GETTING THERE FROM HERE

The Road to ULOP Adequate Progress and ULDC Certification

2018 Floodplain Management Association Conference
September 7, 2018

PANELISTS

Dr. David T. Williams (DTW Associates)

Claire Marie Turner (MBK)

Cale Crawford (ENGEO)

Moderator: Pro Mitra (MBK)

URBAN LEVEL OF FLOOD PROTECTION (ULOP)

In 2007, California Senate Bill 5 was passed “to strengthen the link between flood management and land use”.

From this legislation, the “Urban Level of Flood Protection” (ULOP) guidance was developed for urban and urbanizing areas protected by the State Plan of Flood Control levees **to comply with the required 200-year level of flood protection by 2025**.

URBAN LEVEL OF FLOOD PROTECTION (ULOP)

Cities and urban/urbanizing communities in the Sacramento and San Joaquin river basins were required, by state law, to make a **ULOP finding by July 1, 2016**.

For locations that do not currently meet ULOP requirements, an initial finding is required from the local flood management agencies to document the adequate progress made to date and identify the remaining efforts required to achieve ULOP by 2025.

URBAN LEVEL OF FLOOD PROTECTION (ULOP)

Implementation of achieving ULOP and meeting the requirements for the Urban Levee Design Criteria (ULDC) are not without its challenges, such as:

- identifying and tracking progress for each ULOP and ULDC criteria,
- considering the sustainability of current analyses as performance criteria evolves, and
- managing and coordinating the independent review process.

URBAN LEVEL OF FLOOD PROTECTION CRITERIA

"The California Department of Water Resources developed the Urban Level of Flood Protection Criteria. For **affected land use decisions (DCN)**, cities and counties in **specific locations (LOC)** within the Sacramento and San Joaquin river basins need to make a **finding (FND)** related to an urban level of flood protection based on **substantial evidence (EVD)** in the record. Cities and counties may use criteria consistent with this Criteria or apply this Criteria directly."

ULOP: FINDINGS AND SUBSTANTIAL EVIDENCE

FND-1 : Make a new finding

FND-2 : Rely on previous finding(s)

