

Multi-Hazard Mitigation Plan

6.7 City of Isleton and “The Delta” Community Element



CITY OF ISLETON AND “THE DELTA” COMMUNITY PROFILE



The small town on Isleton is located in southern Sacramento County in the Delta Region along the banks of the Sacramento River. The Delta is a land of rivers, agriculture, boating, fishing, and rich history. Isleton was once referred to as the “Little Paris on the Delta.”

Its location on the river brought commerce and trade since the river was the primary source of transport. Improving the waterways for deeper channels that would permit year round travel brought about levee construction. The levees remain though the town has since dwindled from its boom days

Isleton’s resident population is currently 840, but swells to as many as 200,000 during the popular Crawdad Festival held every year on Father’s Day weekend. The town hosts several other festivals, including the Spam Contest, which originated as a direct result of the floods of 1996. Displaced families during the flood were given shelter at the Hotel Del

Josiah Pool founded Isleton in 1874. Isleton, like many other communities in Sacramento County, benefited from gold fever. Its



Rio, owned by Ralph and Charli Hand. When people visited their homes, they remarked that the labels on the Spam cans were the only labels that survived. Charli decided to make some fun of it and the Spam Contest was created. Contestants cook Spam, carve Spam, dress Spam up in costumes and even appoint a “Captain Spam.” *Source: <http://www.isletoncoc.org>*

TOTAL VALUES AT RISK FROM HAZARDS

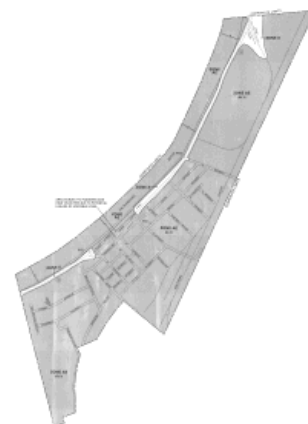
The total values at risk from all hazards are presented as a worst-case baseline. Like other values presented in this plan, these are deceptively low because they do not include the values of infrastructure, government and church facilities, or the local economy. Additionally, assessed values in California are lower than actual because they are frozen to only reflect the value at the time of the last sale.

	Total value	Land value
2/3/4 PLEX	2,178,275	559,822
COMMERCIAL/INDUSTRIAL	9,101,616	2,914,932
MULTI-FAMILY	139,081	34,363
SINGLE FAMILY	18,813,447	5,360,538
VACANT LAND/AG	3,601,490	3,588,353
=====	=====	=====
ISLETON	33,833,909	12,458,008

There are very few events that would destroy an entire community, so in any given disaster event, one could expect the damages to be less than the \$33.8 Million displayed. However, the entire community of Isleton is in the Sacramento River 100-yr floodplain (Zone AE), so it is possible that the community could be inundated from a flood. The following section takes a closer look at Isleton’s vulnerability to flooding.

NFIP DATA AND FLOODPLAIN INVENTORY

HAZUS MH data indicate that there are 271 residential structures in the mapped 100-year floodplains of Isleton. NFIP Insurance data indicates that as of February 29, 2004, there are 173 flood insurance policies in the City of Isleton. There have been 19 claims paid for properties located within the mapped floodplain for a total of \$457,109.



OTHER HAZARDS

Earthquakes

Isleton's location and underlying soils make it more susceptible to earthquakes than any other part of Sacramento County.

Secondary Earthquake Disasters: *Sacramento-San Joaquin Delta levees*

An April 2000 study assessed the potential earthquake vulnerability of the 660 mile complex of Sacramento-San Joaquin Delta levees. Several regional and local fault models were used, and it was found that the earthquake hazard is "dominated by moderate local events, [but] it is unlikely that the entire Delta region will be subjected to large motions in any single earthquake." Thus, several potential moderate magnitude (6.0 – 7.1) earthquakes were used to estimate potential damage. *Source: Calfed Bay-Delta Program, Seismic Vulnerability of the Sacramento-San Joaquin Delta Levees, April 2000.*

The study defined four (I-IV) potential damage zones in the Delta region. Zones I, II, and IV are of particular interest to Sacramento County. Zone I (highly susceptible to earthquake damage) includes only Sherman Island; Zone II (medium to medium-high susceptibility and by far the largest zone) runs from about Walnut Grove on the north, Isleton-Rio Vista on the west, Terminous on the east, and below the San Joaquin County line to the south; and Zone IV (low susceptibility) includes an area south of Hood to the Cosumnes River.

