Subcommittee hearing today is protecting the Bay Delta Water Supplies and Responding to Catastrophic Failures in California Water Deliveries.

I am not only interested in the current situation that we are dealing with, as all of the Members have noted, but I am also interested in the long-term investments. I know we have an infrastructure bond measure that the legislature and the Governor are contemplating and a number of us have signed to ensure that we work together to develop a bipartisan influence to respond to not just needs of the Sacramento/San Joaquin Valley areas but the entire State of California.

Congresswoman Napolitano noted that there have been significant flooding issues in Southern California, but there is also a significant importance to that Northern California water coming down to Southern California as part of the blend of water supplies in Southern California. Therefore, the Delta is the linchpin of our plumbing system.

You know, when we look at levee restoration efforts, and I have been a part of an effort for 20-some years to provide state funding for Delta levee restoration, I think what I am going to be very interested to hear from the witnesses is whether or not there has been a cost benefit analysis done as it relates to a number of the levees. They are not all Federal responsibilities; some are state responsibilities, some are local responsibilities.

Jones Tract, I believe in the Tennessee area, broke last year. It is about 8,000 acres of land, it cost \$100 million to repair that. It just seems to me that when we are looking at investing for protection, that we need to look at whether or not, in fact, some of the areas might be a better investment to pay fair market value and purchase the land, as opposed to investing in levees that ultimately will degrade.

The University of California, Davis produced a study earlier this year that demonstrated that if there was a 6.5 earthquake in that area, that most of the Delta area would, as a result of liquefaction, turn to Jell-O. And therefore, all of that investment would be for naught.

And so it seems to me we ought to be as wise in terms of how we do the restoration effort, and we ought to have good input and cooperation with our state counterparts as we look at a major infrastructure bond that involves not just flood control protection.

But I was speaking to Congressman Cardoza yesterday on the Floor, and I said it would be nice if we could visualize, as the

debate is taking place, to recreate what that part of California would look like today if there were no dams, reservoirs to protect it, not only for flood control, but also provided water supplies. And this notion that it is either yes or no makes absolutely no sense. They would be in a rowboat going to the State Capitol if it weren't for the infrastructure that exists there now, and we need to be mindful of that fact.

So I look forward to the testimony, and I look forward to asking questions of the witnesses. Thank you very much.

Mr. RADANOVICH. Thank you, Mr. Costa. Mr. Cardoza.

STATEMENT OF THE HON. DENNIS CARDOZA, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. CARDOZA. Thank you, Mr. Chairman, for convening this hearing for items that have purpose and meaning.

Both Chairman Pombo and I represent portions of the Delta that have become increasingly concerned over the years about the state of our levees and the lack of response should an emergency occur within the Delta itself or the Bay area.

When the next earthquake occurs, the Valley will be the Baton Rouge of California. And therefore, it is critical that we continue to meet regularly with local, state, and Federal agencies to work toward repairing the levees and developing an emergency response plan.

That need has been made even more clear in the recent rains, which have further weakened the levees and caused severe flooding in parts of the Valley this week. In fact, it has been brought to my home, where 150,000 people were evacuated.

Whether a major breach will occur is no longer even a question; the question is when it will occur, and will we be prepared to handle it. The entire levee system in the San Joaquin Valley has never been upgraded, even after the floods of 1979, which caused millions of dollars in damage.

After those storms, numerous breaches along the San Joaquin River were repaired, but never upgraded. Instead, the California and Sacramento and San Joaquin River Basin Comprehensive Study was initiated, but never even completed. As a result, the system remains an unmanageable combination of private, state, and Federal levees, with no single agency taking responsibility for addressing the problem.

In order to convey the magnitude of this problem, I would like to mention a few statistics. Two-thirds of the state population, many in Southern California, receive a portion of their drinking water from the Delta. Fifty percent of California agriculture, seven million acres, receive water from the Bay Delta system. The Central Valley is the number one ag-producing region in the world. Clearly a major breach would be catastrophic, not just for the Valley, but for the rest of California, and especially Southern California as well.

We would have a real problem on our hands. And while the focus of Federal funds has primarily been in the Sacramento region, fresh drinking water into agriculture and the nationwide economic impact of a disaster response would clearly indicate that the time

has been significantly upon us to upgrade the levees and formulate a plan to deal with emergencies.

I would also like to note that it begs the question why aren't we focusing more heavily on the increasing surface storage capacity of the Valley? We need more surface storage capacity.

This week is a perfect example of what we could have done if we had had availability. We should have filled that reservoir up, and we could have had several years worth. We could have had availability. As we see the snow-pack is here and it has gone well beyond 100 percent, 150 percent of average, we must be able to preserve that water.

Mr. Chairman, thanks again for holding this hearing.

[The prepared statement of Mr. Cardoza follows:]

Statement of The Honorable Dennis Cardoza, a Representative in Congress from the State of California

Thank you, Mr. Chairman, for convening this hearing on an issue that urgently needs attention.

Both of us represent portions of the Delta and have become increasingly concerned over the years about the state of the levees and the lack of a response should an emergency occur within the Delta itself, or in the Bay Area.

When the next earthquake occurs, the Valley will be the "Baton Rouge" of California. Therefore, it's critical that we continue meeting regularly—with local, state and federal agencies—to work toward repairing the levees AND developing an emergency response plan.

That need has been made even more clear by the recent rains which have further weakened the levees and have caused severe flooding in parts of the Valley this week.

Whether a major breach will occur is no longer even a question. The questions is when will it occur and will we be prepared to handle it.

The entire levee system in the San Joaquin Valley has never been upgraded, even after the floods of 1997, which caused millions of dollars in damage. After those storms, the numerous breaches along the San Joaquin River were repaired, but never upgraded.

Instead, The California Sacramento & San Joaquin River Basin Comprehensive Study was initiated but never completed.

As a result, the system remains an unmanageable combination of private, state and federal levees, with no single agency taking responsibility for addressing the problems.

In order to convey the magnitude of this problem, I'd like to mention a few statistics:

- 2/3 of the state's population (many in southern California) receives a portion of their drinking water from the Delta
- 50% of California agriculture—7 million acres—receives water from the Bay-Delta system.
- The Central Valley is the number 1 ag producing region in the world.

Clearly, a major breach would be catastrophic not just for the Valley, but for the rest of California—and especially southern California—as well.

We have a real problem on our hands.

And while the focus of federal funds has primarily been in the Sacramento region, the threat to drinking water and agriculture—and the nationwide and economic impacts a disaster would cause—clearly indicate that it is time to spend significant resources to upgrade the levees and formulate a plan to deal with an emergency.

I would also like to note that this begs the question—why aren't we focusing more heavily on increasing surface storage capacity in the Valley?

As we speak, the snowpack in the Sierra has gone beyond 150% of average. Not only should this water be preserved, surface storage projects would go a long way toward alleviating flooding.

For too long irrational and unworkable environmental regulations have prevented storage projects from being built and levees from being repaired.

It is time to take a serious look at these policies that have strangled our ability to address these issues.

I look forward to hearing from our constituents as well as the state and federal agencies on where we stand and their plans to proceed.

Thank you

Mr. RADANOVICH. Thank you, Mr. Cardoza. I appreciate your opening statement.

There being nobody else to give an opening statement, we will refer to our first panel. I want to welcome The Honorable Jack Sieglock, San Joaquin County Supervisor from Lodi, California; The Honorable Victor Mow, Supervisor of San Joaquin County in Stockton, California; The Honorable Gary Giovanetti, Vice Mayor of the City of Stockton; and Mr. Jonas Minton, Senior Project Manager of the Planning and Conservation League.

Gentlemen, welcome to the hearing. What we will do is hear from each of you, and then open up the panel for questions from the dais up here.

We do have a five-minute clock. Now, your written testimony is submitted for the record, so that will be included in its entirety. And you are free to be extemporaneous in your remarks, if you would like to. If you would abide by the five-minute clock, that would be appreciated.

Mr. Sieglock, welcome to the Committee, and you may begin.

STATEMENT OF THE HON. JACK SIEGLOCK, SUPERVISOR, SAN JOAQUIN COUNTY, LODI, CALIFORNIA; ACCOMPANIED BY THE HON. VICTOR MOW, SUPERVISOR, SAN JOAQUIN COUNTY, STOCKTON, CALIFORNIA

Mr. SIEGLOCK. Thank you, Mr. Chairman.

I would like to acknowledge my three staff members who have been instrumental during this whole process.

I would like to point out that we very much appreciate their leadership and the leadership that they have already provided with regard to Delta issues.

In particular, we appreciate the efforts of this Committee and the efforts of Mr. Pombo with regard to Jones Tract, which probably signalled once again the need to begin working on the Delta. We appreciate his efforts with regard to offstream storage, a little project called the M.O.R.E. Water Project, which would divert water, which would be in complementary standing to the Temperance Flat Project, which would complement the Shasta Dam enlargement. We think that is all part of the solution to helping relieve pressure off the Delta, which would also then help with the Delta levee situation.

Not all of you are from the Delta area. Geographically it is Sacramento, Stockton, Tracy, Pittsburgh, Antioch. Under that area 1,000 miles of waterways. It was built in the early 1900s, a lot by Chinese laborers, and not a lot has been done since then.

Some dollars have been invested by the Federal government, by the state government, but it is in much need of repair, expansion, and fortifying.

A lot of times I think we think of the Delta as agriculture, wild-life, recreation, and again, delivering water. It is obviously a great switching yard for the State of California, so there are at least 22 million reasons why we should be concerned about the Delta, because of all the water that goes from north to south.

But in addition to that, the water quality standards are very important because there are a number of agencies that pull directly out of the Delta into the East Bay and Bay area.

In addition to the water aspect, we have two deepwater ports. We have transcontinental railroads, which you may not think about as much. Sixty percent of the natural gas in Northern California comes from the Delta. Again, we have the roadway system. And we have a number of power transmission facilities.

So the Delta is very important for a number of reasons that expand beyond the local interests, that expand beyond state interests, and they go to Federal economic interests. They go to world trade. So there is obviously and definitely a need for greater Federal involvement.

The management of the Delta is very complicated. As you may know, some of the levees are Corps-related, some of the levees are managed by cities because of their jurisdiction or boundaries, meeting FEMA requirements. And again, we appreciate Congressman Pombo's leadership and your support for funding through here to beef up those levees, so that we would be well-protected in the Stockton area.

And in that regard as well, the other manager is the reclamation district. In our county alone, we have 51 reclamation districts, and so these are locally elected bodies. And they tax themselves. They raise money.

But the process to work on the levees is very complicated. It takes a long time. It can be very cumbersome and expensive.

So I think part of the solution to discuss today are not just the Federal dollars that may go on four levees and those kinds of things, but also looking at streamlining the process. We would like to see, the Corps used to be very involved in the Delta in terms of dredging, and using that dredged material to beef up the levees. We have seen that effort become virtually non-existent any more. These rivers and the trees would fall down, they would keep them clear, they would chop them out. That just doesn't occur any more. We would like to see that effort restored by the Corps.

In 1997, after that flooding took place, we saw the beginnings of a study and partnership between the state and Federal government to look at the problem, study the problem, try to identify what ought to be done, how the Federal government, state government, and local government work together. We would like to see that effort continue.

An interim report came out called the Sacramento-San Joaquin River Basin California Comprehensive Study. We would like to see that effort completed. It didn't go far enough. It wasn't done. The rains this week certainly highlight that.

It was mentioned here about a 6.5 earthquake. Well, we could have a pineapple express come through this year, which could do as much damage I suppose as an earthquake, if it caused all the snow to melt at once.

So the threat this year is imminent. Not just rain next week, but again, a pineapple express, if you don't know, it is a warm spring. And so I believe we had one of those in 1986 and 1997. So that is obviously a very imminent threat.

Anyway, let me close by saying again we very much appreciate your holding these hearings. Federal involvement is important. You do have a very important role to play. Obviously we need your assistance. Flood control has been a role played by the Federal government for many years. We see that role continuing.

We see the Delta in the whole, and in that regard, too, I hope we don't go to something like that to solve the problem. I don't see that solving the issue. I would like to make that statement as one representing the San Joaquin County. I think we need to look at the Delta as a whole. I don't see that as the solution. It may solve a small problem, but not the problem.

Thank you very much, Mr. Chairman. I appreciate you allowing me to start.

[The prepared statement of Mr. Sieglock follows:]

Statement of Jack Sieglock, County Supervisor, Fourth District, and Thomas R. Flinn, Director of Public Works, San Joaquin County, California, on behalf of San Joaquin County, California

Background

The Sacramento-San Joaquin Delta lies at the confluence of the Sacramento and San Joaquin Rivers in the heart of the Central Valley of California. The overall system consisting of some upstream levees and levees in the heart of the Delta contains over 1,600 miles of federal participation levees, and an additional 730 miles of levees which are non-federal. This system of channels, weirs and bypasses protect more than a half million people and in excess of \$50 billion of property improvements. The Delta itself stretches across six counties and contains mostly agricultural land uses; however, the cities of Brentwood, Tracy, Lathrop, Manteca, Stockton, Lodi and Sacramento all lie within the influence of the Delta. Today we are speaking to you as San Joaquin County on behalf of the Delta. Approximately a third of the Delta lies within our county, but the Delta itself is not only important to us and the surrounding counties, but also the entire state and country. Construction of the levees started back in the 1860s in order to protect agricultural operations. Since that time many of the islands created by these levees have subsided due to several physical phenomenon. It is not uncommon in some areas to find the elevation of the islands to be as much as 20 feet below sea level. The California San Joaquin Central Valley levee system that protects invaluable infrastructure has received limited maintenance funding for decades.

Activities Within the Delta

On first review it would appear that the Delta is primarily an agricultural concern. Closer examination shows that there are various elements of both transportation and utilities infrastructure that are supported by the Delta and would be severely impacted by a levee failure. As shown on the attached map there are numerous state and interstate highways that traverse the Delta, as well as several trans-continental railroads and two deepwater ports, significant statewide power transmission and natural gas storage and transmission facilities, to say nothing of the water transmission facilities which provide a significant portion of the San Francisco Bay Area, as well as, the California Aqueduct and Delta Mendota Canal which serve the southern central valley and the majority of southern California.

Impacts of Delta Levee Failure

Most of the levees in the Delta are quite fragile. They are constructed on weak and unstable soils and the levees themselves have often been constructed with excavated non-engineered soil. These levees are all subject to various forms of potential failure including over-topping, earthquakes, base failures, seepage, wind and water erosion, extended high water saturation, dam failure inundation, to say nothing of rodent damage. In June of 2004, a levee break occurred on Lower Jones Island which appears to have been due to burrowing rodents. This failure resulted in the flooding of approximately 12,000 acres, displacement of agricultural workers, took nearly a year to restore the island, and cost to the State and Federal governments for restoration exceeded \$100 million. In 1997 floods resulting from high flows in the San Joaquin River forced more than 120,000 people from their homes, and damaged or destroyed 30,000 homes and 2,000 businesses. This is just a small example of what could occur. The State of California Department of Water Resources has

conducted a risk analysis to determine what could happen in the event of an approximate magnitude 6.5 earthquake on the west side of the Delta. That forecast predicts 30 levee failures inundating 16 islands, causing major disruption to transportation and utility systems, and, most important the disruption of water supply to over 22 million citizens, industry and agriculture for several years. The economic, to say nothing of the personal impact of such a failure, would be a catastrophe of a similar magnitude that has been suffered by the City of New Orleans. The State's analysis also indicated that the probability of an earthquake of 6.5 at this location is quite similar to that of a Katrina event. It estimates economic damages exceeding \$30 billion over five years.

Management of the Delta

The management of the Delta is a very complicated issue with numerous state and federal regulatory agencies being involved as well as numerous counties, cities and utilities having very strong interests. It is important to note that at in San Joaquin County, most of these islands were created and are being maintained by individual separate small Reclamation Districts that are managed by the farmers on those respective islands. Within San Joaquin County alone there are 51 such Reclamation Districts. Involved federal agencies in the Delta include the Federal Bureau of Reclamation, the Fish and Wildlife Service, the U.S. Geological Survey, the Bureau of Land Management, EPA, the Army Corps of Engineers, the Department of Agriculture, the Natural Resource Conservation Service, NOAA Fisheries, as well as the federal participation in the CalFed Bay-Delta Program. Although the County of San Joaquin maintains no levees directly within the Delta, we do maintain levees upstream of the Delta that are instrumental to the entire system. We also participate during emergency evacuation and relief activities. The County is not resourced to fight major floods and looks to the State and Federal government for assistance in such cases. It should be noted that the County in cooperation with the City of Stockton and the San Joaquin Flood Control District developed a project to upgrade levees in the Stockton area. This was done proactively to meet FEMA requirements with subsequent federal approval for reimbursement. This project serves as a model of rapid project development which should be further considered in order to expedite improvements at a reduced cost. It should also be noted that the County is also advocating the More Water Project for off-stream flood storage from the Mokelumne River which also feeds into the Delta. If the County is successful in this project, storm water diversion during peak periods of high flow would decrease the potential problems in the Delta.

Problem Identification

In summary, the Delta is a facility of importance to not just San Joaquin County but the entire State of California and Nation. The infrastructure upon which we depend is very old. We have seen declining participation on behalf of state and federal agencies in helping to maintain and improve these facilities. There is increased development in these areas. There are ongoing disputes as far as responsibility for failures. And finally, there is not a clear direction for the future of the Delta. At this time in San Joaquin County we feel the need to evaluate the Delta and determine how to assure its sustainability. We need a comprehensive plan. We need funding and somehow or another, we need stronger, focused leadership.

Local Actions

In order to address these matters the San Joaquin County Flood Control and Water Conservation District, which is only a planning agency with limited resources, has begun to take steps to work with the entities within our County and surrounding areas to develop some strategies and plans to address these issues. The Federal Government could be of assistance in helping us to address the following issues:

Short Term:

- Streamline environmental processes for permitting of levee maintenance work
- Consider restoration of historic U.S. Army Corps of Engineers (USACE) dredging activities
- Complete the California Sacramento & San Joaquin River Basin Comprehensive Study started by the USACE and the California State Reclamation Board in response to concerns raised by the 1997 flood. A draft interim report, which fell far short of the original project scope, was released in July 2002
- Authorize participation of the USACE in emergency response and emergency evacuation planning

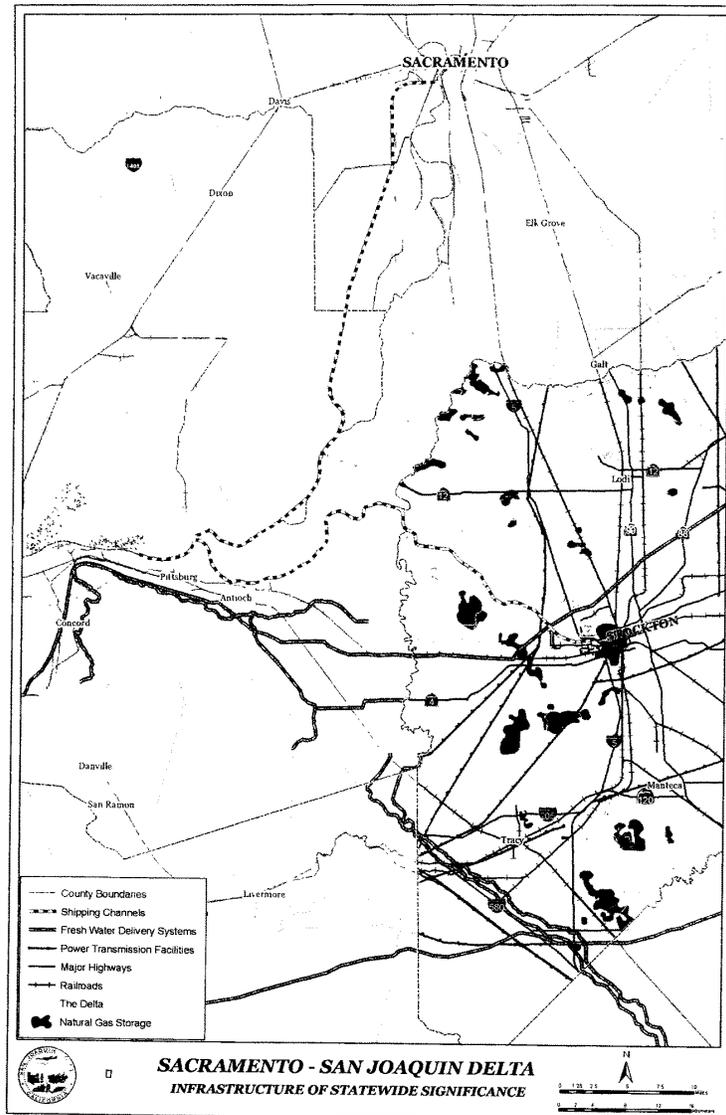
Mid Term:

- Provide leadership and/or funding to become a part of the team to design the future of the Sacramento-San Joaquin Delta
- Direct the USACE to assume a leadership role in assuring preservation of the Sacramento-San Joaquin Delta
- Fund USACE research into development of new, cost-effective strategies for design, construction and maintenance of levees

Long Term:

- Increase federal participation for maintenance of Delta levees
- Support local implementation of projects with Federal review and cost-share reimbursement

Thank you very much for your consideration.



Proclamation

Governor Schwarzenegger Declares State of Emergency for California's Levee System

EXECUTIVE DEPARTMENT

STATE OF CALIFORNIA



PROCLAMATION by the Governor of the State of California

WHEREAS, the California Department of Water Resources document "Flood Warnings: Responding to California's Flood Crisis," submitted to the Legislature in January 2005 identified major deficiencies and challenges to the flood control system in the California Central Valley;

WHEREAS, the California Department of Water Resources testified before the Legislature that a magnitude 6.5 earthquake in the Sacramento Delta region would likely result in a catastrophic levee failure that threatens the drinking water supply for 24 million citizens in California;

WHEREAS, a majority of California's agriculture industry is dependent on water from the Sacramento Delta and a catastrophic levee failure would result in cessation of pumping capacity for as much as 18 months, causing \$30-\$40 billion in economic damage to the State;

WHEREAS, a catastrophic levee failure would threaten tens of thousands of homes and major transportation corridors;

WHEREAS, a catastrophic levee failure would result in significant environmental impacts including the permanent loss of critical habitat for endangered species around the Sacramento Delta;

WHEREAS, severe weather conditions during the past two flood seasons have brought unusually heavy rains, which combined with the already poor condition of many levees creates conditions of imminent peril to those living near the levees, to the environment, businesses, and critical life support systems, such as drinking water supplies;

WHEREAS, my Administration has introduced to the Legislature a comprehensive flood control investment strategy to address these serious threats;

WHEREAS, because of these severe weather conditions, I, Arnold Schwarzenegger, have issued Proclamations of State of Emergency in as many as 42 counties that have suffered flooding, mudslides, the accumulation of debris, washed out and damaged roads, and the loss of human life;

Mr. RADANOVICH. Thank you, Mr. Sieglock. We usually refer to the peripheral canal as Joe or Dan. You know, it comes with much less baggage than does peripheral canal. But thank you for your testimony. It was very valuable.

Next is Mr. Gary Giovanetti, the Mayor of the City of Stockton. Welcome, Mr. Mayor.

