



S A C O G

SACOG Board of Directors

Item #05-11-23 Workshop

November 10, 2005

Flood Protection Implications for the Metropolitan Transportation Plan

Issue: In the wake of flood events on the Gulf Coast, a second flood workshop has been organized. Of particular interest is whether planned urbanization in floodplains may change since this will affect development of the MTP.

Recommendation: None. This item is informational.

Committee Action/Discussion: Since the Board workshop on flood control in June, there have been two major flood events along the Gulf Coast, resulting from hurricanes. The Sacramento region has a number of flood basins and is considered the most at-risk region in the United States. In response to an impromptu discussion on flooding at the September Board meeting, staff has organized a second flood control workshop with presentations from the following speakers:

- Joe Countyman, MBK Engineers – historical and technical background on levee conditions
- Les Harder, Chief of the Division of Flood Management, Dept. of Water Resources – state perspective on flood control
- Dan Silva, Sutter County Supervisor – local urban and farming perspective on flood control

Speakers from the first flood workshop are also invited to participate in discussions. They include:

- Kent McClain, Yuba County Administrator
- Larry Combs, Sutter County Administrator
- Petrea Marchand, Water Resources Coordinator, Yolo Co. Planning and Public Works Department
- Stein Buer, Executive Director, Sacramento Area Flood Control Agency

Staff is mapping 500-year floodplains (the most extreme event) against the Blueprint Base Case and Preferred Alternative to identify current and future urbanization potentially affected by flooding. 100-year and 200-year floodplains are not included because of skepticism about how those areas are delineated. Analysis results will be presented at the meeting and available for future discussions on possible strategies to reduce flood risk in the Sacramento region.

One of those strategies may be to prohibit or greatly reduce future growth in flood-prone areas. This could shift up to approximately 40% of future growth shown on the 2050 Blueprint map to other areas in the region. Another approach may be to continue urbanizing in the floodplains, but do so with funding strategies in place to improve levees and acquire lands where flood waters can be discharged during major flood events. Depending on policy direction, SACOG may need to amend the 2030 land use base for the upcoming MTP.

At the Capitol, Governor Schwarzenegger and Senate President Pro Tem Perata have proposed bond issues to upgrade levees. The legislature is expected to revisit AB 1665, requiring regular levee status and maintenance and improvement reports, as well as, AB 802, requiring flood management plans prior to approving urbanization in floodplains. Senate Bill 1024 is also expected to resurface attempting to establish a \$10 billion infrastructure bond fund, which includes a Flood Control Account (previously \$1 billion). The legislature also recently held a joint hearing on flood risk and liability (background paper and agenda attached). At the federal level, a delegation of congressional representatives has requested more than \$92 million in federal funding to upgrade California levees and recently acquired \$40.9 million for Folsom dam improvements and levee studies and improvements.

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***Risks and Liability:
Who is Responsible for Avoiding a California "Katrina," and
Who Will Pay If We Do Not?***

A Joint Hearing of the Judiciary Committee,
the Water, Parks and Wildlife Committee, and the Insurance Committee of the
California Assembly

Recent events repeatedly have raised alarms about the State's responsibility and liability for the Central Valley flood management system. On a sunny June day in 2004, a private levee in the Sacramento-San Joaquin Delta unexpectedly collapsed and flooded a Delta island, shutting down a State highway, a major railroad line, and State Water Project pumps that ordinarily move much of Southern California's drinking water south. The State alone spent \$45 million to repair the levee and pump out the island. In spring 2005, the Yuba County Board of Supervisors approved a new housing development on lands that were covered by 15 feet of water during the 1997 flood. This summer, the Legislature approved \$500 million in settlements of claims against the State for failed levees in the 1986 and 1997 floods. Finally, this fall, Hurricane Katrina hit the Gulf Coast, levees failed, New Orleans flooded, and more than a thousand people died. Newspaper reports and editorials emphasized the obvious comparisons between New Orleans and Central Valley cities like Sacramento.

In 2003, a State appeals court highlighted the liability risks the State faces from failed levees. *See, Paterno v. State*, (2003) 113 Cal.App.4th 998; *rev. denied* March 17, 2004. The *Paterno* court held the State liable for failure of a levee generally operated and maintained by a local levee maintenance district. The State's liability was substantial because homes and a shopping center were built behind the levee and suffered from the resulting flood. The *Paterno* decision – and recent events – set the stage for this hearing to establish the broad outlines of the flood liability challenges facing the State of California.

I. The California Flood Management System

The 2003 *Paterno* decision unveiled a looming flood management system crisis that had been building for decades. A combination of an outdated flood management system, deferred maintenance, diffused flood management responsibilities, and substantial Central Valley growth and development produced serious risks of loss of life and damage to property from inundation of flood waters. The recent disaster arising out of Hurricane Katrina again highlighted certain flood vulnerabilities that California's Central Valley shares with Louisiana's Mississippi Delta. These vulnerabilities include substantial dependence on aging levees. Most such levees were built decades ago, without the benefit of modern designs, materials, and technology.

A. History of California Flood Management

California has suffered from Central Valley flooding since its earliest days as a state. Native Americans had called the Central Valley the "inland sea" when water covered the valley during the winter. Immense stretches of farms and open lands, particularly in the Sacramento-San Joaquin Delta, flooded annually. In 1862, flood water – as deep as 20 feet – covered the young City of Sacramento, forcing Governor Leland Stanford to row across those waters to get to his inauguration. At the bottom of the watershed, the Delta's vast expanse was covered with water as it flowed toward the Golden Gate. This regular flooding of the Valley's river bottoms and adjacent lands led to early Californians trying to "control" the floods to protect their lives and livelihoods.

1. Flood Management in the 1800's

In the nineteenth century, individuals and local governments built most of the flood control facilities, usually levees. Farmers worked with neighbors to build levees to protect their lands. Cities would build levees to protect their citizens. In the Delta, prospective landowners could acquire land for \$1 per acre if they paid to construct the levees to "reclaim" and turn Delta areas into the islands that exist in the Delta today. Landowners often created levee maintenance districts (commonly called reclamation districts) or other entities that maintained the levees.

The Gold Rush and the hydraulic mining that followed created a legacy that presented the greatest flood control challenge of the nineteenth century – an enormous volume of sediment that filled Northern California rivers, leaving little room for flood flows. Hydraulic mining, as shown in the picture below, was outlawed in 1884, but the legacy continued. In 1893, the Federal Government created the California Debris Commission to examine debris-related flood and navigation issues, primarily in the Sacramento Valley. The Commission uncovered, modified, and adopted an 1880 flood control plan by the State Engineer, to address how best to reduce river sediment. The plan included a system of levees, weirs, and bypass channels.



2. State Flood Management Program

In 1911, the State effectively adopted the flood plan from the California Debris Commission and created the Reclamation Board to implement the plan, working with the Federal Government. The State's adoption of a valley-wide flood management plan was meant to counteract local flood control projects that conflicted with each other, in what has been called "dog-eat-dog reclamation." Six years later, California gained federal authorization for the United States Army Corps of Engineers (the Corps) to collaborate with the State in building and maintaining the Sacramento River Flood Control Project.

For the next seven decades, the state and federal governments built or rebuilt levees, weirs, and bypasses to increase conveyance of flood waters downstream. Project levees stretch about 1,600 miles. The Corps often constructed the federal "project levees" in both the Sacramento and San Joaquin Basin from already existing private levees. In 1953, the Federal Government transferred the Sacramento River Flood Control Project to the State, which in turn passed responsibility for operation and maintenance to local reclamation districts.

The design goal of these flood facilities was to aid navigation and flush sediment remaining from the earlier hydraulic mining. These facilities also constrained the river to specific alignments, significantly reducing historic channel meandering and further isolating the rivers from their historic floodplains. In the second half of the twentieth century, the federal and state government, also built upstream reservoirs to retain some flood waters, to allow more measured releases after the flood danger had passed.

