

# AMERICAN RIVER COMMON FEATURES, NATOMAS LEVEE IMPROVEMENT PROJECT

## REACH A – CONSTRUCTION UPDATE

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2023 Construction Season

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US Army Corps  
of Engineers®





# PROJECT PARTNERS



## FEDERAL GOVERNMENT



**U.S. Army Corps  
of Engineers**  
Sacramento District

## STATE GOVERNMENT



Central Valley  
Flood Protection  
Board



Department of  
Water  
Resources

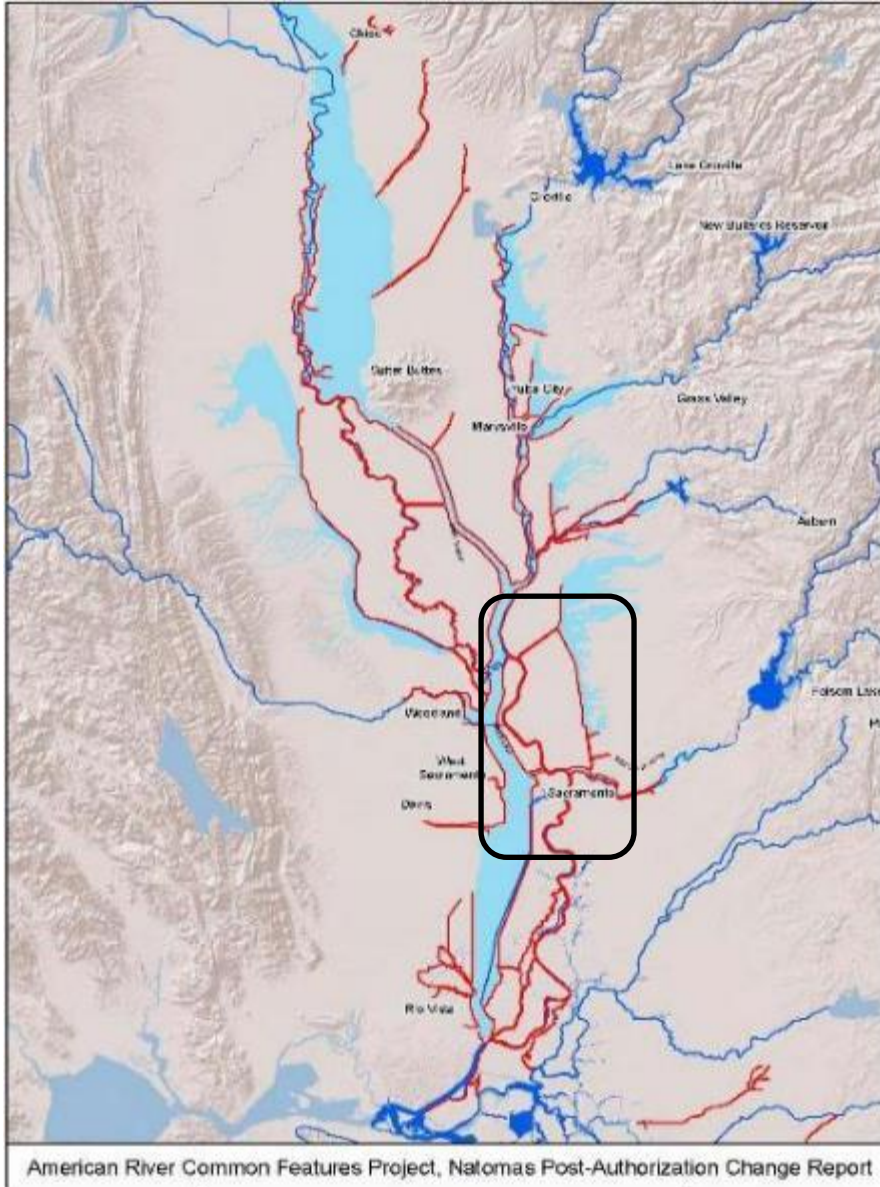
## LOCAL GOVERNMENT







# NATOMAS BASIN LEVEE IMPROVEMENTS OVERVIEW



American River Common Features Project, Natomas Post-Authorization Change Report

Natomas Levee Improvements are a **CRITICAL** part of a larger flood risk reduction system for Sacramento.

The system is over 100 years old, and has served us well, in many flood events.

However, each successive high- water event diminishes the system resiliency during future events.





# FLOOD FIGHTING, 1986



Landside levee distress during flood event - sloughing caused by through-levee seepage.

