

TECHNICAL MEMORANDUM

January 12, 2016

Project: Cities of Lathrop and Manteca
Urban Levee Design Criteria (ULDC) Evaluation

Subject: 7.20 – Emergency Actions

Prepared by: Erik E. Almaas, P.E.

Reviewed by: Christopher H. Neudeck, P.E.
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. 7.20 – Emergency Actions. 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: 7.20 – Emergency Actions.

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:

- Reclamation District 17, Mossdale Tract, Emergency Operations Plan, prepared by KSN in October 2015

3.2 Assumptions

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

Basis of ULDC Analysis:

ULDC states that each public agency with the responsibility for public safety for residents protected by levees must have a plan for flood events and other natural or man-made flood-related incidents.

3.3 Analysis

A copy of the current flood safety plan, consisting of the Emergency Operations Plan and the Flood Contingency Map, is included in **EXHIBIT 1**.

4.0 FLOOD SAFETY PLAN

Since the levee system already has a flood safety plan that meets the requirements described in ULDC Section 7.20, no further action is required.

Cities of Lathrop and Manteca

ULDC Evaluation

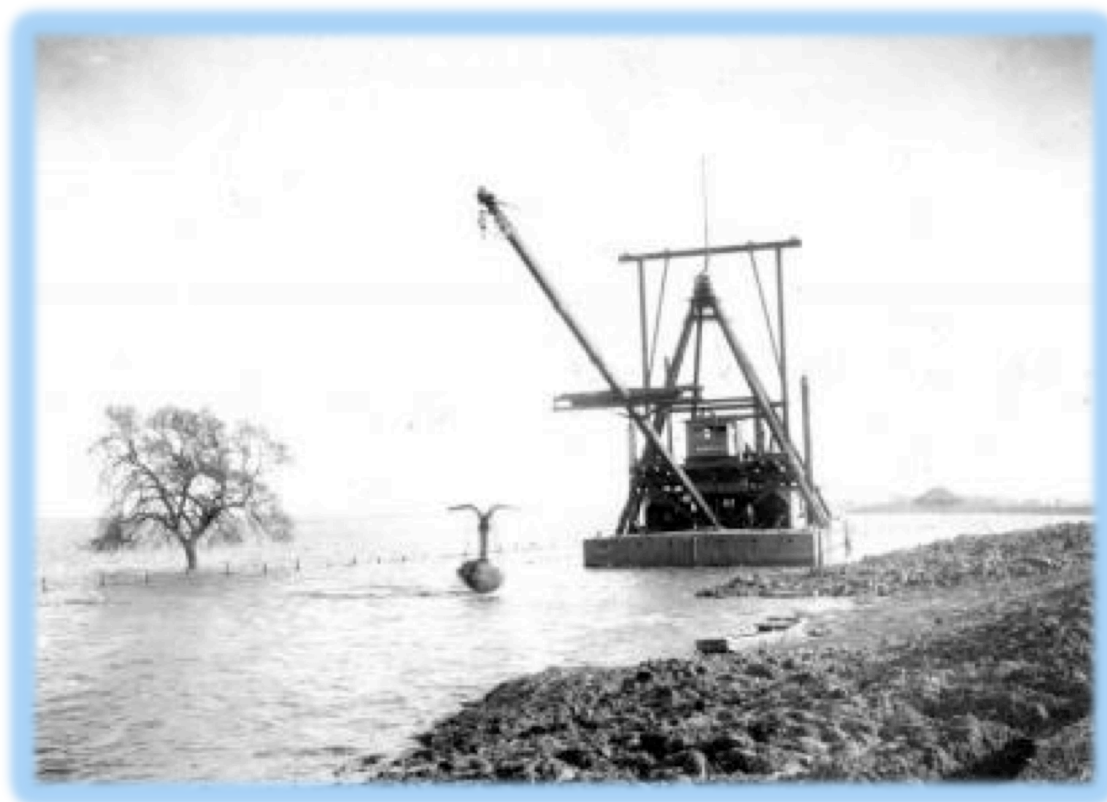
7.20 Emergency Actions

EXHIBIT 1

Flood Safety Plan

Reclamation District 17 Mossdale Tract

Emergency Operations Plan
(California Water Code Section 9650)

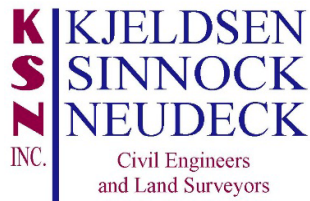


**San Joaquin Operational Area
October 2015**

This document was last updated on October 19, 2015.

Prepared by KJELDSEN SINNOCK & NEUDECK, INC. for Reclamation District 17 – Mossdale Tract, with funds awarded under the California Department of Water Resources Flood Emergency Response Grant Program—Delta, Contract No. 4600010754.

This document satisfies the requirements of California Water Code Section 9650.



Kjeldsen, Sinnock & Neudeck, Inc.
711 N. Pershing Ave
Stockton CA 95203
KSN by Phone:
(209) 946-0268
(916) 403-5900

Plan Promulgation

October 19, 2015

To whom it may concern:

This document and accompanying annex map, having been duly reviewed and approved by the Board of Trustees of Reclamation District 17 – Mossdale Tract (hereinafter referred to as Reclamation District 17, is hereby promulgated as the official emergency plan of the District. District staff is hereby directed to use this plan as the basis for emergency response to flood events. This plan meets the safety plan requirements of Section 9650 of the California Water Code and is compliant with the National Incident Management System and National Response Framework.

The District Secretary is hereby directed to distribute this plan to outside agencies in accordance with the Record of Initial Distribution to ensure proper inter-agency coordination during emergency operations. Copies of the plan shall be provided to additional agencies upon request.

The District Secretary and District Engineer shall review this plan and accompanying annex annually for needed changes and updates. The District Secretary and District Engineer are authorized to make routine updates and changes to the plan required by changes in district operations and personnel and changes to outside agency plans that affect district operations.

The Board of Trustees of Reclamation District 17 shall review this plan once every three years and after any major flood event where the plan was used to guide District response. The District Secretary shall maintain a record of Board plan reviews and approval actions in accordance with District documentation procedures and policies.

Sincerely,

Henry C. Long, President
Board of Trustees
Reclamation District 17

Record of Initial Distribution

Agency Name	Address	Date Provided
San Joaquin County Office of Emergency Services	2101 E. Earhart Stockton, CA	
City of Stockton Office of Emergency Services	425 N. El Dorado Stockton, CA	
City of Lathrop City Manager's Office	390 Towne Center Lathrop, CA	
City of Manteca Fire Department	1001 W. Center St Manteca, CA	
Department of Water Resources Flood Operations Branch	3310 El Camino Ave Sacramento, CA	
California Office of Emergency Services, Inland Region	630 Sequoia Pacific Blvd. Sacramento, CA 95811	
Central Valley Flood Protection Board	3310 El Camino Ave., Rm 151 Sacramento, CA 95821	

Table of Contents

PLAN PROMULGATION	2
RECORD OF CHANGES	3
RECORD OF INITIAL DISTRIBUTION	4
SECTION 1 - PLAN INTRODUCTION	7
1.1 PURPOSE	7
1.2 SCOPE	7
1.3 PLAN STRUCTURE	7
SECTION 2 - CONCEPT OF OPERATIONS	8
2.1 SITUATION OVERVIEW	8
2.2 GENERAL APPROACH TO SEASONAL FLOOD OPERATIONS	8
2.2.1 Routine Preparedness and Infrastructure Maintenance	8
2.2.2 Monitoring and Analysis	9
2.2.3 Alerting, Activation, and Initial Response	9
2.3 PUBLIC ALERT AND WARNING	10
2.4 FLOOD FIGHT OPERATIONS	10
2.5 FEDERAL AND STATE DISASTER ASSISTANCE	11
SECTION 3 – ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES	12
3.1 ORGANIZATION	12
3.2 ASSIGNMENT OF RESPONSIBILITIES	12
3.2.1 Make Legal and Financial Commitments on behalf of District	12
3.2.2 Represent District in Operational Area Emergency Management Committee	13
3.2.3 Provide Public Information.....	13
3.2.4 Maintain Emergency Equipment, Supplies, and Resources.....	13
3.2.5 Monitor Water Conditions, Elevations, and Forecasts.....	13
3.2.6 Activate and/or Direct District Staff During Emergency Operations.....	13
3.2.7 Document Expenditures, Emergency Actions, and Requests for Mutual Aid	14
SECTION 4 – DIRECTION, CONTROL AND COORDINATION	15
4.1 MANAGEMENT AND CONTROL OF DISTRICT OPERATIONS AND COORDINATION WITHIN DISTRICT	15
4.1.1 Management and Policy	15
4.1.2 District Incident Command	15
4.1.3 Incident Command Facilities	15
4.2 MANAGEMENT AND COORDINATION WITH OTHER JURISDICTIONS	15
4.2.1 Unified Flood Fight Command Post.....	15
4.2.2 San Joaquin Operational Area Emergency Operations Center.....	16
4.2.3 State-Federal Flood Operations Center.....	16
4.2.4 San Joaquin Operational Area Joint Information Center	18
SECTION 5 - COMMUNICATIONS	19
5.1 COMMUNICATIONS ORGANIZATION.....	19
5.2 DISTRICT COMMUNICATIONS.....	19
5.3 COMMUNICATIONS WITH OTHER JURISDICTIONS	19
5.3.1 San Joaquin Operational Area EOC.....	19
5.3.2 Department of Water Resources State-Federal Flood Operations Center	19
SECTION 6 - LOGISTICS AND FINANCE/ADMINISTRATION	20

