Flood Contingency Options

High Water Event

The general strategy in a high water event is to implement effective patrol, coordinate through Metropolitan Flood Fight Command, and prepare to implement contingency options if 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 Calaveras River South Bank Levee West of Interstate 5

The general flood fight strategy will be to prepare to make Country Club Relief Cut, place Smith Tract Emergency Berms, install emergency pumping capacity, and plug cross culverts crossing under Interstate 5.

Actions

Make Country Club Relief Cut P.E.D. as impounded water elevation reaches water elevation within Calaveras River at site if ordered by Metropolitan Flood Fight Command.

Construct Smith Canal Emergency Berms P.E.D. and plug cross culverts crossing under Interstate 5 if ordered by Metropolitan Flood Fight Command.

Identify additional pumping capacity and arrange for transport to Country Club Emergency Pumping Station P.E.D..

Repair levee breach.

Protect interior slopes of district levees if district floods.

Failure of Calaveras River South Bank Levee East of Interstate 5

The general flood fight strategy will be to prepare to make Smith Canal Emergency Berms in conjunction with Karl Ross Relief Cut, or make Country Club Relief Cut, plug cross culverts crossing under Interstate 5, and install emergency pumping capacity. Prepare to prevent water flow into RD828 at American Legion Park.

Actions

Construct Smith Tract Emergency Berms P.E.D., plug cross culverts crossing under Interstate 5, and make Karl Ross Relief Cut P.E.D. if ordered by Metropolitan Flood Fight Command.

Make Country Club Relief Cut P.E.D. as impounded water elevation reaches water elevation in Calaveras River at site if Interstate 5 option is not adopted.

Identify emergency pumping capacity and arrange for transport to Country Club Emergency Pumping Station or Karl Ross Emergency Pumping Station depending on flood fight option adopted by Metropolitan Flood Fight Command.

Repair levee breach if needed.

Protect interior slopes of district levees if district floods.

Construct Emergency Berm at American Legion Park to prevent flow of water into RD828 if ordered by Metropolitan Flood Fight Command.

Failure of Smith Canal North Bank Levee West of Interstate 5

The general flood fight strategy will be to prepare to make Smith Tract Emergency Berms, plug cross culverts crossing under Interstate 5 with Smith Canal Emergency Berms and plug cross culverts crossing under Interstate 5 if ordered by Metropolitan Flood Fight Command.

Actions

Construct Smith Tract Emergency Berms P.E.D. with Karl Ross Emergency Pumping Station and plug cross culverts crossing under Interstate 5 if ordered by Metropolitan Flood Fight Command.

Identify additional emergency pumping capacity and arrange for transport to either Karl Ross or Country Club Emergency Pumping Stations as appropriate.

Repair levee breach.

Protect interior slopes of district levees if district floods.

Failure of Smith Canal South Bank Levee West of Interstate 5

The general flood fight strategy will be to prepare to construct Weber Tract Emergency Berms, plug cross culverts crossing under Interstate 5, and install emergency pumps to dewater.

Actions

Construct Weber Tract Emergency Berms P.E.D. and plug cross culverts crossing under Interstate 5 if ordered by Metropolitan Flood Fight Command.

Identify additional emergency pump capacity and arrange transport to Shimizu Emergency Pumping Station (West).

Repair levee breach.

Protect interior slopes of district levees if district floods.

Failure of Smith Canal South Bank Levee East of Interstate 5

The general flood fight strategy will be to prepare to construct Weber Tract Emergency Berms, plug cross culverts crossing under Interstate 5, make Shimizu Relief Cut and install emergency pumps to dewater.

Actions

Construct Weber Tract Emergency Berms P.E.D. in conjunction with Shimizu Relief Cut P.E.D. and plug cross culverts crossing under Interstate 5 if ordered by Metropolitan Flood Fight Command.

Identify additional emergency pump capacity and arrange transport to Shimizu Emergency Pumping Station either west or east side of Interstate 5 as appropriate.

Repair levee breach.

Protect interior slopes of district levees if district floods.