**STATEMENT OF THE HON. GARY GIOVANETTI, VICE MAYOR,
CITY OF STOCKTON, STOCKTON, CALIFORNIA**

Mr. GIOVANETTI. Chairman Radanovich, members of the Subcommittee on Water and Power, thank you for this opportunity to present our issues on water supply in response to catastrophic levee failures in the Sacramento/ San Joaquin Bay-Delta Region, Central California.

My name is Gary Giovanetti. I proudly serve as the Vice Mayor for the City of Stockton, Board member of the San Joaquin Area Flood Control Agency. With me today, sitting behind me is J. Gordon Palmer, Jr., a City Manager if you have questions for him.

Stockton is located 40 miles south of Sacramento and 80 miles east of San Francisco at the heart of the Bay Delta Estuary, the largest on the West Coast. We are the 13th-largest city in California and the 65th-largest city in America.

The Delta is a tidal area where the Sacramento River, flowing from the north, and the San Joaquin River, flowing from the south, and their tributaries come together. This estuary is 738,000 acres, spanning across six counties. The Delta is 1100 miles of waterways surrounding 60 levee-protected tracts and islands used primarily for agriculture. The lowest islands are in the central and western Delta, where much of the land is 15 to 25 feet below sea level due to oxidation of the peat soil from continuous farming.

The Water Education Foundation reports an estimated 25 percent of all warm water and sport fishing species as well as 80 percent of the state's commercial and fishery species live in or migrate through these waters.

The State Water Project and the Federal Central Valley Project transformed this saltwater estuary and marsh into a freshwater conveyance for two-thirds of the population of California for 22 million people, and the multi-billion-dollar agricultural economy supplying irrigation to seven million acres of farmland.

The western portion of Stockton borders the Delta. These levees are well maintained, and provide 100-year flood protection per FEMA criteria. It should be noted that our taxpayers assessed themselves and completed this 100-year protection under budget, and in less time than expected.

The freshwater conveyance that now exists in the Delta is in serious jeopardy. Its 1100 miles of waterways benefit from only 275 miles Federal project of protected levees maintained by the Army Corps of Engineers. The balance is privately owned by agricultural communities, and is not built to FEMA standards.

As has been mentioned, you may recall a single failure in the weakest part of the levee at Jones Tract cost \$100 million to repair and dewater the tract. Property owners are not capable of writing that check. Just think if we could have used that money strictly for repair and maintenance.

We must also look to the Endangered Species Act for common-sense interpretation. We know now that the Jones Tract failure was due primarily to beaver caves and dams. My mother has always told me an ounce of prevention is worth a pound of cure.

She was never an elected official, but she knows exactly why we are here.

In recent years, the state has provided some assistance to the Levee Subventions Program, a matching of 75 percent for repair and maintenance costs. This program will end this year. It is estimated that \$1 billion still is needed to repair and reinforce the worst 500 miles of Delta levees.

Flooding of one of the Delta islands can have a domino effect by putting more pressure on the adjacent levees, causing these levees to fail. If many islands flood simultaneously, saltwater from the San Francisco Bay will be sucked into the freshwater areas, contaminating drinking water and agricultural irrigation.

Beyond the water conveyance protection, at risk are the inland ports of Stockton and Sacramento, commercial and recreational navigation, highways, railroads, electrical transmission lines, natural gas storage, utility pipeline, fish, migratory waterfowl, and hundreds of thousands of jobs.

Federal assistance cannot be limited to disaster relief. The fifth-largest economy in the world demands your attention now. Prevention is hugely cost-effective.

In summary, the Federal government should take immediate first steps to channel Federal dollars to supplement the State Levee Maintenance Subventions Program. The Federal government should also move to develop an action plan to close levee breaks, and dewater flooded areas, to minimize interruption and loss of water supply.

We are requesting, we are begging, we are imploring you to act. A levee break, as witnessed with Hurricane Katrina, will affect 10 times the population, 10 times the loss to the California economy, and 10 times the cost to repair. We don't have time to debate, conjecture, and policy discussion.

Thank you for your consideration.

[The prepared statement of Mr. Giovanetti follows:]

**Statement of Gary S. Giovanetti, Vice Mayor,
City of Stockton, California**

The Sacramento/San Joaquin Delta is the tidal area where the Sacramento and San Joaquin Rivers and their tributaries meet the Delta Estuary, the largest estuary on the West Coast of the United States. The Delta comprises more than 738,000 acres in six counties. The Delta's 700 miles of waterways surround more than 60 levee protected tracts and islands. The lowest islands are in the agricultural portions of the western Delta where much of the land is 15 to 25 feet below sea level and continuing to sink due to oxidation of the peat soil. Most of the 1,100 miles of levees surrounding these islands are privately owned and maintained. The Delta serves as the hub of fresh water deliveries from northern to southern California. The State Water Project and Federal Central Valley Project transformed the Delta from a salt water estuary into a fresh water conveyance for a multi-billion dollar urban and agricultural economy. The Central Valley Project relies on Delta fresh water conveyance capabilities to supply 7 million acres of highly productive farmland south of the Delta.

A massive Delta levee failure, likely caused by an earthquake with a similar occurrence probability as Hurricane Katrina, would bring immense economic impact by ceasing water deliveries to much of the state not to mention displacing hundreds of thousands of people from their homes. If a catastrophe of this magnitude were to occur, the fresh water conveyance for 2/3rds of the state's drinking water supplies would be lost for many years. Losing the Delta would be devastating to the 5th largest economy in the world. Existing storage, conservation and alternative sources of fresh water would simply not sustain the water demands throughout the state. A

likely scenario would be the tremendous loss of agricultural lands as irrigation water would be transferred to urban uses.

Approximately 400,000 people live in and around the Delta. The portion of the City of Stockton located within the Delta is protected from flooding by levees. These levees are well maintained and provide 100-year flood protection per FEMA criteria. Immediately to the west of the City are the numerous tracts and islands which are protected by levee systems and comprise the heart of the Delta. These levee systems are critical to the efficient control of salinity intrusion from the San Francisco Bay, allowing the Delta to be the fresh water supply for 23 million Californians. Although not currently drawing drinking water supplies from the Delta, Stockton will have its Delta Water Supply Project on line in 2010 to supply the metropolitan area with 35 percent of its current municipal and industrial needs.

Except for 275 miles of federal project levees along the navigable channels, the Corps of Engineers has not inspected or rehabilitated the private Delta levees because they are not part of the federal levee system. In recent years the State has provided assistance through the Levee Subventions Program, matching 75% of repair and maintenance costs. That highly successful program ended in 2005. Assemblymember Lois Wolk (D-Davis) has introduced a bill to extend the Levee Subventions Program an additional two years and seeks greater funding for Delta levee maintenance. It is estimated that \$1 billion dollars would be needed to repair and reinforce the worst 500 miles of Delta levees to minimum FEMA standards. Federal dollars are needed to supplement the Levee Subventions Program to maintain the Delta's viability to convey fresh water to pumps that serve 2/3rds of the State's population. Although the risk of levee failure will be reduced through ongoing levee maintenance efforts, it will never be eliminated.

Need For Immediate Funding For Upgrading Delta Levees

Although the State and Federal interest and need for action to upgrade Delta levees has been clear for many years, significant State and Federal assistance has been basically limited to disaster assistance until 1984 when the State committed roughly ten million dollars per year to the State Delta Levee Maintenance Subvention Program.

Federal interest in agriculture, commercial and recreational navigation, transportation, fish, migratory waterfowl, and fresh water supplies as related to the Delta is and has been clear, however, the non-disaster federal contribution to maintenance and rehabilitation of the non-project levees in the Delta has been directed primarily to studies.

There Is A Real Need To Secure Funds That Will Result in Immediate Placement of Dirt and Rock On Existing Levees To Reduce The Risk of Levee Failure

The most effective way to accomplish this result is to contribute funding to the already ongoing State Delta Levee Maintenance Subvention Program which is administered by the State Reclamation Board through the California Department of Water Resources and California Department of Fish and Game.

Disaster Response

Local agencies can help fight flooding but do not have the financial ability to repair a levee break, dewater the flooded areas or otherwise undertake major restoration work. Once a levee break occurs, the assessable base of the local agencies is of little value. This was the case in June 2004, when an unexpected levee break of Lower Jones Tract overwhelmed the local ability to respond. This single break cost nearly \$100 million for emergency response, damage to private property, lost crops, levee repair, and pumping costs. The opportunity for possible reimbursement through currently structured disaster assistance or similar types of programs does not provide the cash necessary to accomplish the work. Given today's costs, only a state or federal agency has the financial capability to adequately respond to a Delta levee break. A plan for immediate response by a state or federal agency once a levee break occurs is essential to containment of the damages including the protection of the water supply. The plan should provide for immediate restoration of the levee and drainage facilities to the point that the local agencies can financially and effectively resume operation and maintenance. Emergency response regardless of the type of emergency should not involve a debate on policy. Immediate no holds barred response to arrest the threat should be the goal.

Federal Responsibility

Due to the critical importance of the Delta levee system to the State's economy, the federal government should to take immediate action to channel federal dollars to supplement the Levee Subventions Program and the Corps of Engineers should

be directed to take action to evaluate the future of the Delta, invest in levee repair and maintenance and develop an action plan to close levee breaks and dewater flooded areas in the Delta to minimize interruption and loss of water supplies for the federal Central Valley Project and other projects dependent upon the Delta.

Mr. RADANOVICH. Thank you, Mr. Mayor. I appreciate your testimony.

Next is Mr. Jonas Minton, Senior Project Manager for the Planning and Conservation League.

Mr. Minton, welcome to the Subcommittee. You may begin your testimony.

STATEMENT OF JONAS MINTON, SENIOR PROJECT MANAGER, THE PLANNING AND CONSERVATION LEAGUE, SACRAMENTO, CALIFORNIA

Mr. MINTON. Good morning. Thank you all very much. I am Jonas Minton, Water Policy Advisor for the Planning and Conservation League.

Now, you know that is an environmental organization. But my comments truthfully are also influenced by 30 years in the water supply and flood management business. I was a water agency manager. I was the executive director of a regional water forum. From 2000 to 2004 I was Deputy Director of the California Department of Water Resources.

Flooding is also a personal issue with us. In 1997 our home on the American River flooded. Last New Year's Eve at 5 in the morning the sheriff pounded on our door telling us that we had another voluntary evacuation, and so that changed our New Year's plan.

As you think about the Delta today, there are five points I am going to quickly go over for your consideration. We are talking about planning for a potential collapse catastrophe in the Delta.

There is already a catastrophe in the Delta. As Vice Mayor Giovanetti pointed out, that estuary is the largest estuary on the West Coast of the United States. It is the largest estuary on the West Coast of the hemisphere.

Now you heard at your earlier hearings that the pelagic fisheries, the open-water fisheries, have already collapsed. And that has relevance to water supply how?

Here is the second point for your consideration. I like to think Mother Nature is a kindly, benevolent spirit. But we have also heard that there are real-world consequences when we ignore the physical laws of nature.

Let us think back to Klamath in 2002. The decision was made to provide cold water deliveries for water uses in that basin. Now, four years later, we know that we are facing a crippling of these fisheries on the whole West Coast.

Katrina, what happened there? They paved over the wetlands, that part of the ecosystem that buffers the natural resources. What happened? Storm surge came in. The lack of that buffer helped allow the leveling of New Orleans. Klamath River, we see what is happening there.

The third point is that catastrophe planning is essential, but it cannot be done by nameless, faceless bureaucrats in our cubicles.

Now, I am commending the California Department of Water Resources—and you will hear from Lester Snow—as part of their

Delta visioning process, they are looking at how to openly, transparently involve the public, many users of the Delta, in catastrophe planning. So it is a real plan, a workable plan.

The Metropolitan Water District of Southern California, which receives a portion of its water supply from the Delta, has already embarked on that process. They have a plan in place to deal with up to a six-month interruption in their water supply from the Colorado River or the State Water Project. And now with the information that this Committee and other forums have provided, they are extending their time period.

We are unaware, and we look forward to hearing the testimony later in this hearing, what the Federal government is doing. The Bureau of Reclamation, the Corps of Engineers, the resource agencies, and FEMA. Are they undertaking a similar sort of inclusive, open process, where everyone knows what the plan is? We are unaware of that. We encourage you to ask them to conduct such planning.

The fourth point, the peripheral canal. Not Joe, not John, but we will call it the peripheral canal. There is a natural feeling that perhaps this is the silver bullet answer. If the Delta is going to have problems, what do we do? Instead of getting water through the Delta, let us think about routing it around the Delta.

Now, here are some things for your consideration. There are huge unknowns about a peripheral canal. How big would it be? How much would it cost? Who would pay for it? What would be its environmental impact?

Now let me give you one more factoid, as reported in last month's Science Magazine. The proposed intake for the peripheral canal is at Hood, California. And certainly Mr. Pombo knows exactly where that is. That is at elevation 19 feet above current sea level.

Science Magazine says with the temperatures that are predicted to occur from a variety of models, sea level rise could be as much as 20 feet. Any rise, even a fraction of that, severely compromises Hood as an intake point for the peripheral canal.

Why don't you just move the intake up further? Well, that is going to get you right to the back side of the Sacramento Regional Wastewater Treatment Plant outpost, and I don't think we are suggesting that.

The last point is where this goes. California needs a very reliable supply for both its ecosystem and our commerce, our people. The best way to ensure that reliability for our state prosperity is to increase investments in conservation, recycling, and groundwater cleanup.

Attached to my testimony are excerpts from Governor Schwarzenegger's recently released updates to the California State Water Plan. It showed that to the year 2030, if we keep doing the conservation programs we are doing, even with an additional 12 million residents, California's water use would be slightly less than it is now. If we do conservation, it will be less.

On top of that, the Governor's recently released water plan identifies about five million acre-feet of water conservation recycling and groundwater cleanup potential.

In conclusion, we think the water supply reliability is very important. We think that there are some common-sense, cost-effective ways to achieve that.

Thank you very much.

[The prepared statement of Mr. Minton follows:]

**Statement of Jonas Minton, Water Policy Advisor,
Planning and Conservation League¹**

I am Jonas Minton, Water Policy Advisor for the Planning and Conservation League. My comments today are also built upon my 30 years of experience in the water industry including serving as a water agency manager, executive director of a regional water forum and, from 2000 to 2004, Deputy Director of the California Department of Water Resources. I have done a lot bricks and mortar projects in my career.

Today I will quickly go through five key points you need to know as you think about the Delta.

The first is that the Delta is already in a catastrophe. This Delta is the largest estuary on the west coast of not just the United States but the entire Western Hemisphere. And its ecosystem is collapsing. As scientists reported to you in your earlier hearing, the pelagic fish are at record lows and some are teetering on the brink of extinction.

We would like to think of Mother Nature as a kindly, benevolent spirit. However the second thing we need to remember is that there are real world consequences when we ignore physical laws. Let's look at what happened in Louisiana. When they paved over the wetlands, they removed that natural buffer to storm surges. That helped let in the force that wiped out New Orleans.

The Klamath River is an even closer analogy. In 2002 the decision was made to override the physical needs of the fish to allow large deliveries to agricultural customers. Now four years later the collapse of that fishery may very well shut down California's entire commercial salmon fishery and result in the loss of thousands of jobs. To compound the tragedy, it is now known that those levels of deliveries to water users in the Klamath Basin are not sustainable.

Just as in the Klamath Basin, attempting to ignore the ecosystem collapse in the Delta will actually force reductions in water deliveries.

The third point is that effective catastrophe planning is essential but it cannot be done by faceless bureaucrats in their cubicles. The Department of Water Resources is beginning to prepare a State contingency plan in conjunction with the public process for developing a Delta Vision. The Metropolitan Water District of Southern California already has a plan in place to manage a 6 month interruption in supply from the Colorado River Aqueduct or the State Water Project. They are now extending their plan to cover a longer outage.

We are unaware if the federal agencies—the Bureau of Reclamation, the Corps of Engineers, FEMA and the fishery agencies—are cooperating on a federal contingency plan.

Congress should direct those agencies to use an open and transparent process to develop the federal plan for reversing the existing ecological catastrophe and reducing the risk of reductions in water supply reliability.

The fourth point is that the peripheral canal is not the silver bullet answer to the problems in the Delta. There is a natural inclination to think about a way to move water around, instead of through, the Delta. However the costs and environmental impacts of a peripheral canal are huge unknowns.

Even the engineering feasibility of a peripheral canal is questionable. The suggested intake location at Hood, California is only 19 feet above current sea level. Last month the journal Science published a study estimating that sea levels could rise by as much as 20 feet. Any rise close to that level would leave the peripheral canal as a multi billion dollar stranded asset.

All of this leads to the last, and most important point. California residents and our economy are dependent on a healthy ecosystem and reliable water supplies.

The best way to ensure reliable water supplies and to relieve the existing environmental catastrophe is to reduce diversions from the Delta and increase conservation, recycling, and groundwater cleanup.

¹ Presented to the House of Representatives Subcommittee on Water and Power, April 6, 2006 by Jonas Minton j. For forty years PCL has been a leading environmental advocacy group in California. Over the past two decades PCL has sponsored and supported \$16 billion in water and other resource bonds approved by California voters.

I strongly recommend that you carefully review the new information in the Update to the California State Water Plan just released by Governor Schwarzenegger's Department of Water Resources. Attached are key excerpts.

The State Water Plan shows that even with an additional 12 million residents by the year 2030, under current conditions continued total water use will actually be slightly less than current water use. And under a resources conserving scenario total use would be even less.

On top of all that the Governor's Updated State Water Plan also identifies an additional 5 million acre feet of urban water conservation, water recycling and ground-water cleanup potential. These include a lot of bricks and mortar projects.

In conclusion, the best way for dealing with highly likely risks to central and southern California water supplies and the current ecosystem catastrophe is to reduce Delta diversions and steer investments to the kinds of regional integrated projects that are much more reliable.

Mr. RADANOVICH. Thank you, Mr. Minton. I appreciate your testimony. And I agree with you; I don't think the peripheral canal is the answer. Not only the flood threat, but I do believe that another project is the Auburn Dam, which was mentioned a little bit earlier from my friend, Mr. Costa, that if it weren't for dams on the rivers that feed the Valley and the Delta, we would be doing a rowboat from Bakersfield to Sacramento. And the only major river left in the area that doesn't have a dam on it is the American River.

And what astounds me is that we can sit here and talk and whine and cry about the fact that we need to solve this problem, yet nobody really wants to go to the most cost-effective answer, the most potentially contributing solution for Bay-Delta health, and the most cost-efficient means for preventing flooding in that area—the Auburn Dam.

But let us all talk around it, and let us all talk about how we can't do it, and talk more about all these solutions that aren't really solutions, that don't give us the kind of benefit that we are looking for in a 500-year flood protection for the area. Let us just talk about other stuff.

Thank you. I just had to vent that. That really just drives me nuts.

But Mr. Sieglock, given that, doesn't the need, for example, in the floods we had in 1997, the fact that we have got a potential 1997 lurking in the Sierras, and with this warm rain season that we have got right now, this spring; doesn't it cry for the need for more water storage reservoirs?

Mr. SIEGLOCK. Absolutely. I would agree, Mr. Chairman, with your comment with regard to Auburn Dam and its need, enlarging the Shasta, Temperance Flats, the Water Project. I think all those are very much needed. I think they are very wise projects. I think they are good for the environment, not bad for the environment, and certainly would relieve substantial pressure off the Delta.

So therefore, obviously it would be very helpful. And I think they are cost-effective, too.

Mr. RADANOVICH. Well, it is. I think when you are looking at the numbers now, with the cost of repairing levees and the cost of razing Folsom Dam, you know, the Auburn Dam alternative is still the most cost-efficient. As well as all the other benefits it brings to solving this looming problem in California, it still is the most cost-efficient solution.

This would be to all witnesses. We are facing a very tight financial situation here in Washington, but there should be some Federal intervention in helping prevent a levee disaster.

What is the most cost-effective way, in your mind, to avoid a Katrina-like disaster in the Delta? All of you are able to answer, if you would like.

Mr. SIEGLOCK. Well, I think the most cost-effective way is to invest money today, and not wait for the disaster to occur. Let us not wait for a 6.5 or greater earthquake.

And actually, I think your leadership today in having these hearings and highlighting this need to get Federal involvement, to get the Corps of Engineers involved.

In addition to that, we have a Governor in California who is showing a willingness, through the bond process, to spend money and invest money in the Delta. So there appears to me to be a partnership that could develop between the Federal government and the state government, in investing money to pay, and not waiting 10 years, 20 years, waiting for the weather to get nice, until we forget about it.

I think we need to be proactive, which we certainly are. And that we need to act now, and invest the money today. As my friend said, as Ben Franklin said and his mother said, an ounce of prevention is worth a pound of cure.

Mr. MINTON. If I might add, one concept that is achieving greater traction in the flood management community is the concept of stoutly defending areas. Urbanized areas need to be stoutly defended. Those levees need to be just about as strong as dams.

However, we also note that in California, with our growing population, there is a need to house folks. Currently there are at least 100,000 homes in the pipeline to be placed in areas with inadequate flood protection, areas that have flooded repeatedly over the past several decades.

There is not enough money to provide protection throughout the Central Valley, all those areas that are not yet developed. Funds should be focused on those areas that are currently urbanized. We have to ensure that our agricultural operations are protected to a reasonable level, that our large-priced facilities are there. But those areas that are currently urbanized—Sacramento, parts of San Joaquin County, Yuba City, Marysville, West Sacramento—they deserve that attention. That is where the largest losses would be.

Mr. RADANOVICH. What kind of flood protection do you all want? Do you want 100-year flood protection, 200-year flood protection? Do you want 500-year flood protection for that area? People in flood control areas, what do they shoot for?

Mr. SIEGLOCK. Well, the standard now is 100-year flood protection, as dictated by FEMA. But I know in many parts of the country we are going to 200-year flood protection. And perhaps that is a question that needs to be debated. Is 100-year enough, or do we need to go to a 200-year level?

Mr. RADANOVICH. To my knowledge, it has been 500-year flood protection is what most parts of the area are shooting for.

Mr. SIEGLOCK. OK.

Mr. RADANOVICH. Most of the other major cities are going 500-year flood protection. I mean, how much flood protection can you

get from having the strongest levees in the world right there in that valley doing nothing else?

Mr. MINTON. One of the misconceptions that came out of FEMA was that 100-year flood protection. My wife, who is in the audience, thought 100-year flood protection meant it wasn't going to flood for 100 years.

Now what we really know is that when you have so-called 100-year protection, it means every year you have one chance in 100 that you are going to flood. And that means that you take on a 30-year mortgage—

Mr. RADANOVICH. But you are not answering my question. I am saying if you reinforce the levees and do nothing else, you are only going to get, maybe you are only going to get 100-year flood protection or maybe a little bit more.

Mr. MINTON. At the most, two to maybe three hundred. The only solution to get 500-year flood protection in that part of the State of California is the Auburn Dam.

While there has certainly been a lot of discussion in the past about Auburn Dam, even if you have Auburn Dam, you still have to do all those other actions.

Mr. RADANOVICH. And you cannot get 500-year flood protection without the Auburn Dam.

