



Right of Way (ROW) Acuirement Needs for Alternate Structure Locations	Design, Permitting & Construction Costs (RD1614)	Levee Improvements for RD 828 FEMA Compliant	Cost to get to ULDC	ULDC Completion %	Yearly Gate Operations Cost	Yearly Levee Maintenance Cost	Estimate Time for Completion
<span style="color: red;">█</span> The Gate (GATE)	<del>\$36,000,000 to \$38,000,000</del> <b>\$71M</b>	Included	\$10,000,000 to \$50,000,000?	25%	\$750,000	\$200,000	6-8 Years
<span style="color: blue;">█</span> Atherton Cove ULDC Levee Improvement & Gate at Moreing Rd.	\$54,000,000 to \$58,000,000	Included	\$10,000,000 to \$50,000,000?	35%	\$750,000	\$200,000	6-10 Years
<span style="color: orange;">█</span> Two Gate Option (2G)	\$48,000,000 to \$52,000,000	Included	\$40,000,000 to \$80,000,000?	25%	\$750,000	\$200,000	6-9 Years
<span style="color: green;">█</span> GME Plan	\$25,000,000 to 32,000,000	\$1,000,000 to \$2,000,000	\$1,000,000	80%	\$0	\$75,000	3 years



## NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodway depths have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only to landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study Report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction, and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this jurisdiction.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) Zone 10N. The horizontal datum was NAD83, GRS80 spheroid. Differences in datum, spheroid projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website: <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services  
NOAA, NGS12  
National Geodetic Survey, SSMC-3, #9202  
1315 East-West Highway  
Silver Spring, Maryland 20910-3282  
(301) 713-3242

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit their website at <http://www.ngs.noaa.gov>.

Base map information shown on this FIRM was derived from multiple sources. This information was compiled from the U.S. Geological Survey, 2002, National Geodetic Survey, 2002, City of Lathrop, 1997, City of Manteca, Department of Public Works, 2001, and San Joaquin County Community Development Department, 2008. Additional information was photogrammetrically compiled at a scale of 1:12,000 from U.S. Geological Survey aerial photography dated 1989, 1993 and 2002.

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels; community map repository addresses; and a listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the FEMA Map Service Center at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and their website at <http://www.msc.fema.gov>.

If you have questions about this map or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov>.

Provisionally Accredited Levee Notes to Users: Check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as protection for areas on this panel. To maintain accreditation, the levee owner or community is required to submit the data and documentation necessary to comply with Section 65.10 of the NFIP regulations by August 23, 2009, for the Fourteenmile Slough Levee (east of Interstate 5) and the Rough and Ready Island Levees, August 23, 2010, for Levee P452 (along the northwest boundary of Redwood District 404), and March 30, 2010, for all other levees. If the community or owner does not provide the necessary data and documentation or if the data and documentation provided indicate the levee system does not comply with Section 65.10 requirements, FEMA will revise the flood hazard and risk information for this area to reflect de-accreditation of the levee system. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA Website at <http://www.fema.gov/business/info/index.shtm>.

## WRIGHT ELMWOOD "AE" SPECIAL FLOOD ZONE NON-ACCREDITED LEEVE (ELEVATION = 9)

KEY TO NUMBERED STREETS

1. TOWERY CT
2. CHAMBERLAIN CT
3. CHAMBERLAIN CT
4. WILLIAM CT
5. MARTEL AVE
6. BRADSHAW CT
7. CRYSTAL WAY
8. CHERRY CT
9. RIVERSIDE CT
10. CHERRY CT
11. COUNTRY CLUB CT
12. CLUB VIEW DR
13. MONTEREY CT
14. RUMSON AVE
15. LARSON RD
16. ADAMS CREEK CT
17. CRYSTAL TREE CT
18. HILTON LANE
19. HERITAGE PL
20. JELSON CT
21. ANTOINE PL
22. COASTAL COVE CT
23. JUNE MEADOW CT
24. LARK HAVEN CT
25. MELCOY CT
26. CONCORD CT
27. WEATHERBROOK DR
28. WEATHERBROOK PL
29. BROOK VALLEY PL
30. BROOK HOLLOW CT
31. BROOK MEADOW CT
32. THORNHILL CT
33. STONEBROOK CT
34. BROOKFALLS CT
35. HARVEST GOLD DR
36. SIKINA DR
37. WHISPERING WIND CT
38. MORNING BROOK CT
39. RAINBOW CT
40. BOULDER CREEK CT
41. SUN RIVER CT
42. JULIUS CT
43. BORJA CT
44. PLATO CT
45. PICCARDI CT
46. AMBERWOOD CT
47. AUGUSTUS CT
48. CONCORDIA CT
49. SERENADE CT
50. SANDPIPER CT
51. FOX SPARKING CT
52. TREE SWALLOW CT
53. CASCADE CT
54. BLACKOAK CT
55. WEDGEWOOD CT
56. PINTAL CT
57. CANVASBACK CT
58. WHITE BIRCH CT
59. BLUE SPRUCE CT
60. CLEAR CREEK CT
61. LOST CREEK CT
62. ROCK CREEK CT
63. TWIN LAKES CT