The Delta is subject to flooding from earthquake induced levee failures. The greatest risk is when river levels are at their highest and the levees are in their most saturated condition.

CAPABILITY ASSESSMENT

Isleton has no full-time staff and was unable to complete the Capability Assessment matrix that the HMPC utilized in the other incorporated communities. The town is afforded significant protection by the levees along the Sacramento River, as it is situated tens of feet below the water surface elevation.

HISTORIC PRESERVATION

Isleton has a number of historic structures. The following Historic District is listed on State and Federal Historic Preservation District Registers:

Isleton Chinese and Japanese Commercial Districts (added 1991 - **District** - #91000297), also known as **Isleton Asian--American District**

Bounded by River Rd. and Union, E and H Sts., Isleton

Source: <http://www.nationalregisterofhistoricplaces.com/CA/Sacramento/state.html>

NATURAL RESOURCES IDENTIFIED IN ISLETON

The following list was generated from The California Natural Diversity Database and contains all known occurrences of rare plants and animals, and terrestrial and aquatic communities located within Isleton city limits.

CITY OF ISLETON

Delta tule pea

Northern California black walnut

DEVELOPMENT TRENDS

The following building permit listing indicates that Isleton is not experiencing any growth.

Single-family new house construction building permits: ISLETON

- 1996: 1 building, average cost: \$12,000
- 1997: 0 buildings, average cost: \$0
- 1998: 0 buildings, average cost: \$0
- 1999: 0 buildings, average cost: \$0
- 2000: 0 buildings, average cost: \$0
- 2001: 0 buildings, average cost: \$0
- 2002: 0 buildings, average cost: \$0
- 2003: 0 buildings, average cost: \$0

COMMUNITY-SPECIFIC RECOMMENDATIONS – ISLETON

Isleton Recommended Action Item #1: *Participate with the development of a seasonal multi-hazard public education campaign to be implemented annually*

Issue/Background Statement: Refer to Section 5-4 Countywide Mitigation Recommendations. Public Education is one of the primary mechanisms in reducing future hazard related losses, and one that is inexpensive in comparison to other mitigation projects. This effort should be coordinated between the many organizations that already have extensive and/or limited programs in place.

The following topics could be addressed through this effort that apply to the Isleton-Delta area:

- Floods
 - Warning system components
 - Flood insurance availability and Preferred Risk policies behind levees City/County/SAFCA Program
 - Regional Evacuation plans/procedures (response to warning)
 - Public Info regarding manhole covers popping off: what they are, what they are for
 - Natural & Beneficial value of floodplains
 - Placing Flood-Depth signs county-wide
 - Investigate the “Living with Levees” program
- Severe Weather
 - Tree-limb trimming
 - Fog – driving tips

- Warning (NOAA Weather [All-Hazards] Radio)
- Earthquakes
- Health Hazards (West Nile Virus)
- Water Conservation
- Develop/enhance Business Continuity Planning
- Conduct disaster exercises
- Train consumers/volunteers to be ready to help when disasters strike
- Provide all-hazard curriculum for teachers

Other Alternatives Considered: Do nothing

Responsible Offices/Persons: City & County Emergency Management offices, City & County Floodplain Management Offices, SAFCA, the American Red Cross, Sacramento County Health Department, San Juan Water District, the California Fire Alliance, the Institute of Building and Home Safety, CA-OES, CA-DWR, CA-Reclamation Board and FEMA Region IX.