B. Responsibility for Today's Flood Management System

Responsibility for operating California's flood management system is diffuse, spread among multiple agencies at all three levels of government. Consistent with the United States Constitution's Commerce Clause, the Corps has primary responsibility for regulating the flows (including flood waters) in the "waters of the United States," which include the Sacramento River and the San Joaquin River. In addition to its regulatory authority, the Corps has a long history of building water projects, particularly for flood control. Traditionally, Congress authorizes specific flood control projects for the Corps, usually in a "Water Resources Development Act," which often passes every two to three years. Any substantial change to those water projects requires the Corps' authorization. As for federal Central Valley Project reservoirs with flood control space, the Bureau of Reclamation operates such reservoirs for flood control, under the Corps' direction.

1. State Responsibility for Flood Management

The State – through the Reclamation Board – shares in the costs of construction, assumes responsibility for the operation and maintenance of the facilities, and holds the Federal Government harmless from liability. For Central Valley flood management projects, the Reclamation Board delegates operation and maintenance to the Department of Water Resources (DWR) or local flood agencies. DWR's primary responsibilities lie in the Sacramento Valley, while primarily local agencies take responsibility in the San Joaquin Valley.

The Reclamation Board has the legal responsibility for oversight of the entire Central Valley flood management system, although it resides, administratively, within DWR. Its

jurisdiction extends through 14 counties and comprises 1.7 million acres lying along the most flood-prone portions of the two rivers. Its authorities include:

- cooperation with the Corps in building and operating the Central Valley flood management system (including levees);
- oversight of flood management facility operation and maintenance
- development and administration of floodways;
- acquisition of property necessary for flood management; and
- regulation of encroachments on the flood management system

Perhaps most importantly, the Reclamation Board has authority to approve or deny any plan of land reclamation (*i.e.* development) or flood control that involves excavation near the rivers and their tributaries. (Cal. Water Code § 8710). The geographic jurisdiction for this regulatory authority appears to apply to the entire floodplain. Specifically, without Reclamation Board approval, no construction can begin:

in the bed of or along or near the banks of the Sacramento or San Joaquin Rivers or any of their tributaries or connected therewith, or upon any land adjacent thereto, or within any of the overflow basins thereof, *or upon any land susceptible to overflow* therefrom.

Id. (emphasis added.)

Historically, however, the Reclamation Board has not always exercised this authority.

The Department of Water Resources also plays a significant role in California's flood management system, with staff "on the ground" inspecting and maintaining many miles of levees and other flood management facilities. DWR inspects and evaluates the maintenance of all of the State's federally-designated project levees and channels. While most project levees are maintained by local agencies, DWR may perform the levee maintenance where the levees provide broad system benefits and local interests are unable to perform satisfactory maintenance. DWR also maintains the Sacramento River system channels (*e.g.*, dredging), while local agencies maintain the San Joaquin River system channels. DWR's Division of Flood Management describes its mission as follows:

The mission of the Division of Flood Management is to prevent loss of life and reduce property damage caused by floods, to facilitate recovery efforts following any natural disaster, and to carry out its public safety responsibilities in ways that preserve and restore the environment.

2. Local Agencies

Local agencies play a significant role in flood management. Their activities and responsibilities are as diverse as their legal structures. These local agencies include levee maintenance and reclamation districts, counties, cities and water districts. In many areas, these local agencies maintain, operate, and assume responsibility for project levees and other flood management facilities, on the State's behalf. In 1986, federal and state law shifted greater financial responsibility for flood management facility construction to local agencies, which today typically pay 25% (or more) of construction or rehabilitation costs for federal-state project facilities. In other cases, local agencies pay the entire cost of flood management, but remain subject to Reclamation Board and Corps of Engineers oversight.

C. Liability Risks Arising from Current Flood Project Conditions

The State's flood management system in the Central Valley includes reservoirs with flood detention space, approximately 1,600 miles of project levees, and a series of overflow weirs and bypass channels (e.g. Yolo Bypass). An attached map shows the location of the project levees. In areas that show no project levees, local landowners or agencies may maintain private levees or other protections for local lands. The State's system discharges through the Sacramento-San Joaquin Delta, which contains over 1,000 miles of non-project (local) levees, which are generally maintained by local reclamation districts.

Levee failures, similar to those in New Orleans, have drawn the most attention. Such failures in the 1986 and 1997 floods led to this year's legislative approval for settling claims against the State for approximately \$500 million. Levee failures may be caused by overtopping, seepage, instability (e.g. settling), burrowing animals, or erosion. Because many levees were deliberately built close to the river channel to help scour mining debris from rivers and improve navigation, erosion has become a major problem. A 2004 Corps study found 183 spots along the Sacramento River where levees have visibly eroded, including 25 sites deemed "critical."

Levees also may be weakened by subsidence on lands behind the levees, which undermines the levee's foundation. In some cases, subsidence occurs because of groundwater overdraft. Delta levees (approximately 6,000 miles, with 4,300 miles privately maintained) remain the most at risk due to subsidence, which has led to some lands behind levees falling 25 feet below the adjacent water level. This Delta subsidence arises from the nature of Delta peat soils, which have oxidized and disappeared after decades of farming. Scientists estimate that 2,700 cubic meters of organic soil are lost daily.

In recent years, both federal and state agencies have prepared reports emphasizing the deteriorating conditions of the Central Valley flood management system. In January 2005, DWR issued a "White Paper" regarding flood management, noting that powerful flood flows have eroded levees and deferred maintenance has not caught up. In addition, the White Paper observed that the Central Valley's growing population is pushing new housing developments and job centers into areas that are particularly vulnerable to flooding. DWR estimated the following risks from flood damage:

- 500,000 people in floodplains
- 2 million acres of cultivated acreage
- 200,000 structures with a value of \$47 billion

The DWR White Paper concludes: "These factors have created a ticking time-bomb for flood management in California."

In December 2002, the Corps issued an "Interim Report" on its Sacramento and San Joaquin River Basins Comprehensive Study, which arose out of the devastation from the 1997

Key Terms

100-Year Protection: forecast of survival through a flood that would occur once in 100 years. A 100-year flood has a 1% chance of occurring in any given year, or 26% chance during a typical homeowner's 30-year mortgage.

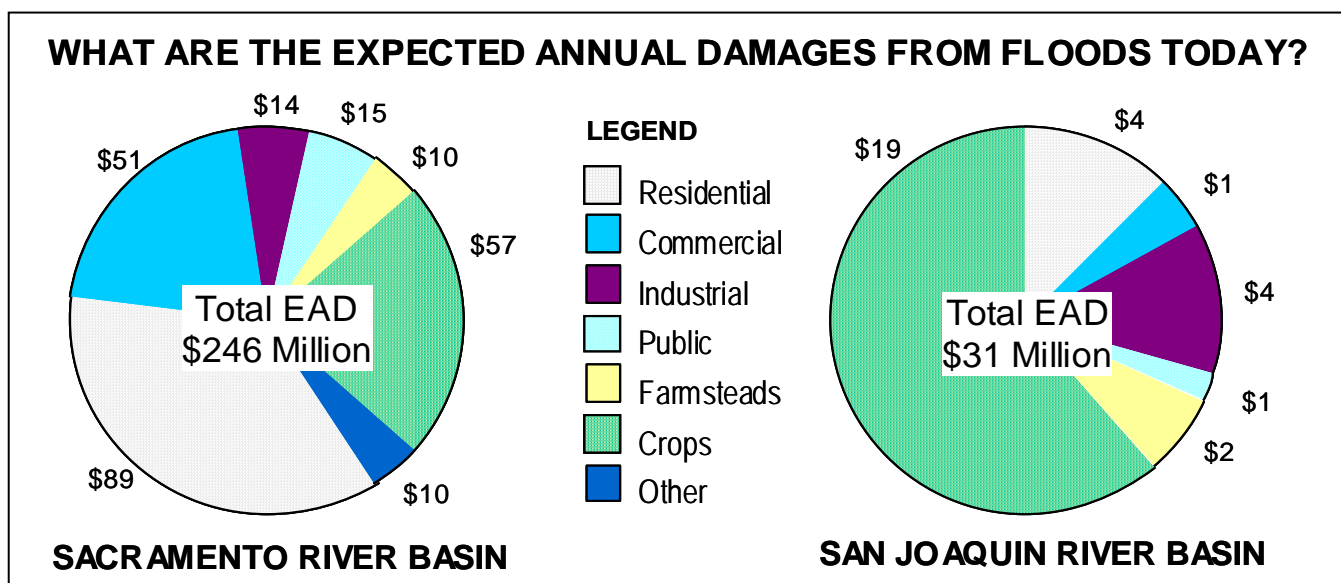
Project Levee: structure protecting adjacent lands from river flooding constructed or adopted by the federal and state governments in a flood control project

