



**CITY OF HUGHSON
CITY COUNCIL MEETING
CITY COUNCIL CHAMBERS
7018 Pine Street, Hughson, CA**

AGENDA

MONDAY, JULY 12, 2021 – 7:00 P.M.

How to participate in, or observe the Meeting:

- In person in the City Council Chambers (people not fully vaccinated are asked to wear a mask in compliance with State Public Health Officer Order of June 11, 2021)
- Interactively, via WebEx Videoconference, by accessing this link:
<https://cityofhughson.my.webex.com/cityofhughson.my/j.php?MTID=mf3c6dd00c32e1f96d7f77542d0a8ab3a>
- Observe only via YouTube live, by accessing this link:
https://www.youtube.com/channel/UC-PwkdlrKoMmOJDzBSodu6A?view_as=subscriber
- In addition, recorded City Council meetings are posted on the City's website the first business day following the meeting. Recorded videos can be accessed with the following link:
<http://hughson.org/our-government/city-council/#council-agenda>

How to submit written Public Comment:

- Email will be available prior to 5:00 PM on July 12, 2021, to provide public comment for the Public Comment Period, or for a specific agenda item. Please email agose@hughson.org. Written comment will be distributed to the City Council and kept on file as part of official record of the Council meeting.

CALL TO ORDER: Mayor George Carr

ROLL CALL: Mayor George Carr
Mayor Pro Tem Harold Hill
Councilmember Ramon Bawanan
Councilmember Samuel Rush
Councilmember Michael Buck

FLAG SALUTE: Mayor George Carr

INVOCATION: Hughson Ministerial Association

1. PUBLIC BUSINESS FROM THE FLOOR (No Action Can Be Taken):

Members of the audience may address the City Council on any item of interest to the public pertaining to the City and may step to the podium, state their name and city of residence for the record (requirement of name and city of residence is optional) and make their presentation. Please limit presentations to five minutes. Since the City Council cannot take action on matters not on the agenda, unless the action is authorized by Section 54954.2 of the Government Code, items of concern, which are not urgent in nature can be resolved more expeditiously by completing and submitting to the City Clerk a "Citizen Request Form" which may be obtained from the City Clerk.

2. PRESENTATIONS:

- 2.1:** Opportunity Stanislaus Economic Development Strategic Plan – David White.

3. CONSENT CALENDAR:

All items listed on the Consent Calendar are to be acted upon by a single action of the City Council unless otherwise requested by an individual Councilmember for special consideration. Otherwise, the recommendation of staff will be accepted and acted upon by roll call vote.

- 3.1:** Approve the Minutes of the Regular Meeting of June 28, 2021.
- 3.2:** Approve the Warrants Register.
- 3.3:** Waive the Second Reading and Adopt of Ordinance No. 2021-06, Amending Municipal Code Chapter 15.12 – Flood Damage Prevention to Title 15 "Buildings and Construction" of the City Municipal Code.

- 3.4:** Approve the Treasurer's Report for February 2021.
- 3.5:** Approve the Treasurer's Report for March 2021.
- 3.6:** Approve the Treasurer's Investment Portfolio Report for March 2021.
- 3.7:** Approve Designating Mayor George Carr as the Voting Delegate for the League of California Cities Annual Conference on September 22-24, 2021, in Sacramento, California.
- 3.8:** Accept the Willdan Proposal for design and engineering of the Whitmore Avenue Pedestrian Crossing and Sidewalk Improvement Project.
- 3.9:** **A.** Adopt Resolution No. 2021-25, approving the Professional Services Agreement with JSWWC Water and Wastewater Management for consulting services at the Wastewater Treatment Plant and the Public Water System.
- B.** Adopt Resolution No. 2021-26, approving the Professional Services Agreement with JSWWC Water and Wastewater Management for the Meter Register Replacement Project.

4. UNFINISHED BUSINESS: NONE.

5. PUBLIC HEARING TO CONSIDER THE FOLLOWING: NONE.

6. NEW BUSINESS: NONE.

7. CORRESPONDENCE: NONE.

8. COMMENTS:

- 8.1:** Staff Reports and Comments: (Information Only – No Action)

City Manager:

Deputy City Clerk:

Community Development Director:

Director of Finance and Administrative Services:

Police Services:

City Attorney:

8.2: Council Comments: (Information Only – No Action)

8.3: Mayor's Comments: (Information Only – No Action)

9. CLOSED SESSION TO DISCUSS THE FOLLOWING:

9.1 CONFERENCE WITH LEGAL COUNSEL-ANTICIPATED LITIGATION
Significant exposure to litigation pursuant to paragraph (2) of subdivision (d) of Section 54956.9: one case

9.2 PUBLIC EMPLOYEE PERFORMANCE EVALUATION
Title: City Manager

ADJOURNMENT:**Notice Regarding Non-English Speakers:**

Pursuant to California Constitution Article III, Section IV, establishing English as the official language for the State of California, and in accordance with California Code of Civil Procedures Section 185, which requires proceedings before any State Court to be in English, notice is hereby given that all proceedings before the City of Hughson City Council shall be in English and anyone wishing to address the Council is required to have a translator present who will take an oath to make an accurate translation from any language not English into the English language.

WAIVER WARNING

If you challenge a decision/direction of the City Council in court, you may be limited to raising only those issues you or someone else raised at a public hearing(s) described in this Agenda, or in written correspondence delivered to the City of Hughson at or prior to, the public hearing(s).

**AMERICANS WITH DISABILITIES ACT/CALIFORNIA BROWN ACT
NOTIFICATION FOR THE CITY OF HUGHSON**

This Agenda shall be made available upon request in alternative formats to persons with a disability as required by the Americans with Disabilities Act of 1990 (42 U.S.C. Section 12132) and the Ralph M. Brown Act (California Government Code Section 54954.2).

Disabled or Special needs Accommodation: In compliance with the Americans with Disabilities Act, persons requesting a disability related modification or accommodation in order to participate in the meeting and/or if you need assistance to attend or participate in a City Council meeting, please contact the City Clerk's office at (209) 883-4054. Notification at least 48-hours prior to the meeting will assist the City Clerk in assuring that reasonable accommodations are made to provide accessibility to the meeting.

UPCOMING EVENTS:

July 13	<ul style="list-style-type: none"> ▪ Parks, Recreation and Entertainment Commission Meeting, City Council Chambers, 6:00 PM
July 15	<ul style="list-style-type: none"> ▪ COVID-19 Vaccine Clinic, Senior Community Center, 3:00 PM
July 20	<ul style="list-style-type: none"> ▪ Planning Commission Meeting, City Council Chambers/WebEx Videoconference/YouTube Live Stream, 6:00 PM
July 22	<ul style="list-style-type: none"> ▪ Hughson Community Blood Drive, Senior Community Center, 10:00 AM
July 26	<ul style="list-style-type: none"> ▪ Economic Development Committee Meeting, Hughson City Hall, 5:30 PM
July 26	<ul style="list-style-type: none"> ▪ City Council Meeting, City Council Chambers/WebEx Videoconference/YouTube Live Stream, 7:00 PM
August 3	<ul style="list-style-type: none"> ▪ National Night Out, City Wide, 6:00 PM

General Information: The Hughson City Council meets in the Council Chambers on the second and fourth Mondays of each month at 7:00 p.m., unless otherwise noticed.

Council Agendas: The City Council agenda is now available for public review at the City's website at www.hughsonca.gov and City Clerk's Office, 7018 Pine Street, Hughson, California on the Friday, prior to the scheduled meeting. Copies and/or subscriptions can be purchased for a nominal fee through the City Clerk's Office.

Questions: Contact the City Clerk at (209) 883-4054.

AFFIDAVIT OF POSTING

DATE: July 9, 2021 **TIME:** 12:00 PM
NAME: Ashton Gose **TITLE:** Deputy City Clerk



CITY COUNCIL AGENDA ITEM NO. 3.1 SECTION 3: CONSENT CALENDAR

Meeting Date: July 12, 2021
Subject: Approval of the City Council Minutes
Presented By: Ashton Gose, Deputy City Clerk

Approved By:

Merry Mayhew

Staff Recommendation:

Approve the Minutes of the Regular Meeting of June 28, 2021.

Background and Overview:

The draft minutes of the June 28, 2021 meeting are prepared for the Council's review.



**CITY OF HUGHSON
CITY COUNCIL MEETING
CITY COUNCIL CHAMBERS
7018 PINE STREET, HUGHSON, CA**

**MINUTES
MONDAY, JUNE 28, 2021 – 7:00 P.M.**

CALL TO ORDER: Mayor Carr

ROLL CALL:

Present: Mayor Carr
Mayor Pro Tem Harold Hill
Councilmember Ramon Bawanan
Councilmember Michael Buck

Absent: Councilmember Sam Rush

Staff Present: Merry Mayhew, City Manager
Ashton Gose, Deputy City Clerk
Daniel Schroeder, City Attorney (via WebEx
Videoconference)
Anna Nicholas, Director of Finance and Admin Services
Rachel Wyse, Community Development Director
Jose Vasquez, Public Works Superintendent
Sarah Chavarin, Accounting Manager
Fidel Landeros, Chief of Police

1. PUBLIC BUSINESS FROM THE FLOOR (No Action Can Be Taken):

Bruce Olsen, from the American Legion Post 872, invited the City Council and staff to a Veteran's Day Memorial being held at the Hughson Soccer Complex on November 11, 2021.

2. PRESENTATIONS: NONE.

3. CONSENT CALENDAR:

All items listed on the Consent Calendar are to be acted upon by a single action of the City Council unless otherwise requested by an individual Councilmember for special consideration. Otherwise, the recommendation of staff will be accepted and acted upon by roll call vote.

- 3.1:** Approve the Minutes of the Regular Meeting of June 14, 2021.
- 3.2:** Approve the Warrants Register.
- 3.3:** Adopt Resolution No. 2021-19, setting the Appropriation Limit (Gann Limit) for Fiscal Year 2021-2022.
- 3.4:** Adopt Resolution No. 2021-20, Updating the Publicly Available Salary Schedule Consistent with the Requirement of California Code of Regulations Title 2 Section 570.5.
- 3.5:** **A.** Adopt Resolution No. 2021-21, Directing the Filing of the Annual Reports for Fiscal Year 2021-2022 for the Special Assessment Districts (Landscaping and Lighting Districts, Benefit Assessment Districts, and Community Facilities District) in the City of Hughson.

B. Adopt Resolution No. 2021-22, Declaring the City Council's Intent to Levy and Collect Assessments for Fiscal Year 2021-2022 for the City of Hughson Landscaping and Lighting Districts, Benefit Assessment Districts, and Community Facilities District and to Set the Public Hearing for the July 26, 2021 City Council Meeting.
- 3.6:** Waive the Second Reading and Adopt Ordinance No. 2021-02, Adding Section 02.04.040 to Chapter 2.04 of Title 2 – Administration and Personnel – of the Hughson Municipal Code.
- 3.7:** Waive the Second Reading and Adopt Ordinance No. 2021-03, Amending Section 9.24.020 of Chapter 9.24 of Title 9 of the Hughson Municipal Code – Public Peace, Morals, and Welfare, and Section 12-.24.150 of Chapter 12.24 of Title 12 of the Hughson Municipal Code – Streets, Sidewalks and Public Places.
- 3.8:** Waive the Second Reading and Adopt Ordinance No. 2021-04, Amending Section 12.24.150 of Chapter 12.24 of the Title 12 of the Hughson Municipal Code – Streets, Sidewalks and Public Places.
- 3.9:** Waive the Second Reading and Adopt Ordinance No. 2021-05, Amending Section 12.24.110 of Chapter 12.24 of Title 12 of the Hughson Municipal Code – Streets, Sidewalks, and Public Places.

- 3.10:** Adopt Resolution No. 2021-23, Authorizing the Extension of the Abandoned Vehicle Abatement Program Fee Until April 30, 2032.

HILL/BUCK 4-0-0-1 motion passes to approve the consent calendar as presented, with the following roll call vote:

BAWANAN	RUSH	BUCK	HILL	CARR
AYE	ABSENT	AYE	AYE	AYE

4. UNFINISHED BUSINESS: NONE.

5. PUBLIC HEARING TO CONSIDER THE FOLLOWING:

- 5.1:** Introduce and Waive the First Reading of Ordinance No. 2021-06, Amending Municipal Code Chapter 15.12 – Flood Damage Prevention to Title 15 “Buildings and Construction” of the City Municipal Code.

Director Wyse presented the staff report on this item.

Mayor Carr opened the public hearing at 7:11 PM. There was no public comment. Mayor Carr closed the public hearing at 7:11 PM.

BAWANAN/HILL 4-0-0-1 motion passes to introduce and waive the first reading of Ordinance No. 2021-06, Amending Municipal Code Chapter 15.12 – Flood Damage Prevention to Title 15 “Buildings and Construction” of the City Municipal Code, with the following roll call vote:

BAWANAN	RUSH	BUCK	HILL	CARR
AYE	ABSENT	AYE	AYE	AYE

6. NEW BUSINESS:

- 6.1:** Adopt Resolution No. 2021-24, Adopting the City of Hughson’s Fiscal Year 2021-2022 Proposed Budget.

Director Nicholas presented the staff report on this item.

Mayor Carr opened public comment at 7:46 PM. There was no public comment. Mayor Carr closed public comment at 7:46 PM.

HILL/BUCK 4-0-0-1 motion passes to adopt Resolution No. 2021-24, Adopting the City of Hughson's Fiscal Year 2021-2022 Proposed Budget, with the following roll call vote:

BAWANAN	RUSH	BUCK	HILL	CARR
AYE	ABSENT	AYE	AYE	AYE

7. CORRESPONDENCE: NONE.

8. COMMENTS:

8.1: Staff Reports and Comments: (Information Only – No Action)

City Manager:

City Manager Mayhew informed the City Council that City Hall has reopened. She also provided an update regarding the Hughson Economic Development Committee meetings, and National Night Out, scheduled for August 3, 2021.

Community Development Director:

Director Wyse provided updates regarding the START Bus Stop at Whitmore Avenue and Tully Road, the trees located at the Fox Road Storage Tank, and the application for the California State Department of Parks and Recreation Per Capita Grant Funds.

Police Services:

Chief Landeros provided the City Council with the latest Crime Statistic Report.

8.2: Council Comments: (Information Only – No Action)

Councilmember Bawanan announced that he visited Pearl Harbor on his most recent vacation. He thanked City staff and Hughson Police Services for all their hard work. He also announced that he will not be present at the July 12, 2021, Hughson City Council meeting.

Councilmember Buck completed his ride alongs with Hughson Police Services. He thanked Director Nicholas, Director Wyse, and Hughson Public Works staff for their hard work.

Mayor Pro Tem Hill attended Duarte Nursery's Friends Day on June 18, 2021. He thanked City staff and Hughson Police Services for their hard work. He also announced that he celebrated his 52nd wedding anniversary since the last meeting.

8.3: Mayor's Comments: (Information Only – No Action)

Mayor Carr attended StanCOG Executive Committee meeting on June 7, 2021. He also attended an All-Mayor's meeting, and the Stanislaus County

Sheriff's Department Posse Dinner. He reminded Hughson Public Works staff, and Hughson Police Services to stay hydrated and safe.

ADJOURNMENT:

HILL/BUCK 4-0-0-1 motion passes to adjourn the regular meeting of June 28, 2021 at 8:07 PM with the following roll call vote:

BAWANAN	RUSH	BUCK	HILL	CARR
AYE	ABSENT	AYE	AYE	AYE

APPROVED:

GEORGE CARR, Mayor

ATTEST:

ASHTON GOSE, Deputy City Clerk



CITY COUNCIL AGENDA ITEM NO. 3.2

SECTION 3: CONSENT CALENDAR

Meeting Date: July 12, 2021
Subject: Approval of Warrants Register
Enclosure: Warrants Register
Presented By: Anna Nicholas, Director of Finance

Approved By: Merry Mayhew

Staff Recommendation:

Approve the Warrants Register as presented.

Background and Overview:

The warrants register presented to the City Council is a listing of all expenditures paid from June 22, 2021 through July 6, 2021.

Fiscal Impact:

There are reductions in various funds for payment of expenses.



Hughson

Check Report

By Check Number

Date Range: 06/22/2021 - 07/06/2021

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
Bank Code: Payable Bank-Payable Bank						
01603	Amazon Capital Services, Inc.	06/22/2021	Regular	0.00	67.61	54120
1XQ7-KTC3-14KY	Invoice	06/18/2021	office supplies (corp yard)	0.00	67.61	
00104	AYERA TECHNOLOGIES INC.	06/22/2021	Regular	0.00	84.00	54121
284316	Invoice	06/01/2021	Blanket PO	0.00	84.00	
00356	CRAFCO, INC.(PMSI)	06/22/2021	Regular	0.00	2,757.72	54122
9402481376	Invoice	06/18/2021	crack seal material	0.00	2,757.72	
00381	DARKHORSE OUTHOUSE SERVICE	06/22/2021	Regular	0.00	269.69	54123
1288	Invoice	06/11/2021	porta potty for clean up day	0.00	269.69	
00498	FRANTZ WHOLESALE NURSERY	06/22/2021	Regular	0.00	1,672.06	54124
597559,597565,5...	Invoice	06/04/2021	bark and plants for llds	0.00	1,672.06	
00623	HUGHSON TIRE	06/22/2021	Regular	0.00	30.00	54125
INV0005401	Invoice	06/18/2021	tire repair (gator)	0.00	30.00	
01583	Hunts & Sons, Inc.	06/22/2021	Regular	0.00	2,200.30	54126
918025	Invoice	06/04/2021	BLANKET P.O. W.H. BREASHERS (fuel)	0.00	2,200.30	
00914	QUICK N SAVE	06/22/2021	Regular	0.00	226.86	54127
1011390	Invoice	06/09/2021	BLANKET P.O. QUICK N SAVE	0.00	39.03	
1014807	Invoice	05/27/2021	BLANKET P.O. QUICK N SAVE	0.00	27.31	
1015277	Invoice	06/17/2021	BLANKET P.O. QUICK N SAVE	0.00	128.58	
1018377	Invoice	06/03/2021	BLANKET P.O. QUICK N SAVE	0.00	31.94	
00972	SAFE-T-LITE	06/22/2021	Regular	0.00	269.97	54128
375484	Invoice	06/18/2021	safety cones	0.00	269.97	
01115	THE HOME DEPOT CRC	06/22/2021	Regular	0.00	174.39	54129
1010654	Invoice	05/11/2021	BLANKET P.O. HOME DEPOT	0.00	174.39	
01176	USA BLUE BOOK	06/22/2021	Regular	0.00	721.83	54130
610984	Invoice	06/18/2021	pump	0.00	721.83	
01224	WILBUR-ELLIS COMPANY	06/22/2021	Regular	0.00	441.10	54131
14249804	Invoice	06/18/2021	Ranger herbicide	0.00	441.10	
00016	ABS PRESORT	06/22/2021	Regular	0.00	5,000.00	54132
MP-20210609	Invoice	06/09/2021	Advance Postage	0.00	5,000.00	
00019	ACCOMTEMP	06/22/2021	Regular	0.00	1,116.44	54133
57847545	Invoice	06/15/2021	Finance Extra Help	0.00	1,116.44	
00032	AFLAC	06/22/2021	Regular	0.00	655.83	54134
March2020	Invoice	06/17/2021	AFLAC	0.00	655.83	
01613	Asset Recovery Specialist, Inc	06/22/2021	Regular	0.00	655.00	54135
ORD075566	Invoice	06/22/2021	Equipment Pick up Payment	0.00	655.00	
00094	AT&T MOBILITY	06/22/2021	Regular	0.00	405.87	54136
287303621604X0...	Invoice	06/02/2021	PHONES	0.00	405.87	
00284	CHARTER COMMUNICATION	06/22/2021	Regular	0.00	92.75	54137
54047061021	Invoice	06/17/2021	IP ADDRESS- 1ST	0.00	92.75	
01601	Colantuono, Highsmith & Whatley, PC	06/22/2021	Regular	0.00	5,156.50	54138