Mr. MINTON. You probably cannot.

Mr. RADANOVICH. OK, thanks. Grace.

Ms. NAPOLITANO. Thank you, Mr. Chair. And along the same line of questioning, it is unbelievable to me that the new housing developments are allowed behind the levees, and you can actually see things going by in the river. And you think that levees that were built with peat moss by Coolie labor or whatever other kind of labor there was would have been protected to the degree that you would not endanger those people living in those homes.

I am not sure where this would lie in, whether it is the local government or the state government that have allowed these housing to continue to blossom. Yes, you need housing, no question. But does it have to be right by the levees that potentially will not last if you have a 6.5 earthquake?

And I would like to direct this to Mr. Sieglock.

Mr. SIEGLOCK. OK. Well, I think again we are meeting Federal standards with regards to our levee protection in the City of Stockton. And certainly if that standard rises, we will meet that challenge. And because of Mr. Pombo's leadership, we actually invested through the local government and some state and Federal government to keep up with those upgrades that you are discussing.

I think it was said earlier that the whole valley right now would be flooded potentially if we didn't have offstream storage. So I think answers like Auburn Dam, the Moore River would all help in reducing that further up the Delta in providing greater flood protection to those areas.

But we are meeting those Federal standards. We think that is important.

Ms. NAPOLITANO. Well, that still didn't answer my question, sir, I am sorry. But to me it is an area that you have already experienced levee breaks up and on through the years. You know they

may continue, and the reports in the past have indicated that earthquakes could even make that even worse. I think my colleague stated that, Mr. Costa. It liquefies those levees, and you are going to have catastrophe. And yet you still are allowing housing in this area.

I will move on, because that is just a point of contention with me. I lived in Sacramento for six years, and I saw a lot of the building going on at the time that I lived in Sacramento.

Has FEMA ever offered training to San Joaquin County personnel? Anybody?

Mr. MOW. Congresswoman, on your previous question, as we all know, the State of California has grown by 600,000 people.

Ms. NAPOLITANO. I can't hear you, sir, I am sorry.

Mr. MOW. I am sorry. As we all know, the State of California has grown by 600,000 people. Much of that growth has to be accommodated somehow in the State of California.

For San Joaquin County, 40 percent of the folks living in San Joaquin County will be behind some levees—

Ms. NAPOLITANO. I am talking about the training, sir. Has FEMA offered training to San Joaquin County personnel?

Mr. MOW. I would say no.

Ms. NAPOLITANO. Addressing some of your potential levee breaks.

Mr. MOW. At the state level.

Ms. NAPOLITANO. But not with the cities or counties?

Mr. MOW. We have an Office of Emergency Services that works with FEMA, a representative to address any disaster.

Ms. NAPOLITANO. OK. But I guess what I am saying is, and we saw this in Louisiana with Katrina, is that the agencies were not speaking to each other. They were not able to take effective measures, because nobody knew who was doing what, or when, or where.

Mr. SIEGLOCK. Actually, we have very good coordination between our law enforcement officials, our emergency management departments. We probably have one of the better plans that we are aware of in the state. And I know that Mr. Baldwin works with FEMA on a regular basis.

Since Katrina we have had a hearing on San Joaquin County's plight—

Ms. NAPOLITANO. Back to the question. Are they providing training to the personnel? That would be something that if someone could answer, but I think you should reply to the Committee on whether or not FEMA is working to ensure that everybody is on the same page should you have a levee break or a catastrophe of that magnitude.

Mr. MOW. Right. They are wanting us to move to an operable analog system for communications in that regard, to have a better communication system in those areas that we don't want that to happen.

Ms. NAPOLITANO. OK. And very quickly, have you done any drills, along the same line of questioning? Any drills with FEMA or with the state agencies to address something of this nature?

Mr. SIEGLOCK. We are drilling regularly from what I am told.

Ms. NAPOLITANO. Thank you.

Mr. RADANOVICH. Thank you, Ms. Napolitano.

Mr. SIEGLOCK. Ms. Napolitano, if I might mention, for the City of Stockton, our fire department is the first responder, and we do have regular drills.

Mr. RADANOVICH. Thank you, Ms. Napolitano. Chairman Pombo. Mr. Calvert?

Mr. CALVERT. Thank you, gentlemen. First I would like to respond to the gentlelady's question that FEMA is not the responsible agency to provide training for the local first responders. It is up to the first responders to provide for their own training.

It is up to FEMA to coordinate Federal assistance if in fact a catastrophe does occur. They would have to change their policy to provide training to the first responders. That is not their job.

But getting back to the Delta, Mr. Costa mentioned the land acquisition in the Delta, and I remember and I shared with this Committee that was somewhat of a controversial subject at the time. And we were involved in a couple of the major islands within the Delta, and some of the local folks I would say were reluctant to move toward that as part of the solution within the Delta.

Is that changing? I just wondered if in the last few years if that has changed, because as we were looking at a through-Delta facility, in concert with moving the CALFED bill, land acquisitions was something we set aside. Is there any comment about that from anyone? Is there any less reluctance today than there was in the past?

Mr. GIOVANETTI. I would say that the attitude is about the same.

Mr. CALVERT. The other issue on the peripheral canal, has that changed? Again, when I was chairing this Committee, there seemed to be such a level of opposition that we just didn't go for it. That is why we went with CALFED and we developed the through-Delta facility. Did that change?

Mr. GIOVANETTI. The opposition is still there.

Mr. CALVERT. So those facts haven't changed. OK. So assuming then that the land acquisition is not going to take place and that the peripheral canal is not going to be built, then we are moving forward with a through-Delta facility under the CALFED scenario. Then obviously there is levee problems within the Delta, and there are certain levees—somebody mentioned 500 miles of levees—that are prioritized for reconstruction.

There is \$90 million within the CALFED bill, \$90 million of Federal funds that were meant to be matched with state and local funds, to be leveraged approximately three to one. If, in fact, the Federal government was able to appropriate those types of funds, are the state and locals willing and able to match those funds?

Mr. SIEGLOCK. I can't speak from experience, but again, Governor Schwarzenegger appears to want to address the issue through bonds. So it appears as if matching funds would be there from the State of California.

Mr. CALVERT. If, in fact, those funds were appropriated, say in the next couple of years, are state and local ready, in effect, to the point of planning to spend those dollars for levee reconstruction?

In other words, if we went in and built the types of levees that are necessary to withstand a potential earthquake or catastrophe within the Delta, are you able to take the money today, even today, to spend the money to reconstruct some of those 500 miles of

levees? Has the design work been done? Has the environmental documentation been completed?

Mr. SIEGLOCK. Actually, it takes a year to two years to get a permit to do levee repairs. And that is just from our side, on levees that we work on as a county.

Mr. CALVERT. So this 500 miles of potential levee reconstruction, how much has been done to get us to the point where we can start construction on those levees?

Mr. SIEGLOCK. Much work needs to be done.

Mr. CALVERT. Does anybody have a timeline as to when we can get the planning documentation done so we can actually, so I can go out there to Richard's district, and we can actually walk, get on a little tractor and go on across, and see pilings being put in and the rest? Anybody have any idea?

Mr. SIEGLOCK. Actually, we need that study.

Mr. CALVERT. Where are we at on that study?

Mr. MINTON. It just started.

Mr. CALVERT. So now with the CALFED legislation, everybody is getting together in a room, the Corps of Engineers, Fish and Wildlife, Fish and Game, all the players. They are all working right now to do it.

Mr. SIEGLOCK. I can't say that. I haven't seen a kumbaya conference.

Mr. MINTON. If I may, one of your other witnesses, Lester Snow, I think will be a good respondent on that issue.

Mr. CALVERT. I understand that. But I wanted to hear from you, the locals, what you are hearing. Sometimes you guys hear things that are really going on sometimes that we don't know about. That is why I am asking the question.

Mr. MINTON. There are a couple things at the state level that Mr. Costa alluded to. We in the environmental community, along with cities, counties, and water flood managers, are very supportive of the state flood bonds, those elements that were providing free flood protection.

Mr. CALVERT. Are you in favor of the levee reconstruction?

Mr. MINTON. By and large, yes.

Mr. CALVERT. Thank you.

Mr. RADANOVICH. Thank you, Mr. Calvert. Mr. Costa.

Mr. COSTA. Two questions, and not probably more appropriately than the Chairman did. But it was alluded to I think with Mr. Calvert in his discussion of the levees it doesn't seem to me that there is as yet clearly a delineation as to the status quo of the private levees, versus responsibility of levees by local districts, versus those responsibility of the state, versus those of the Federal government.

For the somewhat 20 years I have worked on this, the state has put literally hundreds of millions of dollars, through a series of bond measures. So it is not like people have just been idle, sitting by. And I think Congresswoman Napolitano makes a good point when she talks about the responsibility of local government.

There has been a moratorium in building in Sacramento as a result of trying to make sections of the levee in need of repair free from construction.

And so it seems to me, before we talk about additional Federal dollars, which we, I think should do, and the state undertakes a

bond measure, we need to get a clear idea of which levees are whose responsibility. And I don't know that that has clearly been vetted yet at this point in time.

Do any of you want to comment on that?

Mr. SIEGLOCK. I agree with your comment that there are a lot of different interests that have different responsibility. And that is perhaps one of the issues, one of the problems, in terms of taking responsibility.

Obviously a reclamation district would basically be composed of the farmers who own the land in the district. Maybe they can tax themselves \$50 or \$100 an acre.

But with the kind of jobs you are talking about doing, you are not going to be able to tax them, they are not going to be able to raise enough money at \$500 an acre, \$1,000 an acre, because they wouldn't make any money.

Mr. COSTA. No, I understand that. Going with that I think is a cost benefit analysis that needs to be done.

Mr. SIEGLOCK. Right.

Mr. COSTA. You indicated that hasn't been done as it relates to which of these are not only whose responsibility but most in need of being rehabilitated.

Mr. SIEGLOCK. So that has not been defined yet. It needs to be.

Mr. COSTA. Right.

Mr. SIEGLOCK. And so getting to your question, though, while they may be reclamation districts, they are certainly a public interest relative to the Delta for all the reasons listed, which would suggest that perhaps that state and Federal partnership needs to be exercised.

Mr. COSTA. There is certainly a state importance to the Delta, for all the reasons that have been stated.

Mr. SIEGLOCK. Correct. Right.

Mr. COSTA. But it is, I think, inaccurate or, in my view, to put every island and every levee at the same level of importance, and that is why I still believe that there needs to be an evaluation.

And I am not saying that we ought to buy up all the islands. I know that is the controversy for both Congressman Pombo and for Congressman Cardoza. But some of the islands I think where you have two or three landowners, if you were to offer them fair market value, they may be interested in selling.

I mean, \$100 million that we spent on Jones Tract, 8,000 acres, I mean, you look at the tradeoffs. Even the Federal government doesn't have unlimited funds.

Mr. MINTON. If I might observe, I think your question even goes to a deeper problem, which is that in many areas of the Delta that are urbanizing, they may be protected by a reclamation district originally established to protect lands to agricultural standards.

As that land converts to urban, they do not have the funding base to maintain even levees they have. They would not have the funding base to maintain new levees.

Mr. COSTA. Before my time is up, the California Association of Water Agencies headquarters has put up a proposal that I think has merit. I would like to get your thoughts on it. And that is to create kind of a like a blue-ribbon draft-like commission that would look at the various solutions that we have talked about: the

through-Delta facility versus some other means of conveyance for the linchpin of our plumbing system.

And then it would recommend it to whatever the best cost-feasible alternative would be. And then the Legislature would have the option at that point to vote it up or down. Any thoughts on that?

I mean, we have all dealt with these issues for years. The controversy will never, never, in my opinion, go away.

Mr. MINTON. The California State Legislature last year enacted Assembly Bill 1200, which calls upon DWR, Department of Water Resources, Fish and Game, to work with others to develop what you are in essence suggesting: a vision recommendation to the Legislature. We are very supportive of that process and hope that it succeeds.

Mr. COSTA. Well, my time is up, Mr. Chairman. But let me just summarize that that is good, but that is not new. We have been doing that for 40-some years. So how do we get off this paradigm is continuing to be—we are living on borrowed time.

Mr. SIEGLOCK. Again, we think the Corps study needs to be completed, identifying cost and identifying needs of the Delta, and talk about the environment. In some places, things have begun, but then they were not finished. Some of those things need to be completed so you can identify should it all be saved, is there one that shouldn't be.

I mean, we have Franks Tract that was not saved for various reasons. But should all the islands be saved? And is there some higher and better use? Is there a less expensive way of going about dealing with those levees? Are there restrictions we should put on boating? I don't know all those answers, but some of those studies that were begun, I think we have some good information, they need to be completed.

One thing we do know and one of my observations is when disaster does strike, the cost does become much greater, and it typically rests with the Federal government. You know, I thank you again. I compliment you for these hearings, and based on that, we need to get ahead of this problem.

Mr. RADANOVICH. Thank you, Mr. Costa. Mr. Pombo.

Mr. POMBO. Thank you. In response to some of the questions that have been asked, I think where we are right now is we have about \$45 million worth of improvement work that has already gone through all of the process, the studies and all the permitting and everything else that can be done right now.

The Army Corps is in the middle of doing their study on prioritizing which levees should receive attention first, based on what our greatest priorities are. And on those, as far as making a decision about which levees should be saved and which areas should be protected, I think it is easy for people to say that particular levee, let it go, and let that island flood, if they don't happen to own it and live out there. And that is where we get into a little bit of a different set of priorities, where we get into this, listening to my supervisors and the Vice Mayor from Stockton talk about what all of their problems are.

Obviously these are issues that this Committee and other committees here are dealing with right now. But I think it is important

for my colleagues to hear just what you are up to, and what some of the problems are.

Obviously, if we had it to do all over again, we probably wouldn't have built in some of the places we did. But the reality is those houses are there, and we have to figure out a way to protect them.

The Chairman of the Subcommittee, Mr. Radanovich, brought up the Auburn Dam. I don't think anybody can come to an answer that gives us the 500-year flood protection for the City of Sacramento without the Auburn Dam. That is just the pull-apart reality that is in front of us right now.

The City of Sacramento, the City of Stockton have lower flood protection than any other major city in this country. There is no other major city in the country that is even close to what we have. In New Orleans they were talking about 500-year flood protection. Most major metropolitan areas have a minimum of 500-year flood protection. And we are fighting to get 100 years in our area.

The Federal government does have liability. Jones Tract has been brought up on a number of occasions. It cost us \$100 million in recovery and repair, in trying to bring back Jones Tract, and that was a sparsely populated area. Most of that was farmland. There were very few people left who lived out there.

The cost of repair and recovery for a major metropolitan area like Stockton or the City of Sacramento would be in the billions of dollars. We are talking about getting a few hundred million dollars to begin the levee reconstruction work that needs to be done to protect those areas. A few hundred million dollars versus spending billions of dollars. That is the real choice that we are faced with here.

Obviously, in 1997 we had flooding that was caused by heavy rain that melted snow. We are in the middle of heavy rain that is melting snow right now, and could have very similar results, if this continues to go the way it is. We no longer have the option of sitting back and not doing something about it.

And I think Senator Feinstein, when she was out in the district talking about this a few weeks ago, had a very good point. And that was we know what our liability is, we know what the risk is that we face. We no longer have the choice to sit back and do nothing. And that is the choice that Congress has right now. And it is not if and when, but how fast can we get this done.

I appreciate you being here and sharing your stories with the Committee. Obviously there are some different points of view, but when it comes right down to it, we have to do everything we can to protect those areas, to protect the citizens of this country. They happen to be my constituents, they happen to be Mr. Cardoza's constituents in this case. But it is our responsibility to do something about it.

I thank you, Mr. Chairman, for doing this. I yield back my time.

Mr. RADANOVICH. Thank you, Mr. Pombo. Mr. Cardoza

Mr. CARDOZA. Thank you, Mr. Chairman. In light of Mr. Pombo's comments that I totally agree with, I want to make mention of something that Mr. Minton said.

You know, I don't support a peripheral canal. However, the concept you put forward of putting this trough near the exit or the effluent from the City of Sacramento into the river was an idea that I think deserves some consideration, because I think in these urban

areas that receive this water, it is often easy to sit on high, and when you aren't threatened with the flooding, you aren't threatened with the challenges of raising the levees in the environment where the Endangered Species Act oftentimes doesn't let you do the work that you think you need to do to protect the population, I think maybe we should consider making the inflow for the California water projects near the effluent, because only then would they understand that water quality is truly something that we have to deal with. It may be a concept that we need to look at.

I want to go to Mr. Giovanetti's testimony and look at how did you arrive at the \$1 billion cost estimate for repair and maintenance of the Delta levees?

Mr. GIOVANETTI. There was a recent Army Corps of Engineers study that estimated the \$1 billion amount.

Mr. CARDOZA. What is Stockton doing with regard to levee repair and maintenance and construction in the flood plain?

Mr. GIOVANETTI. We are no longer allowing construction in the flood plain. We are also doing our best to assist reclamation districts by recently we loaned \$400,000. TEJAFCA, as I mentioned in my testimony, was a project where the citizens assessed themselves for \$70 million to get us to at least the 100-year protection. And we are still working on reimbursement for those funds.

One of the developers is voluntarily looking at a 300-year flood protection.

Mr. CARDOZA. I am familiar with that, Mr. Giovanetti. And it makes, you know, as I look at what has been happening, and there certainly is incredible growth happening in our part of the central Valley. But as I look at some of the new developments, it is actually the new developments that are putting in the most responsible levee systems, and the vast majority of the property that is vulnerable were built many years ago and before you and I or either an officer had any responsibility and I might mention was during a period of time when it was assumed that the Auburn Dam would be built.

And so it was based on changes of decisions that happened here in the Federal government and the state government or were ramifications to actions that are now being criticized here that actually may have precipitated some of the problems.

Mr. GIOVANETTI. I agree.

Mr. CARDOZA. Mr. Sieglock or Mr. Mow, would you like to comment along these lines as well? To what San Joaquin County is doing with regard to building in flood plains and what you are doing along levy restoration work.

Mr. SIEGLOCK. Again, with the county technically in the unincorporated area, we are not seeing building in that regard, and if we do, then they have to meet standards so they are not in the flood zone, that we are in a flood plain. From our perspective on LAFCO, we make sure that those standards are being met if new annexations occur again so they are not being built in a flood zone or in a flood plain.

A number of the developments that are being required to meet a much higher standard are voluntarily meeting that standard because the public demands that as well, so I think we have been very proactive.

Again, the SOJAFCA effort was a model effort for improving flood protection in all of Stockton to bring those levies up, so that was local participation along with the state and Federal government. So it is certainly something we like to see, and it is perhaps time to evaluate a higher standard. We are a smaller community than Sacramento or some other areas, but maybe you are talking about adding a foot to get the additional protection. I don't know.

Mr. MOW. Just on the growth in San Joaquin County would involve some danger from flooding, and that is a fact. And our county continues to grow. We are looking at holding developers responsible for levee construction to bring them up to a higher standard. And I think that is something that most communities in our county.

Mr. CARDOZA. I know my time is up. I know we have to go take a vote on the Floor in just a moment, but I wanted to make one more point in response to a question that Ms. Napolitano made earlier.

And that is that there is a request that is being coordinated between our counties, Stanislaus County and San Joaquin County, to try and put together an inoperability plan for communications. And it would really be very important for this Committee and the Members who sit on it to help us work on that, because frankly, the quicker we can respond to dangers or breaks, the quicker that we can make sure that Southern California's water does not become vulnerable.

If we can fix these levee breaches, we see that the quicker we can respond, the less damage. They tend to widen with time, and the quicker we can get on this and respond to these damages, the better we would all be in trying to make sure that the Delta remains as safe as possible and the water supply remains as continuous as possible.

So with that, I would just make that point.

Mr. RADANOVICH. Thank you, Mr. Cardoza. We appreciate your questions. Ms. Napolitano and I have a couple of more.

But can I get a sense from the panel? When we are talking about either a through-Delta facility or a peripheral canal, we are not really talking about so much flood control as we are the ability to convey water out of the Delta and Bay Delta health. It is really more of an issue of water conveyance and Delta health. It is not so much an issue of flooding when it comes to a peripheral canal or a through-Delta facility. Is that right?

Mr. CARDOZA. I would say that is a fair statement.

Mr. MOW. I would say it is a combination of all of that. It is flood protection for 600,000 folks that will be living in our county.

Mr. RADANOVICH. How would that be flood protection? I am not sure I get that. I do not see the flood protection aspect that much from something like a peripheral canal.

Mr. MOW. The levee obviously has protective value for the citizens that reside in our county. As a result of that, the integrity of the levee is important.

Mr. RADANOVICH. Right. No, I understand the importance of levees. But as far as a peripheral canal or a through-Delta pumping, that you are really talking about ease of conveyance and Delta health, right? I mean, there is pretty much agreement on that, right?

Mr. MINTON. But it also backs into the question of flooding in this way. And you would be familiar with this. Just colloquially speaking, if there is a peripheral canal, there is a lot of concern that the Delta levees will be abandoned, that there won't be the interest in Southern California.

Mr. RADANOVICH. That is OK. I don't want to get there. I just want a common understanding that a peripheral canal or through-Delta pumping speaks mostly to conveyance and Bay and Delta health.

When you are talking about flood control, you are talking about levees, and you are talking about either raising Folsom Dam or building Auburn Dam, right?

Mr. SIEGLOCK. For the Sacramento region. But then also that is a great point. It reduces pressure on the Delta. So instead of having the water 15 feet high, maybe it is 12 feet high, taking the pressure off. So with an Auburn Dam, with an expansion of Folsom, with an expansion of Shasta, with the Moore River Water project, et cetera, you are taking pressure off the Delta, which takes pressure off the levees, which helps reduce flooding.

Mr. RADANOVICH. OK. Thank you very much. Mrs. Napolitano.

Ms. NAPOLITANO. Well, that brings up an interesting point and an interesting point of view in regard to the possibility of the peripheral canal being able to be not only a conveyance but also assist in lowering that levee pressure. Am I correct?

Mr. SIEGLOCK. I don't believe so.

Ms. NAPOLITANO. No?

Mr. SIEGLOCK. The peripheral canal is simply a—

Ms. NAPOLITANO. Conveyance.

Mr. SIEGLOCK.—conveyance facility. I don't necessarily see it reducing pressure on the Delta.

Mr. MINTON. The flows in the Delta peak at about six, 700,000 cubic feet per second. A peripheral canal might be 10 or 20 thousand, so it is not going to take a lot of that water pressure off those levees unfortunately.

Ms. NAPOLITANO. I see. OK.

Mr. SIEGLOCK. It is not a water storage facility, it is a conveyance facility.

Ms. NAPOLITANO. Conveyance, right.

Mr. SIEGLOCK. That would be the difference between taking pressure off or just kind of adding to the switching station.

Ms. NAPOLITANO. OK. Well, my colleague over here is asking for the help of the Committee on looking at how we can support the issue of the working together of the counties. And also before that, you mentioned sending the water just near the Sanitation—I call it Sanitation.

Mr. CARDOZA. It was a facetious comment.