Priority (H,M,L): High

Cost Estimate/Potential Source of Funding: TBD/HMGP

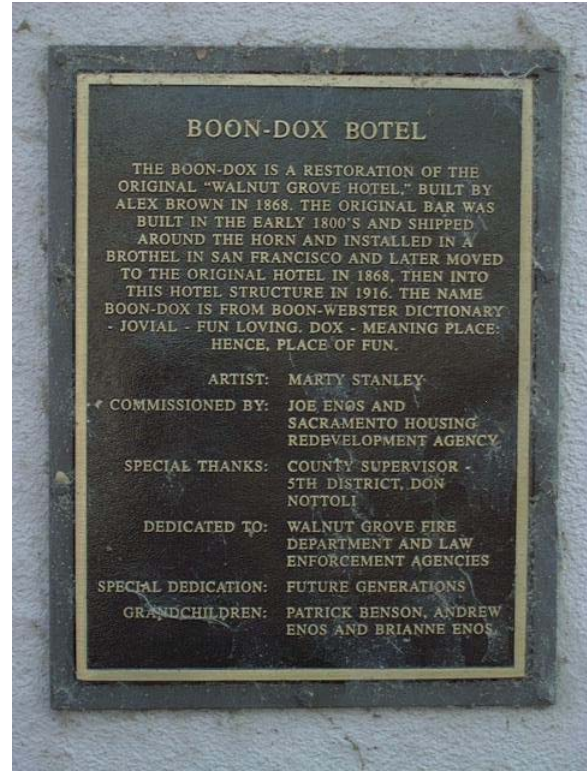
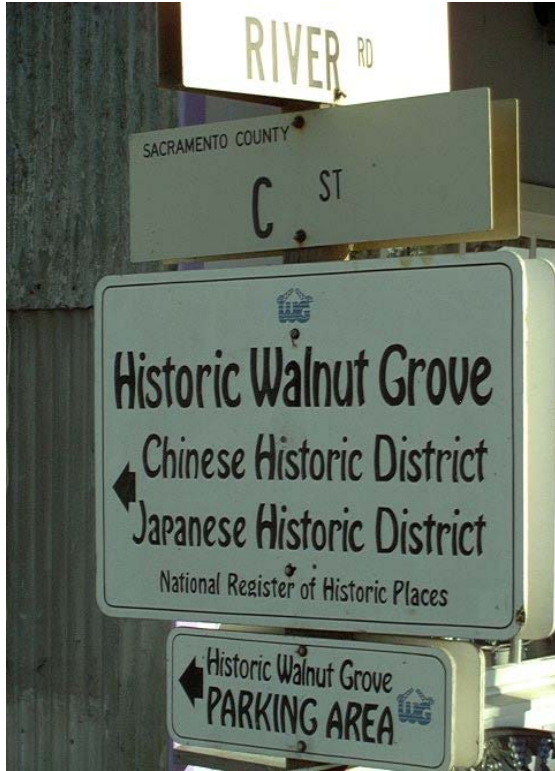
Cost-Effectiveness Explanation: Life-safety, hazard loss reduction

Schedule: 2005

COMMUNITY PROFILE FOR – “THE DELTA”

The Delta is defined as that portion of the County bounded on the east by the Western Pacific Railroad tracks, on the north by the southern city limits of the City of Sacramento, and on the south and west by the Sacramento County boundary. It is more commonly referred to as that area of the southern County (below Galt) that is between the Sacramento and San Joaquin Rivers. The Delta is a 700,000-acre region characterized by rivers, sloughs, levees and islands. It is a major agricultural producer, a major recreational playground, and an important wildlife habitat. *(Source: Sacramento County General Plan)*

The Delta is rich in history, much like the rest of Sacramento County, dating back to the Gold Rush and with the Sacramento River providing water transport to San Francisco and beyond.



DELTA ISSUES AND HAZARD PROBLEMS

From flood control to waterborne commerce to water supply. The original upstream flood management system created over the century following the Gold Rush consisted of levees, weirs, bypasses, and overflow areas and worked well in its ability to convey large floods downstream with minimal damage. In addition to protecting lives and property, the original system was intended to facilitate use of the rivers for waterborne commerce. The downstream water conveyance and flood protection system levees, much of it built with hand labor in the 19th century, protected towns and farms, while providing for water-borne commerce. Over the years, the intensification of agriculture led to subsidence across the Delta largely due to the exposure of the peat soils to air, causing them to oxidize. So the surrounding land sank and the levees grew in height.