Check Report

Date Range: 06/22/2021 - 07/06/2021

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
47819	Invoice	06/08/2021	Professional Services	0.00	5,156.50	
00368	CSU STANISLAUS	06/22/2021	Regular	0.00	25.00	54139
CMP-009926	Invoice	06/08/2021	Fingerprints- Swanton	0.00	25.00	
00463	EXPRESS PERSONNEL SERVICE	06/22/2021	Regular	0.00	1,659.84	54140
25556710	Invoice	06/09/2021	Extra Help- PW	0.00	1,659.84	
00570	HARRIS & ASSOCIATES	06/22/2021	Regular	0.00	4,360.82	54141
48748	Invoice	06/17/2021	Professional Services May 2021	0.00	4,360.82	
00824	NEUMILLER & BEARDSLEE	06/22/2021	Regular	0.00	6,043.94	54142
317750	Invoice	06/17/2021	LEGAL SERVICES	0.00	1,600.00	
318351	Invoice	06/17/2021	LEGAL SERVICES	0.00	4,443.94	
00901	PREFERRED ALLIANCE, INC.	06/22/2021	Regular	0.00	89.76	54143
0167700-IN	Invoice	05/31/2021	OFF-SITE PARTICIPANT	0.00	89.76	
01169	UNUM LIFE INSURANCE CO.	06/22/2021	Regular	0.00	72.53	54144
INV0005390	Invoice	06/09/2021	LIFE INSURANCE WITHHOLDING	0.00	72.53	
01225	WILLDAN ENGINEERING	06/22/2021	Regular	0.00	2,073.75	54145
334059	Invoice	02/16/2021	ENGINEERING SERVICES	0.00	468.75	
334677	Invoice	05/21/2021	Euclid North Subdivision	0.00	1,605.00	
	Void	06/30/2021	Regular	0.00	0.00	54146
	Void	06/30/2021	Regular	0.00	0.00	54147
01420	CALIFORNIA STATE DISBURSEMENT UNIT	06/30/2021	Regular	0.00	40.12	54148
INV0005416	Invoice	06/30/2021	INCOME WITHHOLDING FOR CHILD SUPPORT	0.00	40.12	
00009	A.R.F.	07/06/2021	Regular	0.00	1,600.68	54149
16268	Invoice	06/11/2021	Fire Extinguishers	0.00	643.97	
16269	Invoice	06/11/2021	Fire Extinguishers	0.00	171.00	
16270	Invoice	06/11/2021	Fire Extinguishers	0.00	278.00	
16271	Invoice	06/11/2021	Fire Extinguishers	0.00	507.71	
00019	ACCOUNTTEMPS	07/06/2021	Regular	0.00	1,978.45	54150
57877822	Invoice	06/21/2021	Finance Extra Help	0.00	876.70	
57921967	Invoice	06/28/2021	Finance Extra Help	0.00	1,101.75	
00032	AFLAC	07/06/2021	Regular	0.00	483.41	54151
642476	Invoice	05/12/2021	AFLAC	0.00	483.41	
01603	Amazon Capital Services, Inc.	07/06/2021	Regular	0.00	8.91	54152
147c-ywgd-d73n	Credit Memo	05/12/2021	Credit Memo	0.00	-27.72	
1k4k-fdd3-yv69	Invoice	06/09/2021	Office Supplies	0.00	28.01	
1XT6-T6LJ-FTJN	Invoice	06/11/2021	Misc Office Supplies	0.00	8.62	
00094	AT&T MOBILITY	07/06/2021	Regular	0.00	4.38	54153
287249079959x0...	Invoice	06/19/2021	PHONES	0.00	4.38	
00310	CLARK'S PEST CONTROL	07/06/2021	Regular	0.00	180.00	54154
28519877	Invoice	06/22/2021	PEST CONTROL	0.00	113.00	
28547641	Invoice	06/22/2021	PEST CONTROL	0.00	67.00	
01538	Colonial Life	07/06/2021	Regular	0.00	489.82	54155
5405907-0601115	Invoice	06/19/2021	Colonial Life	0.00	489.82	
00332	CONDOR EARTH TECHNOLOGIES	07/06/2021	Regular	0.00	3,141.51	54156
85049	Invoice	06/30/2021	PROFESSIONAL SERVICES FOR WWTP	0.00	3,141.51	
01616	De Novo Planning Group	07/06/2021	Regular	0.00	3,990.00	54157
3103	Invoice	06/08/2021	Update General Plan	0.00	3,990.00	
00463	EXPRESS PERSONNEL SERVICE	07/06/2021	Regular	0.00	2,213.12	54158
25591154	Invoice	06/16/2021	Extra Help- PW	0.00	1,361.92	

Check Report

Date Range: 06/22/2021 - 07/06/2021

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
25621832	Invoice	06/23/2021	Extra Help- PW	0.00	851.20	
00464	EZ NETWORK SOLUTIONS	07/06/2021	Regular	0.00	4,726.04	54159
39901	Invoice	06/30/2021	IT SERVICES	0.00	503.29	
TS39985	Invoice	06/30/2021	IT SERVICES	0.00	4,222.75	
00528	GILTON SOLID WASTE MANAGE	07/06/2021	Regular	0.00	1,848.84	54160
HUGHSS-059	Invoice	06/30/2021	STREET SWEEPING-JUNE	0.00	1,848.84	
00544	GRAND FLOW	07/06/2021	Regular	0.00	901.95	54161
1170	Invoice	04/20/2021	Blue Notices Paper	0.00	569.11	
1414	Invoice	05/21/2021	AP Checks	0.00	332.84	
00594	HINDERLITER, dELLAMAS &	07/06/2021	Regular	0.00	808.28	54162
SIN009350	Invoice	06/30/2021	Contract Services- Sales Tax 4th Qtr 2020	0.00	808.28	
01402	Irene Alvarez	07/06/2021	Regular	0.00	100.00	54163
INV0005434	Invoice	06/19/2021	Park Deposit Refund- Alvarez	0.00	100.00	
01282	JAIME VELAZQUEZ	07/06/2021	Regular	0.00	176.85	54164
INV0005429	Invoice	06/21/2021	Reimbursement: Trainings & Cert Renewal	0.00	176.85	
01617	Juan and Nancy Perez	07/06/2021	Regular	0.00	100.00	54165
INV0005433	Invoice	06/26/2021	PArk Deposit Refund- Perez	0.00	100.00	
01619	Marisol Villanueva	07/06/2021	Regular	0.00	100.00	54166
INV0005436	Invoice	06/27/2021	Park Deposit Refund- Villanueva	0.00	100.00	
01459	Merry Mayhew	07/06/2021	Regular	0.00	625.00	54167
INV0005431	Invoice	06/30/2021	Reimbursement for Mayor Carr LOCC Annual...	0.00	625.00	
00611	Mid Valley Publications	07/06/2021	Regular	0.00	129.50	54168
115351	Invoice	06/17/2021	LEGAL #8728	0.00	129.50	
01618	Miguel Garcia	07/06/2021	Regular	0.00	100.00	54169
INV0005435	Invoice	06/19/2021	Park Deposit Refund- Garcia	0.00	100.00	
00879	PG & E	07/06/2021	Regular	0.00	143.42	54170
INV0005439	Invoice	06/30/2021	UTILITIES	0.00	143.42	
00906	PROVOST & PRITCHARD CONSU	07/06/2021	Regular	0.00	9,545.76	54171
85626	Invoice	06/10/2021	TCP Treatment Study	0.00	9,545.76	
01454	Ray Morgan Company	07/06/2021	Regular	0.00	912.88	54172
3360608	Invoice	06/30/2021	COPIES	0.00	912.88	
01607	Scott N. Kivel	07/06/2021	Regular	0.00	1,886.50	54173
INV0005438	Invoice	06/30/2021	Professional Services	0.00	1,886.50	
01009	SHRED-IT USA LLC	07/06/2021	Regular	0.00	173.33	54174
8182178105	Invoice	06/07/2021	Shredding	0.00	173.33	
01599	SMILE BUSINESS PRODUCTS, INC	07/06/2021	Regular	0.00	184.71	54175
959789	Invoice	06/30/2021	COPIES	0.00	184.71	
01040	STANISLAUS COUNTY SHERIFF	07/06/2021	Regular	0.00	108,991.47	54176
2021-HPS10	Invoice	05/18/2021	LAW ENFORCEMENT SERVICES- APRIL 2021	0.00	108,991.47	
01615	Super Towing	07/06/2021	Regular	0.00	5,000.00	54177
INV0005428	Invoice	06/29/2021	Property Cleanup (2125 6th St)	0.00	5,000.00	
01149	TURLOCK IRRIGATION DIST.	07/06/2021	Regular	0.00	32,399.84	54178
INV0005432	Invoice	06/16/2021	ELECTRIC	0.00	32,399.84	
01192	VISION SERVICE PLAN	07/06/2021	Regular	0.00	471.36	54179
812610744	Invoice	06/19/2021	MEDICAL INSURANCE WITHHELD- JULY	0.00	471.36	

Check Report

Date Range: 06/22/2021 - 07/06/2021

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Payable #	Payable Type	Post Date	Payable Description	Discount Amount	Payable Amount	
01225	WILLDAN ENGINEERING	07/06/2021	Regular	0.00	4,112.10	54180
334238	Invoice	03/19/2021	WHITMORE AVE SIDEWALK	0.00	290.00	
334252	Invoice	03/19/2021	SANTA FE AVE	0.00	3,822.10	

Bank Code Payable Bank Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	75	59	0.00	223,891.79
Manual Checks	0	0	0.00	0.00
Voided Checks	0	2	0.00	0.00
Bank Drafts	0	0	0.00	0.00
EFT's	0	0	0.00	0.00
	75	61	0.00	223,891.79

All Bank Codes Check Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	75	59	0.00	223,891.79
Manual Checks	0	0	0.00	0.00
Voided Checks	0	2	0.00	0.00
Bank Drafts	0	0	0.00	0.00
EFT's	0	0	0.00	0.00
	75	61	0.00	223,891.79

Fund Summary

Fund	Name	Period	Amount
999	POOLED CASH/CONSOLIDATED CASH	6/2021	36,363.68
999	POOLED CASH/CONSOLIDATED CASH	7/2021	187,528.11
			223,891.79



CITY COUNCIL AGENDA ITEM NO. 3.3

SECTION 3: CONSENT CALENDAR

Meeting Date: July 12, 2021

Subject: Waive the Second Reading and Adopt Ordinance No. 2021-06, Amending Chapter 15.12 – Flood Damage Prevention to Title 15 “Buildings and Construction” of the City Municipal Code

Enclosures: National Flood Insurance Program Flood Insurance Rate Map Panel, Flood Insurance Study, Technical Review of Hughson Municipal Code Chapter 15.12

Presented By: Rachel Wyse, Community Development Director

Approved By: Merry Mayhew

Staff Recommendation:

Waive the second reading and adopt Ordinance No. 2021-06, amending Chapter 15.12 – Flood Damage Prevention to Title 15 “Buildings and Construction” of the City Municipal Code.

Background and Overview:

The National Flood Insurance Program (NFIP) was established with the passage of the National Flood Insurance Act of 1968. The NFIP is a federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages.

As of 2005, over 20,000 communities participated in the program.

Discussion:

Participation in the program is completely voluntary. A benefit to those that participate is the ability to purchase flood insurance program. However, communities that are in ‘flood prone’ areas are required to participate in the program. The City of Hughson is not in a flood prone area.

The Federal Emergency Management Agency (FEMA) is required by law to identify and map the Nation’s flood prone areas. The identification of flood hazards serves many important purposes—it creates awareness of the hazard, especially for those

who live and work in flood prone areas. Maps provide the State and communities with the information needed for land use planning and to reduce flood risk to floodplain development and implement other health and safety requirements through codes and regulations. State and communities can also use the information for emergency management.

To participate in the NFIP, a community must adopt and enforce floodplain management regulations that meet or exceed the minimum requirements of the Program. These requirements are intended to prevent loss of life and property and reduce taxpayer's costs for disaster relief, as well as minimize economic and social hardships that result from flooding.

It should be noted that homeowner's insurance policies generally do not cover the flood losses and while Hughson is not a flood prone area, there are residents that do desire flood insurance.

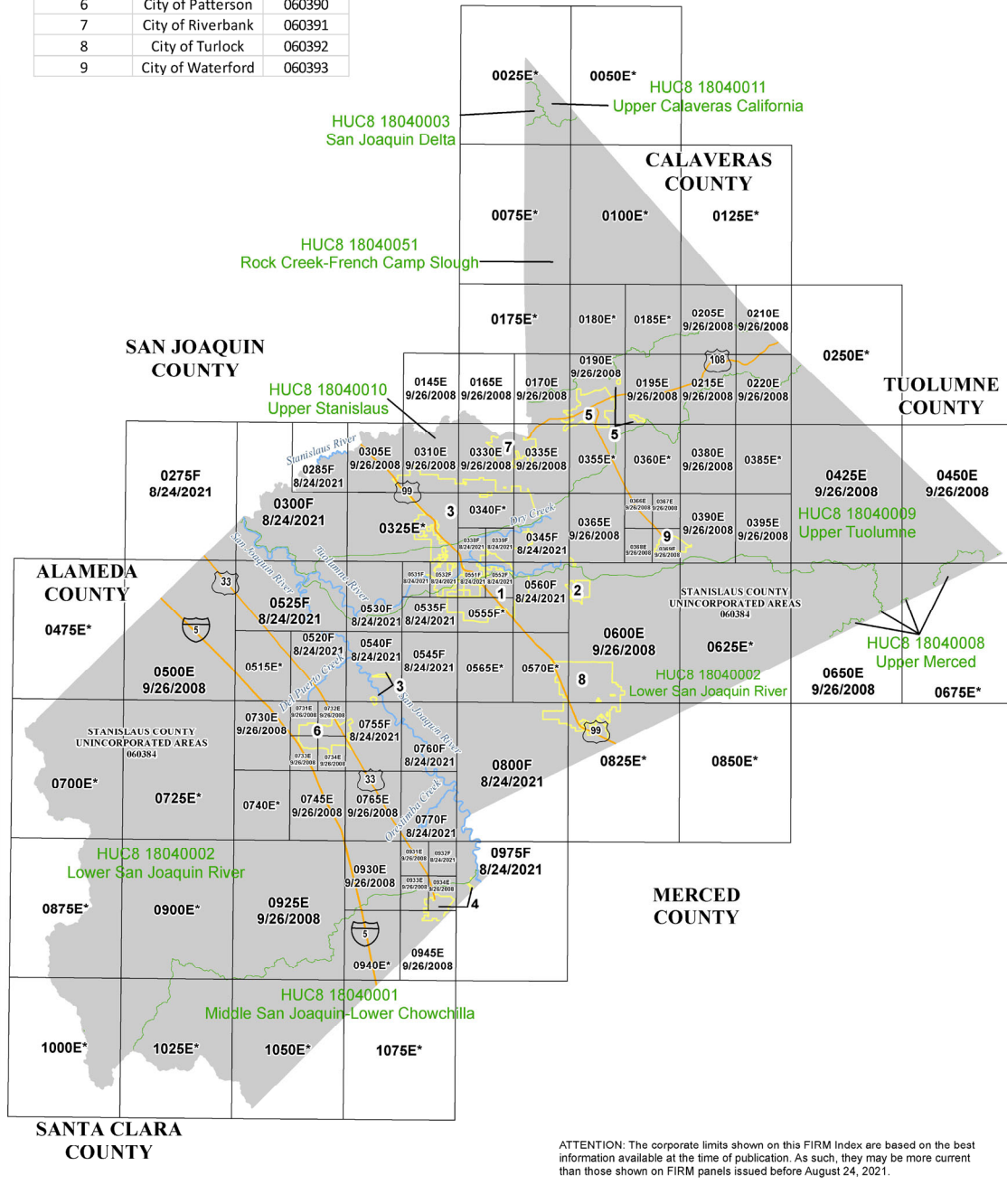
On January 25, 2016, the Hughson City Council adopted Ordinance No. 2016-05, adding Chapter 15.12 – Flood Damage Prevention to Title 15 of the Hughson Municipal Code. In order to complete application with the National Flood Insurance Program administered by the Federal Emergency Management Agency City staff modified the text of the Ordinance and addressed the Wastewater Treatment Plant property on Leedom Road which was left off of the initial application. The modified Ordinance was adopted on January 13, 2020.

Earlier this year staff received correspondence from FEMA stating that a Flood Insurance Study (FIS) and Flood Insurance Rate Map (FIRM) were completed for the City of Hughson and surrounding areas, and that the map would go into effect on August 24, 2021, and that prior to the effective date FEMA is required to approve the legally enforceable floodplain management measures a community adopts. In accordance with that requirement FEMA staff conducted their technical review of Chapter 15.12 and determined that there is additional language needed that requires an ordinance amendment. FEMA's suggested modifications to Chapter 15.12 have been reviewed by the City Attorney and are included in the ordinance amendment. The FIS and FIRM prepared by FEMA for the City of Hughson as well as the technical review of Chapter 15.12 is attached for reference.

Fiscal Impact:

Due to the City of Hughson's status outside of a designated flood zone or flood prone areas, there is no fiscal impact associated with the city becoming a participant in the NFIP. Further, the floodplain management regulations that are being adopted as part of this Ordinance are less stringent than the California Building Code, therefore, the City of Hughson has been meeting the requirements for participation in the program for many years.

Key Number	Community	CID
1	City of Ceres	060385
2	City of Hughson	060386
3	City of Modesto	060387
4	City of Newman	060388
5	City of Oakdale	060389
6	City of Patterson	060390
7	City of Riverbank	060391
8	City of Turlock	060392
9	City of Waterford	060393



1 inch = 6 miles
1:400,000
0 5 10 Miles
Map Projection:
StatePlane California III FIPS 0403;
North American Datum 1983
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING
DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT
[HTTPS://MSC.FEMA.GOV](https://MSC.FEMA.GOV)
SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION

* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS



NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP INDEX

STANISLAUS COUNTY, CALIFORNIA (And Incorporated Areas)

PANELS PRINTED:

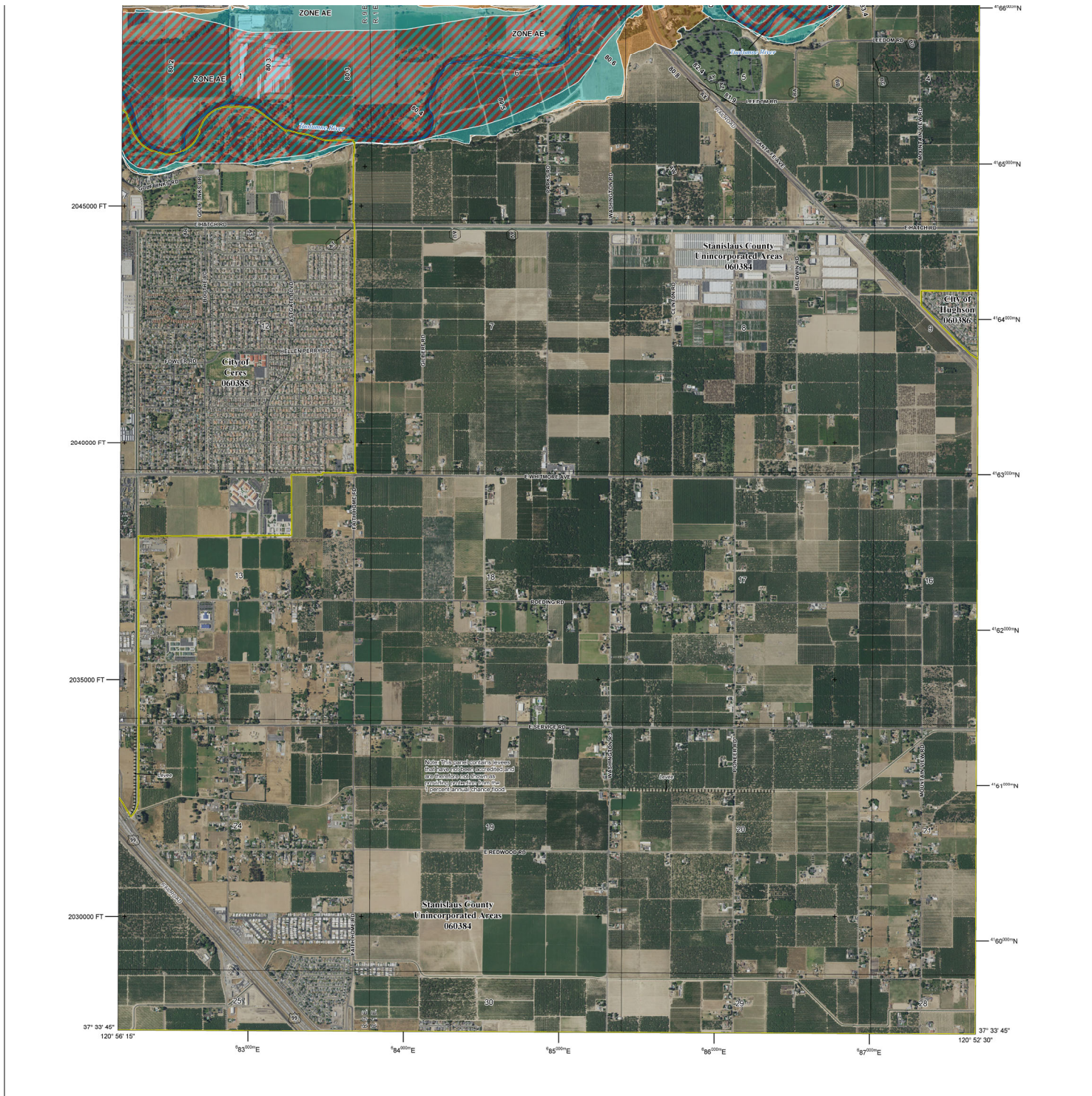
0145, 0165, 0170, 0190, 0195, 0205, 0210, 0215, 0220, 0275, 0285,
0300, 0305, 0310, 0330, 0335, 0338, 0339, 0345, 0365, 0366, 0367,
0368, 0369, 0380, 0390, 0395, 0425, 0450, 0500, 0515, 0520, 0525,
0530, 0531, 0532, 0535, 0540, 0545, 0551, 0552, 0560, 0600, 0650,
0730, 0731, 0732, 0733, 0734, 0745, 0755, 0760, 0765, 0770, 0800,
0925, 0930, 0931, 0932, 0933, 0934, 0945, 0975



FEMA

MAP NUMBER
06099CIND08

MAP REVISED
AUGUST 24, 2021



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT
THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT [HTTPS://MSC.FEMA.GOV](https://MSC.FEMA.GOV)

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone AE, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee See Notes, Zone X
OTHER AREAS		Area with Flood Risk due to Levee Zone D
		Areas of Minimal Flood Hazard Zone X
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-326-2627) or visit the FEMA Flood Map Service Center website at msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

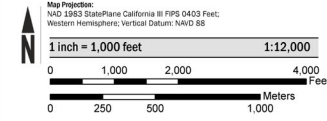
Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was provided in digital format by the United States Department of Agriculture Farm Service Agency (USDA-FSA). This information was derived from digital orthophotography at a 1-meter resolution from photography dated 2016.

