

One earthquake could leave two-thirds of Californians without drinking water

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On November 1, 2005 California's Department of Water Resources (DWR) issued a report stating that a simple 6.5-magnitude earthquake in Northern California's Delta region could produce more than 30 levee breaches on 16 Delta islands. This would flood tens of thousands of homes and a massive area of productive farmland, causing around \$30 billion in damages. However, the most alarming news, by far, was the realization that such an event could render unusable the drinking water supply of two-thirds of all Californians.

The United States Geological Service estimates that there is a 62 percent probability that an earthquake of at least magnitude 6.7 or greater will strike the San Francisco Bay region before 2032. According to the DWR report, this would liquefy several portions of the levee system, causing a massive release of fresh water. Salt water from the San Francisco Bay would then be sucked into the Delta to replace the fresh water in a phenomena described as "the big gulp," shutting down the State Water Project and the Central Valley Project. These two water projects together serve 25 million Californians. Major power and gas transmission lines would also be damaged, impacting energy delivery throughout the state.

The report also predicted essential highways would be inundated, creating lengthy detours and jamming other roadways with panic-stricken residents in search of fresh water and higher ground. Needless to say, the environmental damage to the fragile Delta ecosystem would be devastating and irreversible for decades.

DWR Director Lester Snow estimated that it would take at least 15 months and \$30-40 billion to restore basic infrastructure in the region. The only way to avoid such an impending catastrophe is through a huge investment in levee maintenance and improvement, greater flood risk education for local agencies and a program to ensure upgraded flood management systems for the mass of new housing developments in the flood plain.

The waters of the Pacific Ocean fill the San Francisco Bay and flow eastward into the Central Valley—the third largest agriculture producing region in the world—where they connect with fresh water flowing from the Sierra Nevada in the San Joaquin and Sacramento rivers. The Delta is a vascular network of waterways that branch off from these rivers—the state's two largest—and encircle about 57 levee-protected "islands." The islands are generally used for farming because of their rich, silt-laden soil.

California's Central Valley is essentially a vast floodplain. Nearly the entire western portion is at or below sea level and depends on the protection of 1,600 miles of levees erected along

the Sacramento and San Joaquin rivers over 100 years ago, principally by Chinese laborers. The levee system was built to protect crops, not cities, or drinking water. Without this mass of dams and earthen walls, the area would flood every spring just as Egypt's Nile Valley once did.

Like the levee system that failed to hold back Lake Pontchartrain in New Orleans, the delta levee system is in desperate need of repairs and reinforcement. Maintenance of the levee system has become increasingly difficult, with estimated costs continually on the rise. The DWR last estimated that Central Valley levees require nearly \$5 billion in repairs. Despite the gravity of the problem, there is no funding for the work. In a January 2005 report, the department referred to the levee system as a "ticking time bomb."

The danger has been proven over and over again. There have been 153 levee breaks since 1900, flooding more than 250,000 acres. Historically, the risk to human life from levee failures has been relatively low because of the small population densities associated with agriculture operations. However, due to the burgeoning housing developments outside the Bay Area, another flood may kill or impoverish thousands.

Valley residents got a reminder of the danger just over a year ago when Jones Tract—a levee-enclosed Delta island southwest of Sacramento—crumbled, allowing the waters of the middle river to drown 12,153 acres of farmland. This relatively small breach cost nearly \$100 million in losses and repairs. Jeffrey Mount, a geology professor at the University of California, Davis and former Reclamation Board member, told the *Sacramento Bee*, "We're going to see an increasing tendency for Jones Tract-style levee failures.... Your government has no ability to deal with it. It's a big, dark secret that no one wants to talk about."

Housing development in the Central Valley has become a billion-dollar industry, financially linked to both Republicans and Democrats. Investors routinely purchase undeveloped floodplain land for relatively low prices, throw up tract housing and then resell each unit at prices greatly inflated by the current housing bubble. If wealthy investors find a compliant local government, they can make multimillion-dollar profits on single projects.

Despite the obvious danger, public records show that a minimum of 115,000 new homes are scheduled to be built in flood-prone areas of six counties between Marysville (northern delta) and Tracy (southern delta). At this rate of growth, developers will have soon constructed a mid-size city in an area with the greatest flood

risk in the nation.

Eric Parfrey, an urban planner and former president of the Sierra Club's Mother Lode chapter, told the *Sacramento Bee* that he estimates a much higher figure. In the south delta alone, he said, at least 170,000 new homes will be built in high-risk areas.