Today, the use of the water control system has changed since it was constructed, with water supply conveyance replacing waterborne commerce. The Delta, fed by rivers carrying rain and snowmelt from the Sierra Nevada, provides two-thirds of California residents with fresh drinking water distributed through the California Aqueduct. The delta is also a major source of water for Central Valley farms. California, especially Southern California, is utterly dependent on the Delta for water (*Source: Sacramento Bee and Los Angeles Times*)

The Delta became a political football during the 1960s and 1970s when interests clashed over control of its water. The federal Central Valley Project drew water - initially captured by Shasta, Folsom and other big dam-reservoir projects - from the Delta for delivery to San Joaquin Valley farmers, and the state weighed in with its own massive water project in the 1960s to transfer

Delta water to Southern California's growing and thirsty cities. So much water was being removed from the southern edge of the Delta that river flows began to reverse and brackish water from San Francisco Bay began to intrude. State and federal engineers then devised a 42-mile-long "Peripheral Canal" that would carry water from the Sacramento River around the Delta - and ignited two decades of bitter political warfare.

Environmental groups feared that once in place, the Peripheral Canal (portions of which were excavated to provide material for construction of Interstate 5 between Sacramento and Stockton) would allow water transfers to be increased dramatically and threaten North Coast rivers that had been off-limits to development. Delta farmers opposed the canal over concerns for water quality and the implications for the maintenance of the existing levees, reasoning that if state and federal water continued to flow through the existing system the maintenance responsibilities could be shared with the governments. The canal was defeated at the polls in 1982. *(Source: Sacramento Bee and Los Angeles Times)*

In recent years, the creation of CALFED, a multi-agency program aimed at making incremental changes in the management of Delta water, aims to both enhance water quality and allow pumps to draw more water for shipment southward. CALFED was created after a 1992 reauthorization of the federal Central Valley Project that shifted a huge amount of water from farmers to environmental enhancement. The central issue today is whether plans should include more water storage to meet future demands or rely primarily on conservation to work within existing supplies, but there are dozens of specific issues of contention. The current California administration is rewriting a conservation-centered water policy that had been developed under the predecessor administration, putting more emphasis on water storage.

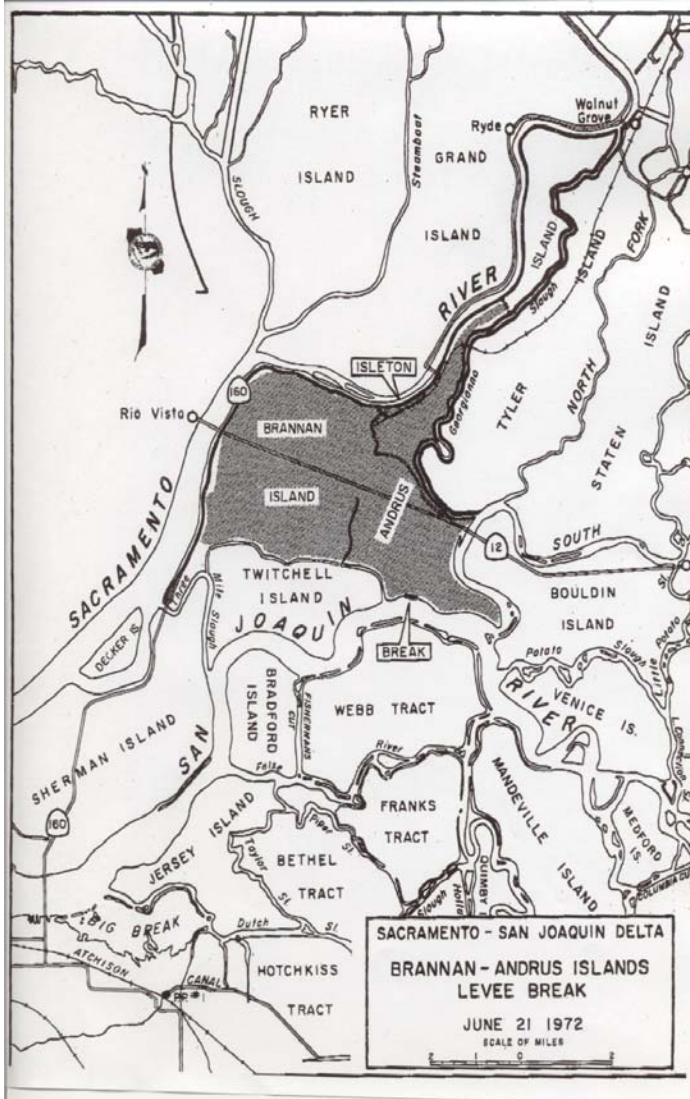
Since 1994, a state federal water program called Cal-Fed has been studying ways to improve Delta drinking water supplies and fisheries without building a canal. If those plans don't produce results in a few years, Cal-Fed has the option of pursuing a "through-Delta facility," an alternate version of the peripheral canal.