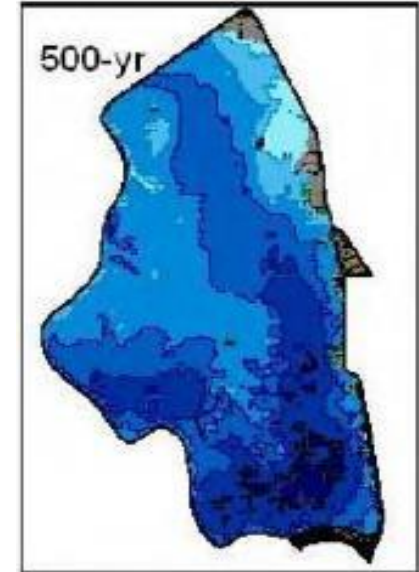
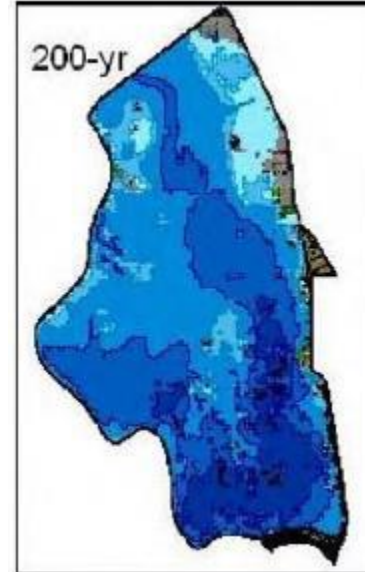
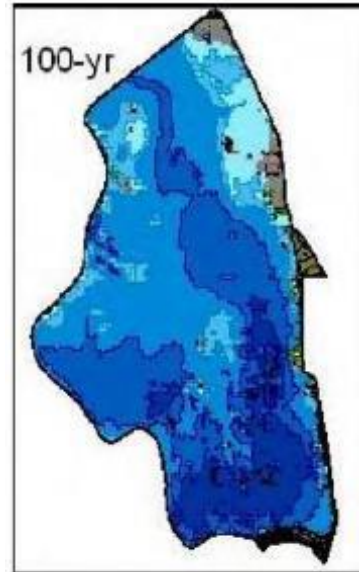
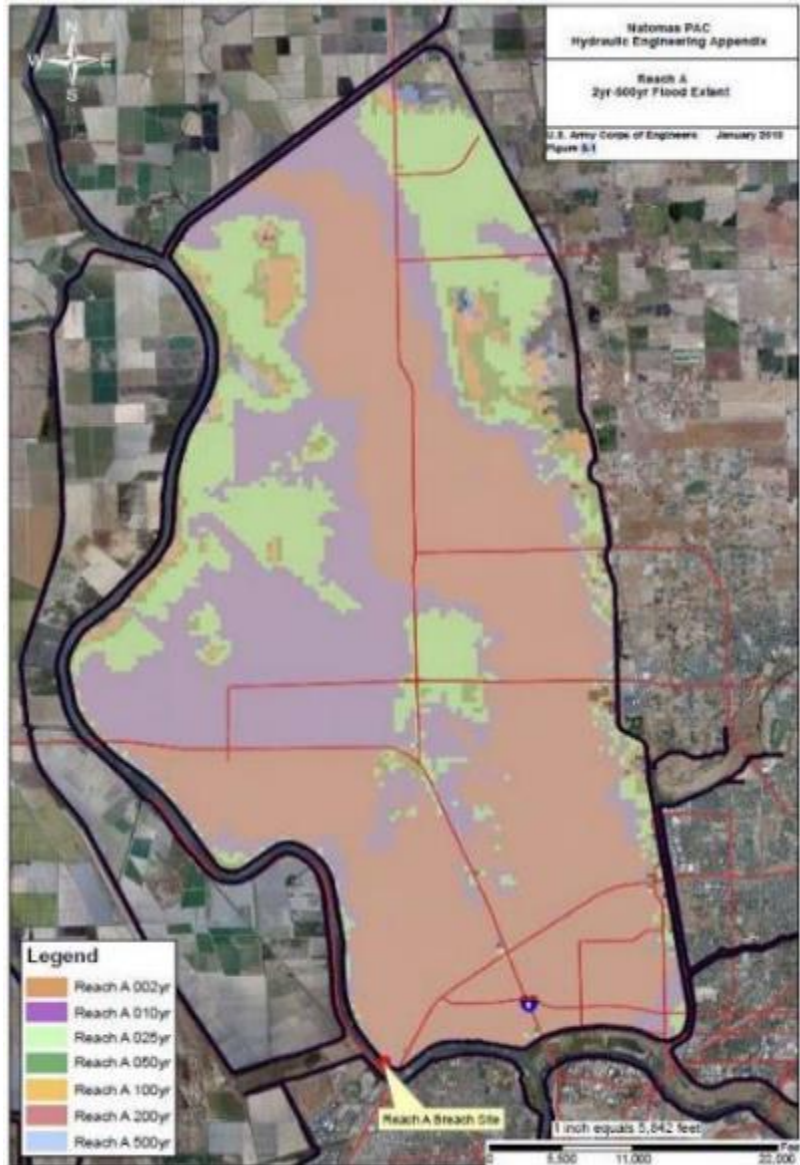