San Joaquin County  
Unincorporated Areas  
060299

City of Stockton  
060302

San Joaquin County  
Unincorporated Areas  
060299

NOTE: THIS AREA IS SHOWN AS BEING PROTECTED FROM THE 1-PERCENT-ANNUAL-CHANCE OR GREATER FLOOD HAZARD BY A LEEVE SYSTEM THAT HAS BEEN PROVISIONALLY ACCREDITED. OVERTOPPING OR FAILURE OF ANY LEEVE SYSTEM IS POSSIBLE. FOR ADDITIONAL INFORMATION, SEE THE "PROVISIONALLY ACCREDITED LEEVE NOTE" IN NOTES TO USERS.

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## LINCOLN VILLAGE WEST "X" FLOOD ZONE PROTECTED BY A LEEVE

## BROOKSIDE "X" FLOOD ZONE PROTECTED BY A LEEVE

## SMITH CANAL GATE \$1,600,000 PER YEAR ASSESSMENT DISTRICT BOUNDARY

## ROUGH AND READY ISLAND "X" FLOOD ZONE PROTECTED BY A LEEVE

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## LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. This Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the minimum elevation above the 1% annual chance flood.

Zone A: No Base Flood Elevations determined.  
Zone AE: Base Flood Elevations determined.  
Zone AH: Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevation determined.  
Zone AO: Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); Average depths determined. For areas of shallow fan flooding, velocities also determined.  
Zone AR: Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently destroyed. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

Zone A99: Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.  
Zone V: Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.  
Zone VE: Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

Zone X: Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

Areas determined to be outside the 0.2% annual chance floodplains. Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Areas of different

Base Flood Elevation, and value elevation in feet

Base Flood Elevation value where uniform with contour

Reference to the North American Vertical Datum of 1988

Cross section line

Traverse line

Geographic coordinates referenced to the North American

Datum of 1983 (NAD 83), Western Hemisphere

1000-meter Universal Transverse Mercator grid values, zone 10

5000-meter grid values, California Zone 10 coordinate system,

zone 10 (FIPS2010-1000), Lambert Conformal Conic Projection

Bench mark (see explanation in Notes to Users section of this

FIRM piece)

River mile

Refer to Map Repository list on Map Index.

MAP SCALE 1" = 1000'

0 500 1000 2000 FEET

0 500 1000 2000 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0455F

FIRM

FLOOD INSURANCE RATE MAP

SAN JOAQUIN COUNTY,

CALIFORNIA

AND INCORPORATED AREAS

PANEL 455 OF 950

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY NUMBER PANEL SUFFIX

SAN JOAQUIN COUNTY 060299 0455 F

STOCKTON, CITY OF 060302 0455 F

Notice to User: The Map Number shown below should be used

when placing any order for the Community Number shown

above should be used as insurance applications for this subject

community

MAP NUMBER

06077C0455F

EFFECTIVE DATE

OCTOBER 16, 2009

Federal Emergency Management Agency




Smith Tract				
Buena Vista North	24.4	12.0	12.4	20,005
Lake Drive	0.8	0.4	0.4	645
Franklin	83.1	42.0	41.1	66,308
Plymouth	15.0	0.0	15.0	24,200
Gardena	9.7	0.0	9.7	15,649
Moreing	6.1	0.0	6.1	9,841
Yosemite Lake (half)	228.6	96.5	132.1	213,121
<i>Subtotal:</i>	<i>368</i>	<i>151</i>	<i>247</i>	<i>349,771</i>
<i>Water in Canal (at Elev 8.0):</i>			<i>194</i>	<i>312,987</i>
			<b>411</b>	<b>662,757</b>

8. RESIDUAL FLOODING AT WEBER TRACT IS BASED ON THE LEVEE BREACH AS NOTED ABOVE PLUS STORM RUNOFF THAT WOULD NORMALLY DISCHARGE TO SMITH CANAL (INCLUDING HALF OF YOSEMITE LAKE WATERSHED CONTRIBUTION) LESS AVAILABLE STREET DETENTION UPSTREAM OF PERSHING AVENUE.

