

**Feather River West Levee Project**  
**Central Valley Flood Protection Board**  
**September 14, 2012**

## Introductions

- Executive Director – Mike Inamine
- Director of Engineering – Michael Bessette
- General Counsel – Scott Shapiro/Andrea Clark
- Design Team
  - Chris Krivanec, Civil Project Manager
  - Sean Minard, Encroachments
  - Les Harder, Technical/Policy Advisor
  - Barry O'Regan/Scott McElhern, Right-of-Way
- Public Outreach – Kim Floyd
- Administration – Sarah Modeste
- Finance and Budget – Seth Wurzel

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## Presentation Overview

- SBFCA Background
- Approach – Feather River West Levee Project (FRWLP)
- Project funding
- Project schedule
- Right-of-Way
- Encroachments
- Levee Vegetation

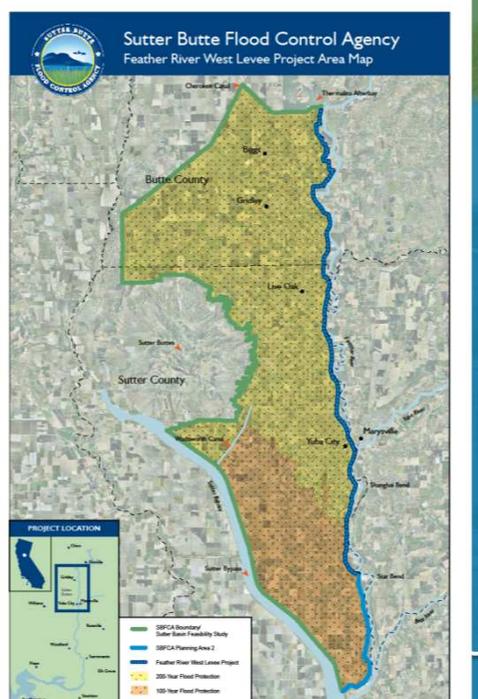


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## About SBFCA

- Created in September 2007
- Regional approach to finance and construct flood protection improvements
- A Joint Powers Agency (JPA) of County Of Butte, County of Sutter, Cities of Live Oak, Gridley, Biggs and Yuba City, Levee District #1 and Levee District #9
- Sutter Basin Description

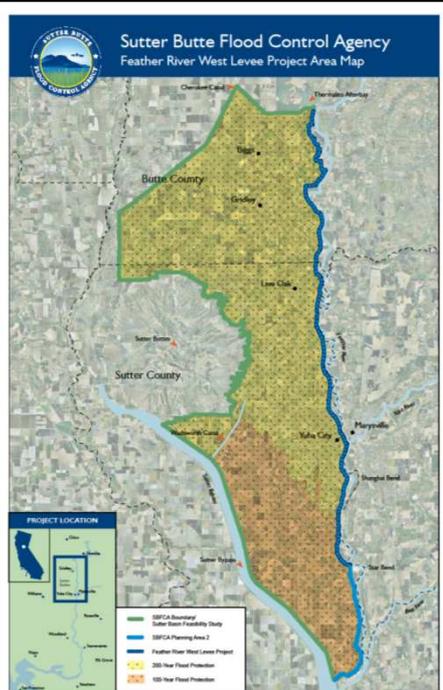
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## SBFCA Goals

- Achieve 200-yr protection for urban areas through the Feather River West Levee Project (FRWLP)
- Achieve 100-yr protection for remaining rural, southern portion of basin

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## SBFCA Approach

- SBFCA is lead agency for levee rehabilitation for the Sutter Basin
- Accomplish rehabilitation through parallel efforts:
  - Construction in advance of the Corps via EIP/CVFPP
  - Collaboration with Corps Feasibility Study