Section 4-3 of this plan detailed how CALFED, the state and federal government program agreement preserve and protect the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta), and how the Bay-Delta region is of critical importance to California, as the hub of the State's water supply system and an area of ecological importance. CALFED created an agreement calling for a joint state-federal process to develop long-term solutions to problems in the Bay-Delta Estuary related to fish and wildlife, water supply reliability, natural disasters, and water quality. This led to the long-term Plan for the Bay-Delta.

The California Bay-Delta Act of 2003 established the California Bay-Delta Authority which seeks to improve the quality and reliability of California's water supplies while restoring the Bay-Delta ecosystem. The California Bay-Delta Authority is focused upon improving Bay-Delta levees, by acting to protect water supplies needed for the environment, agriculture and urban uses by reducing the threat of levee failure and seawater intrusion. Delta levees also protect major interstates, roadways, cities, towns, agricultural lands, and environmental and aquatic habitat.

Delta Levee Failures. Levee failures have occurred throughout the Central Valley and the Delta for years, flooding thousand of acres, causing millions of dollars in damages, and multi-millions of dollars in awards resulting from liability lawsuits.

In June 1972, the Brannan - Andrus Island's levee failed and flooded Isleton. 150,000 acre-feet of water covered the islands, which is as much as 20 feet below sea level. The USACE and many volunteers built an emergency bow levee around Isleton to protect it, but a break in a chemical pipe at the sewage treatment plant and forced the closing of the plant and the evacuation of Isleton. After 36-hours the bow levee failed and Isleton flooded.



A bigger battle was waged against the “invisible” flooding of saltwater. The freshwater inflow to the Delta was not enough to maintain a freshwater outflow and flood the islands, so saltwater from Suisun Bay moved in to fill the void. Pumping through the Central Valley Project at Tracy was cut-back, and releases from Folsom, Oroville and Shasta reservoirs was increased, but it took 1.5, 3 and 5 days respectively for that water to reach the Delta and create the hydraulic barrier needed. Saltwater remained trapped in the central and southern Delta. The water released through the dams was enough to create the hydraulic barrier but not enough to flush the Delta. Pumping was ordered. It wasn't until August 16, 8 full weeks later, that salinity levels dropped to pre-failure levels.

Damages were estimated between \$20-40 million. USACE spent \$1.4 million just to repair the breach. Federal disaster assistance totaled \$2.4 million. Saltwater intrusion degraded water supply for central Delta farms, and business at marinas and restaurants

suffered from rumor and negative publicity.

It has been reported that the Peripheral Canal (described in more detail in the next few pages), had it been in place, would not have prevented the levee break or the saltwater intrusion, but it would have limited the saltwater intrusion in the southern Delta and it would have been possible to flush the saltwater back into Suisun Bay more quickly and efficiently (3 weeks versus 8 weeks), and there would not have been the need to dispose of 53,000 tons of salt.



Most recently, on June 3, 2004, the Jones Tract levee failed near the Town of Holt (not in Sacramento County), flooding more than 11,000 acres of farmland. Levee breaks can cause a radical shift in water along the delta, as fresh water floods the low-lying areas. The vacuum draws in saltwater from San Francisco Bay, which is connected to the delta through a series of bays and rivers.