Levee crown cracking due to slope instability during flood event





# FLOOD RISK



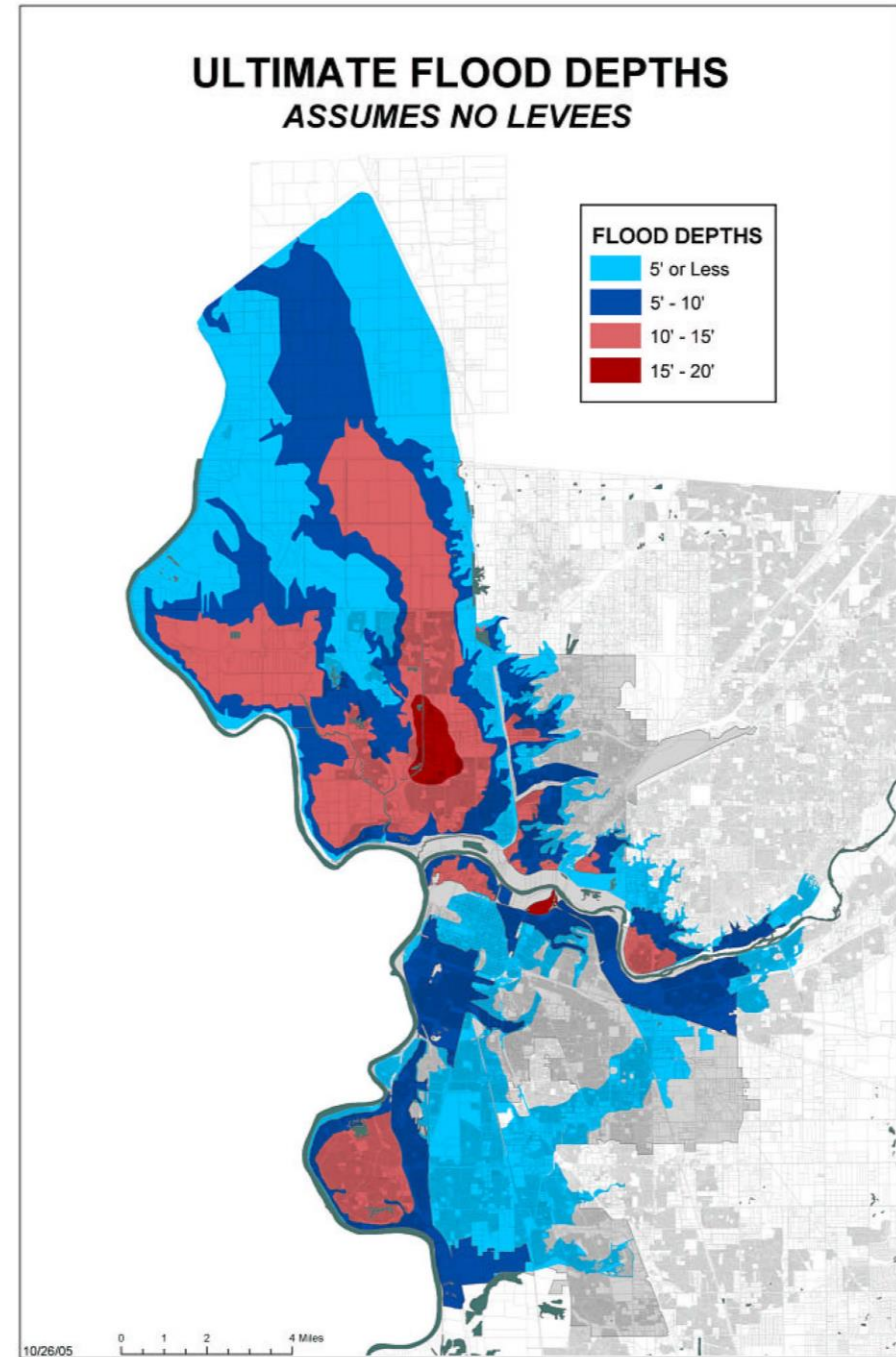
Natomas Basin inundation mapping for hypothetical levee breach at Reach A.



# SACRAMENTO BASIN

## Ultimate Flood Depths:

This map shows what the levels of flooding in the Sacramento Basin would be if there were no levees to protect us.