Failure of South Bank of Diverting Canal

The general flood fight strategy will be to prepare to make Smith Tract Emergency Berms, Weber Tract Emergency Berms, plug cross culverts crossing under Interstate 5, Country Club Relief Cut, and/or Shimizu Relief Cut as warranted by flow of water and as ordered by flood fight command. Prepare to install emergency pumping capacity to dewater.

Actions

Construct Smith Tract Emergency Berms P.E.D. with either Karl Ross Relief Cut P.E.D. or Karl Ross Emergency Pumping Station and plug cross culverts crossing under Interstate 5 as ordered by Metropolitan Flood Fight Command.

Construct Weber Tract Emergency Berms P.E.D. with either Shimizu Relief Cut P.E.D. or Shimizu Emergency Pumping Station and plug cross culverts crossing under Interstate 5 as ordered by Metropolitan Flood Fight Command.

Make Country Club Relief Cut P.E.D. and install Country Club Emergency Pumping Station if ordered by Metropolitan Flood Fight Command.

Make Shimizu Relief Cut P.E.D. and/or install Shimizu Emergency Pumping Station if ordered by Metropolitan Flood Fight Command.

Tactical Plans (Preliminary Engineering Designs)

Preliminary engineering designs for the following response options have been completed. P.E.D.'s can be downloaded from Flood Contingency Map Website at www.sjmap.org/oesfcm or obtained from indicated engineering firm.

Country Club Relief Cut

Relief cut to lower elevations of impounded waters in RD 1614 from upstream breaches. P.E.D. completed by KSN Engineers, Stockton.

Smith Tract Emergency Berms

Emergency berms to block Interstate 5 underpasses to stop flood water flow either west or east. Single berm design used for either contingency. Actual berms needed can be determined at time of flood. P.E.D. completed by KSN Engineers, Stockton.

Karl Ross Relief Cut

Relief cut to lower elevations of impounded waters in RD 1614 east of Interstate 5 and mitigate adverse impacts of placing Smith Canal Emergency Berms. P.E.D. completed by KSN Engineers, Stockton.

RD 1614 Calaveras River Emergency Pumping Station

Detailed survey of pumping station location to assist with placement of intakes. P.E.D. completed by KSN Engineers, Stockton.

RD 1614 Smith Canal Emergency Pumping Station

Detailed survey of pumping station location to assist with placement of intakes. P.E.D. completed by KSN Engineers, Stockton.

Weber Tract Emergency Berms

Emergency berms to block Interstate 5 underpasses to stop flood water flow either west or east. Single berm design used for either contingency. Actual berms needed can be determined at time of flood. P.E.D. completed by KSN Engineers, Stockton.

Shimizu Relief Cut

Relief cut to lower elevations of impounded waters in RD 828 from upstream breaches. P.E.D. completed by KSN Engineers, Stockton.

Shimizu Emergency Pumping Station

Detailed survey of pumping station location to assist with placement of intakes. P.E.D. completed by KSN Engineers, Stockton.

Smith Tract Cross Culverts

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

Weber Tract Cross Culverts

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

Delivery Points and Supply Staging Areas

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

Delivery Points

RD-1614		
DP-01	The Commercial Parking Lots on the south side of Country Club Blvd, just west of Interstate No. 5 (Safeway and Big Lots).	121°20'45.35"W 37°57'48.7"N
RD-828		
DP-02	West side of Shimizu Drive underpass at Interstate 5.	121°20'6.85"W 37°57'36.92"N

Supply Staging Areas

SA-01	Storage Shed at Franklin Avenue	121°19'42.33"W 37°57'47.31"N

Dewatering Plan

RD 1614

If Country Club Relief Cut has been made – 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 breach(es). Upon closure of breaches and relief cut, place emergency pumping station on levee at site shown for flood dewatering.

If Karl Ross Relief Cut has been made – 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 breach(es). Upon closure of breaches and relief cut, place emergency pumping station on levee at site shown for flood dewatering.

RD 828

If Shimizu Relief Cut has been made – 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 breach(es). Upon closure of breaches and relief cut, place emergency pumping station on levee at site shown for flood dewatering.