Bacon Island Road, west of the town of Holt, offers a view of the June 3 levee break. (Source: Sacramento Bee file, 2004/José Luis Villegas)

The saltwater then contaminates the drinking-water supply. The levee break in Holt forced officials to shut down the pumping of fresh water out of the delta for three days until its salt content could be reduced to normal levels. The breach renewed concerns among state water officials about the aging levees and the delta's islands, which continue to sink. (Source: Los Angeles Times 6/19/04)

A Presidential Disaster Declaration was made, and FEMA granted the state more than \$7.3 million to repair the levee break and help prevent future breaches. The funds will cover 75 percent of the repair and prevention costs. Total costs from the disaster are estimated at \$90 million. (Source: Los Angeles Times 10/30/04)

A scientific symposium held in October 2004, on the Sacramento-San Joaquin Delta included the state's top geologists and fishery biologists. The conference tackled the issues of how to lessen the state's dependence on this critical water source so that California's water supply isn't so vulnerable to the failure of just a small piece of the system, while recognizing that the rivers continue to flow, the levees continue to erode and demands for more water from an ever-expanding population continue to mount. (Source: Sacramento Bee).

The symposium scientists emphasized that multiple levee failures in the Sacramento-San Joaquin Delta are almost sure to disrupt California's water system in the next 50 years, and the state needs to start planning for that contingency. One scientist stated that the odds were more than 60 percent that multiple levees could fail in a single event within 50 years. That, in turn, would

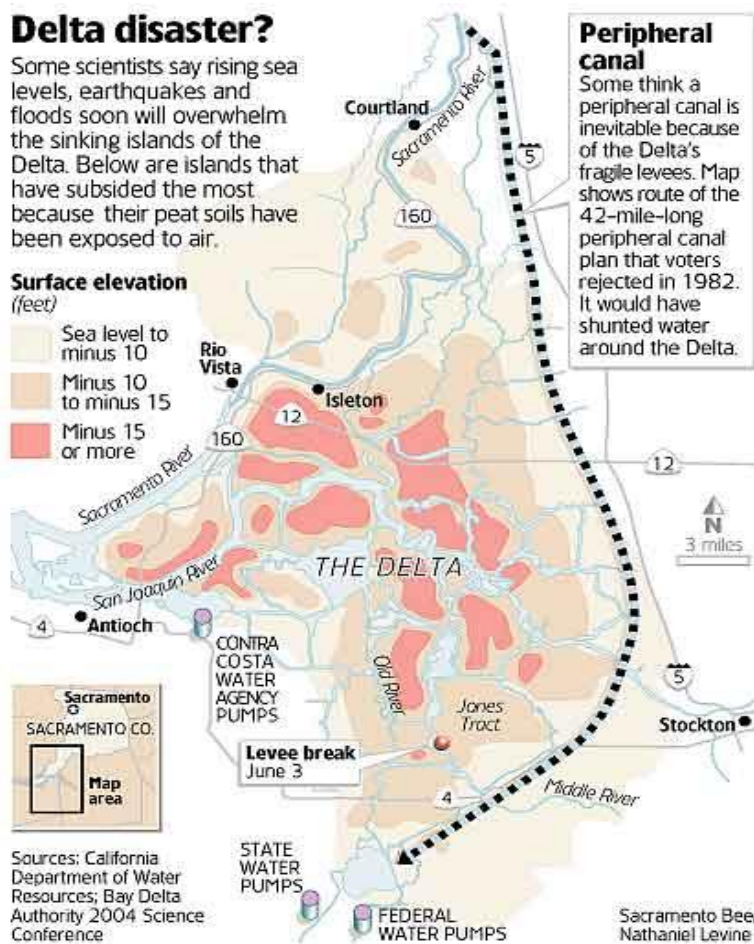
draw saltwater toward the Delta water pumps, shutting down the drinking supplies of 22 million Californians.

Delta disaster?

Some scientists say rising sea levels, earthquakes and floods soon will overwhelm the sinking islands of the Delta. Below are islands that have subsided the most because their peat soils have been exposed to air.

