

Draft
Levee District 1
Flood Safety Plan

Prepared for the Levee District One of
Sutter County

Prepared by GEI Consultants, Inc.

December 13, 2010

Table of Contents

Abbreviations and Acronyms		v
1	Plan Introduction	1
1.1	Purpose	1
1.2	Scope	1
2	Concept of Operations	1
2.1	Situation Overview	1
2.2	General Approach to Seasonal Flood Operations	1
2.2.1	Monitoring	1
2.2.2	Analysis and Initial Response	1
2.2.3	Alerting and Activation	2
2.3	Public Notification for Flood Threats	2
2.3.1	Initial Notifications	2
2.4	Flood/Threat Operations	2
2.4.1	Phase I: Normal Preparedness	3
2.4.2	Phase II: Increased Readiness	4
2.4.3	Phase III: Emergency Preparedness	4
2.4.4	Phase IV: Emergency Phase	5
2.4.5	Phase V: Recovery	5
2.4.6	Federal and State Emergency and Disaster Assistance	6
3	Organization and Assignment of Responsibilities	7
3.1	General Organization and Responsibilities	7
3.1.1	Levee Flood Control Operations	7
3.1.2	Operational Area Flood Control Operations	7
3.1.3	Mutual Aid Regions and Regional Support	7
3.1.4	State Flood Control Operations	7
3.1.5	Federal Flood Control Operations	7
4	Direction, Control, and Coordination	8
4.1	Chief Executive	8
4.2	Incident Commander	8
4.3	Support Personnel	8
4.4	Plan Activation	8
4.5	Standardized Emergency Management System (SEMS) Structure	8
4.6	Public Notification	9
4.6.1	Notification Protocols	10
4.7	Resources	10
4.7.1	Staffing	10
4.7.2	Integration with Police, Fire Responders	10

4.7.3	Getting and Training Volunteers	10
4.7.4	Cal EMA and DWR Assistance	10
4.8	Disaster Intelligence	11
4.8.1	Information Needed and Resources	11
4.9	Essential Services	12
5	Communications	13
5.1	Communications Organization	13
5.2	Public Alerting Systems	13
5.2.1	Emergency Alert System (EAS)	13
5.2.2	Emergency Digital Information Service (EDIS)	13
5.3	Local Radio Systems	13
5.3.1	Radios	13
5.3.2	Consolidated Public Safety Communications System (CPSCS)	14
5.3.3	Local Communications Support Resources	14
5.3.4	Telephone Systems	15
5.3.5	Weak Links	15
5.4	Protocols for Contacting Levee Patrols	15
5.4.1	Other Communications Protocols	15
5.5	Integration and Interoperability	15
5.6	Media Interface	16
6	Administration, Finance, and Logistics	17
6.1	Master Mutual Aid Agreement	17
6.2	Record Keeping	17
6.3	Resource Tracking	17
6.4	Stockpiles – Location and Access	18
6.5	Staging Areas	18
6.6	Equipment	18
7	Plan Development and Maintenance	19
7.1	Plan Development	19
7.2	Plan Review and Maintenance	19
7.3	Training and Exercises	20
7.4	Evaluation	20
8	Authorities and References	21
8.1	Federal	21
8.2	State	21
8.3	Local	21
Appendix A	Communications Support	A-1
A.1	Communications Support	A-1
A.1.1	The California Emergency Management Agency (Cal EMA)	A-1
A.1.2	Mobile Satellite Communications Units	A-1
A.1.3	Operational Area Satellite Information System	A-1

Flood Safety Plan – Levee District One of Sutter County (LD1)

A.1.4	Mobile Command & Communication Facilities	A-1
A.1.5	Portable Radio Caches	A-1
A.2	Emergency Call-Down Tree	A-2
A.3	Emergency Contact Directory	A-3
A.4	Sample Press Releases	A-4

Appendix B **Levee Patrol** **B-1**

B.1	Purpose	B-1
B.2	Program Elements	B-1
B.2.1	Component I – Training	B-1
B.2.2	Component II – Equipment Procurement and Maintenance	B-2
B.2.3	Component III – Levee Patrols	B-2
B.2.4	High Water Staking Procedures	B-4
B.3	Augmenting Staff	B-4

Appendix C **Flood Fight** **C-1**

C.1	Trigger(s)	C-1
C.2	Prioritization	C-1
C.3	Activation and Dispatch	C-1
C.4	Personnel	C-2
C.4.1	Resource Agencies	C-2
C.4.2	Mission Tasking	C-2
C.4.3	Tasking Criteria	C-2
C.4.4	Costs/Reimbursement	C-2
C.4.5	Request Procedures	C-2
C.4.6	State Agency Voluntary Response	C-3
C.5	Hazardous Materials Locations	C-3
C.6	Materials and Supplies	C-3
C.7	Public Supplies	C-4
C.8	Logistics Procedures	C-4
C.9	Training in Flood Fight Procedures and Techniques	C-5

Appendix D **Evacuation** **D-1**

D.1	Considerations	D-1
D.2	Public Notification	D-1
D.3	Operations	D-1
D.4	Maps	D-2

Appendix E **Flood Water Removal** **E-1**

E.1	Priorities	E-1
E.1.1	Alternative 1 – No Immediate Dewatering Needed	E-1
E.1.2	Alternative 2 – Close Breach; No Water Removal	E-1
E.1.3	Alternative 3 – Repair Breach and Remove Water by Pumping	E-2
E.1.4	Alternative 4 – Repair Breach and Remove Water by Making a Relief Cut	E-2
E.1.5	Environmental Considerations	E-3

E.2	Contractors and Vendors	E-3
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<u>Appendix F</u>	<u>References</u>	<u>F-1</u>
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<u>Appendix G</u>	<u>Supporting Documents</u>	<u>G-1</u>
G.1	Supporting Documents	G-3
	G.1.1 Promulgation Document/Signature Page	G-3
G.2	Approval and Implementation	G-4
G.3	Record of Changes	G-4
G.4	Record of Distribution	G-5
G.5	Hazard Analysis Summary	G-5
	G.5.1 Creeks and Streams	G-5
	G.5.2 Levees and Dams	G-5
G.6	Capability Assessment	G-6
G.7	Planning Assumptions	G-6
G.8	Formal Delegation of Authority to Incident Commander	G-7

Abbreviations and Acronyms

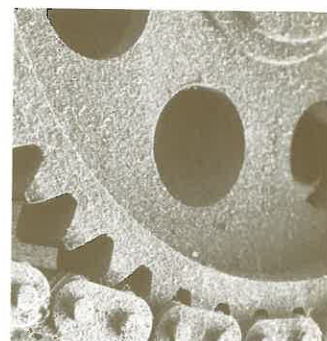
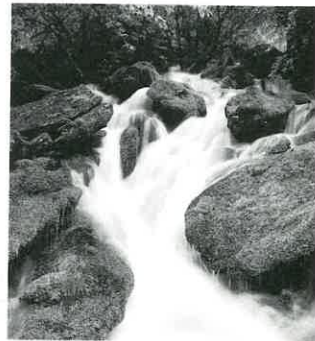
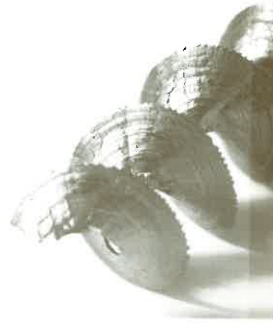
Cal EMA	California Emergency Management Agency
Cal Fire	California Department of Forestry and Fire Protection
Cal OSHA	California Division of Occupational Safety and Health
CB	Citizens' Band
CCC	California Conservation Corps
CDEC	California Data Exchange Center
CERT	Community Emergency Response Team
CESRS	California Emergency Services Radio System
CLEMARS	California Law Enforcement Mutual Aid Radio System
CLERS	California Law Enforcement Radio System
CNG	California National Guard
CNRFC	California-Nevada River Forecast Center
CPSCS	Consolidated Public Safety Communications System
DWR	California Department of Water Resources
EAS	Emergency Alert System
EDIS	Emergency Digital Information Service
EMS	Emergency Management System
EOC	Emergency Operations Center
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FOC	Flood Operations Center
FSP	Flood Safety Plan
GPS	Global Positioning System
IC	Incident Commander
ICP	Incident Command Post
ICS	Incident Command System
JIC	Joint Information Center

Flood Safety Plan – Levee District One of Sutter County (LD1)

LD1	Levee District One of Sutter County
LMA	Local Maintaining Agency
MECU	Mobile Emergency Coordination Unit
NWS	National Weather Service
OA	Operational Area (County)
OASIS	Operational Area Satellite Information System
OES	Office of Emergency Services
PIO	Public Information Officer
PL 84-99	Public Law No. 84-99 (1984) gives the Corps of Engineers authority for emergency management activities.
PSAP	Public Safety Answering Point
RACES	Radio Amateurs Civil Emergency Services
RD	Reclamation District
RM	River Mile
REOC	Cal EMA's Regional Emergency Operations Center
RIMS	Response Information Management System
SEMS	Standardized Emergency Management System
SOC	Cal EMA's State Operations Center
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation



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1 Plan Introduction

1.1 Purpose

This Flood Safety Plan (FSP) outlines Levee District One of Sutter County (LD1's) planned response to flood emergencies in or affecting its responsibilities in Sutter County.

The purpose of the plan is to provide information, policies, and procedures that will guide and assist LD1 in efficiently dealing with flood emergencies. The plan addresses flood preparedness, levee patrols, flood fight, evacuation procedures, floodwater removal, and related subjects. This plan allows implementation of the California Standardized Emergency Management System (SEMS). When used in conjunction with the *California Emergency Plan* and other local emergency plans, it will facilitate multi-agency and multi-jurisdictional coordination, particularly among LD1, local governments, and State agencies in flood emergency operations.

Although this is a public document, appendices contain specific procedures to be followed in flood response. The appendices include sensitive material, such as personal contact information. Therefore, they are not public documents in their complete forms – they are subject to restricted-use handling procedures. Edited copies deleting restricted data may be obtained from the LD1 main office located at 243 Second Street, Yuba City, CA 95991.

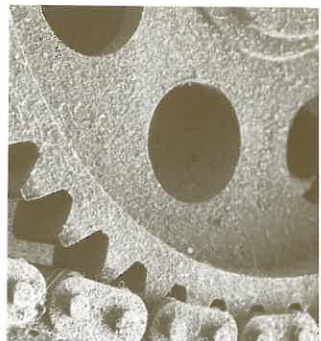
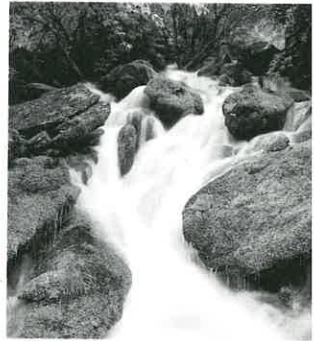
1.2 Scope

The LD1 Flood Safety Plan:

- Establishes the emergency management organization to respond to a flood emergency affecting LD1.
- Identifies policies, responsibilities, and procedures required to protect the health and safety of LD1 from the effects of flood emergencies.
- Establishes operational concepts and procedures associated with field response to flood emergencies and the recovery process.
- Identifies policies for after-action analyses and follow-on activities.



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2 Concept of Operations

2.1 Situation Overview

LD1 is located in Sutter County in the Sacramento Valley. Areas and basins adjacent to rivers, sloughs, creeks, and drainage canals and other low-lying areas are subject to flooding. State and local protective facilities, such as dams, bypasses, and levees, afford a level of flood protection; however, the flood events of 1955, 1964, 1986, 1995, 1997, and 1998 demonstrated that there is still a flood threat in the Valley. The Board of Directors for LD1 – Francis K. Silva, Chairman, Al Montna, and Barbara LeVake – is committed to improving flood safety along the Feather River through proper maintenance of the levee for which it is responsible.

2.2 General Approach to Seasonal Flood Operations

LD1 is responsible for 16.65 miles of levee along the Feather River, as shown in Figures 1 & 2. Flood response levels for LD1 are based on river stage for the Feather River at the 5th Street Bridge gage as well as river stages monitored at Boyd's Landing and at Nicolaus. This ensures coordination with flood emergency response by Sutter County and Yuba City. Although not all flooding in its jurisdiction may be based on various river stages, this Section, specifically part 2.4, defines the level of response by LD1 for specific triggers.

2.2.1 Monitoring

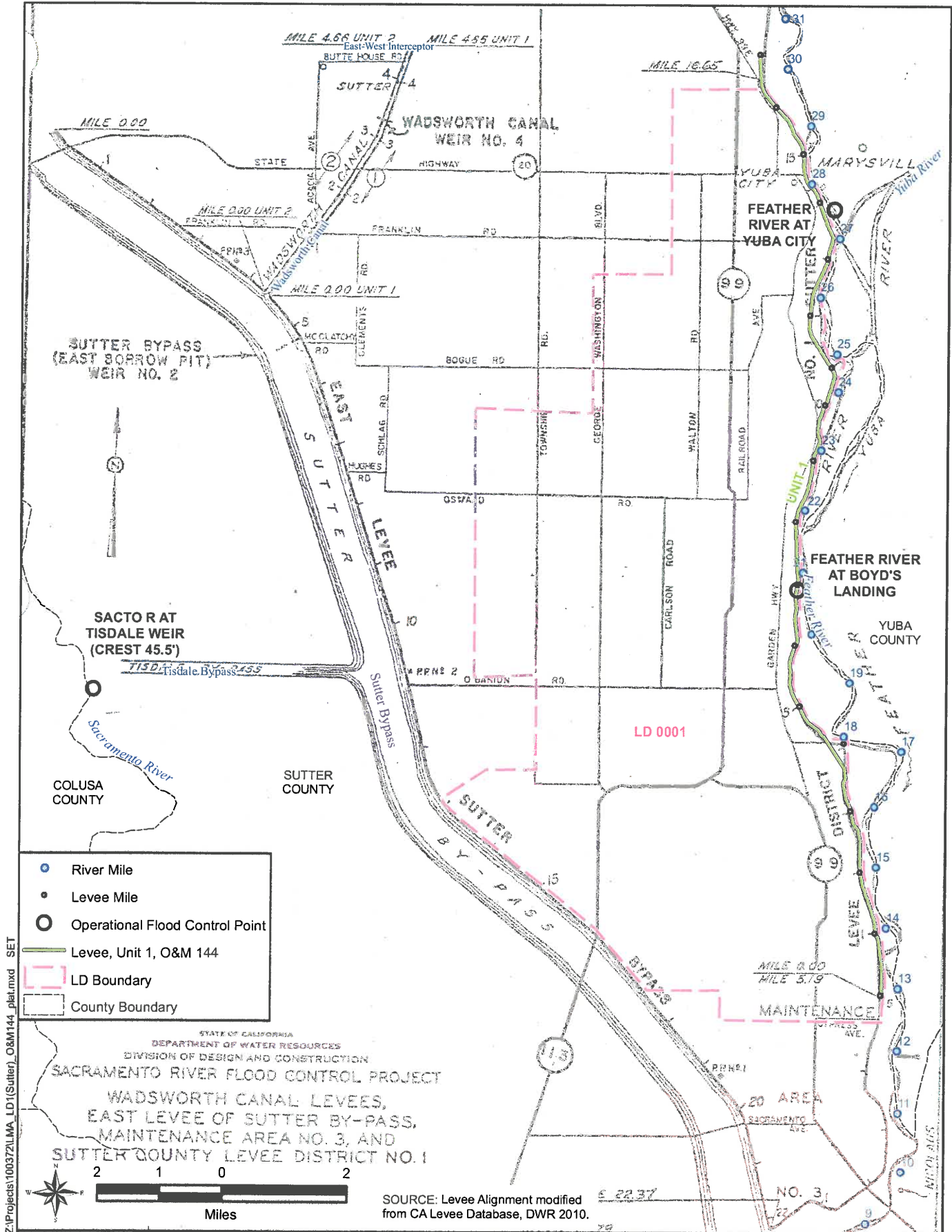
LD1's flood stage monitoring is comprised of observing the readings from the 5th Street Bridge gage on the Feather River near River Mile (RM) 28.5 in Yuba City as well as observing river stages at Boyd's Landing near RM 22.0 and at Nicolaus near RM 9.5. Real-time data is available through the internet through the California Data Exchange Center (CDEC) within the Department of Water Resources Website (<http://cdec.water.ca.gov>). CDEC provides information on all California rivers and reservoirs. This allows direct monitoring of outflows from Oroville and New Bullards Bar, key dams affecting the release of flows on LD1 levee system.