6.1	MUTUAL AID	20
6.2	RESOURCES	20
6.3	PROCUREMENT	20
6.4	LOGISTICS FACILITIES.....	20
6.5	FINANCE AND ADMINISTRATION	20
SECTION 7 - PLAN DEVELOPMENT AND MAINTENANCE.....		21
7.1	PLAN DEVELOPMENT AND MAINTENANCE	21
7.2	TRAINING AND EXERCISES	21
7.3	PLAN EVALUATION	21
SECTION 8 - AUTHORITIES AND REFERENCES.....		22
8.1	FEDERAL	22
8.2	STATE.....	22
8.3	LOCAL	22
ATTACHMENT 1		23
	RECLAMATION DISTRICT 17 EMERGENCY RESPONSE AND TRAINING POLICY	23
ATTACHMENT 2		25
	RECLAMATION DISTRICT 17 DELEGATION OF AUTHORITY LETTER	25
ATTACHMENT 3		26
	FLOODFIGHT SUPPLY INVENTORY	26
ATTACHMENT 4		27
	EMERGENCY RESOLUTION TEMPLATE	27

Section 1 - Plan Introduction

1.1 Purpose

The purpose of this Flood Safety Plan is to ensure the effective performance of Reclamation District 17 responsibilities in a flood emergency in collaboration with other jurisdictions performing emergency functions within and around the District. This plan is to be used in conjunction with the emergency operations plans of the State of California and the San Joaquin Operational Area to facilitate multi-jurisdictional coordination within District boundaries. Although this is a public document, specific procedures and information of a sensitive nature as well as personal information may be edited out of publicly available versions. The full document is subject to restricted-use handling procedures. This plan meets the requirements of Section 9650 of the California Water Code.

1.2 Scope

Reclamation District 17 is an independent jurisdiction with responsibility for the operation and maintenance of the levee system within its jurisdictional boundaries. This District emergency operations plan covers only detailed procedures for District responsibilities. Operational plans of other jurisdictions with public safety responsibilities within the District are referenced in this plan.

This plan will cover in detail the following;

- District Flood Preparedness Procedures
- District Levee Patrol Procedures
- District Flood Fight Procedures
- District Flood Water Removal Procedures
- District Recovery and After-Action Procedures

1.3 Plan Structure

This Flood Safety Plan is structured as a traditional functional emergency operations plan in accordance with Comprehensive Preparedness Guide (CPG) 101 v. 2.0 issued by the Federal Emergency Management Agency (FEMA). Consistent with that guidance, and because of the District’s limited responsibilities and lack of internal departments, this emergency operations plan consists of this Basic Plan and one hazard-specific annex, Annex A – Flood Contingency Map (Annex A). The District’s existing flood contingency map will constitute this Annex A containing the District’s specific flood response procedures. The most current Annex A for the district can be accessed at the San Joaquin Operational Area flood contingency map website (Figure 1.1).

The screenshot shows the website interface for "O.E.S. Flood Contingency Mapping" by sjmap.org. It includes a navigation menu on the left, a central map titled "VISUAL INDEX OF AVAILABLE MAPS" showing various colored regions, and a table below the map listing map names, PDF links, and preliminary engineering designs.

Official Map Name	Map PDF	Preliminary Engineering Designs PDF
Beacon Island	kwad (7-2011)	ED
Boggs Tract	N/A	N/A
Black Canal Tract	kwad (17-2011)	N/A
Central Stockton	N/A	N/A
Delta Islands North	N/A	N/A
Eight Mile Corridor	kwad (8-2011)	ED
Hilmar 11 Corridor	kwad (29-2011)	ED
Isola Tract	N/A	N/A
McDonald Island	kwad (2011) (20-101)	ED
New Hope Tract	kwad (18-2011)	N/A
North Stockton	kwad (2011) (17-2011)	N/A
Old River	N/A	N/A
OL1000 Lincoln Wilson West	kwad (24-2011)	ED
OL17 Hugobue	N/A	N/A
OL1224 Sprague Stewart	kwad (24-2011)	ED
Parsons Tract	kwad (14-2011)	ED
Roberts Island	kwad (5-2011)	N/A
Rough And Ready Island	N/A	N/A
San Joaquin River East Bank	kwad (15-2011)	N/A
San Joaquin River West Bank	kwad (28-2011)	N/A
San Joaquin River West Bank	kwad (15-2011)	N/A
San Joaquin River West Bank	kwad (2011) (29-2011)	ED
San Joaquin River West Bank	kwad (2011) (31-2011)	N/A
Smith Water Tract	N/A	N/A
South Stockton	kwad (17-2011)	N/A
Station Island	N/A	N/A
Stewart Hugobue Tract	N/A	N/A
Union Island	kwad (18-2011)	ED
Victoria Canal	kwad (11-2011)	N/A
Victoria Canal	kwad (2011) (11-2011)	N/A

www.sjmap.org/oesfcm
maintained by San Joaquin
Operational Area

Figure 1.1

Section 2 - Concept of Operations

2.1 Situation Overview

See the San Joaquin Operational Area Hazard Mitigation Plan for a comprehensive flood risk assessment for the County of San Joaquin. See Annex A for District boundaries, levees, pumping stations, supply depots, historical flooding summary, locations of past breaches and areas of historic seepage or erosion, topography, and characteristics of waterways fronting District levees.

Reclamation District 17, Mossdale, is bounded on the west side by the San Joaquin River and on the north side by French Camp Slough. The southern side of the District is bounded by a dry land levee protecting the District from flood waters arriving from the south through Reclamation Districts 2094 and 2096. High ground borders the eastern side of the District. Interstate 5 runs generally through the District from its northeast side to the southwest side (See Figure 2.1).

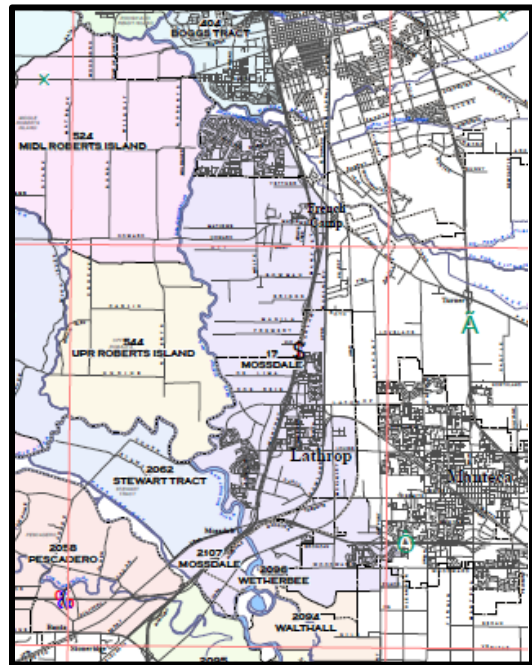


Figure 2.1

The San Joaquin River varies between 150-400 feet wide along the District boundaries. Old River separates from the San Joaquin River between Levee Miles 10 and 11 carrying significant river flow to the west. No major islands or barriers exist in the river channel along the District boundary but it is crossed by two bridges. The French Camp Slough channel extends up to 350 feet in width along the District's northern boundary. This channel contains scrub and tree covered islands and obstructions.

Reclamation District 17 is threatened primarily from riverine floods along the San Joaquin River. There is some tidal effect up the San Joaquin River along the District levees but this is not a significant factor for flood water elevations.

District levees protect areas within three cities, Manteca, Lathrop, and Stockton and unincorporated areas of the County. Overall population is in excess of 30,000 residents.

2.2. General Approach to Seasonal Flood Operations

District staff will carry out routine preparedness activities at the beginning of flood season as described in below. Annex A of this plan describes the concept of operations for active District flood fight activities. Section 3, Organization and Responsibilities, of this Basic Plan describes authorities and responsibilities for performing routine and emergency activities.

2.2.1 Routine Preparedness and Infrastructure Maintenance

District performs the following routine preparedness actions.

1. Inspect District levees once a week on a routine basis
2. Ongoing and routine baiting and grouting program for ground rodents
3. Ongoing and routine vegetation control program
4. Annual inspection and inventory of District flood fight supplies
5. Semi-annual joint inspection of levees with State inspectors
6. Periodic joint inspection of levees with Federal inspectors
7. Annual inspection and maintenance of access control gates on levees

District does not own or maintain pumping stations for internal drainage control. No culverts or through levee pipes exist within District.