# PROJECT OVERVIEW



Together the Corps, State of California, and the Sacramento Area Flood Control Agency (SAFCA) have made tremendous progress in reducing flood risk for the Natomas Basin and the City of Sacramento.

The Natomas basin includes portions of the counties of Sacramento and Sutter as well as a portion of the City of Sacramento.

The basin is protected by 42 miles of ring levee, originally constructed in the early 1900s.

Projected completion of overall improvements to the basin in 2026.

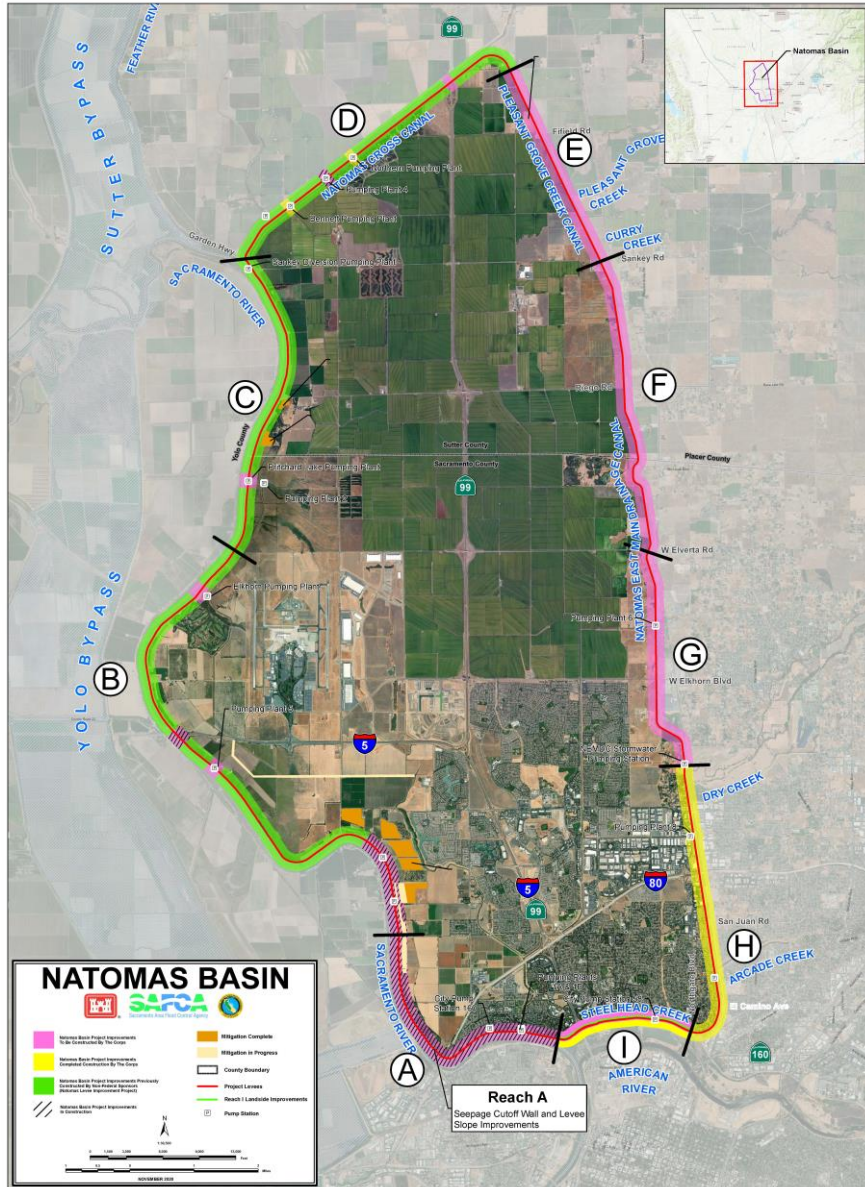


American River at CA 160 (1986)