SCALE



PANEL LOCATOR



NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

STANISLAUS COUNTY, CALIFORNIA
and Incorporated Areas

PANEL 560 of 1075

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
CERES, CITY OF	060385	0560	F
HUGHSON, CITY OF	060386	0560	F
STANISLAUS COUNTY	060384	0560	F

FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 1 OF 1



STANISLAUS COUNTY, CALIFORNIA

AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
CERES, CITY OF	060385
HUGHSON, CITY OF	060386
MODESTO, CITY OF	060387
NEWMAN, CITY OF	060388
OAKDALE, CITY OF	060389
PATTERSON, CITY OF	060390
RIVERBANK, CITY OF	060391
STANISLAUS COUNTY (UNINCORPORATED AREAS)	060384
TURLOCK, CITY OF*	060392
WATERFORD, CITY OF	060393

*No Special Flood Hazard Areas Identified

REVISED:

AUGUST 24, 2021

FLOOD INSURANCE STUDY NUMBER

06099CV000B

Version Number 2.5.3.0



FEMA

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Volume 1

Exhibits

Flood Profiles	<u>Panel</u>
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Dry Creek	04-07 P
Orestimba Creek	08-12 P
Salado Creek	13-14 P
Stanislaus River	15-25 P
Tuolumne River	26-33 P
Tuolumne River at Waterford	34 P

Published Separately

Flood Insurance Rate Map (FIRM)

FLOOD INSURANCE STUDY REPORT

STANISLAUS COUNTY, CALIFORNIA

SECTION 1.0 – INTRODUCTION

1.1 The National Flood Insurance Program

The National Flood Insurance Program (NFIP) is a voluntary Federal program that enables property owners in participating communities to purchase insurance protection against losses from flooding. This insurance is designed to provide an alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods.

For decades, the national response to flood disasters was generally limited to constructing flood-control works such as dams, levees, sea-walls, and the like, and providing disaster relief to flood victims. This approach did not reduce losses nor did it discourage unwise development. In some instances, it may have actually encouraged additional development. To compound the problem, the public generally could not buy flood coverage from insurance companies, and building techniques to reduce flood damage were often overlooked.

In the face of mounting flood losses and escalating costs of disaster relief to the general taxpayers, the U.S. Congress created the NFIP. The intent was to reduce future flood damage through community floodplain management ordinances, and provide protection for property owners against potential losses through an insurance mechanism that requires a premium to be paid for the protection.

The U.S. Congress established the NFIP on August 1, 1968, with the passage of the National Flood Insurance Act of 1968. The NFIP was broadened and modified with the passage of the Flood Disaster Protection Act of 1973 and other legislative measures. It was further modified by the National Flood Insurance Reform Act of 1994 and the Flood Insurance Reform Act of 2004. The NFIP is administered by the Federal Emergency Management Agency (FEMA), which is a component of the Department of Homeland Security (DHS).

Participation in the NFIP is based on an agreement between local communities and the Federal Government. If a community adopts and enforces floodplain management regulations to reduce future flood risks to new construction and substantially improved structures in Special Flood Hazard Areas (SFHAs), the Federal Government will make flood insurance available within the community as a financial protection against flood losses. The community's floodplain management regulations must meet or exceed criteria established in accordance with Title 44 Code of Federal Regulations (CFR) Part 60, *Criteria for Land Management and Use*.

SFHAs are delineated on the community's Flood Insurance Rate Maps (FIRMs). Under the NFIP, buildings that were built before the flood hazard was identified on the community's FIRMs are generally referred to as "Pre-FIRM" buildings. When the NFIP was created, the U.S. Congress recognized that insurance for Pre-FIRM buildings would be prohibitively expensive if the premiums were not subsidized by the Federal Government. Congress also recognized that most of these floodprone buildings were built

by individuals who did not have sufficient knowledge of the flood hazard to make informed decisions. The NFIP requires that full actuarial rates reflecting the complete flood risk be charged on all buildings constructed or substantially improved on or after the effective date of the initial FIRM for the community or after December 31, 1974, whichever is later. These buildings are generally referred to as “Post-FIRM” buildings.

1.2 Purpose of this Flood Insurance Study Report

This Flood Insurance Study (FIS) Report revises and updates information on the existence and severity of flood hazards for the study area. The studies described in this report developed flood hazard data that will be used to establish actuarial flood insurance rates and to assist communities in efforts to implement sound floodplain management.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive than the minimum Federal requirements. Contact your State NFIP Coordinator to ensure that any higher State standards are included in the community’s regulations.

1.3 Jurisdictions Included in the Flood Insurance Study Project

This FIS Report covers the entire geographic area of Stanislaus County, California.

The jurisdictions that are included in this project area, along with the Community Identification Number (CID) for each community and the United States Geological Survey (USGS) 8-digit Hydrologic Unit Code (HUC-8) sub-basins affecting each, are shown in Table 1. The FIRM panel numbers that affect each community are listed. If the flood hazard data for the community is not included in this FIS Report, the location of that data is identified.

Jurisdictions that have no identified SFHAs as of the effective date of this study are indicated in the table. Changed conditions in these communities (such as urbanization or annexation) or the availability of new scientific or technical data about flood hazards could make it necessary to determine SFHAs in these jurisdictions in the future.

Table 1: Listing of NFIP Jurisdictions

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Ceres, City of	060385	18040002, 18040009	06099C0532F, 06099C0535F, 06099C0551F, 06099C0552F, 06099C0555F ² , 06099C0560F	
Hughson, City of	060386	18040002	06099C0365E, 06099C0560F, 06099C0600E	
Modesto, City of	060387	18040002, 18040010, 18040009	06099C0305E, 06099C0310E, 06099C0325E ² , 06099C0330E, 06099C0335E, 06099C0338F, 06099C0339F, 06099C0340F ² , 06099C0345F, 06099C0531F, 06099C0532F, 06099C0540F, 06099C0551F, 06099C0552F	
Newman, City of	060388	18040002, 18040001	06099C0933E, 06099C0934E, 06099C0945E, 06099C0975F	
Oakdale, City of	060389	18040010	06099C0170E, 06099C0190E, 06099C0195E, 06099C0335E, 06099C0355E ²	
Patterson, City of	060390	18040002	06099C0540F, 06099C0731E, 06099C0732E, 06099C0733E, 06099C0734E, 06099C0755F	
Riverbank, City of	060391	18040010	06099C0330E, 06099C0335E	

Table 1: Listing of NFIP Jurisdictions (continued)

Stanislaus County, Unincorporated Areas	060384	18040002, 18040010, 18040003, 18040008, 18040001, 18040009	06099C0025E ² , 06099C0050E ² , 06099C0075E ² , 06099C0100E ² , 06099C0125E ² , 06099C0145E, 06099C0165E, 06099C0170E, 06099C0175E ² , 06099C0180E ² , 06099C0185E ² , 06099C0190E, 06099C0195E, 06099C0205E, 06099C0210E, 06099C0215E, 06099C0220E, 06099C0250E ² , 06099C0275F, 06099C0285F, 06099C0300F, 06099C0305E, 06099C0310E, 06099C0325E ² , 06099C0330E, 06099C0335E, 06099C0338F, 06099C0339F, 06099C0340F ² , 06099C0345F, 06099C0355E ² , 06099C0360E ² , 06099C0365E, 06099C0366E, 06099C0367E, 06099C0368E, 06099C0369E, 06099C0380E, 06099C0385E ² , 06099C0390E, 06099C0395E, 06099C0425E, 06099C0450E, 06099C0475E ² , 06099C0500E, 06099C0515E, 06099C0520F, 06099C0525F, 06099C0530F, 06099C0531F, 06099C0532F, 06099C0535F, 06099C0540F, 06099C0545F, 06099C0551F,	
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Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Stanislaus County Unincorporated Areas (continued)			06099C0552F, 06099C0555F ² , 06099C0560F, 06099C0565E ² , 06099C0570E ² , 06099C0600E, 06099C0625E ² , 06099C0650E, 06099C0675E ² , 06099C0700E ² , 06099C0725E ² , 06099C0730E, 06099C0731E, 06099C0732E, 06099C0733E, 06099C0734E, 06099C0740E ² , 06099C0745E, 06099C0755F, 06099C0760F, 06099C0765E, 06099C0770F, 06099C0800F, 06099C0825E ² , 06099C0850E ² , 06099C0875E ² , 06099C0900E ² , 06099C0925E, 06099C0930E, 06099C0931E, 06099C0932F, 06099C0933E, 06099C0934E, 06099C0940E ² , 06099C0945E, 06099C0975F, 06099C1000E ² , 06099C1025E ² , 06099C1050E ² , 06099C1075E ²	
Turlock, City of ¹	060392	18040002	06099C0570E ² 06099C0600E 06099C0800F 06099C0825E ²	

Table 1: Listing of NFIP Jurisdictions (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Waterford, City of	060393	18040009	06099C0369E 06099C0390E	

¹ No Special Flood Hazard Areas Identified

² Panel Not Printed

1.4 Considerations for using this Flood Insurance Study Report

The NFIP encourages State and local governments to implement sound floodplain management programs. To assist in this endeavor, each FIS Report provides floodplain data, which may include a combination of the following: 10-, 4-, 2-, 1-, and 0.2-percent annual chance flood elevations (the 1-percent-annual-chance flood elevation is also referred to as the Base Flood Elevation (BFE)); delineations of the 1-percent-annual-chance and 0.2-percent-annual-chance floodplains; and 1-percent-annual-chance floodway. This information is presented on the FIRM and/or in many components of the FIS Report, including Flood Profiles, Floodway Data tables, Summary of Non-Coastal Stillwater Elevations tables, and Coastal Transect Parameters tables (not all components may be provided for a specific FIS).

This section presents important considerations for using the information contained in this FIS Report and the FIRM, including changes in format and content. Figures 1, 2, and 3 present information that applies to using the FIRM with the FIS Report.

- Part or all of this FIS Report may be revised and republished at any time. In addition, part of this FIS Report may be revised by a Letter of Map Revision (LOMR), which does not involve republication or redistribution of the FIS Report. Refer to Section 6.5 of this FIS Report for information about the process to revise the FIS Report and/or FIRM.

It is, therefore, the responsibility of the user to consult with community officials by contacting the community repository to obtain the most current FIS Report components. Communities participating in the NFIP have established repositories of flood hazard data for floodplain management and flood insurance purposes. Community map repository addresses are provided in Table 30, "Map Repositories," within this FIS Report.

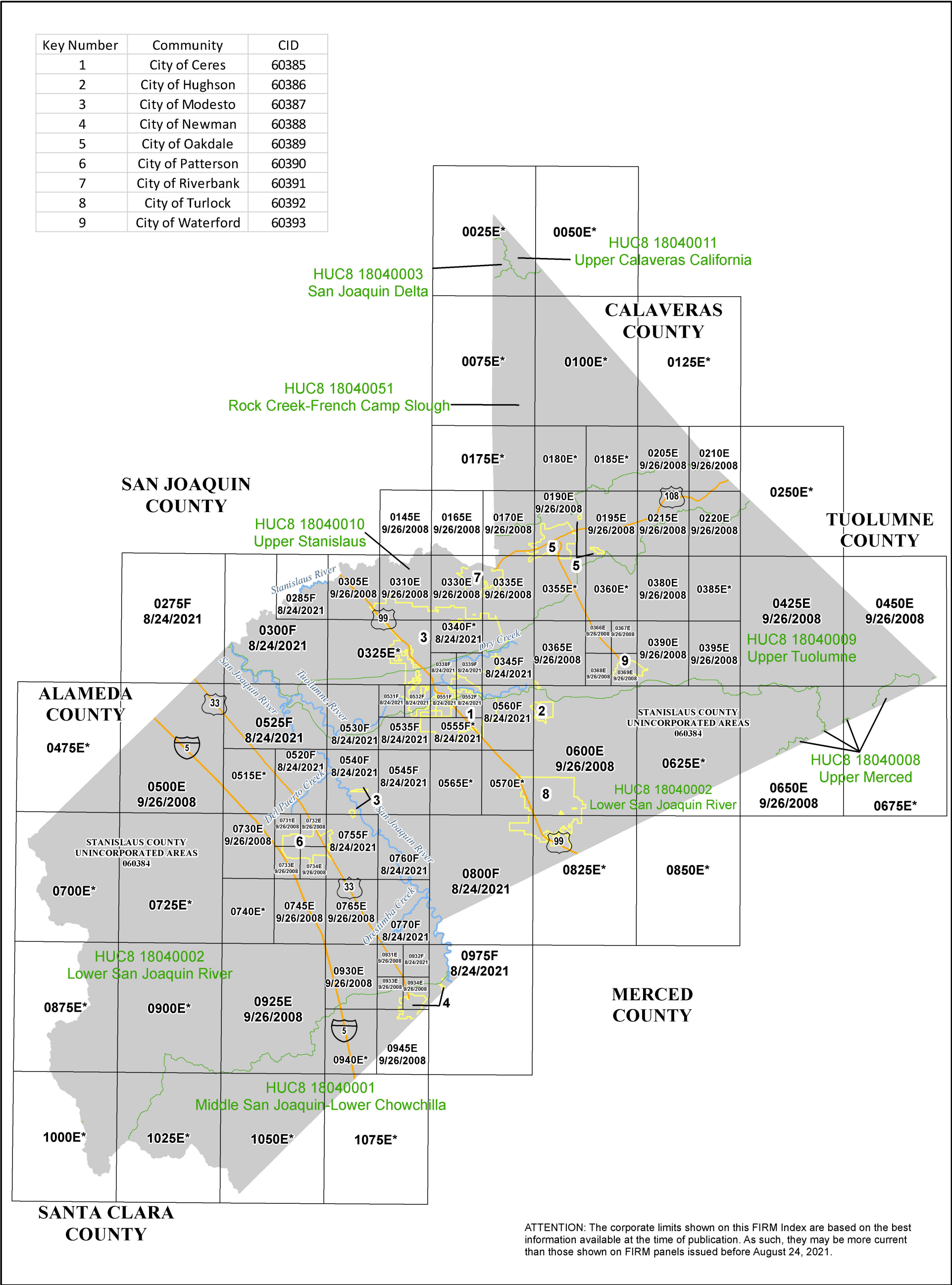
- New FIS Reports are frequently developed for multiple communities, such as entire counties. A countywide FIS Report incorporates previous FIS Reports for individual communities and the unincorporated area of the county (if not jurisdictional) into a single document and supersedes those documents for the purposes of the NFIP.

The initial Countywide FIS Report for Stanislaus County became effective on September 26, 2008. Refer to Table 27 for information about subsequent revisions to the FIRMs.

- FEMA has developed a *Guide to Flood Maps* (FEMA 258) and online tutorials to assist users in accessing the information contained on the FIRM. These include how to read panels and step-by-step instructions to obtain specific information. To obtain this guide and other assistance in using the FIRM, visit the FEMA Web site at www.fema.gov/online-tutorials.

The FIRM Index in Figure 1 shows the overall FIRM panel layout within Stanislaus County, and also displays the panel number and effective date for each FIRM panel in the county. Other information shown on the FIRM Index includes community boundaries, flooding sources, watershed boundaries, and USGS HUC-8 codes.

Figure 1: FIRM Index



ATTENTION: The corporate limits shown on this FIRM Index are based on the best information available at the time of publication. As such, they may be more current than those shown on FIRM panels issued before August 24, 2021.

1 inch = 6 miles

1:400,000

0

5

10

Miles

Map Projection:
StatePlane California III FIPS 0403;
North American Datum 1983

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT
[HTTPS://MSC.FEMA.GOV](https://MSC.FEMA.GOV)

SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION

* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP INDEX

STANISLAUS COUNTY, CALIFORNIA (And Incorporated Areas)

PANELS PRINTED:
0145, 0165, 0170, 0190, 0195, 0205, 0210, 0215, 0220, 0275, 0285, 0300, 0305, 0310, 0330, 0335, 0338, 0339, 0345, 0365, 0366, 0367, 0368, 0369, 0380, 0390, 0395, 0425, 0450, 0500, 0520, 0525, 0530, 0531, 0532, 0535, 0540, 545, 0551, 0552, 0560, 0600, 0650, 0730, 0731, 0732, 0733, 0734, 0745, 0755, 0760, 0765, 0770, 0800, 0925, 0930, 0931, 0932, 0933, 0934, 0945, 0975

MAP NUMBER

06099CIND0B

MAP REVISED

AUGUST 24, 2021

Each FIRM panel may contain specific notes to the user that provide additional information regarding the flood hazard data shown on that map. However, the FIRM panel does not contain enough space to show all the notes that may be relevant in helping to better understand the information on the panel. Figure 2 contains the full list of these notes.

Figure 2: FIRM Notes to Users

<p style="text-align: center;">NOTES TO USERS</p> <p>For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products, or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Flood Map Service Center website or by calling the FEMA Map Information eXchange.</p> <p>Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.</p> <p>For community and countywide map dates, refer to Table 27 in this FIS Report.</p> <p>To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.</p>
<p>The map is for use in administering the NFIP. It may not identify all areas subject to flooding, particularly from local drainage sources of small size. Consult the community map repository to find updated or additional flood hazard information.</p> <p>BASE FLOOD ELEVATIONS: For more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, consult the Flood Profiles and Floodway Data and/or Summary of Non-Coastal Stillwater Elevations tables within this FIS Report. Use the flood elevation data within the FIS Report in conjunction with the FIRM for construction and/or floodplain management.</p>
<p>FLOODWAY INFORMATION: 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 FIS Report for this jurisdiction.</p> <p>FLOOD CONTROL STRUCTURE INFORMATION: Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 4.3 "Non-Levee Flood Protection Measures" of this FIS Report for information on flood control structures for this jurisdiction.</p> <p>PROJECTION INFORMATION: The projection used in the preparation of the map was State Plane California III FIPS 0403 feet. The horizontal datum was the North American Datum of 1983 NAD83. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.</p>

Figure 2. FIRM Notes to Users

PROJECTION INFORMATION: The projection used in the preparation of the map was State Plane California III. The horizontal datum was the North American Datum of 1983 NAD83. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

ELEVATION DATUM: Flood elevations on the FIRM 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 Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at www.ngs.noaa.gov.

Local vertical monuments may have been used to create the map. To obtain current monument information, please contact the appropriate local community listed in Table 30 of this FIS Report.

BASE MAP INFORMATION: Base map information shown on the FIRM was provided by the United States Geological Survey (USGS) This information was derived from digital orthophotography at a 2-foot resolution from photography dated 2016. For information about base maps, refer to Section 6.2 “Base Map” in this FIS Report.

Corporate limits shown on the 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 the map was published, map users should contact appropriate community officials to verify current corporate limit locations.

NOTES FOR FIRM INDEX

REVISIONS TO INDEX: As new studies are performed and FIRM panels are updated within Stanislaus County, California, corresponding revisions to the FIRM Index will be incorporated within the FIS Report to reflect the effective dates of those panels. Please refer to Table 27 of this FIS Report to determine the most recent FIRM revision date for each community. The most recent FIRM panel effective date will correspond to the most recent index date.

SPECIAL NOTES FOR SPECIFIC FIRM PANELS

This Notes to Users section was created specifically for Stanislaus County, California, effective August 24, 2021.

FLOOD RISK REPORT: A Flood Risk Report (FRR) may be available for many of the flooding sources and communities referenced in this FIS Report. The FRR is provided to increase public awareness of flood risk by helping communities identify the areas within their jurisdictions that have the greatest risks. Although non-regulatory, the information provided within the FRR can assist communities in assessing and evaluating mitigation opportunities to reduce these risks. It can also be used by communities developing or updating flood risk mitigation plans. These plans allow communities to identify and evaluate opportunities to reduce potential loss of life and property. However, the FRR is not intended to be the final authoritative source of all flood risk data for a project area; rather, it should be used with other data sources to paint a comprehensive picture of flood risk.

Each FIRM panel contains an abbreviated legend for the features shown on the maps. However, the FIRM panel does not contain enough space to show the legend for all map features. Figure 3 shows the full legend of all map features. Note that not all of these features may appear on the FIRM panels in Stanislaus County.

Figure 3: Map Legend for FIRM

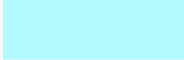

<p>SPECIAL FLOOD HAZARD AREAS: The 1% annual chance flood, also known as the base flood or 100-year flood, has a 1% chance of happening or being exceeded each year. Special Flood Hazard Areas are subject to flooding by the 1% annual chance flood. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood. 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. See note for specific types. If the floodway is too narrow to be shown, a note is shown.</p>	
	Special Flood Hazard Areas subject to inundation by the 1% annual chance flood (Zones A, AE, AH, AO, AR, A99, V and VE)
Zone A	The flood insurance rate zone that corresponds to the 1% annual chance floodplains. No base (1% annual chance) flood elevations (BFEs) or depths are shown within this zone.
Zone AE	The flood insurance rate zone that corresponds to the 1% annual chance floodplains. Base flood elevations derived from the hydraulic analyses are shown within this zone.
Zone AH	The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot BFEs derived from the hydraulic analyses are shown at selected intervals within this zone.
Zone AO	The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet. Average whole-foot depths derived from the hydraulic analyses are shown within this zone.
Zone AR	The flood insurance rate zone that corresponds to areas that were formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. 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	The flood insurance rate zone that corresponds to areas of the 1% annual chance floodplain that will be protected by a Federal flood protection system where construction has reached specified statutory milestones. No base flood elevations or flood depths are shown within this zone.
Zone V	The flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations are not shown within this zone.
Zone VE	Zone VE is the flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations derived from the coastal analyses are shown within this zone as static whole-foot elevations that apply throughout the zone.
	Regulatory Floodway determined in Zone AE.