Paterno liability: State liability for damage arising out of failure of a project levee

floods. In assessing the existing flood management system, the Corps identified the following issues:

- reduced flood conveyance capacity, due to reduced flow area (from sediment, vegetation growth and encroaching development), poor levee foundation conditions, deteriorating levees and subsidence.
- "choke points" created by infrastructure development (e.g., bridges)
- substantial reliance on Sacramento Valley bypass system, with reduced bypass capacity
- reduced ecosystem function from constraining river channels from historic floodplain
- reservoir flood capacity
- land subsidence

The Interim Report estimated average annual flood damages of \$246 million in the Sacramento system and \$31 million in the San Joaquin system. These estimates reflect the average annual flood costs, although California may not actually incur them until the next major flood. The report included the following graphic estimating particular types of damage:



Source: U.S. Army Corps of Engineers, Sacramento District

II. Who is potentially liable in the event of a flood?

A. Is Federal Immunity Complete?

The federal government is generally immune to claims for damages caused by floods or flood waters. In response to the massive Mississippi River floods of 1927 which ravaged the Midwest, Congress enacted the Flood Control Act of 1928. The Act includes a broad immunity provision which states, "No liability of any kind shall attach to or rest upon the United States for any damage from or by floods or flood waters at any place." 33 USC Section 702c; *Central Green Co. v. US*, (2001) 531 U.S. 425, 426. As the U.S. Supreme Court has noted, "It is difficult to imagine broader language." *US v. James*, (1986) 478 US 597, 604. This language generally

protects the federal government against any claims for property damages, personal injury or death resulting from floods or floodwaters. *Id.*

The immunity applies regardless of whether the government has acted with negligence, or would otherwise be liable under the Federal Tort Claims Act. *Id.* This broad grant of immunity has been criticized by the courts as creating injustices, and has even been termed an anachronism by one U.S. Supreme Court justice. See *Hiersche v. United States*, (1992) 112 S. Ct. 1304 (Stevens); Matthew Gregory, *50 Am. Jur. 2d Levees and Flood Control Section 12* (2004).

1. Takings

The immunity provision of the Flood Control Act, 33 USC section 702c, does not extend to "takings" claims. See, *Turner v. U.S.*, (1989) 17 Cl. Ct. 832. The United States Constitution provides that private property shall not be "taken for private use without just compensation." U.S. Const. Amend. V. Flooding caused by the federal government may sometimes constitute a taking. To establish a taking by flooding, a landowner must show that the land is permanently flooded, or it must be subject to frequent and inevitably recurring overflows. *Pumpelly v. Green Bay Co.*, (1871) 80 U.S. (13 Wall.) 166, 181. The landowner must also show that the flooding was caused by government action, caused substantial damage, and that the governmental activities causing the flooding did not benefit the plaintiffs more than it injured them. *Turner*, 17 Cl. Ct. at 836. Only a "taking" is compensable under the Fifth Amendment, damages resulting from lesser invasions are not. *Hartwig v. United States*, (Ct. Cl. 1973) 485 F.2d 615, 619. A lesser damages claim would be a form of a tort action and would be barred by the Flood Control Act's immunity provision.

2. Indemnification

The federal government's immunity does not extend to breach of contract claims for damages from or related to flood management projects. *State of CA v. U.S.*, (Fed. Cir. 2001) 271 F.3d 1377. In 1995, a joint federal and California state water project flooded causing \$5.3 million dollars of property damage in California. The state paid several claims seeking compensation for the damages, and then sought partial reimbursement from the federal government pursuant to a contract agreement. A federal appellate court rejected the government's contention that it was immune to such damages under the Flood Control Act of 1928. *Id.* The Court held that to the extent that sovereign immunity might otherwise apply, it had been previously waived by the Tucker Act, 28 U.S.C. section 1491, which permitted breach of contract claims, among others, against the federal government. *Id.*

In summary, California would be able to seek reimbursement from the federal government for flood damages in the event of a major flood if a contract provision between the state and federal government so provided. Otherwise, the federal government would most likely have no legal responsibility for the billions of dollars in potential damages due to the broad grant of immunity in the Flood Control Act and a stringent "takings" standard.

B. Current State Liability Via Inverse Condemnation

Claims for flood damages against the state and other public agencies are often grounded on the theory of inverse condemnation, which is rooted in the following Constitutional provision:

“Private property may be taken or damaged for public use only when just compensation . . . has first been paid to . . . the owner.” Cal. Const. Art. 1, Sect. 19. When a public use or improvement (such as a dam or flood management project) results in damage to private property without having been preceded by just compensation, then the damaged private property owner may bring an action against the public entity to recover just compensation. Because the private property owner, as opposed to the public entity, initiates the action, it is termed an “inverse” condemnation. Cal. Const. Art. 1, Sect. 19. *See also, Breidert v. Southern Pac. Co.* (1964) 61, Cal. 2d 659, 663 fn., 1; *Belmont County Water Dist. v. California* (1976) 65 Cal. App. 3d 13, 19, fn. 3; *Arreola v. County of Monterrey* (2002) 99 Cal. App. 4th 722, 737.

The underlying policy concern in inverse condemnation cases has less to do with deterring negligent behavior (as in tort law) than in preventing an individual private property owner from bearing a disproportionate burden of the costs of a public project (or costs incurred from the failure or inadequacy of those projects). *Paterno v. California (Paterno II)* (2003) Cal App. 4th 998, 1003; *Locklin v. City of Lafayette* (1994) 7 Cal. 4th 327; *Belair v. Riverside County Flood Control District* (1988) 47 Cal. 3d 550, 558; *Holtz v Superior Court* (1970) 3 Cal. 3d 296, 303. A public entity will be liable for inverse condemnation in areas historically prone to flooding, if its design, construction, or maintenance of a public improvement poses an unreasonable risk of harm to the plaintiff’s property, and the unreasonable aspect of the improvement is a substantial cause of damage. *Arreola*, 99 Cal. App. 4th at 739. In determining reasonableness, the courts look beyond the conduct of the defending public entity toward a balancing of broader policy considerations as set forth by the Supreme Court in *Locklin*. *Locklin*, 7 Cal. 4th 327. Ultimately, the reasonableness standard in inverse condemnation cases balances the public need for flood management projects against the risks and severity of damages sustained by private landowners. *Locklin, supra* 7 Cal. 4th at 368; *Paterno II, supra*, 113 Cal. App. at 1018-1019.