Surface elevation (feet)

- Sea level to minus 10
- Minus 10 to minus 15
- Minus 15 or more



Peripheral canal

Some think a peripheral canal is inevitable because of the Delta's fragile levees. Map shows route of the 42-mile-long peripheral canal plan that voters rejected in 1982. It would have shunted water around the Delta.

Another speaker said the state should take a fresh look at a peripheral canal, which would shunt water around the Delta and - in the eyes of some - reduce some conflicts in the estuary. "Taking this off the table is a bit of a mistake," continuing that it would be better to carefully plan a peripheral canal than hastily build one following a disaster. "What I am worried about is a peripheral canal being built on an emergency basis. If one of these scenarios ... comes true, you would suddenly have a brackish water system where there is now a freshwater system." (Source: Sacramento Bee).

Actions taken in September/October, 2004: Congressional leaders authorized \$90 million to reconstruct levees in the Sacramento-San Joaquin Delta by passing a sweeping \$395 million California water bill September 15, 2004. The bill re-authorizes CALFED which aims to restore California's Sacramento-San Joaquin Delta and ensure a reliable water supply for millions of users. It represents the first major changes to California's water systems since the 1960s.

"Under pressure from some of California's biggest cities and farm districts, federal and state officials are planning major changes in how water is stored and distributed across the state, including increased pumping of supplies from the Sacramento-San Joaquin Delta... The proposed changes, outlined in an obscure state-federal document called the Operations Criteria and Plan, sets the stage for California's most far-reaching plumbing shifts in a decade. Under the plan, water contractors would increase pumping from the Delta by 27 percent, sending more to Southern California and the San Joaquin Valley. Less water would flow to the San Francisco Bay and less would be reserved for endangered salmon during the driest of droughts." (Source: Sacramento Bee 9/26/04)

The bill also authorizes studies of dams on the upper San Joaquin River and in Colusa County. It tries to ensure Sacramento-San Joaquin Delta water quality. It prescribes Tracy Pumping Plant fish screens and other environmental protections (*Source: Sacramento Bee 10/17/04*)

To get this bill through Congress however, California's representatives had to reduce the funding request for this bill from an estimated \$2.4 billion down to \$395 million to be stretched over four years. That is a reduction of more than 80 percent, and some are quick to note that the state's list of water and habitat project needs has not decreased by a similar amount. "If anything, it has grown." (*Source: Sacramento Bee 10/26/04*)

"The National Marine Fisheries Service issued an opinion on [October 22, 2004] that opens the door to increased water exports from the Sacramento-San Joaquin Delta. The agency concluded that additional pumping from the delta, as well as changes in dam operations, would not seriously harm endangered or threatened salmon species... That reversed earlier draft findings by its biologists that could have stymied plans to send more water south to the farms of the San Joaquin Valley and the cities of Southern California." (*Source: Los Angeles Times 10/23/04*)

President Bush signed a landmark California water bill October 25, 2004.

CAPABILITY ASSESSMENT/DEVELOPMENT TRENDS

The Rural Growth Management Strategy section of the Land Use Element of the Sacramento General Plan states that all growth of the Delta communities of Freeport, Hood, Courtland, Locke, and Walnut Grove should occur within the limitations of sewage disposal facilities and flood protection. The Delta Community Area Plan, which is incorporated by reference into the Community Planning Element of this General Plan, provides further guidance for the expansion of the Delta area towns. The County drainage and floodplain management regulations further limits the ability for any significant or substantial growth to take place.

In December 2002, the *Sacramento and San Joaquin River Basins S-1 Interim Report Comprehensive Study*, was released. State and Federal legislation authorized the development of comprehensive plans for flood damage reduction and ecosystem restoration along the Sacramento and San Joaquin rivers following the disastrous floods that occurred in January 1997. ... The authorizing legislation recognized that a durable flood management system that can be effectively maintained on a long-term basis requires a design to accommodate and respect natural processes and the current benefits and uses offered by the river systems.

The report concludes that "a comprehensive effort to develop an effective plan for the flood management system requires evaluating how the complete system functions, how its performance could be improved, and how changes to parts of the system affect its overall performance. The capability of analyzing the flood management system comprehensively would replace the past practice of making incremental changes to the system without fully understanding how it may affect other parts of the system and the performance of the system as a whole". A major undertaking of the study was developing the necessary analytical tools to evaluate how changes to the system affected the performance of the system as a whole.