Figure 3: Map Legend for FIRM (continued)












OTHER AREAS OF FLOOD HAZARD	
	Shaded Zone X: Areas of 0.2% annual chance flood hazards and areas of 1% annual chance flood hazards with average depths of less than 1 foot or with drainage areas less than 1 square mile.
	Future Conditions 1% Annual Chance Flood Hazard – Zone X: The flood insurance rate zone that corresponds to the 1% annual chance floodplains that are determined based on future-conditions hydrology. No base flood elevations or flood depths are shown within this zone.
	Area with Reduced Flood Risk due to Levee: Areas where an accredited levee, dike, or other flood control structure has reduced the flood risk from the 1% annual chance flood. See Notes to Users for important information.
	Area with Flood Risk due to Levee: Areas where a non-accredited levee, dike, or other flood control structure is shown as providing protection to less than the 1% annual chance flood.
OTHER AREAS	
	Zone D (Areas of Undetermined Flood Hazard): The flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.
<div style="border: 1px solid black; padding: 2px; display: inline-block;">NO SCREEN</div>	Unshaded Zone X: Areas of minimal flood hazard.
FLOOD HAZARD AND OTHER BOUNDARY LINES	
<div style="display: flex; align-items: center;">   </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> (ortho) (vector) </div>	Flood Zone Boundary (white line on ortho-photography-based mapping; gray line on vector-based mapping)
	Limit of Study
	Jurisdiction Boundary
	Limit of Moderate Wave Action (LiMWA): Indicates the inland limit of the area affected by waves greater than 1.5 feet
GENERAL STRUCTURES	
<div style="border-bottom: 1px dashed black; width: 100px; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> <i>Aqueduct</i> <i>Channel</i> <i>Culvert</i> <i>Storm Sewer</i> </div> <div></div> </div>	Channel, Culvert, Aqueduct, or Storm Sewer
<div style="border-bottom: 1px solid black; width: 100px; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> <i>Dam</i> <i>Jetty</i> <i>Weir</i> </div> <div></div> </div>	Dam, Jetty, Weir
	Levee, Dike, or Floodwall

Figure 3: Map Legend for FIRM (continued)

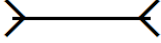

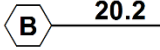
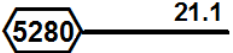
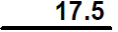
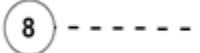













	Bridge
REFERENCE MARKERS	
	River mile Markers
CROSS SECTION & TRANSECT INFORMATION	
	Lettered Cross Section with Regulatory Water Surface Elevation (BFE)
	Numbered Cross Section with Regulatory Water Surface Elevation (BFE)
	Unlettered Cross Section with Regulatory Water Surface Elevation (BFE)
	Coastal Transect
	Profile Baseline: Indicates the modeled flow path of a stream and is shown on FIRM panels for all valid studies with profiles or otherwise established base flood elevation.
	Coastal Transect Baseline: Used in the coastal flood hazard model to represent the 0.0-foot elevation contour and the starting point for the transect and the measuring point for the coastal mapping.
	Base Flood Elevation Line
ZONE AE (EL 16)	Static Base Flood Elevation value (shown under zone label)
ZONE AO (DEPTH 2)	Zone designation with Depth
ZONE AO (DEPTH 2) (VEL 15 FPS)	Zone designation with Depth and Velocity
BASE MAP FEATURES	
	River, Stream or Other Hydrographic Feature
	Interstate Highway
	U.S. Highway
	State Highway
	County Highway

Figure 3: Map Legend for FIRM (continued)

MAPLE LANE 	Street, Road, Avenue Name, or Private Drive if shown on Flood Profile
 RAILROAD	Railroad
	Horizontal Reference Grid Line
	Horizontal Reference Grid Ticks
	Secondary Grid Crosshairs
Land Grant	Name of Land Grant
7	Section Number
R. 43 W. T. 22 N.	Range, Township Number
⁴² 76 ^{000m} E	Horizontal Reference Grid Coordinates (UTM)
365000 FT	Horizontal Reference Grid Coordinates (State Plane)
80° 16' 52.5"	Corner Coordinates (Latitude, Longitude)

SECTION 2.0 – FLOODPLAIN MANAGEMENT APPLICATIONS

2.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent-annual-chance (100-year) flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent-annual-chance (500-year) flood is employed to indicate additional areas of flood hazard in the community.

Each flooding source included in the project scope has been studied and mapped using professional engineering and mapping methodologies that were agreed upon by FEMA and Stanislaus County as appropriate to the risk level. Flood risk is evaluated based on factors such as known flood hazards and projected impact on the built environment. Engineering analyses were performed for each studied flooding source to calculate its 1-percent-annual-chance flood elevations; elevations corresponding to other floods (e.g. 10-, 4-, 2-, 0.2-percent annual chance, etc.) may have also been computed for certain flooding sources. Engineering models and methods are described in detail in Section 5.0 of this FIS Report. The modeled elevations at cross sections were used to delineate the floodplain boundaries on the FIRM; between cross sections, the boundaries were interpolated using elevation data from various sources. More information on specific mapping methods is provided in Section 6.0 of this FIS Report.

Depending on the accuracy of available topographic data (Table 22), study methodologies employed (Section 5.0), and flood risk, certain flooding sources may be mapped to show both the 1-percent and 0.2-percent-annual-chance floodplain boundaries, regulatory water surface elevations (BFEs), and/or a regulatory floodway. Similarly, other flooding sources may be mapped to show only the 1-percent-annual-chance floodplain boundary on the FIRM, without published water surface elevations. In cases where the 1-percent and 0.2-percent-annual-chance floodplain boundaries are close together, only the 1-percent-annual-chance floodplain boundary is shown on the FIRM. Figure 3, “Map Legend for FIRM”, describes the flood zones that are used on the FIRMs to account for the varying levels of flood risk that exist along flooding sources within the project area. Table 2 and Table 3 indicate the flood zone designations for each flooding source and each community within Stanislaus County, respectively.

Table 2, “Flooding Sources Included in this FIS Report,” lists each flooding source, including its study limits, affected communities, mapped zone on the FIRM, and the completion date of its engineering analysis from which the flood elevations on the FIRM and in the FIS Report were derived. Descriptions and dates for the latest hydrologic and hydraulic analyses of the flooding sources are shown in Table 12. Floodplain boundaries for these flooding sources are shown on the FIRM (published separately) using the symbology described in Figure 3. On the map, the 1-percent-annual-chance floodplain corresponds to the SFHAs. The 0.2-percent-annual-chance floodplain shows areas that, although out of the regulatory floodplain, are still subject to flood hazards.

Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data. The procedures to remove these areas from the SFHA are described in Section 6.5 of this FIS Report.

Within this jurisdiction, there are one or more levees that have not been demonstrated by the communities or levee owners to meet the requirements of the Code of Federal Regulations, Title 44, Section 65.10 (44 CFR 65.10) as it relates to the levee's capacity to provide 1-percent-annual-chance flood protection. As such, the floodplain boundaries in this area are subject to change. Please refer to Section 4.4 of this FIS Report for more information on how this may affect the floodplain boundaries shown on this FIRM.

Table 2: Flooding Sources Included in this FIS Report

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Del Puerto Creek	Stanislaus County, Unincorporated Areas	Approximately 1,780 feet upstream of the confluence of San Joaquin River	Approximately 200 feet upstream of Raines Road	18040002	4.7		N	AE	1987
Dry Creek	Modesto, City of; Stanislaus County, Unincorporated Areas	Confluence with Tuolumne River	Approximately 942 feet upstream of Church Street	18040009	7.7		Y	AE	2012
Orestimba Creek	Stanislaus County, Unincorporated Areas	Approximately 3,430 feet upstream of the confluence of Stanislaus River	Approximately 2,350 feet downstream of Interstate 5	18040002	5.9		N	AE	1987
Salado Creek	Patterson, City of; Stanislaus County, Unincorporated Areas	Southern Pacific Railroad	Raines Road	18040002	3.2		N	AE	1987
San Joaquin River	Stanislaus County, Unincorporated Areas	Confluence with Stanislaus River	Approximately 6,367 feet upstream of the confluence with Merced River	18040001, 18040002, 18040003,	71		N	AE	2018
Stanislaus River	Stanislaus County, Unincorporated Areas	Approximately 28,700 feet upstream of the confluence of San Joaquin River	Approximately 5,380 feet downstream of the county boundary	18040010	3.6		N	AE	2001
Tuolumne River	Ceres, City of; Modesto, City of; Stanislaus, County Unincorporated Areas	Approximately 34,700 feet upstream of confluence of Lower San Joaquin River	Approximately 7,449 feet upstream of Santa Fe Avenue	18040009	24.2		Y	AE	2012

Table 2: Flooding Sources Included in this FIS Report (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Tuolumne River at Waterford	Waterford, City of	Approximately 168,000 feet above mouth to 175,200 feet upstream of mouth	Approximately 200 feet upstream of Raines Road	18040009	2.3		N	AE	1978

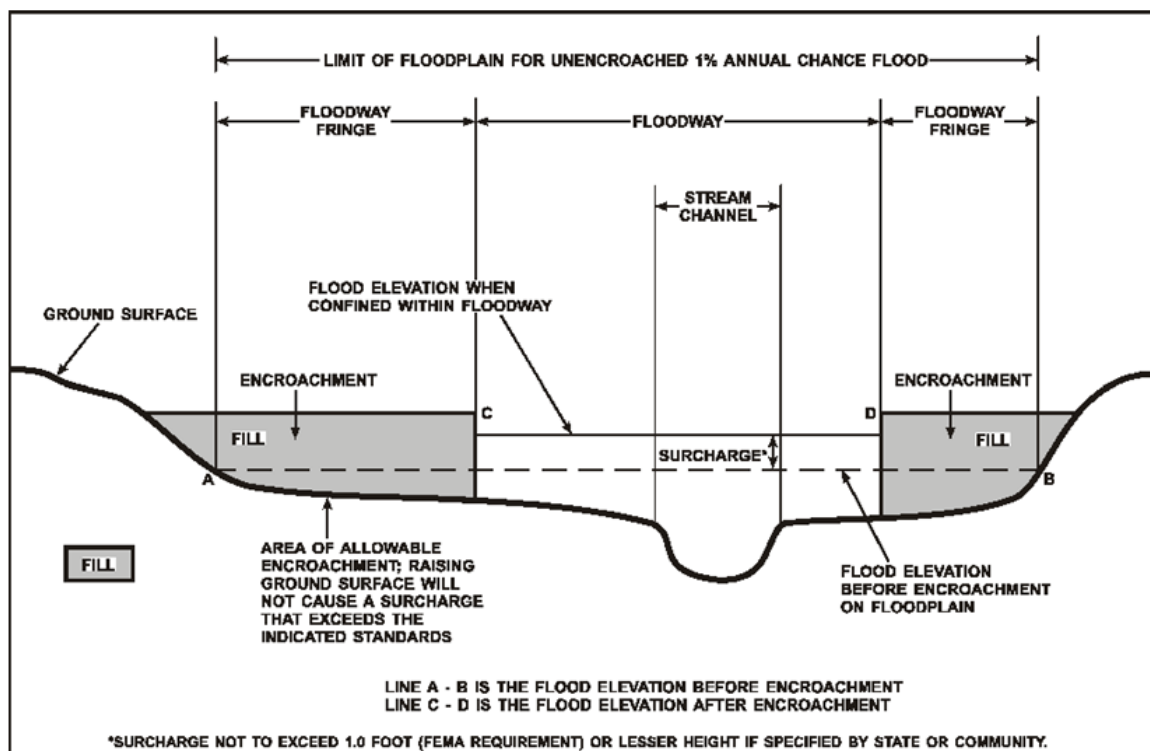
2.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard.

For purposes of the NFIP, a floodway is used as a tool to assist local communities in balancing floodplain development against increasing flood hazard. With this approach, the area of the 1-percent-annual-chance floodplain on a river is divided into a floodway and a floodway fringe based on hydraulic modeling. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment in order to carry the 1-percent-annual-chance flood. The floodway fringe is the area between the floodway and the 1-percent-annual-chance floodplain boundaries where encroachment is permitted. The floodway must be wide enough so that the floodway fringe could be completely obstructed without increasing the water surface elevation of the 1-percent-annual-chance flood more than 1 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 4.

To participate in the NFIP, Federal regulations require communities to limit increases caused by encroachment to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this project are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway projects.

Figure 4: Floodway Schematic



Floodway widths presented in this FIS Report and on the FIRM were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. For certain stream segments, floodways were adjusted so that the amount of floodwaters conveyed on each side of the floodplain would be reduced equally. The results of the floodway computations have been tabulated for selected cross sections and are shown in Table 23, "Floodway Data."

All floodways that were developed for this Flood Risk Project are shown on the FIRM using the symbology described in Figure 3. In cases where the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary has been shown on the FIRM. For information about the delineation of floodways on the FIRM, refer to Section 6.3.

2.3 Base Flood Elevations

The hydraulic characteristics of flooding sources were analyzed to provide estimates of the elevations of floods of the selected recurrence intervals. The BFE is the elevation of the 1-percent-annual-chance flood. These BFEs are most commonly rounded to the whole foot, as shown on the FIRM, but in certain circumstances or locations they may be rounded to 0.1 foot. Cross section lines shown on the FIRM may also be labeled with the BFE rounded to 0.1 foot. Whole-foot BFEs derived from engineering analyses that apply to coastal areas, areas of ponding, or other static areas with little elevation change may also be shown at selected intervals on the FIRM.

BFEs are primarily intended for flood insurance rating purposes. Cross sections with BFEs shown on the FIRM correspond to the cross sections shown in the Floodway Data table and Flood Profiles in this FIS Report. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS Report in conjunction with the data shown on the FIRM. For example, the user may use the FIRM to determine the stream station of a location of interest and then use the profile to determine the 1-percent annual chance elevation at that location. Because only selected cross sections may be shown on the FIRM for riverine areas, the profile should be used to obtain the flood elevation between mapped cross sections. Additionally, for riverine areas, whole-foot elevations shown on the FIRM may not exactly reflect the elevations derived from the hydraulic analyses; therefore, elevations obtained from the profile may more accurately reflect the results of the hydraulic analysis.

2.4 Non-Encroachment Zones

This section is not applicable to this Flood Risk Project.

2.5 Coastal Flood Hazard Areas

This section is not applicable to this Flood Risk Project.

2.5.1 Water Elevations and the Effects of Waves

This section is not applicable to this Flood Risk Project.

Figure 5: Wave Runup Transect Schematic
[Not Applicable to this Flood Risk Project]

2.5.2 Floodplain Boundaries and BFEs for Coastal Areas

This section is not applicable to this Flood Risk Project.

2.5.3 Coastal High Hazard Areas

This section is not applicable to this Flood Risk Project.

Figure 6: Coastal Transect Schematic
[Not Applicable to this Flood Risk Project]

2.5.4 Limit of Moderate Wave Action

This section is not applicable to this Flood Risk Project.

SECTION 3.0 – INSURANCE APPLICATIONS

3.1 National Flood Insurance Program Insurance Zones

For flood insurance applications, the FIRM designates flood insurance rate zones as described in Figure 3, “Map Legend for FIRM.” Flood insurance zone designations are assigned to flooding sources based on the results of the hydraulic or coastal analyses. Insurance agents use the zones shown on the FIRM and depths and base flood elevations in this FIS Report in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

The 1-percent-annual-chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (e.g. Zones A, AE, V, VE, etc.), and the 0.2-percent-annual-chance floodplain boundary corresponds to the boundary of areas of additional flood hazards.

Table 3 lists the flood insurance zones in Stanislaus County.

Table 3: Flood Zone Designations by Community

Community	Flood Zone(s)
Ceres, City of	AE, X
Hughson, City of	A, X
Modesto, City of	AE, X
Newman, City of	A, AE, AH, AO, X
Oakdale, City of	AE, X
Patterson, City of	AE, AH, AO, X
Riverbank, City of	AE, X

Table 3: Flood Zone Designations by Community (continued)

Community	Flood Zone(s)
Stanislaus County, Unincorporated Areas	A, AE, AH, AO, X
Turlock, City of	X
Waterford, City of	AE, X

SECTION 4.0 – AREA STUDIED

4.1 Basin Description

Table 4 contains a description of the characteristics of the HUC-8 sub-basins within which each community falls. The table includes the main flooding sources within each basin, a brief description of the basin, and its drainage area.

Table 4: Basin Characteristics

HUC-8 Sub-Basin Name	HUC-8 Sub-Basin Number	Primary Flooding Source	Description of Affected Area	Drainage Area (square miles)
Lower San Joaquin River	18040002	Lower San Joaquin River	Encompassing most of the southern half of the county.	917
Middle San Joaquin-Lower Chowchilla	18040001	Chowchilla River	Located in the southeastern portion of Stanislaus County.	3,525
Rock Creek-French Camp Slough	18040051	San Joaquin River	Smallest watershed in Stanislaus County located in the northern quarter of the county.	473
San Joaquin Delta	18040003	San Joaquin River	Encompassing a small portion of the northwestern quarter of Stanislaus County	1,232
Upper Calaveras California	18040011	Calaveras California	Located in the northernmost portion of Stanislaus County.	529
Upper Merced	18040008	Merced River	Located at the easternmost corner of Stanislaus County.	1,269
Upper Stanislaus	18040010	Stanislaus River	Emcompassing Stanislaus River in the northern half of Stanislaus County.	1,197
Upper Tuolumne	18040009	Tuolumne River	Located in the central portion of the county, encompassing the entire Tuolumne River.	1,873

4.2 Principal Flood Problems

Table 5 contains a description of the principal flood problems that have been noted for Stanislaus County by flooding source.

Table 5: Principal Flood Problems

Flooding Source	Description of Flood Problems
All Flooding Sources	Major flooding occurred in 1955 and 1969 on all the streams studied. Most of the flood damage in Stanislaus County has been limited to agricultural land and crops, but with continuing encroachment on the floodplains by residential and commercial development, flood damage to structures and their contents is increasing.
Del Puerto Creek	General rainstorms over the region can produce flood conditions over a widespread area that, consequently, can cause either high flows on just one of the streams or concurrent high flows on two or all three of the streams. Cloudburst storms are rare but can occur anytime from late spring to early fall, sometimes taking place in an extremely severe sequence within a general rainstorm. Cloudbursts are high intensity storms, yet in the vicinity of Patterson/Newman, they do not have the peak flows, duration, or volume of general rainstorms. Although they usually cover small areas, cloudburst storms can cause minor flooding on the comparatively flat valley floor in the county. The flows for all three west-side streams are constricted at the DMC (Delta Mendota Canal) by either a siphon (Del Puerto and Orestimba Creeks) or an overchute (Salado Creek), thus forcing the ponding of floodwaters to the west of the canal.
Dry Creek	Low lying areas of Modesto are subject to flooding when overflow from Dry Creek and Tuolumne River occurs. Flooding occurred along Dry Creek in 1955, 1958, 1969 and 1973.
Orestimba Creek	The April 1958 flood mainly damaged agricultural facilities in the Orestimba Creek basin and public, commercial, and residential properties in the Salado Creek Basin. Residents in both basins were forced to evacuate their homes. Volunteers used about 5,000 sandbags in fighting the flood along Salado Creek. During the February 1959 flooding, Orestimba Creek floodwaters eroded the west embankment of the Anderson Road Bridge, causing that end to drop 2 feet, which in turn caused several cracks in the bridge. Floodwaters from Del Puerto Creek washed out a canyon bridge west of Interstate 5 and felled many telephone poles and lines. Patterson reportedly received more than 2 inches of rain in a 24-hour period and needed pumps to drain flooded streets.
Salado Creek	The Salado Creek ponding is diverted southeasterly for a few miles, and eventually, a substantial quantity of floodwaters flow into Little Salado Creek and then under the canal, adding significantly to floodflows in the vicinity of the Naval Auxiliary Landing Field just northwest of Crows Landing. The peak discharge of Salado Creek through the City of Patterson is limited by the Salado Creek overchute capacity over the DMC. The overchute capacity is 710-cubic feet per second (cfs), which is approximately equal to the 2-percent annual chance recurrence interval flood on Salado Creek. The overchute was built in 1947 and is located approximately 3 miles upstream from Patterson. Downstream from the overchute, the channel capacity of Salado Creek is approximately 300 cfs. During periods of high flow, overflow occurs along the banks of Salado Creek at several locations south-west and west of Patterson. The overflow does not return to the channel because there are small manmade levees along the channel, and the natural slope of the land surface is away from the channel. The overflow enters Patterson from the west as sheetflow, generally flowing from southwest to northeast.