2.2.2 Monitoring and Analysis

The District will monitor and analyze water conditions, elevations, and forecasts for waterways affecting District levees throughout flood season for the purpose of promptly identifying heightened threats to the integrity of District levee systems. The objective of this monitoring effort is to identify conditions that warrant additional actions beyond routine flood season preparedness activities.

The District will use the following gauges and information sources in its monitoring effort.

Primary Reference Gauge:

San Joaquin River at Mossdale See Annex A for stage information
Datum NAVD 88

Secondary Reference Gauge:

San Joaquin River near Vernalis See Annex A for stage information
Datum NAVD88

2.2.3 Alerting, Activation, and Initial Response

The following actions will be taken when the trigger condition is identified by District staff. These actions may be taken by District staff at any time it is felt that conditions affecting the levees and drainage system warrant such action.

<u>Action</u>	<u>Trigger Condition</u>
Alert the District Board of Trustees and staff; Issue Delegation of Authority letter appointing District Incident Commander	Official prediction that Monitor Stage will be reached at Mossdale Gauge
Activate/Hire District staff and initiate periodic focused levee inspections	Monitor Stage at Mossdale Gauge
Initiate 24-hour continuous levee patrols	21.5' at Mossdale Gauge
Contact cities of Lathrop, Stockton, and Manteca, San Joaquin County Sheriff, and San Joaquin OES	Potential threat to levee integrity or if District begins patrol

Contact the State-Federal Flood Operations Center

Identified problem on levee

The District does not use “phases” where objective conditions trigger a group of actions. Each action indicated will be taken upon reaching the trigger condition shown or if District staff feels it is warranted. As noted below, the District Engineer and District Emergency Manager are responsible for monitoring objective conditions affecting the District.

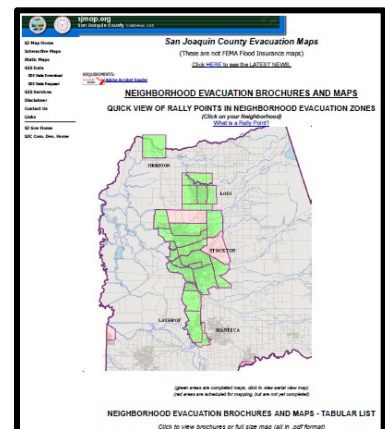
District staff will take all of the above actions upon the identification, or verified report, of any out of the ordinary condition on a District levee that presents a potential risk of failure.

2.3 Public Alert and Warning

The District will promptly notify jurisdictions responsible for alerting and warning of the general public upon identification of a threat to District levees. The District will provide detailed information on the characteristics of the threat and will assist, to the extent possible, with notification of the public if requested. All alert and warning of the general public will be carried out in accordance with the plans of protected jurisdictions.

Jurisdictions responsible for alerting and warning of the general public within District:

- City of Stockton
- City of Lathrop
- City of Manteca
- County of San Joaquin



General Public Evacuation Maps and Brochures website
www.sjmap.org/evacmaps
maintained by San Joaquin Operational Area
Figure 2.2

Alerting and warning will be conducted jointly by these jurisdictions through the San Joaquin Operational Area using the procedures contained in the SJOA Warning Annex (see www.sjgov.org/oes). The District will provide a representative to the operational area and SJOA Joint Information Center to assist with alert and warning messages, if requested.

Evacuation maps and brochures for the public are available at a dedicated website maintained by San Joaquin Operational Area (See Figure 2.2). These maps contain information on receiving alerts and warnings within the District along with evacuation and safety instructions.

Location of public safety evacuation map for Reclamation District 17 is shown on Annex A. The area of Reclamation District 17 is designated the “RD17 Evacuation Zone” with three complementary larger scale sector maps for Weston Ranch, Lathrop, and Manteca.

2.4 Flood Fight Operations

Flood fight operations, including levee patrol, will be conducted in accordance with the procedures in this Basic Plan and those shown on Annex A. Annex A displays the District’s

concept of operations for emergency communications, patrol, flood fight, and dewatering operations. This concept of operations and response procedures will be modified as needed by the District Incident Commander to meet the demands of actual emergency conditions. Plans of jurisdictions with responsibility for warning and evacuation within the District are referenced on Annex A as well as in this plan.

2.5 Federal and State Disaster Assistance

The District's policy is to maintain mitigation and emergency plans and procedures, and the physical condition of its levees at the level required to be eligible for disaster assistance under the Federal Stafford Act and PL84-99 programs and the California Disaster Assistance Act (CDAA).

Emergency operations will be conducted and documented in compliance with conditions of those programs for reimbursement of disaster expenses. The District has assigned its contract engineering firm to maintain necessary documentation during an emergency and to participate in any available assistance programs after a disaster on behalf of the District.

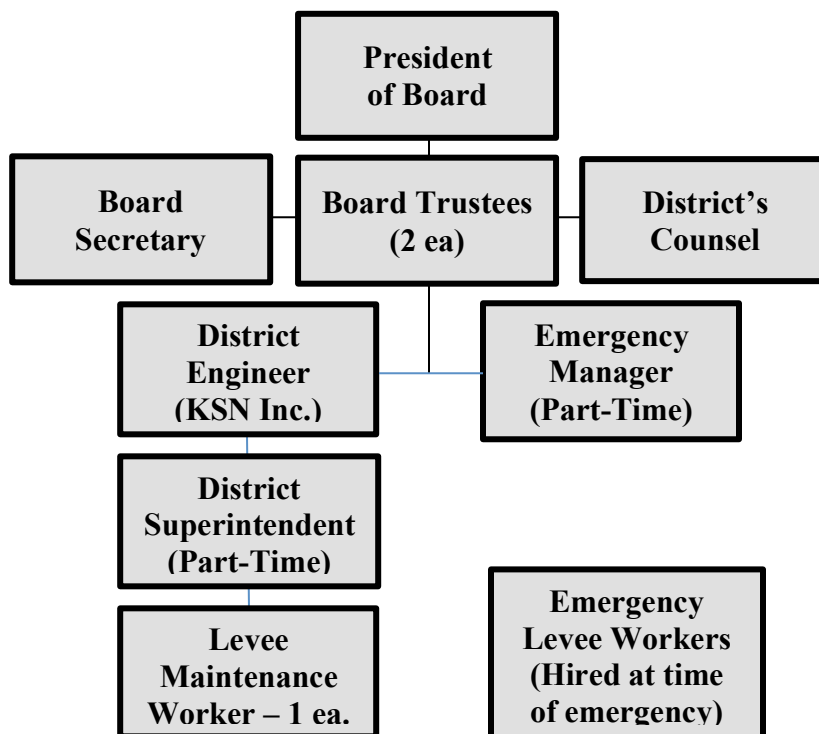
To ensure that the District takes steps to quickly access the recovery process, these actions should be considered if an incident is imminent or occurring:

- PL-84-99:
 - Pre-develop a USACE PL84-99 request letter on District letterhead
 - Contact DWR Flood Operations Center
 - Follow-up call to USACE District office that a request was made to DWR
 - Notify Operational Area of PL84-99 request, send copy of written request
- State and other Federal programs:
 - Request San Joaquin County to Proclaim the Existence of a Local Emergency
 - Notify District administration when the Proclamation is established

Section 3 – Organization and Assignment of Responsibilities

3.1 Organization

The District will use its paid, contract, and volunteer staff as shown below to perform its responsibilities in a flood emergency.



District hires additional staff under the job description of “Emergency Levee Worker” for levee patrol once monitoring efforts indicate that conditions for initiating levee patrol will be reached. Emergency workers will work under the designated District Incident Commander.

3.2 Assignment of Responsibilities

The District Board of Trustees has made the following assignments of authority and responsibility to ensure that needed emergency actions can be taken promptly and efficiently.

3.2.1 Make Legal and Financial Commitments on behalf of District

Any single trustee, the District Engineer, or the District Secretary are authorized, once the Board has concurred that a local emergency is occurring, to 1) make a legal or financial commitment on behalf of District during emergency operations and 2) purchase additional flood fight supplies or materials. There is no limit to the commitment that can be made. Any single trustee, the District Engineer, or the District Secretary can take these actions upon recognition of a threat to levee integrity even without prior Board concurrence that a local

emergency is occurring, but in this case the Board must be notified of the action within 24-hours.

The District President or Secretary will sign written contracts with private vendors or other public agencies stemming from emergency actions as described above.

3.2.2 Represent District in Operational Area Emergency Management Committee

The District Emergency Manager and/or District Engineer are authorized and responsible for representing the District at unified field commands as may be established by the San Joaquin Operational Area. They are also responsible for representing the District at the San Joaquin Operational Area management committee. These District representatives may speak for the District in matters of the condition of District levees, input to protective action decisions being made by public safety agencies, and any requests to modify or conform District response that come out of the multi-agency coordination process.