# PROJECT PROGRESS

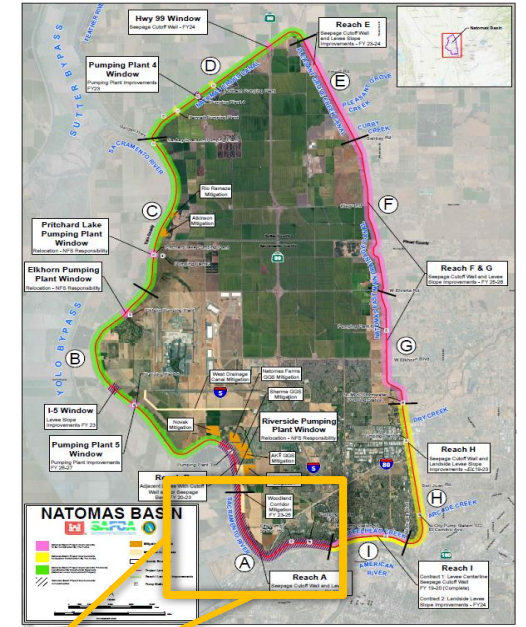
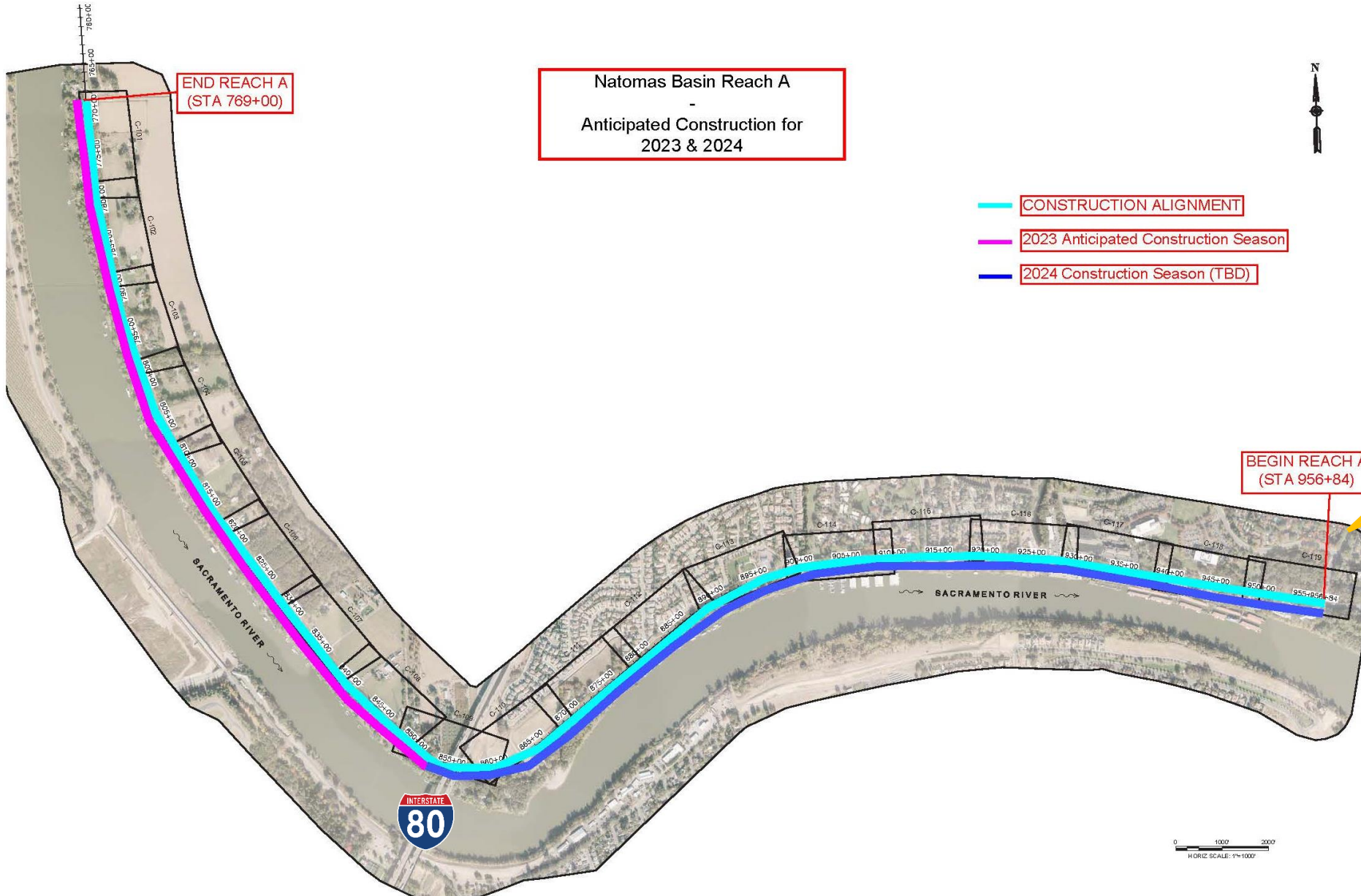


- 2019 Reach D construction complete. Reach B, H, and I construction ongoing. Reach E design ongoing.
- 2020 Reach A and I-5 Window designs complete. Reach H and I construction complete. Reach B construction ongoing. Reach E design ongoing. Reach F/G design begins.
- 2021 Reach A contract award. I-5 Window construction begins. Reach B construction ongoing. Reach E and F/G design ongoing.
- 2022 Reach A construction begins. I-5 Window, Reach B construction ongoing. Reaches F & G and Hwy-99 design in process. Reach E design complete. PP4 substantially complete.
- 2023 Reach A, Reach B and I-5 Window construction continues. Reach E construction begins. Reach F&G and Hwy-99 design complete.