Table 5: Principal Flood Problems (continued)

Flooding Source	Description of Flood Problems
San Joaquin	General rain floods can occur in San Joaquin River anytime during the period from November through April. This type of flood results from prolonged heavy rainfall over tributary areas and is characterized by high peak flows of moderate duration. Flooding is more severe when the ground in tributary areas is frozen and infiltration is minimal, or when rain or snow in the high elevations adds snowmelt to rainflood runoff. Snowmelt floods on the San Joaquin River and its higher elevation tributaries can be expected to occur during the period from April through June. Although snowmelt flooding is of much larger volume and longer duration than rain flooding, it does not have the high peak flows characteristic of rain floods. Snowmelt flood runoff is sometimes augmented by late spring rains on the snowfields or lower elevation tributary watersheds.
Stanislaus River	Large floods occurred along the Stanislaus River in 1938, 1950, and 1955 before the New Melones Dam was constructed. Since construction of the New Melones Dam and its related flood control were completed in 1979, floods of near-record size have occurred in the San Joaquin Valley on the Stanislaus River in 1995, 1996, and 1997. The worse of these floods occurred in January 1997. Portions of the Cities of Ripon, Riverbank, and Oakdale were flooded. However, upstream of these cities, the New Melones Dam provided a high level of protection during the floods, and the uncontrolled spillway of the dam was not overtopped. In spite of this, large controlled outlet releases were required from the dam during the floods and affected a significant number of structures located in the floodplain.
Tuolumne River	Flooding along Tuolumne River results from winter rainfall during November through March and spring snowmelt during April through July. The snowmelt floods have comparatively low peaks, but have large volumes of water and are of long duration. The larger peak discharges are caused by rain, and occurred along Tuolumne River in 1950, 1955, and 1969. The largest of these floods was on December 9, 1950. Peak discharge of this flood was 57,000 cfs in Modesto, and 59,000 cfs in Waterford. Because of the flood control available from Don Pedro Dam, completed in 1970, the flood of December 9, 1950, now has a statistical recurrence interval of approximately 120 years. Historically, most flood damage had been limited to agricultural land and crops but with continuing encroachment on the flood plains by residential and commercial development, flood damage to structures and their contents has increased. The Tuolumne River experienced severe flooding during the storms of January 1997 and established a new record height at 71.2 feet from data extending back to 1897 (U.S. Army Corps of Engineers 1999). Although inflows to Don Pedro Reservoir were record-setting, the peak flow on January 4, 1997, of 55,800 cubic feet per second (cfs) in downtown Modesto, was slightly lower than the peak flow of 57,000 cfs recorded in 1950 prior to the new Don Pedro dam being constructed. Floodplain and habitat on a 5-mile reach of the Tuolumne River below Don Pedro Reservoir was severely damaged during the January 1997 flooding. Levees were breached, and surrounding land and gravel operations were engulfed by what has become a new channel for the Tuolumne River (California Department of Water Resources 1997).

Table 6 contains information about historic flood elevations in the communities within Stanislaus County.

Table 6: Historic Flooding Elevations

Flooding Source	Location	Historic Peak (Feet NAVD88)	Event Date	Approximate Recurrence Interval (years)	Source of Data
Tuolumne River	9th Street	73.3	1997	80	FEMA's Hydraulic Study Report, Tuolumne River At Modesto, Ca, Feb 1999
Tuolumne River	Intersection of Hatch and Ustick Roads, across river from sewage treatment plant	68.5	1997	80	FEMA's Hydraulic Study Report, Tuolumne River At Modesto, Ca, Feb 1999
Tuolumne River	Mitchell Road	77.3	1997	80	FEMA's Hydraulic Study Report, Tuolumne River At Modesto, Ca, Feb 1999
Tuolumne River	Santa Fe Avenue	79.2	1997	80	FEMA's Hydraulic Study Report, Tuolumne River At Modesto, Ca, Feb 1999

4.3 Non-Levee Flood Protection Measures

Table 7 contains information about non-levee flood protection measures within Stanislaus County such as dams, jetties, and or dikes. Levees are addressed in Section 4.4 of this FIS Report.

Table 7: Non-Levee Flood Protection Measures

Flooding Source	Structure Name	Type of Measure	Location	Description of Measure
San Joaquin River	Millerton Lake, Lake McClure	Storage Structures	Stanislaus County	
Stanislaus River	New Melones Dam	Dam	Upstream of Cities of Riverbank and Oakdale.	Dam
Tuolumne River	Don Pedro Dam and Don Pedro Lake	Dam	Tuolumne County	Dam

Table 7: Non-Levee Flood Protection Measures (continued)

Flooding Source	Structure Name	Type of Measure	Location	Description of Measure
Tuolumne River	Modesto Canal/Modesto Reservoir	Canal and Reservoir	Stanislaus County	

4.4 Levees

For purposes of the NFIP, FEMA only recognizes levee systems that meet, and continue to meet, minimum design, operation, and maintenance standards that are consistent with comprehensive floodplain management criteria. The Code of Federal Regulations, Title 44, Section 65.10 (44 CFR 65.10) describes the information needed for FEMA to determine if a levee system reduces the risk from the 1-percent-annual-chance flood. This information must be supplied to FEMA by the community or other party when a flood risk study or restudy is conducted, when FIRMs are revised, or upon FEMA request. FEMA reviews the information for the purpose of establishing the appropriate FIRM flood zone.

Levee systems that are determined to reduce the risk from the 1-percent-annual-chance flood are accredited by FEMA. FEMA can also grant provisional accreditation to a levee system that was previously accredited on an effective FIRM and for which FEMA is awaiting data and/or documentation to demonstrate compliance with Section 65.10. These levee systems are referred to as Provisionally Accredited Levees, or PALs. Provisional accreditation provides communities and levee owners with a specified timeframe to obtain the necessary data to confirm the levee's certification status. Accredited levee systems and PALs are shown on the FIRM using the symbology shown in Figure 3 and in Table 8. If the required information for a PAL is not submitted within the required timeframe, or if information indicates that a levee system no longer meets Section 65.10, FEMA will de-accredit the levee system and issue an effective FIRM showing the levee-impacted area as a SFHA.

FEMA coordinates its programs with USACE, who may inspect, maintain, and repair levee systems. The USACE has authority under Public Law 84-99 to supplement local efforts to repair flood control projects that are damaged by floods. Like FEMA, the USACE provides a program to allow public sponsors or operators to address levee system maintenance deficiencies. Failure to do so within the required timeframe results in the levee system being placed in an inactive status in the USACE Rehabilitation and Inspection Program. Levee systems in an inactive status are ineligible for rehabilitation assistance under Public Law 84-99.

FEMA coordinated with the USACE, the local communities, and other organizations to compile a list of levees that exist within Stanislaus County. Table 8, "Levees," lists all accredited levees, PALs, and de-accredited levees shown on the FIRM for this FIS Report. Other categories of levees may also be included in the table. The Levee ID shown in this table may not match numbers based on other identification systems that were listed in previous FIS Reports. Levees identified as PALs in the table are labeled on the FIRM to indicate their provisional status.

Please note that the information presented in Table 8 is subject to change at any time. For that reason, the latest information regarding any USACE structure presented in the table should be obtained by contacting USACE and accessing the USACE National Levee Database. For levees owned and/or operated by someone other than the USACE, contact the local community shown in Table 30.

Table 8: Levees

Community	Flooding Source	Levee Location	Levee Owner	USACE Levee	Levee ID	Covered Under PL84-99 Program?	FIRM Panel(s)
Modesto, City of	Tuolumne River	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015013	No	06099C0535F
Modesto, City of	Tuolumne River	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015014	No	06099C0535F
Modesto, City of	Tuolumne River	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015020	No	06099C0535F
Modesto, City of; Stanislaus County, Unincorporated Areas	Lateral Number 3	Both Banks	Locally Constructed, Locally Operated and Maintained	No	1905015018	No	06099C0340F 06099C0345F 06099C0365E
Modesto, City of; Stanislaus County, Unincorporated Areas	Modesto Main Canal	Both Banks	Locally Constructed, Locally Operated and Maintained	No	1905015063	No	06099C0335E 06099C0340F 06099C0345F
Modesto, City of; Stanislaus County, Unincorporated Areas	Lower Lateral No. 2	Within ponding area	Locally Constructed, Locally Operated and Maintained	No	1905015142	No	06099C0540F
Modesto, City of; Stanislaus County, Unincorporated Areas	Sewage Disposal Ponds	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015136	No	06099C0540F
Modesto, City of; Stanislaus County, Unincorporated Areas	Sewage Disposal Ponds	Within ponding area	Locally Constructed, Locally Operated and Maintained	No	1905015137	No	06099C0540F
Modesto, City of; Stanislaus County, Unincorporated Areas	Sewage Disposal Ponds	Within ponding area	Locally Constructed, Locally Operated and Maintained	No	1905015140	No	06099C0540F
Modesto, City of; Stanislaus County, Unincorporated Areas	Sewage Disposal Ponds	Within ponding area	Locally Constructed, Locally Operated and Maintained	No	1905015142	No	06099C0540F

Table 8: Levees (continued)

Community	Flooding Source	Levee Location	Levee Owner	USACE Levee	Levee ID	Covered Under PL84-99 Program?	FIRM Panel(s)
Modesto, City of; Stanislaus County, Unincorporated Areas	Sewage Disposal Ponds	Within ponding area	Locally Constructed, Locally Operated and Maintained	No	1905015143	No	06099C0540F
Modesto, City of; Stanislaus County, Unincorporated Areas	Westpoint Drain	Within ponding area	Locally Constructed, Locally Operated and Maintained	No	1905015141	No	06099C0540F
Stanislaus County, Unincorporated Areas	Ceres Main Canal	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015191	No	06099C0560F
Stanislaus County, Unincorporated Areas	Internal Levee	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015184	No	06099C0300F
Stanislaus County, Unincorporated Areas	Laird Slough	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015180	No	06099C0525F
Stanislaus County, Unincorporated Areas	Lateral Number 3	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015073	No	06099C0300F
Stanislaus County, Unincorporated Areas	Lateral Number 3	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015074	No	06099C0300F
Stanislaus County, Unincorporated Areas	Lateral Number 7	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015185	No	06099C0300F
Stanislaus County, Unincorporated Areas	Lateral Number 7	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015186	No	06099C0300F
Stanislaus County, Unincorporated Areas	Lateral Number 8	Left Bank	Locally Constructed, Locally Operated and Maintained	No	150005012267	No	06099C0285F
Stanislaus County, Unincorporated Areas	Main Canal	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015149	No	06099C0755F

Table 8: Levees (continued)

Community	Flooding Source	Levee Location	Levee Owner	USACE Levee	Levee ID	Covered Under PL84-99 Program?	FIRM Panel(s)
Stanislaus County, Unincorporated Areas	Main Canal	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015151	No	06099C0755F
Stanislaus County, Unincorporated Areas	Main Canal	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015153	No	06099C0755F
Stanislaus County, Unincorporated Areas	Main Canal	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015155	No	06099C0755F
Stanislaus County, Unincorporated Areas	Main Canal	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015157	No	06099C0755F
Stanislaus County, Unincorporated Areas	Main Canal	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015159	No	06099C0755F
Stanislaus County, Unincorporated Areas	Main Canal	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015150	No	06099C0755F
Stanislaus County, Unincorporated Areas	Main Canal	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015152	No	06099C0755F
Stanislaus County, Unincorporated Areas	Main Canal	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015154	No	06099C0755F
Stanislaus County, Unincorporated Areas	Main Canal	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015156	No	06099C0755F
Stanislaus County, Unincorporated Areas	Main Canal	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015158	No	06099C0755F
Stanislaus County, Unincorporated Areas	Main Canal	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015160	No	06099C0755F

Table 8: Levees (continued)

Community	Flooding Source	Levee Location	Levee Owner	USACE Levee	Levee ID	Covered Under PL84-99 Program?	FIRM Panel(s)
Stanislaus County, Unincorporated Areas	Miller Lake	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015209	No	06099C0300F
Stanislaus County, Unincorporated Areas	Modesto Lateral Number 1	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015167	No	06099C0345F
Stanislaus County, Unincorporated Areas	Modesto Lateral Number 1	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015226	No	06099C0345F
Stanislaus County, Unincorporated Areas	Modesto Lateral Number 1	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015166	No	06099C0345F
Stanislaus County, Unincorporated Areas	Modesto Lateral Number 1	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015225	No	06099C0345F
Stanislaus County, Unincorporated Areas	Modesto Main Canal	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015062	No	06099C0335E 06099C0345F 06099C0365E
Stanislaus County, Unincorporated Areas	West Stanislaus Main Canal	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015057	No	06099C0525F
Stanislaus County, Unincorporated Areas	Stanislaus River	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015079	No	06099C0285F
Stanislaus County, Unincorporated Areas	Unnamed Canal	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015126	No	06099C0300F
Stanislaus County, Unincorporated Areas	Unnamed Canal	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015127	No	06099C0300F
Stanislaus County, Unincorporated Areas	Unnamed Canal	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015128	No	06099C0300F

Table 8: Levees (continued)

Community	Flooding Source	Levee Location	Levee Owner	USACE Levee	Levee ID	Covered Under PL84-99 Program?	FIRM Panel(s)
Stanislaus County, Unincorporated Areas	San Joaquin River	Left Bank	Locally Constructed, Locally Operated and Maintained	No	5205001341	No	06099C0525F
Stanislaus County, Unincorporated Areas	San Joaquin River	Left Bank	Locally Constructed, Locally Operated and Maintained	No	5205001351	No	06099C0300F
Stanislaus County, Unincorporated Areas	San Joaquin River	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015123	No	06099C0300F
Stanislaus County, Unincorporated Areas	San Joaquin River	Right Bank	Locally Constructed, Locally Operated and Maintained	No	5205001281	No	06099C0540F 06099C0755F 06099C0760F 06099C0770F 06099C0800F
Stanislaus County, Unincorporated Areas	Richie Slough	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015229	No	06099C0520F
Stanislaus County, Unincorporated Areas	Sacramento River	Both Banks	Locally Constructed, Locally Operated and Maintained	No	1905015113	No	06099C0525F
Stanislaus County, Unincorporated Areas	San Joaquin River	Left Bank	CA Department of Water Resources, Central Valley Flood Protection Board	No	5205001351	No	06099C0300F
Stanislaus County, Unincorporated Areas	San Joaquin River	Left Bank	CA Department of Water Resources, Central Valley Flood Protection Board	Yes	5205001191	No	06099C0755F 06099C0760F 06099C0770F
Stanislaus County, Unincorporated Areas	San Joaquin River	Left Bank	CA Department of Water Resources, Central Valley Flood Protection Board	Yes	5205001281	No	06099C0540F 06099C0755F 06099C0760F 06099C0770F 06099C0800F

Community	Flooding Source	Levee Location	Levee Owner	USACE Levee	Levee ID	Covered Under PL84-99 Program?	FIRM Panel(s)
Stanislaus County, Unincorporated Areas	San Joaquin River	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015026	No	06099C0800F
Stanislaus County, Unincorporated Areas	San Joaquin River	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015075	No	06099C0300F
Stanislaus County, Unincorporated Areas	San Joaquin River	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015076	No	06099C0300F
Stanislaus County, Unincorporated Areas	San Joaquin River	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015115	No	06099C0525F
Stanislaus County, Unincorporated Areas	San Joaquin River	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015122	No	06099C0525F
Stanislaus County, Unincorporated Areas	San Joaquin River	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015124	No	06099C0300F
Stanislaus County, Unincorporated Areas	San Joaquin River	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015129	No	06099C0300F
Stanislaus County, Unincorporated Areas	San Joaquin River	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015133	No	06099C0540F
Stanislaus County, Unincorporated Areas	San Joaquin River	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015169	No	06099C0525F
Stanislaus County, Unincorporated Areas	San Joaquin River	Left Bank	U.S. Fish and Wildlife Service (USFWS)	No	5205001331	No	06099C0300F 06099C0525F
Stanislaus County, Unincorporated Areas	San Joaquin River	Left Bank	U.S. Fish and Wildlife Service (USFWS)	No	5205001341	No	06099C0525F

Community	Flooding Source	Levee Location	Levee Owner	USACE Levee	Levee ID	Covered Under PL84-99 Program?	FIRM Panel(s)
Stanislaus County, Unincorporated Areas	San Joaquin River	Right Bank	CA Department of Water Resources, Central Valley Flood Protection Board	Yes	5205001291	No	06099C0525F
Stanislaus County, Unincorporated Areas	San Joaquin River	Right Bank	Locally Constructed, Locally Operated and Maintained	No	150005012535	No	06099C0525F
Stanislaus County, Unincorporated Areas	San Joaquin River	Right Bank	Locally Constructed, Locally Operated and Maintained	No	150005012536	No	06099C0525F
Stanislaus County, Unincorporated Areas	San Joaquin River	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015032	No	06099C0300F 06099C0525F
Stanislaus County, Unincorporated Areas	San Joaquin River	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015224	No	06099C0760F
Stanislaus County, Unincorporated Areas	San Joaquin River, Stanislaus River	Both Banks	CA Department of Water Resources, Central Valley Flood Protection Board	Yes	5205001201	No	06099C0285F 06099C0300F
Stanislaus County, Unincorporated Areas	Sewage Disposal Ponds	Within ponding area	Locally Constructed, Locally Operated and Maintained	No	1905015138	No	06099C0540F
Stanislaus County, Unincorporated Areas	Stanislaus River	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015077	No	06099C0285F
Stanislaus County, Unincorporated Areas	Stanislaus River	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015078	No	06099C0285F
Stanislaus County, Unincorporated Areas	Stream	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015172	No	06099C0300F

Community	Flooding Source	Levee Location	Levee Owner	USACE Levee	Levee ID	Covered Under PL84-99 Program?	FIRM Panel(s)
Stanislaus County, Unincorporated Areas	Tuolumne River	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015117	No	06099C0525F
Stanislaus County, Unincorporated Areas	Tuolumne River	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015118	No	06099C0525F
Stanislaus County, Unincorporated Areas	Tuolumne River	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015119	No	06099C0525F 06099C0530F
Stanislaus County, Unincorporated Areas	Tuolumne River	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015168	No	06099C0300F 06099C0525F
Stanislaus County, Unincorporated Areas	Tuolumne River	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015116	No	06099C0525F
Stanislaus County, Unincorporated Areas	Tuolumne River	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015146	No	06099C0525F 06099C0530F
Stanislaus County, Unincorporated Areas	Tuolumne River	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015148	No	06099C0530F
Stanislaus County, Unincorporated Areas	Upper Lateral No. 2	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015091	No	06099C0560F
Stanislaus County, Unincorporated Areas	West Stanislaus Main Canal	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015054	No	06099C0515E 06099C0525F
Stanislaus County, Unincorporated Areas	West Stanislaus Main Canal	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015055	No	06099C0525F
Stanislaus County, Unincorporated Areas	West Stanislaus Main Canal	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015056	No	06099C0525F

Community	Flooding Source	Levee Location	Levee Owner	USACE Levee	Levee ID	Covered Under PL84-99 Program?	FIRM Panel(s)
Stanislaus County, Unincorporated Areas	West Stanislaus Main Canal	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015058	No	06099C0525F
Stanislaus County, Unincorporated Areas	West Stanislaus Main Canal	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015060	No	06099C0525F
Stanislaus County, Unincorporated Areas	West Stanislaus Main Canal	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015059	No	06099C0525F
Stanislaus County, Unincorporated Areas	West Stanislaus Main Canal	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015061	No	06099C0525F
Stanislaus County, Unincorporated Areas	Westly Wasteway	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015011	No	06099C0515E 06099C0520F
Stanislaus County, Unincorporated Areas	Westly Wasteway	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015132	No	06099C0515E 06099C0520F
Stanislaus County, Unincorporated Areas	Westport Drain	Left Bank	Locally Constructed, Locally Operated and Maintained	No	1905015245	No	06099C0545F
Stanislaus County, Unincorporated Areas	Westport Drain	Right Bank	Locally Constructed, Locally Operated and Maintained	No	1905015244	No	06099C0545F

SECTION 5.0 – ENGINEERING METHODS

For the flooding sources in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude that are expected to be equaled or exceeded at least once on the average during any 10-, 25-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly termed the 10-, 25-, 50-, 100-, and 500-year floods, have a 10-, 4-, 2-, 1-, and 0.2-percent-annual-chance, respectively, of being equaled or exceeded during any year.

Although the recurrence interval represents the long-term, average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the 100-year flood (1-percent chance of annual exceedance) during the term of a 30-year mortgage is approximately 26 percent (about 3 in 10); for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

5.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak elevation-frequency relationships for floods of the selected recurrence intervals for each flooding source studied. Hydrologic analyses are typically performed at the watershed level. Depending on factors such as watershed size and shape, land use and urbanization, and natural or man-made storage, various models or methodologies may be applied. A summary of the hydrologic methods applied to develop the discharges used in the hydraulic analyses for each stream is provided in Table 12. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation.