The Board President will issue a Delegation of Authority letter (see Attachment 2) confirming and defining these specific authorities at the time of an emergency and formally identify the District Incident Commander and Deputy Incident Commander upon reaching the trigger condition described in Section 2.2.3.

3.2.3 Provide Public Information

The District Secretary is authorized to speak to the media on behalf of the District as part of the San Joaquin Operational Area Joint Information Center.

3.2.4 Maintain Emergency Equipment, Supplies, and Resources

The District Superintendent is authorized and responsible for maintaining District equipment, supplies, and resources for emergency response. The Superintendent will ensure that supplies are maintained at inventory levels set by the Board or at any minimum levels that may be set by Department of Water Resources guidance or statutes.

3.2.5 Monitor Water Conditions, Elevations, and Forecasts

The District Engineer and Emergency Manager are responsible for monitoring water conditions, elevations, and forecasts for the purpose of identifying conditions warranting additional action beyond routine flood preparedness as outlined in this plan.

3.2.6 Activate and/or Direct District Staff During Emergency Operations

The District Emergency Manager and District Engineer are authorized and responsible for activating District staff and resources, for requesting or providing mutual aid assistance from public agencies, and for supervising District staff, contractors, and/or mutual aid resources assigned to District for 1) levee patrol, 2) flood fight operations, and 3) District de-watering operations.

The Board President will issue a Delegation of Authority letter (see Attachment 2) confirming and defining these authorities as noted in Section 3.2.2 and the Emergency Resolution Template (See Attachment 4) to support the existence of an emergency in the District and the need for any and all local, state and/or federal support.

3.2.7 Document Expenditures, Emergency Actions, and Requests for Mutual Aid

The District Engineer is authorized and responsible for maintaining necessary documentation of emergency expenditures, damage to District infrastructure, and use of supply inventories in accordance with the requirements of federal and state disaster assistance programs.

The District Engineer is authorized and responsible for the preparation and submission of disaster assistance claims during the recovery period through all federal and state disaster assistance programs that may be applicable and relevant to District costs.

Section 4 – Direction, Control and Coordination

4.1 Management and Control of District Operations and Coordination within District

District staff authorized and responsible for carrying out the actions outlined in Section 3, Organization and Responsibilities, will use the direction, control, and coordination facilities and processes described in this section. Communications and logistics systems for command, coordination, and response are described in Sections 5 and 6.

District staff will use the National Incident Management System (NIMS), and the Standardized Emergency Management System (SEMS), to organize District response activities. District staff will comply with the procedures of the San Joaquin County Unified Flood Fight Command to which the District is assigned, the San Joaquin Operational Area Multi-Agency Coordination System (MACS) or any other “as needed” command structure put in place by local officials for purposes of inter-agency coordination.

4.1.1 Management and Policy

The District shall maintain direction and control of District operations during emergency periods. The District Board of Trustees shall meet and confer as deemed necessary by the President during emergency operations to perform their policy making and financial responsibilities during emergency response operations. Board meetings will occur in the field or if needed at the office of the District.

The Board President will issue a Delegation of Authority letter (see Attachment 2) upon reaching the trigger condition indicated in Section 2.2.3.

4.1.2 District Incident Command

The District will appoint one incident commander to manage all incidents occurring on the District levee system as an “incident complex” during any single disaster event as allowed in NIMS protocols. The District will operate on a 24-hour operational period.

4.1.3 Incident Command Facilities

The District does not maintain pre-identified facilities for hosting emergency activities being undertaken by District staff. The District’s counsel has facilities for meetings. District activities will be organized and coordinated in the field or at other incident command facilities established by public safety agencies or the San Joaquin Operational Area.

4.2 Management and Coordination with Other Jurisdictions

The District will ensure that proper management and coordination is maintained with 1) other public agencies and jurisdictions operating within the District, 2) neighboring Reclamation Districts, and 3) the San Joaquin Operational Area. The following procedures will be followed to accomplish this function.

4.2.1 Unified Flood Fight Command Post

The County of San Joaquin has established four pre-planned unified flood fight commands with pre-identified command post locations to facilitate coordination and mutual aid between neighboring reclamation Districts and supporting city/county, state, and federal agencies. The District Emergency Manager or District Engineer will report to the District’s

assigned unified flood fight command to coordinate the development and implementation of incident action plans. Unified situation assessment, resources, and tactical planning of multi-agency flood fight activities will take place within this unified command. See Unified Flood Fight Command Map at www.sjmap.org/oesfcm.

Reclamation District 17 is a member of the METROPOLITAN UNIFIED FLOOD FIGHT COMMAND established by the San Joaquin Operational Area. The Metropolitan Unified Flood Fight Command meets at the San Joaquin Operational Area Emergency Operations Center, 2101 E. Earhart Avenue, Stockton. The boundaries and assignments to this command may be viewed on the SJ County Unified Flood Fight Command Map available at www.sjmap.org/oesfcm. See Figure 1.1.

4.2.2 San Joaquin Operational Area Emergency Operations Center

The County of San Joaquin maintains and hosts the San Joaquin Operational Area Emergency Operations Center (EOC) at 2101 E. Earhart Avenue, Stockton, in the Robert J. Cabral Agricultural Center. There could be other emergency facilities established under the OA-EOC located in separate locations.

The Operational Area Multi-Agency Coordination Group (MAC Group) may be activated to assist the EOC Director prioritize incidents for allocation of scarce resources, including mutual aid, assists Planning/Intelligence in information sharing, and conduct resource coordination processes in accordance with the procedures maintained by San Joaquin County Office of Emergency Services. This group works closely with the OA-EOC Logistics Section.

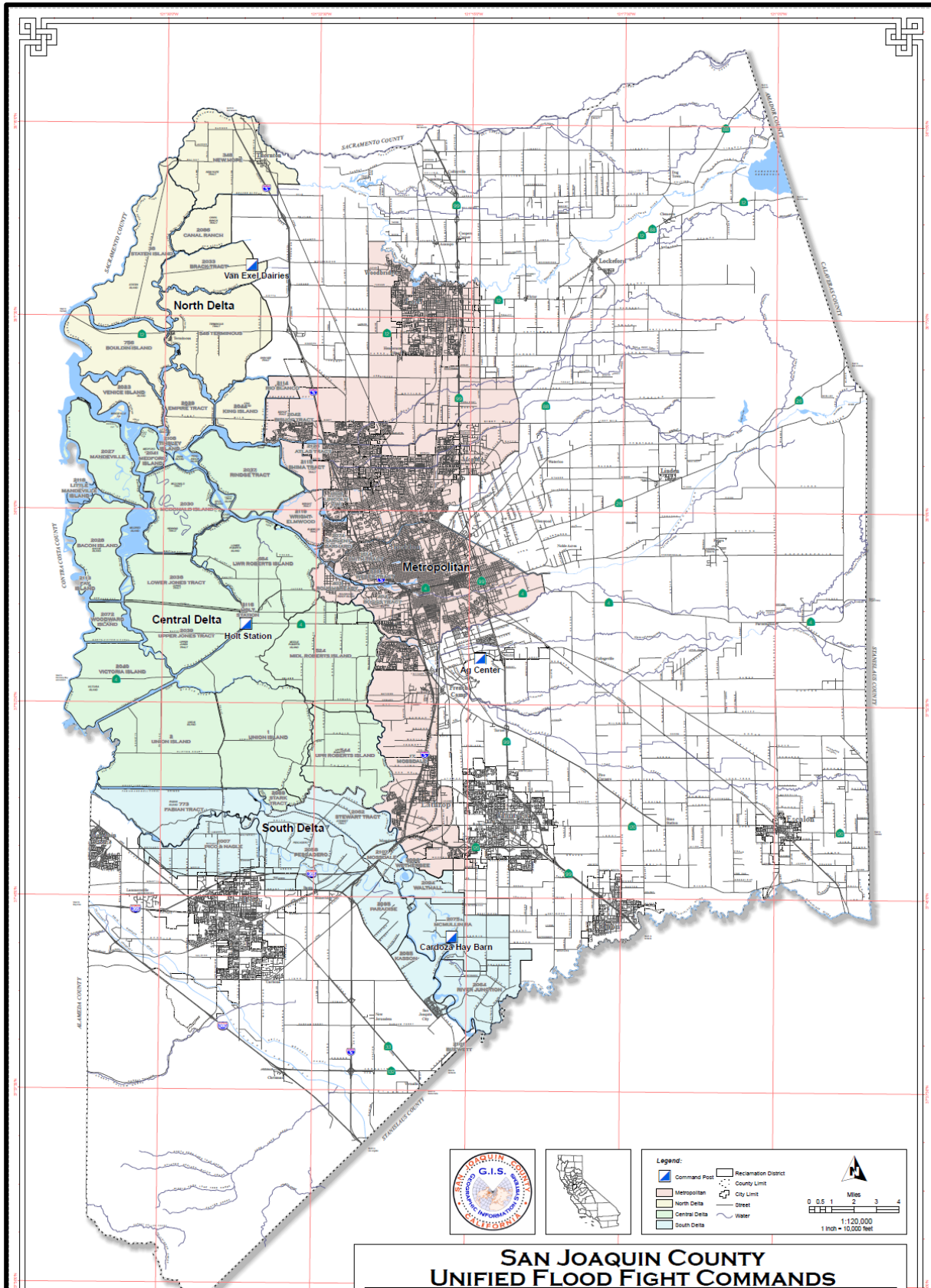
The San Joaquin Operational Area Planning/Intelligence Section will provide disaster intelligence and situational status to participating jurisdictions upon activation in an emergency. This District will participate as needed in this disaster intelligence and information sharing process. See www.sjgov.org/oes for relevant San Joaquin Operational Area plans.