Levee Patrol Plan

Patrol Group Supervisor – District Incident Commander

Patrol Group Staging Area
KSN Engineers, 711 North Pershing Ave., Stockton

Patrol Communications – Private cellular phones

Patrol Plan

Reclamation District 1614

Agency Responsible for Coordinating Levee Patrols: RD 1614

Along the south bank of the Calaveras River, west of Pershing Avenue, the San Joaquin County Flood Control & Water Conservation District is responsible for Levee Patrol.

Along Smith Canal levee patrols will have to go door to door or inspect the levee from the waterside by boat, due to the fences and other obstructions along the levee crown. R.D. 1614 will rely on citizen reports for levee information along Smith Canal due to the lack of levee access. District Superintendent is responsible for coordinating levee patrols.

Reclamation District 828

Agency Responsible for Coordinating Levee Patrols: RD 828

District Incident Commander will organize patrols for two levee segments. First segment is from Interstate 5 to Pershing Avenue on Smith Canal with coordination with City of Stockton for patrol to Yosemite Lake. Second segment is from Interstate 5 to high ground past Ryde Avenue on the Stockton Deep Water Channel.

Along Smith Canal levee patrols will have to go door to door or inspect the levee from the waterside by boat, due to the fences and other obstructions along the levee crown between Buena Vista Avenue and Pershing Avenue. West of Buena Vista Avenue there an intermediate amount of obstructions. Most of the levee is accessible, but some door to door will be necessary.

Lath Protocol for Patrol Crews

Red Flagged - Boil/Seepage Site
Blue Flagged - Rock Slippage
White Flagged - Slope/Levee Distress

Evacuation Plan

Responsible Agencies

The city of Stockton Police Department and the San Joaquin County Sheriff's Department are responsible for alert and warning and evacuation.

Public Safety Agencies Evacuation Plans

Smith Tract and Weber Tract Evacuation Maps are available at www.sjmap.org/evacmaps/private (password protected).

Evacuation Maps for General Public

Evacuation maps for general public with Smith and Weber Tracts are available at www.sjmap.org/evacmaps (Country Club Evacuation Zone and Harding Way Evacuation Zone)

Flood Fight History

1875 First levee work on north bank of Calaveras River to protect land on lower Calaveras River. Use of new dredges in 1896 led to placement of stronger levees on north bank of lower Calaveras River. (Settlement Geography of the Sacramento-San Joaquin Delta. J. Thompson)

1889 In 1880's City of Stockton built canals to drain water away from old city area at east end of ship channel and along Mormon Slough. This action flooded rural landowners to the west in the area of map. In 1889 funds appropriated to build Smith Canal to drain flood waters further to the west into the tidal basin. (San Joaquin Flood Control District).

1910 Lower Calaveras River dredged and levees placed on south bank (at least partially by Dredge San Francisco) as part of a new system to divert flood water to north away from old Stockton (located east of area of map). Major flood flows that formerly moved through Mormon Slough into old Stockton were now diverted to north and down through the lower Calaveras River to the tidal basin. (The Tule Breakers, J and E. Dutra)

1911 Flood of record on Calaveras River. 50,000 cfs peak flow at Jenny Lind. (Floodplain Study, U.S. Army Corps of Engineers, 1975)

1958 Major flood with peak flows of 15,400 cfs at Bellota Station where Mormon Slough and Calaveras River separate. Extensive flooding east and south of Smith/Weber Tracts. (Floodplain Study, U.S. Army Corps of Engineers, 1975)

1997 Major flood with high flows into New Hogan Dam on Calaveras River. Dam operators reduced releases to zero during this peak flow to allow runoff below the dam to drain. Stockton East Water District report indicated that flow into the Calaveras below the dam reached channel capacity. The ability of New Hogan Dam to reduce flows to zero while this downstream flow moves through is key to flood protection along Calaveras River in area of map. (R. Baldwin, San Joaquin Office of Emergency Services)

2006 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. (R. Baldwin, San Joaquin Office of Emergency Services)

Communications Plan

Field Command Posts

RD 828 & RD1614	KSN Civil Engineers, 711 N. Pershing, Ave, Stockton	121°18'45.83"W 37°57'22.96"N

Communications Equipment

The District does not own communications equipment.