2.2.2 Analysis and Initial Response

After compiling monitoring and surveillance information, LD1 decides whether it is necessary to begin flood operations or to direct flood fight resources to specific areas where flooding is occurring or may occur soon. LD1, Yuba City, and Sutter County emergency personnel also monitor river stage information and are in constant communications with flood control staff throughout any storm episode.

2.2.2.1 Patrol Trigger

LD1 begins daily levee patrols when the elevation reaches 60 feet and rising at the 5th Street Bridge gage on the Feather River located near its northerly boundary the northerly, or when the Feather River stage reaches or exceeds 57.0 feet or 40 feet at Boyd's Landing and Nicolas, respectively located near the central and southerly portions of the LD1 levee system. (LD1



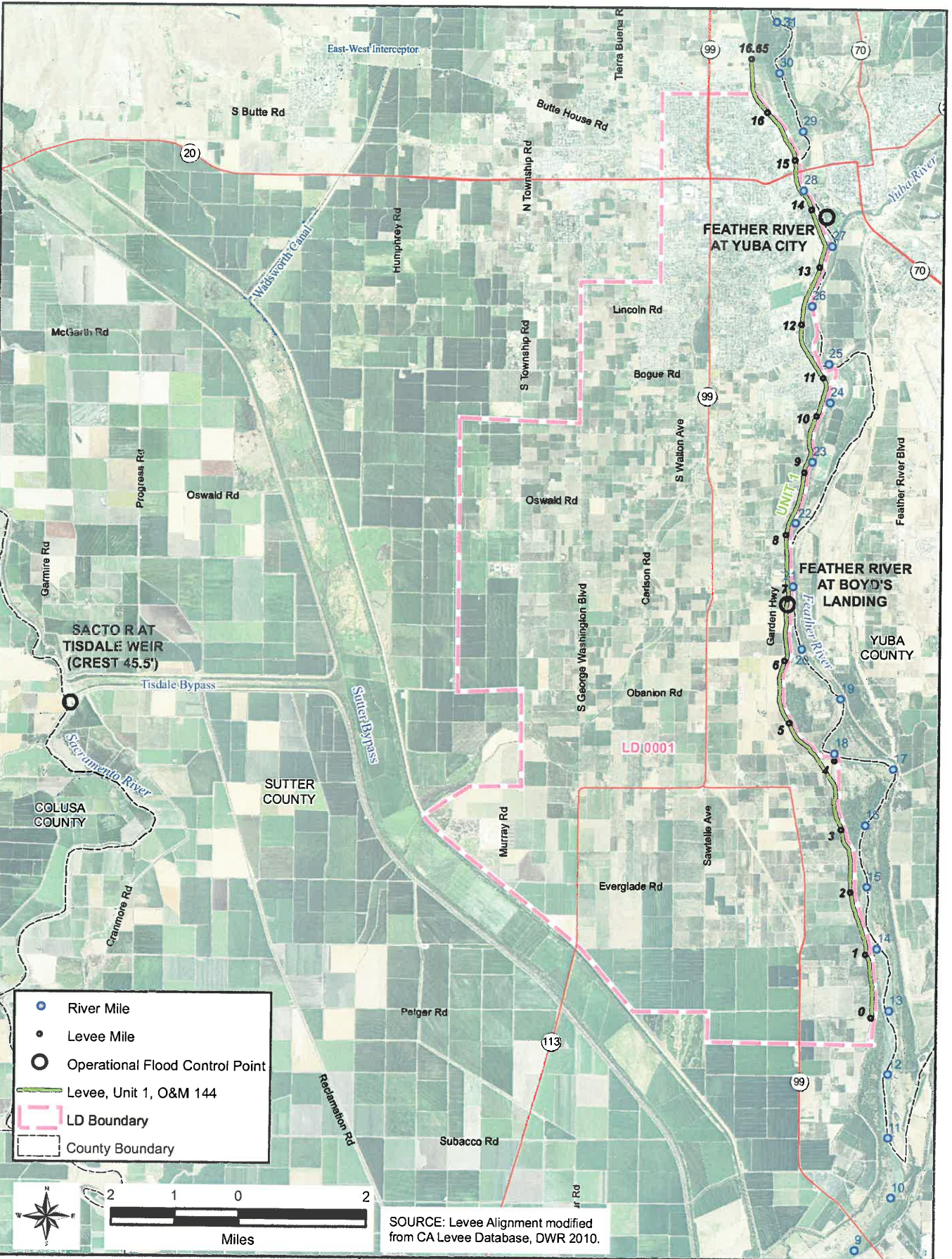
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- River Mile
- Levee Mile
- Operational Flood Control Point
- Levee, Unit 1, O&M 144
- LD Boundary
- County Boundary

STATE OF CALIFORNIA
 DEPARTMENT OF WATER RESOURCES
 DIVISION OF DESIGN AND CONSTRUCTION
SACRAMENTO RIVER FLOOD CONTROL PROJECT
WADSWORTH CANAL LEVEES,
EAST LEVEL OF SUTTER BY-PASS,
MAINTENANCE AREA NO. 3, AND
SUTTER COUNTY LEVEL DISTRICT NO. 1



SOURCE: Levee Alignment modified from CA Levee Database, DWR 2010.



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- River Mile
- Levee Mile
- Operational Flood Control Point
- Levee, Unit 1, O&M 144
- LD Boundary
- County Boundary



SOURCE: Levee Alignment modified from CA Levee Database, DWR 2010.

shares the results of these Feather River stage patrols with Yuba City and Sutter County. See Section 2.4 for a more complete discussion.

If patrols detect emergency conditions that exceed its capabilities on any part of the levee, LD1 will call Sutter County for technical assistance. If conditions continue to worsen, LD1 will contact Sutter County for mutual aid resources. Upon request by LD1 or Sutter County, the DWR Flood Operations Center (FOC) may request support from the U.S. Army Corps of Engineers (USACE) under PL 84-99.

2.2.3 Alerting and Activation

As flood risk increases, LD1 will begin partial activation by notifying the Board and the staff.

The Yuba City OES Director and Sutter County Emergency Services Manager will brief their respective administrators. Depending on the flooding situation, their EOCs will be activated and staff will respond to coordinate response to the disaster with other agencies. The DWR FOC may also be activated.

2.3 Public Notification for Flood Threats

2.3.1 Initial Notifications

Initial notification is often limited in detail. Some emergency actions might be needed, but not enough to warrant LD1 activation. A follow-up call to the notifying party or agency may obtain further detail.

Local governments may receive direct warning from DWR, NWS, or the California Emergency Management Agency (Cal EMA). The Yuba County Water Agency, which controls New Bullards Bar Dam, and DWR, which operates Oroville Dam, will advise of dam incidents, significant releases, or significant changes in releases.

Sutter County is responsible for warnings and evacuations in unincorporated areas. They are also responsible for activating their own emergency response plans for the flooding threat.

2.4 Flood/Threat Operations

Feather River floods usually are preceded by a buildup period, providing advance warning. LD1 will use this time to prepare prompt and efficient response. In the case of slow rise flood threats, this plan will be implemented in several phases. For the Northern part of the levee, the phases are based on river elevations at the 5th Street Bridge gage as shown in Table 2-1.

Table 2-1. Emergency Actions as a Function of Feather River Elevation at 5th Street Bridge in Yuba City

<u>River Elevation</u>	<u>LD1 Patrol Activity</u>	<u>Yuba City Designation</u>	<u>Sutter County Designation</u>
60 feet	Daily patrols	Watch Stage	Planning and Preparation Phase
70 feet	Dawn & Dusk patrols	Full Alert Stage	Ready for Action Stage
77 feet	Hourly patrols	Emergency Stage	Emergency Phase

The Feather River at the 5th Street Bridge in Yuba City overflows its natural banks and reaches the base of the levee at an elevation of 60 feet. The “Project Flood Stage,” which is the

maximum designed flow for the levees, is 80.2 feet. At this elevation the levee still has over 3 feet of freeboard to the top of the levee. The top of the levee is at 83.5 feet.

For the central part of the LD1 levee system, the phases are based on river elevations at the Boyd’s Landing gage as shown in Table 2-2; and for the southern part of the LD1 levee system that can be heavily influenced by independent high water conditions originating within the Sutter Bypass the levee patrol phases are based upon river elevations at the Nicolaus gage as shown in Table 2-3

Table 2-2. Emergency Actions as a Function of Feather River Elevation at Boyd’s Landing

<u>River Elevation</u>	<u>LD1 Patrol Activity</u>	<u>Yuba City Designation</u>	<u>Sutter County Designation</u>
57 feet	Daily patrols	Watch Stage	Planning and Preparation Phase
60 feet	Dawn & Dusk patrols	Full Alert Stage	Ready for Action Stage
65 feet	Hourly patrols	Emergency Stage	Emergency Phase

In extreme weather events, water moving through the Sutter Bypass may backup into the Feather River near Nicolaus. In this case, although the trigger points may not have been reached at the 5th Street Bridge gage, LD1 will initiate levee patrols based on readings at the Nicolaus gage as noted in Table 2-3.

Table 2-3. Emergency Actions as a Function of Feather River Elevation at Nicolaus

<u>River Elevation</u>	<u>LD1 Patrol Activity</u>	<u>Yuba City Designation</u>	<u>Sutter County Designation</u>
40.0 feet	Daily patrols	Watch Stage	Planning and Preparation Phase
42.6 feet	Dawn & Dusk patrols	Full Alert Stage	Ready for Action Stage
46.4 feet	Hourly patrols	Emergency Stage	Emergency Phase

As a final check to ensure action is initiated well in advance of specific threats to the levee, LD1 uses the Boyd’s Landing gage, which is at the midpoint of the levee. The comparison shown in Table 2-4 is taken from CDEC. All elevations are 0.0 USED.

Table 2-4. Comparison of River Elevation at Critical Gages

<u>Station</u>	<u>CDEC ID</u>	<u>Monitor (ft)</u>	<u>Flood (ft)</u>	<u>Peak (ft)</u>	<u>Date</u>
Feather R at Yuba City	YUB	65.0	80.2	78.23	01/02/1997
Feather R at Boyd's Landing	FBL	57.0	65.0	---	---
Feather R near Nicolaus	NIC	40.0	48.0	50.40	01/02/1997

2.4.1 Phase I: Normal Preparedness

LD1 prepares and maintains plans, operating procedures, and checklists detailing the use and disposition of its resources in a flood emergency. These plans and procedures include coordination and communication lines with Yuba City, Sutter County, and nearby Districts.

During this Phase, DWR provides Flood Fight Training. LD1 conducts pre-season coordination and plans review meeting with Yuba City, Sutter County, and adjacent jurisdictions. LD1 also conducts public awareness and information campaigns. These campaigns include levee tours

and participation in National Flood Awareness Week programs. Also during this Phase, LD1 reviews its plans and procedure checklists, updating them where necessary.

2.4.2 Phase II: Increased Readiness

This phase begins with *monitoring* when conditions exist that could result in a flood, such as continuing and excessive rainfall, an unusually rapid snowmelt, or rising rivers. Phase II (monitor/initial action) is initiated when the elevation of the Feather River reaches 60 feet and rising at the 5th Street Bridge gage, or when the Boyd’s Landing gage is at 50 feet, or when the Nicolaus gage is at 40 feet.

As this situation develops, Frank Silva, Chairman of LD1 or Bill Hampton, General Manager, (or a designee) will evaluate information, decide upon necessary action, and initiate appropriate response. Generally this means to put the emergency response plan into *limited* operation, including the start of daily levee patrols. This also includes alerting the Board of Directors and key staff, ensuring readiness of essential resources, and preparing to move resources to any threatened section of the levee if required. LD1 will coordinate with Yuba City and Sutter County.

LD1 monitors communications, receives information on field situations, weather, river, and reservoir stages, directs response, and coordinates with adjacent and local agencies. It provides and coordinates resources and assets, provides information, arranges for volunteers and plans, organizes, controls, and documents actions preparing for a potential flood event.

State and federal actions in this phase include the following: DWR FOC monitors flooding situations and may extend hours to 24-hour operations. The Cal EMA State Operations Center (SOC) and Regional Operations Center for the Inland Region (REOC), and the Dam Management Center operated by USACE are all activated as flood threats increase. Adjacent counties and cities may decide to activate their EOCs.

2.4.3 Phase III: Emergency Preparedness

This phase begins when an evaluation of the situation indicates it is a matter of “when” rather than “if” emergency conditions will exist. Phase III starts when the elevation of the Feather River reaches 70 feet and rising at the 5th Street Bridge gage. South of Levee Mile 8, this phase can be initiated by a river stage of the Feather River at 56.2 feet and rising at the Boyd’s Landing gage; and in the southern portion of the District when the river stage of the Feather River is at 42.6 feet and rising at the Nicolaus gage.

