

Flood Aware Flood Prepare



A Special Publication About Flood Safety In The Sacramento Valley
Prepared By Sutter County And The Sutter-Butte Flood Control Agency
In Cooperation With The City of Yuba City and the County Of Yuba



Images To Remember

The historic flood threat in the Sacramento Valley is revealed in images of (clockwise from top) the Meridian basin flood of 1997; the inundation of Colusa Highway during the Yuba City flood of 1955; Marysville surrounded by floodwaters in 1955; and a helicopter rescue during the Yuba City flood of 1955.



Sponsors, Partners And Thanks

This special publication was produced by the County of Sutter and the Sutter-Butte Flood Control Agency. It appears courtesy of The Appeal-Democrat, but the newspaper's editorial department is not responsible for its content.

We would like to thank our partners and sponsors in the preparation of this publication and the activities of Flood Awareness Month. *(While not a partner in Flood Awareness Month, Yuba County provided editorial copy for this publication).*

Sutter Butte Flood Control Agency

County of Sutter

City Of Yuba City

Levee District 1

Three Rivers Red Cross

Pro-Act Sutter County Citizens Alliance

Sutter County Taxpayers Association

Yuba Sutter Chamber of Commerce

Sutter Yuba Association of Realtors

Yuba-Sutter Farm Bureau

The Yuba-Sutter Mall

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October Is Flood Awareness Month

We may be in a drought, but there is a chance of flooding in any winter or spring in the Sacramento Valley. That's why October is Flood Awareness Month in Sutter County.

According to the federal

government, there is a one-in-four chance that your home will flood at some point during the life of a 30-year mortgage if you live in a flood plain. That's greater than the one-in-ten chance that your home will suffer

from a fire during that same 30-year mortgage period.

Flood Awareness Month was created by Sutter County and the Sutter Butte Flood Control Agency to help residents understand the threat posed by the Sacramento,

Feather, Yuba and Bear rivers; new federal flood insurance requirements on 1/3 of Sutter County; and the efforts of the new Sutter Buttes Flood Control Agency to develop and fund flood control projects.

Flood Insurance Required South Of Stewart Road

If you live south of Stewart Road in Sutter County, you may be required to have federal flood insurance.

New flood maps produced by the Federal Emer-

gency Management Agency for the National Flood Insurance Program placed 1/3 of Sutter County in "high risk" areas for flooding--effectively requiring federal

flood insurance on properties with a mortgage backed by the federal government.

The new area identified as "high risk" is eastern Sutter County south of Stewart Road and stretches to the Sacramento County line.

In order to be "grandfathered" in and avoid potentially higher flood insurance costs, property owners required to have flood insurance should act before De-

cember 2, 2008,

Flood insurance is a good idea for anyone living in the Sacramento Valley, but the requirement for flood insurance is new in Sutter County. It is the result of a re-evaluation by the federal government of the integrity of the Sacramento Valley levee system in light of the catastrophic failure of a levee at New Orleans in the wake of Hurricane Katrina.

Schedule Of Flood Awareness Events

Flood Awareness Month actually began in September, with the first of three levee tours on Saturday.

It continues with the placement of a traveling exhibit at The Yuba Sutter Mall from October 3 through October 11.

Other events include:

Oct. 10, 6 p.m.-10 p.m.: exhibit at Yuba City Centennial Celebration on Plumas Street.

Oct. 11, 10 a.m., levee tour sponsored by Levee District 1, City of Yuba City, and PROACT Sutter County Citizens Alliance, 250 Second St., Yuba City.

Oct. 15, 6 p.m.: informational meeting on mandatory federal flood insurance at Barry School auditorium, 1255 Barry Road, Yuba City.

Oct. 16, 6 p.m., informational meeting on mandatory flood insurance at East Nicolaus High School auditorium, 2454 Nicolaus Ave., Nicolaus.

Oct. 20, 9 a.m., Sutter County Water Resources Division workshop on impact of new flood maps for engineers and developers, Veteran's Hall, 1425 Veteran's Memorial Circle.