Reclamation District 17 is a signatory to the San Joaquin Operational Area Agreement and, as such, its Emergency Manager will participate in SJOA multi-agency coordination processes and procedures on behalf of the District. General travel times from District to the SJOA emergency operations center is 10 minutes. District representative may remotely communicate with the SJOA EOC through cellular telephone.

4.2.3 State-Federal Flood Operations Center

The Department of Water Resources has special authority under Water Code Section 128 to assist Reclamation Districts with flood fight operations. The Department of Water Resources maintains the State-Federal Flood Operations Center (FOC) to perform these functions and support the operations of other State and Federal agencies. The District will maintain communications with the FOC in order to receive and provide information with that facility and to request technical assistance. The District will communicate with the flood operations center through telephone systems or at Metropolitan Unified Flood Fight Command multi-agency coordination activities where FOC representatives are present.

Figure 4.1 Unified Flood Fight Commands



**SAN JOAQUIN COUNTY
UNIFIED FLOOD FIGHT COMMANDS**

4.2.4 San Joaquin Operational Area Joint Information Center

Public information to the general public and jurisdictions will also be coordinated, planned, and carried out through the San Joaquin Operational Area Joint Information Center (JIC). The District will assist with communication as requested through the operational area. See www.sjgov.org/oes for relevant San Joaquin Operational Area plans and procedures.

The District will provide a public information officer, as requested, who will have authority to approve information releases. The District information officer will identify the location and schedule of the JIC from the San Joaquin Operational Area Public Information Officer at the beginning of the flood event.

Section 5 - Communications

5.1 Communications Organization

The District will maintain adequate communications equipment to implement this emergency plan. This section identifies equipment and/or systems available for communications,

1. Between District staff, contractors, and other staff working under District supervision
2. With other public agencies operating within the District
3. With neighboring reclamation Districts
4. With the San Joaquin Operational Area EOC
5. With the State Flood Operations Center

5.2 District Communications

The District does not own or operate communications equipment. The District will rely on personal cell phones of its staff and trustees to maintain communications between the Board of Trustees, the District Engineer, the District Emergency Manager and other response staff that may be hired during the emergency period. In the event of failure of cellular telephone systems the District will use messengers to transmit information between its staff and other jurisdictions as well as regularly scheduled coordination meetings of the field unified commands and the San Joaquin Operational Area organization.

5.3 Communications with Other Jurisdictions

The District will maintain communications with other jurisdictions by cellular telephone and by participation in meetings of the Metropolitan Unified Flood Fight Command. The Operational Area may assign radio or phone communications equipment to the District if this will provide reliable contact, as requested by the District.

5.3.1 San Joaquin Operational Area EOC

The District will maintain communications with the San Joaquin Operational Area EOC by cellular telephone and participation in scheduled meetings of the SJOA management. The District will maintain telephone numbers assigned by SJOA for use by reclamation districts.

5.3.2 Department of Water Resources State-Federal Flood Operations Center

The District will communicate with the Flood Operations Center by cellular telephone. Additional communications equipment may also be provided to ensure contact, as requested by the District.

Section 6 - Logistics and Finance/Administration

6.1 Mutual Aid

The District is a signatory to the California Master Mutual Aid Agreement and the San Joaquin Operational Area Agreement. District staff will follow the processes outlined in those documents for requesting and providing mutual aid. The San Joaquin Operational Area Agreement and San Joaquin County Ordinances have provisions allowing the San Joaquin Operational Area Logistics Section and San Joaquin County Purchasing Agent to acquire and transport, on behalf of the District, resources requested by the District.

Mutual aid requests for technical assistance and services, flood fight crews, supplies and materials, and other resources will be made through the San Joaquin Operational Area Logistics Section and/or the Operational Area Public Works Mutual Aid Coordinator. See www.sjgov.org/oes for operational area plans and procedures.

6.2 Resources

See Attachment 3 for inventory of district flood fight resources. San Joaquin Operational Area maintains seven twenty-foot containers with flood fight supplies that the district can draw on through the San Joaquin Operational Area Agreement. Inventory of that resource can be obtained from San Joaquin Operational Area. In addition, DWR stores resources at the Port of Stockton area.

6.3 Procurement

District maintains standard forms and processes for initiating and executing contracts with private vendors. The District maintains a standard contract form for contracts under \$25,000 in a no-bid environment. The District maintains a separate contract form for contracts over \$25,000 adding a bonding requirement. Contracts over \$25,000 will be awarded through an informal bid process.

6.4 Logistics Facilities

See Annex A for locations of pre-planned delivery points, locations of District supplies, and District supply staging areas and points.

6.5 Finance and Administration

The District maintains financial and administrative records associated with emergency response in accordance with *44 C.F.R. Part 13--Uniform Administrative Requirements For Grants And Cooperative Agreements To State And Local Governments*. Emergency response and construction records, including field reports, procurement and construction management files are maintained by both the District and the District's Engineer and are retained as prescribed by the grant authority. District maintains a safety plan for employees and work rules as appropriate.

Section 7 - Plan Development and Maintenance

7.1 Plan Development and Maintenance

The District Secretary, Emergency Manager, and Engineer are responsible for overseeing the development of the Reclamation District 17 Emergency Operations Plan. The District Engineer will maintain Annex A. The District Secretary, Emergency Manager, and Engineer are responsible for periodic review of the District Emergency Operations Plan and Annex A to determine the need for revisions or updates.

The District Board will approve this plan when initially completed. The District President is authorized to approve routine updates and revisions. The District Board will review and re-approve the Emergency Operations Plan and Annex A at least every three years. Revised plans must be reviewed and approved by protected cities and the County.

7.2 Training and Exercises

The District will maintain a training program to implement this emergency operations plan and to meet minimum federal and state requirements for disaster reimbursement. All District training will comply with the National Incident Management System (NIMS) and the Standardized Emergency Management System (SEMS). The District Emergency Response and Training Policy explains the District training program in detail (See Attachment 1).

District employees will receive training on the District EOP – Basic Plan and Annex A.

District staff will participate in internal exercises and exercises sponsored by the San Joaquin Operational Area jurisdictions.

7.3 Plan Evaluation

Reclamation District 17 staff will prepare a written After-Action Report (AAR) after any District declared emergency affecting District levees. The District Secretary is responsible for the preparation of this report. The Board will review and approve the AAR, which will briefly describe District operations, response problems that arose, and damage sustained by the District. The AAR will also contain recommendations for improving District emergency operations in the future. The Board will provide direction to staff as to the preparation of changes, additions, or revisions to the District emergency operations plan.

Section 8 - Authorities and References

8.1 Federal

Federal Civil Defense Act of 1950 (Public Law 920, as amended)

Robert T Stafford Disaster Relief and Emergency Assistance Act of 1988 (Public Law 93-288, as amended)

8.2 State

California Emergency Services Act (Chapter 7, Division 1 of Title 2 of the Government Code)

Standardized Emergency Management System Regulations (Chapter 1 of Division 2 of Title 19 of the California Code of Regulations)

8.3 Local

Ordinance Code of San Joaquin County 1995, Title 4 – Public Safety, Division 3. – Civil Defense And Disaster, Section 4-3008

Local Project Cooperation Agreement between The Central Valley Flood Protection Board of the State of California and Reclamation District 17 for PL84-99 Work, 2008

Standard Operation and Maintenance Manual for the Lower San Joaquin River Levees, Lower San Joaquin River and Tributaries Project, California

Attachment 1

Reclamation District 17 Emergency Response and Training Policy

Reclamation District 17 Board of Trustees hereby adopts the National Incident Management System (NIMS) for organizing emergency response activities. The Board further establishes the following emergency response and training policies.

Emergency Response

In an emergency, the District Board of Trustees is responsible for determining general response policy and performing financial oversight. The District Emergency Manager and District Engineer are responsible for organizing District response activities, supervising any hired staff or contractors working for the District, and for coordinating with outside agencies. The District hereby establishes the position of Emergency Levee Worker for purposes of hiring or re-assigning staff at the time of the emergency for levee patrol.

National Incident Management System Training Guidance

In regard to meeting national training requirements, the District will comply with the provisions of the National Incident Management System Training Program Manual, September 2011 and any subsequent revisions to that document. The District will also comply with California Standardized Emergency Management System (SEMS) training requirements.

