

Trees on the Levee



Life-Cycle Management

The American River Flood Control District inspects and maintains levee trees. Trees that become diseased or damaged present a standing hazard to the public.

Army Corps of Engineers Policy

The Army Corps of Engineers (USACE) has a policy that there shall be **no trees on levees**. To achieve this, the District promotes tree life-cycle management with a **phased removal plan** – an ongoing approach where trees are removed only when they become a hazard to the levee or the public.

What Justifies Removing Trees?

We use visual indicators to spot declining health in a tree, such as disease, dead branches, and insect infestation. We are continuously working with other agencies and specialists to **manage vegetation on the levees**. For example, we often hire an arborist to diagnose the tree's condition and determine if a particular tree is a hazard.

New Flood Protection Requirements

The state recently adopted the *Urban Levee Design Criteria*, which includes construction standards for levee work to meet a 200-year level of flood protection. One criterion dictates how tree stumps must be removed from levees. Life-cycle management may be used to control vegetation on the landside slope and toe of the levee and the top one-third of the waterside slope.

Using life-cycle management, the District will achieve the USACE's goal of no trees on levees. And we'll do it in a **cost-effective way** that causes the least harm to habitat while providing the strongest possible levees.

“Uncontrolled growth (of vegetation) can interfere with routine maintenance and inspection, inhibit flood fight activities, and provide a haven and food sources that attract burrowing animals. Also, when large trees are toppled by wind, disease, or old age, they often dislodge broad areas of protective sod and earth and may divert water into a levee section.”

– from the State of California
Department of Water Resources
Superintendent’s Manual



Essential Maintenance Practices

OUR FOCUS

The District works diligently to:

- Keep levees in like-new condition through **ongoing maintenance** and small capital projects.
- Discover flaws or problem areas on the levee. This requires clear visibility of all areas.
- **Prevent fire** vulnerability.
- Respond immediately to problems. This requires unobstructed access at all times.
- **Prevent flooding** in Sacramento by providing the best maintenance possible.

The following table identifies key tasks and the methods we use to keep the levees in good condition. We continue to strive to maintain the levees in the best way possible and to increase productivity, performance, and efficiency.

ACTIVITY	PURPOSE	METHOD USED
Establish grass cover on the levee.	Prevent surface erosion from rain, wind, and river flow.	Broadcast seeding.
	Provide better surface visibility for identifying problems.	Mow.
Trim trees.	Enhance visibility. Limit attractive nuisance for pests.	Ongoing frequent maintenance. Hand equipment (loppers, pole-saw, line trimmer) where accessible only by foot.
	Prevent potential fire hazard. Reduce falling branches that become pedestrian hazards.	Contract with a tree service when necessary.
Control weeds and bushes.	Reduce competition with undesirable species.	Apply targeted herbicides to problem vegetation and roadways.
Control rodent populations.	Prevent burrows, which weaken the levee, and repair damage.	Remove food source. Continuously inspect, document, and apply corrective action.
Maintain roadways, gates, and ramps.	Provide clear access and serviceability to levees in all weather conditions. Provide security and limit unauthorized access to the levees.	Apply proactive maintenance practices.

Safety First

Keeping Our Levees Free of Encroachments

The American River Flood Control District is responsible for keeping our levees accessible and well maintained. A key factor in keeping our levees safe and in optimum condition is to ensure areas are free of encroachments.

Removing Prohibited Encroachments

Over the years, some property owners who live adjacent to the levee have obtained permits to install features on the levee – outside their property – such as stairs, landscape vegetation, and irrigation lines. If they applied for these permits now, they probably would not be approved. However, their old permits are still valid.

Sometimes we discover unpermitted items and we must take action to remove them. For example, **excavation weakens the levee and can trigger levee failure**. Other items that should be corrected or removed include unmaintained landscaping, soil mounds, walls, and undulations.