Ms. NAPOLITANO. So don't mix them. And I must remind you that we do have the voters in Southern California. At least half the population resides in Southern California, where we have the wherewithal to vote bonds in or out. And if you mention that you are going to have that kind of facility close to that kind of a plant, I think you are defeating the purpose of being able to inform and educate our people.

Mr. CARDOZA Will the gentlelady yield?

Ms. NAPOLITANO. No. I just want to continue moving along because I do have a couple of questions for Mr. Giovanetti, the Vice Mayor of the City of Stockton. And that has to do with your statement on page 2, whether you are indicating there is a real need to secure funds that will result in immediate placement of dirt and rock on existing levees to reduce the risk of levee failure.

Will this repair address the structural problem of the levees? And will more dirt and rock be of much help if we do have a 6.5 earthquake in the Delta?

Mr. GIOVANETTI. I don't believe that we can protect for a 6.5 earthquake. What we are looking for is the rock as a barrier to prevent the seepage of water through these earthen levees. If we don't add the protection, they are only as strong as their weakest link. To be honest, I could not say that we could protect for a major earthquake.

Ms. NAPOLITANO. I see. And again, we go back to the issue, and I am sorry Mr. Pombo isn't here, because my asking whether FEMA has involved the City of Stockton in planning for the possible catastrophe is more of working together to address the agencies being on the same page of what can be done to prepare and to protect.

Mr. GIOVANETTI. Yes. As I stated earlier, our first responders are the fire department, and they do communicate with FEMA.

Ms. NAPOLITANO. Thank you. To Mr. Minton, is it too late to restore some of the natural ecosystems in the Delta that once helped buffer the floods?

Mr. MINTON. No. There are going to be changes in the Delta inevitably. It is not the same as it was 100 years ago or even 10 years ago.

The real challenge is how do we adapt to these changes, including sea level rise. Things are going to happen. What is our process for seeing what is going on, making sure the people are protected, that water supplies or substitutes are developed, and that the ecosystem is restored as well as it can be. I think those will be the factors in the solution.

Ms. NAPOLITANO. We have read in the testimony that MWD is already addressing a six-month possible dependency on the water should a catastrophe happen. Can the water supply agencies do more to decrease their dependence?

Mr. MINTON. According to Metropolitan Water District's recently released Urban Water Management Plan, there are a host of actions that they can take to increase their local self-sufficiency. They are called integrated resources planning and management where instead of getting rid of floodwater locally as fast as you can, dealing with it as a problem, you say wait a minute, that first 12, 24, 36, 48 hours of rain, let us find ways to let it soak into the Southern California aquifers to recharge those as sources of supply. So there are a variety of things that they are looking at.

Ms. NAPOLITANO. Thank you, Mr. Chair. I think that will do for this round.

Mr. RADANOVICH. Thank you, Mrs. Napolitano. Mr. Cardoza, any other further questions?

Mr. CARDOZA. Yes. Actually, just to clarify, Mr. Chair, my statement earlier since I wasn't able to get a yield earlier. The point

was that the absurdity of the statement of trying to put a water system or a drinking water system next to a treatment plant was the point.

It is equal to the absurdity that we sometimes face of having others put regulations on us when we sit in the Valley and the Delta area and are subject to flooding or dangers because of external concepts that folks on high don't have those dangers are exposed to. That was the point of drawing those conclusions.

And one of the things that I also wanted to make a statement about, and I will let the panelists discuss if they would like, is that we talk about the challenges of doing these improvements because we in fact want to help our residents, and it is our obligation to help those who live in danger in our communities, and we want to make the necessary repairs.

And when we feel constrained by different factors, including regulatory factors that are engaged the Endangered Species Act or other challenges that we face in communities, those are real dangers to the same kind of citizens that we represent as would be endangered through polluted water.

So those are the points I was making, and I will leave it to the panel to extrapolate any further on any of those statements.

Mr. GIOVANETTI. I would like to make a couple of statements. I would like to start by underscoring Chairman Radanovich's comment.

Of 100 percent of the watersheds in the State of California, 2 percent is used by residential/commercial, 7 percent is used by agriculture. A third of the watershed evaporates. We don't have a water supply problem in California, we have a water storage problem.

To the comments by Congressman Cardoza, the City of Stockton discharges their sewer treatment plant into the San Joaquin River. The quality of that water is good enough to swim in.

We have just recently received our permit. We have perfected water rights such that we can actually pull water downstream from our discharge. We will then pipe it to a water treatment plant and serve it back to our community. So the concept is not as absurd as it may sound because the City of Stockton is in the middle of satisfying our growth for the future with our securing of the water rights.

Mr. MINTON. Mr. Cardoza, I am very sensitive to your concerns. At 30 years in the bricks-and-mortar water business, trying to do projects to benefit the public and the environment, it is very hard.

At the same time, there are successes out there. Sacramento, which has 14 dams above it on the American River already, there are 14 dams, through the able assistance of Members of Congress, we supported the raise of Folsom Dam, improvements to the levee, reoperation of the facilities.

At the same time, they have been able to incorporate environmental improvements into it such that everybody is getting together, and the local residents have, through a Proposition 213 election, said that we will put our money up for those multi-purpose projects, and I think that is the way to go.

Mr. CARDOZA. I think you are right, Mr. Minton.

Mr. MOW. We have spoken considerably on water conveyance and flood protection for folks, but there is an agricultural economy there as well that is a big part of the levee system in San Joaquin County. And the values of the crop, our food for our nation is of importance as well. Thank you.

Mr. RADANOVICH. I appreciate your comments with the local community wanting to see the Delta preserved and protected and the levees to remain in place. And actually, we haven't talked about it a lot, but if you let the islands go, then the wave action can cause then an impact to those levees that are protecting Stockton, so we look at it as all being related together.

And so there is great importance to the public safety for maintaining those islands, regardless of the fact that they are not filled with residences, that there is an indirect impact that can become a direct impact.

But if you have never been on the Delta to any extent, I would invite you on a tour. I am sure Congressman Pombo and Congressman Cardoza would love to take you on a tour if you have not have that chance. It is something you can see by a car, but until you get on a boat and tool around, there is nothing like it. I used to go water skiing for three or four years, and I was 50 pounds lighter at that time.

Mr. CARDOZA. Mr. Chair, if I may, I would just like to thank the panel and those folks that are in the audience that have come from Stockton for this very important issue.

Mr. RADANOVICH. Thank you, Mr. Cardoza. And I just don't want this session of the panel to go without reiterating that we can't really address flooding in this part of California by solely addressing the levees; we have to talk about storage as well, and that needs to be a part of the solution.

Thank you very much for your valuable testimony. And with that, I will call up the second panel. And it consists of Brigadier General Joseph Schroedel, the Commander and Division Engineer with the U.S. Army Corps of Engineers; Mr. William Lokey, Operations Branch Chief with FEMA; Mr. Kirk Rodgers of the Mid-Pacific Region of the Bureau of Reclamation; and Mr. Lester Snow, the Director of the California Department of Water Resources.

[Pause.]

Mr. RADANOVICH. OK, thank you for seating yourselves. I do want to state that we expect two votes on the Floor at any time. I think what I would like to do is go ahead with the testimonies of each of your witnesses, and at some point in time we may have to break and go and vote and come back and resume the hearing. But we may have that break, depending on when the vote bells go off. So if you hear the bells, you will know what it is all about.

Again, welcome to the Subcommittee. Each witness has five minutes to expend your knowledge. And thank you for making yourselves available for questions after that.

So Brigadier General, welcome to the Subcommittee. And you may begin. We will go right on down the line.

**STATEMENT OF BRIGADIER GENERAL JOSEPH SCHROEDEL,
COMMANDER AND DIVISION ENGINEER, SOUTH PACIFIC DI-
VISION, U.S. ARMY CORPS OF ENGINEERS, SAN FRANCISCO,
CALIFORNIA**

Brigadier General SCHROEDEL. Mr. Chairman, Committee, and other folks here, I would like to start by thanking you, as a soldier, for the support that you or anyone else in earshot has given to men and women in uniform, and civilians, for serving our great nation and at least 120 countries around the world today, fighting other fights on behalf of our nation.

I also want to thank you for the opportunity at the same time to be a part of this team effort to solve the problems in the great State of California as a Federal partner on this team, as we fight the fights there, and find a way to bring Mother Nature on our team.

What I would like to do is recognize a couple of folks I have with me. So folks in this room, you will see them again, they are important people.

Mr. Mark Charlton, who has extensive experience in the Sacramento District, is now serving on my staff in San Francisco. He will continue to help pull together the efforts and the link with other agencies in the state, local, and Federal family.

I would also like to recognize Ms. Lynn O'Leary, who is our Project Manager on the Delta Project, and has 17 years' experience. I can't even begin to match her knowledge and her experience in the Delta.

And then also Ms. Chris Altendorf. Chris, who was just recently selected to be the Deputy for Program Management in the Sacramento District. So she will be intimately involved with the entire family here to help solve the problems.

With that, I would just like to make a couple of points. I appreciate your accepting my statement for the record, but I would like to emphasize a couple of points up front, if I can.

First of all, the Corps continues to be engaged very heavily on two fronts in the state. The first front is solving the immediate problems in trying to correct the erosion problems, trying to correct other issues that we know will help on the protection side.

Likewise, we are engaged intimately in the planning process, which we can talk about a little bit more later, a long-term plan. If there is any message that I would like to leave, it is this. We have talked about, we have studied about, we have done a lot of that kind of thing on these problems. It is time for action. It is time to stop talking. It is time to stop studying. It is time now, not 10 years from now, to have a long-term strategy that is a decision that leads to action, not 10 years from now, but now.

The second point, and again, we are engaged in supporting, as a member of this team, in every way that we are authorized and appropriated to do so, and even beyond. We are offering technical assistance as we speak today on our own nickel to help with the current flood situation.

Second, there are three phases, in my view, to these operations. First there is preparation. Second is response. Third is recovery.

As FEMA's Federal Engineer, if I can cast our roll that way, on the response side, as a part of the national response plan, yes, we

focus heavily on response and recovery. We focus on how do we respond to a catastrophe. That gets back to my first point.

We have got to do the first part first, which is the preparation piece, which can only be solved by deciding the long-term plan now. And I would tell you, I have talked to owners of the islands, I have talked to many, many people out there. Some people say that people in California are ready for that discussion.

My view is now is the time, in the wake of Katrina, to have that discussion, because the people will listen. We have got to engage the people now to get them on the team. It is one thing for those of us here at the table here to be on the team, but it is quite another to make sure that we have got the people of the state engaged, as well. So we are here to support all of those efforts. We can build Auburn, we can do whatever needs to be done. We just need to be authorized and appropriated, and by God, we will do our part for the team.

The last point I would make is, as you know, the CALFED 180-day report draft is on the street. I am proud to report to this Committee, and to other Members of Congress, that we will meet our 18 May deadline and provide that report.

I want to make sure that everybody understands what that report is. Basically, we were allowed to go out and ask for input. And I am not convinced that we got all the input we need. So that is another one of those short-term-fix, not-quite-all-there kind of solutions, if I can kind of cast it that way.

And then second, we will talk, and I encourage your further discussion on the Delta islands and feasibility study and the DRMS, because I think that is the key to solving the long-term problem now.

So again, we are here. We believe we are responsive. We believe we are well integrated with this team, and we are proud to be a part of this team.

Thank you very much.

[The prepared statement of Brigadier General Schroedel follows:]

**Statement of The Honorable Brigadier General Joseph Schroedel,
Commander, South Pacific Division, U.S. Army Corps of Engineers**

Introduction

Mr. Chairman and distinguished members of the Subcommittee, I am Brigadier General Joseph Schroedel, Commander of the U.S. Army Corps of Engineers South Pacific Division. I am honored to be testifying before your committee oversight hearing today on "Protecting Sacramento/San Joaquin Bay-Delta Water Supplies and Responding to Catastrophic Failures in California Water Deliveries." This is an important topic. If you take away one message from my testimony, I hope it will be this: Both short-term actions and long-term solutions are essential to confront this issue. We need to take action now to address critical needs and reduce the threat of catastrophic failure or we risk allowing a failure to determine our actions. At the same time, we need to work with our federal, state and local partners to develop the system-wide, long-term strategy.

Background

Since I last testified before you in October 2005 regarding the Corps' efforts to reduce the risk of flood damage to the Sacramento/San Joaquin River system, the Corps has undertaken a full-court press to prepare the "CALFED Levee Stability Program Report to Congress." The Corps is required to submit the report on May 18, 2006 in accordance with the Congressionally mandated 180-day requirement. I am happy to report to the Committee that we are on schedule to deliver the report on time.

Before I discuss the details of the report, let me characterize the Corps' assessment of the situation in the Delta.

As the hub of California's two largest water distribution systems, the Sacramento-San Joaquin Delta supplies drinking water to more than 22 million people and irrigation water to millions of acres of highly productive agricultural land. It is a haven for 750 plant and animal species and home to hundreds of thousands of people.

Yet this valuable resource is inadequately protected by an extremely fragile levee system that threatens to fail at any time, even under fair weather conditions. Unlike other levee systems that protect against high water events, the Delta's maze of mostly non-federal levees must work all day, every day to keep water from inundating people living below sea level. In fact, these islands are often referred to as "bowls." The levees that make up the rims of these bowls are part of the State-wide water conveyance system, yet have suffered as local reclamation districts have not been able to properly maintain them due to a lack of local resources.

During the last century, there have been 162 levee failures in the Delta that led to major inundation of islands, regardless of the weather conditions. These have been costly, as illustrated by the recent Jones Tract levee failure in June 2004, which occurred without warning during fair weather, inundating 12,000 acres of property and causing an estimated \$100 million in damages.

Congress recognized the threat and cost of these serious levee failures and directed the Corps to deliver a report that prioritizes potential levee stability projects in the Delta. The CALFED Bay-Delta Authorization Act (Public Law 108-361) authorized using up to \$90 million dollars in Corps funds through 2010 to implement these projects. The Corps invited Delta stakeholders to submit proposals addressing critical levee improvement needs.

In response, Delta area reclamation districts and flood management agencies submitted more than 54 project proposals totaling more than \$1 billion in estimated costs.

We evaluated the proposals based on the extent to which they would reduce the risk to life, health and safety, urban and agricultural properties, and strategic infrastructure for transportation, utilities and water supply. The report currently being prepared has identified a preliminary list of potential projects, consistent with Section 205 authority, that could be considered in future Administration budget requests to further CALFED goals. It is important to note that any selected projects would require site-specific design and environmental compliance work before construction.

While the Corps' Delta Report to Congress provides a prioritized list of projects that can be accomplished in the near-term with the help of federal funding, state, local and federal stakeholders in the State of California will need a long-term vision for the Delta before we can truly tackle the monumental task of providing comprehensive and systematic flood management to this region.

The Corps' long-term strategy will be developed in the Sacramento-San Joaquin Delta Islands and Levees Feasibility Study. This comprehensive study will address all CALFED objectives and assess existing and future flood risks in the Delta as well as water supply needs, ecosystem restoration and recreation. Scheduled to begin this year, the study will provide a comprehensive vision and roadmap for future federal participation in the Delta. The study will incorporate the California Department of Water Resources' Delta Risk Management Strategy (DRMS), which will quantify risks and potential impacts and develop a risk reduction strategy. The feasibility study will build upon the DRMS to address remaining levee stability work beyond the \$90 million federal effort authorized in the CALFED Act.

This report is the first step in a multi-year effort to address levee stability concerns in the Delta region; however, both short-term actions and a long-term strategy are essential.

Emergency Preparedness

Mr. Chairman, the Committee also raises the question of whether local, state and federal authorities are prepared to respond to a Catastrophic Failures in California Water Deliveries. The Corps and Federal Emergency Management Agency (FEMA) are working with the state to remedy the fact that right now most northern California communities do not have an updated assessment of their flood risk. Flood plain maps are often out of date by 10, 15, and even 20-years. They rely on old geotechnical data, and understanding of flood risk, under seepage, and levee performance, which has changed in recent years. In 2004, the Corps developed new procedures for how we need to assess levees for the deep under seepage in the Central Valley. That knowledge will help us evaluate levees with these updated technologies. We will work with FEMA and the State to help ensure that local communities have updated, accurate assessments of their flood risk.

The Corps also needs to update its emergency response plans and practices to optimize effectiveness and efficiencies given what we now know about California levees and the potential for multiple failures during a major earthquake event. While the State and local agencies are responsible for the first line of defense and responsiveness in emergency actions, the Corps is ready to assist in flood fighting, provision of emergency water supply and other activities in cooperation with non-federal entities when called upon. We need to update and clarify roles and responsibilities, and enhance communications and public education.

The innovative Silver Jackets program, which relies on funding from our Floodplain Management Services (FPMS) and Planning Assistance to the States (PAS) programs, combines the knowledge and programs of FEMA and the Corps, and this year has started building that relationship in California. This program is the meshing together of Federal, state, and local hazard planning and mitigation activities along with improved processes for emergency response and recovery.

This concludes my statement. Again, I appreciate this opportunity to testify today. I would be pleased to answer any questions you may have.

STATEMENT OF WILLIAM LOKEY, OPERATIONS BRANCH CHIEF, RESPONSE DIVISION, FEDERAL EMERGENCY MANAGEMENT AGENCY, WASHINGTON, D.C.

Mr. LOKEY. Thank you very much. Good morning, Mr. Chairman, Members of the Committee. My name is William Lokey. I am the Chief of the Operations Branch of the Response Division of FEMA.

Also with me today is Ms. Nancy Ward, who is the Response and Recovery Division Director from FEMA Region IX in California, who had a lot of hands-on with the participants here today, and can address particular needs and specifics.

I plan to cover three topics. The first one, very briefly, FEMA's general authority to mitigate, prepare, respond to and recovery from disaster; our role and activities in emergency planning in California, and the specific response we have done to the Governor's request for a Presidential Declaration for a potential levee break in six Central Valley Counties.

FEMA derives its authority from the Robert T. Stafford Disaster Relief and Emergency Assistance Act, the Stafford Act, as amended. Simply put, this provides the authority for mitigating the effects of disaster, the authority for preparedness planning, including training, with our Federal, state, local, and private-sector partners, the authority for the Federal response, the authority for our recovery programs, and the authority for the Federal coordinating officer.

Under our mitigation grant programs, we have three disaster mitigation, flood mitigation assistance, and our post-disaster effort mitigation grant program provides funds and technical assistance to develop state and local plans for mitigation that identify cost-effective projects.

The role of FEMA and other Federal agencies, state and local and private-sector partners is further outlined in the National Response Plan, the nation's all-hazards plan for establishing a comprehensive system, including training, exercise, and planning, as well as response and recovery, for our nation.

FEMA Region IX continually supports all hazards emergency planning, and has a close relationship with California state officials and local officials in conducting both general and incident-specific planning.

As an example, they have been working with the Federal, state, and local officials in Los Angeles to develop a proactive approach

to a Federal response in case of a major incident. Many of the concepts here have broader applications statewide to planning efforts in response to a levee break.

This particular effort also has contributed to the national effort in catastrophic planning. Specifically after our experiences from Hurricane Katrina, concepts of pushing resources forward instead of waiting for them to be requested are being strengthened and updated.

Every other month they meet with the Regional Inter-Agency Steering Committee, which are Federal partners in working on planning issues. And also included in that are state officials as appropriate.

Under the Stafford Act, we are authorized to supplement the efforts and make available resources to state and local governments and disaster relief organizations for an emergency or disaster declared by the President.

We can lean forward and move Federal assets, commodities, and equipment and teams to Federal facilities to increase our preparedness. But we can't actually provide assistance under the law until the Governor has asked, certifying it is beyond the state's capability, and the President has approved the declaration.

The response to any emergency in California, including a massive levee failure, would be under the auspices and authority of the State of California. They have a very capable and professional Office of Emergency Services and State Emergency Management Network, and it is a tried-and-true program of mutual aid that they have developed over the years. They are quite good at what they do.

I also need to point out that FEMA has no direct role in the maintenance of levees, although we certainly are a partner in the planning for the eventuality of problems.

Levee maintenance and flood fighting are primarily handled at the local level through local maintenance agencies and through the Corps of Engineers providing technical assistance and flood-fighting and assistance like that under their own authority, which can be done without FEMA and without the authority of the Stafford Act.

The California Office of Emergency Services is responsible for the overall management of emergencies and coordinating resources in the state with other partners like the Department of Water Resources, who I believe is talking today. They are the ones mainly responding to what is going on now due to the flooding in some of the California areas.

In the event of a major failure of a levee, the Stafford Act, if it were implemented on request of the Governor, we would provide supplemental assistance to the State of California and their local governments under the National Response Plan.

And a lot of the planning we have done to get ready for this year's hurricane season will apply with respect to the moving of resources, evacuation, search and rescue, and things like that that we might get asked to do.

As part of the planning effort and consistent with the other plans, we are working to improve Federal support to emergency management, streamlining contracting procedures, and establish

regular and ongoing activities and communication among the partners.

Current contingency planning is underway as a result of the request of the Governor for an emergency declaration in six Central California counties and Region IX. And California OES staff have been engaged with a number of Federal, state, and local partners doing contingency planning for this eventuality.

They are conducting assessments, identifying capabilities and shortfalls, and developing a regional plan to provide a proactive response for the 24 sites of interest identified by the Corps of Engineers. This plan is still in development, the coordination stage, and has not been completed. But a number of preliminary steps have been achieved and are in place should something happen sooner.

For example, initial transportation and logistical requirements have been identified, mobilization centers and staging areas evaluated, a preliminary execution schedule and resources has been developed.

We may also need, and plans are being done, to support transportation, fueling, and emergency medical services along transportation and evacuation corridors.

Thank you very much for the opportunity to be here today.

[The prepared statement of Mr. Lokey follows:]

**Statement of William Lokey, Operations Branch Chief,
Response Division, Federal Emergency Management Agency**

Good morning, Mr. Chairman and members of the Committee. My name is William Lokey. I am Chief of the Operations Branch of the Response Division of the Federal Emergency Management Agency. Also with me today is Ms. Nancy Ward, the Response and Recovery Division Chief from FEMA Region IX in California. On behalf of the Federal Emergency Management Agency and the Department of Homeland Security, I would like to thank you for the opportunity to brief you today. I plan to cover three topics. FEMA's general authority to mitigate, prepare for, respond to and recover from disaster; FEMA's role and activities in emergency planning in California and FEMA's specific response to Governor of California's State of Emergency; and the request for a Presidential Emergency Declaration for a potential levee break in one of the six Central Valley Counties of Colusa, Sacramento, Solano, Sutter, Yolo, and Yuba.

FEMA derives its authority from the Robert T. Stafford Disaster Relief and Emergency Assistance Act, P.L. 93-288 (Stafford Act), as amended. Simply put, this provides the authority for mitigating the effects of disasters through pre-disaster grants to states, the authority for preparedness planning with our Federal, State, Local and private sector partners, the authority for the Federal response, the authority for our recovery programs, and the authority for the Federal Coordinating Officer.