The NIMS Training Program Manual indicates that federal training guidance is not absolute and that organizations should tailor their training to the level of incident complexity that their staff would potentially manage. After careful review of the definitions of incident complexity levels shown on Page 16 of the NIMS Training Program Manual, this Board has determined that District responsibilities to patrol its levees and respond to threats to levee structural integrity would require District staff to manage Type 4 incidents. District training requirements outlined below meet NIMS training recommendations for Type 4 incidents (pages 17 and 18, NIMS Training Program Manual, September 2011) and SEMS training requirements.

Reclamation District 17 Training Requirements

The Board of Trustees hereby establishes the following training requirements for District staff involved in flood emergency operations.

Members of the Board of Trustees shall complete the G-402, Incident Command System Overview for Executives and Senior Officials and the SEMS Executive Course.

The District Emergency Manager and District Engineer shall complete, at a minimum, the SEMS Introduction, ICS-100 Introduction to the Incident Command System, ICS-200 ICS for Single Resources and Initial Action Incidents, and IS-700 NIMS An Introduction courses to

meet Type 4 incident management requirements. In addition, the District Emergency Manager shall complete IS-800 National Response Framework and IS-701 NIMS MACS course to meet inter-agency coordination responsibilities.

Staff hired or transferred to serve as Emergency Levee Workers at the time of an emergency shall receive a 2-hour RD17 Emergency Safety and NIMS Course that will include a 60 minute summary of the SEMS Introduction, ICS-100 and IS-700 courses and specific safety information for their emergency duties prior to beginning work.

This policy is hereby approved by the Board of Trustees on _____
by the following vote.

By: _____

Title

Attachment 2

Reclamation District 17 Delegation of Authority Letter

As of _____ hrs, _____, I have delegated the authority and responsibility for the
(Time) (Date)

complete management of the Reclamation District 17 _____ Incident to
(Name of Incident)

_____ acting as District Incident
(Name of Individuals)

Commander and Deputy Incident Commander respectively.

Instructions

As Incident Commander, you are accountable to me and the Board of Trustees for the overall management of this incident including control and return to District staff and contractors. I expect you to adhere to relevant and applicable laws, policies, and professional standards.

My general considerations for management of the incident are:

1. Provide for safety of District staff.
2. Keep the Board and Board Secretary informed of key actions, and the situation.
3. Comply with the RD17 Flood Safety Plan and document conditions requiring its modification

My specific directions and clarifications of authority for this incident are:

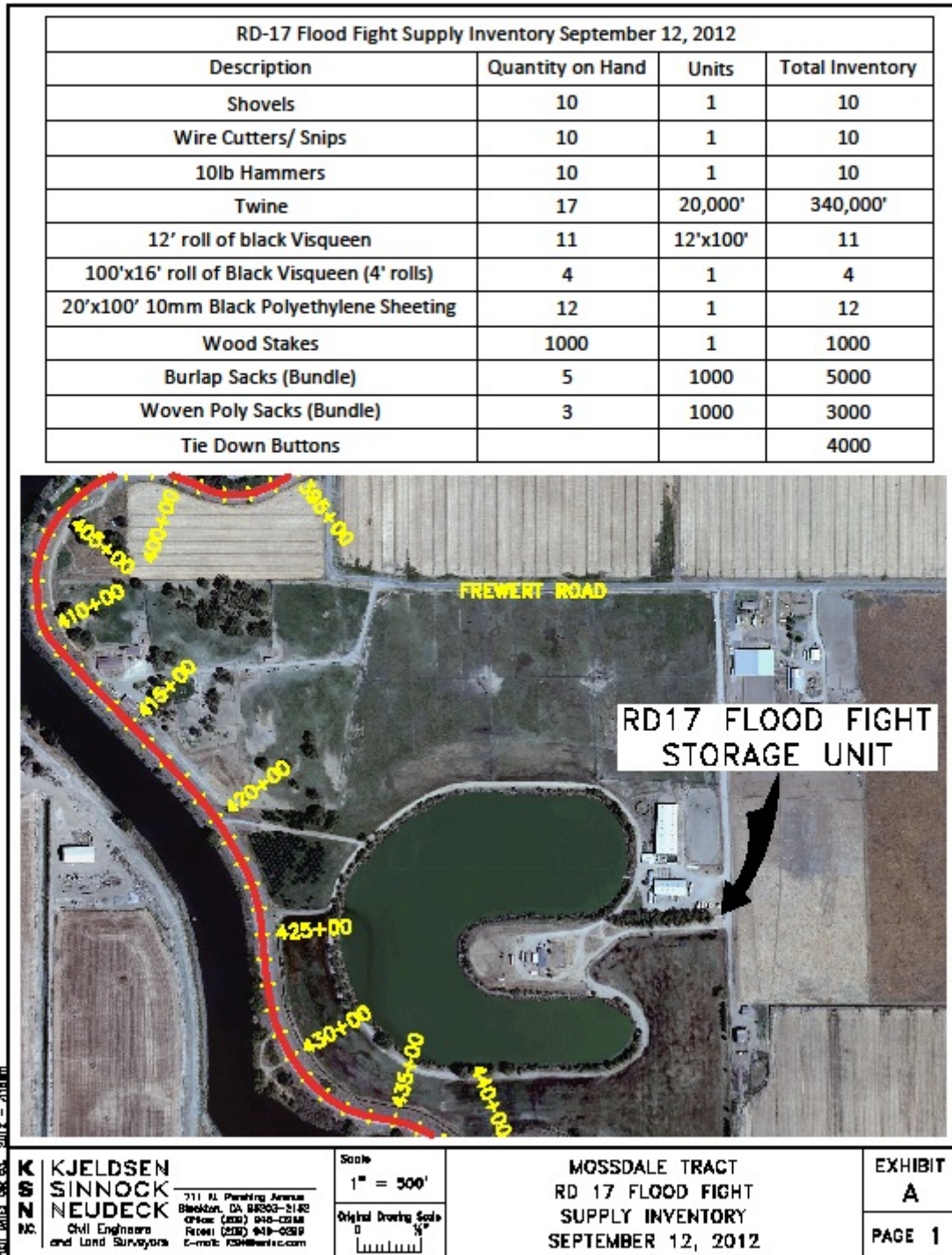
- 1.
- 2.
- 3.
- 4.

By: _____
(President, Board of Trustees)

Date

Attachment 3

Floodfight Supply Inventory



Attachment 4

Emergency Resolution Template

**RESOLUTION OF THE BOARD OF TRUSTEES
OF RECLAMATION DISTRICT NO. ____**

RESOLUTION No. ____

Upon special notice to and consent by the Trustees of Reclamation District No ____, of the County of ____, State of California, an emergency meeting of the Board of Trustees was held at the district offices at [LOCATION] on [DAY and DATE] at [TIME]. The Board agrees that an emergency situation exists which requires immediate action by the District.

[DESCRIPTION OF EMERGENCY EVENT, JUSTIFICATION]

EMERGENCY DECLARATION

WHEREAS, the trustees of Reclamation District ____ have considered the condition of the District Levees and the potential risk of general operation at the expense of public safety and agricultural production; and

WHEREAS, the Trustees have noted that the Sacramento and San Joaquin Delta is and will continue to experience high water levels resulting from heavy rainfalls and runoff, and high winds; and

WHEREAS, the District is experiencing [DESCRIPTION OF EMERGENCY EVENT]; and

WHEREAS, after consultation with the District staff and engineers after a visual assessment of the condition of the District levees on [DATE(S) and TIME(S)], the District finds and declares on [DATE] that an emergency situation exists and that all necessary and required work to protect the District and the District's levees should be completed at the earliest possible date.

