



Water Resources ♦ Flood Control ♦ Water Rights

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## MEMORANDUM

**DATE:** August 14, 2020

**TO:** Tim Kerr, P.E., General Manager, American River Flood Control District

**FROM:** Ric Reinhardt, P.E., MBK Engineers; Pro Mitra, P.E., MBK Engineers

**SUBJECT:** Summary of June 19, 2020 Field Visit with ARFCD along American River Levees, Natomas East Main Drainage Canal East Levee, Rio Linda South Levee, and Dry Creek North Levee

On June 19, 2020, a field visit was conducted with the American River Flood Control District staff (ARFCD), which is the local maintaining agency (LMA) for the urban portion of the American River north and south levees, Arcade Creek north and south levees, Natomas East Main Drainage Canal (NEMDC) east levee, Rio Linda south levee, and Dry Creek north levee. MBK Engineers staff (MBK), representing the Sacramento Area Flood Control Agency (SAFCA), were also in attendance during the field visit.

The following personnel were in attendance at the field visit:

- ARFCD: Tim Kerr (General Manager), Ross Kawamura (Superintendent)
- MBK Engineers: Ric Reinhardt, Pro Mitra

Ric Reinhardt is the Certifying Engineer for Federal Emergency Management Agency (FEMA) and Urban Levee Design Criteria (ULDC) compliance. The purpose of the field visit was to review the status of maintenance and identify any actions needed to meet FEMA and ULDC requirements for maintenance and make recommendations to ensure the levee can be certified as meeting both FEMA and ULDC maintenance criteria. The field visit did not include the Arcade Creek levees due to the recently completed levee improvement work and frequent site visits by Mr. Reinhardt to account for the current condition of the levees. The previous field visit for the ARFCD levees was conducted in 2012 in preparation of the FEMA Certification Package 1.

### Field Visit Observations

Observations made during the field visit included, but were not limited to, the following items:

1. Several trees that were identified as high hazard (e.g., fruit/nut bearing, on landside slope, or on landside toe) have been removed over time. Trees that remain do not appear to be in a state of decline. ARFCD is monitoring whether rodent activity is present near fruit/nut bearing trees and will decide if removal is necessary.
2. No presence of high hazard encroachments along the levees observed and included in FEMA Certification Packages 1 and 2.
3. Some vegetative overgrowth exists near the waterside levee toe on the American River north levee (ARNL) near Cal Expo. The overgrowth is neither severe nor any cause of concern.
4. ARFCD staff identified beaver activity at the toe of the levee at ARNL station 3042+50, upstream of the Highway 160 bridge crossing. ARFCD installed a concrete cutoff trench at the waterside toe of the levee on the landside of the bike trail. Repairs on the bike trail indicate that the collapse is occurring due to the beaver dens.

### **Summary**

ARFCD staff does an exceptional job with their maintenance practices in trimming low-hanging tree branches, managing borrowing rodents, thinning vegetation overgrowth where feasible, and removing snags and trees in state of decline on the landside of the levee.

Non-compliant groundcover, such as ivy and ice plants spread across a large area, is categorized as a high-hazard encroachment and have been removed in the locations that were previously identified in the first field survey in 2012. ARFCD staff have been successful in contacting and engaging with the property owners to remove unwanted encroachments in the Cert package 1 and 2 reaches. Due to ARFCD's relationships with adjacent property owners, they have made significant progress in removing encroachments and moving fences off of government property to reclaim the landside toe access corridor in the Cert package 3 reach as well.

Over the past few years, there has been a significant increase in the homeless population on lands managed by ARFCD. As a result, they have had to defer some of their maintenance projects, such as working with property owners to relocate fences encroaching on government property, in order to remove debris from homeless encampments and repair damage done to the levees by homeless people, an example being excavations into the levee slope to provide a level surface for tents.

### **Recommendations**

MBK is recommending the following actions be implemented by ARFCD:

1. Continue focusing on removal of high-hazard trees over time.
2. Continue working with River Park residents to address high-hazard encroachments in advance of next FEMA certification report, scheduled in 2025.
3. ARFCD should continue to use its own discretion in prioritizing remediation efforts for encroachments that impede access or visibility for O&M and emergency actions along the slope and/or at the levee toe.
4. ARFCD should continue with their enforcement and remediation efforts, as they determine appropriate, to meet their obligations for levee O&M.

5. ARFCD should consider working with other regional agencies as appropriate to address the beaver damage at ARNL Station 3042+50. While the concrete cutoff trench is an acceptable interim approach to managing the risk from potential damage caused by beavers, an abatement program should be implemented to reduce the potential of future burrowing activity along the levee.

Overall, ARFCD sets the bar for how an LMA should maintain their levees throughout the year on a regular basis and sustaining their outreach efforts with adjacent property owners to address high-hazard encroachments. ARCFD and SAFCA shall continue to move forward with their long-term goals in resolving property boundaries and establishing levee easements for landside access.



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Ric Reinhardt, P.E.

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