# REACH A – ANTICIPATED CONSTRUCTION





# REACH A – PROGRESS & SCHEDULE

March 2023	April 2023	May 2023	June 2023	July 2023
Site preparation activities and utility relocations.	Construction Starting at Farm Road: Working platform Cutoff wall begins.  Continued utility relocations downstream of I-80.	Construction continues to flow downstream on Garden Hwy.  Utility relocations continue I-80 to Gateway Oaks.	Construction continues to flow downstream on Garden Hwy.  Utility relocations continue I-80 to Gateway Oaks	Construction continues to flow downstream on Garden Hwy.  Utility relocations continue I-80 to Gateway Oaks

Areas potentially not affected in 2023 Construction Season: I-80 to Gateway Oaks





# SITE PREPARATIONS



Tree Removal – Ongoing Winter to Spring 2023

Utility Relocations – Anticipated completion Spring 2024

Construction Limit Borders & Fencing – Spring 2023

Additional Preparations – Clearing & grubbing



Reach A Overhead Utility Relocations, Site Preparations, 2022



# IMPACTS



## TRAFFIC IMPACTS

### Garden Highway Lane Reductions

- Some construction will require temporary lane reductions
- Traffic plan developed and reviewed by City of Sacramento

## PERMANENT IMPACTS

Residential

Vegetation removal within the project footprint

## ENVIRONMENTAL IMPACTS

Next phase of tree removal will commence in the Winter 2022 to Spring 2023

## CONSTRUCTION IMPACTS

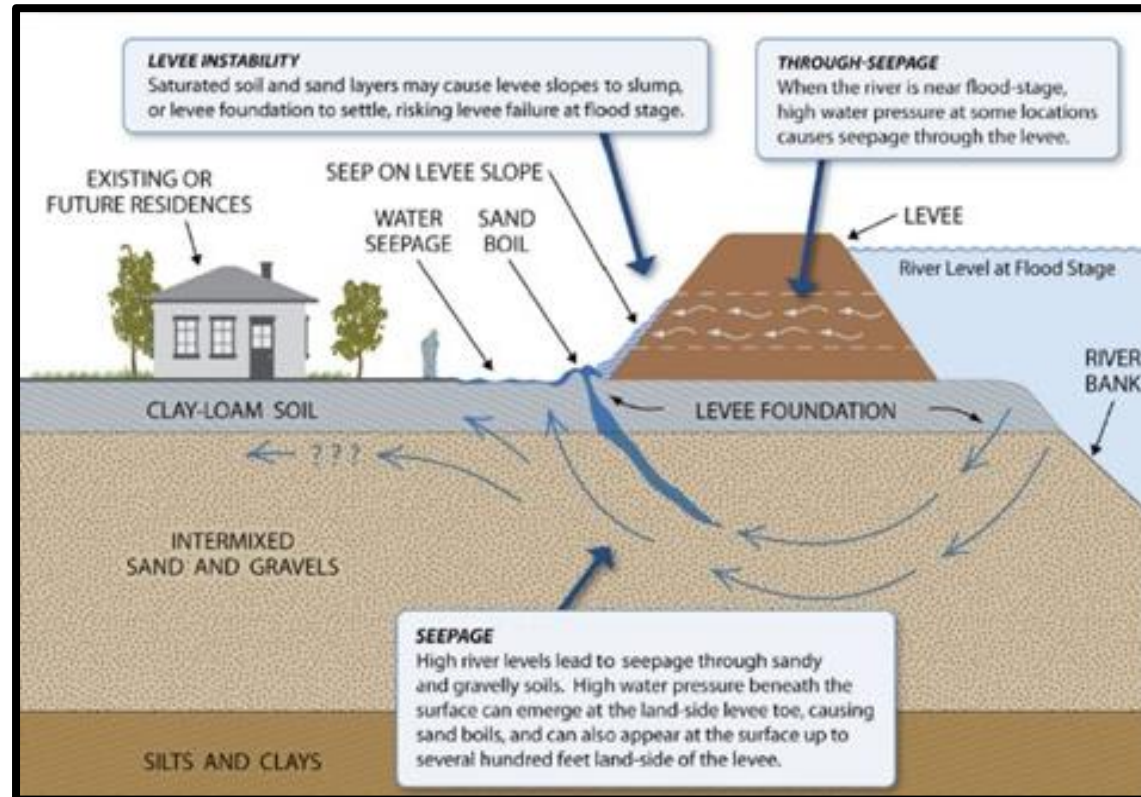
Dust, noise, & vibration



# TECHNICAL OVERVIEW – PROJECT OBJECTIVE



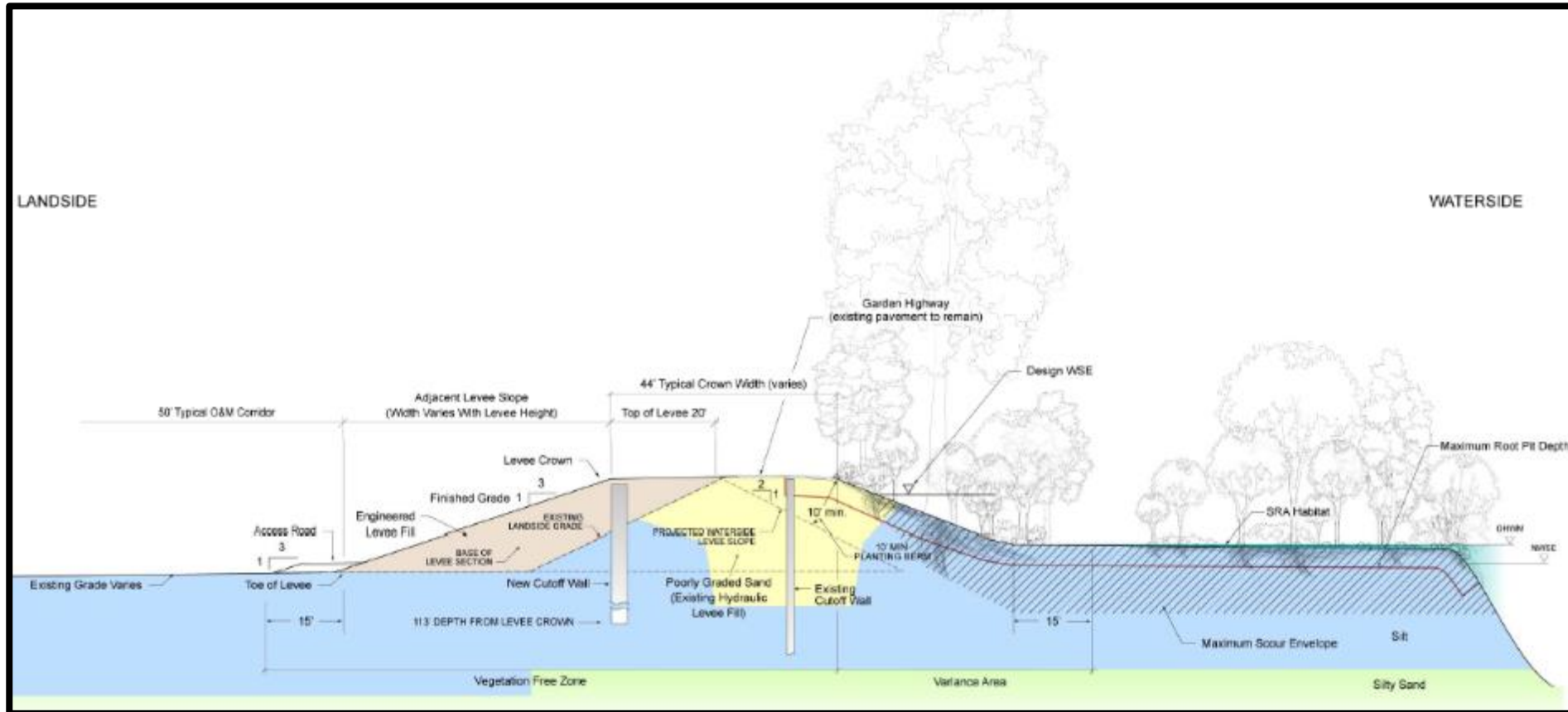
*To reduce flood risk associated with through-seepage, under-seepage, and slope instability.*



# TECHNICAL OVERVIEW – KEY PROJECT ELEMENTS

## Project Elements:

- Landside “adjacent levee” construction (through-seepage and stability benefits)
- Deep cutoff wall (through- and under-seepage benefits)
- Operation & maintenance access at adjacent levee toe







# TECHNICAL OVERVIEW – DESCRIPTION OF WORK



## **From Farm Road to Interstate 80**

Levee widening (adjacent levee) with seepage cutoff wall

## **Interstate 80 area**

Landside stability berm with landside seepage berm (no new seepage cutoff wall) and waterside clay blanket