NOW, THEREFORE, BE IT RESOLVED AND ORDERED by the Board of Trustees of the Reclamation District No. ____, as follows:

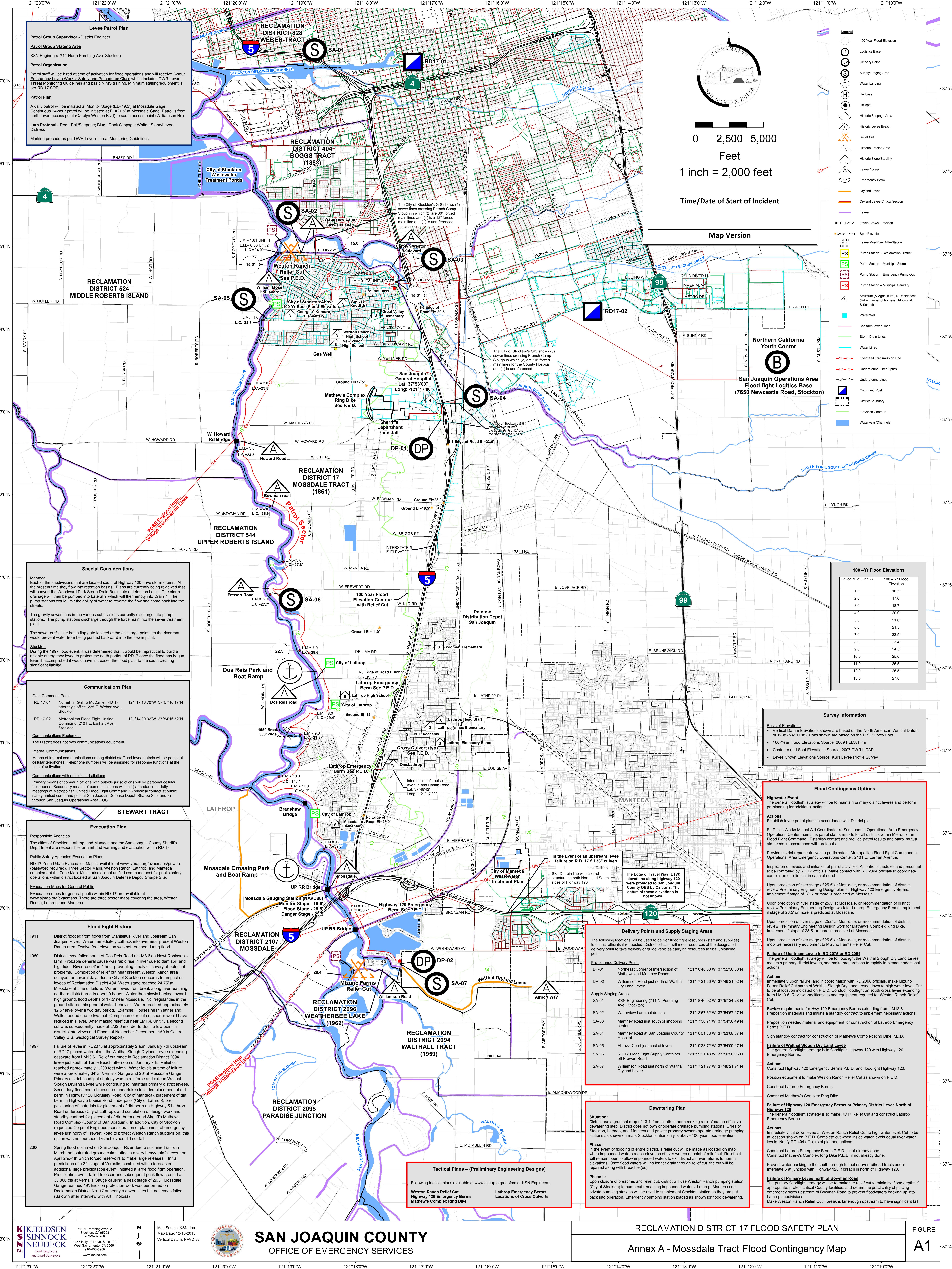
1. As of [DATE] an emergency situation exists within the District and along the District's levees, which requires the District to proceed immediately with the work to prevent the possible flooding of the district, and failure to its levees at the earliest possible time.
2. That the district President, and/or staff be hereby authorized and directed to acquire such materials and equipment and to enter into contracts necessary and appropriate to meet the emergency needs of the district in accordance with Flood Safety Plan.

CERTIFICATION

I, _____, President and trustee for Reclamation District No. ____ (District) do hereby certify that the above is a true and correct copy of the resolution which the Board of Trustees of the District unanimously adopted on [DATE].

Executed on _____, in _____, California.

District President



Levee Patrol Plan
Patrol Group Supervisor - District Engineer
Patrol Group Staging Area
 KSN Engineers, 711 North Pershing Ave, Stockton
Patrol Organization
 Patrol staff will be hired at time of activation for flood operations and will receive 2-hour Emergency Levee Worker Safety and Procedures Class which includes DWR Levee Threat Monitoring Guidelines and basic NIMS training. Minimum staffing/equipment is per RD 17 SOP.
Patrol Plan
 A daily patrol will be initiated at Monitor Stage (EL+19.5) at Mossdale Gauge. Continuous 24-hour patrol will be initiated at EL+21.5 at Mossdale Gauge. Patrol is from north levee access point (Carlyn Weston Blvd) to south access point (Williamson Rd).
Levee Protocol - Red - Bolt/Seepage; Blue - Rock Slippage; White - Slope/Levee Distress
 Marking procedures per DWR Levee Threat Monitoring Guidelines.

- Legend**
- 100 Year Flood Elevation
 - Logistics Base
 - Delivery Point
 - Supply Staging Area
 - Water Landing
 - Helibase
 - Helispot
 - Historic Seepage Area
 - Historic Levee Breach
 - Relief Cut
 - Historic Erosion Area
 - Historic Slope Stability
 - Levee Access
 - Emergency Berm
 - Dryland Levee
 - Dryland Levee Critical Section
 - Levee
 - Levee Crown Elevation
 - Spot Elevation
 - Levee Mile-River Mile Station
 - Pump Station - Reclamation District
 - Pump Station - Municipal Storm
 - Pump Station - Emergency Pump Out
 - Pump Station - Municipal Sanitary
 - Structure (A=Agricultural, R=Residence (R# = number of homes), H=Hospital, S=School)
 - Water Well
 - Sanitary Sewer Lines
 - Storm Drain Lines
 - Water Lines
 - Overhead Transmission Line
 - Underground Fiber Optics
 - Underground Lines
 - Command Post
 - District Boundary
 - Elevation Contour
 - Waterways/Channels

0 2,500 5,000
 Feet
 1 inch = 2,000 feet

Time/Date of Start of Incident

Map Version

100-Yr Flood Elevations

Levee Mile (Unit 2)	100-Yr Flood Elevation
1.0	16.5'
2.0	17.6'
3.0	18.7'
4.0	20.0'
5.0	21.0'
6.0	21.5'
7.0	22.5'
8.0	23.4'
9.0	24.5'
10.0	25.0'
11.0	25.5'
12.0	26.5'
13.0	27.8'

Survey Information

- Vertical Datum Elevations shown are based on the North American Vertical Datum of 1988 (NAVD 88). Units shown are based on the U.S. Survey Foot.
- 100-Year Flood Elevations Source: 2009 FEMA FIM
- Contours and Spot Elevations Source: 2007 DWR LIDAR
- Levee Crown Elevations Source: KSN Levee Profile Survey

Flood Contingency Options

Highwater Event
 The general floodlight strategy will be to maintain primary district levees and perform preplanning for additional actions.

Actions
 Establish levee patrol plans in accordance with District plan.
 SJ Public Works Mutual Aid Coordinator at San Joaquin Operational Area Emergency Operations Center maintains patrol status reports for all districts within Metropolitan Flood Fight Command. Establish contact and provide patrol results and patrol mutual aid needs in accordance with protocols.
 Provide district representatives to participate in Metropolitan Flood Fight Command at Operational Area Emergency Operations Center, 2101 E. Earhart Avenue.
 Inspection of levees and initiation of patrol activities. All patrol schedules and personnel to be controlled by RD 17 officials. Make contact with RD 2094 officials to coordinate completion of relief cut in case of need.
 Upon prediction of river stage of 25.5' at Mossdale, or recommendation of district, review Preliminary Engineering Design plan for Highway 120 Emergency Berms. Implement if stage of 26.5' or more is predicted at Mossdale.
 Upon prediction of river stage of 25.5' at Mossdale, or recommendation of district, review Preliminary Engineering Design work for Lathrop Emergency Berms. Implement if stage of 26.5' or more is predicted at Mossdale.
 Upon prediction of river stage of 25.5' at Mossdale, or recommendation of district, review Preliminary Engineering Design work for Mathews Complex Ring Dike. Implement if stage of 26.5' or more is predicted at Mossdale.
 Upon prediction of river stage of 25.5' at Mossdale, or recommendation of district, mobilize necessary equipment to Mizuno Farms Relief Cut.

Failure of Upstream Levee in RD 2075 or RD 2094
 The general floodlight strategy will be to floodlight the Walthal Dry Land Levee, maintain primary district levees, and make preparations to rapidly implement additional actions.
Actions
 Immediately upon failure, and in coordination with RD 2096 officials, make Mizuno Farms Relief Cut south of Walthal Slough Dry Land Levee down to high water level. Cut to be at location indicated on P.E.D. Conduct floodlight on south cross levee extending from LM13.6. Review specifications and equipment required for Weston Ranch Relief Cut.
 Review requirements for Hwy 120 Emergency Berms extending from LM12.8. Preparation materials and initiate a standby contract to implement necessary actions.
 Preposition needed material and equipment for construction of Lathrop Emergency Berms P.E.D.
 Sign standby contract for construction of Mathews Complex Ring Dike.