Oct. 27, another workshop for insurance agents and real estate professionals on impacts of new flood

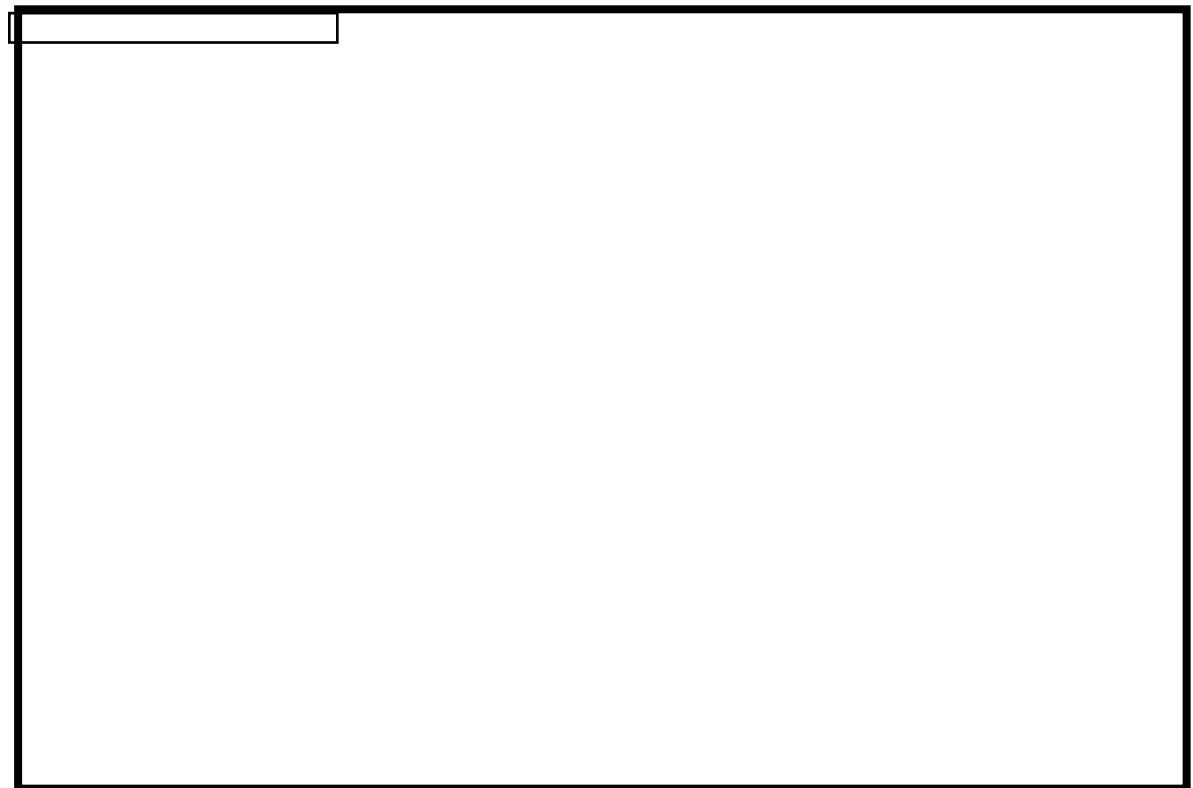
maps, Veteran's Hall, Yuba City.

Oct. 25, 10 a.m., Levee Tour, Levee District 1, 250 Second St., Yuba City.

Oct. 25, noon-4 p.m., Flood Aware/Flood Prepare Fair at Three Rivers Red Cross, 2125 East Onstott Road, Yuba City.

Oct. 28, the Sutter County traveling display will be at an Emergency Preparedness event hosted by the Glad Tidings Church at 1179 Eager Road, Yuba City.

For more information, call 822-7100.



New Sutter Butte Flood Control Agency Leads Fight

The Sutter Butte Flood Control Agency plans, designs and coordinates regional flood control improvements to protect lives and property in the Yuba City Basin (sometimes called the Sutter Basin).

The Flood Control Agency's goal is to protect public safety against the ongoing threat of flooding from Sierra storms and snow packs that run off into the region's rivers systems.

While there has not been a flood in the Yuba City basin since 1955, and dams have been constructed on the Feather and Yuba rivers since that devastating event, there remain concerns about the integrity of all Sacramento Valley levees. The Sutter Butte Flood Control Agency was established to address those concerns

on a regional basis.

