



Map Version

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

Communications Plan

Field Command Posts
RD 404 Northelli, Gill & McDaniel RD404 121°17'16.50"W 37°57'15.94"N
Attorney's Office, 238 E. Wever Avenue, Stockton

Communications Equipment
The District does not own communications equipment. Port of Stockton has agreed to provide radios for levee patrol vehicles and patrol group supervisor.

Internal Communications
Means of internal communications among district staff will be personal cellular telephones. Telephone numbers will be assigned for response functions at the time of activation. Levee patrol vehicles and patrol supervisor will have radios with common frequency per patrol plan.

Communications with outside Jurisdictions
Primary means of communications with outside jurisdictions will be personal cellular telephones. Secondary means of communications will be 1) daily meetings of Metropolitan Unified Flood Fight Command, and 2) contact with Port Zone public safety unified command post (Stockton Corporation Yard at Lincoln and Charter Way 1) activated.

Flood Fight History

1900 Early floods inundated the southern portions of Stockton along Mormon Slough and the San Joaquin River. Much specific information that areas east of current Interstate 5 flooded and that RD 17 south of Boggs Tract flooded but no major problems reported on Boggs Tract. Flooding depths were 16 inches to 4 feet in Stockton and 5-12 feet in RD 17. Flooding could have been ameliorated in Boggs Tract from flood waters coming from the east and south due to the presence of McDougall Slough on the east side of district and French Camp Slough on the south side of district. McDougall Slough no longer exists. See discussion on 1955 flood. (Research by Ron Baldwin, San Joaquin Office of Emergency Services)

1955 Estimated flow in Mormon Slough at Bellota was 16,000 cfs and recorded flow on Calaveras River at Jenny Lind was 14,200 cfs. Duck creek flow was 2,500 cfs. Mormon Slough flooded along both sides from Bellota to Diverting Canal east side of Stockton. 1,500 acres of Stockton generally along Mormon Channel were inundated by floodwaters breaking out of Mormon Slough after failure of Diverting Canal. Floodwater remained in City for as long as 8 days and reached a depth of 6 feet in some areas. 125 city blocks flooded, the most severely damaged being south of Charter Way and east of French Camp Slough. (COE Flood Plain Studies 1974 and 1975)

Flood waters flowed along Mormon Slough. McDougall Slough existed along present Interstate 5 from Charter Way to junction of Mormon Slough with current strip channel. There was an embankment along the west side of McDougall Slough. Witness observed COE out water back into McDougall Slough to drain floodwaters from South Stockton. Moss Tract and Boggs Tract (now one district - RD404) did not flood. McDougall Slough is now filled in at Charter Way but humps at Charter Way and on west side of I5 are remnant of embankment. (Dan Noremelli)

Evacuation Plan

Responsible Agencies
The City of Stockton and the San Joaquin County Sheriff's Department are responsible for alert and warning and evacuation within RD 404.

Public Safety Agencies Evacuation Plans
Port Zone Urban Evacuation Map covers RD 404 and is available at www.sjmap.org/evacuation (password required). Public Safety Field Command Post will be located at City of Stockton Corporation Yard at Lincoln Street and Charter Way.

Evacuation Maps for General Public
Evacuation maps for general public are available at www.sjmap.org/evacuation. Full size map can be accessed for posting at business and institutions and brochures (8.5"x11") map and safety information for printing on standard home printers.

Special Considerations

Stockton Municipal Utilities District Waste Water Treatment Plant
Utility District staff cannot currently prevent internal flooding of treatment plant by floodwaters entering effluent lines remaining at plant. Staff will attempt to save plant by pumping effluent as quickly as possible into Tertiary Ponds across river. Flood flow lines will probably exceed that pumping capacity.

1997 Major flood with high flows into New Hogan Dam on Calaveras River and through Diverting Canal east side of Stockton. Failure of Diverting Canal will send flood waters toward Boggs Tract. Dam operators reduced releases to zero during this peak flow to allow runoff below the dam to drain. The ability of New Hogan Dam to reduce flows to zero while this downstream flow moves through is key to flood protection along Mormon Slough.

2006 Major flows along San Joaquin River. Vernalis gage reached over 34' and Mossdale gage upstream from Boggs Tract reached over 20'. Flows of 72,000 cfs in San Joaquin River at Vernalis. Erosion and other problems but no major problems reported on Boggs Tract. No flooding in district. (R. Baldwin, San Joaquin Office of Emergency Services)

Due to wet March, New Hogan Dam reservoir was at high water levels and an intense rainfall on April 4, 2006 almost caused dam to spill. Three days of subsequent dry weather allowed dam operators to regain flood storage. 10,000 cfs releases into lower Calaveras River for three days. High flows in San Joaquin River. Vernalis gage reached danger stage, 26.5' and Mossdale gage reached monitor stage, 19.2'. Some erosion problems reported in Boggs/Moss Tract (RD404) but no major problems (R. Baldwin, San Joaquin Office of Emergency Services)

Survey Information

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

Mossdale Gauging Station (NAVD 88)

Monitor Stage	19.5'
Flood Stage	28.5'
Danger Stage	29.5'

Tactical Plans (Preliminary Engineering Designs)

Preliminary engineering designs for the following response options have been completed. Designs can be downloaded from Flood Contingency Map Website at www.sjmap.org/efcom or obtained from indicated engineering firm.

Boggs Tract Emergency Berms
Emergency berms to block Interstate 5 underpasses to stop flood water flow either into district or out of district. Actual berms needed can be determined at time of flood. P.E.D. completed by KSN Engineers, Stockton.

Navy Drive and Fresno Avenue Emergency Berms
Emergency berms at railroad embankment underpasses to prevent movement of floodwaters south to protect regional wastewater treatment plant. P.E.D. completed by KSN Engineers, Stockton.