In performing this balancing test, the courts apply the so-called “Locklin factors.” (As noted in *Paterno I & II*, the “Locklin factors” in fact consist of two overlapping set of factors. *Paterno II, supra*, 113 Cal. App. 4th at 1016-1018.) These factors include (1) The overall public purpose served by the improvement project; (2) the degree to which the plaintiff’s loss is offset by reciprocal benefits; (3) the availability to the public entity of feasible alternatives with lower risks; (4) the severity of the plaintiff’s damages in relation to risk-bearing capabilities; (5) the extent to which the kind of damage sustained is considered as a normal risk of land ownership; and (6) the degree to which the kind of damage is distributed at large or is peculiar to the plaintiff (i.e., a “special damage.”) In addition, a determination of reasonableness may also consider the landowner’s responsibility to take reasonable precautions to protect against potential flood damage and to anticipate upstream developments that may increase the stream flow. *Bunch, supra* 15 Cal. 4th at 446; *Paterno II, supra* 113 Cal. App. at 1017.

Recent court decisions have made clear that the state and other public entities may be held liable for the consequences of failing to maintain a flood management system or for failing to mitigate a known danger. *Paterno II*, 113 Cal. App. 4th 998. (See also *Paterno v. California (Paterno I)* (1999) 74 Cal. App. 4th 68.); *Arreola*, 99 Cal. App. 4th 722. In the *Paterno* cases, about 3,000 plaintiffs sued both the state of California and a local reclamation district for damages caused by the failure of a 1986 Yuba County levee that had been incorporated into a state-managed regional flood management plan. The court of appeals found that the state was liable to the plaintiffs for damages to their property caused by the flooding. The court reasoned

that when California incorporated the levee into the state plan, it accepted liability as if it had planned and built the system itself. Although the state had operated the levee for 75 years prior to its failure, it had never corrected the levee's underlying structural flaws. The court did not find liability on the part of the reclamation district because the local district only had responsibility for maintenance; it did not have any authority or duty to correct structural flaws. This ruling ultimately cost the state nearly half a billion dollars.

C. Local Liability in Inverse Condemnation Cases

In cases arising from flood damages, plaintiffs often bring multiple claims against both the state and public entities (e.g. *Paterno*, *Belair*, *Akins*, and *Arreola*). The liability that various entities (including cities, counties, reclamation districts, levee districts, etc.) might face in the event of major flooding depends in large part upon the role that they have played in the flood management system of the flooded region. In assessing liability as between various entities, courts consider which entity has sufficient control and authority to prevent, remedy, or guard against the known danger. *Arreola*, 99 Cal. App. 4th at 761-763.

Local public entities will likely not be liable for flooding done to floodplain housing developments where their sole function was in approving the development. The courts have held that inverse condemnation liability will not lie against a public entity for damage to private property caused by private development approved or authorized by that public entity, where the public entity's sole affirmative action was the issuance of permits and approval of a subdivision map. *DiMartino v. City of Orinda*, (Cal. App. 4 2000) 80 Cal. App. 4th 329, 339; *Ullery v. County of Contra Costa*, (Cal. App. 1 1988) 202 Cal. App. 3d 562, 570.

However, local entities have been found liable under inverse condemnation when the damages arose from their failure to maintain a flood management project when they were required to do so. In *Galli v. California*, the local levee maintenance district was liable in tort and inverse condemnation for flood damages resulting from the failure of a non-project levee. In that case, the State Reclamation Board was found not to be liable because the Board did not have a mandatory duty to review the maintenance district's work plan for repairing the non-project levee; the levee was not under the control of the state, and the local district was responsible for maintaining the district. *Galli v. State of California* (1979), 98 Cal. App. 3d 662.

In *Arreola*, various local entities (including counties and local water districts) were found liable in tort and inverse condemnation for extensive damage caused when the Pajaro River Levee failed during a heavy rainstorm in 1995. *Arreola*, 99 Cal. App. 4th 722 (also finding the state liable because drainage culverts on Highway 1 were too small). The local entities had assumed complete responsibility for the operation and maintenance of the flood management project within their respective borders, but had subsequently failed to keep the project clear of vegetation and shoals. The appellate court found that inadequate maintenance can support liability for inverse condemnation. It noted, "We conclude that in order to prove the type of governmental conduct that will support liability in inverse condemnation, it is enough to show that the entity was aware of the risk posed by its public improvement and deliberately chose a course of action – or inaction – in the face of that known risk." *Id.* at 744.

Thus, it appears that assessing the relative liability of the state and local entities will depend upon the particular facts of the case. Important factors include whether the levee is a

project or non-project levee, the cause of the flood damages, and the responsibilities of each entity. The liability of public entities will also be impacted by contract provisions and statutes related to indemnification. For example, the Legislature has required local agencies conducting levee maintenance in the Sacramento-San Joaquin Delta to enter into an agreement with the state prior to receiving funding for maintenance. The agreement requires the local agencies to indemnify the state and prohibits the local agencies from holding the state liable for any damages except those caused by gross negligence. Water Code Section 12992, *see also*, Water Code Section 12316.

D. Negligence and Other Potential Theories of Liability

Most suits against state and local entities brought to recover damages caused by levee and/or flood management failure have been based on a theory of "inverse condemnation." Traditionally, the government was considered immune to tort actions. In 1961, the California Supreme Court concluded, "After a reevaluation of the rule of governmental immunity from tort liability, we have concluded that it must be discarded as mistaken and unjust." *Muskopf v. Corning Hosp. Dist.*, (1961) 55 Cal. 2d 211, 213. The Legislature gave legislative approval to the judicial repudiation of sovereign immunity in 1963 by enacting a comprehensive set of statutes. *5 Witkins Sum. Cal. Law Torts Section 129*. Now all state and local public entities are subject to tort liability to the extent declared by statute. *Id.* Although the Tort Claims Act (Government Code section 810, *et seq.*) contains a general immunity provision (section 815), the Act imposes liability in particular circumstances. Successful tort claims arising from a major flood could mean a significant increase in the amount of a public entity's liability since plaintiffs could potentially recover actual damages, including pain and suffering. *5 Witkins Sum. Cal. Law Torts Section 136*.

In short, claims for damages other than "inverse condemnation" can be brought against public entities both at the state and local level. Five alternative theories discussed below, which might allow plaintiffs to circumvent the general immunity provisions of the Torts Claim Act, are: (1) dangerous conditions on public property; (2) mandatory duty; (3) employee negligence and vicarious liability; (4) nuisance; and (5) liability implied in statutes creating a flood management project.

1. "Dangerous Condition of Public Property" (Cal. Govt. Code § 835)

California Government Code section 835 creates an exception to the government immunity provision of the California Torts Claim Act. Section 835 imposes liability upon a public entity for injury caused by the dangerous condition of its property. In order to state a cause of action against a public entity under section 835, the plaintiff must plead that (1) a dangerous condition existed on the public property at the time of the injury; (2) the dangerous condition proximately caused the injury; (3) the dangerous condition created a reasonably foreseeable risk of the kind of injury sustained; and (4) the public entity had actual or constructive notice of the dangerous condition in sufficient time to have taken corrective measures. It is not necessary that the injury occur *on* the dangerous property, for the dangerous condition may cause damage to adjacent properties. *Vedder v County of Imperial* (1974) 36 Cal. App. 3d 654; *Cornette v. Dept. of Trans.* (2001) 26 Cal. 4th 63; *Zelig v County of Los Angeles* (2002) 27 Cal. 4th 1112; *Brenner v. City of El Cajon* (2003) 113 Cal. App. 4th 434.

Constructive notice of a dangerous condition can be imputed to the public entity if it can be shown that an obvious danger existed for a sufficient period time to allow public entity employees, when exercising due care, to discover and remedy the danger. *Nashihama v. City and County of San Francisco* (2001), 93 Cal. App. 4th 298.