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**Legend**

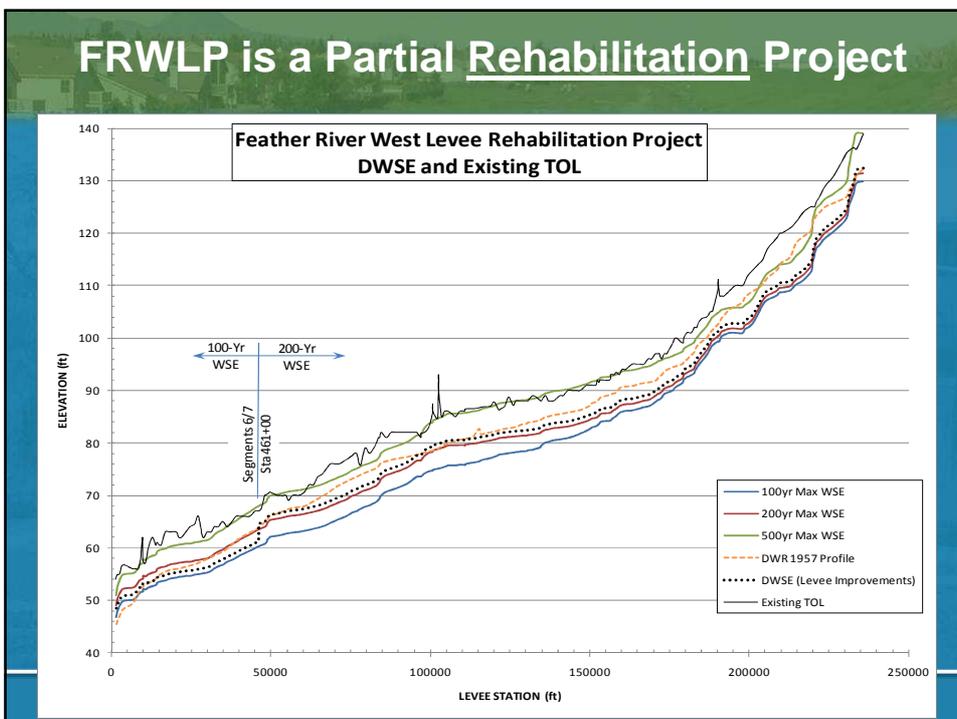
**Optimized Alternatives**

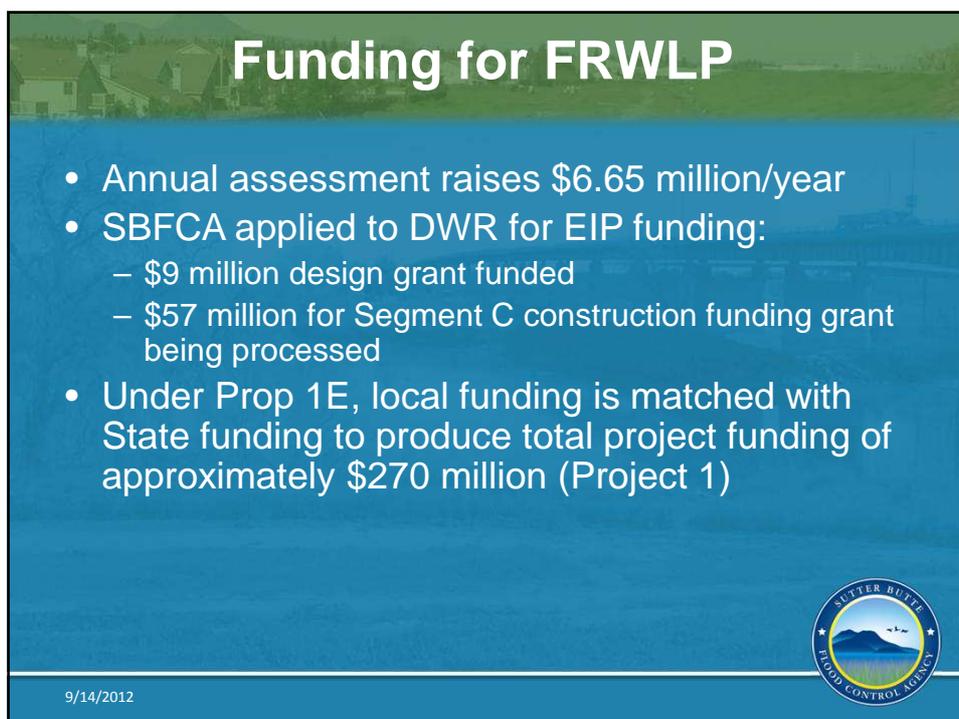
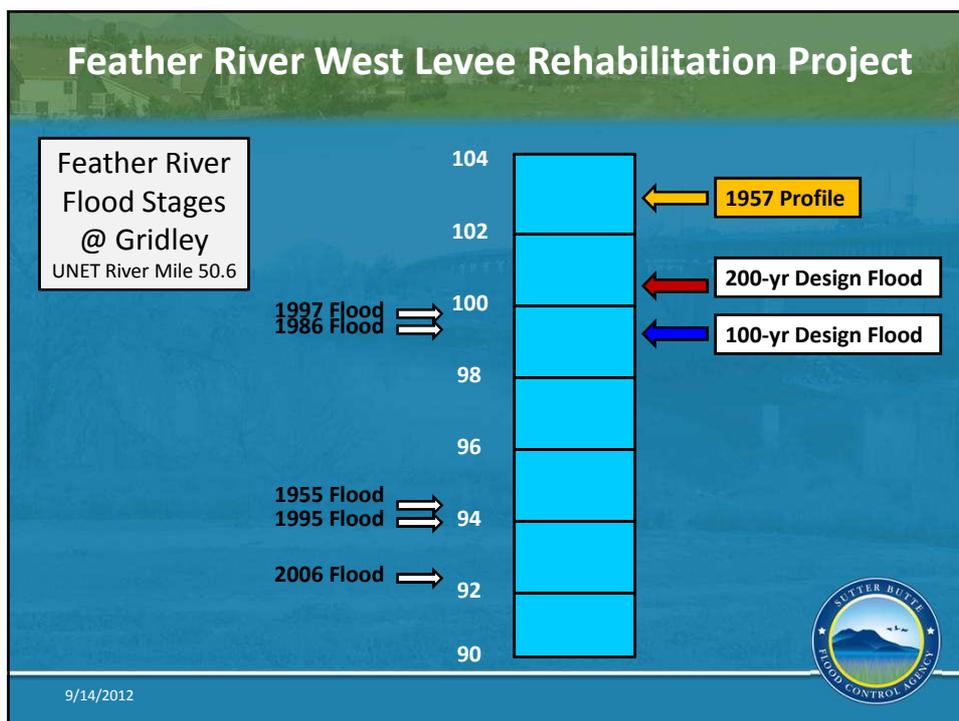
- Cutoff Wall
- Cutoff Wall & Relief Wells
- Cutoff Wall & Fill Landside Toe Depression
- Cutoff Wall & Reconfigure Canal Bottom
- Cutoff Wall & Serpentine Berms
- Keep Canal in Place without Safety Flaps, Walls, & Weirs
- No Rehabilitation
- Undrained Seepage Berm & Drained Stability Berm
- Undrained Seepage Berm & Drained Stability Berm
- Cutoff Wall & Serpentine Berms
- Worsen Slope Flattening
- Upgrade Levee and Reconstruct with 5:1 Landside Slope
- Levee Stabilizing
- Major Structures
- Cities

