LEGEND

XX.X'	BASE FLOOD ELEVATION 2009 FEMA FLOOD RATE INSURANCE MAP (NAVD 88 DATUM) U.O.N.
B	LOGISTICS BASE
DP	SUPPLY DELIVERY POINT SERVING DISTRICT SHOWN
S	SUPPLY STAGING AREA
	TEMPORARY LEVEE/ EMERGENCY BERM
	SEEPAGE AREA
	HISTORIC LEVEE BREACH
	RELIEF CUT
	EROSION AREA
A	LEVEE ACCESS GATE
	DRYLAND LEVEE/EMBARKMENT
	DRYLAND LEVEE/EMBARKMENT (LOW OR CRITICAL SECTION)
	LEVEE
L.M.=1.0 R.M.=1.0 100+OO	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)
PS	MUNICIPAL SANITARY PUMP STATION
PS	MUNICIPAL STORM PUMP STATION
PS	RURAL DRAINAGE PUMP STATION (NOT AT 100–YR FLOOD PROTECTION)
PS	SITE FOR EMERGENCY PUMP STATION
PS	PRIVATE RIVER INTAKE PUMP STATION
	WATER WELL
OH	OVERHEAD TRANSMISSION LINE
	STRUCTURES
	COMMAND POST
	DISTRICT BOUNDARY
15.0'	100–YR FLOOD CONTOUR WITH RELIEF CUT
	PG&E UTILITY TOWERS
	C.O.S. BENCHMARK W/ ELEVATION
	CDEC DATA STATION
6.53	ROAD ELEVATION (MINUS WHERE NOTED)
	LAKE OR WATERWAY
	PARK / GREENSCAPE
	MARSH AREA

ABBREVIATIONS

COS	CITY OF STOCKTON
DWR	DEPARTMENT OF WATER RESOURCES
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
SJC	SAN JOAQUIN COUNTY
OES	OFFICE OF EMERGENCY SERVICES
USGS	U.S. GEOLOGICAL SURVEY
PG&E	PACIFIC GAS & ELECTRIC
SEI	SIEGFRIED ENGINEERING, INC.
E.B.M.U.D	EAST BAY MUNICIPAL UTILITIES DISTRICT
B.E.	BROOKSIDE ESTATES
NGVD 88	NORTH AMERICAN VERTICAL DATUM 1988 (NGVD 29 + 2.13')

Datum

All elevations are in feet and refer to North American Vertical Datum 1988 (NAVD 88)

WATER SURFACE ELEVATION (WSE) DATA:

All areas except the Calaveras River

100 year WSE	9.5
Mean High Tide	5.6
Mean Low Tide	1.4

Lake Levels

1 BROOKSIDE, HERON, TEAL, PINEHURST
NOV. 15 TO APRIL 15 – (–8.5)
APRIL 15 TO NOV. 15 – (–7.9)

2 SPYGLASS – (–4.9)

3 GOLF COURSE B TO J – (–9.9)

4 GOLF COURSE K – (–6.9)

Flood Contingency Options

Highwater Event

Patrol levees and update options as necessary.

Upstream Failure on Calaveras River

The following tasks would be directed and implemented by City Officials.
Flood fight strategy in the event of a failure of levees upstream of RD 2074:

- Barricade the I–5 underpasses at March Lane, E.B.M.U.D., and Brookside Road.
- Place emergency pumps near the existing Stockton pumping station west of I–5. This work would be conducted by City Officials along the Calaveras River at Feather River Drive.
- Supplemental pumps may be placed at additional COS pump stations upstream to prevent waters from reaching I–5.

Failure of Wright–Elmwood

Flood fight strategy in the event of a failure of RD 2119, Wright–Elmwood, levees:

- Increase patrols along Ten Mile Dry Land Levee.
- Place polyethylene sheathing on the west face of Ten Mile Levee from the toe to the west levee top hinge point. Consider placing stone protection against the west face of Ten Mile Levee, 450,000 sq.ft.
- Place emergency pumps per RD 2119 Flood Contingency Map.

Failure of Primary Levees or Ten Mile Dry Land Levee

Flood fight strategy in the event of a failure of RD 2074's primary levees:

- Place barricades at the I–5 underpasses at March Lane, E.B.M.U.D., and Brookside Road to prevent flood waters from progressing east of Interstate 5. This work would be conducted by City Officials.
- Protect interior slopes from additional erosion with polyethylene sheathing.
- Place emergency pumps along the Calaveras River Levee.

Floodwaters will run toward the golf course and areas south of March Lane.

Supply Delivery Point(s)

The following locations will be used to deliver floodfight materials 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.

Supply Delivery Point
RD 2074 – Storage yard at Levee Station 14+00 located on Brookside Road, south of Brookside Elementary School.

Supply Staging
City of Stockton – Buckley Cove boat launch parking lot.