Francis K. Silva, Chairman of LD1, will put emergency plans into full operation and conduct operations as follows:

- Require levee patrols to increase to dawn and dusk patrols and advise the Yuba City and Sutter County Offices of Emergency Services.
- Where resources appear insufficient, prepare to request and receive mutual aid.
- Contact the Sutter County Office of Emergency Services to give information as to the kind of threat, its imminence, potential severity, area affected, and associated problems.

Reports will include action being planned or taken, as well as deficiencies in critical emergency resources.

- Should the possible or expected emergency develop, ensure that ALL alerted agencies are promptly notified of this new change in conditions. This may also prompt immediate public notification, as is required by the nature of the threat.

2.4.4 Phase IV: Emergency Phase

During Flood Emergencies, LD1 may choose to have separate triggers for the northern (above Levee mile 8) and southern portions of its levee responsibilities. For the northern portion of the levee, the Emergency Phase can be initiated by a river stage of the Feather River at 77 feet and rising at the 5th Street Bridge gage or upon occurrence of a flood emergency requiring extraordinary effort. South of Levee Mile 8, this phase can be initiated by a river elevation of the Feather River at 65 feet and rising at the Boyd's Landing gage. At Nicolaus, this phase is initiated at a river elevation of the Feather River at 48 feet and rising. The nature of response operations is dependent upon the characteristics and requirements of the situation. The emergency organization will be mobilized to cope with the specific situation. Priority will be given to operations such as the following:

- Convene an emergency session of the LD1 Board of Directors
- Survey and evaluate the emergency situation and advise the Board of Directors
- Mobilize, allocate, and position personnel and materials for 24-hour patrolling and flood fight
- Establish staging areas for personnel, supplies, and equipment
- Protect, control, and allocate vital resources
- Restore or activate essential facilities and systems

All the preceding actions are based on extensive local coordination of plans and response. In addition, there are daily briefings at the FOC involving all parties and available by webcast to LD1. When local resources are committed to the maximum and additional materials/personnel are required to control or alleviate the emergency, requests for mutual aid will be initiated through the Sutter County EOC.

2.4.5 Phase V: Recovery

LD1 will address identified recovery needs. Governmental assistance could be required for an extended period. Recovery activities would include:

- Removal of debris
- Clearance of roadways
- Demolition of unsafe structures

This stage has three major objectives:

- Reinstatement of family autonomy and the provision of essential public services
- Permanent restoration of public property along with reinstatement of public services

2.4.6 Federal and State Emergency and Disaster Assistance

State and federal support during the Emergency Phase:

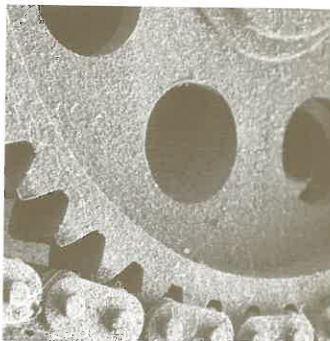
- LD1 will consider requesting Sutter County and DWR support during the Emergency Phase. California Mutual Aid and USACE assistance are available when resources beyond local capability are needed for flood fight operations.

Emergency Phase support following flooding:

- If the County declares a disaster, the Governor may support it by proclaiming a State of Emergency and then requesting the President make a National Disaster declaration for the affected area.
- If the President declares the area a national disaster, assistance from the Federal Emergency Management Agency (FEMA) will be requested.
- If residential flooding occurs, regardless of the declaration, USACE can provide federal funds for recovery operations for up to 30 days following the incident.
- USACE assistance can also be requested to repair eroded and damaged levees following high flows. Request for this authority must be made in a timely manner (30 days).



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3 Organization and Assignment of Responsibilities

3.1 General Organization and Responsibilities

3.1.1 Levee Flood Control Operations

Levee District One (LD1) exists within the Sutter County unincorporated area and has responsibility for the 16.65 miles of levee along the Feather River. The District has Sean Minard, a Civil Engineer with MHM Engineers, to help with flood fight responsibilities during flood emergencies. LD1 requests mutual aid and coordinates with the Sutter County Operational Area during flooding.

3.1.2 Operational Area Flood Control Operations

Sutter Operational Area flood operations are coordinated through its EOC. The EOC ensures proper communication and coordination among all entities responding to the flood.

3.1.3 Mutual Aid Regions and Regional Support

Mutual Aid requests go from Sutter County to the Inland Region REOC and then are passed to other counties in the Region. (Other counties will only supply what they can without endangering their own response capability.) The REOC may then request resources from the SOC, DWR, and USACE.

3.1.4 State Flood Control Operations

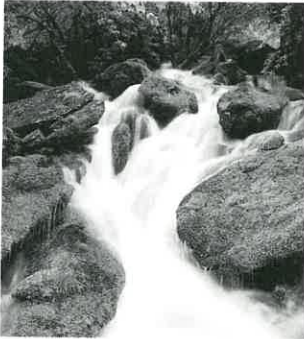
DWR is responsible for State flood control operations through its FOC, Division of Flood Management, other divisions, and their flood management and flood fight technical experts. DWR coordinates with USACE, USBR, and other agencies. DWR also operates CDEC, which monitors rainfall, stream flow, river stages, and reservoir releases across the state. DWR will work with other State agencies as needed during flood emergencies.

3.1.5 Federal Flood Control Operations

The USACE has responsibilities for federal flood activities in California. The USACE has a major responsibility for overseeing reservoir releases and supporting the State's effort in maintaining the levees and structures associated with the State Plan of Flood Control. The USACE can support emergency work as requested by the State under Public Law 84-99, which includes levee flood fighting.



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4 Direction, Control, and Coordination

4.1 Chief Executive

The LD1 Board of Directors establishes overall policies and priorities, providing direction for local flood response. Responsibility for managing emergency response within these policies and priorities is delegated to the General Manager and, on scene, to the Incident Commander (IC), who reports to the General Manager. LD1 supports Incident Response by supplying resources, equipment, and supplies. Where supplies are limited, the Board of Directors establishes priorities for allocation.

4.2 Incident Commander

The IC at the flood fight scene is in charge of all resources responding to that emergency site. The IC may assign missions to flood fight crews acquired under Mutual Aid from other governmental agencies, tasking them to perform specific tasks to facilitate response. Based on these missions, the crews' normal supervisors will direct State and federal crews.

4.3 Support Personnel

Flood fight crews responding from other areas pursuant to mutual aid – and contractors hired to undertake repairs – receive work assignments from the organization that requested or hired them. Organized crews will work under the immediate control of their own supervisors in response to missions assigned by the IC.

4.4 Plan Activation

Frank Silva, Chairman of the Board for LD1 and Bill Hampton, General Manager, have authority to activate this plan based on the previously identified stages.

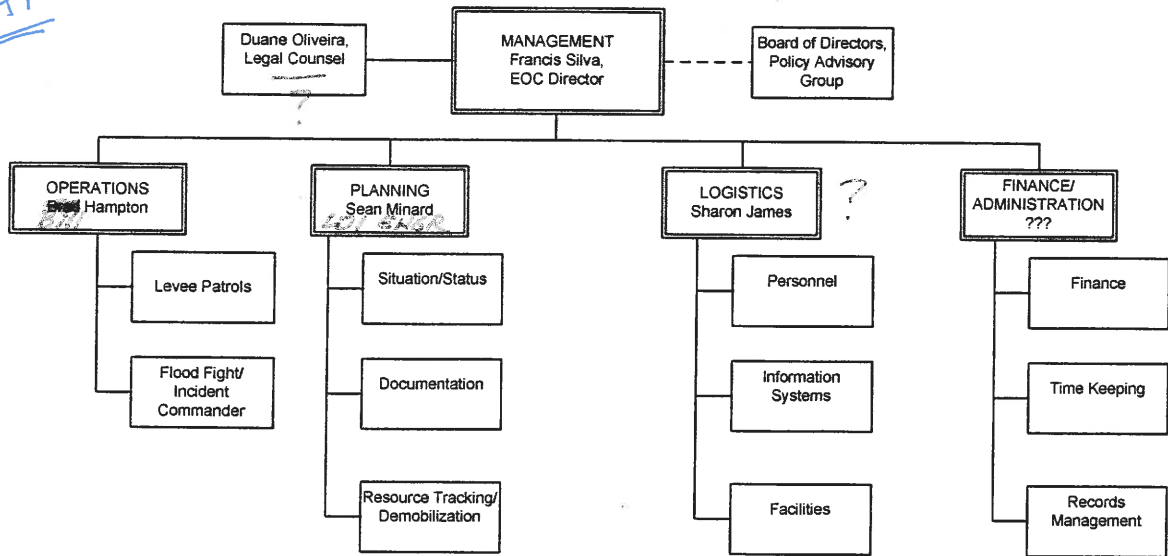
4.5 Standardized Emergency Management System (SEMS) Structure

Under SEMS, common structure and terminology combine to ensure smoother communication and better coordination of inter-jurisdiction and inter-agency response to flood emergencies. The five sections below have uniform responsibilities throughout California – whether the governmental level is a special district, city, county, or the State.

- Command Staff
- Operations
- Planning and Intelligence
- Logistics
- Finance and Administration

Figure 4-1. SEMS-based Emergency Organization Chart

DRAFT



4.6 Public Notification

Public notification and awareness is extremely important during an emergency. In the case of a potential flood, the public must be kept informed of:

- Water levels and their implications for a flood event
- Levee conditions
- Short- and long-term weather forecasts
- Any other flood related threat that might exist

In an incident, like a case where a levee has already failed, early alert and notification is crucial to allow the public as much warning time as possible so they can evacuate or avoid the area. LD1 and Sutter County are committed to notifying the public as to the conditions of the Feather River Levee if it should threaten flooding. The County will start evacuation due to a threat, rather than waiting until flooding has commenced.

A well-informed public is likely to respond well in the face of an actual disaster. In Sutter County and LD1, there are many ways to inform the public. These include:

- Emergency Alert System
- Emergency Digital Information System
- Fire and Police Vehicle Loudspeakers

4.6.1 Notification Protocols

The Public Notification System is activated by Sutter County to provide public instructions to local TV and radio stations before activating sirens. All media outlets must be notified of the emergency such that they are providing public alert announcements. The actual verbal or written messages that will be given – whether through the media or other messaging systems – are the responsibility of the Sutter County Public Information Officer in the EOC. (Sample Notices are contained in Part III, References and Supporting Documents.)

In case of an evacuation, Sutter County will notify the area’s special needs care providers of the emergency. These providers will be asked to notify their clients in the affected area and give instructions to their clients.

4.7 Resources

4.7.1 Staffing

LD1 employs staff that functions as levee patrollers and initial flood responders. Additional flood emergency response staffing comes from Mutual Aid resources and volunteers.

4.7.2 Integration with Police, Fire Responders

SEMS creates a set of personnel, policies, procedures, facilities, and equipment that is integrated into a common organizational structure designed to improve emergency response operations of all types and complexities. SEMS creates a flexible, scalable response organization providing a common framework within which people can work together effectively. These people may be drawn from multiple agencies that do not routinely work together. So, SEMS provides standard response and operation procedures to reduce potential miscommunications.

4.7.3 Getting and Training Volunteers

One of the most important aspects of flood response in LD1 is the non-government agencies and organizations and local businesses that partner with LD1. The volunteer groups provide critical personnel and resources.

LD1 maintains a Community Emergency Response Team (CERT) Program. CERT educates people about disaster preparedness for hazards that may affect their area and trains them in basic disaster response skills. Using the training learned in the classroom and during exercises, CERT members assist others in their neighborhood or workplace during an event when professional responders are not immediately available to help. CERT members also support emergency response agencies by taking a more active role in emergency preparedness projects in their community. LD1 has registered all CERT members as Disaster Service Workers.

4.7.4 Cal EMA and DWR Assistance

During emergency response to flooding or storms LD1 may require assistance in performing sand bagging, emergency debris clearance, and similar activities to save lives and protect public safety. These activities often require the use of trained crews to augment local personnel. In accordance with SEMS, once local resources are depleted or reasonably committed, mutual aid is

accessed and coordinated within the Operational Area (OA). If Sutter County OA resources are not sufficient or timely, then the request is forwarded to the Inland REOC. The REOC evaluates and fills requests by coordinating mutual aid from unaffected OAs, tasking a State agency, or accessing federal assistance. Because of the nature of the need and the resource, requests for crews are usually tasked to a State agency. Details of acquiring additional resources are contained in Appendix C.

4.8 Disaster Intelligence

Disaster intelligence means the tools and techniques LD1 used to identify, collect, analyze, and disseminate information on the current and future extent and consequences of the flood.

4.8.1 Information Needed and Resources

4.8.1.1 Weather Forecast

The advent of satellite imagery and sophisticated computer models has significantly improved the ability to forecast times and intensities of rainfall. Managing flood response requires knowledge and understanding of the implications of weather predictions for other parts of the watershed as well as the local area. The National Weather Service provides daily briefings on upcoming weather as part of its role in the DWR FOC. LD1 participates in these briefings.

4.8.1.2 River Forecast

In addition to precipitation forecasts, the General Manager also must know how resulting runoff will affect reservoir storage, releases from dams, and ultimately the amount of water flowing in the river. Hydrologists for DWR work with the National Weather Service in the California-Nevada River Forecast Center (C-NRFC) to provide twice daily forecasts of river height at various points. These forecasts are issued as “River Bulletins” and LD1 subscribes to DWR’s email distribution system. In addition, LD1 regularly reviews the website of the CDEC, which provides data on reservoirs, rivers, and rainfall. (<http://cdec.water.ca.gov/>) More specifically, CDEC provides information on Precipitation, River Forecasts, River Stages, Snowfall, and Reservoir storage. The information is presented as tables, but is also available in graphical format that compares current conditions to historical data.

4.8.1.3 Flood-Related Events, such as Levee Slumps or Boils

As important as it is to anticipate the potential situation, it is equally as vital to be aware of current conditions and sudden shifts in those conditions. LD1 maintains regular contact with its Levee Patrols and other field responders. This ensures it learns quickly of any changes in the situation, facilitating prompt response.

4.8.1.4 Traffic Information

Similarly, LD1 maintains regular contact with the Sheriff, Sutter County Department of Transportation, Caltrans, and others to ensure situational awareness of traffic issues. Reports from Yuba City and Sheriff patrols apprise emergency managers of flooded intersections due to storm drains being stopped up.

4.8.1.5 Maps of Staging Areas and Stockpiles

LD1 has tasked the Administration/Finance Branch with maintaining its inventory of flood response materials and supplies at their locations. Details are contained in Section 9.