Table 9: Summary of Discharges

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	0.2% Annual Chance
Del Puerto Creek	At Interstate 5	72.6	*	*	*	7,960	*
Dry Creek	At Mouth	196.6	*	*	*	11,586	15,627
Dry Creek	Near Modesto	193.0	*	*	*	11,422	15,051
Orestimba Creek	At Interstate 5	134	*	*	*	15,590	*
Salado Creek	At Interstate 5	25.3	*	*	*	2,820	*
Salado Creek	Below DMC	25.3	*	*	*	710	*
San Joaquin River	Downstream of Merced River	9,520	*	*	*	34,600	42,000
Stanislaus River	At Oakdale	1,020	7,600	*	8,000	8,000	154,000
Tuolumne River	At Modesto	1,884	*	*	*	70,000	*
Tuolumne River	At Waterford	1,640	9,000	*	10,000	42,000	225,000

*Not calculated for this Flood Risk Project

Figure 7: Frequency Discharge-Drainage Area Curves
[Not Applicable to this Flood Risk Project]

Table 10: Summary of Non-Coastal Stillwater Elevations
[Not Applicable to this Flood Risk Project]

Table 11: Stream Gage Information used to Determine Discharges

Flooding Source	Gage Identifier	Agency that Maintains Gage	Site Name	Drainage Area (Square Miles)	Period of Record	
					From	To
Dry Creek	B04130	CA Department of Water Resources	Gage on Dry Creek near Modesto	193	10/01/1960	09/30/2011
Tuolumne River	11290000	USGS	Gage on Tuolumne River at Modesto	1884	01/01/1971	01/01/1997

5.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals. Base flood elevations on the FIRM represent the elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report. Rounded whole-foot elevations may be shown on the FIRM in coastal areas, areas of ponding, and other areas with static base flood elevations. These whole-foot elevations may not exactly reflect the elevations derived from the hydraulic analyses. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS Report in conjunction with the data shown on the FIRM. The hydraulic analyses for this FIS were based on unobstructed flow. The flood elevations shown on the profiles are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

For streams for which hydraulic analyses were based on cross sections, locations of selected cross sections are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 6.3), selected cross sections are also listed in Table 23, "Floodway Data."

A summary of the methods used in hydraulic analyses performed for this project is provided in Table 12. Roughness coefficients are provided in Table 13. Roughness coefficients are values representing the frictional resistance water experiences when passing overland or through a channel. They are used in the calculations to determine water surface elevations. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation.

Table 12: Summary of Hydrologic and Hydraulic Analyses

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Del Puerto Creek	Approximately 1,780 feet upstream of the confluence of San Joaquin River	Approximately 200 feet upstream of Raines Road	Rainfall-Runoff computations and statistical analysis of synthetic rainstorms	HEC-2	11/01/1987	AE	<p>Loss-rate data for the 100-year storms on the three streams (Del Puerto, Salado, and Orestimba Creeks) in the study area were derived from loss-rate data developed for a series of storms over Orestimba and Del Puerto Creeks in January 1983. The loss-rates were also based on the initial and constant loss concept and analyses of soil cover and land uses. Base flow included recession amounts from previous storms. Applying the Flood Flow Frequency Analysis computer program (USACE 1981) to the gaged streamflow data, peak flow frequency curves were developed for the stream gages on Orestimba and Del Puerto Creeks. The curves were used to authenticate the validity of the peak flows generated by the synthetic 100-year, 24-hour storms on the study area streams.</p> <p>Cross-section data were taken from field surveys and supplemented with topographic maps (USGS Various). Along some reaches, cross sections could not be obtained because some landowners refused the right of entry. Some structural data for bridges, culverts, and railroad trestles were obtained from Stanislaus County, the Cities of Petterson and Newman, and the SPTC. A field reconnaissance was conducted to obtain additional data.</p>

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Dry Creek	Confluence with Tuolumne River	Approximately 942 feet upstream of Church Street	Log-Pearson Type III (Based on Bulletin 17B)	HEC-RAS 4.1	12/01/2012	AE w/ Flood way	<p>The 1- and 0.2-percent chance peak discharges for Dry Creek near Modesto and at its mouth were obtained based on stream flow data available for the gage on Dry Creek near Modesto, operated by the California Department of Water Resources (DWR). Flow data for the gage were obtained from DWR's Water Data Library for a period of record of 51 years (1961-2011). A Log-Pearson Type III analysis with a weighted skew was performed based on Bulletin 17B to estimate the peak discharges. The peak discharges at the mouth of Dry Creek were obtained by applying an adjustment to the peak discharges at the gage location based on the ratio of corresponding drainage areas for the two locations.</p> <p>For the revisions dated 2014, the 1-percent and 0.2-percent annual chance of occurrence water-surface elevations for Tuolumne River and Dry Creek were determined using detailed methods. This analysis replaces the detailed analysis that was completed in the previous study of the Tuolumne River and Dry Creek near the City of Modesto. The USACE HEC-RAS 4.1 computer model, operating in unsteady state, was used to determine the 1-percent and 0.2-percent annual chance of occurrence water-surface elevations and the floodway for this reach (U.S. Department of the Army, Corps of Engineers, Hydrologic Engineering Center, 2010). The cross sections and the work map for the analysis were obtained from LiDAR and ground surveys (DWR, 2008 and Andregg Geomatics, 2012). The starting water-surface</p>

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Dry Creek (continued)	Confluence with Tuolumne River	Approximately 942 feet upstream of Church Street	Log-Pearson Type III (Based on Bulletin	HEC-RAS 4.1	12/01/2012	AE w/ Flood way	elevation was developed based on an assumption of normal depth within the stream channel. The hydraulic model was calibrated using observed high watermarks from the January 3-4, 1997 storm event. Manning's n-values and bridge modeling methods were adjusted to calibrate the HEC-RAS model. Roughness coefficients (Manning's "n" values) were estimated based on field visits and guidelines outlined in Guide for Selecting Manning's Roughness Coefficients for Natural Channels and Flood Plains (U.S. Geologic Survey Water Supply Paper - 2339, 1989). The values selected ranged from 0.045 in the channel and from 0.055 to 0.090 in the overbank areas. Once calibration was established, the 1- and 0.2-percent annual chance (100- and 500-year) peak hydrographs were run to compute water surface profiles. A 1-percent annual chance (100-year) floodway was also recomputed for the study reach.
Orestimba Creek	Approximately 3,430 feet upstream of the confluence of Stanislaus River	Approximately 2,350 feet downstream of Interstate 5	Rainfall-Runoff computations and statistical analysis of synthetic rainstorms	HEC-2	11/01/1987	AE	Loss-rate data for the 100-year storms on the three streams (Del Puerto, Salado, and Orestimba Creeks) in the study area were derived from loss-rate data developed for a series of storms over Orestimba and Del Puerto Creeks in January 1983. The loss-rates were also based on the initial and constant loss concept and analyses of soil cover and land uses. Base flow included recession amounts from previous storms.

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Orestimba Creek (continued)	Approximately 950 feet downstream of River Road	Bell Road	Rainfall-Runoff computations and statistical analysis of synthetic rainstorms	HEC-2	11/01/1987	AE	<p>Applying the Flood Flow Frequency Analysis computer program (USACE 1981) to the gaged streamflow data, peak flow frequency curves were developed for the stream gages on Orestimba and Del Puerto Creeks. The curves were used to authenticate the validity of the peak flows generated by the synthetic 100-year, 24-hour storms on the study area streams.</p> <p>Cross sections for backwater analyses were located at close intervals upstream and downstream of bridges, culverts, and other hydraulically significant features to establish the backwater effect of such structures in areas presently urbanized or subject to development. Additional cross sections were located at other representative locations in the study area. Cross-section data were taken from field surveys and supplemented with topographic maps (USGS Various). Along some reaches, cross sections could not be obtained because some landowners refused the right of entry. Some structural data for bridges, culverts, and railroad trestles were obtained from Stanislaus County, the Cities of Petterson and Newman, and the SPTC. A field reconnaissance was conducted to obtain additional data.</p>

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Salado Creek	Southern Pacific Railroad	Raines Road	Rainfall-Runoff computations and statistical analysis of synthetic rainstorms	HEC-2	11/01/1987	AE	<p>The capacity of the Salado Creek overchute over the Delta Mendota Canal limits the discharge of Salado Creek through Patterson (USGS 1947). Duration of high flow based on the unit hydrograph was used to determine areas and depths of flooding in Patterson. The capacity of the Salado Creek overchute over the Delta Mendota Canal is 710 cfs, which is much less than the 1-percent annual chance discharge of 2,400 cfs. Discharge in excess of the overchute capacity will overtop that Salado Creek levees and pond upstream of the Delta Mendota Canal. A discharge of 710 cfs, with duration based on the 1-percent annual chance flood hydrograph was routed through Patterson.</p> <p>Bankfull channel capacity of Salado Creek upstream of Patterson was determined by storage and routing methods (USACE 1981). Structural data for bridges, culverts and railroad trestles were obtained from Stanislaus County, the City of Patterson, and the SPTC. Full hydraulic efficiency of the channel and structures 21 was assumed for all computations. Overbank flooding will occur at several locations along Salado Creek, downstream of the DMC.</p>

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Salado Creek (continued)	Southern Pacific Railroad	Raines Road	Rainfall-Runoff computations and statistical analysis of synthetic rainstorms	HEC-2	11/01/1987	AE	<p>Extensive topographic surveying was used to determine probable sheetflow patterns. The sheetflow through Patterson will pond behind State Highway 33 and the SPRR embankment.</p> <p>Loss-rate data for the 100-year storms on the three streams (Del Puerto, Salado, and Orestimba Creeks) in the study area were derived from loss-rate data developed for a series of storms over Orestimba and Del Puerto Creeks in January 1983. The loss-rates were also based on the initial and constant loss concept and analyses of soil cover and land uses. Base flow included recession amounts from previous storms. Applying the Flood Flow Frequency Analysis computer program (USACE 1981) to the gaged streamflow data, peak flow frequency curves were developed for the stream gages on Orestimba and Del Puerto Creeks. The curves were used to authenticate the validity of the peak flows generated by the synthetic 100-year, 24-hour storms on the study area streams.</p> <p>A floodway was not developed for Salado Creek because of overflow losses. These cannot be confined by a floodway without causing additional flooding downstream.</p>

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
San Joaquin River	Confluence with Stanislaus River	Approximately 6,367 feet upstream of confluence with Merced River	Gage Analysis and Regulated Frequency Curve	FLO-2D 2009.06 BUILD NO. 09-13.01.12	5/20/2018	AE	The study used topographic and hydraulic data developed by the California Department of Water Resources' (CA DWR) Central Valley Floodplain Evaluation and Delineation (CVFED) program. The study used hydrologic data developed by CA DWR's Central Valley Hydrology Study (CVHS). CVHS products provide regulated flow-frequency curves. The source of the hydraulics for the existing conditions and natural valley analyses were Task Order (TO) 25 Lower San Joaquin River System FLO-2D model developed by CA DWR's CVFED program.
Stanislaus River	Approximately 28,700 feet upstream of the confluence of San Joaquin River	Approximately 5,380 feet downstream of the county boundary	Flood Flow Frequency Analysis	HEC-RAS 3.0.1	5/01/2001	AE	As a result of large rainfall events in 1995, 1996, and 1997, it was expected that a shift in the computed flood frequency peak flows had occurred that would increase flood hazard areas. As a result, a new flood flow frequency analysis (USACE 1995 and USACE 1993) was performed as part of this study by the USACE, Sacramento District. Using all historical data (USACE 1980 and USACE 1992) collected to date, peak river flows have been estimated for 10-, 2-, 1-, and 0.2-percent annual chance floods. This hydrology analysis is presented in the Rain Flood Flow Frequency Analysis Report of 1999 (SDWM 1999).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Stanislaus River (continued)	Approximately 28,700 feet upstream of the confluence of San Joaquin River	Approximately 5,380 feet downstream of the county boundary	Flood Flow Frequency Analysis	HEC-RAS 3.0.1	5/01/2001	AE	<p>Peak discharges for the 10-, 2-, 1-, and 0.2- percent annual chance floods, used in the steady flow model, were based on updated hydrology. Flow data for the January 1997 flood event were estimated by DWR and the USGS. The peak discharge of 9,019 cfs from the 1997 flood was used for calibration of the steady state hydraulic model.</p> <p>The flow data, recorded at gages at the Orange Blossom Bridge and State Highway 99 bridge at Ripon, indicated a period of approximately 15 hours of lag time for the flow routing from the Orange Blossom Bridge to the City of Ripon. The off-channel storage area along the Stanislaus River reduced the peak discharge in the downstream channel. The USGS gage at the State Highway 99 Bridge at Ripon indicated that the peak discharge leveled off at about 7,000 cfs. A more rigorous and refined calibration was used for this study. An hourly flow hydrograph was used in unsteady-state hydraulic model to replicate the flood of January 1997. The hydrograph was the actual recorded data of the gage at the Orange Blossom Bridge. Both steady-state and unsteady-state models indicated that the USACE Hydrologic Engineering Center-River Analysis System</p>

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Stanislaus River (continued)	Approximately 28,700 feet upstream of the confluence of San Joaquin River	Approximately 5,380 feet downstream of the county boundary	Flood Flow Frequency Analysis	HEC-RAS 3.0.1	5/01/2001	AE	<p>(HEC-RAS) model was able to accurately reproduce the flood of 1997 at locations with recorded high-water marks (USACE 2001).</p> <p>For a detailed explanation of the hydrologic information, please refer to the Rain Flood Flow Frequencies Analysis (SDWM 1999)</p> <p>One-dimensional steady flow data were developed for this restudy. The cross-sectional data produced by InRoads software from the digital terrain model were imported into HEC-RAS and used as the basic river geometry for the one dimensional steady-flow hydraulic model for this study.</p> <p>Bridge geometry was based on as-built plans and survey information. Cross-section surveys used in this restudy were provided by Ayres Associates (Ayres, 2000). Results used in the analyses included the completed sounding survey of the channel floor conducted by boat in February 1999; a cross-section survey by Ground Point Station in 2000; a 1998 section survey produced by a contract with GeoTopo, Inc.; and linear interpolation between cross sections (Reference 1).</p> <p>All cross sections, including bridges on the Stanislaus River, were used in the HEC-RAS model. Because of the length of the reaches, many interpolated cross sections were</p>

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Stanislaus River (continued)	Approximately 28,700 feet upstream of the confluence of San Joaquin River	Approximately 5,380 feet downstream of the county boundary	Flood Flow Frequency Analysis	HEC-RAS 3.0.1	5/01/2001	AE	<p>created between the major cross sections. The hydrographic survey break lines of these interpolated cross sections were interpolated from their upstream or downstream surveyed cross sections.</p> <p>The starting WSELs at the downstream limit of study were computed using normal-depth calculation at River Mile (RM) 12. An energy slope of 0.00047 was used for computation of normal depth for each flow profile.</p> <p>The highway and railroad bridges in the study reach were constructed at different times. Data for all bridges were provided by the California Department of Transportation, Division of Structures, and the Burlington Northern Santa Fe Railroad Company. Bridge data were converted to NGVD 29, where necessary, using engineering judgment and ground elevation data from topographic surveys performed in 1999 and 2000. Channel cross-section survey information was then imported into the design file to help define the topology of the river channel. The data for each cross section were copied a short distance downstream of the original, and points of equal elevation were connected by break lines. Between two surveyed cross sections, the channel elevations were represented by three-dimensional polylines with interpolated elevations</p>

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Tuolumne River	Approximately 34,700 feet upstream of confluence of Lower San Joaquin River	Approximately 7,449 feet upstream of Santa Fe Avenue	Gage Analysis and Regulated Frequency Curve	HEC-RAS 4.1	12/01/2012	AE w/ Flood way	The 1- and 0.2-percent chance peak discharges for Tuolumne River near Modesto were obtained from the study entitled 'Rain Flood Flow Frequency Analysis, Tuolumne River, California' by the USACE dated February, 1999. Hypothetical hydrographs for the 1- and 0.2-percent chance storm events were developed for the Tuolumne River and Dry Creek locations by applying the peak discharges to the flow hydrographs of the January 1997 storm event. For the revisions dated 2014, the 1-percent and 0.2-percent annual chance of occurrence water-surface elevations for Tuolumne River and Dry Creek were determined using detailed methods. This analysis replaces the detailed analysis that was completed in the previous study of the Tuolumne River and Dry Creek near the City of Modesto. The USACE HEC-RAS 4.1 computer model, operating in unsteady state, was used to determine the 1-percent and 0.2-percent annual chance of occurrence water-surface elevations and the floodway for this reach (U.S. Department of the Army, Corps of Engineers, Hydrologic Engineering Center, 2010).

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Tuolumne River (continued)	Approximately 34,700 feet upstream of confluence of Lower San Joaquin River	Approximately 7,449 feet upstream of Santa Fe Avenue	Gage Analysis and Regulated Frequency Curve	HEC-RAS 4.1	12/01/2012	AE w/ Flood way	<p>The cross sections and the work map for the analysis were obtained from LiDAR and ground surveys (DWR, 2008 and Andregg Geomatics, 2012). The starting water-surface elevation was developed based on an assumption of normal depth within the stream channel.</p> <p>The hydraulic model was calibrated using observed high watermarks from the January 3-4, 1997 storm event. Manning's n-values and bridge modeling methods were adjusted to calibrate the HEC-RAS model. Roughness coefficients (Manning's "n" values) were estimated based on field visits and guidelines outlined in Guide for Selecting Manning's Roughness Coefficients for Natural Channels and Flood Plains (U.S. Geologic Survey Water Supply Paper - 2339, 1989). The values selected ranged from 0.045 in the channel and from 0.055 to 0.090 in the overbank areas. Once calibration was established, the 1- and 0.2-percent annual chance (100- and 500-year) peak hydrographs were run to compute water surface profiles. A 1-percent annual chance (100-year) floodway was also recomputed for the study reach.</p>

Table 12: Summary of Hydrologic and Hydraulic Analyses (continued)

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Tuolumne River at Waterford	Approximately 168,000 feet above mouth to 175,200 feet upstream of mouth	Approximately 200 feet upstream of Raines Road	Study from the Don Pedro Lake-Reservoir Regulation for Flood Control. Sites 16 miles upstream (below La Grange Dam) and 12 miles downstream (at Modesto) were interpolate to give peak discharges at Waterford	E431 (Energy Balance Step Backwater Analysis	2/01/1978	AE	In determining the floodway, no encroachment on the main channel of the Tuolumne River was allowed, and since the 100-year flood is mostly contained in the main channel, the only possible areas to be included in the floodway fringe were the narrow bench below the city sewage treatment ponds near the north bank of the Tuolumne River near the extreme eastern and western corporate limits. However, hazardous velocities (greater than 6-7 feet per second) necessitate that the entire area inundated by the 100-year flood be included in the floodway. Therefore, the 100-year flood plain will be considered in the floodway for the City of Waterford.

Table 13: Roughness Coefficients

Flooding Source	Channel "n"	Overbank "n"
Del Puerto Creek	0.030-0.075	0.030-0.050
Dry Creek	0.045	0.065-0.090
Orestimba Creek	0.030-0.075	0.030-0.050
Salado Creek	0.030-0.075	0.030-0.050
San Joaquin River	0.030-0.045	0.040-0.250
Stanislaus River	0.045-0.060	0.050-0.120
Tuolumne River	0.045	0.050-0.090
Tuolumne River at Waterford	0.030-0.045	0.040-0.070

5.3 Coastal Analyses

This section is not applicable to this Flood Risk Project.

Table 14: Summary of Coastal Analyses
[Not Applicable to this Flood Risk Project]

5.3.1 Total Stillwater Elevations

This section is not applicable to this Flood Risk Project.

Figure 8: 1% Annual Chance Total Stillwater Elevations for Coastal Areas
[Not Applicable to this Flood Risk Project]

Table 15: Tide Gage Analysis Specifics
[Not Applicable to this Flood Risk Project]

5.3.2 Waves

This section is not applicable to this Flood Risk Project.

5.3.3 Coastal Erosion

This section is not applicable to this Flood Risk Project.

5.3.4 Wave Hazard Analyses

This section is not applicable to this Flood Risk Project.

Table 16: Coastal Transect Parameters
[Not Applicable to this Flood Risk Project]

Figure 9: Transect Location Map
[Not applicable to this Flood Risk Project]

5.4 Alluvial Fan Analyses

This section is not applicable to this Flood Risk Project.

Table 17: Summary of Alluvial Fan Analyses
[Not Applicable to this Flood Risk Project]

Table 18: Results of Alluvial Fan Analyses
[Not Applicable to this Flood Risk Project]

SECTION 6.0 – MAPPING METHODS

6.1 Vertical and Horizontal Control

All FIS Reports and FIRMs are referenced to a specific vertical datum. The vertical datum provides a starting point against which flood, ground, and structure elevations can be referenced and compared. Until recently, the standard vertical datum used for newly created or revised FIS Reports and FIRMs was the National Geodetic Vertical Datum of 1929 (NGVD29). With the completion of the North American Vertical Datum of 1988 (NAVD88), many FIS Reports and FIRMs are now prepared using NAVD88 as the referenced vertical datum.

Flood elevations shown in this FIS Report and on the FIRMs are referenced to NAVD88. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between NGVD29 and NAVD88 or other datum conversion, visit the National Geodetic Survey website at www.ngs.noaa.gov.

Temporary vertical monuments are often established during the preparation of a flood hazard analysis for the purpose of establishing local vertical control. Although these monuments are not shown on the FIRM, they may be found in the archived project documentation associated with the FIS Report and the FIRMs for this community. Interested individuals may contact FEMA to access these data.

To obtain current elevation, description, and/or location information for benchmarks in the area, please visit the NGS website at www.ngs.noaa.gov.

The datum conversion locations and values that were calculated for Stanislaus County are provided in Table 19.