Also, under FEMA's mitigation grant programs—Pre-Disaster Mitigation (PDM), Flood Mitigation Assistance (FMA) and the post-disaster Hazard Mitigation Grant Program (HMGP), FEMA provides funds and technical assistance to develop State and Local Mitigation Plans (LMP), which assess the communities' risks and vulnerabilities and propose mitigation solutions to reduce those risks. Mitigation planning should be included as part of a communities overall planning effort. By having an LMP, communities have a better understanding of their risks and an awareness of the infrastructure and properties vulnerable to those risks, and can apply for mitigation funding when it is made available under the mitigation grant programs mentioned. Mitigation grant programs are 75% Federal 25% State or local cost share program.

The role of FEMA, the Department of Homeland Security and other Federal, State, Local and Private Sector Partners is further outlined in the National Response Plan (NRP), the nation's all discipline, all-hazard plan for establishing a single, comprehensive framework for the management of domestic incidents.

FEMA and the new Preparedness Division in the Department of Homeland Security coordinate initiatives that include planning and technical assistance for state and local governments, and provide support to National Incident Management System (NIMS) implementation and the National Emergency Management Baseline

Capability Assessment Program. Further, FEMA operates the National Emergency Training Center and the Emergency Management Institute (EMI), a national training center for emergency planning, exercise design, and incident command operations for Federal, State, local and private sector individuals.

FEMA's Region IX continually supports all hazards emergency response planning. With the ever present potential for an earthquake impacting millions of people in California, FEMA Region IX staff is acutely aware of the importance of catastrophic emergency response planning in particular. As a result, Region IX has a close working relationship with both California State and local officials and conducts proactive regional and incident specific planning.

As an example, Regional staff has been working with Federal, State and local officials in the Los Angeles area to develop a proactive approach of notification and deployment of Federal resources in anticipation of or in response to a catastrophic incident where federal assistance is immediately needed. Many of the concepts developed during this initiative have a broader application to the planning efforts in response to any levee failure.

Publication of the NRP-Catastrophic Incident Supplement (NRP-CIS) also contributes to the Los Angeles planning effort. The NRP-CIS established a coordinated strategy for accelerating the delivery and application of Federal resources and capabilities in support of a response to a no-notice catastrophic event. After the experiences from Hurricane Katrina, this concept of pushing resources toward an event instead of waiting to be asked is being updated and strengthened.

Additionally, FEMA Region IX continues to chair the Regional Interagency Steering Committee composed of National Response Plan (NRP) Emergency Support Function (ESF) agency representatives. Meetings are conducted every other month, often with the participation of State emergency officials, addressing issues such as an incident and hazard specific response and multi-agency coordination. FEMA Region IX has also identified federal operational support facilities, including California State specific Mobilization Centers and Staging Areas, and continues to provide National Incident Management System/Incident Command System (NIMS/ICS) compliant training and exercise opportunities, with a specific focus on joint, unified State/Federal operations.

Under the Stafford Act, FEMA is authorized to supplement the efforts and available resources of State, local governments and disaster relief organizations for an emergency or major disaster declared by the President. We can lean forward and move Federal teams, commodities and equipment to Federal facilities to increase our preparedness, but we cannot actually provide pre-disaster assistance under the law, unless the Governor asks, certifying that it is beyond the State's capability and the President approves a declaration.

The State of California has a very capable and professional Office of Emergency Services (OES). Specifically with regard to response to a California levee emergency or disaster, it is important to distinguish between the Sacramento-San Joaquin Delta levees and the levees referenced in the Governor Schwarzenegger February 27, 2006, request for a Presidential Emergency Declaration.

The response to any emergency in the State of California including a widespread, massive levee failure would be under the authority of the State of California governed by California's Standardized Emergency Management System (SEMS), which incorporates the State's mutual aid system and principles of the ICS, and provides the structure through which State and local government agencies coordinate their emergency response and request resources from one another.

While FEMA has no direct role in the maintenance of levees, California levee maintenance and flood fighting operations are primarily handled at a local level through Local Maintenance Agencies (LMAs). The USACE provides technical assistance, flood fighting assistance, and support for emergency repairs in situations where a levee meets the criteria for participation under COE authority. The state may request support from the USACE directly through this program without a Presidential disaster declaration under the Stafford Act.

The Local Maintenance Agencies also play a key role in planning for levee emergencies. If the event is severe enough to threaten life and property, the LMA coordinates with the local Emergency Operations Center (EOC), which may request resources from other jurisdictions or OES through SEMS.

California's OES will be responsible for the overall management of the emergency and for requesting support and resources from other State agencies, including the California Department of Water Resources (DWR). DWR is the lead state agency for flood response operations, and coordinates requests for flood fighting assistance with the U.S. Army Corps of Engineers (USACE).

If the emergency is such that support beyond these authorities is required, a Stafford Act declaration would be necessary to authorize Federal assistance. In the

event of levee failure and a Stafford Act Presidential Emergency or Major Disaster Declaration, the Department of Homeland Security's Federal Emergency Management Agency (DHS-FEMA) will provide supplemental assistance to the State of California and local jurisdiction Operational Area via the National Response Plan (NRP). The planning we are doing to be ready for the 2006 Hurricane season and the ongoing planning with the State of California will ensure that we are ready to respond quickly. We have strengthened our evacuation and search and rescue capabilities, our emergency medical response and the movement and tracking of commodities.

Existing protocols call for the activation of the Regional Response Coordination Center and the deployment of FEMA Liaison and Emergency Response Team (ERT) personnel to tie in with State emergency management officials to address life saving and live threatening response requirements.

According to the USACE, the exact risks from catastrophic levee failure are unknown and studies are being conducted in support of the larger California Department of Water Resources (DWR) Delta Risk Management Strategy (DRMS). According to the USACE, the DRMS will provide the basis for further feasibility studies in support of a comprehensive San Francisco Bay-Delta Plan.

As part of this planning effort and consistent with the States plans and priorities, FEMA will continue to work with the Corps, the State and other stakeholders to:

- Improve Federal support to the emergency management response capability of local, State and Federal agencies to rapidly respond to levee emergencies and other Incidents of National Significance
- Streamline emergency contracting procedures and plan to ensure an adequate inventory of flood flight assets are strategically pre-positioned.
- Establish regular communication and planning activities among all emergency responders and affected communities and landowners.

Currently contingency planning is underway as a result of the Governor of California's State of Emergency for a potential levee break in one of the six Central Valley Counties of Colusa, Sacramento, Solano, Sutter, Yolo, and Yuba included in the proclamation. FEMA Region IX and California OES are engaged in the Sacramento Valley Levee Response Plan Project (SVLRPP), including stakeholder participation from the USACE, California Department of Social Services (CDSS), California Department of Water Resources (DWR), six Central Valley counties' Emergency Management Agencies (Colusa, Sacramento, Solano, Sutter, Yolo, and Yuba), and the City of Sacramento.

The purpose of this Project is to conduct an assessment of vulnerabilities, identify capabilities and shortfalls, and develop a regional plan to provide proactive response to create a comprehensive, venue-specific mass evacuation and mass care plan for the population at risk from a breach of 24 critical erosion sites in the Central Valley Counties of Colusa, Sacramento, Solano, Sutter, Yolo, and Yuba. Besides assisting local government planning efforts, this project is intended to enable FEMA to identify specific resources needed immediately, mid-term, and long-term for response and recovery operations. The greatest need is to develop regional mass evacuation and shelter plans for the City of Sacramento and the greater Sacramento area.

Though this plan is still in the development/coordination stage and has not yet been completed, a number of preliminary steps have been achieved and are in place should something happen before publication. For example, transportation and logistical requirements have been identified, potential mobilization centers and staging areas have been evaluated, and a preliminary execution schedule has been developed.

FEMA may also need to provide support to transportation, fueling, and emergency medical assistance efforts along major transportation and evacuation corridors. With up to 220,000 people potentially displaced, including 36,000 people in an area known as the Pocket, a natural depression surrounded on three sides by levees, Sacramento City has far and away the greatest threat due to a levee failure along the Sacramento River.

Mr. Chairman, Members of the Committee, thank you again for the opportunity to be before you today. I would be pleased to answer any questions you may have.

Mr. RADANOVICH. Thank you, Mr. Lokey. Unfortunately, I have to go do what the people of the 19th Congressional District elected me to do. It is two votes.

Mr. Rodgers and Mr. Snow, if you will be patient, we will recess for a few minutes, and probably resume within 15 minutes.

Thank you very much. We are in recess.

[Recess.]

Mr. RADANOVICH. Mrs. Napolitano will be joining us shortly, but we are going to go ahead and resume the hearing. Take our next witness, Mr. Rodgers.

Welcome to the Subcommittee, and you may begin your testimony. Thank you.

STATEMENT OF KIRK RODGERS, REGIONAL DIRECTOR, MID-PACIFIC REGION, BUREAU OF RECLAMATION, SACRAMENTO, CALIFORNIA

Mr. RODGERS. Thank you, Mr. Chairman and members of the Subcommittee. I appreciate the opportunity to appear before you today and talk about the current water-related infrastructure of the Delta, and the challenges we face in protecting the future water supplies.

My testimony today addresses reclamations, physical and operational response to a levee failure, based on past experience and potential request for assistance that may arise. I defer to the Corps of Engineers and the State Department of Water Resources to discuss the conditions and primary response, since they have that delegated responsibility.

It is noteworthy that many of the Delta islands lie below sea level, and thus are protected by levees. These levees also form channels by which the water moves through the Delta. And water from upstream reservoirs is released to rivers which flow to the Delta, where these levee-bounded channels convey the water to the Central Valley Project and the State Water Project facilities.

It has been pointed out that two-thirds of the state's population benefit from drinking water that derives from the Delta, and similarly a large portion of the state's agriculture depends on these mechanisms to bring water to their crops. I should add that the stability of the Delta also is important to aquatic species that either pass through or do reside there.

It is for these reasons that the importance of the Delta to California's complicated water delivery system cannot be overstated. Both reclamation and the California DWR have a long history of working together to ensure reliable water supply for the people of the State of California.

There does continue to be a lot of discussion today comparing Sacramento and San Joaquin Bay Delta to New Orleans in relation to its importance and its vulnerability, and rightfully so. A catastrophic event could result in levee failures that would make it very difficult, if not impossible, to deliver water to customers south of the Delta.

It is important to note that a significant Delta levee failure could also impact operations of storage facilities as far north as Shasta Lake in ways that I will further explain in just a moment.

I want to point out that there is no cookbook recipe for levee failure in the Delta because its precise responses depend upon several factors. One, some of those might be the number of levees that do fail. Their location or the season and time of year. Each circumstance introduces a variable that may greatly alter the response.

Regardless of the variable circumstance associated with the failure, Reclamation is willing to assist, if asked, by those state and Federal agencies whose responsibilities it is to manage the levee system. Examples of assignments that Reclamation could be responsive to are as follows.

We have design and engineering services, construction inspection surveys, construction contracting and management, and other related services. Also if needed, we do have some heavy equipment and operators that could be made available.

Our objective would be to assist in returning the system to service as quickly as efficiently as possible.

A second or equally important consideration to a physical response is taking water management actions that may assist in restoring service efficiently. Central to Reclamation's mission is to deliver water, and we will do what is necessary to maintain that capability.

A couple of examples of actions we could take to assist in the event of a failure is as follows. One is that we could adjust or curtail pumping at our plant in the Delta. This would minimize salt-water intrusion, which rapidly degrades the water quality, as salty water rushes in from the bay to fill the islands where the levee failures occurred. And it was one of the first actions we took in response to the Jones Tract levee failure in 2004.

Another thing we could do is adjust upstream reservoir releases to assist in flushing salty water out of the Delta that may have been pulled in as a result of the failure. Again, this was an action that we took during the Jones Tract failure.

I hasten to point out, though, that these examples fit as effective responses in the Jones Tract incident, it was a one-levee, one-island occurrence. It cost Reclamation 30,000 acre-feet of unscheduled release from storage to flush the saltwater out of the Delta.

Different decisions may be appropriate if the failure were more severe, such as one would expect from an event caused by earthquake or massive flooding, where multiple levee failures may be the result.

And I would just conclude by saying three things. The Delta is important, and we are willing to help, either in a physical response way or operational management way, if asked.

Thank you.

[The prepared statement of Mr. Rodgers follows:]

**Statement of Kirk Rodgers, Mid-Pacific Regional Director,
Bureau of Reclamation, U.S. Department of the Interior**

Introduction

Mr. Chairman, and members of the Subcommittee, I am Kirk Rodgers, Mid-Pacific Regional Director for the Bureau of Reclamation. I appreciate the opportunity to appear before you today to discuss the current water related infrastructure conditions in California's Central Valley and the challenges we face in protecting future water supply deliveries. My remarks are focused on the work and activities in the Sacramento/San Joaquin River Delta (Delta) and on the risk faced in the context of levee failures.

Importance of the Delta

The Delta includes nearly 60 islands and tracts lying below sea level that are protected by levees. These mostly privately owned and maintained levees were built to protect crops from flooding. We will defer to the Corps of Engineers and the State of California to more fully address the condition of the levees in the Sacramento/San Joaquin River system.

The importance of the Delta to California's complicated water supply delivery system cannot be overstated. Water pumped out of the Delta provides drinking water for two-thirds of the state's population, and supports one of the most productive agricultural regions in the nation. The Delta's channels convey water from upstream reservoirs to the south Delta, where the Central Valley Project (CVP) and State Water Project (SWP) facilities can move water into the CVP's Delta-Mendota Canal and the SWP's California Aqueduct. The stability of the Delta levees that contain the water in these channels is paramount to protecting the Delta infrastructure ensuring a reliable supply of fresh water to the Federal and State facilities.

The failure of key levees has the potential to impact the CVP water supply that is managed by Reclamation. My testimony today will focus on Reclamation's response to levee failures as opposed to dam safety or canal failures. Additionally, I will describe a generalized response to scenarios ranging from a small levee failure, such as Jones Tract levee failure, to a disaster that could have a prolonged and indefinite impact on significant portions of the CVP water supply.

Response to Levee Failure

In June 2004, a levee failure occurred in dry weather and without warning on Upper Jones Tract in the South Delta. Following the break, Delta pumping was curtailed for several days to prevent seawater intrusion into the Delta. The State and Federal pumping plants were limited for a time and water shipments to Southern California were continued only through unscheduled releases from San Luis Reservoir, a large off-stream reservoir where water is held after it is pumped from the Delta. Releases were also increased at Folsom, Shasta, and Oroville reservoirs, sending more fresh water to the Delta for salinity control. The costs related to this levee break were estimated to be nearly \$100 million according to the California Department of Water Resources report entitled *Flood Warnings: Responding to California's Flood Crisis*, January 2005. The levee is privately owned. The cause of the break is still unknown.

Reclamation's response to any levee failure would be based on the nature and extent of the failure. The response would depend on a number of factors, including:

- (a) risk of flood or earthquake,
- (b) the number of failed levees,
- (c) the time of the year (winter or summer), and
- (d) the location of the levee failures.

Reclamation's CVP water service contracts have a shortage provision which recognizes that short-term or long-term water shortages may occur as a result of unforeseen events, such as a significant levee failure. This contract provision would allow Reclamation to respond to health and safety concerns that might arise as a result of such an event.

In general, Reclamation would respond to a levee failure in the following way:

- (a) Work with the Division of California Water Resources to stabilize the situation in accordance with the State's Disaster Preparedness Plan.
- (b) If necessary, modify upstream reservoir releases and re-operation of associated canals to manage potential salt water intrusion.
- (c) Employ the use of temporary features, such as barriers, pumps, or canals to ensure an adequate supply of quality water is accessible.

During any emergency situation, Reclamation closely coordinates with the California Department of Water Resources, the California Office of Emergency Services, the Corps of Engineers, and the Federal Emergency Management Agency. Levee breaks in particular also involve coordination with the State Water Resources Control Board and various other local agencies.

Conclusion

Reclamation is committed and prepared to use all tools at our discretion to manage an emergency of any size regarding levee failure in the Delta. In a worst case scenario where the only available usable water supply is contained in reservoirs upstream of the Delta, the State of California has the authority under the state water code to determine the best usage of the available water supply in the interest of public health and safety. Reclamation will continue to cooperate with other agencies and the public to protect the CVP water supply in the event of a levee failure in the Delta.

That concludes my testimony. Mr. Chairman, I would like to reiterate my appreciation to the sub-committee and others for continuing to work with the Administration to address these significant water issues facing California. I would be happy to answer any questions at the appropriate time.

Mr. RADANOVICH. Thank you, Mr. Rodgers. I appreciate your testimony.

Next is Mr. Lester Snow of the Department of Water Resources. Lester, welcome to the Subcommittee.

STATEMENT OF LESTER SNOW, DIRECTOR, CALIFORNIA DEPARTMENT OF WATER RESOURCES, SACRAMENTO, CALIFORNIA

Mr. SNOW. Chairman Radanovich, good to see you.

We have provided to you and members of the Committee an information packet just today. It includes a flood warnings document that we issued to the Legislature, California Legislature, in January of 2005, that highlights a lot of the issues that unfortunately have come to bear in terms of deterioration of the flood system, as well as a deferred maintenance.

It also includes a DVD that highlights some of the actual problems that we have encountered: the Jones Tract failure, and also some of the flood fights from January of 2006. Unfortunately, we will update it soon to include the flood fights that are going on as we speak.

It also includes some of the issues that Congressman Costa made reference to. We have animations of the 6.5 earthquake, and what results in the Delta, and how it impacts the water system, as well as an animation of the erosion of critical erosion sites that you may know have been declared an emergency by Governor Schwarzenegger.

What I would like to do is cover four basic elements. A very quick status report, an update on the flooding conditions in California, updated about midnight last night. Then highlight the Governor's flood initiative, which is divided into two parts, the Central Valley Federal Flood Control System, which is about 1600 miles of levee, the Delta, which is about 700 miles of local levee, Emergency Response, and then finally our request and expectation of Federal assistance.

I would like to point out, in terms of the Governor's flood initiative, that he has laid out a bond proposal that maps a 10-year investment strategy of approximately \$6 billion to improve the flood system. Separate from that \$6 billion in the Governor's bond initiative is \$1 billion exclusively for surface storage.

As you may know, that has not been without controversy within the State Legislature. We are committed to seeing funding of appropriate surface storage in the State of California, as well as funding of other sources of storage.

In terms of the current situation, to date we have an update, I think it was provided to you and Members of the Committee. As of this week, we are currently about 167 percent of normal rainfall in the state, with very healthy snow pack. Unfortunately, some of the recent storms have been warm, and are starting to melt the snow pack.

In terms of dividing the Central Valley up into three parts, the Sacramento Valley has probably already peaked and starting to recede. Within the Delta, we are already seeing some receding from the flows coming in from the Sacramento side. We have not

experienced the high winds that we did earlier this year, nor the double-high tides that caused us great problems New Year's Day.

So the Sacramento Valley and the Delta are kind of in a watch condition. We are not overly alarmed at this point.

However, the story is very different in the San Joaquin Valley. The San Joaquin River is above capacity as we speak. And that would not be so bad except we expect it to be sustained above capacity for at least a week or more, and could be as long as two weeks. So we have a very high level of concern.

Now, there is some drying today. We expect to be some drying tomorrow. But unfortunately, late Friday on through the weekend we expect a series of storms. So the San Joaquin River will continue to flow at and above capacity.

We have activated flood fight teams throughout the Valley, so that they are there, employees to respond. We have pre-positioned materials, and we are increasing surveillance so we can respond quickly.

Now, what I would like to do, if I could, is make reference to an information piece that is in the information packet that contains a series of slides and pictures that I think would be helpful in terms of explaining how we are approaching the problems that we have.

On the second page in terms of California's flood crisis, again, we divide it into two parts: the Federal project levees, which provide inadequate levels of flood protection because of their origin and because they used to protect farmland and now protect major urban areas, and the vulnerability of the Delta system.

Again, to highlight, on page 3, we have 1600 miles of Federal project levees, 700 miles of local Delta levees. That is an aging system, continued deterioration, and a major problem not only for protecting housing, commercial activities, but the water supply for much of the State of California.

Fourth page is simply a reminder of how this system developed 100 years ago, piling up dirt along the river to protect agricultural land. It was done specifically to encourage erosion to move the sediment from Placer mining activities out of the system. Unfortunately, that erosion continues today.

On page 5, this is a lot of the strategy that we are employing in the Central Valley to deal with inadequate levees from a height standpoint, and also a seepage standpoint. So when you hear the Corps of Engineers or the Department of Water Resources refer to getting the 200-year protection, it means strengthening the levees. It also means slurry walls to cutoff seepage.

The next page, the Chairman has already pointed out that Sacramento has some of the lowest protection of any major urban area, below 100-year protection. The Governor's bond package that I have made reference to would support the Corps activities and achieve a 200-year level of protection for Sacramento.

On page 7, unfortunately we can show you an inundation map for the Sacramento region. Two areas with just two levee breaches, we would see water over 20 feet deep in what is called the Natomas Basin, as well as in the pocket area. By our estimates, working with the city, we would expect \$28 billion of damage from just two levee breaches in those areas during flood stage, a 200-year event.

The next page, page 8, highlights actual pictures of existing erosion sites. The map shows the 24 erosion sites that the Governor has declared as an emergency, and we are proceeding in concert with the Corps of Engineers to repair those sites in this calendar year.

The following page simply shows why this is an emergency. There has been some concern that an erosion site can be fixed at any time. The problem is that these are deemed critical because they have undermined the slope of the levee, and can fail in the next flood event.

If we could skip to page 11. The Governor, recognizing the vulnerability of the system, recognizing the length of time it was taking both the state and the Federal government to respond to these critical sites, declared an emergency on February 24. It provides additional resources to the Department of Water Resources, and allows us to streamline the permitting process in California.

We have requested supporting Federal action, in terms of contract amendments, to accept advance monies from the state. We need Federal resource agencies to expedite the permitting process so we can do any mitigation that is required after the fact, not prior to the action.

We need to revise the process so that the state can obtain Federal credits for the money that we front in this process.

And finally, we need to expand and reauthorize the sack bank program so we can continue into phase three.

On to the Delta. On page 13, and this has been covered, but 700 acres, 60 islands, 1100 miles of levees, over 700 miles of those are private levees, or local levees. What can we lose? What is dependent on the Delta? Twenty-two million Californians, over four million acres of ag land receive their total water supply from the Delta.

The water supply out of the Delta supports directly \$400 billion of the state economy, and indirectly probably double that. It is actually home for 400,000 people, 500 species of habitat in the Delta region. And an issue that we have begun focusing on is the major highway, the transportation corridor, petroleum pipelines, power distribution, and deepwater port.

Page 15 simply shows that in the Delta, these are no longer levees. These are dams. They are constantly holding back water. Because of the subsidence and oxidation of the peat soils, we actually are farming below sea level and below flood stage in almost all of the islands. And that is why I make reference to these are dams that would not meet any standard for a dam in the State of California.

On page 16 is the traditional way we have looked at risks to Delta levees. Overtopping, high winds, under-seepage in boils or a surprise break, as we had on Jones Tract.

The new aspect, on page 17, Congressman Costa has already mentioned. And that is the realization of earthquake-induced failure in the Delta, meaning many simultaneous breaks. We have been aware of earthquake threats. Recent modeling has been done by the Department, by UC, Davis, that gives us a much better understanding of what could happen to these levees that are basically located on peat soils.