4.9 Essential Services

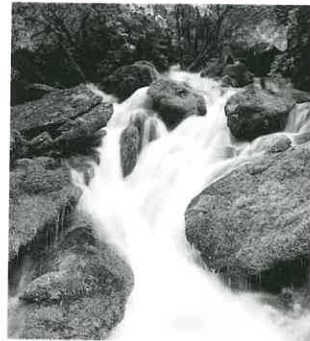
It is the policy of Sutter County that new buildings in which the inhabitants are expected to be **essential service providers** shall be required to be located outside an area that may be flooded in the event of any levee failure or they will be designed to be operable shortly after the floodwater is removed. They shall be designed and constructed to minimize and resist flood hazards, either through location outside likely flooded areas or through design. It is also the policy of Sutter County that the structural systems and details set forth in working drawings and specifications be carefully reviewed using qualified personnel, and that the construction process be carefully and completely inspected.

It is further the policy of Sutter County that the nonstructural components vital to the operation of essential services buildings shall also be able to resist, insofar as practical, the effects of flooding. LD1 recognizes that certain nonstructural components housed in essential services buildings, including, but not limited to, communications systems, main transformers and switching equipment, and emergency backup systems, are essential to facility operations and that these nonstructural components should be given adequate consideration during the design and construction process to assure, insofar as practical, continued operation of the building after a flood.

“Essential Services Building” means any building used (or designed to be used), or any building that a portion of which is used (or designed to be used), as a hospital, fire station, police station, or jail. These buildings would also include sheriff’s offices, emergency operations centers, and emergency communications centers.



Geotechnical
Environmental and
Water Resources
Engineering



5 Communications

This Section provides an overview of available communications systems. Supporting State communications resources are listed in Appendix A. **{{This Communication Section of the plan requires careful review to ensure it matches LD1’s specific capabilities.}}**

5.1 Communications Organization

The Communications Organization consists of a Public Information Officer (PIO). Personnel for these positions come from the LD1 staff. Additional personnel are available from the local Radio Amateurs Civil Emergency Services (RACES) organization and from State agencies through Mutual Aid.

5.2 Public Alerting Systems

5.2.1 Emergency Alert System (EAS)

The EAS is a network of public and private broadcast stations and interconnecting facilities. The FCC authorized the system to operate in a controlled manner during a war, state of public peril or disaster, or other national emergency. The system is used within Sutter County on a voluntary basis during day-to-day situations that pose a threat to the safety of life and property. Sutter County uses a commercial broadcast facility as the central point of information dissemination under the EAS format. Access to EAS is coordinated through the Sutter County Office of Emergency Services. (Please refer to Appendix D Evacuation.)

5.2.2 Emergency Digital Information Service (EDIS)

EDIS is California’s state-of-the-art method for emergency public information: alerting, informing, and reassuring the public. The purpose of EDIS is to alert, inform, and reassure the public about current or foreseen threats to public safety. Any bulletin that serves those purposes is appropriate for distribution on EDIS, provided that it is: clear, concise, timely, accurate, correctly prioritized, and targeted to the affected geographic area.

Distributed to the public by television or radio, a message can be text, image or sound. EDIS is an advanced tool that enables local, State, federal, and allied agencies to distribute public information instantly to the public and the media. EDIS is a service of Cal EMA in partnership with private, local, State, and federal organizations. For access to EDIS, LD1 will contact Sutter County OES.

5.3 Local Radio Systems

The following local communications systems operate within Sutter County.

5.3.1 Radios

LD1 has the following radio equipment.

<u>Type</u>	<u>Frequency</u>	
	Transmit	Receive
Base Station		
Mobile (vehicle)		
Handheld		
Amateur Band (RACES)		

5.3.2 Consolidated Public Safety Communications System (CPSCS)

Sutter County Communications Unit functions as the 9-1-1 Public Safety Answering Point (PSAP) for the county. Through this Communications Center, Sutter County provides 24 hour a day dispatch services to County agencies and law enforcement, fire, and EMS agencies.

In addition to locally available dispatch frequencies, the Communications Center can also communicate with most other local, State, and federal law enforcement, fire and rescue, and EMS agencies.

5.3.3 Local Communications Support Resources

This section describes locally available communications resources. *{{NOTE: The following are examples only. The Sample must be modified to allow for local situations.}}*

5.3.3.1 Radio Amateur Civil Emergency Services (RACES)

The RACES network operates on amateur radio frequencies (UHF, VHF, HF) by authority of the FCC in support of emergency communications operations. RACES can augment existing public radio systems, substitute for damaged or inoperable systems, and establish communications links with otherwise inaccessible areas. RACES capabilities also include the transmission of data and video signals by means of sophisticated communications relays and data processing equipment..

All RACES volunteers serve as Disaster Service Workers when officially activated. Several cities have well-established amateur radio organizations assigned to support their local EOC operations. When the EOC is activated, local RACES networks coordinate with the RACES Coordinator stationed at the EOC.

5.3.3.2 Citizens’ Band Radio (CB)

The FCC permits CB radio operations in emergency services activities on a voluntary basis under the direction of emergency services authorities. However, uncontrolled frequency use, overloading, and poor transmission quality limit the usefulness of this system. The EOC

will/will not actively monitor CB channels. LD1 uses CB as a backup system, recognizing that CB communications are usually monitored.

5.3.4 Telephone Systems

5.3.4.1 Common Carrier Telephone Service

Common carrier phone service is available throughout the area to support all emergency systems. A directory of emergency contacts is found in Appendix A.

5.3.4.2 Cellular Phones

LD1 maintains a cache of (#) cellular phones along with a copy of the operations and distribution instructions. The Logistics Section is responsible for coordinating and authorizing the distribution of these resources. Prioritization will be coordinated with the Operations Section. Each Levee Patrol Leader must identify requirements for cellular phones to the Operations Sections Chief.

5.3.5 Weak Links

Telecommunications are composed of many subsystems, each interconnected and interdependent. A radio network, for example, may use a combination of telephone lines, microwave circuits, satellite interfaces, underground and overhead cables, and secondary radio paths. The failure of any link in this electronic “chain” can disable a large portion of the system.

LD1’s solution to these communications weaknesses has been to develop a fault-tolerant system. In this system, a failure of one weak link can be addressed by additional capacity elsewhere in the system.

5.3.5.1 Loss of Power

Loss of emergency power has been the primary cause of communications failure in past emergencies. LD1’s solution to power loss has been to ensure proper installation and generator maintenance. LD1 tests its generator(s) regularly and maintains adequate stockpiles of diesel/gasoline.

5.4 Protocols for Contacting Levee Patrols

Initial contact with the Levee Patrol Team(s) shall be in accordance with the Activation Tree (Appendix A). Generally, communications with Levee Patrol Teams will be through the (Agency) Operations Chief.

5.4.1 Other Communications Protocols

All other communications shall be in accordance with the Incident Communications Plan, as documented on ICS forms ICS 204 and ICS 205.

5.5 Integration and Interoperability

{{NOTE: Interoperability is essential to effective emergency management during flood response. At the most basic level, interoperability allows two or more parties to exchange information

directly. First responders at the scene can instantly connect and communicate with each other, make the contacts needed to bring in additional resources, coordinate rescue missions, and provide other forms of response to threats and emergencies. This section gives the planner options in addressing this issue.}}

The most practical solution is to link radio systems together. The manner in which radio systems are linked will depend on variables such as existing communication infrastructures, population density, and geographic features. The goal is to find the most cost-effective means to link first responder radio systems.

LD1 has chosen to meet interoperability needs by

{{NOTE: SELECT APPLICABLE SOLUTION}}:

- Maintaining several spare handheld radios to exchange on scene
- Using cross band repeaters, which can connect an 800 MHz site with a VHF or UHF radio site
- Using a switching mechanism that connects different radio systems using telephone lines or the internet
- Using cell phone
- Collocating dispatch personnel

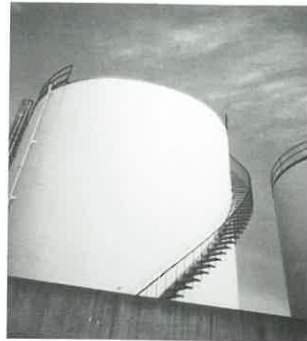
5.6 Media Interface

LD1 will have Barbara LeVake, Director, as its Public Information Officer (PIO). A PIO is a spokesperson responsible for developing and releasing information about the incident to the news media, to incident personnel, and to other agencies and organizations.

(Sample Press releases are in Part III. References and Supporting Documents)



Geotechnical
Environmental and
Water Resources
Engineering



6 Administration, Finance, and Logistics

6.1 Master Mutual Aid Agreement

The foundation of California’s emergency planning and response is a statewide mutual aid system. Mutual Aid is designed to ensure that adequate resources, facilities, and other support are provided to jurisdictions whenever their own resources prove inadequate to cope with a situation. The basis for the system is the California Disaster and Civil Defense master Mutual Aid Agreement, as provided for in the California Emergency Services Act. It created a formal structure, within which each jurisdiction retains control of its own personnel and facilities, but can give and receive help whenever it is needed. State government, on the other hand, is obligated to provide available resources to assist local jurisdictions in emergencies.

LD1 has developed and maintains this Flood Safety Plan, compatible with the California Master Mutual Aid Agreement. This Flood Safety Plan is coordinated with those of neighboring jurisdictions to ensure mutual compatibility.

6.2 Record Keeping

LD1 tracks, records, and reports on all LD1 flood response personnel time. LD1 collects and maintains documentation on all emergency information needed for reimbursement by Cal EMA or FEMA. LD1 is aware of the requirement to retain these records for audit purposes for three years after receiving the last FEMA payment for flood-related expenditures.

6.3 Resource Tracking

Comprehensive resource management is a key management principle. It implies that all assets and personnel during an event need to be tracked and accounted for. It ensures maintenance of accountability over all resources. Thus, they can be moved quickly to support preparation and response to an incident and ensure a fluid demobilization.

Resource management involves coordinating and overseeing the acquisition and deployment of tools, supplies, equipment, and people during a flood. The objective of resource management is to (a) maximize efficient resource use while maintaining cost-effectiveness and resource safety, (b) consolidate control of single resources in order to reduce communications activity, and (c) instill resource accountability. Resource management enhances the benefit of mutual-aid agreements and improves interoperability.

Flood response resources include: (1) personnel or equipment to perform a specific operation, and (2) supplies and facilities to support on-scene incident operations. The SEMS Logistics Section typically orders supply items (e.g., food) and facilities (e.g., equipment staging). The SEMS Finance/Administration Section tracks the use of and maintains records on the resources applied to flood response.

6.4 Stockpiles – Location and Access

LD1 maintains stockpiles of flood fight equipment and supplies in the following locations.

Location	Access Contact	Emergency Access

6.5 Staging Areas

LD1 has identified the following sites for use as Staging Areas for incoming resources.

Location	Address	Phone

6.6 Equipment

Location 1 *{{Sample list}}*

(20) Three-cell watertight flashlights	(4) 500-watt lights
(60) ‘D’ cell batteries	(2) Light standards
(10) Cal OSHA approved hardhats	(8) Propane lanterns
(20) Flat-tipped shovels	(4) Portable radios
(10) Sets assorted size raingear	(200) Orange wire marking flags
(20,000) empty sandbags	(200) Yellow wire marking flags
(2) Generators 3,500 KW or larger	(200) Red wire marking flags

Location 2

(20) Watertight flashlights	(20) Orange vests
(80) ‘D’ cell batteries	(10) Portable radios
(26) US Coast Guard-approved lifejackets	(10) GPS Units
(25) Cal OSHA approved hardhats	(2) Vehicles with mobile radios
(6) Flat-tipped shovels	(1) Base radio



Geotechnical
Environmental and
Water Resources
Engineering

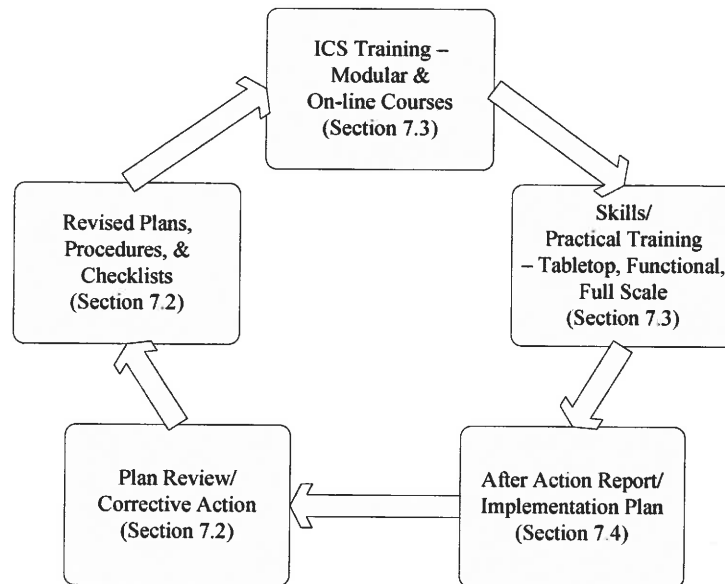


7 Plan Development and Maintenance

7.1 Plan Development

Bill Hampton, General Manager has primary responsibility for developing, reviewing, and updating this Flood Safety Plan on a regular basis. He will request input from individuals, jurisdictions, and agencies having responsibilities under this plan. Figure 7-1 shows the LD1 Plan Maintenance cycle.

Figure 7-1. Plan Maintenance Cycle



7.2 Plan Review and Maintenance

Agencies and individuals providing emergency response will review this plan at least annually. In addition, this plan may be modified as a result of post-incident analyses and/or post-exercise critiques:

- Proposed changes shall be submitted in writing to Mr. Hampton
- Changes shall be published and distributed to jurisdictions and agencies holding this plan

Every four years this plan will be reviewed in its entirety, updated, republished, and redistributed. (See distribution list in Part III: References and Supporting Documents.) This plan also may be modified whenever responsibilities, procedures, laws, rules, or regulations pertaining to emergency management and operations change.

- Jurisdictions and agencies having assigned responsibilities under this plan are obligated to inform Mr. Hampton when changes occur or are imminent.
- These changes will be incorporated into this plan, published, and distributed to jurisdictions and agencies holding this plan (see Distribution List).

7.3 Training and Exercises

All emergency responders from LD1 are strongly encouraged to take advantage of FEMA's on-line training. In addition, LD1's General Manager will notify holders of this plan of training opportunities or scheduled exercises associated with flood emergency management and operations, such as DWR's annual Flood Fight sessions

This plan will be exercised regularly. LD1's General Manager will conduct emergency preparedness exercises in accordance with an annual exercise schedule. See also specific training for Levee Patrol and Flood Fight.

