

Summary of Substantial Changes from the *Third Draft Interim Levee Design Criteria for Urban and Urbanizing Area State-Federal Project Levees*

Version 4 of the *Interim Levee Design Criteria for Urban and Urbanizing Areas in the Sacramento-San Joaquin Valley*, dated December 15, 2010, contains the following substantial changes as compared to the *Third Draft Interim Levee Design Criteria for Urban and Urbanizing Area State-Federal Project Levees*, dated May 15, 2009:

- Changed name to reflect that the criteria are not limited to State-Federal levees
- Modified the format, in part to reduce redundancy
- Added a table of contents
- Added sections on purpose and need
- Extended the date of applicability
- Removed the section on assumptions and considerations
- Expanded the number of definitions
- Expanded the discussion of guiding principles
- Added guidance on development of 200-year flow and stage
- Added guidance on bridge clearance requirements
- Added criteria for overtopping flows on levees with insufficient height
- Added guidance to consider flood threats from overland flows and nearby levee breaks
- Removed the distinction between new levees and existing levees for underseepage criteria
- Removed uplift criteria for seepage berms
- Modified exit gradient criteria for seepage berms when water is at the hydraulic top of levee
- Added criteria for:
 - Frequently-Loaded Levees
 - Seismic Vulnerability
 - Levee Geometry
 - Erosion
 - Right-of-Way
- Added three tables
- Added two figures
- Added a section on criteria that are under development, covering the following topics:
 - Encroachments (Excluding Penetrations, Closure Structures, and Levee Vegetation)
 - Penetrations
 - Floodwalls, Retaining Walls, and Closure Structures
 - Levee Vegetation
 - Wind Setup and Wave Runup
 - Security
 - Sea Level Rise
 - Emergency Actions
 - Procedure for Finding that Facilities Provide the Urban Level of Flood Protection
 - Substantial Evidence in the Record
 - Exceptions
 - Periodic Review
 - Independent Expert Panel
- Removed the section on achievements and considerations
- Removed the section on proposed circulation
- Expanded the list of references