

June 3, 2009

## News

### DELTA DEBATE RAGES FIVE YEARS LATER SOME SAY JONES TRACT DISASTER PLAYED KEY ROLE

By *Alex Breitler*  
June 03, 2009  
Record Staff Writer

JONES TRACT - Engineer Tom Rosten drove the winding levee road three times that June afternoon.

The next morning, Rosten, still wearing his bathrobe, answered the telephone. Thirty-five minutes later he stood at the edge of a 200-foot abyss where the road he had traveled hours earlier had crumbled away and torrents of water spewed onto farmland.

"When I got up there and saw what had happened, I said, 'Oh, my God,'" Rosten said. "There's just nothing we can do."

Indeed, at that point it was a question only of how long it would take the water to spread across Upper and Lower Jones tracts, flooded five years ago today.

More than 12,000 acres of farmland was swamped, dozens of farm workers were displaced, and only a mad rush saved Highway 4 and prevented floodwaters from spreading to the south.

Eventually, the islands were pumped dry. The breach was fixed. Many of the farmers returned. Jones Tract today is a verdant bowl of green, where big rigs loaded with stacks of hay maneuver the narrow roads and corn stalks blow in the breeze.

But the berm that mysteriously crumbled on a sunny day is still a reminder that you can't take a levee - any levee - for granted. And some believe the Jones Tract disaster prompted, at least in part, a flurry of Delta debates that continue today at the state level: debates over how to manage the estuary in the future and whether to build a peripheral canal.

"I think in 20 years, when they write the history of what the Delta has become, the catalyst will have been Jones Tract," said Ron Baldwin, coordinator of the San Joaquin County Office of Emergency Services.

Not everyone shares Baldwin's view - a peripheral canal, for example, has been argued over for decades, and levee breaks are nothing new. But a recent state report warning that the Delta's levees are vulnerable to earthquakes says the Jones Tract flood "heightened concern over the sustainability of the Delta in its current form."

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"I don't think Jones Tract was the catalyst, but I think (the state) took advantage of it," said Dante Nomellini, a Stockton attorney for Delta farmers.

The portion of levee that burst without warning was "one of the best levees in the Delta," Rosten said. Whatever the cause, it was promptly washed away.

The engineer theorizes that dens of burrowing rodents, probably a beaver and a squirrel, connected beneath the levee, providing an avenue for water to squirt out the dry side. At high tide, pressure mounted until the levee burst.

There was no hope of immediately plugging the breach, Rosten said; the water was moving too fast.

Instead, the immediate fear became the levee along Highway 4 to the south. Would the water overtop it?

Baldwin remembers one of his early conversations with Rosten:

We've got a problem, Rosten told him.

What?

The levee's too low.

How low?

I don't know.

Officials had been surveying levees to determine their exact elevation, but the Highway 4 levee had not been checked. A surveyor was brought in to hurriedly get the correct number; they had about 48 hours before the water would fill Jones Tract.

Water was lapping at the top of the Highway 4 levee by the time officials had dumped enough dirt to make the levee hold.

"We were lucky, because it was summer," Baldwin said. "If it was winter water levels, our goose was cooked."

On Jones Tract, farmers had salvaged everything they could, moving machinery and pesticides to higher ground. Migrant workers were evacuated; no lives were lost.

"I was amazed at how well those guys came together and handled what was a catastrophe for them," Rosten said.

Critical infrastructure - railroad lines and water pipes serving more than 1 million people in the East Bay - also

survived the flood, and there was little disruption of Delta water exports to two-thirds of Californians.

Some of the farmers moved on:

"They didn't want to make the investment because of the risk of the levee breaking again," said Rudy Mussi, who now farms on Roberts and Union islands.

"It took us a few years, but we recouped financially. We survived."

So did Jones Tract, where officials expect in the coming days to receive a \$600,000 payment from the Federal Emergency Management Agency for further levee rehabilitation.

Chris Neudeck, another Delta engineer, said Jones Tract is a simple reminder that a levee is merely "a dirt pile that you have to maintain and operate."

And despite that disaster, he said, "We've done a very good job of it."

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### Summer floods

Since 1950, a summertime levee failure has led to the flooding of a Delta island only eight times, according to a report commissioned by the state Department of Water Resources. Sparse data make it impossible to say how many sunny-day failures took place before 1950.

Overall, since 1900, levee failures have swamped Delta islands 166 times.

June 3, 2009

## Environment

### GROUP WANTS DELTA FLOOD REPORT HALTED QUAKE THREAT EXAGGERATED, SOME CONTEND

By *Zachary K. Johnson*

June 03, 2009  
Record Staff Writer

STOCKTON - Local officials Tuesday asked the state to put the brakes on a Delta flood risk report, claiming that it exaggerates the risk of earthquakes to the levees protecting the estuary's islands and much of California's water supply.

Such overstatements are already being used to justify proposals that could affect the Sacramento-San Joaquin Delta region's future, local officials told the San Joaquin County Board of Supervisors.