Finally, after a draft of the Flood Water Removal Appendix is complete, LD1 will conduct a Tabletop Exercise. A tabletop is a problem-solving or brainstorming session. Problems are tackled one at a time and talked through without stress. A session like this gives planners an opportunity to review the proposed decision and determine if changes are needed. The Appendix will then be made final.

7.4 Evaluation

LD1's General Manager will coordinate and facilitate post-incident analyses following emergencies and exercises. He will prepare an After-Action Report and Implementation Plan for approval by the Board of Directors and distribute it to those jurisdictions and agencies involved in the emergency or exercise.



Geotechnical
Environmental and
Water Resources
Engineering



8 Authorities and References

The following sources provide authorities for planning, conducting, and/or supporting flood emergency operations.

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)
- U. S. Army Corps of Engineers Flood Fighting (Public Law 84-99)

8.2 State

- California Emergency Services Act (Chapter 7, Division 1 of Title 2 of the Government Code)
- Standardized Emergency Management System (SEMS) Regulations (Chapter 1 of Division 2 of Title 19 of the California Code of Regulations) and (California Government Code §8607 et sec)
- Hazardous Materials Area Plan Regulations (Chapter 4 of Division 2, Title 19, Article 3, §2720-2728 of the California Code of Regulations) and (California Health and Safety Code, Division 20, Chapter 6.95, Section 25503.5)
- California Department of Water Resources Flood Control (California Water Code §128)

8.3 Local

- Resolution of the Board of Directors relative to Workers' Compensation Insurance for Registered Volunteer Disaster Service Workers, dated [REDACTED].
- Adoption of the LD1 Flood Safety Plan on January 10, 2011, by the Board of Directors.



Geotechnical
Environmental and
Water Resources
Engineering



Appendix A Communications Support

A.1 Communications Support

The following are sources of communications support available to local emergency operations, with support being dependent upon the type and magnitude of the emergency.

A.1.1 The California Emergency Management Agency (Cal EMA)

Cal EMA maintains several communications support capabilities available for use by local governments during major emergencies. Note: All requests for Cal EMA communications support will be directed to the Sutter County Operational Area EOC (or County OES if the EOC is not activated) for processing. Technical advice also is available by contacting the Cal EMA Warning Center at (916) 845-8911.

A.1.2 Mobile Satellite Communications Units

Cal EMA maintains and operates several mobile satellite communications units that can be driven, transported by trailer, or airlifted to any location in the state to provide dedicated voice and data satellite transmission capability. These mobile units are positioned throughout the state and may be sent into local jurisdictions to support emergency communication needs. The mobile satellite communications units are part of the statewide Operational Area Satellite Information System (OASIS) network.

A.1.3 Operational Area Satellite Information System

There are independent OASIS locations through the EOC, allowing for rapid, reliable communications with Regional/State and Operational Area Command Centers. An OASIS station is in the Sutter County Communications Center.

A.1.4 Mobile Command & Communication Facilities

Cal EMA maintains two mobile command facilities available for use during major emergencies. These mobile command complexes consist of integrated communications and command vans and appropriate support vehicles and equipment.

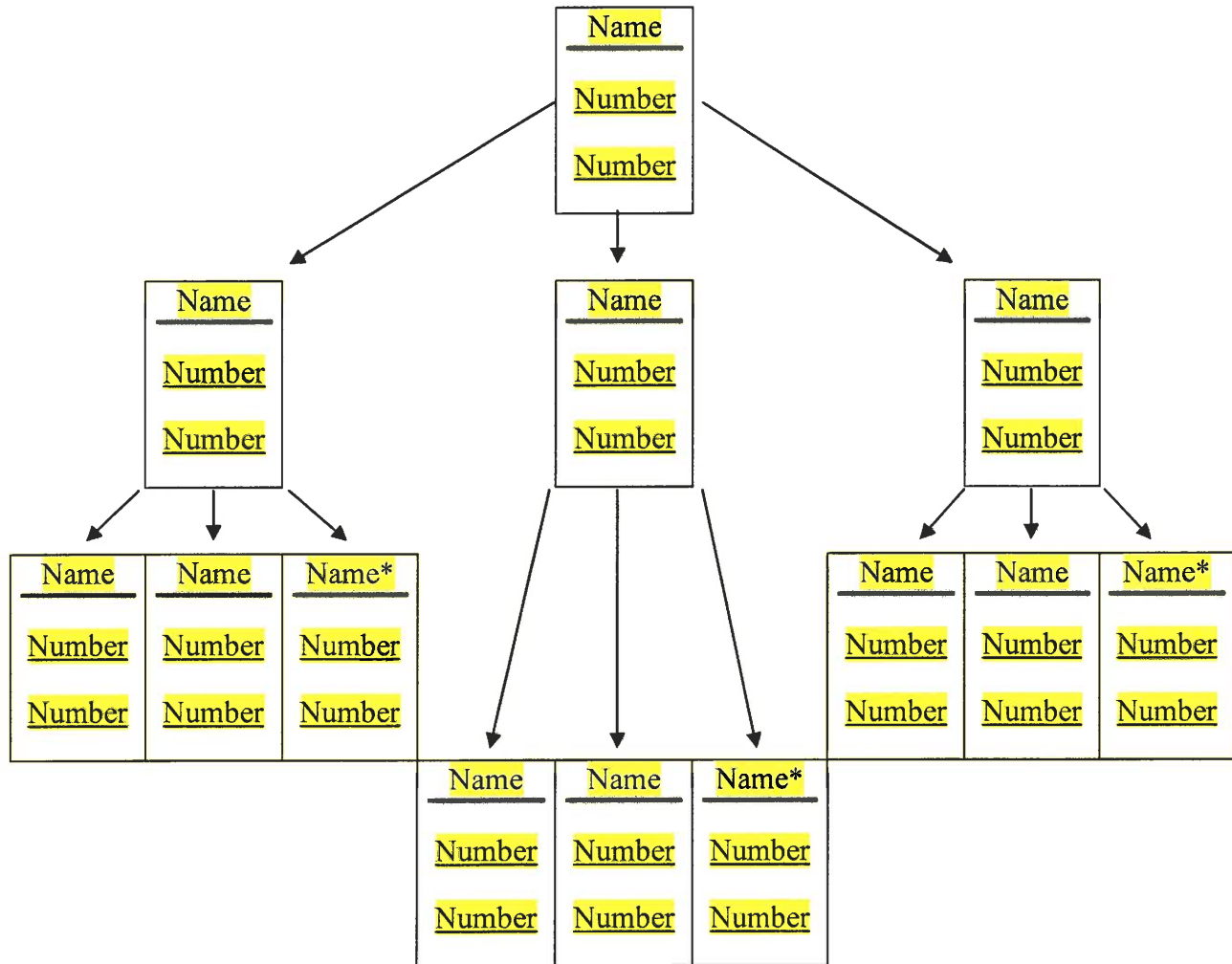
The primary purpose of these mobile command units is to provide initial field communications information until more sophisticated communications are established and/or restored. Each of the complexes is equipped for operations on each of the major state radio systems, the OASIS, mutual aid radio systems, and amateur radio (RACES) frequencies. Radio operators must be provided by the responsible agency.

A.1.5 Portable Radio Caches

Cal EMA also maintains caches of portable radios capable of operating on selected statewide law enforcement and fire and rescue mutual aid frequencies. These radios are available to local governments upon request.

A.2 Emergency Call-Down Tree

Note: If contact cannot be made with an individual, it is the responsibility of others at that level to ensure contact. Persons designated by * call the dispatch center to confirm contact has been made.



A.4 Sample Press Releases

Example News Release –Preparedness

NEWS RELEASE: Winter Storm Awareness Week and Family Preparedness Planning

Francis K. Silva has issued a proclamation designating Winter Storm Awareness Week (Dates) in LD1. The week is designed to focus attention on the flood threat and to increase public awareness. People in potentially vulnerable areas should consider actions they would need to take if a flood threatened Agency/Jurisdiction directly. The public should monitor the local news media, especially people in low-lying areas. People in potentially vulnerable areas should:

- **Review evacuation plans:** Residents living in vulnerable areas and those living in mobile homes that might be flooded should make plans now should an evacuation become necessary. Become familiar with evacuation routes, which are marked with special signs. Options include: a hotel, motel, or friend’s home that is outside the vulnerable area or an American Red Cross shelter. Hotels and motels fill up quickly and out-of-county evacuations take time. The earlier you leave a potentially flooded area, the less time you will spend on the road.
- **Fuel cars, keep supplies in vehicles, secure important documents:** Individuals and families should fill up their cars with gas. Road maps, nonperishable snack foods, a first-aid kit that includes a supply of your family’s prescription medications, and convenience items such as diapers should be available in the car. Secure important documents in waterproof packaging.
- **Obtain supplies to protect the home:** If residents are ordered to evacuate, there will be little time to protect their homes from a flood.
- **Consider the safety of pets:** Pets may not be allowed in Red Cross shelters. Individuals and families should plan to board pets with veterinarians, kennels, or other facilities in non-vulnerable areas. Identification and rabies tags should be attached to the pets’ collars.
- **Register for special medical care:** Residents with special medical needs who may require transportation or medical care should contact their local emergency management office if they have not already done so. Special medical needs shelters require advance registration.

Example News Release – Possible Flooding

NEWS RELEASE: Levee District One Monitors Storm; Citizens Should Review Plans

Levee District One is paying close attention to forecast winter storms. As a result of the storms' projected precipitation, key personnel have been notified to be ready to respond if the need arises.

People in potentially vulnerable areas should review their plans and consider actions they would need to take if the flooding occurs. The public should monitor local news media, especially people in low-lying areas.

People in potentially vulnerable areas should:

- **Review evacuation plans:** Residents living in vulnerable areas and those living in mobile homes must make plans now should an evacuation later become necessary. Become familiar with evacuation routes and select a possible destination. Options include: a hotel, motel, or friend's home that is outside the vulnerable area or an American Red Cross shelter. Hotels and motels fill up quickly and out-of-county evacuations take time. The earlier you leave, the less time you will spend on the road.
- **Fuel cars, keep supplies in vehicles, secure important documents:** Individuals and families should fill up their cars with gas. Road maps, nonperishable snack foods, a first-aid kit that includes a supply of your family's prescription medications, and convenience items such as diapers should be available in the car. Secure important documents in waterproof packaging.
- **Consider the safety of pets:** Pets may not be allowed in Red Cross shelters. Individuals and families should plan to board pets with veterinarians, kennels, or other facilities in non-vulnerable areas. Identification and rabies tags should be attached to the pets' collars.
- **Register for special medical care:** Residents with special medical needs who may require transportation or medical care should contact their local emergency management office if they have not already done so.

Example News Release – Probable Flooding

NEWS RELEASE: Citizens Should Prepare For Flooding

The public should monitor local news media, especially people in low-lying areas. Now is the time for people to prepare their homes, gather supplies, review their plans, and prepare for possible evacuation.

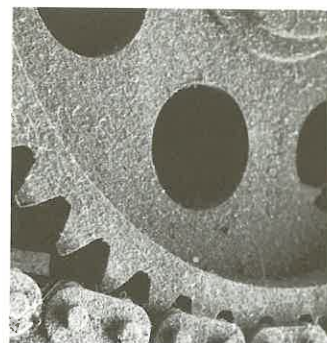
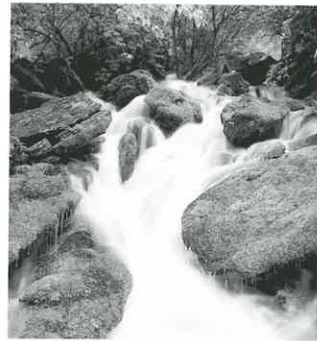
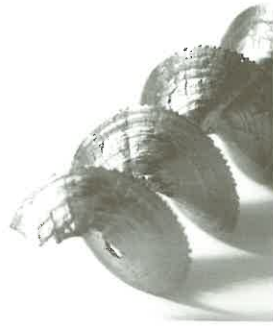
Forecasters currently show the storm on a track that could cause heavy rainfall. As a precautionary measure in anticipation of probable flooding, Levee District One has instituted levee patrols and other proactive measures.

If you live in a highly vulnerable area you should be prepared to leave immediately.

- **Prepare to evacuate if ordered to do so:** Residents living in vulnerable areas and those living in mobile homes must plan their evacuation now. Select a destination, such as a hotel, motel, or friend's home that is outside the vulnerable area or an American Red Cross shelter. Hotels and motels fill up quickly and out-of county evacuations take time.
- **Fuel cars, keep supplies in vehicles, secure important documents:** Individuals and families should fill up their cars with gas. Road maps, nonperishable snack foods, a first-aid kit that includes a supply of your family's prescription medications, and convenience items such as diapers should be available in the car. Secure important documents in waterproof packaging.
- **Consider the safety of pets:** Pets may not be allowed in Red Cross shelters. Individuals and families should plan to board pets with veterinarians, kennels, or other facilities in non-vulnerable areas. Identification and rabies tags should be attached to the pets' collars.
- **Register for special medical care:** Residents with special medical needs who may require transportation or medical care should contact their local emergency management office if they have not already done so. Special medical needs shelters require advance registration.



Geotechnical
Environmental and
Water Resources
Engineering



Appendix B Levee Patrol

B.1 Purpose

The purpose of levee patrols is to have qualified personnel visually evaluate the performance of the Levee District One levee. Their intent is to determine the condition of the levee and to identify potential and existing problems:

- Threats
- Instabilities
- Seepage conditions
- Erosion points
- Freeboard

Implementation of this procedure will ensure each member of the Levee Patrol Team is capable of participating in precautionary actions and emergency response that may occur.

This program will predominantly be undertaken by Levee District One, with operational support from Sutter County. The major objectives of this procedure are to:

- Develop a training program to ensure qualified personnel are available for use
- Ensure materials, equipment and supplies are available to implement this procedure and are maintained in a serviceable condition to meet the needs of the LD1
- Ensure action levels are established and in place to manage potential challenges
- Prepare members to recognize the interface between allied agencies should escalating events require large-scale operations
- Prepare members to patrol levees to locate potential problems, to alert the EOC, and to actively coordinate work, using flood fight and other methods, to resolve problems and minimize adverse consequences

B.2 Program Elements

The levee patrol program has three basic components – Training, Equipment Procurement and Maintenance, and Levee Patrols.

B.2.1 Component I – Training

All participants will complete the following training to become qualified for levee patrol.