DATE: 2/28/12 (REVISED) DRAWN: CDM Max and Dale, 2/28/12, 1/10/12  
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## FRWLP

- Project Limits
  - Project 1
  - Project 2
  - Corps 408 Request
- Description
  - Primarily deep underseepage
  - Slurry wall primary remediation
  - Some berms





## Schedule: Construction

**2013-2014 CONSTRUCTION**

- Project Area C1 & C2 (Yuba City north to Live Oak)

**2014-2015 CONSTRUCTION**

- Project Area D2 (Live Oak to Biggs)
- Project Area B (Yuba City south to Star Bend)
- Project Area D1 (Biggs north to Thermalito)
- Cutoff Wall Windows
- Project Area D3 (Canals – Live Oak)

**FUTURE CONSTRUCTION**

- Project Area A (Star Bend south to confluence)



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## Design Schedule: Segment C

65% design completed (FRWLP)	April 2012
90% design completion	Oct. 2012
CVFPB to consider 408 request to USACE (FRWLP)	Oct. 2012
100% design completion	Dec. 2012
SBFCA construction start	July 2013

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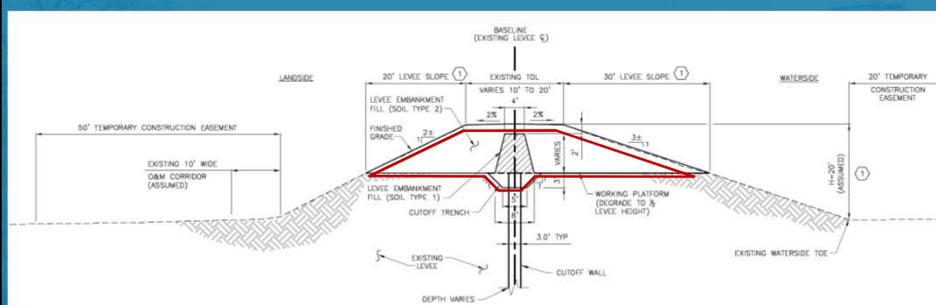
## Schedule: USACE 408

- Section 408 permission is needed from USACE to modify a Federal Project levee
- Section 408 process involves USACE District, Division and HQ levels
- CVFPB engages as partner with SBFCA in Section 408 process
- SBFCA's Section 408 milestone goals
  - September 2012 - Draft Project Summary Report
  - October 2012 - CVFPB makes formal 408 request to USACE Sac District
  - April 2013 - USACE Division review
  - May 2013 - USACE HQ Review
  - July 2013 - Section 408 Approval



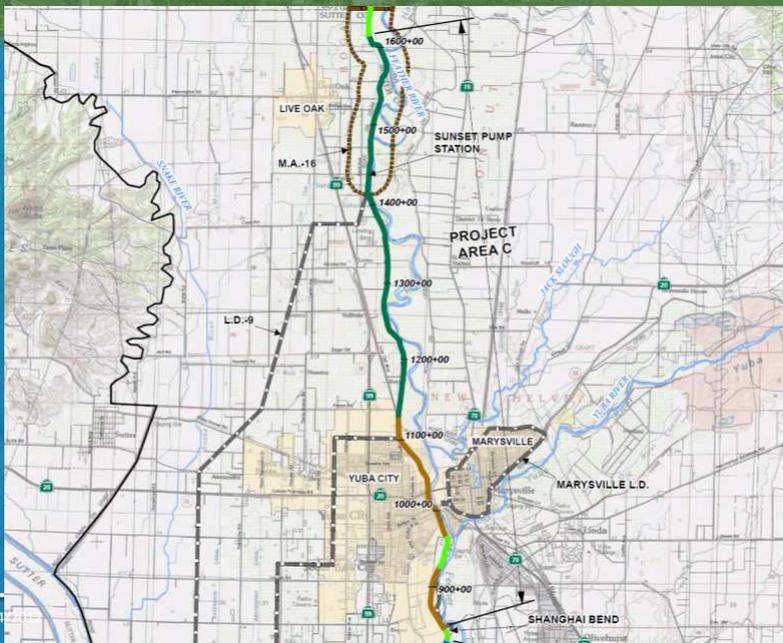
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## Typical FRWLP Cross-Section