One reason for the disparity between official and unofficial estimates is that areas prone to flooding are not included in the floodplain region mapped by the Federal Emergency Management Agency (FEMA). As FEMA admits, its floodplain maps are outdated. Moreover, FEMA's federal flood safety standard hasn't been raised since 1968, despite increased risks.

For example, the Plumas Lake area in Sacramento County has never been identified by FEMA as lying in a floodplain, despite the fact that it has flooded twice due to levee breaks. FEMA has also failed to recognize a floodplain in the Lathrop area—a city of 12,500 south of Stockton, where home foundations are currently being poured below the river water level. Moreover, no single agency—local, state or federal—is monitoring the cumulative impact of growth on water quality or public safety.

Although state law prohibits development in the Delta's 500,000-acre "primary zone," this restriction doesn't apply to the Delta's "secondary zone," a surrounding ring of 238,000 acres where cities including Oakley, Tracy, Lathrop, Stockton and West Sacramento are permitting a mass of haphazard development.

Examples of precarious development abound from county to county. In West Sacramento—an area almost completely surrounded by the Sacramento River—over 20,000 homes, at least one new school, and 13 million square feet of commercial space are to be built behind levees. In Sacramento's levee-encircled Natomas area over 10,000 new homes are slated for construction over the next 10 years.

Lathrop officials have approved the addition of 9,000 homes to an area west of Interstate 5 despite the fact that the abutting levee suffered seepage problems as recently as 1997. City officials didn't require developers to upgrade or even certify the levee. In a show of proud ignorance, Lathrop even opted to build its City Hall behind the levee. "I think that's a pretty good vote of confidence," City Manager Pam Carder told the *Stockton Record*.

In Stockton, The Grupe Co. announced a proposal this month to build more than 7,000 homes, offices and stores on a Delta island that flooded in 1983. A ground squirrel reportedly caused the flood when it burrowed into the levee. Kevin Huber, the company's president, blithely told the *Stockton Record*, "We don't think that's a problem."

While these development corporations monitor their profit margins with the greatest precision and efficiency, there is virtually no consistent oversight of the growing flood threat. Cities and counties have absolute authority to approve development, but they have no legal responsibility for flood protection. State agencies—levee maintenance districts—bear responsibility for flood protection, yet have no power to stop housing developments or generate money for needed repairs. Meanwhile federal agencies, like the notorious FEMA, are expected to assess flood risk.

Local Democratic State Senator Michael Machado led a hearing on the DWR report the week it was released. However, Machado has been unable to find support for the "Delta's needs" from

fellow members of the California Legislature. According to the *Stockton Record*, he complained, "We've had a hard time getting recognition." Efforts to enact laws forcing local governments to stop encroachment on flood sensitive areas have been frustrated by lobbyists for developers. Machado claimed "the Legislature might not be ready" for such a debate, and formed a "task force" that recommends only that the state require homeowners to buy flood insurance!

Two of the biggest developers, Alex Spanos and Fritz Grupe, are heavy financial supporters of Governor Arnold Schwarzenegger. Spanos alone contributed \$2 million to "Schwarzenegger's California Recovery Team," an Orwellian euphemism for the committee used to push his now failed ballot measures.

After the catastrophic flooding in New Orleans, the California Water Reclamation Board, the agency with direct responsibility for the levees, announced that it would review all developments proposed in flood-prone areas. In response to developer complaints, Schwarzenegger removed the entire board and made his own appointments.

Congressman for California's Eleventh district, Richard Pombo—best known for his tireless efforts to open up Alaska's Arctic National Wildlife Refuge for oil exploration—likewise claims that he is trying to get federal funds for levee maintenance and repair. Pombo has also received significant contributions from Spanos and other major developers in the Delta region.

It is not an aberration that state officials cannot muster the political will to stop developers from building at ground zero, but rather a reflection of the priorities of the profit system, where everything is subordinated to the interests of major developers and other wealthy contributors to the two big-business parties. Thousands of working families are being driven into purchasing unsafe homes at astronomically inflated prices, financed by increasingly risky and predatory mortgage schemes.

Major swathes of productive agricultural land are compromised and even the drinking water—depended on by over half of the residents of the nation's most populous state—is deemed less important than private profit. The political response is an eerie echo of the half-hearted efforts made by local and federal officials to secure funds for levee improvement in New Orleans prior to Hurricane Katrina.



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