The board then passed a resolution calling on the state to keep the study from moving forward until concerns raised in earlier independent reviews are adequately addressed.

"It is not ready to be used as a basis for major policy decisions," Mark Connelly, engineering manager of the county's Flood Management Division, said in a presentation to the board. "We believe there are serious technical questions."

The science behind the report is sound and has been reviewed by expert consultants and the U.S. Geological Survey, said Dale Hoffman-Floerke, executive environmental manager at the state Department of Water Resources. "We stand by the information that's in the document."

Released in March, the report caps the first phase of the Delta Risk Management Strategy, which began with legislation in 2005 to study risks of floods, sinking land, earthquakes, climate change and rising sea levels on the Delta water supply.

More than 1,000 miles of levees hold back Delta water, including around islands used for agriculture. Those levees also hold roads and pipelines. The Delta supplies drinking water to about 25 million Californians.

That water supply would be in jeopardy if a major earthquake causes the simultaneous failure of multiple levees, according to the risk report. Such a failure could create a vacuum that would suck water in from Suisun Bay, making Delta water too salty for irrigation, for nearby water districts, and for those receiving water from the state and federal pumps.

The report claims there is a 40 percent chance a major earthquake could cause 27 or more islands to flood.

simultaneously before 2030.

County officials said the risk is overstated. The statistic they cited was the historical number of Delta levee failures caused by earthquake: zero.

But that doesn't mean the levees are not vulnerable, Hoffman-Floerke said. "The levees haven't been tested."

County Supervisor Ken Vogel said exaggerated threats serve as a manufactured crisis to help justify the building of a peripheral canal, a controversial plan to divert water around the Delta to state and federal aqueducts.

The second phase of the risk strategy process is to develop strategies to manage those risks.

Tuesday's resolution requests that the second phase doesn't begin until "significant technical concerns" have been addressed.

A 2007 draft report was criticized after being reviewed by a panel of experts and, separately, the Corps of Engineers, according to the county. The independent panel found that the draft's critical analyses were incomplete and that the report had other shortcomings, including poor documentation and a lack of methodology for assessing impacts.

The final report still contains significant concerns and requires further review, including another review by the Corps of Engineers, according to the county.

On Tuesday the board heard from three members of the Delta risk-strategy steering committee. Members expressed their own concerns throughout the process.

The report is meant as a tool for policymakers, but it doesn't reflect the caveats or uncertainties it should, said Marci Coglianese, former mayor of Rio Vista and a committee member.

"This study should not be used for making policy until the concerns are addressed," she said.

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THE SACRAMENTO BEE [sacbee.com](http://www.sacbee.com)

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## Army Corps levee tree rules rattle Sacramento flood agencies

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If a tree grows on a levee, is it bad?

According to a recent scientific review, there's no way to tell by reading federal policy.

In 2007, in the wake of Hurricane Katrina in New Orleans, the U.S. Army Corps of Engineers began enforcing national levee maintenance policy in California for the first time. The policy allows only grass on levees; trees and shrubs are banned.

The corps' rules have caused alarm in the Central Valley ever since, where trees and shrubs growing on levees provide the only remaining riverside habitat. Critics say removing that vegetation poses not only huge fiscal and environmental burdens, but would also drastically change the region's iconic scenery.

The levee maintenance policy has never been applied uniformly in California. In fact, local Army Corps officials have worked with the state for years to plant more trees on levees.

The corps commissioned a scientific peer review of its policy last year. Finished in December, the corps provided The Bee a copy last week.

"The policies and guidance lack scientific foundation, as evidenced by broad anecdotal assumptions and lack of (non-Army Corps) literature citations," the three-member review panel wrote. "The document is from the single perspective that vegetation on levees is bad and should be removed. Some vegetation may help stabilize ... levees."

This echoes the consensus of a science symposium on the subject hosted in 2007 by the Sacramento Area Flood Control Agency. Numerous experts said there was little proof that trees threaten levees. On the contrary, they cited a large body of research that trees may actually strengthen levees by binding loose soils together with their roots.

The federal policy relies largely on field experience rather than scientific studies to justify its conclusions.

The corps stands behind its policy and rejects the critique of its scientific merit.

"We don't agree with that at all," said Eric Halpin, Army Corps special assistant on dam and levee safety. "Our primary mission is to keep public safety forefront, and not everyone has that mission. Certainly the folks that are solely focused on the benefits of trees don't have that focus."

The peer reviewers also criticized the corps for failing to consider experience from other regions of the nation and world. The corps has stated previously that the policy is based on conditions and experience in the American Midwest, which differ greatly from California.

In California, levees were built close together after the Gold Rush, intentionally narrowing the rivers to flush out sediment deposited by hydraulic mining.

That was shortsighted: It not only gave rivers less room to flood, but eliminated virtually all riverside habitat.

Today, the only habitat left along hundreds of miles of Central Valley rivers grows on the levees themselves.

No one knows how many trees grow on California levees. A cursory survey in 2007 found 5,100 trees growing on just 25 percent of the levees in Sacramento. This represents a tiny fraction of the 1,600 miles of Central Valley levees affected by corps policy.