Failure of Walthal Slough Dry Land Levee
 The general floodlight strategy is to floodlight Highway 120 with Highway 120 Emergency Berms.
Actions
 Construct Highway 120 Emergency Berms P.E.D. and floodlight Highway 120.
 Position equipment to make Weston Ranch Relief Cut as shown on P.E.D.
 Construct Lathrop Emergency Berms
 Construct Mathews Complex Ring Dike

Failure of Highway 120 Emergency Berms or Primary District Levee North of Highway 120
 The general floodlight strategy is to make RD 17 Relief Cut and construct Lathrop Emergency Berms.
Actions
 Immediately cut down levee at Weston Ranch Relief Cut to high water level. Cut to be at location indicated on P.E.D. Complete cut when inside water levels equal river water levels. Notify RD 404 officials of planned actions.
 Construct Lathrop Emergency Berms P.E.D. if not already done.
 Construct Mathews Complex Ring Dike if not already done.
 Prevent water backing to the south through tunnel or over railroad tracts under Interstate 5 at junction with Highway 120 if breach in north of Highway 120.

Failure of Primary Levee north of Bowman Road
 The primary floodlight strategy will be to make the relief cut to minimize flood depths if appropriate, protect critical County facilities, and determine practicality of placing emergency berm upstream of Bowman Road to prevent floodwaters backing up into Lathrop subdivisions.
 Make Weston Ranch Relief Cut if break is far enough upstream to have significant fall

Delivery Points and Supply Staging Areas

The following locations will be used to deliver flood fight resources (staff and supplies) to district officials if requested. District officials will meet resources at the designated delivery point to take delivery or guide vehicles carrying resources to final unloading point.

Pre-planned Delivery Points	Coordinates
DP-01 Northeast Corner of Intersection of Mathews and Mantley Roads	121°1648.80'W 37°5256.80'N
DP-02 Williamson Road just north of Walthal Dry Land Levee	121°1721.66'W 37°4621.92'N
Supply Staging Areas	Coordinates
SA-01 KSN Engineering (711 N. Pershing Ave., Stockton)	121°1846.92'W 37°5724.28'N
SA-02 Waterway Lane cul-de-sac	121°1857.62'W 37°5457.27'N
SA-03 Mantley Road just south of shopping center	121°1730.71'W 37°5436.49'N
SA-04 Mantley Road at San Joaquin County Hospital	121°1651.86'W 37°5308.37'N
SA-05 Abuzzi Court just east of levee	121°1928.72'W 37°5409.47'N
SA-06 RD 17 Flood Fight Supply Container off Frewert Road	121°1921.43'W 37°5050.96'N
SA-07 Williamson Road just north of Walthal Dryland Levee	121°1721.77'W 37°4621.91'N

Dewatering Plan

Situation: District has a gradient drop of 13.4' from north to south making a relief cut an effective dewatering strategy. District does not own or operate drainage pumping stations. Cities of Stockton, Lathrop, and Manteca and private property owners operate drainage pumping stations as shown on map. Stockton station only is above 100-year flood elevation.

Phase I: In the event of flooding of entire district, a relief cut will be made as located on map when impounded waters reach elevation of river waters at point of relief cut. Relief cut will remain open to allow impounded waters to exit district as river returns to normal elevations. Once flood waters will no longer drain through relief cut, the cut will be repaired along with breaches.

Phase II: Upon closure of breaches and relief cut, district will use Weston Ranch pumping station (City of Stockton) to pump out remaining impounded waters. Lathrop, Manteca and private pumping stations will be used to supplement Stockton station as they are put back into operation. Emergency pumping station placed as shown for flood dewatering.

Tactical Plans - (Preliminary Engineering Designs)

Following tactical plans available at www.sjmap.org/ocsefm or KSN Engineers.

- Weston Ranch Relief Cut
- Highway 120 Emergency Berms
- Mathews Complex Ring Dike
- Lathrop Emergency Berms
- Locations of Cross Culverts

Special Considerations

Manteca
 Each of the subdivisions that are located south of Highway 120 have storm drains. At the present time they flow into retention basins. Plans are currently being reviewed that will convert the Woodward Park Storm Drain Basin into a detention basin. The storm drainage will then be pumped into lateral Y which will then enter into Drain 7. The pump stations would limit the ability of water to reverse the flow and come back into the streets.
 The gravity sewer lines in the various subdivisions currently discharge into pump stations. The pump stations discharge through the force main into the sewer treatment plant.
 The sewer outfall line has a flap gate located at the discharge point into the river that would prevent water from being pushed backward into the sewer plant.

Stockton
 During the 1997 flood event, it was determined that it would be impractical to build a reliable emergency levee to protect the north portion of RD17 once the flood has begun. Even if accomplished it would have increased the flood plain to the south creating significant liability.

Communications Plan

Field Command Posts

RD	Location	Coordinates
RD 17-01	Nornellini, Grill & McDaniel, RD 17 attorney's office, 235 E. Weber Ave., Stockton	121°1716.70'W 37°5716.17'N
RD 17-02	Metropolitan Flood Fight Unified Command, 2101 E. Earhart Ave., Stockton	121°1430.32'W 37°5416.52'N

Communications Equipment
 The District does not own communications equipment.

Internal Communications
 Means of internal communications among district staff and levee patrols will be personal cellular telephones. Telephone numbers will be assigned for response functions at the time of activation.

Communications with outside Jurisdictions
 Primary means of communications with outside jurisdictions will be personal cellular telephones. Secondary means of communications will be 1) attending at daily meetings of Metropolitan Unified Flood Fight Command, 2) physical contact at public safety unified command post at San Joaquin Defense Depot, Sharpe Site, and 3) through San Joaquin Operational Area EOC.

Evacuation Plan

Responsible Agencies
 The cities of Stockton, Lathrop, and Manteca and the San Joaquin County Sheriff's Department are responsible for alert and warning and evacuation within RD 17.

Public Safety Agencies Evacuation Plans
 RD 17 Zone Urban Evacuation Map is available at www.sjmap.org/evacmaps/private (password required). Three Sector Maps, Weston Ranch, Lathrop, and Manteca complement the Zone Map. Multi-jurisdictional unified command post for public safety operations within district located at San Joaquin Defense Depot, Sharpe Site.

Evacuation Maps for General Public
 Evacuation maps for general public within RD 17 are available at www.sjmap.org/evacmaps. There are three sector maps covering the area, Weston Ranch, Lathrop, and Manteca.

Flood Fight History

1911 District flooded from flows from Stanislaus River and upstream San Joaquin River. Water immediately cutback into river near present Weston Ranch area. Twelve foot elevation was not reached during flood.

1950 District levee failed south of Dos Reis Road at LM8.6 on New Robinson's farm. Probable general cause was rapid rise in river due to dam spill and high tide. River rose 4 1/2 hours preventing timely discovery of potential problems. Completion of relief cut near present Weston Ranch area delayed for several days due to City of Stockton concerns for impact on levees of Reclamation District 404. Water stage reached 24.75' at Mossdale at time of failure. Water flowed from break along river reaching northern district area in about 9 hours. Water then slowly backed toward high ground, flood depths of 17.5' near Mossdale. No irregularities in the ground altered this general water behavior. Water reached approximately 12.5' level over a two day period. Example: Houses near Yether and Wolfe flooded one to two feet. Completion of relief cut sooner would have reduced this level. After making relief cut near LM1.4, Unit 1, a second cut was subsequently made at LM2.8 in order to drain a low point in district. (Interviews and Floods of November-December 1950 in Central Valley U.S. Geological Survey Report)

1997 Failure of levee in RD2075 at approximately 2 a.m. January 7th upstream of RD17 placed water along the Walthal Slough Dryland Levee extending eastward from LM13.6. Relief cut made in Reclamation District 2094 levee just south of Turtle Beach afternoon of January 7th. Relief cut reached approximately 1,200 feet width. Water levels at time of failure were approximately 34' at Vernalis Gauge and 20' at Mossdale Gauge. Primary district floodlight strategy was to reinforce and extend Walthal Slough Dryland Levee while continuing to maintain primary district levees. Secondary flood control measures undertaken included placement of dirt berm in Highway 120 McKinley Road (City of Manteca), placement of dirt berm in Highway 5 Louise Road underpass (City of Lathrop), pre-positioning of materials for placement of dirt berm on Highway 5 Lathrop Road underpass (City of Lathrop), and completion of design work and standby contract for placement of dirt berm around Sheriff's Mathews Road Complex (County of San Joaquin). In addition, City of Stockton requested Corps of Engineers consideration of placement of emergency levee just north of Frewert Road to protect Weston Ranch subdivision; this option was not pursued. District levees did not fail.

2008 Spring flood occurred on San Joaquin River due to sustained rains in March that saturated ground culminating in a very heavy rainfall event on April 2nd-4th which forced reservoirs to make large releases. Initial predictions of a 32' stage at Vernalis, combined with a forecasted additional large precipitation event, initiated a large flood fight operation. Precipitation event failed to occur and subsequent peak flow created at 35,000 cfs at Vernalis Gauge causing a peak stage of 29.3'. Mossdale Gauge reached 19'. Erosion protection work was performed on Reclamation District No. 17 at nearly a dozen sites but no levees failed. (Badwin after interview with Art Hinjosa)