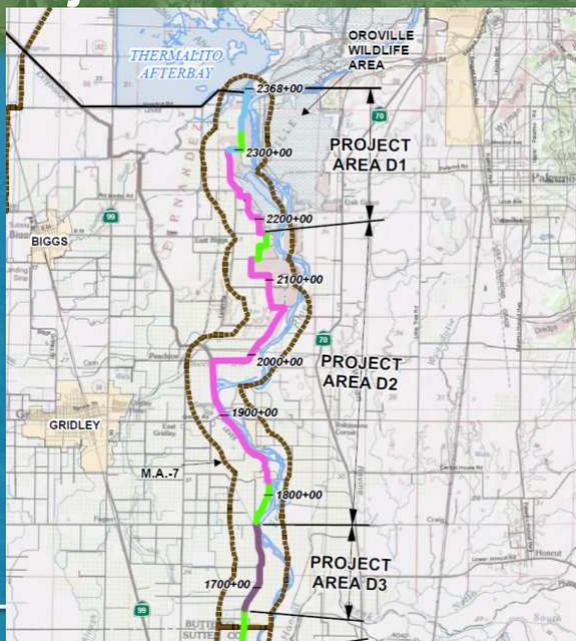
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## Project Area C – 2013/14



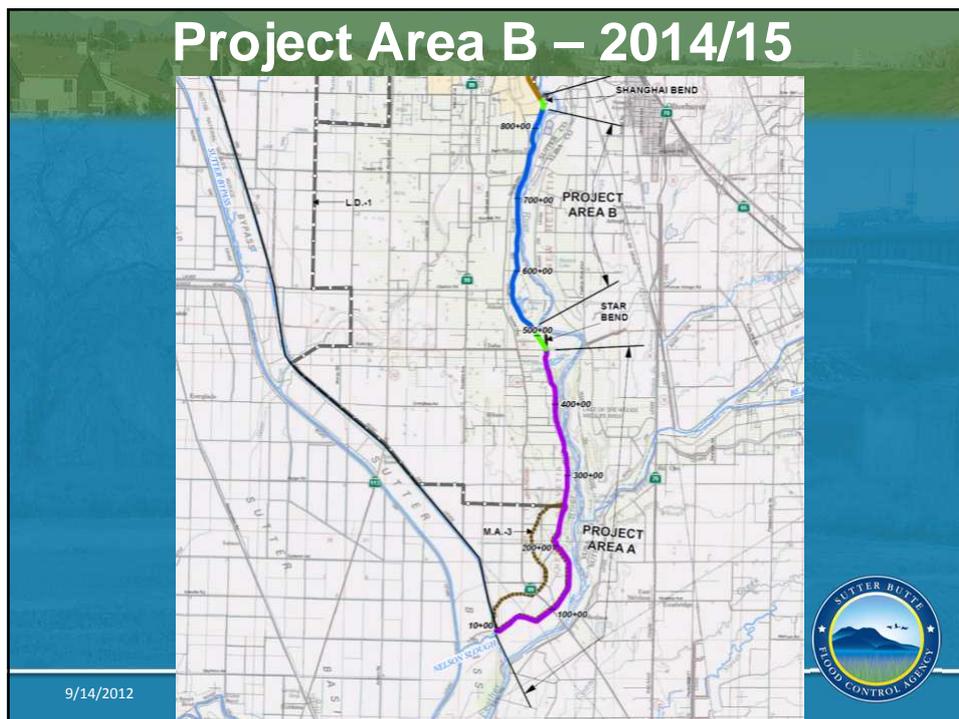
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## Project Area D – 2014/15



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## ROW Approach

- ROW acquisition critical to project construction
- Significant ROW exists for current alignment, but much of it is non-exclusive easement
- Goal to minimize massive takes of property, minimize future land use conflicts