Table 19: Countywide Vertical Datum Conversion

[Not applicable to this Flood Risk Project]

A countywide conversion factor could not be generated for Stanislaus County because the maximum variance from average exceeds 0.25 feet. Calculations for the vertical offsets on a stream by stream basis are depicted in Table 20.

Table 20: Stream-Based Vertical Datum Conversion

Flooding Source	Average Vertical Datum Conversion Factor (feet)
Del Puerto Creek	+2.45
Dry Creek	+2.41
Orestimba Creek	+2.46
Salado Creek	+2.47
Stanislaus River	+2.41
Tuolumne River (At Modesto)	+2.41
Tuolumne River (At Waterford)	+2.41

6.2 Base Map

The FIRMs and FIS Report for this project have been produced in a digital format. The flood hazard information was converted to a Geographic Information System (GIS) format that meets FEMA's FIRM Database specifications and geographic information standards. This information is provided in a digital format so that it can be incorporated into a local GIS and be accessed more easily by the community. The FIRM Database includes most of the tabular information contained in the FIS Report in such a way that the data can be associated with pertinent spatial features. For example, the information contained in the Floodway Data table and Flood Profiles can be linked to the cross sections that are shown on the FIRMs. Additional information about the FIRM Database and its contents can be found in *FEMA's Guidelines and Standards for Flood Risk Analysis and Mapping*, <https://www.fema.gov/flood-maps/guidance-partners/guidelines-standards>.

Base map information shown on the FIRM was derived from the sources described in Table 21.

Table 21: Base Map Sources

Data Type	Data Provider	Data Date	Data Scale	Data Description
Base map for Stanislaus County, California and Incorporated Areas	Stanislaus County, CA	2004	1:24,000	Location of corporate and County boundaries, Stanislaus County digital corporate limits
Digital Ortho Quadrangle	USGS	2004	1:24,000	Color Orthoimagery
HUC 8 watersheds for Stanislaus County, CA	United States Geological Survey	2018	1:24,000	Water subbasins
National Levee Database	US Army Corps of Engineers	2019	1:5,000	Levee data
Public Land Survey System (PLSS)	US Census Bureau	2014	1:24,000	PLSS Data
Transportation Features	US Census Bureau	2019	1:24,000	TIGER Line Shapefile for Transportation Lines

6.3 Floodplain and Floodway Delineation

The FIRM shows tints, screens, and symbols to indicate floodplains and floodways as well as the locations of selected cross sections used in the hydraulic analyses and floodway computations.

For riverine flooding sources, the mapped floodplain boundaries shown on the FIRM have been delineated using the flood elevations determined at each cross section; between cross sections, the boundaries were interpolated using the topographic elevation data described in Table 22.

In cases where the 1-percent and 0.2-percent-annual-chance floodplain boundaries are

close together, only the 1-percent-annual-chance floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

The floodway widths presented in this FIS Report and on the FIRM were computed for certain stream segments on the basis of equal conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. Table 2 indicates the flooding sources for which floodways have been determined. The results of the floodway computations for those flooding sources have been tabulated for selected cross sections and are shown in Table 23, "Floodway Data."

Table 22: Summary of Topographic Elevation Data used in Mapping

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Vertical Accuracy	Horizontal Accuracy	Citation
Modesto, City of; Stanislaus County (Unincorporated Areas)	Dry Creek	Light Detection and Ranging data (LiDAR)	0.3 cm RMSEz	2 feet at 95% confidence level	DWR-CVFED, 2008
Ceres, City of; Modesto, City of; Stanislaus County (Unincorporated Areas)	Tuolumne River	Light Detection and Ranging data (LiDAR)	0.3 cm RMSEz	2 feet at 95% confidence level	DWR-CVFED, 2008
City of Waterford	Tuolumne River	USGS 7.5-mile Series Topographic Maps	Unknown	Unknown	USGS 1968

BFEs shown at cross sections on the FIRM represent the 1-percent-annual-chance water surface elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report.

Table 23: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ²	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A-H ¹								
I	30,820	162	1,038	7.6	164.4	164.4	165.4	1.0
J	33,640	195	1,260	6.2	174.6	174.6	175.6	1.0
K	34,500	102	628	12.5	180.6	180.6	180.9	0.3
¹ No floodway computed ² Feet above confluence with San Joaquin River								
TABLE 23	FEDERAL EMERGENCY MANAGEMENT AGENCY STANISLAUS COUNTY, CALIFORNIA AND INCORPORATED AREAS			FLOODWAY DATA				
				FLOODING SOURCE: DEL PUERTO CREEK				

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	2,096	159	2,017	5.7	76.0	61.3 ²	61.5 ²	0.2
B	2,380	162	1,618	7.0	76.0	61.2 ²	61.6 ²	0.4
C	2,762	193	2,249	5.1	76.0	62.1 ²	62.4 ²	0.3
D	3,904	85	1,414	8.1	76.0	63.0 ²	63.3 ²	0.3
E	4,243	110	1,634	7.0	76.0	64.0 ²	64.4 ²	0.4
F	4,559	126	1,850	6.2	76.0	65.5 ²	65.8 ²	0.3
G	5,710	97	1,755	6.5	76.0	66.6 ²	66.9 ²	0.3
H	6,669	147	1,981	5.8	76.0	67.4 ²	68.0 ²	0.6
I	7,037	187	2,214	5.2	76.0	68.3 ²	68.9 ²	0.6
J	8,268	149	1,869	6.1	76.0	69.5 ²	70.1 ²	0.6
K	9,847	125	1,712	6.7	76.0	71.1 ²	71.8 ²	0.7
L	11,122	168	1,974	5.8	76.0	72.4 ²	73.2 ²	0.8
M	11,154	177	2,191	5.2	76.0	72.6 ²	73.4 ²	0.8
N	12,388	169	1,699	6.7	76.0	73.6 ²	74.4 ²	0.8
O	14,016	164	1,854	6.2	76.0	75.5 ²	76.5 ²	1.0
P	15,644	136	1,909	6.0	77.2	77.2	78.2	1.0
Q	15,836	134	1,965	5.8	78.8	78.8	79.7	0.9
R	17,986	167	2,139	5.3	80.8	80.8	81.7	0.9
S	19,882	227	2,728	4.2	82.2	82.2	83.2	1.0
T	21,957	238	2,412	4.7	83.7	83.7	84.6	0.9
U	24,068	326	3,184	3.6	85.4	85.4	86.1	0.7
V	26,065	270	2,320	5.0	86.8	86.8	87.4	0.6
W	28,679	449	3,339	3.5	89.4	89.4	89.8	0.4

¹ Stream Distance in feet above confluence with Tuolumne River

² Computed without consideration of backwater effects from Tuolumne River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY
STANISLAUS COUNTY, CALIFORNIA
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: DRY CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	30,058	122	1,761	6.5	90.4	90.4	90.8	0.4
Y	30,223	138	2,104	5.5	91.1	91.1	91.5	0.4
Z	31,794	388	3,488	3.3	92.4	92.4	92.8	0.4
AA	34,327	353	2,739	4.2	93.8	93.8	94.3	0.5
AB	34,444	425	3,563	3.2	94.3	94.3	94.8	0.5
AC	35,968	330	3,281	3.5	95.2	95.2	95.5	0.3
AD	37,940	328	2,812	4.1	96.3	96.3	96.8	0.5
AE	39,379	310	2,722	4.3	97.3	97.3	98.1	0.8
AF	39,454	294	2,797	4.1	97.5	97.5	98.2	0.7
AG	40,396	307	2,962	3.9	98.3	98.3	98.9	0.6

¹ Stream Distance in feet above confluence with Tuolumne River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY
STANISLAUS COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: DRY CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A-N ²								
O	49,790	560	3,238	4.1	135.5	135.5	136.5	1.0
P	53,760	503	2,386	6.1	140.7	140.7	141.3	0.6
Q	57,490	414	3,193	4.7	149.4	149.4	150.4	1.0
R	59,750	275	1,784	8.8	156.5	156.5	156.5	0.0
S	61,680	148	1,593	10.2	166.2	166.2	167.2	1.0
T	62,200	335	5,259	3.1	168.4	168.4	169.3	0.9

¹ Stream distance in feet above confluence with San Joaquin River

² Floodway not computed

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY
STANISLAUS COUNTY, CALIFORNIA
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ORESTIMBA CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
XG-W ²		*	*	*			*	*
X	252,220	140	2,278	3.5	135.3	135.3	135.8	0.5
Y	254,780	102	1,391	5.8	136.8	136.8	137.2	0.4
Z	258,010	183	2,599	3.1	139.1	139.1	139.6	0.5
AA	259,490	303	3,327	2.4	140.3	140.3	140.8	0.5
AB	261,560	209	1,796	4.5	142.4	142.4	142.9	0.5
AC	263,760	390	2,082	3.8	145.1	145.1	146.0	0.9
AD	265,320	221	2,108	3.8	146.9	146.9	147.7	0.8
AE	266,860	275	2,366	3.4	148.3	148.3	148.9	0.6
AF	268,730	97	1,141	7.0	150.0	150.0	150.5	0.5
AG	270,150	136	1,400	5.7	152.6	152.6	152.9	0.3
AH	272,400	309	3,325	2.4	155.0	155.0	155.3	0.3
AI	274,770	152	1,350	5.9	156.8	156.8	157.2	0.4
AJ	276,690	230	1,973	4.1	159.0	159.0	159.6	0.6
AK	277,440	166	1,614	5.0	159.7	159.7	160.3	0.6
AL	278,920	204	1,737	4.6	161.6	161.6	162.1	0.3
AM	280,320	241	1,986	4.0	162.5	162.5	163.1	0.3
AN	282,360	199	1,928	4.2	165.7	165.7	166.0	0.4
AO	283,990	150	1,753	4.6	167.3	167.3	167.6	0.5
AP	284,870	123	1,873	4.3	168.2	168.2	168.6	0.9
AQ	287,090	159	1,403	5.7	171.5	171.5	172.0	0.9
AR	288,560	266	1,984	4.0	174.4	174.4	175.3	0.8
AS	290,180	106	1,539	5.2	177.6	177.6	178.5	0.9
AT	291,280	158	1,514	5.3	179.3	179.3	180.1	0.8
AU	291,600	142	1,738	4.6	179.8	179.8	180.7	0.9

¹ Feet above mouth

² Floodway not computed/shown for this cross section

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY
STANISLAUS COUNTY, CALIFORNIA
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: STANISLAUS RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	34,700	3,300	37,387	1.9	54.5	51.4 ²	52.1	0.7
B	36,037	3,014	27,641	2.6	54.5	51.5 ²	52.3	0.8
C	37,514	2,400	21,934	3.3	54.5	51.9 ²	52.8	0.9
D	39,171	2,200	25,542	2.8	54.5	52.5 ²	53.5	1.0
E	40,895	2,600	22,423	3.2	54.5	53.2 ²	54.0	0.8
F	43,038	2,500	21,602	3.3	54.5	54.2 ²	55.0	0.8
G	45,233	2,700	23,686	3.0	55.1	55.1	56.0	0.9
H	47,175	2,795	28,024	2.5	55.5	55.5	56.5	1.0
I	49,031	2,809	18,385	3.9	56.1	56.1	57.0	0.9
J	51,129	3,128	22,453	3.2	57.5	57.5	58.3	0.8
K	53,106	2,800	19,401	3.7	58.3	58.3	59.3	1.0
L	55,101	2,480	21,910	3.3	59.4	59.4	60.4	1.0
M	57,051	1,792	18,454	3.9	60.3	60.3	61.1	0.8
N	59,038	1,330	15,633	4.6	61.5	61.5	62.1	0.6
O	60,961	1,089	14,968	4.8	62.8	62.8	63.4	0.6
P	63,050	861	15,620	4.6	63.8	63.8	64.4	0.6
Q	65,088	776	11,985	6.0	64.7	64.7	65.3	0.6
R	67,022	860	10,607	6.7	65.9	65.9	66.5	0.6
S	68,313	770	12,981	5.5	66.8	66.8	67.7	0.9
T	68,426	785	12,420	5.8	68.0	68.0	68.7	0.7
U	70,468	1,010	17,516	4.1	69.1	69.1	69.8	0.7
V	73,039	1,000	21,761	3.3	69.9	69.9	70.8	0.9
W	74,876	900	16,583	4.3	70.5	70.5	71.2	0.7

¹ Limit of Detailed Study (Limit of detailed study is approximately 34,700 feet upstream of confluence with Lower San Joaquin River)

² Elevation computed without consideration of backwater effects from Lower San Joaquin River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY
STANISLAUS COUNTY, CALIFORNIA
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TUOLUMNE RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	77,014	1,081	19,263	3.7	71.5	71.5	72.3	0.8
Y	78,974	1,299	23,200	3.1	72.0	72.0	72.8	0.8
Z	80,923	777	15,382	4.6	72.3	72.3	73.2	0.9
AA	83,248	2,154	18,808	3.8	73.0	73.0	74.0	1.0
AB	83,585	2,089	15,810	4.5	73.1	73.1	74.0	0.9
AC	84,244	1,890	23,500	3.0	73.5	73.5	74.4	0.9
AD	84,367	2,049	24,435	2.9	73.7	73.7	74.7	1.0
AE	84,439	2,089	25,100	2.9	75.5	75.5	76.4	0.9
AF	85,950	1,904	38,793	1.8	75.7	75.7	76.6	0.9
AG	86,151	1,988	37,485	1.9	76.0	76.0	76.9	0.9
AH	87,543	881	16,910	4.1	76.0	76.0	76.9	0.9
AI	88,708	575	15,098	4.6	76.4	76.4	77.2	0.8
AJ	90,833	1,168	25,408	2.7	77.1	77.1	77.9	0.8
AK	92,893	1,086	23,722	2.9	77.4	77.4	78.2	0.8
AL	94,971	749	17,552	3.9	77.7	77.7	78.5	0.8
AM	96,858	1,068	19,242	3.6	78.3	78.3	79.0	0.7
AN	98,932	1,211	25,343	2.7	78.9	78.9	79.6	0.7
AO	100,906	1,641	24,131	2.9	79.3	79.3	79.9	0.6
AP	102,200	2,189	36,188	1.9	79.6	79.6	80.3	0.7
AQ	102,402	2,368	38,870	1.8	80.0	80.0	80.6	0.6
AR	104,574	3,184	63,674	1.1	80.2	80.2	80.8	0.6
AS	107,005	2,850	58,626	1.2	80.3	80.3	80.8	0.5
AT	108,994	2,367	44,958	1.5	80.3	80.3	80.9	0.6

¹ Limit of Detailed Study (Limit of detailed study is approximately 34,700 feet upstream of confluence with Lower San Joaquin River)

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY
STANISLAUS COUNTY, CALIFORNIA
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TUOLUMNE RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
AU	110,927	2,665	54,629	1.3	80.4	80.4	81.0	0.6
AV	113,077	2,210	45,350	1.5	80.5	80.5	81.1	0.6
AW	115,339	1,607	28,684	2.4	80.6	80.6	81.2	0.6
AX	117,351	694	14,773	4.7	80.8	80.8	81.4	0.6
AY	117,587	535	13,473	5.2	82.4	82.4	83.0	0.6
AZ	118,886	503	11,733	5.9	83.1	83.1	83.4	0.3
BA	121,760	1,440	36,603	1.9	83.4	83.4	84.4	1.0
BB	122,944	1,154	27,473	2.5	83.4	83.4	84.4	1.0
BC	123,584	1,012	22,092	3.2	83.4	83.4	84.4	1.0
BD	125,036	663	16,574	4.2	83.6	83.6	84.6	1.0

¹ Limit of Detailed Study (Limit of detailed study is approximately 34,700 feet upstream of confluence with Lower San Joaquin River)

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY
STANISLAUS COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TUOLUMNE RIVER

Table 24: Flood Hazard and Non-Encroachment Data for Selected Streams
[Not Applicable to this Flood Risk Project]

6.4 Coastal Flood Hazard Mapping

This section is not applicable to this Flood Risk Project.

Table 25: Summary of Coastal Transect Mapping Considerations
[Not Applicable to this Flood Risk Project]

6.5 FIRM Revisions

This FIS Report and the FIRM are based on the most up-to-date information available to FEMA at the time of its publication; however, flood hazard conditions change over time. Communities or private parties may request flood map revisions at any time. Certain types of requests require submission of supporting data. FEMA may also initiate a revision. Revisions may take several forms, including Letters of Map Amendment (LOMAs), Letters of Map Revision Based on Fill (LOMR-Fs), Letters of Map Revision (LOMRs) (referred to collectively as Letters of Map Change (LOMCs)), Physical Map Revisions (PMRs), and FEMA-contracted restudies. These types of revisions are further described below. Some of these types of revisions do not result in the republishing of the FIS Report. To assure that any user is aware of all revisions, it is advisable to contact the community repository of flood-hazard data (shown in Table 30, “Map Repositories”).

6.5.1 Letters of Map Amendment

A LOMA is an official revision by letter to an effective NFIP map. A LOMA results from an administrative process that involves the review of scientific or technical data submitted by the owner or lessee of property who believes the property has incorrectly been included in a designated SFHA. A LOMA amends the currently effective FEMA map and establishes that a specific property is not located in a SFHA.

To obtain an application for a LOMA, visit www.fema.gov/letter-map-amendment-loma and download the form “MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill”. Visit the “Flood Map-Related Fees” section to determine the cost, if any, of applying for a LOMA.

FEMA offers a tutorial on how to apply for a LOMA. The LOMA Tutorial Series can be accessed at www.fema.gov/online-tutorials.

For more information about how to apply for a LOMA, call the FEMA Map Information eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627).

6.5.2 Letters of Map Revision Based on Fill

A LOMR-F is an official revision by letter to an effective NFIP map. A LOMR-F states FEMA’s determination concerning whether a structure or parcel has been elevated on fill above the base flood elevation and is, therefore, excluded from the SFHA.

Information about obtaining an application for a LOMR-F can be obtained in the same manner as that for a LOMA, by visiting www.fema.gov/letter-map-amendment-loma for the “MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill” or by calling the FEMA Map Information eXchange, toll free, at 1-877-FEMA MAP (1-877-336-2627). Fees for applying for a LOMR-F, if any, are listed in the “Flood Map-Related Fees” section.

A tutorial for LOMR-F is available at www.fema.gov/online-tutorials.

6.5.3 Letters of Map Revision

A LOMR is an official revision to the currently effective FEMA map. It is used to change flood zones, floodplain and floodway delineations, flood elevations and planimetric features. All requests for LOMRs should be made to FEMA through the chief executive officer of the community, since it is the community that must adopt any changes and revisions to the map. If the request for a LOMR is not submitted through the chief executive officer of the community, evidence must be submitted that the community has been notified of the request.

To obtain an application for a LOMR, visit www.fema.gov/media-library/assets/documents/1343 and download the form “MT-2 Application Forms and Instructions for Conditional Letters of Map Revision and Letters of Map Revision”. Visit the “Flood Map-Related Fees” section to determine the cost of applying for a LOMR. For more information about how to apply for a LOMR, call the FEMA Map Information eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627) to speak to a Map Specialist.

Previously issued mappable LOMCs (including LOMRs) that have been incorporated into the Stanislaus County FIRM are listed in Table 26.

Table 26: Incorporated Letters of Map Change

Case Number	Effective Date	Flooding Source	FIRM Panel(s)
17-09-2636P	08-03-2018	Overflow from Del Puerto Creek	06099C0732E ¹ 06099C0755F

¹Although a portion of the LOMR 17-09-2636P falls within the scope of this map revision, panel 06099C0732E was not revised. Therefore, users must continue to refer to annotated FIRM attachment for this LOMR for FIRM panel 06099C0732E.

6.5.4 Physical Map Revisions

A Physical Map Revisions (PMR) is an official republication of a community’s NFIP map to effect changes to base flood elevations, floodplain boundary delineations, regulatory floodways and planimetric features. These changes typically occur as a result of structural works or improvements, annexations resulting in additional flood hazard areas or correction to base flood elevations or SFHAs.

The community’s chief executive officer must submit scientific and technical data to FEMA to support the request for a PMR. The data will be analyzed and the map will be revised if warranted. The community is provided with copies of the revised information and is afforded a review period. When the base flood elevations are changed, a 90-day appeal period is provided. A 6-month adoption period for formal approval of the revised map(s) is also provided.

For more information about the PMR process, please visit www.fema.gov and visit the “Flood Map Revision Processes” section.

6.5.5 Contracted Restudies

The NFIP provides for a periodic review and restudy of flood hazards within a given community. FEMA accomplishes this through a national watershed-based mapping needs assessment strategy, known as the Coordinated Needs Management Strategy (CNMS). The CNMS is used by FEMA to assign priorities and allocate funding for new flood hazard analyses used to update the FIS Report and FIRM. The goal of CNMS is to define the validity of the engineering study data within a mapped inventory. The CNMS is used to track the assessment process, document engineering gaps and their resolution, and aid in prioritization for using flood risk as a key factor for areas identified for flood map updates. Visit www.fema.gov to learn more about the CNMS or contact the FEMA Regional Office listed in Section 8 of this FIS Report.

6.5.6 Community Map History

The current FIRM presents flooding information for the entire geographic area of Stanislaus County. Previously, separate FIRMs, Flood Hazard Boundary Maps (FHBM) and/or Flood Boundary and Floodway Maps (FBFMs) may have been prepared for the incorporated communities and the unincorporated areas in the county that had identified SFHAs. Current and historical data relating to the maps prepared for the project area are presented in Table 27, “Community Map History.” A description of each of the column headings and the source of the date is also listed below.