The next page shows the 6.5 earthquake. Our estimate from this analysis is 30 levee breaches. Sixteen islands would be flooded. Our assessment is this would have a probability equivalent to Katrina, so somewhere in the neighborhood of a one in 300 chance. Sounds remote, but could be very devastating, obviously.

One of the key issues and the topic of this hearing on the next page is that failure of those 16 islands would suck in approximately one million acre-feet, 300 billion gallons of saltwater, into the Delta. It would immediately shut down exports out of the south Delta, but probably also would affect the east Bay and contra-costa water supplies.

On page 20, we would expect that after a year we have only been able to repair seven of the islands, keeping in mind over that year we would have flood events, we would have wind damage that would be occurring to other areas, and we would be making interim actions in the south Delta, so that we could resume maybe a third of the normal pumping.

At the bottom of that bullet list, we have estimated very conservatively \$40 billion of economic impact to the State of California.

In terms of emergency preparedness and response, I won't go into detail on this. We do pre-position material. The Department does operate and conduct local training. That came up in the earlier panel. There are at least two training sessions a year. We train probably two to three hundred local emergency response and flood fight managers every year.

We have hydrologic models so that we can predict impact of flooding events, impact of major storm events. And we operate within what is called the Standard Emergency Management System, or SEMS.

I will mention this shows a CCC crew. We have activated both CDF crews and CCC crews to be on standby in the San Joaquin Valley.

In terms of emergency response in the flooding of Delta islands, historically, over a long period of time, the Corps has been the agency that has responded with a local district. In the mid-eighties, the Corps declared that they would not be involved in reclamation of flooded islands. In 2004 with Jones Tract, that is the first time that the state has stepped in and taken responsibility for repair.

The current emergency response system that we have and that we support is able to deal with several simultaneous island floodings, but nothing of the magnitude that I highlighted in the earthquake disaster scenario.

On the next page, I will just mention a few things. The Schwarzenegger Administration is very focused on flood management. It has its origins in the report we submitted to the Legislature on our response to the Jones Tract failure. We have introduced legislation that did not move very effectively last year. We have a whole new level of interest in the State Legislature this year in terms of responding.

The Governor, as I already mentioned, proposed an infrastructure package that included initially \$2.5 billion. He has increased that to \$6 billion to be on the table. The Legislature has various versions in play, all of them at least \$4 billion for investment in flood.

Declaration of emergency, as I already mentioned in February, we are proceeding and working very closely with the Corps to expedite repair of those sites.

Two other points that I will mention on page 25. We described the disaster scenario and presented it to the Legislature. We have undertaken what is called the Delta Risk Management Strategy, which is to look on a very technical basis at all the levees in the Delta, and start setting up a priority structure for investments.

And the last bullet on that page is developing a long-term hundred-year vision for the Delta; what will the Delta look like 100 years from now, how do we start investing to make sure that we can maintain the Delta as a viable resource for all the purposes.

Implicit in that Delta vision is that our current approach to managing the Delta is not sustainable. We have to do something different in the Delta. What we are doing now does not work.

Finally, our request in terms of Federal flood management assistance, specifically in the 24 erosion sites, I have already mentioned the need for a contract amendment, the need for expedited emergency permitting under ESA, the need for a process for the state to get credits for our advance money, and the need to authorize the third phase of the Sacramento River Bank Protection Program.

In terms of Delta emergency response, I believe we need to develop a better understanding of exactly what the Federal role will be in responding to emergencies in the Delta. I think that has become murky over the years, and we need to clarify that.

On a statewide basis, we simply need to continue Federal involvement and cost-sharing as we move forward with flood control all across the state, in terms of the subventions program, the Delta, as well as the project levees.

That concludes my comments.

[The prepared statement of Mr. Snow follows:]

**Statement of Lester A. Snow, Director,
California Department of Water Resources**

Introduction

Committee Chairman Pombo, Subcommittee Chairman Radanovich, and members of the Subcommittee, I appreciate the opportunity to appear before you today to discuss flood issues in the Bay-Delta watershed of California. Governor Arnold Schwarzenegger and his administration have warned that California faces a multi-faceted flood crisis. Tragically, it took the lethal and destructive force of Hurricane Katrina to draw attention to flood threats in California, where the potential for catastrophic flooding is even greater than it was in New Orleans.

In January 2005 Governor Schwarzenegger released Flood Warnings: Responding to California's Flood Crisis. This white paper identified the challenges associated with flood management in California: California's flood protection system is comprised of aging infrastructure with major design deficiencies. Many of our levees were built as part of the federal flood control system more than a century ago using primitive designs and construction techniques. These levees have been further weakened by deferred maintenance. Funding for maintenance and repair of levees has dwindled over time as governments at the federal, state, and local level struggle to meet all their financial commitments.

Meanwhile, escalating development in floodplains increases the potential for flood damage to homes, businesses, and communities. In the Sacramento-San Joaquin Delta there is another threat: levee failure can jeopardize reliable water supplies for farms and cities across two-thirds of the state. This is because a levee failure in this Delta region would draw salt water into Delta channels, rendering this water too salty to deliver to farms and cities served by the Central Valley project, the State Water Project, and local projects that draw water from the Delta.

Our flood management responsibilities include both prevention and emergency response. I will describe activities related to both, but will focus on prevention.

In this regard I would like to focus on two particular aspects of the Schwarzenegger administration flood efforts, and our view of the federal role in these efforts. These two aspects include the Governor's declaration of a flood emergency to expedite repair of critical erosion sites identified by the U.S. Army Corps of Engineers, and the increasing vulnerability of the Sacramento-San Joaquin Delta including the State and federal interests that are put at risk by this vulnerability.

Levee System State of Emergency

On February 22, 2006 Governor Schwarzenegger and Senator Dianne Feinstein led a Congressional delegation on an aerial tour of Central Valley levees. They viewed some of the 24 critical erosion sites in the Sacramento Valley and the Delta identified in December 2005 by the U.S. Army Corps of Engineers. Many of these sites have deteriorated further since their identification by the Corps in December, due to flood flows that occurred in California river systems on or about New Year's Day 2006.

In response, Governor Schwarzenegger on February 24, 2006 declared a state of emergency for the state's levee system. He directed the California Department of Water Resources to repair these 24 sites during this calendar year, and he made available approximately \$100 million in State reserves to fund this emergency work.

Erosion can take its toll on any levee system, but it should not come as a surprise that most of these critical sites are along the Sacramento River. The levees of the Sacramento River were intentionally designed by the U.S. Army Corps of Engineers to erode. During California's Gold Rush, placer mining in the Sierra Nevada washed entire mountainsides into local streams and rivers. This silt deposited in riverbeds of the central valley, increasing flood risk at the very time that farms were being established throughout the valley. In response, levees were built to contain the floodwaters. These levees were intentionally built very close to the channel in order to keep water velocity high and scour this sediment out of the river systems.

Today, these narrow channels have been too successful. The gold rush silt has long since been washed out of the system, but the erosive force of the river continues to eat away at the levee system. Today, the levees protect not only farms, but also hundreds of thousands of people who live and work in central valley cities and towns. All together, more than \$47 billion in infrastructure is protected by central valley levees.

At the existing levels of funding and capacity to plan and carry out levee repairs, correction of these 24 sites by State and federal agencies could take up to four years. By then, the river will have eroded additional sites that will further threaten lives and property. The "business as usual" approach will eventually result in a catastrophic flood that will destroy businesses and take lives.

To avoid catastrophe, we must eliminate this backlog of repairs. Governor Schwarzenegger has taken several proactive steps to improve our flood protection. He has augmented the State's budget for flood management efforts, and he has proposed a very large investment in flood management as part of his Strategic Growth Plan. But these efforts, while very beneficial to our efforts to protect Californians from flooding, are not sufficient. That is why the Department of Water Resources has been tasked with carrying out a monumental erosion repair program this year. We have enlisted the support and cooperation of other State agencies to ensure that we can plan, design, permit, and construct repairs this year.

We are also working closely with our federal partners at several agencies as we prepare for this massive repair program. I would like to brief you today on the status of two areas of interaction: responsible streamlining of environmental permitting under federal emergency procedures, and crediting to obtain eventual federal cost-share funding for the work that California will carry out this year.

Environmental Permitting. Levee maintenance and repair projects ordinarily require several environmental permits before they can proceed, and environmental permitting has sometimes been blamed—accurately or not—for delaying levee projects. In California we have been proactively addressing this situation. Last year I convened a committee of policy-level managers from State and federal agencies to consider how we might appropriately avoid, minimize, or mitigate for the environmental impacts of levee work in ways that would allow the projects to be implemented quickly. One tool we are investigating is the use of mitigation banks so that project mitigation is taken care of in advance of the levee work itself.

In consideration of this levee emergency, we propose to formalize and expand this committee as a Levee Repair Executive Oversight Committee. The purpose of this committee is to ensure that the federal and state agencies responsible for permitting and environmental compliance work together in an expeditious and cooperative

manner to perform the critical levee repair work this year. We will depend on this interagency committee to help us meet the challenge of addressing State and federal permitting in ways that allow us to protect the environment and stay on schedule.

The Governor's emergency declaration allows him to waive certain State requirements such as those related to the California Environmental Quality Act. However, we have been able to proceed in an environmentally sensitive manner by relying on emergency procedures available to State regulatory agencies. In this way we can comply with environmental protections while we are improving our flood protection. California encourages federal permitting agencies to take the same protective, yet flexible, approach. We have already been engaged in discussions with the Department of the Interior and received Interior commitment to use emergency permitting procedures available to the U.S. Fish and Wildlife Service.

Federal Cost-Share Crediting. The federal government has traditionally been a partner to States and communities in providing funding for flood control repairs and improvements. Using available funding, the U.S. Army Corps of Engineers was prepared to repair five of the 24 erosion sites this year. The horrifying images of Hurricane Katrina's aftermath have reinforced the fact that the failure of flood control facilities can have devastating consequences. California cannot wait years to complete the repair of erosion sites that the Corps has already designated as critical.

Therefore, Governor Schwarzenegger has pledged funds from State reserves so that emergency repairs can be made this year without waiting for traditional cost-sharing. We will, in effect, provide credit to the federal government for its share of the funding to complete repairs at ten erosion sites. The Governor has asked the Corps to arrange for California to be reimbursed by the federal government under appropriate cost-share formulas without the need for prior approval of credit agreements.

The Increasing Vulnerability of the Delta

No region of California faces a greater long-term threat of catastrophic failure than the Sacramento-San Joaquin Delta. This area is not a river delta in the classic sense. It is a 700,000 acre region within the Central Valley of California where the Sacramento and San Joaquin Rivers come together in a maze of channels and sloughs and flow to San Francisco Bay. The lands surrounded by these channels have come to be called islands but, again, they are not islands in the classic sense. They are in fact more like New Orleans—lands with elevations below sea level that are protected by fragile levees.

Of course, there are differences between our Delta islands and New Orleans. The levees built to protect the homes, businesses, and citizens of New Orleans provided 250 year flood protection. The Sacramento-San Joaquin Delta is a mostly agricultural region. Only a small fraction of the 1100 miles of levees that protect the Delta islands are Project levees. Most are privately built levees, first constructed over a century ago. Very few of them offer even 100 year flood protection.

This level of protection was sufficient for the agricultural region of a century ago, but many changes have taken place in the Delta. The peat soils of the Delta have subsided, gradually lowering the elevations of Delta islands. Some of these parcels are now more than 20 feet below sea level. As California grew during the 20th Century, two great water projects were built to meet the demands of central valley farms and coastal cities. Today both the federal Central Valley Project and the State Water Project are vitally dependent on fragile Delta levees to protect water supply and water quality. Other infrastructure now crosses the Delta, and is dependent on the continued stability of Delta levees, including state highways, railroad lines, water supply pipelines that serve much of the San Francisco Bay area population, energy transmission lines, and petroleum pipelines to name a few.

As our dependence on the Delta has grown, so has the threat of catastrophic failure of Delta levees. Traditionally we have viewed the flood threat of winter storms as the greatest vulnerability of the Delta. We recognize that this threat has grown over time as the Delta islands have subsided, requiring taller levees to protect them. Today we recognize that global climate change poses additional threats. The careful hydrologic records we have kept since the 1940's have already documented the changes that are taking place. Over the next century we expect sea level in the Delta channels to rise by a foot or more. At the same time, we expect warmer storms to produce higher peak flood flows.

Today there is a growing realization that the Delta also faces threats from seismic events. An earthquake could liquify the foundations of Delta levees and cause catastrophic flooding that would devastate the economy of California and the nation. We have considered the effects that a 6.5 magnitude earthquake in the Delta region would have. This magnitude earthquake may have about the same occurrence

probability as a hurricane like Katrina. Such a temblor could cause 30 levee breaches, flooding 16 islands in the Delta. 300 billion gallons of salt water would be drawn into these subsided islands from San Francisco Bay. The salt in the Delta would render it useless as a water supply source, shutting down the Central Valley Project and State Water Project for several months. When water deliveries could resume, they would be smaller in quantity and much lower in quality than Californians have come to expect.

California's economy would be severely affected. Economic losses would easily reach \$30-40 billion in the five years after the earthquake. Thirty thousand jobs would be lost. Agriculture in the San Joaquin Valley would be greatly impacted. And all these economic effects would ripple throughout the nation and the global economy.

Both the State and federal governments have taken proactive steps to address catastrophic failure of Delta levees. Congress authorized \$90 million in the CALFED authorization bill in 2004 for the U.S. Army Corps of Engineers to assess Delta risks and undertake reconstruction and enhancement of Delta levees. Two weeks ago the Corps released a draft Sacramento-San Joaquin Delta Report, identifying and prioritizing potential levee stability projects in the Delta. We urge Congress to support an active role for the Corps in the Delta by appropriating the full authorization so that the Corps can participate as a partner in our efforts to protect the Delta.

Together with the Corps, California is working to develop the Delta Risk Management Strategy that Congress called for in the CALFED authorizing legislation. By 2008 this effort will help us to better understand all the risks to Delta levee stability, quantify what is at stake when catastrophic failure occurs, and provide long-term options for Delta protection.

At the same time that we develop long-term options for Delta protection, we must be prepared to respond to failures in the Delta and throughout the system when they occur. We have organized our institutions to be as responsive as possible. For example, the operations centers for the State Water Project and the Central Valley Project are located at the same facility that houses our Flood Operations Center and the regional office of the National Weather Service. In this way, communication and coordination among the project operators, the forecasters, and the flood fighters can be rapid and seamless. When a flood emergency is declared, our flood management staff can function 24/7 alongside those who are forecasting flood events and those who are managing dams and reservoirs.

A good illustration of our coordinated response came in June 2004 when a Delta levee at Jones Tract failed. Working with the Governor's Office of Emergency Services, we activated our Standardized Emergency Management System, or SEMS. DWR and OES coordinated a response that included establishment of an incident command center in the field and the involvement of the local levee district, the county, several state agencies, Reclamation, and the Corps.

Recognizing that the Delta must be protected in both the short term and the long term, Governor Schwarzenegger has proposed substantial funding to protect what we have in the Delta, respond to emergencies, and implement the long-term plans we will develop in the coming months. The Governor's Strategic Growth Plan initially included over \$900 million in proposed funding to protect Delta levees and he subsequently proposed increasing this amount to \$1.5 billion.

Conclusion

California faces unprecedented threats from catastrophic flooding. Some of the risk is attributable to our own action or inaction: we depend on century-old levees to protect our growing population and economy, we have not always maintained these levees as well or as promptly as we should, and we have pursued land uses in the Delta and elsewhere that have caused subsidence or increased the risk to lives and property. We are also improving our understanding of the risk we face: our engineers are learning more about the faults that may lie hidden within levees, we have the knowledge to update flood zone maps, and we are gaining an understanding of the increased risk posed by climate change. Tragically, it has taken the misfortune of Hurricane Katrina victims to focus attention on similar risks in California.

We are ready to make the investments and do the work necessary to improve our flood security. The Schwarzenegger administration issued a white paper in January 2005 calling attention to California's crisis, sponsored flood management reform legislation at the State level, increased the State budget for flood management, proposed general obligation bond investments for flood protection, is leading the development of a Delta Risk Management Strategy, described a Delta disaster scenario that highlighted the profound threat and spurred action, and declared an emergency

due to critical erosion in our levee system. We are successfully partnering with federal agencies to better understand the risks, to repair and improve the system, and to expedite the permitting processes associated with levee construction.

We hope that the Congress will recognize the severity of flood risk in California, appropriate funding for traditional cost-shares and new authorizations to fund the work of the Corps in the Delta, and help California improve our level of protection against catastrophic flooding.

Thank you for the opportunity to testify before this Subcommittee. I would be happy to answer any questions that the members may have.

Attachments:

Governor's Emergency Proclamation of February 24, 2006

Governor's Letter of February 27, 2006 to President Bush

Governor's Executive Order of March 6, 2006

Governor's Letter of March 6, 2006 to General Strock

Proclamation

Governor Schwarzenegger Declares State of Emergency for California's Levee System

EXECUTIVE DEPARTMENT

STATE OF CALIFORNIA



PROCLAMATION by the Governor of the State of California

WHEREAS, the California Department of Water Resources document "Flood Warnings: Responding to California's Flood Crisis," submitted to the Legislature in January 2005 identified major deficiencies and challenges to the flood control system in the California Central Valley;

WHEREAS, the California Department of Water Resources testified before the Legislature that a magnitude 6.5 earthquake in the Sacramento Delta region would likely result in a catastrophic levee failure that threatens the drinking water supply for 24 million citizens in California;

WHEREAS, a majority of California's agriculture industry is dependent on water from the Sacramento Delta and a catastrophic levee failure would result in cessation of pumping capacity for as much as 18 months, causing \$30-\$40 billion in economic damage to the State;

WHEREAS, a catastrophic levee failure would threaten tens of thousands of homes and major transportation corridors;

WHEREAS, a catastrophic levee failure would result in significant environmental impacts including the permanent loss of critical habitat for endangered species around the Sacramento Delta;

WHEREAS, severe weather conditions during the past two flood seasons have brought unusually heavy rains, which combined with the already poor condition of many levees creates conditions of imminent peril to those living near the levees, to the environment, businesses, and critical life support systems, such as drinking water supplies;

WHEREAS, my Administration has introduced to the Legislature a comprehensive flood control investment strategy to address these serious threats;

WHEREAS, because of these severe weather conditions, I, Arnold Schwarzenegger, have issued Proclamations of State of Emergency in as many as 42 counties that have suffered flooding, mudslides, the accumulation of debris, washed out and damaged roads, and the loss of human life;

WHEREAS, severe weather conditions during each flood season have resulted in the accumulation of significant damage to the levee system;

WHEREAS, severe weather conditions during the future flood seasons or an earthquake will likely overwhelm the State's levee system;

WHEREAS, the U.S. Army Corps of Engineers in cooperation with the California Department of Water Resources has identified 24 critical erosion sites on project levees in the Sacramento and San Joaquin River Flood Control systems that need to be repaired before a catastrophic levee failure occurs; and will continue to identify additional levee erosion sites;

WHEREAS, any levee breaches in the Central Valley have both hidden and known deficiencies, and it is imperative that the State take measures to address serious risks as they become known;

WHEREAS, without an emergency proclamation and federal assistance, the California Department of Water Resources will not be able to complete necessary repairs to these 24 identified critical erosion sites before the start of the next flood season;

WHEREAS, the Department of Water Resources will continue to identify additional levee sites that require expedited repairs to prevent the loss of human life and significant property damage during a catastrophic levee failure;

I, ARNOLD SCHWARZENEGGER, Governor of the State of California, find that conditions of extreme peril to the safety of persons and property exist within the California levee system;

The resources to address this threat exceed the capabilities, services, personnel, equipment and facilities of any one county. Under the authority of the California Emergency Services Act, set forth at Title 2, Division 1, Chapter 7 of the California Government Code, commencing with section 8550, I hereby proclaim that a State of Emergency exists for the State's levee system;

Pursuant to this proclamation, I hereby direct all agencies of the state government to utilize and employ state personnel, equipment and facilities for the performance of any and all necessary activities to alleviate this emergency in accordance with the State Emergency Plan.

I FURTHER DIRECT, that as soon as hereafter possible, this proclamation be filed in the Office of the Secretary of State and that widespread publicity and notice be given of this proclamation.



IN WITNESS WHEREOF I have here unto set my hand and caused the Great Seal of the State of California to be affixed this the twenty-fourth day of February 2006.

/s/ Arnold Schwarzenegger

Governor of California



OFFICE OF THE GOVERNOR

Letter from Governor Schwarzenegger to President Bush Requesting Federal Emergency Declaration for California Levees

Governor Arnold Schwarzenegger today sent the following letter to President Bush requesting a federal emergency declaration for California levees.

February 27, 2006

The President
The White House
Washington, D.C. 20500

Through:

Ms. Karen Armes, Acting Regional Director
Federal Emergency Management Agency, Region IX
1111 Broadway, Suite 1200
Oakland, California 94607-4052

Dear Mr. President,

On February 24, 2006 I proclaimed a state of emergency for the California levee system due to the imminent threat of catastrophic levee failure.

Under the provisions of Section 501(a) of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. § 5121-5206 (Stafford Act), and implemented by Title 44 of the Code of Federal Regulations § 206.35, I request that, as a result of this imminent threat, you also declare an emergency for the State of California, focusing first on 24 identified critical levee erosion sites located on project levees in the counties of Colusa, Sacramento, Solano, Sutter, Yolo, and Yuba, and then on additional critical levee erosion sites as they are identified.

These 24 critical erosion sites, identified in a report by consultants for the U.S. Army Corps of Engineers (Corps) in cooperation with the California Department of Water Resources (DWR) dated December 29, 2005, represent the gravest danger of catastrophic levee failure and the highest priority for repair of the identified erosion sites. Only eight of these critical sites have been scheduled for repair in 2006, but these projects are in jeopardy due to the lack of federal funding. The other 16 sites have had only cursory review and there is no scheduled plan to repair them. At the current rate of progress, it could take more than four years to complete rehabilitation work at these 24 sites. California cannot wait that long because of the grave threat posed by a catastrophic levee failure. Therefore, I have directed that the full resources of the State of California be utilized to repair these critical sites before the next flood season and am seeking federal assistance to achieve this goal.

Mr. President, during the past two flood seasons, severe weather conditions have caused me to proclaim states of emergency in as many as 42 counties. In fact, as you know, less than two months ago I proclaimed states of emergency covering 34 counties in California and those same counties were declared disaster areas by the Federal government. These storms alone caused more than an estimated \$400 million in disaster-related damages throughout California's coastal areas and the Central Valley, and further weakened critical erosion sites on project levees along the Sacramento and San Joaquin Rivers.

Increasingly severe weather systems each season have accelerated the deterioration of the state's levee system to the point where they are now in danger of failing during the next major rainfall or earthquake. This worsening

situation creates conditions of extreme peril to the public and property protected by the levees, to the environment, and to the very foundation of California's economy.