Port of Stockton Relief Cut
Relief cut to reduce flood depth in district from failure of primary levee or flooding from the East. P.E.D. completed by KSN Engineers, Stockton.

Boggs Tract Cross Culverts
Plug all storm drain culverts crossing under Interstate 5 in conjunction with Boggs Tract Emergency Berms to prevent flood water flow either west or east. P.E.D. completed by KSN Engineers, Stockton.

Flood Dewatering Plan

Situation:
Slight gradient from southeast to northwest within District makes relief cut an option for reducing flood depth (1.5') and extend flood depths of 6' extending to proximity of Interstate 5 would remain to be pumped out. City of Stockton and Port of Stockton operate all existing storm water pumping stations (see map). Port pump only is above the 100-year flood elevation.

District Dewatering - Phase I:
Upon confirmation of levee failure, 1) make relief cut when elevation of impounded waters reaches elevation of river at that point; 2) put storm water pumping station motors if time and safety allows (Stockton & Port Fuel Storage Area); and 3) put manhole lid at location shown below if safety allows. Excavation equipment accesses relief cut site from north end of Port of Stockton facilities.

District Dewatering - Phase II:
Upon closure of (ditches), place emergency pumps on levee at sites shown on map. Place and make pipes within nearest access point to existing storm water system.

Location of Nearest Access to Storm Water System

8th Street Pump Station (Manhole)	N37°55'35.65", W121°19'26.62"
Highway 4 Pump Station	N37°55'45.07", W121°19'35.95" (Ditch)
Port of Stockton Pump Station	N37°56'16.08", W121°19'59.90" (Ditch)

Access levee crown from Highway 4 bridge at west end of District. Two contingencies exist: 1) Breach between Hwy 4 & Port Emergency Pump Site - Barge pumps to RD 403 and use Navy Drive Bridge; 2) Breach between Hwy 4 & Eighth Street Emergency Pumping Site - Use Manthey Street on East side of District to access levee.

District Dewatering - Phase III:
Upon restoration of City of Stockton drainage pumping capacity, use normal interior drainage system to dewater remaining ponded flood waters (see interior drainage analysis). Place pumps and lines to dewater ponded water in Boggs Tract community.

Levee Patrol Plan

Patrol Group Supervisor - Port of Stockton
Patrol Group Staging Area
Port of Stockton Emergency Operations Center, 122 Hooper Drive, Rough and Ready Island

Patrol Organization
Port of Stockton, Stockton Municipal Utilities District, and City of Stockton will provide patrol staff. Port of Stockton will provide radios with common frequency for patrol vehicles. Patrol members will receive 2-hour Emergency Levee Worker Safety and Procedures Class which includes DWR Levee Threat Monitoring Guidelines and basic NIMS training.

Patrol Plan
A daily patrol will be initiated at Monitor Stage (EL=19.5') at Mossdale Gage. Continuous 24-hour patrol will be initiated at EL=21.5' at Mossdale Gage. Port of Stockton staff and one vehicle assigned to North Patrol Sector from Stockton Deep Water Channel to BNSF railroad tracks. Stockton Municipal Utilities District staff and one vehicle assigned to Central Patrol Sector from BNSF railroad tracks to Charter Way. City of Stockton Public Works staff and one vehicle assigned to South Patrol Sector from Charter Way to Interstate 5. Minimum staffing and equipment as per RD 404 SOP.

Lath Protocol - Red - Bolt/Seepage, Blue - Rock Slippage, White - Slope/levee distress
Marking procedures per DWR Levee Threat Monitoring Guidelines.

Flood Contingency Options

High Water Event
The general strategy in a high water event is to establish effective levee patrol, coordinate through Metropolitan Flood Fight Command, and prepare to implement contingency options 4 & ordered.

Actions
Establish levee patrols 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.
Review Preliminary Engineering Designs for contingency options and identify resources needed to implement if ordered.

Failure of South Side of Mormon Slough or West Levee of Diverting Canal
Waters will flow toward district roughly parallel to Mormon Slough through residential areas east of Interstate 5. The general flood fight strategy will be to evaluate whether to implement Boggs Tract Emergency Berms or Port of Stockton Relief Cut while implementing infrastructure protective measures.

Actions
Construct Boggs Tract Emergency BERM P.E.D. to prevent water reaching Regional Wastewater Control Plant and district if ordered by Metropolitan Flood Fight Command.
Implement Port of Stockton Relief Cut P.E.D. if ordered by Metropolitan Flood Fight Command.
Initiate maximum pumping at Regional Wastewater Treatment Plant of waste effluent into tertiary ponds across river to protect treatment plant from internal flooding.
Monitor municipal water system and isolate flooded sections as necessary to maintain integrity of water system. Prepare to cut power to areas impacted by floodwaters.
Protect interior slopes of district levees if district floods.
Install emergency pumping stations if district floods.

Delivery Points and Supply Staging Areas

The following locations will be used to deliver firefighting 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 of guide vehicles carrying resources to final unloading point.

Pre-planned Delivery Points

DP-01	West side of Intersection of Navy Drive and Washington Street	121°20'12.80"W 37°56'30.77"N
DP-02	Stockton Pumping Plant #8 at west end of 8th Street	121°19'24.92"W 37°55'35.73"N
DP-03	Van Buskirk Park Playground Parking Lot at corner of Houston Avenue and Manthey Road	121°17'35.98"W 37°55'50.51"N

Supply Staging Areas

SA-01	KSN Engineering, 711 Pershing Ave., Stockton	121°18'45.71"W 37°57'23.55"N
SA-02	Flood Fight Supplies, Warehouse #609	121°18'45.71"W 37°57'20.27"N

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