Last year the state Department of Water Resources reported the results of a trial inspection using the new criteria. It found that 64 of 107 levee maintenance districts would fail inspection, compared to just six under the old criteria.

Failure means the loss of federal money to rebuild levees after a flood.

Gil Labrie, a levee engineer in Walnut Grove, said removing trees poses an enormous burden on levee maintenance districts, which struggle to fund basic upkeep now.

"We couldn't even get there," he said. "That would be very expensive."

The peer reviewers said the corps also failed to consider other pros and cons of tree-covered levees. There is evidence, for instance, that plants may prevent erosion.

One example: recent research at UC Davis shows that native shrubs "lay down" against the soil during a flood and prevent erosion, while causing little restriction in flows. The shrubs also sheltered juvenile salmon from currents, allowing them to remain in preferable habitat.

The research focused on floodplains, but similar results may be possible on levees.

"It definitely highlights that there are attributes of plants we should be taking advantage of in our designs that we've ignored in past, and we can't really ignore in the future," said Stefan Lorenzato, watershed program manager at DWR and lead author of the study.

State and local officials have worked with the Army Corps to develop a temporary exclusion from the rules. Finalized in March, it allows trees to remain on levees as long as branches are pruned 5 feet off the ground to ensure access for inspections.

The exemption lasts until 2012, when state law requires the Central Valley Flood Protection Board to adopt a comprehensive new flood management plan for the region.

At that point, the state will likely seek a permanent variance from the corps rules. What that will require is unknown, said Jay Punia, the board's executive officer.

"We have dodged a bullet on a temporary basis," Punia said.

Halpin said the corps is willing to consider the variance. It is also conducting additional research on its own to refine the vegetation policy.

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# LEVEE VEGETATION POLICIES

U.S. Army Corps of Engineers rules, applied for the first time in California, allow only grass to grow in a "vegetation free zone" blanketing levees. This could require that hundreds of thousands of mature trees be removed from California levees. California officials earlier this year reached a compromise with the Army Corps that allows properly pruned trees to remain through 2012.

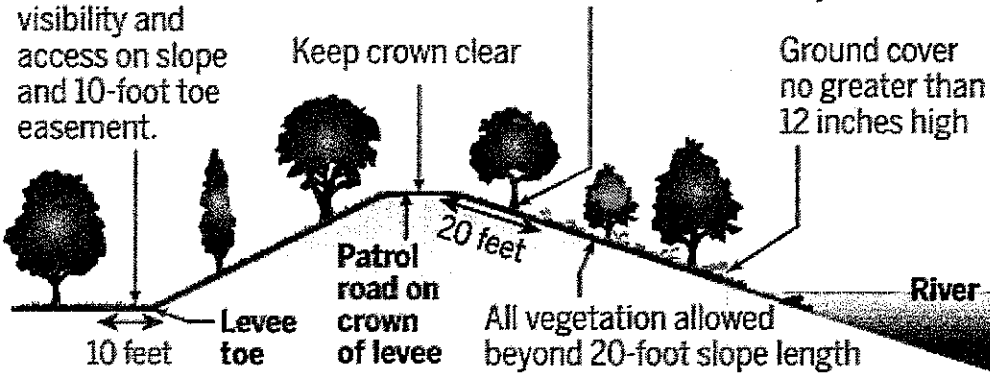
## CURRENT STATE LEVEE VEGETATION POLICY

Brush and weeds trimmed, thinned or removed for visibility and access on slope and 10-foot toe easement.

**Top 20-foot slope length:** Trees trimmed 5 feet above ground level and thinned. Brush and weeds trimmed, thinned or removed for visibility and access.

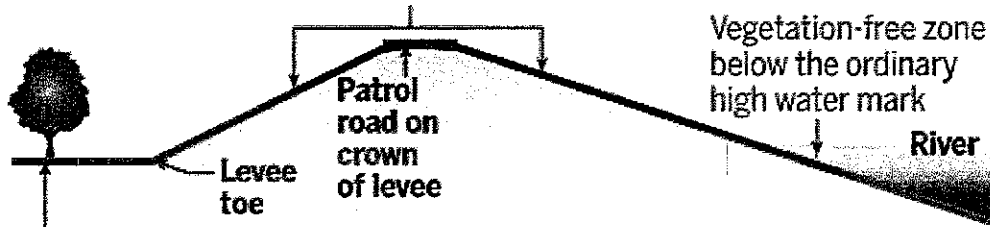
Keep crown clear

Ground cover no greater than 12 inches high



## ARMY CORPS OF ENGINEERS LEVEE VEGETATION POLICY

No plants allowed except grass, maintained at no more than 3 inches tall



Trees are allowed here if they are trimmed 8 feet above ground.

■ Conservationists argue that trees atop levees provide the only riverside habitat in most of the Central Valley.

■ A new Central Valley flood management plan, in which new permanent rules are expected to be adopted, is expected in 2012.

Source: U.S. Army Corps of Engineers, California Levees Roundtable

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