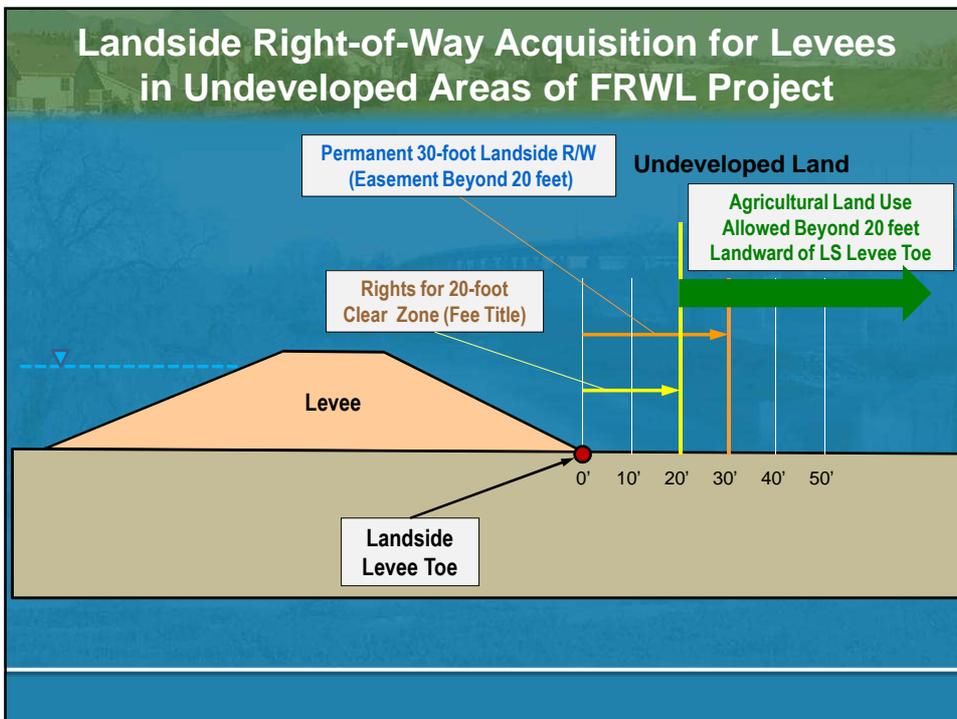
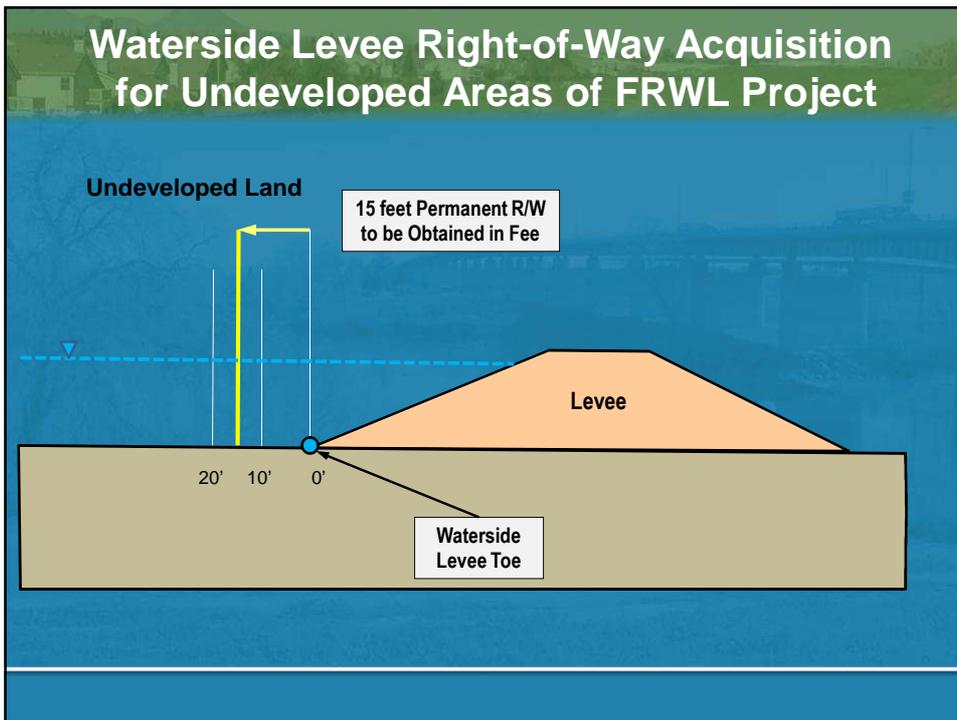
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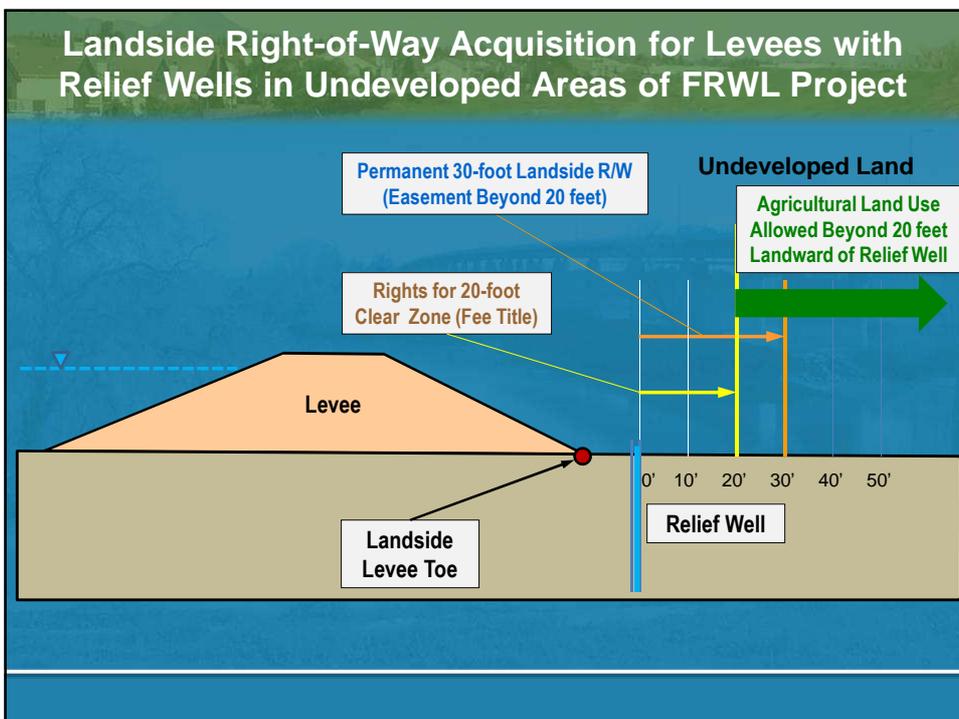
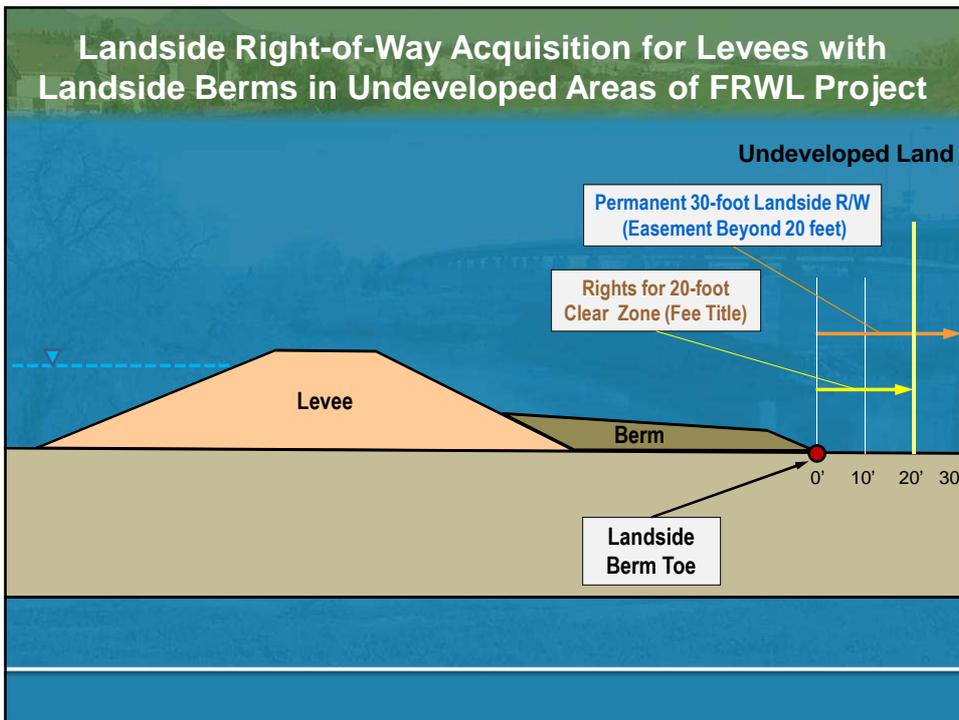
## ROW Approach (cont.)