## **Interstate 80 to City Sump 160 (east of Shorebird Park)**

Levee widening (adjacent levee) with seepage cutoff wall

## **City Sump 160 to Gateway Oaks Drive**

Levee widening (adjacent levee) (no new seepage cutoff wall)

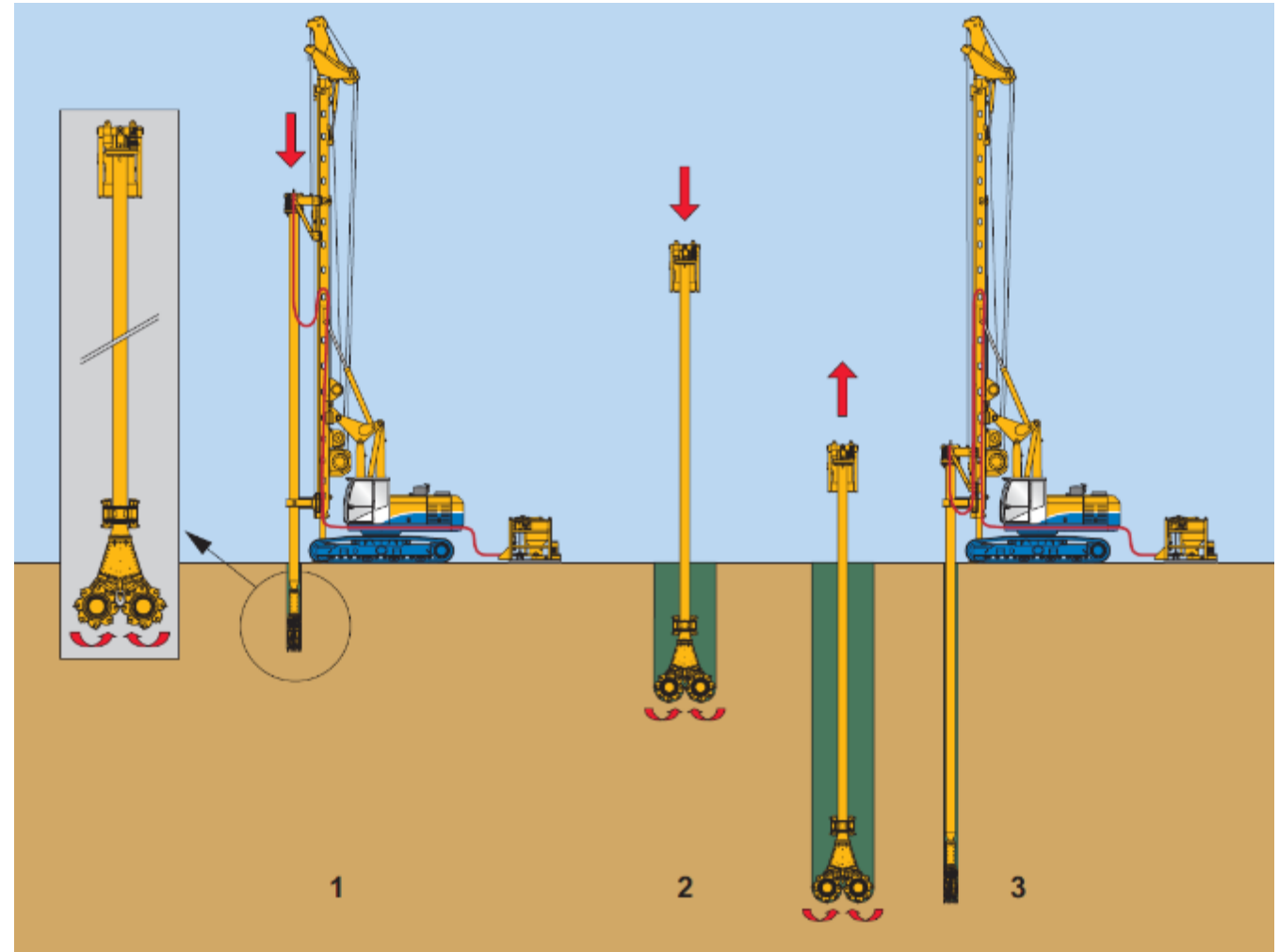


# TECHNICAL OVERVIEW – CUTOFF WALL

## Mix-In-Place Cutoff Wall

### sequencing:

- Step 1: Position rig and cutter head
- Step 2: Advance cutter head downward, mixing soil column (up to 145-ft deep)
- Step 3: Retract cutter head while adding cement-bentonite slurry, creating a mixed column of soil-cement-bentonite







# CONTACT INFORMATION



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*Email USACE Public Affairs Team to be added to the construction updates*