Internal Communications

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

Communications with outside Jurisdictions

Primary means of communications with outside jurisdictions will be personal cellular telephones. Secondary means of communications will be attendance at daily meetings of Metropolitan Unified Flood Fight Command.

Survey Information

Basis of Elevations

Elevations are based on the North American Vertical Datum of 1988 (NAVD88)

100-Year Flood Elevations Source: 2009 PBI Study; FEMA's 2009 Firm

Contours & Spot Elevations Source: 2007 DWR Lidar

Levee Crown Elevation Source: 2009 KSN Levee Profile Survey

See Flood Control Zone 9 Flood Contingency Map

RECLAMATION DISTRICT 2074 SARGENT-BARNHART TRACT

RECLAMATION DISTRICT 1614 SMITH TRACT (1914)

RECLAMATION DISTRICT 828 WEBER TRACT (1912)

RECLAMATION DISTRICT 403 ROUGH & READY ISLAND

RECLAMATION DISTRICT 404 BOGGS TRACT (1883)

East Patrol Sector

West Patrol Sector

Country Club Relief Cut See P.E.D.

Karl Ross Relief Cut See P.E.D.

Shimizu Relief Cut SEE P.E.D.

Smith Tract Emergency Berm (Typical) See P.E.D.

Weber Tract Emergency Berm (Typical) See P.E.D.

Cross Culvert (Typ) See P.E.D.

Plymouth Road

Hogue Avenue/ Tyler School

Montessori Touch

Tyler Elementary

Mission & Del Rio

Riverwalk

Kirk Avenue

Wisconsin Avenue

Hoover Elementary

Commodore Stockton Skills

Alpine Child Development Center

Madison Elementary

Head Start Child Development

Immanuel Lutheran

Buena Vista

Lake Drive

Franklin Avenue

Plymouth road

Smith Canal & Fontana

Gardena

Moreing Road

Ryde Ave. & Smith Canal

Buena Vista & Smith Canal

Victory Elementary

San Joaquin Building Futures Academy

Bianchi & Calaveras (El Dorado)

Sutter & Calaveras

American Legion Park & Smith Canal

University of the Pacific Campus

Rivièra Cliffs (High Ground)

Stockton Golf & Country Club

DP-01

DP-02

SA-01

RD 828 & RD1614

STOCKTON DEEP WATER CHANNEL

SMITH CANAL

CALAVERAS RIVER

MORMON SLOUGH

Projected Flood Limits

- Area Outside the 100-Year Flood Plain
- Area Subjected to 100-Year Flood with Depths Less than 1 Foot
- Special Flood Hazard Area (Area Within 100-year Flood Plain)

Legend

- 100 Year Flood Elevation
- Logistics Base
- Delivery Point
- Supply Staging Area
- Water Landing
- Helibase
- Helispot
- Historic Seepage Area
- Historic Levee Breach
- Relief Cut
- Historic Erosion Area
- Historic Slope Stability
- Levee Access
- Emergency Berm
- Dryland Levee
- Dryland Levee Critical Section
- Levee
- L.C. EL=25.7' Levee Crown Elevation
- Ground EL=18.7' Spot Elevation
- LM=1.0 RM=1.0 100+00 Levee Mile-River Mile-Station
- PS Pump Station – Reclamation District
- PS Pump Station – Municipal Storm
- PS Pump Station – Emergency Pump Out
- PS Pump Station – Municipal Sanitary
- Structure (A-Agricultural, R-Residences (## = number of homes), H-Hospital, S-School)
- Water Well
- Sanitary Sewer Lines
- Storm Drain Lines
- Water Lines
- Overhead Transmission Line
- Underground Fiber Optics
- Underground Lines
- Command Post
- District Boundary
- Elevation Contour
- Waterways/Channels

0 1,000 2,000 Feet

1 inch = 500 feet

Time/Date of Start of Incident

Map Version

FIGURE A1

RECLAMATION DISTRICT1614 AND 828 FLOOD SAFETY PLAN

Annex A - Smith and Weber Tract Flood Contingency Map

SAN JOAQUIN COUNTY
OFFICE OF EMERGENCY SERVICES

Map Source: KSN, Inc.
Map Date: 11-20-15
Vertical Datum: NAVD 88

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