In non-flooding cases, several courts have held that public entities may be held liable for damages caused by dangerous conditions on public property. *Hibbs v Los Angeles County* (1967) 252 Cal. App. 2d 166. See also *Sumner Peck Ranch v Bureau of Reclamation* (1993) 823 F. Supp. 715 (interpreting section 835). In *Miller v. Los Angeles Flood Control District* (1973) 8 Cal. 3d 689, the California Supreme Court reinstated a jury verdict for plaintiffs in a wrongful death action due to dangerous conditions of public property. The Court held that the jury reasonably concluded that the City and the District had negligently created a dangerous condition by not clearing a debris basin. *Miller*, 8 Cal. 3d at 699.

Although many of the “dangerous conditions” cases suggest that the plaintiff bears a heavy burden in meeting the elements, the courts nonetheless make it clear that injuries caused by dangerous conditions on public property are outside of the scope of general governmental immunity. (See e.g. *Paterno I* (1999).) Should the state’s suspect Sacramento-area and Delta levees break and cause widespread flood damage, it seems that the four elements of a “dangerous conditions” action could be met: (1) the condition will have existed at the time of the injury; (2) the break will constitute the proximate cause of the flood damage; (3) flood damage is a foreseeable risk where there are faulty levees in a flood plain; and (4) the state and local entities have actual, or at the very least constructive, notice of the problem. Moreover, where a flood causes death as well as property destruction – as in the Katrina tragedy – plaintiffs could use the “dangerous condition” exception to allege wrongful death, which could lead to increased damages.

2. "Mandatory Duty" (Cal. Govt. Code Section § 815.6)

California law also creates an exception to the general immunity provisions of the Tort Claims Act where a public entity fails to discharge a duty mandated by statute. Government Code section 815.6 states that where a public entity "is under a mandatory duty" imposed by a statute designed to prevent a particular type of injury, then the public entity is liable if its failure to perform that duty causes the type of injury that the statute was designed to prevent. The section allows a suit against a public entity so long as three elements are met: (1) the statute must impose a mandatory, as opposed to a discretionary, duty; (2) the statute must have been designed to prevent the kind of injury suffered; and (3) the breach of mandatory duty must be a proximate cause of the injury suffered. *Braman v State* (1994) 28 Cal. App. 4th 344; *Zolin v Superior Court* (1993) 19 Cal. App. 4th 1157; *State v Superior Court of Sacramento* (1984) 150 Cal. App. 3d 848; *Haggis v City of Los Angeles* (2000) 22 Cal. 4th 490.

In *Galli v. California*, a trial court found the State Reclamation Board liable based on its mandatory duty to review and approve or disapprove district work plans in the Sacramento Delta region. Although the appellate court reversed in part, the court did not reject the possibility that statutorily defined duties might trump the immunity provisions. Rather, it simply argued that the particular provision in question did not create the mandatory duty on the part of the state reclamation board as claimed by plaintiffs. *Galli v. State of California* (1979), 98 Cal. App. 3d

662. Therefore, it remains a possibility that public entities could face tort claims arising out of a mandatory duty in the event of a flood disaster.

3. Employee Negligence & Vicarious Liability (Cal. Govt. Code 815.2)

According to Government Code Section 815.2, a public entity may be held vicariously liable for the act or omission of an employee acting within the scope of employment, notwithstanding provisions of immunity. In addition, Government Code Section 825 provides that an employee or former employee may request a public entity to defend him or her against any claim or action arising out of an act or omission occurring within the scope of employment. *Paterno* recognized in dictum that the acts of employees may result in tort liability. *Paterno*, 113 Cal. App. 4th at 1013 ("Where damage result from the acts of the employees ... [r]ecover, if any, lies in a tort action, such as negligence.")

4. Nuisance (Cal. Civil Code § 3479):

California Civil Code section 3479 defines "nuisance" as "[a]nything which is injurious to health, including, but not limited to ... *an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property*, or unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, or river, bay, stream, canal, or basin, or any public park, square, street, or highway, is a nuisance." (Emphasis added.)

Courts have found that the Tort Claims Act does not bar nuisance actions against public entities, citing California Civil Code sections 3479, 3480 and 3481 (which define nuisance in general, and public and private nuisance, in particular). *Vedder v. County of Imperial* (1974) 36 Cal. App. 3d 654. In addition, liability may be established under provisions relating to dangerous conditions of public property (such as Government Code section 835) or under some other applicable statute. *Nestle v. Santa Monica* (1972) 6 Cal. 3d 920; *Paterno v. California (Paterno I)* (1999) 74 Cal. App. 4th 68.

Although the plaintiffs in *Paterno* relied mainly upon an "inverse condemnation" cause of action, they also pleaded nuisance and dangerous conditions. In *Paterno I*, the court recognized that a plaintiff could plead both a "dangerous condition" and "nuisance" claim, even though the two causes of action would rely on essentially the same facts. *Paterno I* concluded that just because "a given set of facts fortuitously supports liability on two legal theories is not a principled reason to deny a party the right to pursue each theory." *Paterno I* at 72-73. See also *Pfleger v. Superior Court* (1985) 172 Cal. App. 421, at 429-432 (criticizing *Longfellow*). Accordingly, it appears that in the event of major flooding, the state and local public entities could face nuisance claims.

5. Liability Implied in Flood Management Project Statutes

In addition to the Tort Claims Act, the acts that created the districts may also provide a potential source of liability. Although *Hayashi v Alameda County Flood Control* (1959) was decided before the modern Tort Claims Act (enacted in 1963), the earlier Public Liability Act (1923) was based on the same principle that a government entity is not liable for tort unless the legislature specifically imposes such liability by statute. The *Hayashi* court found that even though the Public Liability Act did not impose liability on flood control districts, the act creating the flood district did. The court looked at language granting the district the power to sue and be

sued, and creating a procedure for filing suit against the district. *Hayashi v. Alameda County Flood Control*, (1959) 167 Cal. App. 2d 584. The reasoning of the *Hayashi* decision may still apply to the extent that the statutes creating local flood control districts may provide an independent source for a cause of action.

E. Are There Realistic Theories of Liability of Builders and Developers?

As discussed later in this paper, rapid development is occurring behind California's levees. This raises the issue of whether a builder or developer could be held liable for constructing houses in a floodplain. Cases arising from flood damages caused by disasters (e.g., severe storms, levee breaks, etc.) have generally not been brought against developers. No cause of action for inverse condemnation may lie against them. However, a cause of action may rest in general tort principles. Such an action would probably be based on claims of negligence. *See e.g., Ektelon v. City of San Diego*, (1988) 200 Cal. App. 3d 804, 810 ("The liability of the private developer ... is defined by negligence principles.") A developer would only be negligent if s/he failed to use the skill and care that a reasonably careful developer would have used in similar circumstances (i.e., building new homes in a floodplain). California Civil Jury Instructions (CACI) 401, 600. The basis for liability is the foreseeability of harm in a particular case. *Tucker v. Lombardo*, (1956) 47 Cal. 2d 457, 464. Whether something is an "unreasonable risk" often turns on the question of whether the foreseeable risk of danger outweighs the utility of the act or the manner in which it was done. *Chaplis v. County of Monterey*, (1979) 97 Cal. App. 3d 249, 265.

Therefore, any cases brought against a developer for building in a floodplain will necessarily consider whether the decision to build was reasonable. If the developer has relied upon representations made by FEMA, or state or local entities, that the levees can withstand a specified flood risk, then it is likely that the developer will have been deemed to have acted reasonably. If the developer is aware of a flood risk, or should be aware of a flood risk, but still continues to build on a piece of property, then the developer may be subject to liability. *See Sabella v. Wisler*, (1963) 59 Cal. 2d 21 (builder found to have negligently constructed home on an improperly compacted lot where he negligently failed to discover the unsuitable nature of the ground.)