These encroachments can obstruct access and visibility when mowing, inspecting the levees, and flood fighting. Some items such as broken stairs and steel fence posts (t-posts) are safety hazards and stonework can spark a fire if hit by a mower or be a tripping hazard. Encroachments can also cause settlement, subsidence, cracks in the levee, and concentrated seepage.

It's important to understand the full effect that encroachments may have on our levees. Although an encroachment may benefit a specific parcel or resident, the work to remove encroachments restores the levee to its safest condition. A levee in premium condition provides the highest benefit to the community as a whole. Together, as community partners, we can work toward **maintaining safe and optimum levees** in our neighborhoods.

Please contact us if you have questions about encroachments adjacent to your property.

Meet District Crew Member, Sean O'Connor



Since joining the District in 1996, Sean has proved his skills many times over as a highly proficient crew member and equipment operator. Sean's skill in using specialized equipment was pivotal in the repair of the riverbank erosion on the Sacramento River last fall. He also specializes in welding and fabricating equipment. In his free time, Sean enjoys the outdoors including camping, dirt biking, and working on his house.

Thank you, Sean, for offering creative solutions to problems and your willingness to help.



Message From the General Manager

Sacramento residents have an interest in and enthusiasm for flood safety, and our community has high expectations for its local flood control district. We are committed to meeting those expectations with the following **goals for 2013**:

- Stay at forefront of levee operations and maintenance (O&M) program performance and technology.
- Work with various agencies to be part of planned improvements and make sure levees are maintainable and sustainable in the future.
- **Improve maintenance access**, which enables better and more thorough O&M practices.
- Continue to characterize and remove problem encroachments.
- Continue to **work collaboratively** with flood control partners to develop a sensible levee vegetation standard.

We at American River Flood Control District work to maintain the levees with ongoing, steady improvements and to do the best job possible for our community. As your public agency and as a good neighbor, we want to gather up-to-date information from you and share information about keeping our levees safe for all. Please call us anytime with questions or comments.

Tim Kerr, P.E.
General Manager



Working together for clean and safe levees.

Outstanding Neighbor Recognitions

The District would like to thank Shirley Kammeyer and Charlotte Williams for participating in the District's 2012 River Park Slope Improvement Project.

They worked with our team to facilitate the removal of their previously used vegetable garden and terracing on the levee slope. They are also working with the Central Valley Flood Protection Board to relinquish their permit so that they no longer have an obligation to maintain the encroachments in the levee.

The work to remove the garden was a tremendous success and now the **levee is restored** to a clean and safe condition that will greatly improve maintenance ability and flood safety inspections.

The District also commends Bill Hall (Larchmont neighborhood) for his outstanding efforts. He maintains the sod-covered slope behind his property by mowing and controlling weeds. He keeps the slope in unblemished condition; he doesn't alter, plant, or excavate it.

Thank you, Shirley Kammeyer, Charlotte Williams, and Bill Hall. You are **good stewards of the levees**.



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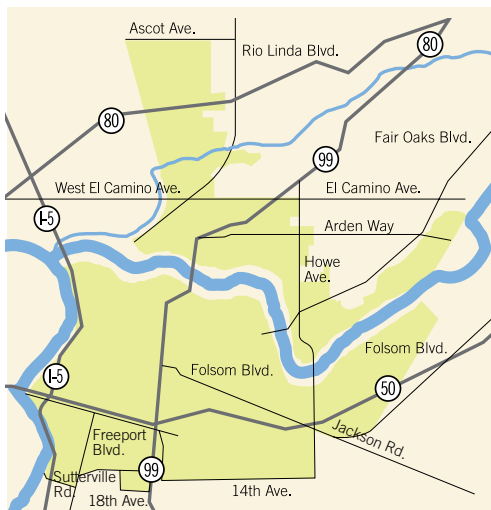
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BOARD OF TRUSTEES' MEETING

Second Friday of every month
at 11:00 a.m.

Open to the Public

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