



Water Resources • Flood Control • Water Rights

MEETING MEMORANDUM

DATE: August 15, 2012
TO: City of Wheatland and Reclamation District 2103
FROM: Tom Engler, EIT, CFM
SUBJECT: Urban Levee Design Criteria and Regional Planning Meeting

Meeting Attendees: Steve Wright (City Manager), Dane Schilling (City Engineer), Dean Webb (President, RD 2103), Ric Reinhardt (MBK Engineers), Tom Engler (MBK Engineers)

The purpose of the meeting was to check in with the City of Wheatland to coordinate ongoing activities of Reclamation District 2103 (RD 2103), discuss the State Urban Levee Design Criteria (ULDC) as well as the upcoming Regional Planning process for the Central Valley Flood Protection Plan (CVFPP). The following is a summary of the discussion.

Urban Levee Design Criteria (ULDC)

According to the Criteria, “The purpose of the ULDC is to provide engineering criteria and guidance for civil engineers to follow in meeting the requirements of California’s Government Code Sections 65865.5, 65962, and 66474.5 with respect to Findings that levees and floodwalls in the Sacramento-San Joaquin Valley provide protection against a flood that has a 1-in-200 chance of occurring in any given year, and to offer this same guidance to civil engineers working on levees and floodwalls anywhere in California. The ULDC may be updated from time to time, either in its current form or as regulations in the California Code of Regulations (CCR). The ULDC was developed through a collaborative stakeholder involvement process with representatives from cities, counties, flood agencies, and State and federal agencies.”

An urbanizing community is a developed area or an area outside a developed area that is planned or anticipated to have 10,000 residents or more within the next 10 years (Government Code Section 65007(k)). The City of Wheatland meets this standard and is considered one of the few, if not only, communities in the Central Valley that meets the definition of Urbanizing. Therefore the City will need to have a plan in place by 2015 to improve the levees to provide 200-year protection and have a project implemented by 2025 in order to approve development in the area.

The Bear River North Levee (BRNL) project was completed by RD 2103 with funding from the State of California, local Landowners, and the City of Wheatland. The project was designed and constructed to a 200-year design water surface elevation, but that design may not meet all of the requirements of the ULDC. For example, the ULDC also requires a factor of safety for a water surface at the design top of levee (200-year plus 3 feet). The BRNL constructed cutoff walls in certain reaches that will likely pass at the design top of levee, but areas where no wall was required at the 200-year water surface may require improvements to meet the design top of levee check. Further, the ULDC require specific seismic analysis, safety and security plans, and other

items not previously analyzed as part of the BRNL. Therefore, there will be additional work required to analyze the levee for the ULDC. *Action: MBK to provide a rough estimate of per mile costs for ULDC analysis being completed in RD 784.*

CVFPP Regional Planning Process

The CVFPP is a framework for improving the Sacramento and San Joaquin River Systems to provide an integrated and sustainable flood protection system. It was adopted by the Central Valley Flood Protection Board in July 2012. It is important to distinguish that the plan simply provides a framework for the types of improvements that should be sought and does not provide project specifics. The CVFPP divided the flood control system into nine geographic regions. Each of these regions will develop a list of projects in their region that will be coordinated with partner agencies, landowners, and other stakeholders (agricultural interests, environmental groups, etc.) through the first phase of implementation referred to as the Regional Planning Process. This process will be funded through State grants and led by the local partners.

Portions of Yuba and Sutter Counties, including the City of Wheatland, are part of the Feather River region. MBK Engineers is under contract to support the development of the Feather River Regional Plan. The Regional Planning process is an opportunity to identify projects for funding assistance from the State to continue flood management efforts in Wheatland. The following is a list of local projects, in order of priority, which the City would like to have considered in the Feather River Regional Plan and or for other local funding programs:

1. FEMA remapping of Dry Creek - FEMA is currently revising its procedures for mapping floodplains as a result of community concern that the levee removal method overestimated the size of the floodplain. The Wheatland Area was remapped in 2010 using the old procedures which likely resulted in several hundred existing residences in the Dry Creek floodplain being mapped into the regulatory 100 year floodplain. Using FEMA's proposed changes to the mapping procedures will likely result in reducing the number of existing homes in the 100 year floodplain, providing substantial savings on flood insurance for these residents. An estimated cost range for detailed hydraulic modeling of this area is \$50,000-\$100,000.
2. Bear River Levee ULDC analysis – see discussion above. Estimated cost range is \$300,000-\$600,000.
3. Dry Creek Levee Improvements – The Dry Creek levee has known deficiencies with levee height, but there is limited additional analysis that has been completed on the other levee criteria. Analysis will be required and improvements made to improve the levee to meet either the small community 100 year FEMA standard or the ULDC (Wheatland meets the State's definition of an urbanizing community). The first step will be to complete a Problem Identification Report and alternatives analysis which is currently estimated at \$1.2 million. The cost of levee improvements for Dry Creek is currently unknown and should be developed as part of the Regional Planning Process.

The above projects represent the priorities for the City of Wheatland. RD 817 will also be consulted to identify rural levee repairs for the leveed portion west of Wheatland.