The Legislature has imposed a statutory duty upon a seller of a piece of property to give notice to a buyer if the property is located in a special flood hazard area designated by FEMA, or is located within an area subject to potential flooding from a dam failure. Cal. Govt. Code Sections 8589.3, 8589.4; Cal. Civ. Code Section 1103. Not all properties behind levees must receive notice. For example, levee updates may result in FEMA removing a property from a special flood hazard area. Cal. Civ. Code Section 1103.2(c). The seller is not liable for inaccurate or omitted information if s/he used ordinary care, relied on information provided by a public agency, and did not have personal knowledge that the property was in a flood hazard area. Cal. Civ. Code Section 1103.4(a). If the buyer does not receive the disclosure prior to the scheduled date of the transfer of property, the buyer may withdraw his or her offer to purchase the property. *Op. Atty. Gen.* No. 01-406 (Aug. 24, 2001). However if the transfer of property occurs without the disclosure, the failure to comply with the notice requirements will not invalidate the transfer of property, but a seller will be liable for any actual damages suffered by the owner. *Id.*; Cal. Civ. Code Section 1103.13. Actual damages represent the buyer's out-of-pocket losses with respect to the transaction (i.e., the difference between the actual value paid for

the property and the actual value of the property). *Saunders v. Taylor*, (1996) 42 Cal. App. 4th 1538, 1542-44. These damages could be minimal.

Any action against a builder or developer will depend on the given facts. Realistically, however, it may be difficult for plaintiffs to succeed in any type of cause of action against them.

F. Conclusion Regarding Liability

In summary, a major flooding event could expose the state and local entities to major liability. A finding that the responsible entities failed to maintain the flood management system or knew that the system was at risk and failed to mitigate the risk, would impact the liability of the entities. Injured parties could bring claims against the government on theories of inverse condemnation and various tort theories. The realization that both the state and local governments could potentially be responsible for billions of dollars in damages leads to several additional questions, including, but not limited to, the following:

- ✓ What are the consequences of the existing liability regime?
- ✓ What actions are encouraged or discouraged due to the existing liability regime?
- ✓ Does liability rest with those who can take steps to prevent floods or flood damage?
- ✓ Can and should the state attempt to modify who is legally held liable in the event of a catastrophic flood?
- ✓ If so, how?
- ✓ What effect will this have?
- ✓ Should the focus be solely on investing more money in prevention?

III. Effect of Flood Insurance

Ensuring broader insurance coverage for flood risks may provide one way for the State to minimize the scope of its financial exposure. Currently, flood insurance is provided primarily through the National Flood Insurance Program (NFIP), a division of the Federal Emergency Management Agency (FEMA). Properties located in communities participating in the program are eligible for federal flood insurance, but such insurance is mandated only for properties located in Special Flood Hazard Areas (SFHAs), as mapped by FEMA. However, as illustrated by recent events and past flooding in California, there are significant portions of existing floodplains that are at risk of flooding but are not included in SFHAs as mapped by FEMA, and owners of improved properties in these areas are thus not required to purchase insurance. This has in some cases created the mistaken impression by property owners that their properties are not at risk.

A. National Flood Insurance Program

The NFIP was created by Congress with the passage of the National Flood Insurance Act of 1968, and was substantially amended in 1973 and 1994. The NFIP makes flood insurance available to property owners in participating communities. Cities and counties must meet minimum criteria for floodplain management and building standards to be eligible to participate in the program. Since 1973, federal flood insurance has been mandated for properties located in an SFHA, defined as an area within a floodplain having a 1 percent or greater chance of flood occurrence in any given year. The mandate is enforced through federally regulated mortgage

lenders, who are prohibited from making or renewing any loan secured by improved real property located in an SFHA in a participating community unless the secured building and personal property are covered for the life of the loan by flood insurance. The flood insurance requirement is enforced by federal agency lender regulators, and through requirements for monitoring and forced placement if policies lapse.

B. Mapping

FEMA conducts flood insurance studies to determine the location of SFHAs and issues Flood Hazard Boundary Maps showing the location of each of these areas. FEMA is currently in the process of updating and digitizing the maps, and recently issued a circular entitled Procedure Memorandum 34 – Interim Guidance for Studies Including Levees. The memorandum indicates that as FEMA works on updating the maps it is attempting to identify the location of all levees in the study area, and that it is the responsibility of the community or other party seeking recognition of a levee system at the time of a flood risk study to certify that the levees provide protection from a 1-percent-annual-chance flood. While updating the maps to reflect current levee conditions is desirable, some have questioned whether the 1%/100 year flood protection standard is adequate, since this standard also means that there is a 26% chance that the home will flood at some time over a typical 30 year mortgage term.

C. Answers to Common Questions Regarding Flood Insurance

What does Homeowner's (HO) insurance cover?

HO insurance generally covers (up to policy limits) damage due to wind, wind-driven rain and fire, theft, vandalism, and damage caused by fallen trees. HO insurance also provides coverage for the contents of a home and provides Additional Living Expense (ALE) coverage that reimburses the costs of living in a temporary location and living expenses. HO insurance generally does NOT cover losses in the event of a flood.

What does commercial property insurance cover?

Typically commercial property insurance will cover the building and permanently attached fixtures and machinery. Commercial property insurance can be purchased as either a specified perils policy or an open perils policy. A specified perils policy consists of a list of each peril to be insured against, such as fire, explosion, windstorm, vandalism, et cetera. An open perils policy covers all losses unless they are specifically excluded. **Earth movement (including earthquake) and flood are two common perils that are excluded under open perils coverage.**

Am I eligible for flood insurance?

If you live in a SFHA, your mortgage lender requires you to have flood insurance. If you do not live in a specially designated SFHA, you may still purchase a flood insurance policy, if you live in a community that is participating in the NFIP program.

Residents of any community that agrees to participate in the program are eligible to purchase insurance from the NFIP. In order to participate, the community must have the authority to adopt and enforce floodplain management ordinances for the area under its

jurisdiction. Each identified flood-prone community must assess its flood hazard and determine whether flood insurance and floodplain management would benefit the community's residents and economy.

The NFIP requires communities to maintain a minimum level of floodplain management ordinances for its residents to be eligible to purchase flood insurance. To encourage communities to exceed these minimum requirements, the NFIP established the Community Rating System (CRS). In exchange for increasing flood preparedness and achieving a CRS rating, the community's residents are offered discounted flood insurance premium rates. Communities are rated by Class and fall into one of ten classes.

For CRS participating communities, flood insurance premium rates are discounted in increments of 5%; i.e., a Class 1 community would receive a 45% premium discount, while a Class 9 community would receive a 5% discount (a Class 10 is not participating in the CRS and receives no discount). The CRS classes for local communities are based on 18 creditable activities, organized under four categories:

(i) Public Information, (ii) Mapping and Regulations, (iii) Flood Damage Reduction, and (iv) Flood Preparedness.

What does flood insurance cover?

Flood insurance purchased from the federal government's NFIP covers damage caused by the general condition of flooding.

The NFIP offers three Standard Flood Insurance Policy forms. The three policy forms are:

- **The Dwelling Form** insures residential structures and/or contents and individual residential condominium units. Residential insurance for one- to four-family unit buildings and individual residential condominium units are written under the Dwelling Form and are eligible for up to \$250,000 in building coverage and up to \$100,000 on personal property coverage. On average, a homeowner policy costs about \$400 a year for around \$100,000 of coverage.
- **The General Property Form** insures residential buildings of more than four families as well as non-residential buildings (schools, churches, businesses, etc.). Residential buildings containing more than four units are written under the General Property Form and are eligible for up to \$250,000 in building coverage and up to \$100,000 on personal property. Non-residential insurance—for properties like schools, churches and commercial structures—are written under the General Property Form and are eligible for building coverage up to \$500,000 and \$500,000 on personal property.
- **The Residential Condominium Building Association Policy Form (RCBAP)** insures associations under the condominium form of ownership. Condominium associations are written under the Residential Condominium Building Association Policy-or RCBAP-Form and are eligible for building coverage, which includes all units within the building (and improvements), up to \$250,000 times the number of units within the residential building. Personal property coverage is limited to \$100,000 per building.

