MODEL MAP #1
GUIDE TO FLOOD CONTINGENCY MAPPING

Floodfight History

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

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

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

2006 Spring flood occurred on San Joaquin River due to sustained rains in March that saturated ground culminating in a very heavy rainfall event on April 2nd-4th which forced reservoirs to make large releases. Initial predictions of a 32' stage at Vernalis, combined with a forecasted additional large precipitation event, initiated a large flood fight operation. Precipitation event failed to occur and subsequent peak flow crested at 35,000 cfs at Vernalis Gauge causing a peak stage of 29.3'. Mossdale Gauge reached 19'. Erosion protection work was performed on Reclamation District No. 17 at nearly a dozen sites but no levees failed. (Baldwin after interview with Art Hinojosa)

Special Consideration

Manteca
Each of the subdivisions that are located south of Highway 120 have storm drains. At the present time they flow into retention basins. Plans are currently being reviewed that will convert the Woodward Park Storm Drain Basin into a detention basin. The storm drainage will then be pumped into Lateral Y which will then empty into Drain 7. The pump stations would limit the ability of water to reverse the flow and come back into the streets.

The gravity sewer lines in the various subdivisions currently discharge into pump stations. The pump stations discharge through the force main into the sewer treatment plant.

The sewer outfall line has a flap gate located at the discharge point into the river that would prevent water from being pushed backward into the sewer plant.

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

RD 17 Communications Plan

Communications Equipment
The District does not own communications equipment.

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

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

RD 17 Evacuation Plan

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

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

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

100 -Yr Flood Elevations

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

Survey Information

Basis of Elevations
Elevations shown are based on the North American Vertical Datum of 1988 (NAVD 88). Units shown are based on the U.S. Survey Foot.
Dryland levee elevations are maintained by KSN, Inc., Civil Engineers, Stockton.

RD 17 Levee Patrol Plan

Organization
District Engineer is responsible for organizing patrols, schedules, and contact list. Patrol staff will be hired at time of activation for flood operations. Patrols will consist of two persons in one pickup. Minimum equipment is cellular phones, lath package, spot light, first aid kit, and district flood map. Patrols will be briefed and debriefed at KSN Engineers, 711 North Pershing Ave.

Patrol Plan
A daily patrol will be initiated at Monitor Stage at Mossdale Gage. Continuous 24-hour patrol will be initiated at Danger Stage at Mossdale Gage. Single sector from north access point (Carolyn Weston Blvd) to south access point (Williamson Rd).

Lath Protocol
Red - Boil/Seepage Blue - Rock Slippage White - Slope/Levee Distress

Tactical Plans (Preliminary Engineering Designs)

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

Weston Ranch Relief Cut
Highway 120 Emergency Berms
Mathew's Complex Ring Dike
Lathrop Emergency Berms
Locations of Cross Culverts in Freeways

Supply Delivery Points

The following locations will be used to deliver floodfight materials to district officials if requested, exact delivery point will be identified at time of resource request. District officials will meet resources at the designated delivery point to take delivery or guide vehicles carrying resources to final unloading point.

RD 17 - Supply Delivery Point #1 - Northeast Corner of Intersection of Mathews and Manthey Roads
Supply Delivery Point #2 - Williamson Road just north of Walthal Dry Land Levee

RD 17 Flood Dewatering Plan

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

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

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

Mossdale Tract Flood Contingency Options

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

Actions

Establish levee patrol plans in accordance with District plan.

SJ Public Works Mutual Aid Coordinator at San Joaquin Operational Area Emergency Operations Center maintains patrol status reports for all districts within Metropolitan Flood Fight Command. Establish contact and provide patrol results and patrol mutual aid needs in accordance with protocols.

Provide district representatives to participate in Metropolitan Flood Fight Command at Operational Area Emergency Operations Center, 2101 E. Earhart Avenue.

Inspection of levees and initiation of patrol activities. All patrol schedules and personnel to be controlled by RD 17 officials. Make contact with RD 2094 officials to coordinate completion of relief cut in case of need.

Upon prediction of river stage of 25.5' at Mossdale, or recommendation of district, review Preliminary Engineering Design plan for Highway 120 Emergency Berms. Implement if stage of 28.5' or more is predicted at Mossdale.

Upon prediction of river stage of 25.5' at Mossdale, or recommendation of district, review Preliminary Engineering Design work for Lathrop Emergency Berms. Implement if stage of 28.5' or more is predicted at Mossdale.

Upon prediction of river stage of 25.5' at Mossdale, or recommendation of district, review Preliminary Engineering Design work for Mathew's Complex Ring Dike. Implement if stage of 28.5' or more is predicted at Mossdale.

Upon prediction of river stage of 25.5' at Mossdale, or recommendation of district, mobilize necessary equipment to Mizuno Farms Relief Cut.