The report also notes that, “over time, public interest has expanded to include conserving and protecting natural systems, rather than replacing them with more intensive uses and recognizes that it is not necessary for public safety and economic prosperity to conflict with conserving natural systems. If conflicts do occur, they can be managed through a balanced approach that retains protecting lives and property as the system’s paramount purpose. The need for system-wide comprehensive analysis applies to both flood damage reduction and ecosystem restoration objectives”.

COMMUNITY-SPECIFIC RECOMMENDATIONS – “THE DELTA”

Recommended Action Item #1: Delta - Dredge River (See also All Reclamation District Action #1, Section 6.9)

Category (for CRS purposes): Structural Protection

Issue/Background Statement: The carrying capacity of the Delta rivers continue to be diminished by the heavy sediment loads that are carried from the Sierra foothills and deposited in the lower, slower reaches of the watercourses. The residents and reclamation districts of the Delta have gone “on record” for over 20 years in support of dredging the Sacramento River --- a practice that was “routine” sixty years ago. The issue hasn’t changed, but conditions have continually worsened, and the entire water distribution system is at a point where *something* has to be done.

Environmental concerns and the temporary/ongoing maintenance nature of dredging are recognized by a citizenry devoted to land and water conservation and stewardship, but seen as barriers to any effective solution and a primary cause of lengthy inaction that only further exacerbates the problems.

Other Alternatives Considered: Peripheral Canal, No Action

Responsible Office/Person: CALFED Bay-Delta Project, State Reclamation Board, Local Reclamation Districts, FEMA, USACE, F&WS, CA-DG&F, CA-OES

Priority (H, M, L): H

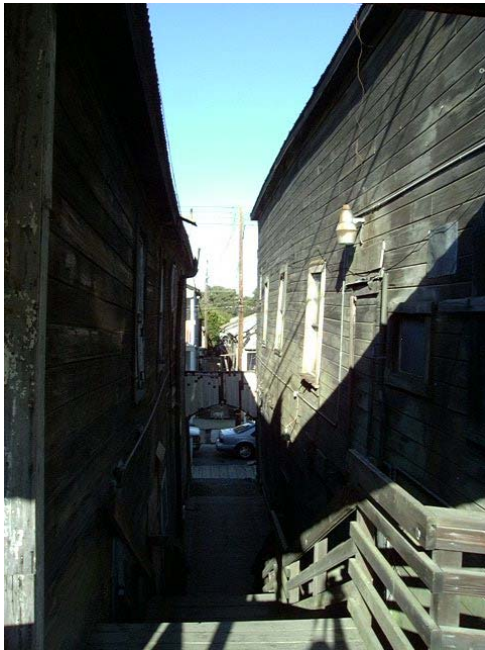
Cost Estimate/Potential Source of Funding: TBD/Congress, State, FEMA, USACE, State and local Reclamation Boards and *all* beneficiaries: Water Supply users, Recreational Water Users, Levee Road Users, Protected communities and agricultural business operations. Levee repair funds included in recent CALFED appropriation.

Briefly Explain why this is cost-effective: The levee system is no longer strictly a flood control system, it supports water-borne commerce, and most importantly, provides a significant portion of southern California’s water supply. Analysis of the impacts of past and recent levee failures vividly demonstrate that there are extreme costs associated with losing water supply, preventing saltwater intrusion, and reallocating upstream flows from major reservoirs. While there is

significant benefit locally to communities and businesses, there is a benefit many times over in maintaining water supplies for a vast and growing population downstream and downstate.

Schedule: ASAP

The following pictures help describe the Delta history and community profile.



Historic Locke, looking landward and downhill to the protected community and farms significantly below the surface elevation of the Sacramento River.



River recreation and levees are common Delta features



The Delta Reclamation Districts hold a special meeting in Walnut Grove to discuss their regional issues and provide input into this DMA plan, August 18, 2004

Walnut Grove mural