In addition, the **Preferred Risk Policy** is a lower-cost option, for building and contents coverage on properties located in a low- to moderate-risk area. It is available for both residential and non-residential properties.

Generally, there is a standard 30-day waiting period, from date of purchase, before a new flood policy goes into effect. However, if a lender requires flood insurance in connection with the making, increasing, extending, or renewing of a loan, there is no waiting period.

What happens to those homeowners who did not have flood insurance?

If they are not covered by HO insurance and they don't have flood insurance, then they will have to turn to FEMA for federal taxpayer assistance. Federal disaster assistance is only available if the President formally declares a disaster. In addition, it is often a loan which must be repaid with interest, in addition to the mortgage loan that the property owner still owes on the damaged property. There are also limits on federal disaster assistance for repetitive losses. If a homeowner receives federal disaster assistance for a flood, and then is required to maintain insurance and fails to do so, they may be ineligible for federal disaster assistance in the case of a subsequent flood.

D. State Authority to Require Flood Insurance

Ensuring broader insurance coverage for flood risks may provide one way for the State to minimize the scope of its financial exposure. However, the state's ability to expand flood insurance requirements beyond federal law may be constrained to some extent by federal preemption doctrines, though the extent of preemption remains an open question. As explained above, the NFIP is implemented and enforced through mortgage lenders. National banks are regulated by the Office of the Comptroller of the Currency (OCC). Federal regulations promulgated by the OCC include Title 12 of the Code of Federal Regulations, Part 34, which provides that state laws are preempted if they "obstruct, impair, or condition" a national bank's exercise of its federally authorized lending powers. A state law conditioning a mortgage loan on the purchase and maintenance of flood insurance, in geographic areas beyond the narrow SFHA zones where such insurance is currently mandated under federal law, could be construed as a condition on the extension of credit and preempted as applied to national banks. In addition to the OCC, there are other federal agencies which oversee other types of federally regulated financial institutions, such as the Office of Thrift Supervision, which have similar preemption provisions. Although the state's authority to enforce such requirements through federally regulated lending institutions may be limited, the state may have greater authority to apply such requirements to state chartered banks and other state lending institutions.

The National Flood Insurance Act itself may also limit the ability of states to expand flood insurance requirements beyond federal law. Section 4024 of Title 42 of the United States Code provides that the Director shall consult with other federal agencies, and with states and local agencies having responsibilities for flood control in order to assure that the programs of such agencies and the federal flood insurance program are "mutually consistent." (42 USC 4024.) However, it is possible that if the state were to adopt mandatory flood insurance requirements that were in addition to but not in conflict with the federal law, such state mandates could be construed as "mutually consistent."

The National Flood Insurance Act also contains provisions which indicate that the federal government does contemplate that states will act to restrict development in flood prone areas. For example, Section 4023 of Title 42 of the United States Code provides:

No new flood insurance coverage shall be provided under this chapter for any property which the Director finds has been declared by a duly constituted State or local zoning authority, or other authorized public body, to be in violation of State or local laws, regulations, or ordinances which are intended to discourage or otherwise restrict land development or occupancy in flood-prone areas. (42 USC 4023.)

State land use restrictions in floodplain areas are further encouraged by other provisions of the NFIP, including the Community Rating System, which provides incentives in the form of reduced insurance premiums to communities that voluntarily adopt and enforce floodplain management activities which go beyond the minimum required by federal law. Properties located in communities that do not meet the minimum requirements for participation in the NFIP are ineligible for federal flood insurance coverage. Reforms adopted by Congress in an effort to reduce repetitive losses to the NFIP also give FEMA statutory authority in some circumstances to penalize policyholders who refuse government assistance to relocate. FEMA's repetitive loss strategy includes a program to target insured properties which have had repetitive flood losses for mitigative action that includes, in some cases, removing them from the floodplain.

IV. Effect of Land-Use Decisions

Since the 1993 flooding on the Mississippi River, development in the floodplain has received increased attention. A 1994 Corps report suggested greater federal involvement in managing development in floodplains. The National Flood Insurance Program issued a policy on repetitive claims, which encouraged relocation of communities that repeatedly file NFIP claims. The 2002 Corps Comprehensive Study also observed that the Central Valley flood management system was designed for agricultural uses, and urban expansion into agricultural areas "placed demands on the system that were not originally anticipated."

The Central Valley population and associated development have grown dramatically in recent years. In the San Joaquin Valley, population has grown an average of 2.1% annually since 1990. *Water for Growth*, Public Policy Institute of Cal. (2005). Cities in the Sacramento Valley have grown even more dramatically. In the last five years, Yuba City grew 58%, Chico grew 21% and Sacramento grew 11%. *Cities and Counties Ranked*, Dept. of Finance (January 2005). With new housing developments planned, Central Valley population growth does not appear to be subsiding, leading to greater pressure to encroach into flood plains.

A. Increasing Flood Risk for Urban Areas

Both new developments and existing communities face increasing flood risk. In addition to the problem of aging flood control facilities, flood conditions are changing. Greater urban development creates greater volumes of stormwater runoff and increases Valley temperatures. As a result of the Valley heat bubble, the snow elevation level has increased as much as 1500 feet in the last 25 years, meaning less snow and more rain that flows almost immediately into Valley rivers. Current federal floodplain maps fail to reflect these changed flood conditions and

the resulting floodplain expansions. Such new information and new analysis leads to changes in community assessments of flood risks.

After the 1986 flood, which nearly caused catastrophic flooding in Sacramento, for example, the Corps reassessed the region's level of flood protection and concluded that it had less than 100-year level of flood protection. As a result, FEMA remapped the area into the regulatory floodplain in 1989. Since then, intensive efforts by the U.S. Army Corps of Engineers, the State Reclamation Board, and the Sacramento Area Flood Control Agency (SAFCA) have resulted in substantial flood protection improvements. Early measures focused on levee improvements and re-operation of Folsom Dam, which together have provided 100-year level of flood protection for the Natomas area (1988) and the American River floodplain (2005). SAFCA and its partners are now focused on providing 100-year level of flood protection for the South Sacramento area by the end of 2006, and advancing plans for higher regional flood protection through modifications to Folsom Dam storage and outlet capacity. Since SAFCA and its partners began making regional levee improvements in 1990, the understanding of how levees function has advanced significantly and performance criteria have been tightened accordingly. Furthermore, as the storm history for the region accumulates, it appears that we are facing a higher probability of large, intense storm systems. Therefore, SAFCA's goal of incrementally achieving 100-year level flood protection, then advancing to better than 200-year level protection, has been a moving target, requiring periodic review of design criteria and completed work along with execution of new projects.

B. Statutory Requirements for Analysis of Flood Risks

In planning and approving new development affected by flood risk, California statutes require some assessment. In the general plan process, local agencies must consider flood risks as part of the safety element and *may* consider flood issues as part of the resource conservation element. Cal. Govt. Code § 65302. For development projects analyzed under the California Environmental Quality Act, the Environmental Checklist also requires some assessment of flood hazards. CEQA Guidelines, Appendix G, § VI. The Reclamation Board also enjoys certain regulatory authority over floodplain developments under its statute. Cal. Water Code § 8710.