The Flood Control Agency is directed by a Board of elected leaders from the counties of Butte and Sutter; the cities of Yuba City, Live Oak, Gridley and Biggs; and

Levee Districts 1 and 9 in Sutter County.

The State's Department of Water Resources is conducting an Urban Levees Evaluation, using sophisticated airborne equipment to look for low and weak spots in the levees. They've provided a snapshot of their findings, which includes some areas that need more study, as well as some that will need attention.

Currently, the US Army Corps of Engineers is sharing this new data and conducting a "Feasibility Study," which will identify weak spots and lay out a general set of alternatives for im-

proving the flood control system. Actions can range from building setback levees, to raising portions of levees and installing barriers in current levees to stop seepage through or under.

Because the full set of alternatives aren't developed, most experts rely on studies that only cover portions of the region's flood protection infrastructure. Cost estimates for improvements in Sutter and Butte counties

range from \$300 million to as high as \$800 million, but none are considered final.

After the Feasibility Study is complete and a general approach agreed to, the local Flood Control

Agency's engineers will begin designing improvements to priority projects that will improve our flood infrastructure and increase our public safety. But before local projects are deemed eligible for state flood dollars (Prop 1E bonds and other sources) the state must adopt a Central Valley Plan of Flood Control, which isn't expected for at least another three years.

In the meantime, some

flood control projects have been completed or are underway. This summer, the U.S. Army Corps of Engineers completed a project to build a slurry wall in the foot of a levee at Wadsworth Canal on the western boundary of the Yuba City basin.

Levee District 1 is finalizing plans and acquiring land for a project in 2009 to construct a 3/4 mile setback levee to straighten the bend at Starr Bend and effectively lower the elevation--and reduce the pressure--of the Feather River at high water upstream and downstream from Starr Bend.

Flood planners are looking for other "early implementation" projects and may seek local funding to start construction in 2009.

For more information about the Sutter Butte Flood Control Agency, visit online at www.SutterButteFlood.org

In Yuba County, An Ambitious Set Back Levee Project

YUBA COUNTY – There is a six-mile stretch of land south of Marysville where trees have been cleared and the ground prepared for the most ambitious setback le-

29 Miles Of Improvements

Before the heavy rains and rising waters of 1986, Yuba County was facing the same challenge as many other California counties with miles of earthen levees. Maintenance for most levees depended on poorly funded reclamation districts. When the rains arrived, the surging waters at the Yuba and Feather rivers proved too much for a stretch of time-worn levee on the northern edge of Linda.

Money for preventing future flooding was hard to find. From 1975 to 2005, California spent only \$210 million on Delta levees. The Army Corps of Engineers spent additional millions on repairs, but the funds were spread thin over several counties. The money that trickled into Yuba County was barely enough to maintain existing levees.

Looking to state and federal agencies to finance the care and upkeep of Yuba County levees was a process that proved too slow. The rains leading into the New Year of 1997 buckled a Feather River levee with devastating results.

In 2004, the County of Yuba and Reclamation District 784 created the Three Rivers Levee Improvement Authority (TRLIA) to finance and construct 29 miles of levee improvements in the South Yuba County along the Yuba, Feather and Bear rivers and the Western Pacific Interceptor Canal.

The goal: 200-year flood protection for South Yuba County by the end of 2008. The cost was estimated to be \$360 million, which was \$150 million more than what California spent on levee repairs throughout the state in the previous 30 years.

The timing was perfect. The burgeoning housing market encouraged developers to help pay for the bulk of levee strengthening and construction. Both residents and businesses began moving into the region. In 2006, Yuba County became the fastest growing county in the state, with 4.8 percent population growth.

When the housing market soured in 2006, it became clear developers would have a difficult time paying their portion of the final phase: an 11-mile stretch of levee along the Feather River, which would include six miles of a new setback levee. It also carried the biggest price tag, with an estimated cost of \$192 million.

Although impressive, these costs were far less than the combined damages from the floods of 1986 and 1997, estimated at \$645 million and--more significantly--the 1997 flood resulted in three deaths.

The Yuba County Board of Supervisors insisted that levee improvements must be completed in order to protect the 11,766 homes, 486 businesses, 74 public buildings, 11 schools and 40,000 residents.