Classroom (3 hours)

- Basic levee design
- Recognizing potential problem characteristics
- Notification/warning system
- Specific levee patrol assignments

- Command structure
 - Safety considerations
- Practical Training (3 hours)
- Filling and use of sandbags
 - Patching of boils
 - Safety precautions

Upon completion of both the classroom and practical functions, a member will remain qualified for 12 months from the final date of training. During flood emergency response conditions, it may be infeasible to provide new volunteers with the “Practical” training session. Instead they will be partnered with experienced patrol personnel who will help and instruct them.

B.2.2 Component II – Equipment Procurement and Maintenance

Levee District One has a responsibility to ensure the following equipment is staged in an approved location and is in serviceable condition. The following resources, resource lists and locations shall be maintained by the listed agencies.

Levee District One Office Building

(20) Three-cell watertight flashlights	(4) 500-watt lights
(60) ‘D’ cell batteries	(2) Light standards
(10) CAL-OSHA approved hardhats	(8) Propane lanterns
(20) Flat-tipped shovels	(4) Portable radios
(10) Sets of assorted size raingear	(200) Orange wire marking flags
(20,000) Empty sandbags	(200) Yellow wire marking flags
(2) Generators 3,500 KW or larger	(200) Red wire marking flags

Levee District One Maintenance Building

(20) Watertight flashlights	(20) Orange vests
(80) ‘D’ cell batteries	(10) Portable radios
(26) US Coast Guard approved lifejackets	(10) GPS Units
(25) CAL-OSHA approved hardhats	(2) Vehicles with mobile radios
(6) Flat-tipped shovels	(1) Base radio

B.2.3 Component III – Levee Patrols

The General Manager will create routes that ensure complete coverage and, wherever possible, overlapping coverage. The General Manager will physically account for all personnel working

under the control of LD1 on an hourly basis. All members will receive a safety briefing prior to commencing patrols and will use all provided safety gear.

B.2.3.1 Motor Patrols

- The levee motor patrol will be initiated when the elevation of the Feather River reaches 60 feet and rising at the 5th Street Bridge gage, or when the Feather River stage reaches or exceeds 57 feet or 40 feet at Boyd’s Landing and Nicolaus, respectively located near the central and southerly portions of the LD1 levee system at the direction of the LD1 General Manager. The levee motor patrol will consist of the following:
 - Two four-wheel drive vehicles with mobile radio capabilities.
 - Two trained and currently qualified observers per vehicle.
 - Patrol areas will be divided as shown on the attached map. *{{Note: Attach a map showing how areas of the levee will be divided for patrol purposes.}}* Radio designators will be designated as Division A or B.
 - Completion of a Division Activity Log will be required for each shift using ICS Form 214).
 - All members will receive a safety briefing and use appropriate safety gear.

B.2.3.2 Walking Patrol

The levee walking patrol will be initiated when the elevation of the Feather River reaches 70 feet and rising at the 5th Street Bridge gage; or it may be initiated in the central portion of the District with a river stage 56.2 feet and rising at the Boyd’s Landing gage; and in the southern portion of the District when the river stage of the Feather River is at 42.6 feet and rising at the Nicolaus gage.

- A levee walking patrol will consist of:
 - Teams of two personnel physically walking a designated section of levee. One person will be positioned at the toe of the land side of the levee. The second will be assigned to the top of the levee.
 - Foot patrols will check visually for potential problems with the levee as per training.
 - Areas of concern will be identified using a yellow wire flag.
 - All yellow flags will be evaluated by the Division Supervisor conducting motor patrol activities.
 - Upon evaluation of the potential problem area, the Division Supervisor will either:
 - “Orange Flag” the area, which means at the present time the levee condition is performing as designed or
 - “Red Flag” the area, which indicates a potential problem requiring action such as an engineer’s review. All red flag conditions will be reported to Command immediately for evaluation by the Engineer.
- All levee foot patrol personnel will have the following at a minimum:
 - Three-cell watertight flashlight
 - Cal OSHA-approved hardhat

- Raingear, if warranted; each individual is responsible for boots
 - Orange reflective vest
 - (10) Yellow marking flags
 - Global Positioning System (GPS) unit to establish latitude and longitude of trouble sites
 - U.S. Coast Guard-approved lifejacket
 - One member of each foot-patrol team will be equipped with a portable radio, operating on **frequency**. Radio communication should be minimized to prevent channel overload. All radio communication will be in plain English, with no jargon or acronyms.
- Walking patrol personnel should be rotated on a 12-hour frequency.

B.2.4 High Water Staking Procedures

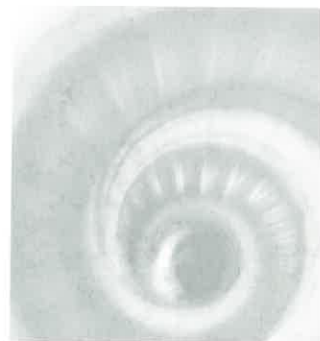
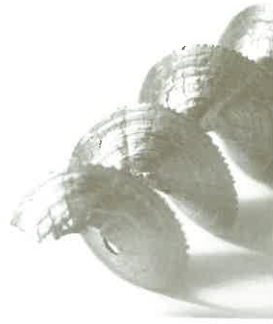
- High water staking: Record the extent of high water by placing markers (stakes) periodically as the event progresses
- Reference those high water locations with suitable surveying or GPS locations
- Provide that information to the jurisdiction and DWR upon request

B.3 Augmenting Staff

When LD1 personnel resources are depleted or reasonably committed, mutual aid is requested and coordinated within the Sutter County Operational Area (OA). If OA resources are not sufficient or timely, the request is then forwarded to the Cal EMA Regional Emergency Operations Center (REOC). The REOC evaluates and fills requests by (a) staff from unaffected OAs, (b) tasking a State agency, or (c) accessing federal assistance. (See Appendix C, Section 4 for Procedures.)



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Appendix C Flood Fight

C.1 Trigger(s)

At the River Warning Stages or upon notification of a potential problem by a levee patrol, establish necessary staging areas for supplies, equipment, and personnel. LD1 has ensured the staging areas are a safe distance from other emergency facilities, such as evacuation centers, shelters, and Incident Command Posts. If required by the situation, commence filling sandbags.

C.2 Prioritization

LD1 will use available resources and personnel to address boils, rising water/loss of freeboard, slumps, and sloughs to the full extent of its training and capability.

Based on input from levee patrols and other informed observers, the Sutter County EOC establishes a Unified Command to set priorities for flood fight operations. LD1 will participate in the Initial Unified Command Meeting. This meeting provides responsible agency officials with an opportunity to discuss and concur on important issues prior to joint incident action planning. The agenda for the command meeting includes the following:

- Set jurisdictional/agency priorities and objectives
- Present jurisdictional limitations, concerns, and restrictions
- Develop a collective set of incident objectives
- Establish and agree on acceptable priorities
- Adopt the overall strategy or strategies to accomplish objectives
- Agree on the basic organization structure
- Designate the most qualified and acceptable Operations Section Chief (the Operations Section Chief will normally be from the jurisdiction or agency that has the greatest involvement in the incident, although that is not essential)
- Agree on General Staff personnel designations and planning, logistics, and finance agreements and procedures
- Agree on the resource ordering process to be followed and cost-sharing procedures
- Agree on informational matters, designating one official to act as the Unified Command spokesperson

The members of the Unified Command must be authorized to decide and act on behalf of the jurisdiction or agency they represent. Such decisions/actions may include ordering of additional resources in support of the Incident Action Plan, possible loaning or sharing of resources to other jurisdictions, and agreeing to financial cost-sharing arrangements with participating agencies.

C.3 Activation and Dispatch

The General Manager of LD1 has the authority to activate this Appendix. Dispatch of Flood Fight Teams shall be in accordance with priorities set by the LD1 Board of Directors.

C.4 Personnel

LD1 maintains a cadre of emergency responders. Additional flood emergency response staffing comes from volunteers.

When the LD1 requires additional people for sand bagging, emergency debris clearance, diking, and similar activities to save life and protect public safety, assistance may come from trained crews to augment local personnel. In accordance with SEMS, when local resources are depleted or reasonably committed, mutual aid is requested and coordinated within the Sutter County Operational Area (OA). If OA resources are not sufficient or timely, the request is then forwarded to the Inland REOC. The REOC evaluates and fills requests by coordinating mutual aid from unaffected OAs, tasking a State agency, or accessing federal assistance. Because of the nature of the need and the resource, requests for hand crews are usually tasked to a State agency.

C.4.1 Resource Agencies

The California Conservation Corps (CCC) has trained civilian crews. The California Department of Forestry and Fire Protection (Cal Fire) supervises crews from the California Department of Corrections and California Youth Authority. The California National Guard (CNG) also has personnel available. Both CCC and Cal Fire have contract services for various types of projects. CNG is only available through State tasking. In addition to crews, CNG and Cal Fire have mobile kitchens and similar support resources available. Cal Fire can also provide trained section leaders for ICS and SEMS organizations.

C.4.2 Mission Tasking

Cal EMA controls missions and mission assignments for State resources and coordinates requests for federal resources. If Cal EMA receives a request that meets the criteria for State agency tasking, Cal EMA will issue a mission number authorizing the agency to respond. Once tasked, that agency will work directly with Sutter County and LD1 to provide the resource within the definition and limits of the mission authorization.

C.4.3 Tasking Criteria

For all missions (a) there must be actual or imminent danger to life or public safety, and (b) locally available resources, including private sector contracting, must be inadequate or untimely. Maintenance or recovery activities should be dealt with by contract and will not be authorized by Cal EMA.

C.4.4 Costs/Reimbursement

State agencies tasked under a Cal EMA mission number respond free of charge. Crews may require feeding and sheltering; transport vehicles may require gas and maintenance. These services are paid for or provided by LD1 unless otherwise agreed to at the time of the request.

C.4.5 Request Procedures


Following coordination within the Sutter County OA, the EOC will forward unfilled requests to the Inland REOC Operations Section. The REOC will follow up with the Sutter OA EOC to resolve any questions and to monitor resource delivery.

C.4.6 State Agency Voluntary Response

During non-emergency conditions or non-proclaimed emergencies, State agencies may respond to requests as a locally available resource. Such responses do not receive mission numbers and may not be covered under Mutual Aid and provisions of the Emergency Services Act. Further, all costs are born by the State agency and/or the requesting agency pursuant to any agreement or understanding between them. Resources committed under such responses may be redirected to higher priority missions during emergencies.

C.5 Hazardous Materials Locations

The Sutter County Fire Department has identified the following sites within LD1 service area as having hazardous chemicals stored onsite.

<u>Location</u>	<u>Contact</u>	<u>Chemical(s)</u>	<u>Placard</u>
			

C.6 Materials and Supplies

In accordance with DWR recommendations, LD1 has stockpiled the following items for flood fight activities. *{{NOTE: This list of materials is based on DWR recommendations.}}*

- Visquine plastic - 30 rolls (@100’x20’x10mil)
- Sandbags - 15,000
- Twine - 200 lb. test, 24 boxes
- Wooden stakes - 600
- Tie buttons - 3,000

Tools Needed:

- Lineman pliers - 24 each
- Sledge hammers - 24 each
- Shovels - 300 each
- Life jackets - all personnel

To expedite flood fight activities and preparedness, LD1 has identified the location of stockpiles and a contact number for the person(s) who has access.

Location	Contact Person	Telephone Number

C.7 Public Supplies

LD1 has placed supplies of sand bag at strategic sites. Citizens affected or threatened by flooding may secure sand and sandbags at these locations.

Sandbag Stock Pile Sites

Location	Address	Contact Phone

C.8 Logistics Procedures

Resource Management will track the rate of consumables use. When the approximate date of complete consumption approaches the date of reasonable delivery, the Logistic Chief shall be apprised. The Logistic Branch shall initiate procurement in consultation and coordination with the Finance/Administration Branch. The Logistics Chief will notify the Operations Chief.

If the Operations Chief is concerned about possible loss of essential consumables, the Operations Chief may request procurement from the Logistics Chief. In no case will any member of the Operations Branch initiate procurement. In no case will the Logistics Branch begin procurement without advising the Finance/Administration Branch.

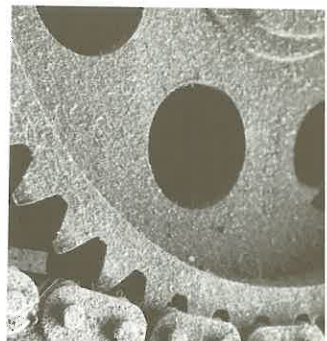
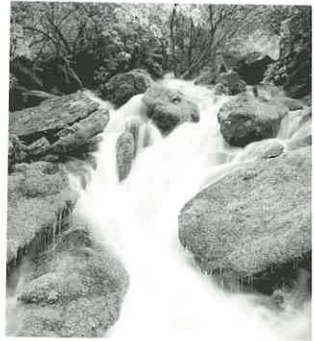
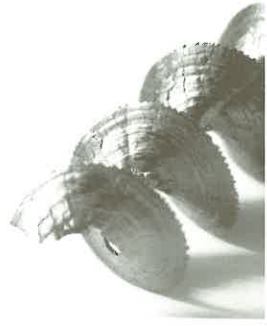
C.9 Training in Flood Fight Procedures and Techniques

Personnel from LD1 participate in DWR Flood Fight training, which DWR provides annually. Also, see the DWR Flood Fight Manual:

http://www.water.ca.gov/floodmgmt/docs/flood_fight_methods.pdf



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Appendix D Evacuation

D.1 Considerations

{{NOTE: In developing this Appendix, the planner needs to address concerns that cannot be included in a template format. These include:

- *Where do people go if local shelters will be flooded or otherwise be inadequate? (Think “Houston from New Orleans.”)*
- *What Evacuation Centers will the Jurisdiction use to manage the large outflow of people?*
- *Which directions will evacuees go and will routes be above water – even sheet flooding?*
- *How will evacuees obtain food, water, and medical care?*
- *Critical care facilities – Hospitals/jails/EOC. Do these meet criteria for Essential Services Building and will they remain in operation as required by Water Code Section 9650?*

A resource for addressing these issues is Guidelines for Inter-County Sheltering Caused by Large-Scale Evacuations of People at <http://www.cdsscounties.ca.gov/coplanners/res/pdf/doc5.pdf>}}

D.2 Public Notification

The decision to evacuate rests with the Sutter County EOC; the instructions to be given to the public are the responsibility of the Public Information Officer (PIO), the Joint Information Center and the EOC.

Public awareness is extremely important during an emergency. In fact, it is the key to a successful evacuation. In the case of a potential flood the public must be kept informed of water levels and their implications for a flood event, levee conditions, short- and long-term weather forecasts, and any other threat that might exist. Sutter County and LD1 are committed to notifying the public about conditions that cause a flood threat and starting evacuations due to the threat without waiting until an actual disaster has commenced. LD1 will support Sutter County to the extent its resources allow.