District Command Post

Authorizing officials to request supplies and assistance, in order of priority are:

RD 2074 Board of Trustees:
District Engineer:
Legal Counsel:

RD 2074 FCP #1 – The Hartmann Law Firm, 3425 Brookside Road. Suite A, 37°59'03"N, 121°21'25"W
RD 2074 FCP #2 – Siegfried Engineering, Inc., 3244 Brookside Road, Suite 100, 37°58'52"N, 121°21'18"W

Communications

Communication Equipment

District does not own communications equipment.

Internal Communication

Means of internal communications among district representatives will be by individual cellular telephones.

Communication with outside Jurisdictions

Means of communications with outside Jurisdiction representatives will be by individual cellular telephones.

Levee Patrol Procedures and Considerations

Levee Patrol Plan

Responsible Officials:	RD 2074 Board of Trustees:	
	District Engineer:	Siegfried Engineering, Inc., (SEI) Tony Lopes
	Legal Counsel & Secretary:	The Hartmann Law Firm, George Hartmann

In an emergency RD 2074 has detailed patrol procedures which are a part of RD 2074's emergency operations plan on file with SJC OES and at SEI.. Patrols are staffed first with SEI personnel. If the level of emergency or frequency of patrols is increased, additional patrol staff is requested from the COS. Each COS staff personnel is paired with experienced SEI personnel to continue patrols. Requests for COS staff assistance are made through the City of Stockton. RD 2074's requests for staff assistance will come from RD 2074 officials or staff in the order shown above as responsible officials.

Patrol Meeting Place
Siegfried Engineering, Inc.
3244 Brookside Road, Suite 100
Stockton, CA 95219

Patrol Activation
Levee patrols will be performed in accordance with the District's Emergency Operations Plan with as represented by the following general guidelines

Level 3 – Monitor Stage Patrol
Conditions: Abnormally high water conditions, high tides projected above elevation 7.50
Frequency: Daily patrols during a 4 hour period starting one hour before high tide and ending 3 hours after high tide.

Level 4 – Flood Stage Patrol
Conditions: 1. Extreme high water conditions, high tides projected above Elevation 9.0 and/or,
2. DWR declares an Emergency Flood Event.
Frequency: One patrol crew, continuous 24 hour patrols, approximately 1 hour per patrol loop.

Level 5 – Danger Stage Patrol
Conditions: 1. Conditions of potential levee instability or overtopping and/or,
2. DWR issues a notice of an Emergency Flood Event.
Frequency: Two patrol crews, continuous 24 hour patrols, one each region (north and south levees). One additional person stationed at critical areas identified by the District.

Levee Marking Protocol

Wood laths will be set at specific areas to mark levee conditions as follows:
Red Lath – To indicate a boil or levee seepage
Blue Lath – To indicate rock slippage
White Lath – To indicate slope or levee distress

Floodfight History

Flood Heights and Flows

Prior to the 1990's, RD 2074 was agricultural land. The farmers built the dry land levee on the east boundary (Smith's Levee) to protect RD 2074 from flood waters emanating in the east. The levee was built to approximate elevation 11.0' (NAVD 88). Discontinuities exist in the land levee at Brookside Road, E.B.M.U.D. green belt, March Lane, The Fountains Office Park, and Driftwood Place.

1996 – 1997 Heavy rains caused record floods in the region. RD 2074's levees along the San Joaquin River experienced some seepage. The lot pads in this area were built up to cap the flow of water through the levee.

2006 Heavy rains and storms bumped tide elevations to 9.9' (NAVD 88). In some areas, water levels topped the pedestrian path along the Calaveras and San Joaquin Rivers. No seepage in district levees was observed.

Special Flood Consideration – RD 2074

The lakes in RD 2074 are interconnected for storm drainage and are pumped at either the North pump station into 14 Mile Slough, or at the South Pump Station into the Calaveras River. These lakes are lowered in the winter to accommodate additional storm run–off. The lakes and golf course can be used as detention basins in an emergency. The lake levels are lowered each winter to 13½" below the top of the bulkhead.

RD 2074 is below sea level and tidal flows will equilibrate at approximately the 100–year flood elevation of 9.5' (NAVD 88) if a breach occurs adjacent to the San Joaquin River, Calaveras River, or 14 Mile Slough.

During a flood emergency, consideration shall be given to blocking the I–5 underpasses at March Lane, EBMUD, Brookside Road, and along Smith Levee to either protect RD 2074 from floodwaters emanating from the east, or to protect the rest of Stockton from a breach within RD 2074. Floodwaters will have to be pumped out through the installation of additional pumps.

Ten Mile Levee is an unarmed, untested dry land levee. This levee was constructed to withstand wave run–up from the fetch created by the flooding of Wright–Elmwood Tract. In the event of a Wright–Elmwood Tract flood, the west face of Ten Mile Levee should be immediately protected from erosion with polyethylene sheathing. For long term erosion protection, stone protection is recommended.

The Calaveras River Levee, from STA 10+00 to STA 87+00 is a Project Levee. All other levees within RD 2074 are Non–Project Levees.