Yuba County qualified for \$138.5 million in Proposition 1E funds through the California Department of Water Resources. However, the county had to come up with more than \$53 million in local matching funds.

In the end, Yuba County and the Yuba County Water Agency agreed to finance \$46.5 million.

vee construction project in California. But even before the levee walls go up along the Feather River, the very foundation for improved flood protection has begun below the ground -- about 50 feet below the ground.

It's one of the modern-day levee construction methods--dictated by the latest federal standards--in which the deep foundations of levees are tested and then packed with solid materials that help keep people who live and work on the dry side of the levee... well, dry.

Construction crews are working around the clock, with the hopes of completing major work before wet weather arrives. The current levee will remain in place until work on the new setback levee is completed.

Thought to be the state's largest project of its kind, the Feather River Setback Levee will improve local and regional flood protection by widening the floodway. Currently, there are portions of the Feather River that narrow, creating "choking points" that cause water lev-

els to back up during high water flows. The new levee will be "set back" from the river, leaving room for river to spread out at lower levels.

The setback levee is only a portion of levee improvements planned along the Feather River. The current levee between Bear River and Starr Bend has undergone a careful evaluation to pinpoint areas that need to be strengthened. A similar evaluation was conducted on 2.8 miles of levee just to the south of the Yuba River, where it was determined the levee wall needed to be both strengthened and made higher, to protect against extreme high water events.

The full Feather River project is eleven miles long; stretching from the Bear River, just south of Plumas Lake, all the way to the Yuba River. The setback portion of the project involves 1,600 acres, 450 acres of which is dedicated to the setback levee. Other acreage will be used for habitat restoration and agriculture.

Flood protection efforts

began in 2004 with major improvements to the Yuba River levee, near the site of the 1986 breach. That was the first of four phases for levee improvements or levee construction in a plan developed by Three Rivers Levee Improvement Authority officials and engineers. The work began on the Yuba River on the north, extended to the Western Pacific Interceptor Canal along the eastern edge of Highway 70, then turned along the Bear River to the south, and will be completed after the current work on the Feather River to the west.

The Bear River project is also a setback levee.

The benefits of repairing or constructing 29 miles of levee are already apparent. Insurance requirements have been reduced for many residents and businesses. Even so, county officials encourage anyone living on the valley floor to purchase flood insurance. Although the risk of flooding has been dramatically reduced, flood insurance brings peace of mind against even a remote chance of flooding.



Flood Aware/Flood Prepare Fair Oct. 25

Come to the Flood Aware Flood Prepare Fair from noon to 4 p.m. on Saturday, Oct. 25th. Share your flood photos and stories with the community and see the Yuba City Fire Department's white water rescue and the Yuba-Sutter Disaster Pet Assistance's dogs. Learn how to prepare your own disaster kits and hear about improvements to our flood protection. Join us at the Three Rivers Red Cross at 2125 East Onstott Road.

Surviving a flood disaster – before, during and after

Before the storm:

- Make sure that you have flood insurance.

- Keep key documents (insurance, will, etc.) and valuables in a safe-deposit box.

- Store supplies at work, home and in your car:

 - First aid kit and essential medications

 - Food (canned, dried or packaged)

 - Cash—ATM machines may not be working

 - Portable radio, flashlights and extra batteries (in water proof or ZipLoc bag)

 - Drinking water in closed, clean containers. 1 gallon of water per person for 3 days.

 - Keep your car fueled (gas station pumps may not work).

 - Know the routes from work, school and home to high, safe ground.

 - Set up an out-of-state “family contact” that family, friends and relatives know to contact. Local and cell phones may be out in a storm.

During the storm:

- Avoid areas that can flood suddenly.

- Don't try to cross flowing water above your knees. Even water 6" deep can create dangerous currents.

- Do not try to drive over a flooded road. Many deaths result from stalling and stranding on roads.

- If your car stalls, abandon it immediately. Go to higher ground.

 - Avoid unnecessary trips.

 - Use the telephone ONLY for emergency needs or to report dangerous conditions.

 - Monitor local radio or TV stations for emergency information and instructions.