D.3 Operations

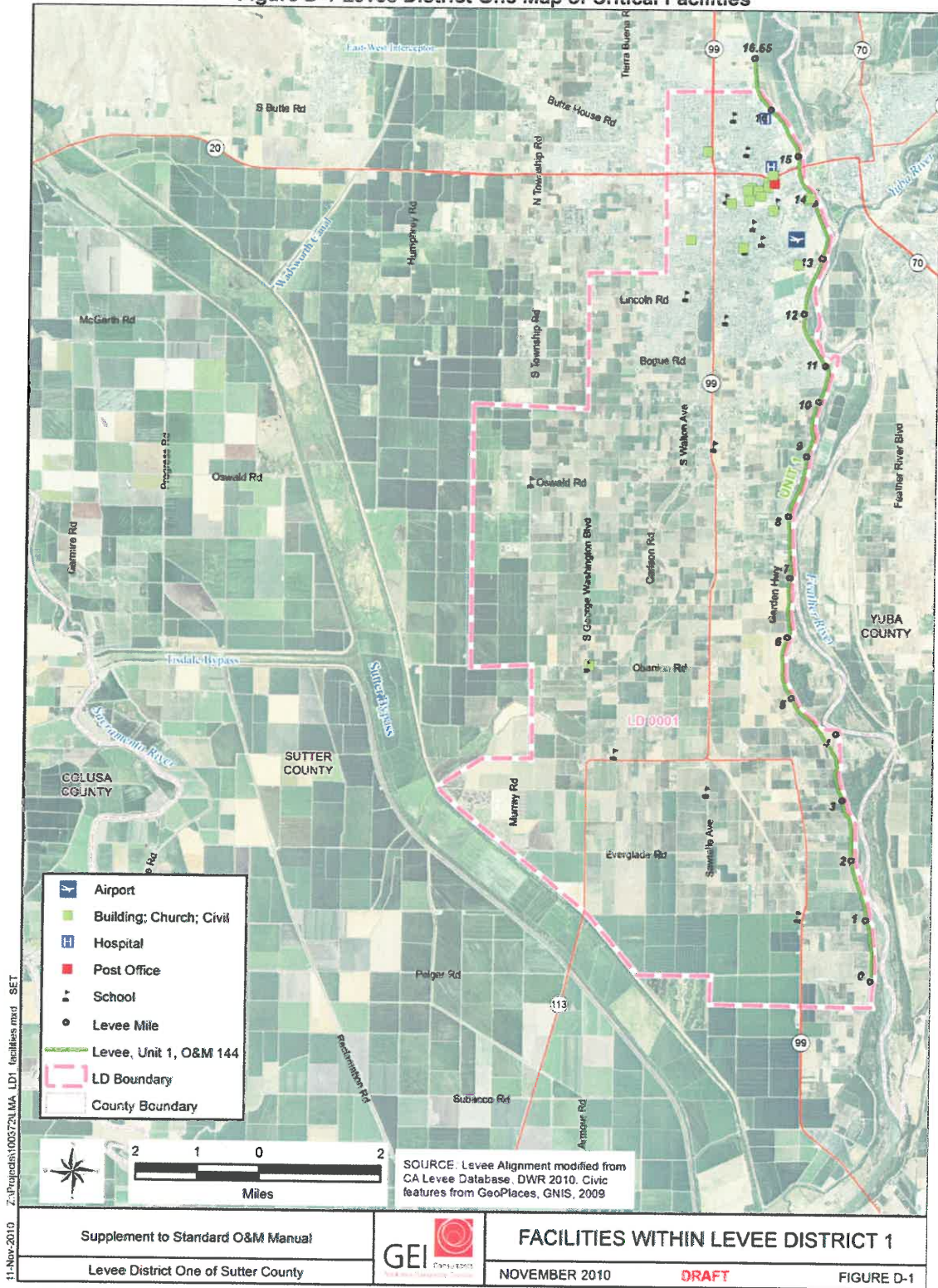
Operational responsibility rests with local law enforcement, possibly assisted by local fire personnel. If it appears that an evacuation may be necessary due to conditions in the field, the LD1 General Manager will provide that recommendation to the Sutter County EOC. If the need to evacuate is extremely urgent, the Flood Fight IC or General Manger may communicate directly with Sheriff and advise the Sutter County EOC. The EOC will advise nearby communities and reception centers.

D.4 Maps

Figure D-1 is a map showing the locations of selected critical facilities in Levee District One. Critical facilities include schools, hospitals, and emergency response facilities.

Sutter County maintains maps showing the evacuation routes. Information related to routes and traffic conditions will be provided using the EAS. For individual rescue situations, helicopters are available from mutual aid through the Sutter County EOC. Operational responsibility for post-evacuation security and patrols rests with the Sutter County Sheriff, assisted by mutual aid resources.

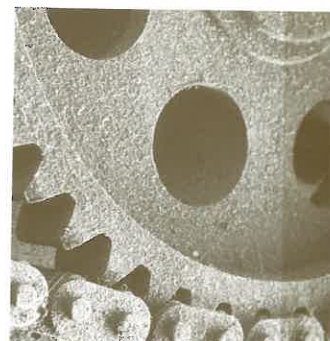
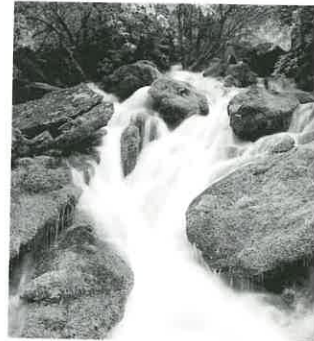
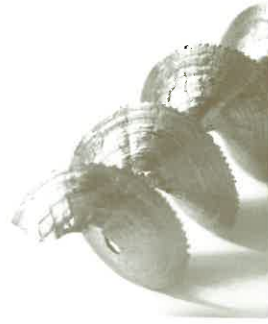
Figure D-1 Levee District One Map of Critical Facilities



SOURCE:



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Appendix E Flood Water Removal

With overtopping or failure of a levee flood protection system, the lands protected by the levee system may become partially or fully inundated. Depending on the situation, there may be an immediate need to dewater that area to prevent further flooding or to protect the overall integrity of the flood protection system, or to remove the water to recover the area to pre-flood conditions. Flood water removal is an integral part of flood emergency response and needs to be considered in planning for floods.

A plan for flood water removal should describe alternatives to dewater areas protected by a jurisdiction's levees. It should address how this will be carried out, where activities will occur, and who will be responsible for carrying out those activities.

Figure E-1 (located at the end of this appendix) depicts flood depths and time of flooding that could occur in the southern Yuba City-Sutter Basin in the event a levee failure was to occur at or near the vicinity of Star Bend.

E.1 Priorities

Please note that this part of the plan cannot be fill-in-the-blanks format. A dewatering plan is dependent upon the characteristics of the Agency/Jurisdiction and their evaluation of risk and resources.

Considerations include:

- How many people are affected by the flooding?
- What is the value of the flooded area?
- What are the long-term consequences and ramifications?

E.1.1 Alternative 1 – No Immediate Dewatering Needed

Based on the situation, it may be advisable to take no immediate action. For example, an inundated agricultural area with no threat to life and property may be left flooded until waters naturally recede. Due to public perception and expectations, this may be a difficult decision to reach, albeit logical. For some areas this choice can be made in advance of a flood event. LMAs, local governments, DWR, USACE, and Cal EMA must work together to ensure everyone understands the reasoning and supports the choice.

E.1.2 Alternative 2 – Close Breach; No Water Removal

Closing the opening in a failed levee is generally the first step of any levee breach repair. It may be necessary to wait for the inflow to slow before taking this action. Rock and suitable materials must be available to armor the ends of the break before closing the opening with additional

suitable material. After the breach is closed, it may be cost-effective to simply let the ground dry out on its own depending on the extent of flooding. Equipment and contractors must be mobilized, the ends of the breach must be able to be accessed, and material for the closure must be available.

E.1.3 Alternative 3 – Repair Breach and Remove Water by Pumping

After the breach is closed, this alternative would remove water using available on-site or perhaps portable pumps. For large flooded areas, the time and expense for this can be extensive.

Providing information on pump suppliers, possible locations for pumps, and other logistics before the event would be part of the plan.

E.1.4 Alternative 4 – Repair Breach and Remove Water by Making a Relief Cut

The situation may warrant excavating a second breach in a levee system to allow flood waters to drain from behind the land side of a levee. This effort may also limit the depth of those flood waters behind the levee and prevent further flooding of areas within the basin, particularly the southern portions of Yuba City. This action may be employed under emergency conditions.

The LD1 levees are being repaired and improved to provide protection from the 100-year flood event, and in some locations the 200-year flood event. While these are relatively high levels of flood protection, there still remains the possibility of levee failure, particularly from some larger infrequent flood event. A levee failure in any of the LD1 levees and portions of east levee of the Sutter Bypass levee just downstream of the Wadsworth Canal would allow flood waters to enter, flow through and pond in the southern portions of LD1. Flood waters would eventually pond against the Lower Feather River right bank levee and Sutter Bypass east levee at or near the confluence of the Feather River and the Sutter Bypass in the southern tip of the Yuba City Sutter Basin. This location is the low point in the LD1 and Yuba City Sutter Basin. This ponded water would increase in elevation until it reaches the lowest top of levee elevation and then would overflow the levee back to the river and/or bypass system near the confluence of the Sutter Bypass and the Feather River. This would likely cause a second breach in the levee system at this low elevation. To minimize ponding elevations (and thus damage) in LD1 and southern portions of Yuba City, actions may be taken by LD1 at its discretion, and with notification to Corps and DWR, after a breach upstream to lower a levee elevation downstream so that the overflow out of LD1 and the Yuba City Sutter Basin would begin at the lowest elevation possible. It is proposed to accomplish this by degrading a section of the Feather River right bank levee, up to 3,500 feet in length, just east of the Sutter Bypass. These actions would not begin until an actual breach of the system had occurred. Mobilization of equipment would begin as upstream overtopping became imminent. Degrading would commence as soon as a levee failure occurred. The levee would be degraded to the forecasted maximum downstream river water surface elevation at the confluence of the Sutter Bypass and the Feather River. Degradation would follow the drop in downstream elevation until water begins to flow through the degraded section back to the river from the leveed area. Flow through the degraded section would then prevent further mechanical degradation and most likely the flow itself would continue to degrade and eventually breach the levee in this section. A breach in this location should not endanger the east levee of the Feather River or the levees of the Sutter Bypass. This breach would be at least 4,200 feet from the nearest levee on the south easterly side of the Feather River (RD 1001) and at

least 5,600 feet from the westerly levee of the Sutter Bypass. The area in the floodway between the levees at and near the confluence of the Sutter Bypass and the Feather River is partially vegetated with riparian forest, reducing the risk of erosion to the opposite bank levee system(s). After the flood event the degraded section and the breach would have to be repaired.

E.1.5 Environmental Considerations

Flood Water Removal projects are generally exempt from CEQA. Statutory exemptions include “emergency projects such as actions required to restore damaged facilities or mitigate an emergency” (*CEQA Guidelines Section 15269*) http://ceres.ca.gov/topic/env_law/ceqa/guidelines/art18.html). Nevertheless, **LD1** will consult legal counsel before making a final decision.

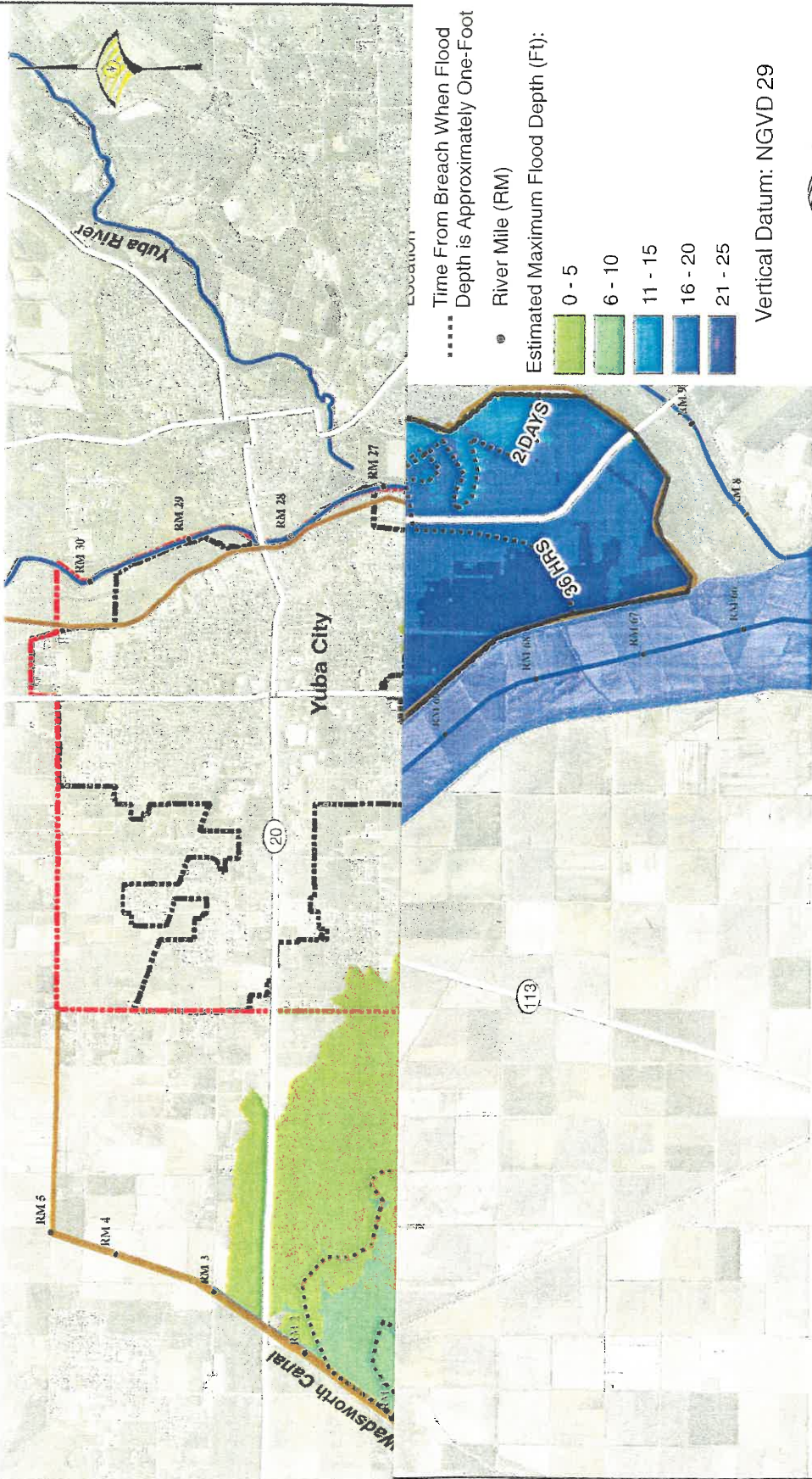
E.2 Contractors and Vendors

- Provide list and contact information.