The California Central Valley flood control system consists of approximately 1,600 miles of project levees maintained by the DWR, various local governments and special districts, and thousands of miles of non-project levees. This intricately balanced system protects more than 500,000 people, two million acres of developed agricultural land, and structures worth at least \$50 billion. The system is aging and deteriorating and, in some places, literally washing away. Over the years, major storms and flooding have taken many California lives, caused significant property losses, and resulted in extensive damage to public and private infrastructure in the Central Valley. Devastating storms in 1997 drove 120,000 people from their homes, resulting in one of the largest mass evacuations in the state's history, and caused damage to more than 30,000 residences and businesses. More recently, the Upper Jones Tract levee failure, in June 2004, produced more than \$100 million in repairs and disaster-related losses.

Pursuant to 44 CFR § 206.35, I have determined that this incident is of such severity and magnitude that effective response is beyond the capabilities of the state and affected local governments, and that supplementary federal assistance is necessary to save lives, protect property, public health, and safety, or to lessen or avert the threat of a disaster. I am specifically requesting federal assistance to accomplish emergency protective measures as allowed under the Public Assistance Program. I would also like to request that the Federal Emergency Management Agency (FEMA) interpret Stafford Act criteria as broadly as possible to encompass and reimburse the wide array of activities that may be needed to alleviate this emergency.

Preliminary estimates of the costs needed to repair the 24 critical erosion sites are between \$75 and \$100 million. The types and amount of emergency assistance needed under the Stafford Act and from other federal agencies under other statutory authorities are expected to exceed \$56 million (75% share) and are tabulated in Enclosure A.

In order to alleviate the conditions of this emergency, DWR has worked cooperatively with the Corps under the Sacramento River Bank Protection Program. Under this program, the Corps repairs severely eroded sites and cost-shares the work with the state on a 75 percent (federal)/ 25 percent (state) basis. The state committed \$6.1 million for State Fiscal Year (SFY) 2005/06 and I have proposed \$4.9 million for SFY 2006/07. I certify that for this emergency, the state and local governments will assume all applicable nonfederal share of the costs required by the Stafford Act.

I have designated Mr. Henry R. Renteria, Director of the Governor's Office of Emergency Services, as the State Coordinating Officer for this request. He will work with FEMA, on my behalf, to provide any additional information or justification that may be needed.

Sincerely,

Arnold Schwarzenegger

Executive Order

EXECUTIVE DEPARTMENT

STATE OF CALIFORNIA



EXECUTIVE ORDER S-01-06
by the
Governor of the State of California

WHEREAS, on February 24, 2006, I proclaimed a State of Emergency based on a finding that conditions of extreme peril to the safety of persons and property exist within California's levee system; and

WHEREAS, on February 27, 2006, I requested that the President of the United States declare an emergency for the State of California, focusing first on 24 identified critical levee erosion sites located on project levees in the counties of Colusa, Sacramento, Solano, Sutter, Yolo, and Yuba; and

WHEREAS, the identified critical levee erosion sites pose a continued and imminent threat to the public and property protected by the levees, to the environment and to California's economy; and

WHEREAS, it is imperative that these identified critical levee erosion sites be repaired as soon as possible in order to alleviate the conditions of this emergency; and

WHEREAS, strict compliance with the certain statutes and their implementing regulations, identified below, would prevent, hinder or delay the mitigation of the effects of the emergency.

NOW, THEREFORE, I, ARNOLD SCHWARZENEGGER, Governor of the State of California, by virtue of the power and authority vested in me by the Constitution and statutes of the State of California do hereby issue this order to become effective immediately:

The California Department of Water Resources shall immediately develop a plan to accomplish critical levee erosion repairs this year and shall coordinate a statewide effort to complete repairs at the 24 critical levee erosion sites on the Sacramento River flood control system, identified in a report by consultants for the U.S. Army Corps of Engineers dated December 29, 2005.

The California Department of Water Resources shall take all necessary steps to immediately implement the plan to accomplish the critical levee erosion repairs at the 24 identified sites this year.

All State agencies with responsibilities, regulatory authority or expertise related to the critical levee erosion sites or repairs shall cooperate fully and act expeditiously in coordination with the California Department of Water Resources to facilitate the completion of all repairs on the 24 critical levee erosion sites this year. Any State agency requested to do so in writing by the Director of the California Department of Water Resources shall temporarily assign staff to the California Department of Water Resources to assist with critical levee erosion repairs.

The California Department of Water Resources shall contract for the services of necessary qualified personnel and for the supplies, materials, equipment and services necessary to perform the critical levee erosion site repairs and to identify additional levee sites that may require expedited repairs to prevent the loss of human life and significant property damage during a catastrophic levee failure. The California Department of Water Resources is authorized to enter into such contracts as expeditiously as possible and for this purpose shall be exempt from the provisions of the Government Code and the Public Contract Code applicable to state contracts, including, but not limited to, advertising and competitive bidding requirements, to the extent that they would prevent, hinder or delay the prompt mitigation of the effects of this emergency.

IT IS FURTHER ORDERED that this order shall expire upon the termination of the State of Emergency.

The activities herein are authorized to be carried out pursuant to the Emergency Services Act, Government Code sections 8550 et seq.

I FURTHER DIRECT that as soon as hereafter possible, this order be filed in the Office of the Secretary of State and that widespread publicity and notice be given to this order.



IN WITNESS WHEREOF I have here unto set my hand and caused the Great Seal of the State of California to be affixed this the sixth day of March 2006.

/s/ Arnold Schwarzenegger

Governor of California



GOVERNOR ARNOLD SCHWARZENEGGER

March 6, 2006

Lt. General Carl Strock
Commander and Chief of Engineers
United States Army Corps of Engineers
441 G Street, Northwest
Washington, DC 20314-1000

Re: Proclamation of a State of Emergency for Critical Levee Erosion

Dear General Strock,

As a result of the imminent threat of catastrophic levee failure, I proclaimed a state of emergency for the California levee system on February 24, 2006. In my proclamation, I focused on the imminent threat of 24 identified critical levee erosion sites located in the counties of Colusa, Sacramento, Solano, Sutter, Yolo, and Yuba. On February 26, 2006, I requested that the President declare a federal state of emergency.

The existence of these 24 critical levee erosion sites creates conditions of extreme peril to the public and property protected by the levees, to the environment, and to the state's general economic well being. Therefore, I am directing that the full resources of the State of California be brought to complete any necessary work to repair these sites this year to avoid a catastrophic levee failure.

To accomplish this critical emergency work, California will need the assistance of federal agencies, including the United States Army Corps of Engineers. I am formally requesting that federal assistance be provided in the following manner.

First, I request that the Corps join with the state in recognizing the imminent threat of failure posed by these critical erosion sites. This is a clearly defined threat acknowledged in the Corps' own consultant report, and given the location of these critical erosion on major rivers flowing past populated areas, it is readily apparent that significant damage will be incurred if preventive action is not taken immediately. This imminent threat is present now in the current flood season and will continue next flood season if the critical erosion sites are not repaired.

The state requests that the Corps do its part to complete as much of these critically important repairs as possible. Accordingly, pursuant to the Code of Federal Regulations, Title 33, Part 203, Subpart F, section 203.72, I request that the Corps assist the state and respond to this emergency by taking advance measures to complete the repair of the 24 critical erosion sites identified in the December 29, 2005 study



Lt. General Carl Strock
 March 6, 2006
 Page 2

prepared by Ayres Associates for the Corps. The following addresses the requirements governing the Corps' emergency work under advance measures to prevent the loss of life and significant damage to property.

State Efforts Undertaken

Following my proclamation of the state of emergency on February 24, the appropriate state agencies immediately redirected resources to repair the 24 levee sites by the end of the calendar year. The California Department of Water Resources (CDWR) is developing a strategic plan for completing the construction, addressing all steps required from design work to environmental mitigation to construction. This includes procuring the appropriate materials and means to perform the work at each critical erosion site and putting in place consulting and construction contracts. The California Department of Finance is securing the financial resources to ensure state's share of the funds are committed in a timely fashion. The California Resources Agency is coordinating with its departments to put in place programmatic agreements to address environmental mitigation and any impact on historic, archeological or Native American resources. As I noted above, I am directing the full resources of the state to protect lives and property by ensuring the necessary repairs to these critical erosion sites are completed this year.

Specific State Needs Requiring Corps Assistance

California specifically needs the Corps' assistance in the following ways:

- Fund, through re-programming, the Sacramento River Bank Protection Project, to accomplish the repairs of the critical erosion sites identified to be completed this year, in recognition of the immediate flood threat, to complete the repair work on the Sacramento River Bank Protection Project sites.
- Waive all rules pertaining to the state advancing funds to the Corps to allow the Corps to directly complete as much of the work as possible.
- Fully cooperate in expediting the amendment of the Local Cooperation Agreement for the Sacramento River Bank Protection project, to allow the state to advance funds to the Corps for construction of erosion repairs within the Corps' capability this year.
- Immediately share with the state all available information regarding the critical sites identified. In particular, the state needs to receive all information regarding plans and specifications, design work, reports, field inspections, geotechnical studies, surveys, biological assessments, any other environmental studies and documentation, and other appropriate documents.
- Acknowledge the emergency nature of this work and the imminent threat to public safety in enforcing Section 404 of the Clean Water Act and in consulting with federal regulatory agencies, including developing agreements that will allow any required mitigation to take place after the repairs have been completed.

Additional Commitments By Non-Federal Interests

In addition to the state resources that have been committed to addressing this critical issue, the CDWR will be coordinating with local reclamation districts, flood control districts and affected cities and counties to

Lt. General Carl Strock
 March 6, 2006
 Page 3

ensure that their resources, expertise, and assistance are appropriately employed to accomplish the repair of these critical sites this year.

Non-Federal Sponsor

The non-federal sponsor for this emergency work is the CDWR.

Because I have directed the CDWR to work to repair all critical erosion sites that the Corps is unable to complete before the start of the next flood season, I also request the Corps to coordinate with CDWR to ensure that the levees are certified immediately upon completion of the repairs. To accomplish this goal, I request that the Corps work with CDWR to ensure that all repairs are completed to Corps and FEMA standards. To this end, it will be necessary for the Corps to provide staff to work with CDWR to review the designs and the contract bid packages that the state will complete. It will also be necessary for the Corps to be present during construction and to verify that the state is completing the work to Corps and FEMA standards.

In addition, I request that the Corps work with the state to arrange for the state to be reimbursed by the federal government under appropriate cost-share formulas without the need for prior approval of credit agreements. This will ensure that the repair work is completed this year with proper contribution to the cost by the federal government. Finally, I request that the Corps provide all available assistance through its consultation with federal regulatory agencies and under its own permits and certification requirements to allow this critical repair work to proceed immediately, including developing agreements that will allow any required mitigation to take place after the repairs have been completed.

Finally, there are reports that the recent storms have induced levee damage, and possibly new critical erosion, along reaches not now identified in the Ayres Report as being critical. As new critical sites are identified, we will be requesting that the Corps, under Public Law 84-99, restore the levees to their pre-flood conditions using federal funds for the federal cost share for these repairs.

I appreciate your cooperation in meeting this challenge.

Sincerely,



Arnold Schwarzenegger

cc: The Honorable John Paul Woodley, Jr.
 Assistant Secretary of the Army (Civil Works)
 108 Army, Room 3E431
 Pentagon
 Washington, DC 20410-0108

Mr. RADANOVICH. Thank you, Mr. Snow, for your testimony. A lot of questions.

Mr. Schroedel, I want to get a sense of, and appreciate your statement on the need to act now, and how the Corps is ready to go forward. And it was very well outlined in your 180-day report that was received recently.

Can you give me an idea if funding were not an issue, how long would it take to implement the items, the to-do list that was generated in that report that you submitted? And what are the things, aside from funding, that might be getting in the way of your ability to implement that?

Brigadier General SCHROEDEL. Sir, just to summarize our findings so far, again, we asked for input from all comers to identify for us critical sites that needed work. We were also given some parameters with which to consider the input.

Specifically, we were asked to consider for potential execution those critical sites that met our section 205 limitations, which mean essentially about an \$11 million project, funded 65 percent Federal, 35 percent non-Federal.

So here is what we found. We found about 54 sites that were submitted to us, 29 of which met the 205 limitations of about an \$11 million project. The total for the 54 sites amounts to about \$1.2 billion. And then the value—

Mr. RADANOVICH. Just for the record, those 54 sites, were those levee repair sites?

Brigadier General SCHROEDEL. Yes, sir, levee repair sites. And one point that I would make just to underscore a comment that I made earlier regarding the fact that this is just information we asked, and it is input we received; and it is hard to judge what else is out there that we are not aware of.

As an example, Sherman Island, which is a very critical island on the western edge of the Delta, we had no submissions for any requirements. That is a little strange to us.

So I just want to make sure that that is very clear, when we get that 180-day report, it is not a conclusive this is what needs to be done. That is an important point I think we need to make first.

Second, \$1.2 billion worth of work, 54 sites. The 29 sites that are within the 205 limitations, the smaller projects amount to probably \$100 million is all out of that \$1.2 billion.

Now, how long would it take, I wouldn't hazard to guess right now. But it would take probably quite a while just to do that work.

And again, the last point I would make, if I may. Even if we did all of that work, that still does not guarantee the integrity of the system. And then I would second Lester's comments about the status of the Delta and the infrastructure of the levees rather. And those Band-Aid fixes, if I can call it that, wouldn't necessarily mean we would ever, or could ever, certify the system. It just means that those sites, in accordance with the evaluation criteria that we selected, would be fixed.

Mr. RADANOVICH. Basically saying that reinforcing the levees alone will not provide the level of protection that that area needs, correct?

Brigadier General SCHROEDEL. Yes, sir, that is correct.

Mr. RADANOVICH. Thank you. Mr. Snow, thanks for your report, too, that you brought here. And I want to hold this part up. And what is really interesting to me is Sacramento's level of flood protection compared to some of the other river cities throughout the United States.

It is embarrassing, but there is Sacramento and its level of protection. New Orleans was even up here, and we are worse than New Orleans, but nowhere near compared to some of the other major river cities in the United States.

In the discussion that we are having with regard to the protection of levees, levee reinforcement, those being done still have not

raised this bar, I mean, that is what will bring this bar to this level right now, right?

Mr. SNOW. Well, the project that is actually the Corps's project working with local agencies that includes levee improvements on the American River and the Sacramento River, combined with the Folsom Dam improvements, gets you up to 200-year. So some levee improvements, but also changing the outlet works at Folsom, as well as a Folsom Dam raise.

Mr. RADANOVICH. The Folsom Dam raise. When you are talking about improvements at Folsom, it is mainly the raise of the dam, is that right?

Mr. SNOW. I believe it is the outlet works, also, so you can evacuate more quickly.

Mr. RADANOVICH. And the gate?

Mr. SNOW. Yes.

Mr. RADANOVICH. If even that were done, it would bring that level up here still below the level of what was current in New Orleans, right?

Mr. SNOW. Correct.

Mr. RADANOVICH. Can anybody care to tell me what we need in addition to what we are doing in order to get that level up to, say, the equivalent of, say, Dallas or Tacoma or St. Louis or Kansas City? Someone has got to respond.

Mr. SNOW. What did you have in mind?

Mr. RADANOVICH. It can be broad, you know. It is more than fixing the levees, isn't it? It is more than reinforcing that. And if you can tell me broadly, what needs to happen in addition to it.

Mr. SNOW. Well, I will make a comment, and perhaps the General also has some thoughts about the next phases. And I know SAFCA, the local—

Mr. RADANOVICH. I am sorry?

Mr. SNOW. SAFCA is the Sacramento Area Flood Control Agency that is very active, and one of the better, more responsible flood agencies in the State of California—are looking at other solutions and other parts of it.

Obviously the historic discussion on flood protection in Sacramento has been upstream storage, Auburn Dam. The problem has been that debate in the past has actually delayed investment in flood improvements in the region. And our focus right now with the state is, we need to make sure we get these improvements, and not get distracted by the next debate over Auburn Dam.

Should that study move forward, I believe the Bureau is proceeding with updating some of the numbers, at the direction of Congress. We will evaluate those and make assessments. But we don't want anything to interfere with making these improvements that are on the table now.

Mr. RADANOVICH. And I agree. But you know, I don't like having a discussion that keeps us at this level of protection and while we continue and avoid what will really give us the protection that we should want and deserve compared to all the other cities in this country.

Lester, I wanted to ask you one other question. In CALFED, there are water storage projects in CALFED, Sykes Reservoir, Los Vaqueros, and one other one. If we need more than levee reinforce-

ment, we need storage in order to sufficiently protect the Delta against floods, will any of those reservoirs provide any adequate level of storage capacity, and thereby relieve the flooding problem in that area? Will it contribute?

Mr. SNOW. The two projects that became the most discussed during our bond deliberations with the Legislature was Sites Reservoir and Upper San Joaquin storage, or Temperance Flat is a classic one. Both of those reservoirs can be operated as part of an improved flood control package. Neither one would be a silver bullet.

But Sites, for example, can be used in conjunction with Oroville, and potentially Shasta, to provide some additional flood space there, so that you can pull water out, move it into offstream storage, and provide additional flood capacity, so it can tie into a strategy.

When you combine that with levee improvements and setback levees—and the reason I mention that is setback levees are also a form of storage. As you widen the channel significantly, then you have additional capacity in the river, and in some areas—obviously the best example is a bypass, where we move significant amounts of water out of the river system into a bypass that is effective as storage, basically.

And so when you combine all those elements, that is how we see getting the protection we need for the future. Storage is a piece of it, levees is a piece of it, and how you construct the levees of course is a piece of it.

Mr. RADANOVICH. Right. Mr. Rodgers, I know that the Bureau was asked to kind of relook at the Auburn Dam. Can you give me an idea of the progress of that effort?

Mr. RODGERS. I believe we were on schedule to have that report done by this fall.

Mr. RADANOVICH. Very good, thank you. Mrs. Napolitano.

Ms. NAPOLITANO. Thank you, Mr. Chair. And Mr. Snow, just looking at the coordination, and it has apparently been identified that there are, of course, first responders in the areas that are going to be needed, or at least in some areas. Apparently there is what, 24 breachable levee areas, am I correct? Or at least that is what I am hearing. There are 54 the Army Corps is identifying.

And whatever many, are the first responders in those areas working in tandem with the agencies to be able to be responding to the needs of the community? Whether it is agriculture, local communities, bedroom communities, whatever.

Mr. SNOW. Yes, there is a couple of issues in play in your question. One, let me mention what is going on as we speak on the San Joaquin River, where we are very concerned.

The San Joaquin River is flowing above capacity, will continue for some time because of the storms that we have had.

The structure we have in California, which is called the Standard Emergency Management System, or SEMS, the first responders are usually the county. It is the county OES offices. And we support them. And then there is the Federal support of us.

And so as we speak, we have our flood investigators out working with the counties, increasing surveillance of the levees, and identifying areas of greatest concern so that we can respond quickly.

We have also pre-positioned flood fight materials and flood fight crews from California Conservation Corps and the California Department of Forestry, which has prison crews that they put together for firefighting, as well as flood fighting. So those are out there so that we can support, as soon as we hear there is an issue we can mobilize sometimes within minutes, certainly within hours, to flood fight.

You made reference to the 24 sites. That is something that is a little bit different. That is a Corps of Engineers report that was made available in December, December 29 of last year, that identified 24 critical erosion sites on the project levees. And those are sites where there has been concern expressed that there is so much erosion that potentially in the next flood, you could have levee failure.

We have mobilized and evaluated each of those sites. The Corps is proceeding. I believe they are going to deal with 10 of those this year, and the state will deal with 14 of those, so that by the next flood season we have repaired all of those sites.

Does that answer your question?

Ms. NAPOLITANO. It addresses most of my question. But given the fact that we have had a lot of rain in Northern California, and we expect, in my understanding, another seven days of rain, how is this going to affect the ability to be able to defend those areas?

Mr. SNOW. Well, the 24 erosion sites, we will keep an eye on them. That is not where we are seeing the problems right now.

Ms. NAPOLITANO. OK, they are different.

Mr. SNOW. Yes.

Ms. NAPOLITANO. Thank you. Page 25 of your report, you indicate your partners are the Corps, the Department of Fish and Game, developing the Delta Risk Management Strategy, local, county, other entities?

Mr. SNOW. We have formed an advisory group on the Delta Risk Management Strategy. It is kind of a technical advisory group. The Delta Risk Management Strategy is a fairly technical assessment of the integrity of the levees. And the Corps is our partner on that. Fish and Game is involved because of the implication to environmental consequences as we start working on Delta levees. And we have a Delta Risk Management Strategy Advisory Group that includes representatives from the local reclamation districts and the counties in the region.

Ms. NAPOLITANO. So you are saying that only in certain areas are you involving the locals.

Mr. SNOW. Well, I am saying on this investigation, which is a study of kind of the engineering integrity of the levees, we have a technical advisory group that includes local representatives.

Ms. NAPOLITANO. OK. That still kind of leaves them out of the whole picture.

Mr. SNOW. Well, that is not our intent. That is why we formed the group, that they can work with us on this.

Ms. NAPOLITANO. Is there a local here that might want to address that, whether or not there is that necessity of being involved in the whole planning and—I guess not.

Mr. Chair, if I may, how will the Water Resources coordinate with FEMA in the event of a serious emergency in a formal

disaster declaration? And who will be in charge? And with that, the statement that, according to Mr. Lokey's testimony from FEMA, Federal assistance from FEMA and other agencies will not be available until an emergency or disaster has been declared under the Stafford Act. And how long does that take?

So I would like to have an answer, if you can clarify that.

Mr. LOKEY. Well, I will take the first one. For some declarations, mainly recovery, the process, you know, it could take in terms of weeks.

An emergency response declaration, that can be done verbally, and we can lean forward on that kind of thing. No doubt there will be one.

We have done a lot of planning. From the hard lessons learned in Katrina, we are knowledgeable now, and have developed plans for search and rescue aimed at hurricane season, but which would be applicable here. We know where the resources are now that we didn't know last year.

Like for example, with the National Park Service and the boats that the Geological Survey has, and the military. Those are all rolled in now to our national strategy that we are planning to apply to hurricanes, but we can certainly apply it there. And we have commodities stored around the country as part of the national strategy, much of that stored at Moffett Field in California. And we can move things in that direction should a cataclysmic event occur.

But the Governor is in charge. And through the state, we are supportive to that. If we see something coming, like we see a hurricane coming, we are authorized to move Federal assets to Federal facilities until a declaration. But as of right now, just the planning we are doing with the Federal family and the various agencies, the specific planning the region is doing with the Federal partners in the region, that would form the nucleus of the relationships and the plans to respond to the state.

We would partner up with the state emergency management agency at the state, emergency operations center in Sacramento. The Governor would be setting, through the emergency management organization and the input from state agencies, would be setting the priorities. And we would be the Federal representation there, and be responding to those priorities as quickly as possible.

But we have to keep in mind, the Federal government is not a 911 emergency response agency, nor designed to be that. We are doing a lot better. We can be ready to move things in quicker. And with the planning that has been done—I used to work for California Office of Emergency Services several years ago, and am aware of their system and the SEMS system.

The relationships they need, the systems they have, the mutual aid systems they have, and things like that are much more robust, much more exercised, and much more sophisticated, as well as the relationships with the Federal family, than existed in Louisiana when Hurricane Katrina hit.