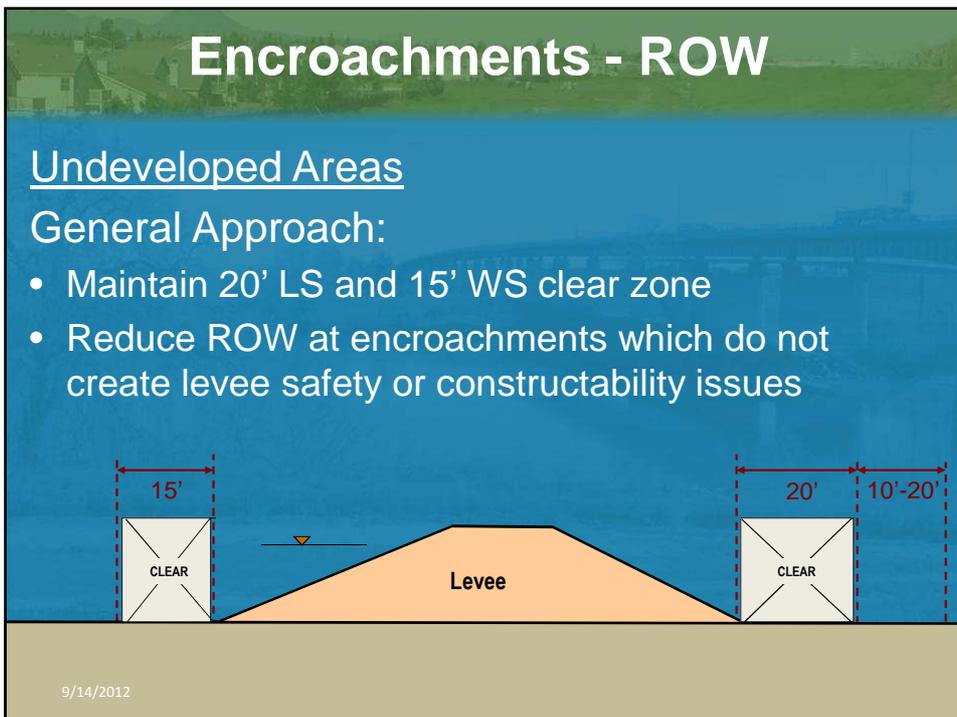
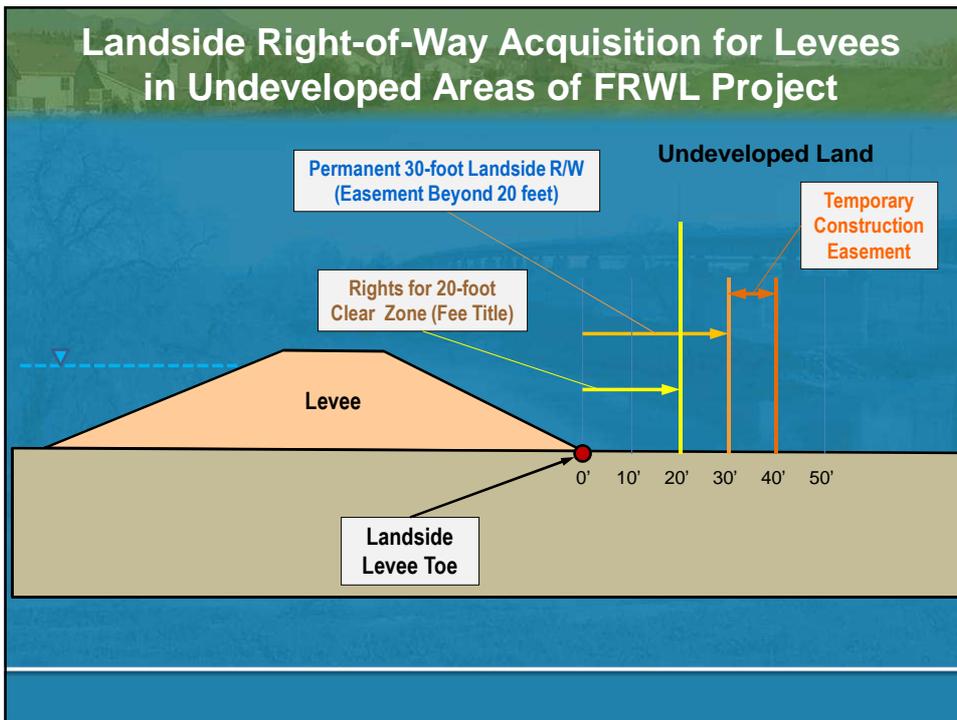
- ROW approach developed by SBFCA and DWR – Fall 2011
- Final agreement letter – December 5, 2011
- SBFCA moving forward with ROW acquisition
  - First offers to acquire property made July 2012
  - Offers for Project C property to go out by Nov. 2012
  - Negotiations expected to extend into Spring 2013