6. Residual flooding SHOWN at Smith Tract is based on the above levee breach PLUS storm runoff that would normally discharge into Smith Canal (including ½ of Yosemite Lake Watershed, less available street detention upstream of I-5. (TOTAL = 411 AC-FT)

5. Wisconsin Pump (206.2 AC-FT) continues to Discharge into the Calaveras River.

4. Ryde Pump (41.6 AC-FT) and Yosemite Lake Pump (457.2 AC-FT) cease to operate and cease to discharge into the Smith Canal









2. Levee breach on the North bank of the Smith Canal (194 ACRE -FEET) AND

3

3. Levee breach on the South bank of the Smith Canal (194 AC-FT)

1. A high High Tide in the Delta and Gate closes at Elev. 8.0 NAVD 88 Datum.

	FLOOD DEPTH	COLOR
1	0 TO 1	
2	1 TO 2	
3	2 TO 3	
4	3 TO 4	
5	4 TO 5	
6	5 TO 10	

7. Residual flooding SHOWN at Weber Tract is based on the above levee breach and PLUS storm runoff that would normally discharge into Smith Canal (including ½ of Yosemite Lake Watershed, less available street detention upstream of I-5. (TOTAL =468 AC-FT)

Watershed	Total Runoff (ac-ft)	Street Detention (ac-ft)	Net Runoff (ac-ft)	Net Runoff (cu yds)
<b>Weber Tract</b>				
Yosemite Lake (half)	228.6	96.5	132.1	213,121
Buena Vista South	116.3	23.5	92.8	149,717
Ryde Avenue	41.6	0.0	41.6	67,115
Kingsley Avenue	4.3	1.8	2.5	4,033
Pinetree Drive	1.9	0.8	1.1	1,775
Occidental Avenue	1.4	0.6	0.8	1,291
Pixie Woods	5.1	2.1	3.0	4,840
<i>Subtotal:</i>	399	125	274	441,892
<i>later in Canal (at Elev 8.0):</i>			194	312,987
			468	754,879

RESIDUAL FLOODPLAIN MAP PER SJA-CEQ 05141-05148



### Worse Assumptions

Watershed	Total Runoff (ac-ft)	Street Detention (ac-ft)	Net Runoff (ac-ft)	Net Runoff (cu yds)
Ref PBI Tech Memo 6/13/16				
<b>Smith Tract</b>				
Wisconsin Pump Floods/				
Power Out	206.2			
Buena Vista North	30.1		30.1	48,561
Lake Drive	1.7		1.7	2,743
Franklin	117.6		117.6	189,728
Plymouth	22.6		22.6	36,461
Gardena	15.7		15.7	25,329
Moreing	9.6		9.6	15,488
Yosemite Lake (ALL)	539.9		539.9	871,039
<i>Subtotal:</i>	<i>737</i>	<i>0</i>	<i>737</i>	<i>1,189,349</i>
<i>Water in Canal (at Elev 8.0):</i>			<i>388</i>	<i>625,973</i>
			<b>1,125</b>	<b>1,815,323</b>

5. Wisconsin Pump (206.2 AC-FT) over floods/cease to operate and cease to discharge continues to Discharge into the Calaveras River.

6. Residual flooding SHOWN at Smith Tract is based on the above levee breach PLUS storm runoff that would normally discharge into Smith Canal (including  $\frac{1}{2}$  ALL 457.2 of Yosemite Lake Watershed, less Including available street detention that flows downhill upstream of I-5 all the way to California Street. (TOTAL = ~~411~~ 1,125 AC-FT)

4. Ryde Pump (41.6-46.8 AC-FT) and Yosemite Lake Pump (457.2-539.9-AC-FT) cease to operate and cease to discharge into the Smith Canal or flow into canal and out the break.







2. Levee breach only on the North bank of the Smith Canal (194 388 ACRE -FEET) AND

3. No Levee breach on the South bank of the Smith Canal (194 0 AC-FT)

7. Residual flooding SHOWN at Weber Tract is based on the above levee breach and PLUS storm runoff that would normally discharge into Smith Canal (including 1/4 of Yosemite Lake Watershed, less available street detention upstream of I-5. (TOTAL=468 AC-FT) THE DEFICIENCY OF THE RYDE AVENUE PUMP STATION.

## WORSE ASSUMPTIONS

1. High tide in the Delta and Gate closes at Elev. 8.0 NAVD 88 Datum

FLOOD DEPTH	COLOR
0 TO 1	
1 TO 2	
2 TO 3	
3 TO 4	
4 TO 5	
5 TO 10	

SMITH CANAL  
GATE

RESIDUAL FLOODPLAIN MAP PER SJA-CEQ 05141-05148. REVISED TO  
WORST CASE BY CA P.E. # 50887, L.S. # 7244 3/17/18

### Worse Assumptions

Watershed	Total Runoff (ac-ft)	Street Detention (ac-ft)	Net Runoff (ac-ft)	Net Runoff (cu yds)
Weber Tract				
Yosemite Lake (NONE)	0.0		0.0	0
Buena Vista South	133.6		133.6	215,541
Ryde Avenue	46.8		46.8	75,504
Kingsley Avenue	5.0		5.0	8,067
Pinetree Drive	2.2		2.2	3,549
Occidental Avenue	1.6		1.6	2,581
Louis	6.0		6.0	9,680
<i>Subtotal:</i>	195	0	195	314,923
<i>Water in Canal (at Elev 8.0):</i>			0	0
			195	314,923