Dewatering Plan

Place emergency pump as located on map and as described in "Flood Contingency Options"

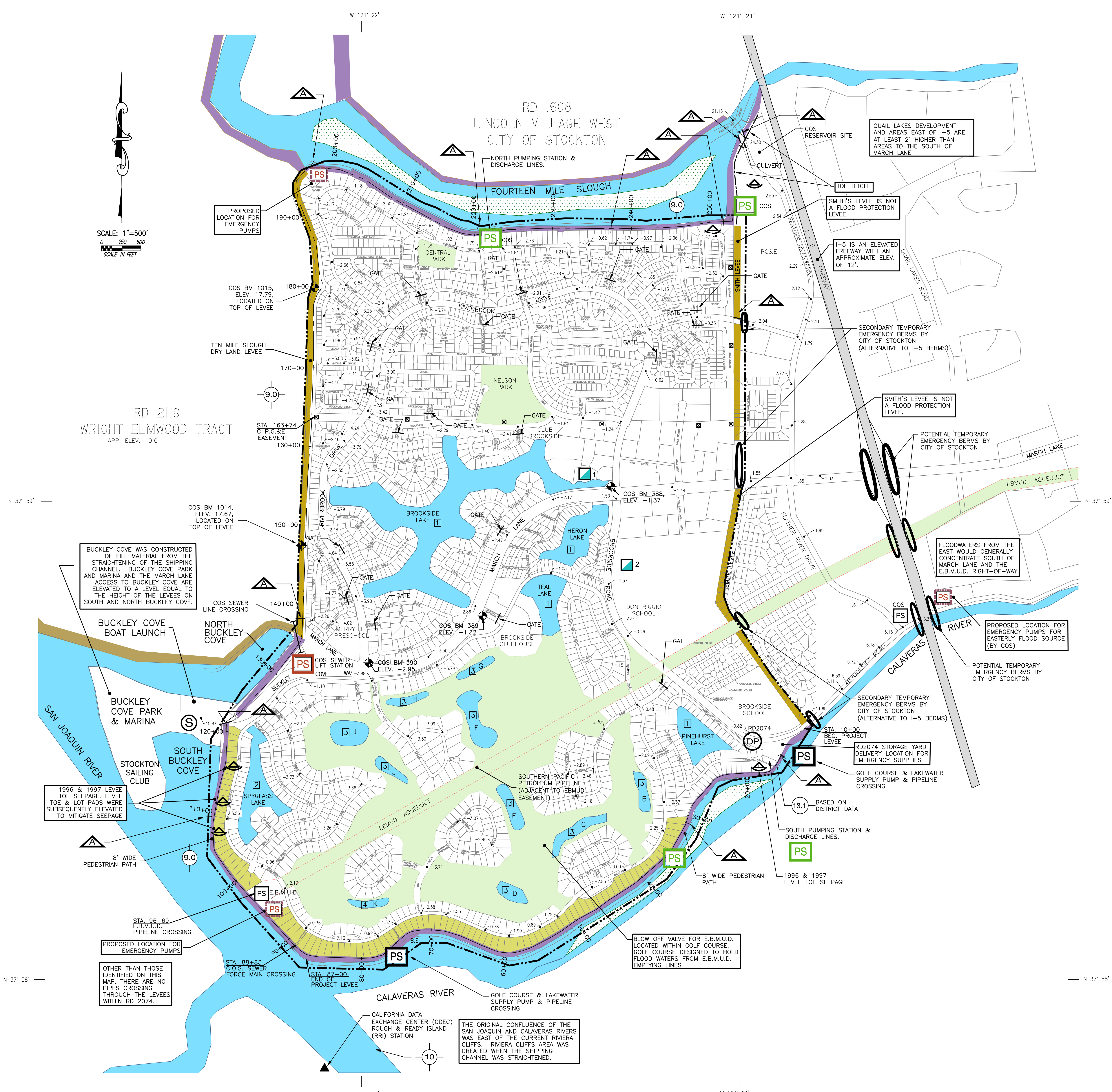
Evacuation Plan

Refer to: www.sjmap.org/evacmap/ for evacuation plans. Evacuations are to be executed by the City of Stockton

Tactical Plans

(Preliminary Engineering Designs–PED's)

PED's have not been proposed for RD 2074. For tactical information refer to "Flood Contingency Options" text box



ANNEX A - FLOOD					
SIEGFRIED — CIVIL ENGINEERING, STRUCTURAL ENGINEERING, LAND SURVEYING, LANDSCAPE ARCHITECTURE — 3244 Brookside Road, Suite 100 Stockton, California 95219 209-943-2021 www.siegfriedeng.com Fx: 209-942-0214	**RECLAMATION DISTRICT 2074** **SARGENT -BARNHART TRACT** **FORMED 1927**	FLOOD CONTINGENCY MAP / SAN JOAQUIN COUNTY OFFICE OF EMERGENCY SERVICES	Revisions	Design AJL; Drawn RK–RJS; Check	Scale 1"=500'; Date 12/15/2006; Sheet Number 1 OF 1

Revisions:

No.	Description	Date	By	Aprvd. By
1	RELOCATE FCP1	3-20-07	DAA	
2	2015 UPDATE	12-10-15	AJL	

Original Drawing Scale 0 1/2" 1"