FND-3 : Effective Period

FND-4 : Periodic review of original finding / remediation plan

FND-5: Follow existing FEMA criteria

FND-6: Adequate public access

ULOP: FINDINGS AND SUBSTANTIAL EVIDENCE

EVD-1 : Flood management facilities

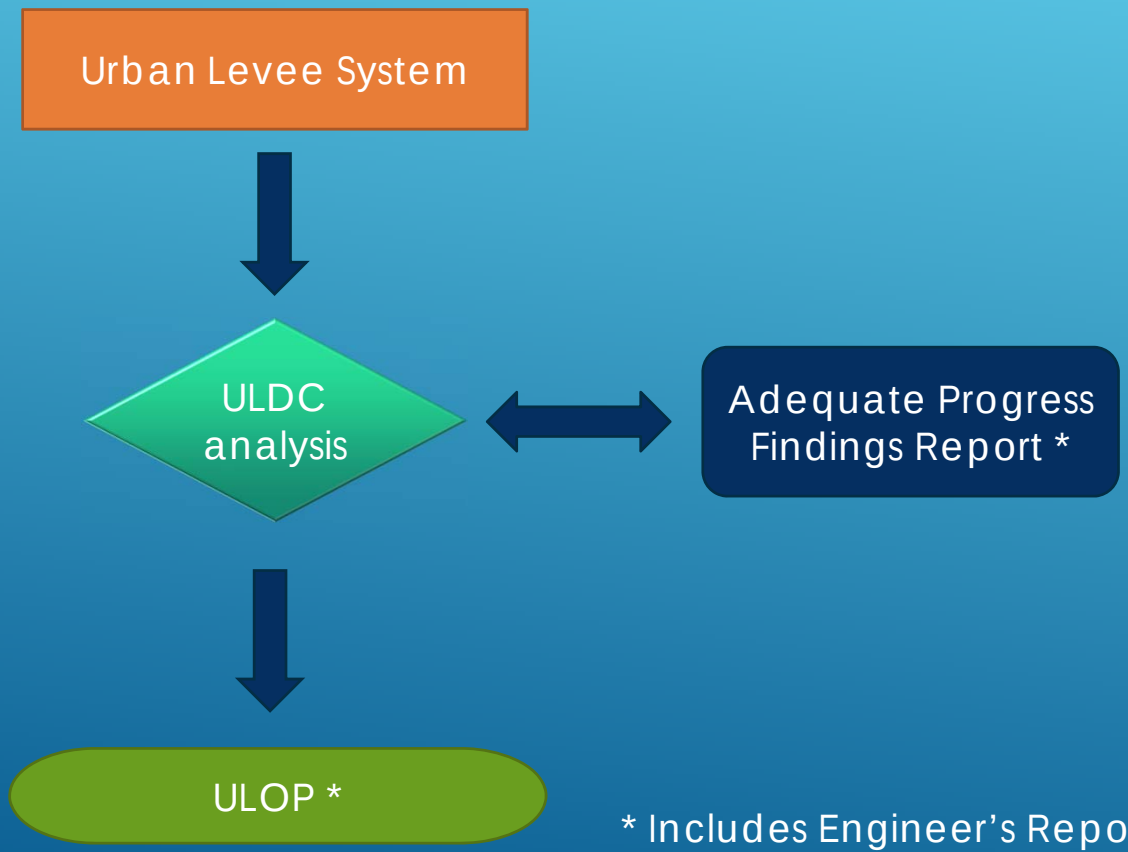
EVD-2 : Imposed conditions

EVD-3 : Adequate progress on construction

EVD-4 : Other measures for undetermined risk area

EVD-5 : Independent Panel of Experts

THE PATH TO ULOP



* Includes Engineer's Report

URBAN LEVEE DESIGN CRITERIA (ULDC)

The Urban Levee Design Criteria provides engineering criteria and guidance for the design, evaluation, operation, and maintenance of levees and floodwalls that provide an urban level of flood protection (i.e. 200-year level of flood protection) in California, as well as for determining design water surface elevations (DWSE) along leveed and unleveed systems. Other topics beyond design and evaluation are presented to provide reasonable assurance that ***once a levee or floodwall is found to provide an urban level of flood protection, it will continue to do so***."

URBAN LEVEE DESIGN CRITERIA (ULDC)

7.1 Design Water Surface Elevation
7.2 Minimum Top of Levee
7.3 Soil Sampling, Testing, and Logging
7.4 Slope Stability for Intermittently Loaded Levees
7.5 Underseepage for Intermittently Loaded Levees
7.6 Frequently Loaded Levees
7.7 Seismic Vulnerability
7.8 Levee Geometry
7.9 Interfaces and Transitions
7.10 Erosion

URBAN LEVEE DESIGN CRITERIA (ULDC)

7.11 Right-of-Way

7.12 Encroachments (excl. Penetrations, Closure Structures, Vegetation)

7.13 Penetrations

7.14 Floodwalls, Retaining Walls, and Closure Structures

7.15 Animal Burrows

7.16 Levee Vegetation

7.17 Wind Setup and Wave Runup

7.18 Security

7.19 Sea Level Rise

7.20 Emergency Actions

QUESTION #1

Is ULOP/ULDC too much to ask from urban communities in meeting these expectations within a relatively short period of time in the history of California's flood control management? How feasible is it to expect all urban areas to meet ULDC by 2025? What other factors should be considered to justify extending this deadline?

QUESTION #2

The conservative approach tends to rule at the end of the day for computing the Design Water Surface Elevation and performing a geotechnical evaluation. Is it sustainable to proceed with future ULOP/ULDC assessments with the conservative approach in mind, or should other less-conservative approaches be adopted to realistically meet ULOP/ULDC? (David)

QUESTION #3

For the work requiring a geotechnical engineering opinion on several criteria, which criteria are the most challenging to provide an opinion, and why? Should some criteria be revised to provide outcomes that are reflective of realistic expectations?

QUESTION #4

Exceptions to any ULDC element require consensus with the independent review panel. Do you feel there can be an "exception" to the rule of exceptions for criteria that do not specifically require computing or analysis?

QUESTION #5

With the recent fires across California that have arguably been attributed to climate change, do you feel that ULOP/ULDC adequately addresses climate change?

QUESTION #6

William Hall is infamously known for saying “There are 2 types of levees: those that have failed and those that will fail”. Through levee research and implementation of advanced construction methods, do you feel Mr. Hall’s quote still rings true? Is ULOP/ULDC ignoring other potential failure modes if the subject levee system passes 200-year criteria?

QUESTION #7

How does one navigate through the requirements of ULOP/ULDC, FEMA certification, and the USACE's SWIF processes simultaneously? Should there be a shared approach when all submittals are required in timelines that can often overlap?

QUESTION #8

From an independent reviewer's point of view, what are the fundamental differences in the approaches taken when reviewing a document or plans to support design for levee improvement compared to a document to support findings for 200-year flood protection?

QUESTION #9

Which of the non-structural criteria are the most challenging to coordinate and complete?

QUESTION #10

The use of “exceptions” for any of the criteria will require consent from the Independent Review Panel. However, would too many exceptions across several criteria for the same levee system send the message that ULOP/ULDC is too stringent or rigid when faced with how existing levees are measured by it?

QUESTION #11

Based on the collective experience of producing or reviewing ULOP/ULDC deliverables among those on this panel, and with firsthand knowledge of costs incurred to coordinate and complete efforts directly and indirectly relating to ULOP/ULDC, what are some cost-saving measures that should be considered for the initial set of documentation and subsequent reports? In your opinion, which criteria are the most expensive to fulfill with regards to the benefit(s) gained?

QUESTION #12

In the theme of sustainability, how would flood management agencies spread awareness of ULOP/ULDC requirements to the public so that it remains important to the community?

MORE QUESTIONS?