KJELDSEN SINNOCK NEUDECK
Civil Engineers and Land Surveyors

Stephen K. Sinnock, P.E.
Christopher H. Neudeck, P.E.
Neal T. Colwell, P.E.
Barry O'Regan, P.E.

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# TECHNICAL MEMORANDUM

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| Project: | Cities of Lathrop and Manteca<br>Urban Levee Design Criteria (ULDC) Evaluation |
| Subject: | 7.18 - Security |
| Prepared by: | Erik E. Almaas, P.E. |
| Reviewed by: | Christopher H. Neudeck, P.E.<br>David A. Peterson, P.E. |

## 1.0 PURPOSE

Detailed analyses and documentation have been performed and developed of the existing levee system of Reclamation District No. 17 (RD17) in order to determine the extent of Urban Levee Design Criteria (ULDC) compliance. The purpose of this technical memorandum is to present the data sources, assumptions, analyses, and results as they pertain to ULDC Item No. 7.18 – Security. The team responsible for undertaking this effort consists of Peterson, Brustad, Inc. (PBI), Kjeldsen, Sinnock and Neudeck, Inc. (KSN), and ENGEO, Inc.

## 2.0 PROJECT BACKGROUND

Legislation passed in 2007 substantially limits the ability of urban communities to approve residential, commercial and industrial development after July 2016 unless they have an Urban Level of Flood Protection (ULOP) or are making adequate progress toward achieving ULOP 200-year flood protection. Background on this mandate was summarized in "*Position Paper for City of Lathrop, Compliance with SB5: ULOP 200-Year Flood Protection for Lathrop (RD 17)*" dated February 3, 2014, by Glenn Gebhardt, City Engineer for the City of Lathrop.

In April 2014, PBI prepared a Strategic Plan for ULOP Compliance for RD17 communities, which outlined a strategic plan for complying with SB5 for the area protected by RD17 levees on a schedule that will meet the requirements of the law. The main component of this Strategic Plan was to perform a comprehensive ULDC analysis and identify areas of deficiencies for each of the ULDC criteria. The analyses presented in this technical memorandum pertain to one of these ULDC criteria: 7.18 – Security.

## 3.0 LEVEE ASSESSMENT

The analyses described in this technical memorandum have been developed at a detailed level using an assessment of the existing levee system to determine the extent of ULDC deficiencies. The assessment was based on a combination of new and existing information.

### 3.1 Data Sources

Existing data sources that were utilized in the levee assessment are as follows:

- Levee Topographic Survey, performed by KSN and Aerial Photomapping Services in 2014

### 3.2 Assumptions

Assumptions that were made in the levee assessment are as follows:

*Basis of ULDC Analysis:*

ULDC states that a security plan is required to protect levee systems from acts of terrorism and other malicious or negligent acts. In developing the security plan, the agency responsible for levee maintenance must consider and prioritize vulnerabilities and employ an array of security measures from four basic categories to address vulnerabilities:

- Networked detection
- Deterrence
- Physical security
- Intrusion interdiction during high threat periods

### 3.3 Analysis

A security plan does not currently exist for RD17. However, a number of security measures are already in place. Regular patrols of the levee system are made by RD17 personnel weekly and more frequently during high water events. All access points are gated to restrict motor vehicle access. The general public routinely use the levees for walking, running, and bicycling. Non-vehicular public access along the levees is generally encouraged in order to have extra eyes on the lookout for malicious activities. Security systems such as cameras, motion detectors, and alarms are generally not feasible primarily due to cost and vandalism. Existing tidal gauges are monitored in order to predict high water events.

## 4.0 SECURITY PLAN

Since the levee system does not currently have a security plan that meets the requirements described in ULDC Section 7.18, it is recommended that such a plan be developed. In addition to appointing a security director, RD17 should consider including the following elements into the security plan.

### 4.1 Networked Detection

Networked detection provides for monitoring and reporting of security information between RD17 and the Intelligence Community, comprised of multiple federal, state, and local agencies. Detection measures should include, but not be limited to, improved personnel and public awareness, suspicious activity reporting, and integration with the existing Terrorism Liaison Officer (TLO) program.

Reporting from the networked detection system should be through the National Suspicious Activity Reporting System (SARs) and fed into the Intelligence Community through the local Fusion Center for analysis. This network establishes the baseline awareness level for periods of normal threat.

RD17 should consider establishing a coordinated network partnership consisting of the public and community entities or citizens who have access to the levee, to report suspicious activity/intrusions to the appropriate authorities. One way to achieve this is through a

“Neighborhood Watch” or “See Something, Say Something” program through the TLO network to enhance community awareness and focus reporting of suspicious behaviors.

RD17 should consider providing for security training and awareness of its personnel through participation in InfraGard and California Emergency Management Agency’s (Cal-EMA) Homeland Security Information Network – Critical Sectors (HSIN-CS).

## 4.2 Deterrence

RD17 should document its current deterrence program consisting of appropriate visible security measures such as gates, physical presence such as increased flood watch patrols during high water, and access control to the degree possible.

## 4.3 Physical Security

RD17 should consider an upgrade for all gates at roadway access points to K4 impact rating and install shielded lock mechanisms that prevent cutting the lock with bolt cutters. Gates should completely block vehicle access or be supplemented by K-rails, cables, or bollards.

Security measures related to levee penetrations and closure structures should be considered. Pump houses, pipes, culverts, and flood gates should all have signage, grates, locks, and alarms if needed and applicable.

Sensor systems should be considered for detecting problems, remotely if practical. Such systems may include pressure sensors, motion sensors, disturbance detection cables, and water flow detectors such as water level gages and piezometers.

RD17 should consider developing and implementing high water levee patrolling protocols that provide for the safety of patrollers if an unauthorized intrusion is underway and that emphasize detection of vehicular trespass.

## 4.4 Intrusion Interdiction

Planning efforts should be considered, such as participating in or hosting a security seminar, workshop, and tabletop exercise with local agencies to familiarize, update and validate the security and evacuation plans related to levee security and breaches.