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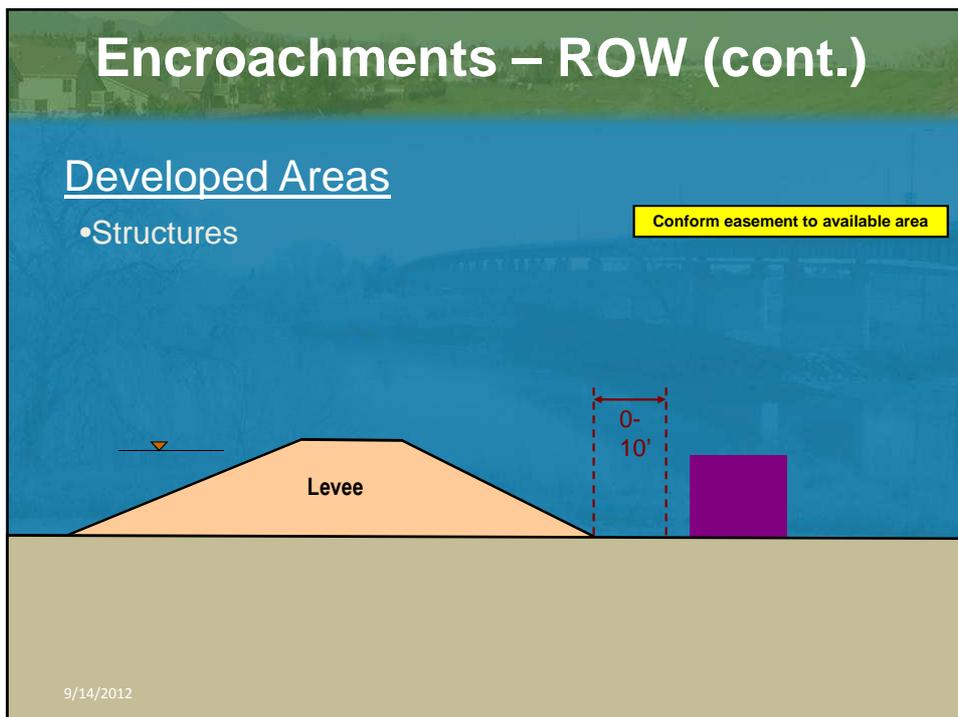


## Encroachments – ROW (cont.)

### Developed Areas

- Structures

Conform easement to available area



## Encroachments - Penetrations

- Assure existing encroachments:
  - Do not create levee safety issues
  - Conform to Urban Levee Design Criteria
  - Do not create levee operation and maintenance issues; or
  - Conform to levee certification and accreditation requirements



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## Encroachments - Non-Penetrations

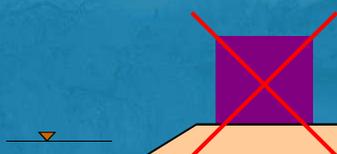
- Removed for:
  - Levee integrity
  - Constructability
  - Access
  - Visibility
- Remaining encroachments will be conformed over time in collaboration with CVFPB