Contractor/Vendor	Type Service	Address	Phone

LEVEE DISTRICT NO. 1 OF SUTTER COUNTY

FLOOD DEPTHS AND TIME OF FLOODING FROM LEVEE BREAK AT STAR BEND (RM18)

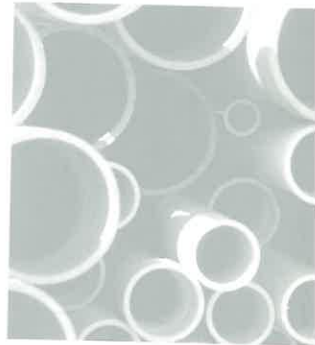
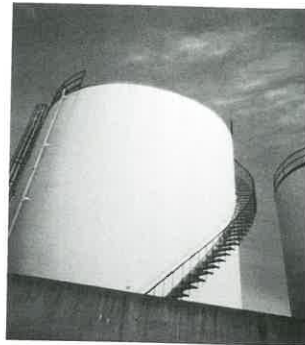


April 2007





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Appendix F References

The three following local references were utilized in developing components of the Levee District One Flood Safety Plan.

Yuba City – Sutter County, California Multi-hazard Mitigation Plan. Prepared by AMEC October 2007.

Yuba City Flood Emergency Response Plan for Slow Rise Flooding Conditions of Feather River at 5th Street Bridge. Yuba City, California. September 2006.

Count of Sutter Emergency Operations Plan. Sutter Operational Area, Annex 5. Floods and Dam Failure. April 2007.

The following documents may be helpful to Flood Safety Plan developers. They elaborate on emergency concepts that apply in flooding emergencies.

- *Guidelines for Coordinating Flood Emergency Operations* (completed in compliance with the Flood Emergency Action Team [FEAT]: Initiative Number 1) (8 pages)
[http://www.oes.ca.gov/Operational/OESHome.nsf/PDF/Guidelines%20for%20Coordinating%20Flood%20Emergency%20Operations/\\$file/Feat1.pdf](http://www.oes.ca.gov/Operational/OESHome.nsf/PDF/Guidelines%20for%20Coordinating%20Flood%20Emergency%20Operations/$file/Feat1.pdf)

Provides a concept of operations for coordinating emergency response at the field level among local, State, and federal agencies with flood control responsibilities

- *Flood Preparedness Guide for Levee (sic) Maintaining Agencies* (completed in compliance with the Flood Emergency Action Team [FEAT]: Initiative Number 3) (6 pages)

http://www.water.ca.gov/floodmgmt/docs/floodprepguide_4lmas.pdf

Describes the response process under SEMS

Provides questions for developing a local maintaining agency emergency plan

Lists standards for stockpiling materials

- *Legal Guidelines for Flood Evacuation* (completed in compliance with the Flood Emergency Action Team [FEAT]: Initiative Number 2) (35 pages)
[http://www.oes.ca.gov/Operational/OESHome.nsf/PDF/Legal%20Guidelines%20for%20Flood%20Evacuation/\\$file/Feat2.pdf](http://www.oes.ca.gov/Operational/OESHome.nsf/PDF/Legal%20Guidelines%20for%20Flood%20Evacuation/$file/Feat2.pdf)

Cites laws and regulations pertaining to authorities for ordering flood evacuation

- *Guidelines for Inter-County Sheltering Caused by Large-Scale Evacuations of People* (Approximately 20 pages)

<http://www.cdsscounties.ca.gov/coplanners/res/pdf/doc5.pdf>

Developed in response to Winter Storms of 1997, which resulted in evacuation of 150,000 persons

Describes procedures for evacuation and care of 10,000 or more evacuees

- *SEMS Resource Ordering and Tracking: A Guide for State and Local Government* (Approximately 50 pages with attachments)

<http://www.cesa.net/library/SEMS%20Resource%20Ordering%20Guide.pdf>

Provides a description of how emergency managers order and track resources

- *Protocol for Closure of Delta Waterways* (completed in compliance with the Flood Emergency Action Team [FEAT]: Initiative Number 7) (7 pages)

http://www.water.ca.gov/floodmgmt/docs/protocol_closure_delta.pdf

Identifies responsibilities and conditions for closure of Delta Waterways

Addresses both pleasure and commercial boat traffic restrictions

- *Memorandum of Understanding for Animal Care During Disasters* (completed in compliance with the Flood Emergency Action Team [FEAT]: Initiative Number 6) (3 pages)

[http://www.oes.ca.gov/Operational/OESHome.nsf/PDF/Memorandum%20of%20Understanding%20for%20Animal%20Care%20During%20Disasters/\\$file/Feat6.pdf](http://www.oes.ca.gov/Operational/OESHome.nsf/PDF/Memorandum%20of%20Understanding%20for%20Animal%20Care%20During%20Disasters/$file/Feat6.pdf)

Provides a model for ensuring pre-event planning; includes agreements for animal care when evacuations are necessary

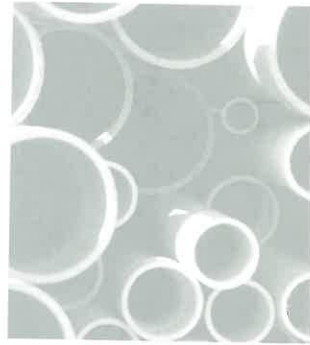
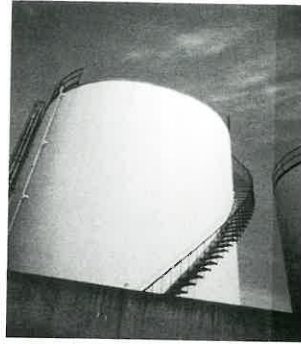
- *Standardized Emergency Management System (SEMS) Guidance for Special Districts* (27 pages)

[http://www.oes.ca.gov/Operational/OESHome.nsf/PDF/SEMS%20Guidance%20for%20Special%20Districts%20to%20OES/\\$file/SEMSDistGuid10-5-07.pdf](http://www.oes.ca.gov/Operational/OESHome.nsf/PDF/SEMS%20Guidance%20for%20Special%20Districts%20to%20OES/$file/SEMSDistGuid10-5-07.pdf)

Analyzes different types of special districts and possible emergency management relationships consistent with the requirements of SEMS



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Appendix G Supporting Documents

G.1 Supporting Documents

G.1.1 Promulgation Document/Signature Page

One of the highest priorities is protecting the people of Levee District One from the effects of flooding. To that end the Board of Directors authorized development of this Flood Safety Plan. It describes our response to flooding, including coordination with other levels of government – local, State, and federal. It is compatible with other flood response plans in the region, as well as with the California Emergency Plan. Accordingly, it meets requirements of Section 9650 of the Water Code.

We hereby promulgate this Flood Safety Plan for Levee District One, in accordance with applicable local statutes and ordinances. The Board charges General Manager Bill Hampton with continued development and maintenance of this plan. Mr. Hampton is responsible for implementing this plan whenever the conditions described in the plan occur.

I wish to thank LD1 General Manager Mr. Bill Hampton, GEI Consultants, Yuba City, Sutter County, and SBFCA representatives and others who worked together to create this plan. Through your combined efforts Levee District One and the southern portion of the Yuba City Basin is more prepared to respond when flooding threatens or strikes our community.

Sincerely,

Francis K. Silva, Chairman

Date

G.2 Approval and Implementation

On January 10, 2011, the Board of Directors of Levee district One approved the attached Flood Safety Plan for Levee District One. The General Manager has responsibility for continued development and maintenance of this plan.

[Attach Copy of Resolution, if appropriate.]

G.3 Record of Changes

It is important to keep the plan up to date so it will be accurate and useful in a flood emergency. This section tracks all updates and changes to the plan to ensure that all participants can be certain of having the most current document.

RECORD OF CHANGES				
CHANGE NUMBER	DATE OF CHANGE	DATE ENTERED	SUMMARY OF CHANGE	ENTERED BY

G.4 Record of Distribution

Copies of this plan have been distributed to the following individuals, offices, organizations, and interested parties. *{{SAMPLE LIST}}*

DISTRIBUTION LIST	
Agricultural Commissioner.....1	<u>Cities</u>
Board of Supervisors.....5	Yuba City.....1
Clerk - Recorder.....1	<u>State Agencies</u>
Building Inspection.....1	Department of Water Resources1
Planning1	California Emergency Management Agency
County Administrative Officer11
County Counsel.....1	
Library.....1	<u>Other</u>
Sheriff1	American Red Cross1
Office of Emergency Services/EOC ..2	Salvation Army1

G.5 Hazard Analysis Summary

This section provides a listing and general assessment of flood hazards within and adjacent to that may affect LD1.

G.5.1 Creeks and Streams

G.5.1.1 Natural Stream/Gilsizer Slough

Gilsizer is a low-lying drainage course **within and** adjacent to portions of LD1 service area and boundary that is the local responsibility of a separate drainage district. The Wadsworth Canal and the Sutter Bypass are nearby water courses that are controlled and managed by DWR. The noted water courses are characterized by limited vegetation and limited channel capacity. Consequently, these water courses may presently lack the capacity to contain a 100-year flood and the Gilziser Slough is considered to have significantly less capacity. Environmental, economic constraints and regulatory restrictions presently limit the ability to significantly improve the flood protection from these potential sources of flooding. Out-of-bank flooding can occur during the larger storm events, with the potential for notable structure flooding in portions of the LD1 Yuba City Sutter Basin.

G.5.2 Levees and Dams

Levees require maintenance and inspection to remain properly functioning. In addition to the portion of the Feather River Levees for which LD1 has responsibility, the Western portion of the county is protected by levees along the Sutter Bypass. These are the responsibility of the Department of Water Resources.

Operation of existing dams strongly affects flooding potential for areas in LD1. There is always an extreme chance that an incident at a dam may cause an uncontrolled release of water. The following major dams affect flows in LD1: Oroville, operated as part of the State Water Project by the Department of Water Resources and New Bullards Bar Dam, operated by the Yuba County Water Agency.

G.6 Capability Assessment

LD1 has developed a list of specific events that will “trigger” emergency response actions. This list is coordinated with those of Yuba City and Sutter County. Priorities have been established for protective actions and a methodology exists for changing those priorities during flood response. Methods and equipment for communication have been established. Staffing levels are adequate and the training and exercise program ensures a proper level of readiness. Written documentation of procedures and techniques exists for levee emergencies such as boils, overtopping, sloughing, or other incident.

LD1 has staging areas for response teams, as well as stockpiles of materials and supplies. (Note: These staging areas are separate from the evacuation centers described elsewhere in this plan.) Security for these sites has been arranged with the Sutter County Sheriff. Logistics procedures for augmenting available supplies and equipment exist. Mutual aid arrangements have been made with Sutter County and Yuba City

G.7 Planning Assumptions

NOTE: This section of the Sample may contain assumptions that do not apply to your agency/jurisdiction. Some that do apply may not be included. Please adjust the information accordingly.

- Public warning is provided through a variety of means; e.g., National Weather Service (NWS) announcements, National Oceanic & Atmospheric Administration radio, standard radio and television Emergency Alert System (EAS) bulletins. *NOTE: The following is an optional comment for those locales having this capability.* A reverse 911 system is also in place to alert residents about potential emergency situations in their specific neighborhoods. These systems advise citizens and authorities about flood threats or actual flooding conditions.
- With adequate warning and timely reaction by emergency response agencies, loss of life, injury, and property damage can be reduced. Careful planning and coordination has been done to protect affected populations through timely warning and protective measures.
- Mutual aid systems will be made available during flooding situations that exceed the resources of LD1 and those of nearby cities and special districts.

G.8 Formal Delegation of Authority to Incident Commander

An Incident Commander's on-scene scope of authority is derived from existing laws and agency policies and procedures. When a flood situation is exceptionally complex, it may be modified by the agency administrator or elected official. This process of granting authority to carry out specific functions is called the Delegation of Authority. Delegation of Authority grants the IC authority to carry out specific functions. It is issued by the chief elected official, chief executive officer, or agency administrator. It may be issued in writing or verbally. While it allows the Incident Commander to assume command at the scene, it does not relieve the granting authority of ultimate responsibility for the flood response.

Within the normal scope of authority, the Incident Commander establishes incident objectives, then determines strategies, resources, and ICS structure. Thus, a delegation of authority may not be required if the Incident Commander is acting within existing authorities. For example, an emergency manager may already have the authority to deploy response resources to a small flash flood.

However, Delegation of Authority is needed when the incident is outside the Incident Commander's home jurisdiction, when the incident scope is complex or beyond existing authorities, or when required by law or procedures. Under this Flood Safety Plan, on-scene management of flood water removal requires Delegation of Authority.

The Delegation of Authority should include:

- Legal authorities and restrictions
- Agency or jurisdictional priorities
- Political implications
- Demographic issues
- Financial authorities and restrictions
- Reporting requirements
- Plan for public information management
- Plan for ongoing incident evaluation

SAMPLE Delegation of Authority

Agency: _____

As of (time), (date), I have delegated authority to manage Flood Water Removal due to the (Flood Event Name) to Incident Commander (Name) and (his/her) Incident Management Team.

The flood, which began as a series of storms starting on (date), involves the (describe area). My considerations for management of this Flood Water Removal project are as follows:

1. Provide for flood fighter and public safety.
2. Manage the flood with as little environmental damage as possible.
3. Key cultural features requiring priority protection are: (list).
4. Key demographic considerations are: (list).
5. Key resources considerations are: (list).

6. Restrictions for water removal actions include: (list).
7. The LD1 advisor will be Sean Minard, LD1 Engineer and Civil Engineer with MHM Engineers and Surveyors.
8. The flood borders private property that must be protected if practical. Barbara LeVake will be the LD1 representative.
9. Manage the flood water removal cost-effectively for the values at risk.
10. Approval for above expenditures (limit) is to be made by (Name/Title).
11. Provide training opportunities for LD1 personnel to strengthen our organizational capabilities.

This Delegation of Authority is subject to weekly review by the Levee District One Board of Directors.

(Signature and Title of Agency Administrator) (Date)