 - If instructed, leave your home and go to a safe location. Disconnect all appliances and shut off electrical service and gas at the meter.

After the storm:

- DO NOT TURN GAS BACK ON YOURSELF!

 - Don't use foods that have come in contact with flood water.

 - Follow local instructions regarding drinking water purity. Otherwise, boil or purify before using. Have wells pumped and tested.

 - Avoid disaster areas. You could hinder rescue or emergency operations.

 - Don't handle live electrical appliances in wet areas. Have them checked before use.

 - Avoid downed power lines and broken gas lines. Report them.

 - Use flashlights to examine buildings, not lanterns, matches, or candles. Beware flammables!

 - Check TV and radio for important instructions from emergency authorities.

Don't Be Sick In A Disaster!

Sutter County Public Health is sponsoring a drive-through flu clinic Nov. 15 at River Valley High School from 10 a.m. to noon.

Three Flood Control Projects Underway Or Completed In 2008

Three critical flood control projects in Sutter County were underway or completed in 2008.

Each project is on a different section of the approximately 240 miles of levees which protect Sutter County from flooding.

Along the Feather River south of Yuba City, Levee District 1 proceeded with plans to complete a \$22 million, 3/4 mile setback levee at Starr Bend that will reduce the height of the water in the Feather River at flood stage by almost a foot. Combined with the six-mile setback levee on the Yuba County side of the Feather River, flood stage elevations

will drop about two-feet during flood stage, dramatically reducing the pressure on the Feather River levee system.

Levee District 1 has completed engineering of the project, obtained financing, and has acquired most of the land necessary to begin the construction phase in April of 2009. The levee setback is expected to be completed before the 2009-2010 rainy season, according to Levee District Manager Bill Hampton.

In 2005, Levee District 1 received more than \$500,000 through Proposition 13 bond funds for a feasibility study to determine

the best course of action to straighten out the Starr Bend levee. In 2008, Levee District 1 was awarded \$16.3 million by the state of California in "early implementation funds," one of four jurisdictions to receive early funding for an identified levee project.

Additional funds for the project include \$750,000 from assessments on property owners protected by LD 1; \$2.9 million from Sutter County (including \$1.3 million from contributions made to the county for flood control purposes by the Calpine Corporation); and \$1.6 million from the City of Yuba City.

On a levee along Wadsworth Canal where it connects to the Sutter Bypass just south of the community of Sutter, the Army Corps of Engineers completed a \$3.7 million slurry wall project to prevent under seepage that was noticeable in the 1997 flooding event. This project was paid for by federal and state funds, since the state is responsible for maintaining the Sutter Bypass levees.

On Sutter County's western border at the Tisdale Weir along the Sacramento River, construction is expected to be completed soon on an overall \$13 million flood control project. The state Department of Water Resources spent approximately \$5 million to remove sediment accumulated at the mouth of Tisdale Weir, which allows Sacramento River water to enter the bypass system and reduces the elevation of the Sacramento River at flood

stage. In addition, the state is constructing an \$8 million bridge to replace the structure currently across the weir—an ancient wood structure with footings so close together it traps river debris and blocks the flow into the bypass. The old bridge reduced weir capacity to 22,000 cubic feet per second from its design capacity of 33,000 cubic feet per second, according to state officials. The effect will be a reduction of pressure on the Sacramento River levees which protect the Meridian and Robbins basins from flooding.

One of the projects planned for 2009 is the placement of netting and large boulders along a 1,200 foot section of the Feather River levee behind Second Street in Yuba City. The project, which will minimize erosion of the levee, is funded entirely by the Army Corps of Engineers.

Website Information For Relevant Agencies

Three Rivers Levee Improvement Authority
www.trlia.org

National Flood Insurance Program
www.fema.gov/business/nfip

Sutter County Emergency Services
www.suttercounty.org/doc/emergencies/emergency-home

Sutter Butte Flood Control Agency (Yuba City basin)
www.sutterbutteflood.org

Sutter County Water Resources Division
www.suttercounty.org/doc/government/depts/pw/wr/fp/fphome

Three Rivers Red Cross
www.threerivers.redcross.org

Levee District 1 (Yuba City)
<http://www.leveedistrict1.com>

California Department of Water Resources
www.water.ca.gov