



# FloodWise

WINTER 2015

PROTECTING LIVES AND PROPERTY IN OUR COMMUNITY SINCE 1927

## Levee Reinforcement Project Wraps Up

This year marks the completion of the 24-mile levee improvement project.

The project helps protect against flood water going over, through, or under the levee by raising the levee in some places and placing a 2-foot-wide slurry wall down the center for reinforcement. The slurry wall extends down as far as 80 feet to prevent water from seeping up from under the levee.

Most of the wall was installed from 1998 to 2001 using equipment that dug a deep and narrow trench, which was then filled with the slurry mixture of soil, bentonite (fine clay), and cement. In some sections, however, bridge footings and utility infrastructure prevented simple wall construction, leaving gaps at bridge crossings. In those spots, a sophisticated process of jet grouting has been used to inject the wall around the utilities and bridge foundations at Howe Avenue, H Street, and Capital City Freeway. This final project phase, authorized under the Water Resources Development Acts of 1996 and 1999, is on track to wrap up before this year's rainy season begins.



### Coming Together to Protect Our Community

We thank the government agencies that partner with us to ensure the integrity of our local flood control system. In an era when most news about government agencies is critical, we can tell a very different story.

The massive levee-strengthening program along 24 miles of the American River is almost complete because of the intelligence, hard work, and funding support of federal, state, and local government agencies:

**FEDERAL:** U.S. Army Corps of Engineers

**STATE:** Central Valley Flood Protection Board

**LOCAL:** Sacramento Area Flood Control Agency (SAFCA) – a partnership of the City of Sacramento, County of Sacramento, County of Sutter, Reclamation District No. 1000 and this organization

The agencies came together on a project that injected a slurry wall up to 80-feet deep down the center of our levees, raised low levees, and improved slope stability. Though it's not possible to create a levee guaranteed to withstand every conceivable flood, our community stands a much better chance than it did 20 years ago.

# Connecting a Community to the River

Sacramento is blessed with miles of riverfront land along the Sacramento and American Rivers. Until recently, though, levees limited riverfront views. Much of the land along the rivers held industrial business, like the Bercut-Richards Packing Company cannery that started packaging fruits and vegetables in 1931. The cannery closed and eventually fell into disrepair, leaving 65 acres of prime riverfront property available for something new.

## A Levee Like No Other

That something new came with an innovative solution to opening up river views and access, while also strengthening the levee. The project developer, Nehemiah Corporation of American, added fill dirt to the land side of the levee. This reinforced the levee structure and connected the new Township 9 community to the river.

## Open Access and Views

As Township 9 began taking shape, we cleaned up the river side of the levee. The area was overgrown and heavily choked by blackberry brambles, limiting our ability to monitor and maintain the levee structure. Cleaning out the undergrowth improved river access and views from the Two Rivers Bike Trail that rims the community.



*The innovative levee solution provides Township Nine residents with river views and easy access. The new community is located north of downtown Sacramento between Richards Boulevard and the American River Parkway.*



Photo courtesy of USACE - Sacramento District

## What Were They Doing?

You may have seen this equipment as you crossed over the Howe Avenue Bridge and wondered what it was. It was a jet-grouting system that allowed crews to work around underground utilities and bridge foundations. Jet grouting was used to close gaps in the slurry wall. Instead of digging a long trench and filling it with slurry, crews drilled and filled deep vertical tubes. The tubes were connected to build a wall out of columns.

## A Hidden Benefit to Levees

The drought's extreme dryness has sharply increased the number of vegetation fires along the American River. The levees have done double duty during the drought by acting as a 40-mile long fire break, preventing a number of fires from crossing over into nearby neighborhoods. Keeping the levees mowed and free of debris slows wildfires. Levee-top access also allows fire crews to move equipment where they need it.

# El Niño and You

**Warming Pacific Ocean waters could create an El Niño weather pattern—a pattern that has traditionally brought heavy rain and snow to California.**

There's still some debate on whether a strong El Niño will develop. There's even more debate on what effect El Niño will have on our weather. Like all Californians, we're hoping a strong El Niño brings drought-ending rain and snow to our parched state. But unlike most people, we're also busy preparing for El Niño's potential challenges.