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## Encroachments - Prism

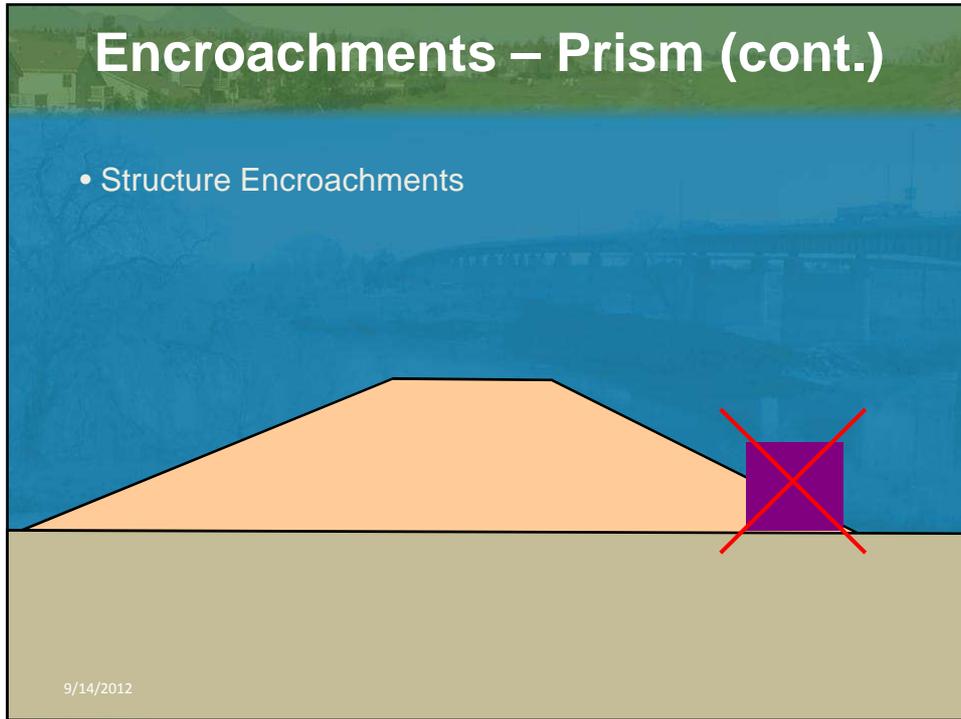
- Structure Encroachments



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## Encroachments – Prism (cont.)

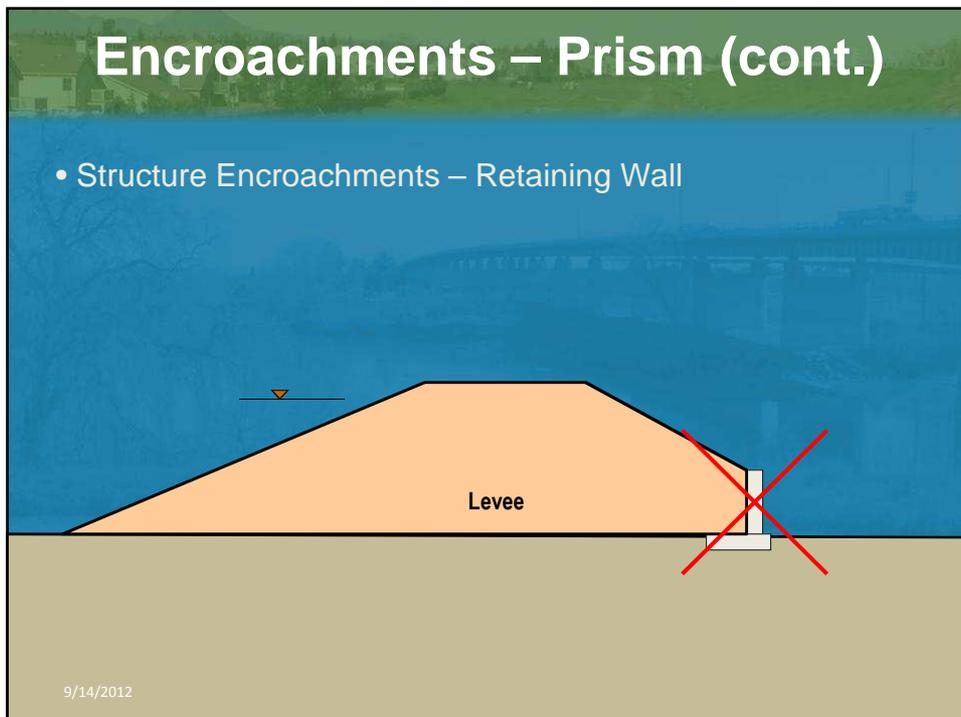
- Structure Encroachments



The diagram shows a cross-section of a prism structure, which is a trapezoidal shape with a flat top and sloped sides, colored in light orange. It sits on a brown ground line. To the left of the structure is a blue area representing water. To the right, a purple square is shown partially overlapping the right edge of the prism. A large red 'X' is drawn over the purple square, indicating that this type of structure encroachment is prohibited. The date '9/14/2012' is printed in the bottom left corner.

## Encroachments – Prism (cont.)

- Structure Encroachments – Retaining Wall



The diagram shows a cross-section of a levee, which is a trapezoidal shape with a flat top and sloped sides, colored in light orange. It sits on a brown ground line. To the left of the levee is a blue area representing water. A horizontal line with a small downward-pointing triangle is drawn across the top of the levee. To the right, a white retaining wall structure is shown partially overlapping the right edge of the levee. A large red 'X' is drawn over the retaining wall, indicating that this type of structure encroachment is prohibited. The word 'Levee' is written in black text in the center of the structure. The date '9/14/2012' is printed in the bottom left corner.

## Vegetation Approach

- Urban Levee Design Criteria
- Remove vegetation
  - for constructability
  - levee integrity
- Life-cycle management



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## Questions & Answers



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