Failure of Upstream Levee in RD 2075 or RD 2094
The general floodfight strategy will be to floodfight the Walthal Slough Dry Land Levee, maintain primary district levees, and make preparations to rapidly implement additional actions.

Actions

Immediately upon failure, and in coordination with RD 2096 officials, make Mizuno Farms Relief Cut south of Walthal Slough Dry Land Levee down to high water level. Cut to be at location indicated on P.E.D. Conduct floodfight on south cross levee extending from LM13.6. Review specifications and equipment required for Weston Ranch Relief Cut.

Review requirements for Hwy 120 Emergency Berms extending from LM12.8. Preposition materials and initiate a standby contract to implement necessary actions.

Preposition needed material and equipment for construction of Lathrop Emergency Berms P.E.D.

Sign standby contract for construction of Mathew's Complex Ring Dike P.E.D.

Failure of Walthal Slough Dry Land Levee
The general floodfight strategy is to floodfight Highway 120 with Highway 120 Emergency Berms.

Actions

Construct Highway 120 Emergency Berms P.E.D. and floodfight Highway 120.

Position equipment to make Weston Ranch Relief Cut as shown on P.E.D.

Construct Lathrop Emergency Berms

Construct Matthew's Complex Ring Dike

Failure of Highway 120 Emergency Berms or Primary District Levee North of Highway 120
The general floodfight strategy is to make RD 17 Relief Cut and construct Lathrop Emergency Berms.

Actions

Immediately cut down levee at Weston Ranch Relief Cut to high water level. Cut to be at location shown on P.E.D. Complete cut when inside water levels equal river water levels. Notify RD 404 officials of planned actions.

Construct Lathrop Emergency Berms P.E.D. if not already done.

Construct Mathew's Complex Ring Dike P.E.D. if not already done.

Prevent water backing to the south through tunnel or over railroad tracts under Interstate 5 at junction with Highway 120 if breach is north of Highway 120.

Failure of Primary Levee north of Bowman Road
The primary floodfight strategy will be to make the relief cut to minimize flood depths if appropriate, protect critical County facilities, and determine practicality of placing emergency berm upstream of Bowman Road to prevent floodwaters backing up into Lathrop subdivisions.

Make Weston Ranch Relief Cut if break is far enough upstream to have significant fall.

LEGEND

- 100 - YEAR FLOOD ELEVATION FLOOD INSURANCE STUDY SAN JOAQUIN COUNTY F.E.M.A. - 1988 COMMUNITY # 060299
- LOGISTICS BASE
- SUPPLY DELIVERY POINT SERVING DISTRICT SHOWN
- SUPPLY STAGING AREA
- TEMPORARY LEVEE/ EMERGENCY BERM
- SEEPAGE AREA
- HISTORIC LEVEE BREACH
- RELIEF CUT
- EROSION AREA
- LEVEE ACCESS
- DRYLAND LEVEE/EMBANKMENT
- DRYLAND LEVEE/EMBANKMENT (LOW OR CRITICAL SECTION)
- LEVEE
- L.M.=1.0 R.M.=1.0 100+00 — LEVEE MILE RIVER MILE STATION
- L.C. EL=20.1' — LEVEE CROWN ELEVATION (FIELD SURVEYED - NAVD 88)
- GROUND EL=1.0' — SPOT ELEVATION (LIDAR DATA - NAVD 88)
- MUNICIPAL SANITARY PUMP STATION
- MUNICIPAL STORM PUMP STATION
- RURAL DRAINAGE PUMP STATION (NOT AT 100-YR FLOOD PROTECTION)
- SITE FOR EMERGENCY PUMP STATION
- WATER WELL
- MUNICIPAL FACILITIES: SANITARY SEWER LINES
- STORM DRAIN LINES
- WATER LINES
- OVERHEAD TRANSMISSION LINE
- STRUCTURES
- COMMAND POST
- DISTRICT BOUNDARY
- 15.0' — 100-YR FLOOD CONTOUR WITH RELIEF CUT (1950 FLOOD LIMIT)

KSN INC. KJELDSEN SINNOCK NEUDECK Consulting Engineers and Land Surveyors
Post Office Box 844
711 N. Pershing Avenue
Stockton, CA 95201-0844

SAN JOAQUIN COUNTY
OFFICE OF EMERGENCY SERVICES

SJ COUNTY
FLOOD CONTINGENCY MAP
RECLAMATION DISTRICT NO. 17
MOSSDALE TRACT

Revisions				
No.	Description	Date	By	Aprvd. By

Design CHN
Drawn JRT
Check CHN
Scale 1" = 2000'
Original Drawing Scale 0 ½" 1"
Date AUG. 2012
Sheet Number 1 Of 1
Project File No. 0856-0540