## El Niño's Dark Side

It's been said that we sit at the bottom of a giant bathtub, where water backs up before it flows down the drain. We saw that effect during the last El Niño in 1997, which resulted in nine lives lost, billions of dollars in flood damage, and 30 levee breaks across the state.

Our district levees held strong in 1997, and they've been improved since then, thanks to an effective collaboration among local, state, and federal agencies. But as the Federal Emergency Management Agency (FEMA) points out, "There is always the chance a flood will exceed the capacity of a levee, no matter how well it is built."

## What This Means to You

None of us has a crystal ball, but a strong El Niño could wreak havoc on our weather. If you don't have flood insurance, now is a smart time to get it. There's usually a 30-day waiting period before insurance becomes effective, so you don't want to wait until it's too late.

## Learn More

Flood insurance is available and affordable through the government-sponsored National Flood Insurance Program (NFIP). Visit our website at [arfed.org/flood\\_insurance](http://arfed.org/flood_insurance) to see a Sacramento flood-risk map and [floodsmart.gov](http://floodsmart.gov) for information on lower rates available through the NFIP.

**If you don't have flood insurance, now is a smart time to get it.**



## A Few Words About Safety

While our levee system offers public access for walking and cycling, a levee's primary purpose is flood protection. We constantly perform maintenance on the steep slopes and narrow roadways.

Please help us by remembering a few simple courtesies that will also protect you from moving equipment and flying debris:

- Stay back or signal the operator.
- Never cross under the extended mower arm.
- Never sneak by when a tractor or dump truck is backing up.
- Don't listen through ear buds while walking or cycling on levee tops.
- Keep pets leashed and well away from equipment.
- Watch your speed.

Remember, operators of noisy equipment are focused on their work and have limited visibility of pedestrians, cyclists, and pets.

Help them get their work done by staying vigilant and giving them plenty of room to maneuver.



*It's easy to forget we live in a flood-prone region, but Sacramento has a long history of major floods. This image shows H Street during a 1942 flood.*

Courtesy of the Center for Sacramento History, Sacramento Bee Collection, SBPM5558

## ARFCD BENEFIT ZONE



## AMERICAN RIVER FLOOD CONTROL DISTRICT

185 Commerce Circle  
Sacramento, CA 95815

PRST STD  
U.S. Postage  
**PAID**  
Permit No. 1491  
Sacramento, CA



**FloodWise** A publication of the American River Flood Control District.

**OFFICE:** (916) 929-4006 **EMAIL:** [info@arfcd.org](mailto:info@arfcd.org) **www.arfcd.org**

### BOARD OF TRUSTEES

Karolyn W. Simon  
Brian F. Holloway  
William J. Pavão  
Cyril A. Shah  
Bettina C. Redway

### GENERAL MANAGER

Timothy R. Kerr, P.E.

### SUPERINTENDENT

Richard Marck

### OFFICE MANAGER

Michelle M. Wilder

### BOARD OF TRUSTEES' MEETING

Open to the public.  
Second Friday of every month at 11:00 a.m.

185 Commerce Circle  
Sacramento CA 95815

## Employee Spotlight

### SEAN O'CONNOR



When Sean started working with us in 1996, he was a natural fit. His fortitude and skill at equipment operation was a plus from the start, but he also brought an unexpected talent for inventing and fabricating solutions to some of our biggest challenges.

His "mulch master" mounted excavator is a good example. The clever device allows us to remove heavily barbed star thistles and blackberry brambles that often prohibit access from the base of our levees.

Sean earned a well-deserved promotion to field supervisor in 2014. He currently supervises five crew members and especially enjoys training newer employees and passing along the skills he's perfected in his 19 years with us. Sean spends as much time as possible in the field, so feel free to say hello if you see him out there.



### Your American River Flood Control District Crew

*(L-R): Eric Maculak, Tim Kerr, David Diaz, Ross Kawamura, Michelle Wilder, Richard Marck, Roger Unruh, Elvin Diaz, (back) Sean O'Connor*

## Our Hearty Thank You

While we're happy to celebrate Ron Sundberg's retirement this past year, it's hard to lose such a valuable member of our team. Ron joined the ARFCD in 1980 and became our field supervisor in 2001. During his 34 years with us, Ron helped us weather many storms, including the flood emergencies of 1983, 1986, 1995, and 1997. His sunny outlook and friendly personality are missed by all.