They have had enough of these big events that they are quite good at it. And so you would feel a much more proactive response. But would it be a 911 call, where the Federal boats would be there in one hour? No, ma'am, that is not possible.

Ms. NAPOLITANO. Understood. But what else can be done, sir, in your estimation?

Mr. LOKEY. Well, we just said, the resources we have to keep the planning going. We have got for the specific area of the Governor's emergency proclamation request, ongoing planning is taking place where groups have been formed and where an ongoing process with the Federal agencies, and that gets stronger and better every day, as per my testimony, and the various things they are identifying. They are pre-identifying staging areas, pre-identifying resources in the state that might be needed to speed up the delivery of them.

And other than keeping that process going and responding to the needs of the state in the other areas of the state, because the Delta area that we are talking about here is different than the area the Governor has declared the emergency on.

And so, again, all this planning has value for that, too. But just continuing that planning process.

Ms. NAPOLITANO. Thank you very much. Thank you for your indulgence.

Brigadier General SCHROEDEL. And if I could add something to that. Another piece that is sometimes overlooked, FEMA has their role, and then we, the Corps, are FEMA's engineers.

However, let me speak, if I could just for a second, on the Defense Department in my capacity as a soldier.

During Hurricane Rita I was the Task Force Engineer for Hurricane Rita, Task Force Rita. What has happened is happening right now. The Federal government is establishing a permanent defense coordinating officer at Camp Parks. That is new.

And that individual's responsibility will be to do planning right now for how the Defense Department might also be brought to bear, just as the Defense Department was, the Coast Guard and whoever in Katrina, Rita, and whatever.

So that is a new twist. A permanent defense coordinating officer at Camp Parks, coordinating with FEMA, coordinating with us to also do some planning for Defense Department response. So that is something new, too.

Mr. LOKEY. And if I could add to that. I came back early from the meeting we were having with the Defense Department and the Nationwide Defense Coordinating Officers in San Antonio, Texas this week.

One of the things we have done this year to expedite the delivery of military assets, because in all authority, the mission assigned the military takes the approval of the Secretary of Defense. And sometimes that does not move very quickly.

So we are working on pre-scripting capabilities, pre-scripting what we will call mission assignments. So we have already done the homework and already run it through the system, about aviation assets, medical assets, transportation assets, and things like that, to shorten that timeframe from when the state identifies the need, or we can anticipate what is needed, and we can actually legally get it moving.

Ms. NAPOLITANO. Gentlemen, that is great news. Where is Camp Parks?

Brigadier General SCHROEDEL. Just not too far from San Francisco, ma'am. It is pretty close to the area we are talking about.

Mr. LOKEY. And the defense coordinating officers will be housed within our 10 regional offices around the country to give ongoing military planning, coordination, and liaison, instead of as it did before where one was identified and you worked with them on a periodic basis.

Ms. NAPOLITANO. Are they also part of a planning group with the rest of the locals and the state and Federal? I know you are Federal, but—

Mr. LOKEY. Yes, they are.

Ms. NAPOLITANO. They are. Thank you very much for your indulgence, Mr. Chair.

Mr. RADANOVICH. Thank you, Mrs. Napolitano. Mr. Costa.

Mr. COSTA. Thank you very much, Mr. Chairman. I have got numerous questions, and some I will have to submit for the record because of time.

I am wondering, if it doesn't take away from my time, Mr. Chairman, because I understand—and correct me if I am wrong—that Mr. Rodgers has to leave for a plane back to Sacramento?

Mr. RODGERS. I would say we have to leave after the presentation probably.

Mr. COSTA. OK. Because we were going to get a briefing on the current efforts on the potential flooding in the affected areas that are in all of our districts. And so they were going to brief us. And that is separate from my line of questioning obviously. I don't know if you want to entertain a three-minute summary on where we are right now or await that following my questions.

Mr. RADANOVICH. Mr. Snow, Lester, didn't you kind of update on the three sections and where we were currently with that?

Mr. SNOW. Yes. And you should have in front of you an update from midnight last night. And to summarize very quickly, Congressman Costa, I mean, the concern that we have in your region actually is that we have these high flows; we have not had major breaks. But we are going to—

Mr. COSTA. Where is that? I am not sure we have it up here.

Mr. SNOW. They are in this room somewhere.

[Laughter.]

Mr. SNOW. I think you have a map in front of you now, is that right?

Mr. COSTA. Mr. Chairman, do you have it there? We can share.

Mr. SNOW. It highlights the various incidents. I think the real issue, the real concern is with the storm patterns and the snow melt, we are going to keep the Sacramento River flowing at or above capacity. What did I say, Sacramento? Sorry. I meant San Joaquin.

Mr. COSTA. And you define capacity as 8,000 cubic feet per second?

Mr. SNOW. It varies by location, including bypass.

Mr. COSTA. Right.

Mr. SNOW. So everything is full. So our concern is that system that doesn't get used as frequently as the Sacramento system probably has its greatest difficulty with sustained high flows. And that is what we are experiencing.

So we have mobilized more surveillance of the sites, mobilized flood fight crews to be prepared, and are starting to pre-position some material in different locations so we can respond.

Mr. COSTA. You would define the critical time period as the next three, four weeks, depending upon the storms and the temperatures?

Mr. SNOW. Perhaps Mr. Rodgers can kind of respond. I am not aware of what their plans are, but my understanding is that entire watershed we expect to be running high for at least the next two weeks. Do you want to comment?

Mr. COSTA. And all the three agencies are meeting daily on this, and with surveillance and the other efforts to keep us apprised? I mean, I know how you have done it before, with the Bureau, with the Department of Water Resources, and the Army Corps, and your center there in Sacramento. Is that what is taking place now?

Mr. RODGERS. If I could respond to that. We have activated what we call the flood operation centers in 24 hours. That is where we have—both project operation facilities are located there, the Central Valley Project, the State Water Project. That is also where the National Weather Service is located.

So we coordinate the weather forecasts with our release strategies from the reservoirs with our flood strategies.

Let me just add to that that yesterday we met with some of the Congressional staff and gave a briefing. What we plan to do daily is make available our operational data and what our projections are, available to Congressional staffers. And that will start in the morning. So that will be one response that we have.

The second one I would mention is that we recognize that on the San Joaquin River, that Vernalis is an important measuring point for flows. And we are projecting about 30,000 cubic feet per second to be flowing past Vernalis at a peak, and probably sustained levels of about 20,000 cubic feet per second for the next couple of weeks, tailing off depending on the storms.

So, as Mr. Snow has mentioned, those are flows that are mostly not experienced, or intermittently experienced. And so the system is not as equipped to handle it, and the damage to levees that are existing can be pretty significant. So that is where the monitoring is taking place now that he mentioned.

Mr. COSTA. Well, even further upstream, I mean, on the Chowchilla Bypass. That is seldom used except for events like this, and therefore its state of ability to handle the capacity is of question, I would guess. I mean, we had the levee failure in 1997 right above the pass there on the San Joaquin River.

Can you refresh my memory? And I know that was over a 100-year event, the flows that we had for that 24-hour period?

Mr. RODGERS. I believe we released about 60,000 cubic feet per second from Friant Dam, for about a 12-hour period, and then tailed off from there. It was pretty significant.

Let me just add that on Friant, our operations there we are coordinating very carefully with the upstream reservoir operators concerning their planned operations and releases. In addition to that, we are working with our own on project users to arrange to disperse outflows to the maximum extent that we can, so that we are putting that to every available distribution point.

For example, the Friant Kern Canal can handle about 2,000 cubic feet per second. And we are putting that right up to its fullest capacity, all that it can handle. Madera Canal at 400 cubic feet per second. I took a drive on Sunday, and everything was flowing.

And the other thing we have done is taken away any administrative barriers as incentives to keep those systems flowing, and coordinated with the State Water Resources Control Board, so that there is no disincentive to continue that sort of an operation.

And then the third thing would be certainly notification coordination with downstream interests that could be impacted.

Mr. COSTA. All right. I think it was important for us to hear what is taking place here, because obviously I think we are at the stage that is, needs to marshal all the resources together, as we have done in the past, in advance, and hope that we will have a more traditional spring, and we will not get the type of event that occurred recurring that occurred in 1997. But it appears that you are all working together, and you have got a plan.

Mr. Chairman, I would like to go back to the other, if it is OK with you, there were a couple questions I did want to get in here.

Mr. RADANOVICH. Yes. And we will wrap up, and if you could move those along, it will be great.

Mr. COSTA. All right. Mr. Snow, I really appreciated your presentation. I thought it was on point and very informative.

Back on page 24 you talk about the proposed general obligation bond, and you look at what was originally proposed over four years, and then now the increased proposal.

Do you have an estimate of what we have spent on the state level over the last 15-plus years, with the boatwright levee program and some of the other additional Federal funds that have come together?

Mr. SNOW. I do not. I probably could get that very quickly for you, but I don't have that on the top of my head.

Mr. COSTA. I think it is important, as we are looking toward our continued partnering, to get an idea of the fact that the state has not been sitting by idly, and in fact has made a significant investment over the last 15 years. And that number would be helpful.

It was alluded to, and I think it has been discussed here, but how far do you think we are—maybe the Army Corps might want to weigh in here—as to really trying to determine whose responsibility it is for which levees, understanding that some are owned locally, privately, some are state responsibilities, and some are the Federal government's responsibilities. How far along are we in really tying that down?

Brigadier General SCHROEDEL. Sir, I think we have got a good idea. We know which levees are project levees, which ones are non-project levees. I think that is pretty clear. We have got maps. We know which levees are which.

We also know that standard practice, once we complete a project, we also, as a part of the project, complete an operations and maintenance manual. And then, standard practice, a responsibility for long-term maintenance, according to the operations manual, is handed off to the local water district.

Mr. COSTA. I understand we know whose responsibility each levee is. But my point is, have we actually triaged or prioritized

based upon where you think the greatest need is, in what order? Because we don't have enough money to do it obviously all at once, and because the funding sources are going to come from different areas, how we coordinate that on a need basis.

Brigadier General SCHROEDEL. Sir, I think within the Delta, our 180-day report, given the other limitations I mentioned earlier, starts to get at some of those priorities, based on their criteria, the CALFED objectives, based on the other objectives.

But I think in general the answer to your question is there is work to be done. And I believe in terms of my opening statement, the need that we see to get to the vision and the work that the state is spearheading, which we support fully, on the Delta vision and on the long-term strategy, I think the sooner we can get to what does the end state look like, I think then we will be able to sort out the priorities that will contribute to that to make wiser use of investments that we want to make today.

Mr. COSTA. I think that priority listing is going to be important as we try to figure out how we come together.

Mr. SNOW, as I look on page 20, and there is other references toward that on your handout, you give a diagram of the Delta. And I want to go back to the point or the reference I made earlier on in terms of whether or not an evaluation is done as to whether or not there is a more cost-effective way of dealing with some of these levees than simply rehabilitating them.

And I don't think it is one size fits all. But it seems to me whether you are talking about \$6 billion or something less, you would offer the opportunity for those who are in an area that they understand what the handwriting on the wall is in terms of the long term, but they might to, in fact, take advantage of simply selling their island, where you are two or three property owners. Has that been evaluated? On a voluntary basis.

Mr. SNOW. I think that is precisely one of the potential outcomes of both the Delta Risk Management Strategy, as well as the Delta vision. There clearly are islands on the peat soils where, if you try to bring them up to a specific standard—Public Law 8499, for example—it only stays there for a short period of time. Because the extra material that you put on there to armor it actually weighs it down, and it squeezes out that peat material.

Some of our thought is very consistent with what you just said; that you lay out a plan where you recognize certain islands that it is just not cost-effective to continue to keep investing.

Now, in those cases, though, you can't just abandon those island. Because an abandoned island means wave-fetch that takes out the next island.

Mr. COSTA. Right. Would they be a potential for water supply?

Brigadier General SCHROEDEL. Potentially. Also a potential for habitat conversion of some sort.

Mr. COSTA. If they are water supply, they are habitat, as well.

Brigadier General SCHROEDEL. Good point. I think the key, though, is making sure that landowners know exactly what is going on, and that they are not simply being abandoned, and that there is a broader plan for the Delta.

Any time you talk about buying an island or abandoning levee repair, you pick up sides. And we can't do that. We have to have a master plan for the Delta.

Mr. COSTA. Well, thank you very much. And thank you, Mr. Chairman, for the time. This is something obviously we are going to have to continue to work together on, on a state and Federal basis. And I will submit my questions, my other questions, later on.

Mr. RADANOVICH. Thank you, Mr. Costa. I appreciate your interest on the current situation out there, which makes this hearing very timely.

One last question to Mr. Rodgers and Mr. Snow. In the event that a massive levee failure disrupts water supplies for many months or even years, do the agencies have contracts in place to get water from underground banks or other sources throughout the state to begin to think about augmenting this water supply if we lose it?

Mr. RODGERS. We don't have contracts presently in place, but we recognize that those resources are available. And we have had transactions with many of those water bank entities in the past. So being able to tap into those in the event of a problem like you describe we think would be a fairly reasonable response on our part, and we could probably do that in short order.

Mr. RADANOVICH. All right, thank you very much. Gentlemen, thank you so much for your testimony here today. It is very valuable, and again, very timely.

Before I adjourn the hearing, I want to ask unanimous consent that the testimony of Mr. Paul Jacks be admitted into the hearing records. Mr. Jacks works for the California Office of Emergency Services, and was not able to be here today because of the pending flooding in California. And there being no objection, so ordered.

[The prepared statement of Mr. Jacks follows:]

**Statement of Paul Jacks, Deputy Director,
California Governor's Office of Emergency Services**

Introduction

Good morning Chairman Pombo, Subcommittee Chairman Radanovich, and members of the Subcommittee. Thank you for the opportunity to testify before you today on "Protecting Sacramento/San Joaquin Bay-Delta Water Supplies and Responding to Catastrophic Failures in California Water Deliveries." As you are well aware, California faces many threats. Since 1989, California has experienced 61 disasters resulting in a Governor's state of emergency, and, of these, 33 were significant enough to be declared federal emergencies or major disasters. The recent storms last December and January caused an estimated \$400 million in damages in a 29 county area and affected more than 50 reclamation districts in the Sacramento-San Joaquin Delta. As Director Snow clearly articulated, California's aging levees pose a significant threat to the public safety, in addition to threatening California's critical water supply system that supports farms and communities across the state.

You have requested that I address the role of the Governor's Office of Emergency Services (OES) as it relates to the coordination and response to massive levee failures and resulting flooding, as well as water delivery interruptions and other consequences associated with levee disasters. Today, along with Director Snow, I will speak from the state perspective, as you will hear also from our federal partners, including the Bureau of Reclamation, United States Army Corps of Engineers (USACE), and the Department of Homeland Security/Federal Emergency Management Agency (FEMA), among others.

First, a few key principles about disasters in general:

1. We cannot predict what the next disaster will bring. Each disaster has its own unique set of issues, so our emergency response system must be flexible—the answer to ten different disaster scenarios is not ten individual plans.

2. All disasters require common capabilities that must always be addressed by public safety agencies.
3. Finally, to be truly prepared for any disaster we must focus on developing and strengthening organizational systems, training our personnel, communications, and resource acquisition. These areas are critical to all disasters, regardless of cause.

Systems

OES serves as the lead agency for emergency management in California. To ensure the most effective use of all resources for dealing with any emergency, OES makes every effort to include government at all levels, businesses, community-based organizations, and volunteers.

The fundamental mission of OES is to ensure that the state is ready and able to mitigate against, prepare for, respond to, and recover from the effects of emergencies that threaten lives, property, and the environment. To accomplish this mission, OES coordinates the activities of state agencies under the authority of the State Emergency Services Act and the California State Emergency Plan. OES also coordinates the response efforts of state and local agencies to ensure maximum effect with minimum overlap and confusion. Additionally, OES, in accordance with the National Response Plan (NRP), coordinates the integration of federal resources into state and local response and recovery operations, when needed.

OES accomplishes its mission through programs and outreach efforts that assist and support local and other state agency emergency management programs.

California has learned that the best way to ensure our disaster readiness is to develop sound and flexible systems that can be applied throughout the disaster spectrum. As stated previously, OES coordinates the state response to major emergencies in support of local government. The primary responsibility for emergency management, and in particular emergency response, rests with local government. In California, the Standardized Emergency Management System (SEMS) serves as the mechanism by which local government requests and receives assistance.

Created by legislative mandate in response to the devastating Oakland-East Bay Hills Fire in 1991, SEMS is critical to California's emergency management organization. Since December 1, 1996, SEMS is required by law for managing responses to multi-agency and multi-jurisdiction emergencies in California. SEMS facilitates coordination among all responding agencies and expedites the flow of resources and communication within all organizational levels.

SEMS incorporates the Incident Command System (ICS), mutual aid, multi and inter-agency coordination, and operational area concepts. Mutual aid in California is executed through a "bottom-up" approach. Resource requests originate at the lowest level of government and are progressively forwarded to the next level until filled. For example, if an Operational Area (county) is unable to provide the necessary requested assistance to an affected jurisdiction, it may contact the OES Regional Emergency Operations Center (REOC) and forward the request. Requests for resources that cannot be filled at this level may then be forwarded to the State Operations Center (SOC). When necessary, the state also can coordinate federal resources on behalf of affected local governments, or even seek assistance from other states through the Emergency Management Assistance Compact (EMAC), which is administered by the National Emergency Management Association (NEMA). All government levels in California understand this system, and we all plan, train, and exercise within it to prevent delays and provide immediate access to assistance.

Deployed for the first time during the January 1997 floods, an incident that affected more than 30 counties and caused an estimated \$2 billion in damages and disaster-related losses, SEMS showed its strength and some weaknesses. Since that time, the system has been steadily improved and fully utilized by state and local agencies for emergency response activities. Its success has been unquestioned and the system has worked so well that certain of its features have been incorporated in the new National Incident Management System (NIMS).

As a result of having a standardized system, our planning at the state level has focused on assisting local governments to be well prepared for the hazards in their jurisdiction. Particular attention has been concentrated on cities and counties, as they primarily attend to human needs during and immediately after disasters. We have found that a common, all-hazards planning approach is the most effective means to address the many types of disasters for which we are at risk. In most cases, the consequences of disasters will be similar; for example, an evacuation and sheltering plan addressing special needs populations will apply whether there is flood, earthquake, or a massive levee failure.

As stated previously, SEMS provides the basic framework for response operations in the State of California. The California State Emergency Plan, however, provides

the policies, concepts, and general protocols for the implementation of SEMs. Additionally, the Department of Water Resources (DWR) has an administrative order that outlines its emergency response functions as established in the California State Emergency Plan and which further guides OES and DWR in coordinating priority tasks and programs that the two departments will perform with respect to emergency preparedness, response, recovery, and mitigation.

Current Levee Efforts

Since the Governor's proclamation of a state of emergency on February 24, 2006, and his subsequent request to the President for an emergency declaration, the state has been working on a levee failure contingency plan in coordination with other state, local, and federal government agencies. All six counties (Colusa, Sacramento, Solano, Sutter, Yolo, and Yuba) potentially affected by a failure at one of the 24 critical sites have been asked by OES and FEMA to review their emergency operations plans in relation to the current levee proclamation and to provide information as to their specific preparations for mass evacuation, shelter, and notification/warning. As part of the process, each county has identified special needs/vulnerable populations in the potential inundation zones and identified resource shortfalls. The City of Sacramento and Sacramento County, which have the most population at risk from a failure of one or more of these critical levee sites, have established robust flood awareness public education campaigns, including holding community meetings to discuss flooding threats, evacuation, and household preparedness.

We are also reviewing existing state and region-level plans and procedures, and identifying immediate actions that could be taken to improve these plans and procedures, in anticipation of a response to requests for local assistance resulting from an imminent or actual failure. The draft plans and procedures currently being updated or revised include Guidance for Sheltering During Large Scale Evacuations, Guidance for Evacuee Reception and Processing Center Operations, Mass Evacuation Guide Checklist, and the OES Inland Region Mass Evacuation System Operations Manual. OES is also finalizing the Inland Region Mass Evacuation System Operations Manual, which specifically addresses the handling of evacuations that cross Operational Area boundaries. Documents developed as part of the Flood Emergency Action Team (FEAT) project, subsequent to the 1997 floods, are also being revisited.

Additionally, OES recently coordinated the formation of a Levee Failure Contingency Planning Group to identify response resources that the State may request from the Federal government to assist with a mass evacuation or sheltering effort. This planning group consists of a number of State agencies, including Department of Social Services, California Highway Patrol, Department of Transportation, Department of Health Services, Emergency Medical Services Authority, Department of Rehabilitation, Department of Food and Agriculture, DWR, California National Guard, and the American Red Cross. As we modify state plans and procedures we will meet with the counties to discuss potential joint operations and identify potential mutual aid requests. FEMA will also participate in those discussions with local governments.

To support the contingency planning effort, OES, through the Levee Failure Contingency Planning Group, is identifying resources that may be requested from the Federal government to support mass evacuation or sheltering operations should a levee failure occur. Currently, these resource needs are primarily related to planning and evacuation/sheltering support. To support planning efforts, the state could benefit from federal assistance in modeling failure at critical levee failure locations throughout the Central Valley and Delta. Examples of operational support include air operations management support (including staffing the tower at the former McClellan Air force Base), aircraft capable of moving swift water rescue teams and equipment from southern to northern California, helicopters and flat-bottomed boats to augment similar State and local assets in performing rescue missions, and mobilization center support. We will continue to refine our lists as our planning efforts expand. If conditions develop that could put further pressure on the weak levee sites, such as warm spring rains leading to rapid melt of the Sierra snow pack, the State and local agencies may request federal assistance with aerial reconnaissance of the levee system and with flood-fight operations.

OES is also working with FEMA to develop a concept of operations for catastrophic flood response that will serve in the interim until more formalized catastrophic planning initiatives are finalized.

Summary

There is no doubt that the devastating effects of hurricanes Katrina and Rita have been a wake up call to all, and Governor Schwarzenegger's aggressive response

to the critical threat facing California's levees has focused much needed attention to this real and ever-present hazard. Although California has a strong emergency management system, we know that large-scale disasters, such as those associated with a catastrophic levee failure or earthquake in California, will affect hundreds of thousands of people, and gravely stress our ability to preserve life and safety and recover our economy. Our State and nation are rich in resources to assist during a disaster—from local government up to federal military assets. We will fail our citizens, however, if there is not a system, organization, and infrastructure in place to get this support to where it is needed in an expedient and organized manner.

The strength and experience within California's system is unequivocal. Repeatedly, our state has had emergencies that span the entire spectrum of the challenges faced in Hurricane Katrina—severe economic impact, major transportation disruptions, infrastructure destruction, mass evacuations, loss of life and many others. From each of these emergencies system improvements were born. Unfortunately, we have had many opportunities to learn and improve and we have not been idle. We will continue to learn from our successes and opportunities for improvement to create an even stronger emergency management system

Thank you.

Mr. RADANOVICH. Gentlemen, thank you so much for your valuable input. And this hearing is closed.

[Whereupon, at 1:15 p.m., the Subcommittee was adjourned.]