C. Recent Development Controversies

In other parts of the Central Valley, proposed housing developments in floodplains also continue to draw attention. In the last year, the Reclamation Board has played an increasingly active role in assessing the flood risks for new developments and criticizing gaps in flood protection. Those projects have included:

- **Plumas Lakes (Yuba County):** The Yuba County Board of Supervisors approved this project despite recent history of flooding (1997) in the aptly named Plumas Lakes. The Reclamation Board has been working with Yuba County to address flood risks.
- **Mossdale Landing (City of Lathrop):** The Reclamation Board expressed concern about this 500-unit mixed use development west of Interstate 5. The Board cited concern over inadequate levees, which were not improved when the Corps of Engineers restored them after the 1997 flood, and flooding due to "a rise of the groundwater level on the landside of the San Joaquin River."

- **Clarksburg/Sugar Mill (Yolo County):** The Reclamation Board has expressed concern about replacing an old sugar mill with a mixed-use development that includes new housing, due to adjacent aging levees along the Sacramento River.
- **River Islands (City of Lathrop):** This proposal involves 11,000 new homes on a Delta island. The developer recently announced that it would build its own levees inside the island, so that it would not touch existing levees that created the island and thereby incur any State regulation by the Reclamation Board.

Governor Schwarzenegger recently replaced all the Reclamation Board members, which were holdovers from the Davis Administration (one from the Wilson Administration) and installed seven new members. Of the new members, four have ties to agriculture, one formerly managed the Sacramento Area Flood Control Agency, and two others are engineers.

D. Recent Legislation Related To Flood Management/Land-Use

This year, several bills related directly or indirectly to flood management, including one bill that addressed the land-use connection.

- **AB 802 (Wolk)** would have required cities, when preparing general plans for development, to assess flood management issues. It did not pass the Assembly floor.
- **AB 1665 (Laird)** started out as the Schwarzenegger Administration's proposal to create a state agency that could raise flood management funding through assessments on Central Valley landowners. Opposition led the Administration organizing a stakeholder process. By the time they drafted a new bill, the deadline for a Senate committee hearing had passed. It now contains various provisions related to floodplain mapping and notice.
- **AB 797 (Wolk)** strengthened the influence of the Delta Protection Commission over local land-use decisions. Although the bill does not expressly relate to flood management, development in the Delta affects the nature of Delta flood management.
- **SB 264 (Machado)** extended the life of the Delta Flood Protection Fund for two years, while DWR completes the "Delta Risk Management Study" for Delta levees. This fund provides "subventions" or funding to local levee agencies to maintain or improve Delta levees.
- **Budget Trailer Bill:** In response to proposals to pay \$464 million to settle the *Paterno* litigation, the Senate Budget Subcommittee on Resources proposed requiring, by 2012, that all new development achieve a 200-year level of flood protection.

Both the development community and local government organizations have expressed concern about the State's playing a greater role in land-use decisions for the floodplains. Development interests were instrumental in defeating AB 802. During the Senate Budget Subcommittee on Resources hearing on the flood protection requirement, one homebuilder lobbyist asserted that there was no connection between flood management and land use. Considering the continuing controversies over local developments in the floodplain, the issue of land use in floodplains nevertheless will continue to arise in the years ahead.

Risks and Liability: Who is Responsible for Avoiding a California "Katrina," and Who Will Pay If We Do Not?

A Joint Hearing of the Judiciary Committee, the Water, Parks and Wildlife Committee, and the Insurance Committee of the California Assembly

**October 25, 2005
11:00 am to 4:00 pm
State Capitol, Room 4202**

**I. Introductory Comments by Chairs and Members
(11:00 am – 11:15 a.m.)**

**II. Flood Management and Prevention in California: Who Builds And Maintains California's Flood Management System?
(11:15 am–12:15 pm)**

(Assemblymember Wolk, Chair)

1. Considering the design capacity and current conditions, what is the level of risk of failure and liability?
2. Who are the players, and what role does each have? Who is in charge?
3. Are the flood maps accurate?
4. What level of flood protection currently exists? How many people live in areas at risk of flooding?
5. What would a flood cost us in lives lost, injuries, property loss and economic damage?
6. What more needs to be done to prevent flooding and reduce the State's liability? Who should pay? How?

Witnesses

Lester A. Snow, Director, Department of Water Resources
President, The Reclamation Board

Brandon Muncy, Chief of Planning, Sacramento Dist., Army Corps of Engineers
Mike Hardesty, President, California Central Valley Flood Control Association

**III. Who Will Be and Who Should Be Footing the Bill If The Flood System Fails?
(12:15 pm – 1:15 pm)**

(Assemblymember Jones, Chair)

1. Who is potentially liable in the event of a flood?
 - a. Is federal immunity complete?
 - b. Current state liability via the theory of inverse condemnation – *Paterno v. State*
 - c. Local liability in inverse condemnation cases
 - d. Negligence and other potential theories of liability
 - e. Are there any realistic theories of liability of builders and developers?
2. What are the consequences of the existing liability regime? What actions are encouraged or discouraged due to the existing liability regime?
3. Does liability rest with those who can take steps to prevent flood damage?
4. Can and should the state attempt to modify who is legally held liable in the event of a catastrophic flood? If so, how? What effect will this have? Or should the focus be solely on investing more money in prevention?

Witnesses:

Gary Livaich, Attorney at Law, Desmond Nolan, Sacramento
(counsel for plaintiffs in *Paterno v. State*)

Sterling Smith, Deputy Attorney General, California Department of Justice
(counsel for State in *Paterno v. State*)

Scott Shapiro, Attorney, Downey Brand, Sacramento
(counsel for California Central Valley Flood Control Association)

**IV. How Does the Pervasive Lack of Flood Insurance Exacerbate the State's
Liability Exposure in the Event of A Major Flood?
(1:15 – 2:15 pm)**

(Assemblymember Nava, Chair)

1. What role if any does flood insurance play?
2. Does homeowner's or commercial insurance cover floods?
3. What is the federal flood insurance program and what does it cover?
4. When is federal flood insurance mandated and who is eligible?
5. What percentage of Californians living or working in flood plains have flood insurance? What can be done to increase coverage?
6. Can the State or local governments require flood insurance?
7. Should flood insurance be mandated?

Witnesses:

Les Harder and Ricardo Pineda, California Department of Water Resources
Stein Buer, Executive Director, Sacramento Area Flood Control Agency
Insurance industry representative (invited)

Ronald Stork, Senior Policy Advocate, Friends of the River

V. New Development in Floodplains: How Do We Make Sure The Public Is Safe?

(2:15 – 3:45)

(Assemblymembers Wolk & Jones, Co-Chairs)

A. What New Development is Projected in Areas of Potential Flooding?

1. Over the next 30 years, what development is expected to occur in areas subject to potential flooding?
2. What additional flood management measures will be needed and at what cost, to protect newly developed areas from flooding?
3. Who decides whether development can occur in an area subject to potential flooding? What role do the state, local and federal governments have in approving development in the floodplain?

B. Who and How Should We Decide Whether to Allow Floodplains to Develop and With What Level of Flood Protection?

1. Who are the players, and what role does each have?
2. Should development be allowed in areas subject to risk of flooding?
3. Who should decide if development can be allowed in areas at risk of flooding? Developers? Local government? The state?
4. What conditions, if any, should be placed on development allowed in areas at risk of flooding? What level of flood protection should be required?
5. Who should pay for flood management improvements needed to make new development safe from flooding? How?

Witnesses

Pete Rabbon, Executive Officer, The Reclamation Board
 Jeffrey Mount, Professor, UC Davis, Center for Watershed Science
 Gary Reents, Director of Utilities, City of Sacramento
 (League of Cities, California State Association of Counties)
 Mike Webb, California Building Industry Association

VI. Public Comment Period

(3:45 pm – 4:15 pm)