- *Community Name* includes communities falling within the geographic area shown on the FIRM, including those that fall on the boundary line, nonparticipating communities, and communities with maps that have been rescinded. Communities with No Special Flood Hazards are indicated by a footnote. If all maps (FHBM, FBFM, and FIRM) were rescinded for a community, it is not listed in this table unless SFHAs have been identified in this community.
- *Initial Identification Date (First NFIP Map Published)* is the date of the first NFIP map that identified flood hazards in the community. If the FHBM has been converted to a FIRM, the initial FHBM date is shown. If the community has never been mapped, the upcoming effective date or “pending” (for Preliminary FIS Reports) is shown. If the community is listed in Table 27 but not identified on the map, the community is treated as if it were unmapped.
- *Initial FHBM Effective Date* is the effective date of the first FHBM. This date may be the same date as the Initial NFIP Map Date.
- *FHBM Revision Date(s)* is the date(s) that the FHBM was revised, if applicable.
- *Initial FIRM Effective Date* is the date of the first effective FIRM for the community.
- *FIRM Revision Date(s)* is the date(s) the FIRM was revised, if applicable. This is the revised date that is shown on the FIRM panel, if applicable. As countywide studies are completed or revised, each community listed should have its FIRM dates updated accordingly to reflect the date of the countywide study. Once the FIRMs exist in countywide format, as PMRs of FIRM panels within the county are

completed, the FIRM Revision Dates in the table for each community affected by the PMR are updated with the date of the PMR, even if the PMR did not revise all the panels within that community.

The initial effective date for the Stanislaus County FIRMs in countywide format was 09/26/2008.

Table 27: Community Map History

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Ceres, City of ²	09/26/2008	N/A	N/A	09/26/2008	08/24/2021
Hughson, City of ²	09/26/2008	N/A	N/A	09/26/2008	08/24/2021
Modesto, City of	07/19/1974	07/19/1974	08/15/1975	08/15/1980	8/24/2021 09/26/2008 05/07/2001 08/17/1982
Newman, City of	02/07/1975	02/07/1975	N/A	09/29/1978	08/24/2021 09/26/2008 01/03/1990
Oakdale, City of	06/07/1974	06/07/1974	12/12/1975	09/05/1979	09/26/2008 09/30/2004
Patterson, City of	05/03/1974	05/03/1974	09/26/1975	08/01/1979	08/24/2021 09/26/2008 01/03/1990 11/10/1981
Riverbank, City of	09/30/2004	N/A	N/A	09/30/2004	09/26/2008
Stanislaus County, Unincorporated Areas	08/01/1980	N/A	N/A	08/01/1980	08/24/2021 09/26/2008 09/30/2004 05/07/2001 09/29/1989 10/16/1984
Turklock, City of ^{1,2}	09/26/2008	N/A	N/A	09/26/2008	8/24/2021
Waterford, City of	05/24/1974	05/24/1974	10/17/1975	07/16/1979	09/26/2008

¹ No Special Flood Hazard Areas Identified

² This community did not have a FIRM prior to the first countywide FIRM for Stanislaus County

SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION

7.1 Contracted Studies

Table 28 provides a summary of the contracted studies, by flooding source, that are included in this FIS Report.

Table 28: Summary of Contracted Studies Included in this FIS Report

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Del Puerto Creek	09/26/2008	U.S. Army Corps of Engineers (USACE), Sacramento District	EMW-86-E-2226	November 1987	Stanislaus County, Unincorporated Areas
Dry Creek	08/24/2021	HDR Engineering, Inc.	TO-105 Contract No. 4600007990	December 2012	Modesto, City of; Stanislaus County, Unincorporated Areas
Orestimba Creek	09/26/2008	U.S. Army Corps of Engineers (USACE), Sacramento District	EMW-86-E-2226	November 1987	Stanislaus County, Unincorporated Areas
Salado Creek	09/26/2008	U.S. Army Corps of Engineers (USACE), Sacramento District	EMW-86-E-2226	November 1987	Patterson, City of; Stanislaus County, Unincorporated Areas
San Joaquin River	08/24/2021	STARR II	HSFE60-15-D-0005	May 2018	Stanislaus County, Unincorporated Areas
Stanislaus River	09/26/2008	U.S. Army Corps of Engineers (USACE), Sacramento District	DR-1155	May 2001	Oakdale, City of; Riverbank, City of; Stanislaus County, Unincorporated Areas
Tuolumne River	08/24/2021	HDR Engineering, Inc.	TO-105 Contract No. 4600007990	December 2012	Ceres, City of; Modesto, City of; Stanislaus County, Unincorporated Areas

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Tuolumne River	09/26/2008	U.S. Army Corps of Engineers (USACE), Sacramento District	IAA-H-17-75	February 1978	Waterford, City of

7.2 Community Meetings

The dates of the community meetings held for this Flood Risk Project and previous Flood Risk Projects are shown in Table 29. These meetings may have previously been referred to by a variety of names (Community Coordination Officer (CCO), Scoping, Discovery, etc.), but all meetings represent opportunities for FEMA, community officials, study contractors, and other invited guests to discuss the planning for and results of the project.

Table 29: Community Meetings

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
City of Ceres	09/26/2008	05/25/2005	CCO Meeting	FEMA, the community, and the study contractor
		11/30/2007	Final CCO Meeting	FEMA, the community, and the study contractor
	08/24/2021	04/29/2020	CCO Meeting	FEMA, the community, and the study contractor
Hughson, City of	09/26/2008	05/25/2005	CCO Meeting	FEMA, the community, and the study contractor
		11/30/2007	Final CCO Meeting	FEMA, the community, and the study contractor
	08/24/2021	04/29/2020	CCO Meeting	FEMA, the community, and the study contractor
Modesto, City of	09/26/2008	05/25/2005	CCO Meeting	FEMA, the community, and the study contractor
		11/30/2007	Final CCO Meeting	FEMA, the community, and the study contractor
	08/24/2021	04/29/2020	CCO Meeting	FEMA, the community, and the study contractor
Newman, City of	09/26/2008	05/25/2005	CCO Meeting	FEMA, the community, and the study contractor
		11/30/2007	Final CCO Meeting	FEMA, the community, and the study contractor
	08/24/2021	04/29/2020	CCO Meeting	FEMA, the community, and the study contractor
Oakdale, City of	09/26/2008	05/25/2005	CCO Meeting	FEMA, the community, and the study contractor
		11/30/2007	Final CCO Meeting	FEMA, the community, and the study contractor
Patterson, City of	09/26/2008	05/25/2005	CCO Meeting	FEMA, the community, and the study contractor
		11/30/2007	Final CCO Meeting	FEMA, the community, and the study contractor
	08/24/2021	04/29/2020	CCO Meeting	FEMA, the community, and the study contractor

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Riverbank, City of	09/26/2008	05/25/2005	CCO Meeting	FEMA, the community, and the study contractor
		11/30/2007	Final CCO Meeting	FEMA, the community, and the study contractor
Stanislaus County, Unincorporated Areas	09/26/2008	05/25/2005	CCO Meeting	FEMA, the community, and the study contractor
		11/30/2007	Final CCO Meeting	FEMA, the community, and the study contractor
	08/24/2021	04/29/2020	CCO Meeting	FEMA, the community, and the study contractor
Turlock, City of	09/26/2008	05/25/2005	CCO Meeting	FEMA, the community, and the study contractor
		11/30/2007	Final CCO Meeting	FEMA, the community, and the study contractor
	08/24/2021	04/29/2020	CCO Meeting	FEMA and the study contractor
Waterford, City of	09/26/2008	05/25/2005	CCO Meeting	FEMA, the community, and the study contractor
		11/30/2007	Final CCO Meeting FEMA, the community, and the study contractor	

SECTION 8.0 – ADDITIONAL INFORMATION

Information concerning the pertinent data used in the preparation of this FIS Report can be obtained by submitting an order with any required payment to the FEMA Engineering Library. For more information on this process, see www.fema.gov.

Table 30 is a list of the locations where FIRMs for Stanislaus County can be viewed. Please note that the maps at these locations are for reference only and are not for distribution. Also, please note that only the maps for the community listed in the table are available at that particular repository. A user may need to visit another repository to view maps from an adjacent community.

Table 30: Map Repositories

Community	Address	City	State	Zip Code
Ceres, City of	City Hall 2220 Magnolia Street	Ceres	CA	95307
Hughson, City of	City Hall 7018 Pine Street	Hughson	CA	95326
Modesto, City of	City Hall 10th Street Place 1010 10th Street	Modesto	CA	95354
Newman, City of	City Hall 938 Fresno Street	Newman	CA	95360
Oakdale, City of	City Hall 280 North Third Avenue	Oakdale	CA	95361
Patterson, City of	City Hall 1 Plaza Circle, 2nd Floor	Patterson	CA	95363
Riverbank, City of	City Hall 6707 3rd Street	Riverbank	CA	95367
Stanislaus County, Unincorporated Areas	Stanislaus County & City of Modesto Building, 1010 10th Street, Suite 3400	Modesto	CA	95354
Turlock, City of ¹	City Hall 156 South Broadway, Suite 150	Turlock	CA	95380
Waterford, City of	City Hall 101 East Street	Waterford	CA	95386

¹ No Special Flood Hazard Areas Identified

The National Flood Hazard Layer (NFHL) dataset is a compilation of effective FIRM Databases and LOMCs. Together they create a GIS data layer for a State or Territory. The NFHL is updated as studies become effective and extracts are made available to the public monthly. NFHL data can be viewed or ordered from the website shown in Table 31.

Table 31 contains useful contact information regarding the FIS Report, the FIRM, and other relevant flood hazard and GIS data. In addition, information about the State NFIP Coordinator and GIS Coordinator is shown in this table. At the request of FEMA, each Governor has designated an agency of State or territorial government to coordinate that

State's or territory's NFIP activities. These agencies often assist communities in developing and adopting necessary floodplain management measures. State GIS Coordinators are knowledgeable about the availability and location of State and local GIS data in their state.

Table 31: Additional Information

FEMA and the NFIP	
FEMA and FEMA Engineering Library website	www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/engineering-library
NFIP website	www.fema.gov/national-flood-insurance-program
NFHL Dataset	msc.fema.gov
FEMA Region IX	Federal Emergency Management Agency 1111 Broadway, Suite 1200 Oakland, CA 94607- 4052 (510) 627-7006
Other Federal Agencies	
USGS website	www.usgs.gov
Hydraulic Engineering Center website	www.hec.usace.army.mil
State Agencies and Organizations	
State NFIP Coordinator	Kelly Soule California Dept. of Water Resources 3464 El Camino Avenue Suite 200 Sacramento, CA 95821 916-574-2314 kelly.soule@water.ca.gov
State GIS Coordinator	David Harris Agency Information Officer California Resources Agency 1416 Ninth Street, Room 1311 Sacramento, CA 95814 (916) 445-5088 david.harris@resources.ca.gov

SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES

Table 32 includes sources used in the preparation of and cited in this FIS Report as well as additional studies that have been conducted in the study area.

Table 32: Bibliography and References

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
Ayres 2000	Ayres Associates	<i>Digital Terrain Survey</i>			1999 and 2000	
CA WA 1978	State of California, Department of Water Resources	<i>California Flood Management and Evaluation of Flood Damage Prevention Programs Bulletin 199</i>			1978	
CA WA 1974	State of California, Department of Water Resources	<i>Hydrologic Data: 1973, San Joaquin Valley, Bulletin 130-73</i>			1974	http://wdl.water.ca.gov/waterdatalibrary/docs/historic/Bulletins/Bulletin_130/Bulletin_130_1973_Volume_2.pdf
CA WA 1976	State of California, Department of Water Resources	<i>Volume IV, Hydrologic Data: 1975 San Joaquin Valley, Bulletin 130-75</i>			October 1976	http://wdl.water.ca.gov/waterdatalibrary/docs/historic/Bulletins/Bulletin_130/Bulletin_130_1975_Volume_4.pdf
CA WA 2004	California Department of Water Resources	<i>San Joaquin Valley Groundwater Basin – Modesto Subbasin</i>			May 2002	https://water.ca.gov/Programs/Groundwater-Management/Bulletin-118
Census 2007	U.S. Census Bureau	<i>2006 Population Estimates</i>			October 2007	http://www.census.gov
FEMA 1990	Federal Emergency Management Agency	<i>Flood Insurance Study, City of Newman, California</i>	FEMA	Washington, D.C.	January 1990	FEMA Flood Map Service Center https://msc.fema.gov

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
FEMA 1990	Federal Emergency Management Agency	<i>Flood Insurance Study, City of Patterson, California</i>	FEMA	Washington, D.C.	January 1990	FEMA Flood Map Service Center https://msc.fema.gov
FEMA 2001	Federal Emergency Management Agency	<i>Flood Hazard Mitigation Study, Stanislaus River, Cities of Ripon, Riverbank, and Oakdale</i>	FEMA	Washington, D.C.	2001	
FEMA 2001	Federal Emergency Management Agency	<i>Flood Insurance Study, City of Modesto, California</i>	FEMA	Washington, D.C.	May 2001	FEMA Flood Map Service Center https://msc.fema.gov
FEMA 2004	Federal Emergency Management Agency	<i>Flood Insurance Study, City of Riverbank, California</i>	FEMA	Washington, D.C.	September 2004	FEMA Flood Map Service Center https://msc.fema.gov
FEMA 2004	Federal Emergency Management Agency	<i>Flood Insurance Study, Stanislaus County, (Unincorporated Areas), California</i>	FEMA	Washington, D.C.	September 2004	FEMA Flood Map Service Center https://msc.fema.gov
Modesto 1958	Modesto Bee	<i>Historical Records of Local Flooding</i>			December 1958	
Modesto 2019	City of Modesto	<i>City of Modesto General Plan</i>	City of Modesto		January 2019	https://www.modestogov.com/DocumentCenter/View/11422/Chapter-V-Section-10---Flooding-and-Water-Quality-PDF
Patterson 1958	City of Patterson	<i>Patterson Irrigator, Historical Records of Local Flooding</i>			April 1958	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
Patterson 1955	City of Patterson	<i>Westside Index, Historical Records of Local Flooding</i>			December 1955	
Riverbank 1997	City of Riverbank	<i>Letter from the City of Riverbank to San Francisco, California District Office</i>			January 1997	
SDWM 1999	Sacramento District Water Management	<i>Rain Flood Flow Frequency Analysis, Stanislaus River, California at New Melones Dam, at Goodwin Dam and at Orange Blossom Bridge</i>			1999	
USACE 1975	U.S. Army Corps of Engineers	<i>Aerial Photographs Stanislaus River, Scale 1:72,000</i>	USACE		June 1975	
USACE 1963	U.S. Department of the Army, Corps of Engineers	<i>Flood Damages, Orestimba Creek</i>	USACE	San Joaquin Basin, California	September 1963	
USACE 1965	U.S. Department of the Army, Corps of Engineers	<i>West Side Streams, San Joaquin Basin, California</i>	USACE		June 1965	
USACE 1981	U.S. Department of the Army, Corps of Engineers	<i>X Rate Program, Basic Routing and Rating Logic</i>	USACE		April 1981	
USACE 1966	U.S. Department of the Army, Corps of Engineers	<i>New Melones Reservoir, Stanislaus River</i>	USACE		December 1966	
USACE 1972	U.S. Department of the Army, Corps of Engineers	<i>Reservoir Regulation for Flood Control – Don Pedro Lake, Tuolumne River</i>	USACE		August 1972	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USACE 1981	U.S. Department of the Army, Corps of Engineers, Hydrologic Engineering Center	<i>Generalized Computer Program, Flood Flow Frequency Analysis</i>	USACE	Davis, California	February 1981	
USACE 1995	U.S. Department of the Army, Corps of Engineers, Hydrologic Engineering Center	<i>HEC-FFA, Flood Frequency Analysis, Computer Program, Version 3.1</i>	USACE	Davis, California	February 1995	
USACE 1993	U.S. Department of the Army, Corps of Engineers	<i>Engineer Manual EM 1110-2-1415, Hydrologic Frequency Analysis</i>	USACE		March 1993	
USACE 1980	U.S. Department of the Army, Corps of Engineers, Sacramento District	<i>Report on Reservoir Regulation for Flood Control, New Melones Dam and Lake, Stanislaus River, California</i>	USACE		January 1980	
USACE 1992	U.S. Department of the Army, Corps of Engineers, Sacramento District	<i>Stanislaus River at New Melones and Goodwin Dams, Unregulated and Regulated Flow Frequency Curves</i>	USACE		April 1992	
USACE 2001	U.S. Department of the Army, Corps of Engineers, Hydrologic Engineering Center	<i>HEC-RAS, River Analysis System, Computer Program, Version 3.0.1</i>	USACE	Davis, California	March 2001	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USACE 2010	U.S. Department of the Army, Corps of Engineers, Hydrologic Engineering Center	<i>HEC-RAS, River Anaysis System, Computer Program, Version 4.1</i>	USACE	Davis, California	January 2010	
USACE 1976	U.S. Army Corps of Engineers	<i>Written Communication from George C. Wenddell to James Goddar, Technical Representative, Federal Insurance Administration</i>	USACE		May 1976	
USACE 1973	U.S. Army Corps of Engineers, Hydrologic Engineering center	<i>HEC-1 Flood Hydrograph Package , Generalized Computer Program</i>	USACE	Davis, California	January 1973	
USACE 1977	U.S. Army Corps of Engineers	<i>Written Communication from George C. Weddell to Patrick L. Stiehr, Hydrologist, U.S. Geological Survey</i>	USACE		February 1977	
USACE 1982	U.S. Army Corps of Engineers, Hydrologic Engineering Center	<i>Generalized Computer Program. Flood Flow Frequency Analysis</i>	USACE	Davis, California	February 1982	
USDA 1975	U.S. Department of Agricultural, Soil Conservation Service, Engineering Division	<i>Technical Release No. 55, Urban Hydrology for Small Watersheds</i>	USDA		January 1975	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USDC 1973	U.S. Department of Commerce, National Weather Service	<i>NOAA Atlas 2, Precipitation-Frequency Atlas of the Western United States. Volume XI-California</i>			1973	
USDH 1978	U.S. Department of Housing and Urban Development, Federal Insurance Administration	<i>Flood Insurance Study, San Joaquin County, California (Unincorporated Areas)</i>			August 1978	
USDH 1979	U.S. Department of Housing and Urban Development, Federal Insurance Administration	<i>Flood Insurance Study, City of Waterford, California</i>		Washington, D.C.	January 1979	City of Waterford library
USGS 1947	U.S. Department of the Interior, Bureau of Reclamation	<i>Design Blueprint of Salado Salado Creek Overchute, Job No. 2-214-4-392</i>			December 1947	
USGS 1951	U.S. Department of the Interior, Geological Survey	<i>Water-Supply Paper No. 1215, Part II, Surface Water Supply of the United States: Pacific Slope Basins in California</i>			1951	
USGS 1958	U.S. Department of the Interior, Geological Survey	<i>Water Supply Paper No. 1565, Part II, Surface Water Supply of the United States: pacific Slope basins in California</i>			1958	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USGS 1960	U.S. Department of the Interior, Geological Survey	<i>Water-Supply Paper 1543-B, Manual of Hydrology: Part 3, Floodflow Techniques, Storage, and Flood Routing</i>	R.W. Carter and R.G. Godfrey		1960	
USGS 1967	U.S. Department of the Interior, Geological Survey	<i>Techniques of Water-Resources Investigations, Application of Hydraulics, Book 3, Chapters A1 and A2</i>			1967	
USGS 1968	U.S. Department of the Interior	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000 Contour Interval 10 feet: Paulsell, California</i>			1968	topomaps.usgs.gov
USGS 1969	U.S. Department of the Interior, Geological Survey	<i>Open-File Report, Mean Annual Precipitation in the California Region</i>	S.E. Rantz		1969	
USGS 1969	U.S. Department of the Interior, Geological Survey	<i>Water Resources Data for California, part I – Volume 2</i>			1969	
USGS 1969	U.S. Department of the Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000 Contour Interval 5 feet: Salida</i>			1969	topomaps.usgs.gov
USGS 1969	U.S. Department of the Interior	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000 Contour Interval 5 feet: Waterford, California</i>			1969	topomaps.usgs.gov

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USGS 1970	U.S. Department of the Interior, Geological Survey	<i>Open File Report, Determination of Channel Capacity of the Tuolumne River Downstream from LaGrange</i>	J.C. Blodgett and H.T. Mitten		1970	
USGS 1974	U.S. Department of the Interior, Geological Survey, Open-File Report	<i>Determination of Channel Capacity of San Joaquin River Downstream from the Merced River, Merced, Stanislaus, and San Joaquin Counties</i>	R.G. Simpson and J.C. Flodgett	California	1974	
USGS 1976	U.S. Department of the Interior, Geological Survey	<i>Report 76-399, User's Manual for Computer Program E-431: Computer Applications for Step-Backwater and Floodway Analysis</i>	J.O. Shearman		1976	
USGS Various	U.S. Department of the Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 5 feet: Crows Landing, California, 1953 (Photorevised 1971); Newman, California, 1962 (Photorevised 1971)</i>			Various	topomaps.usgs.gov

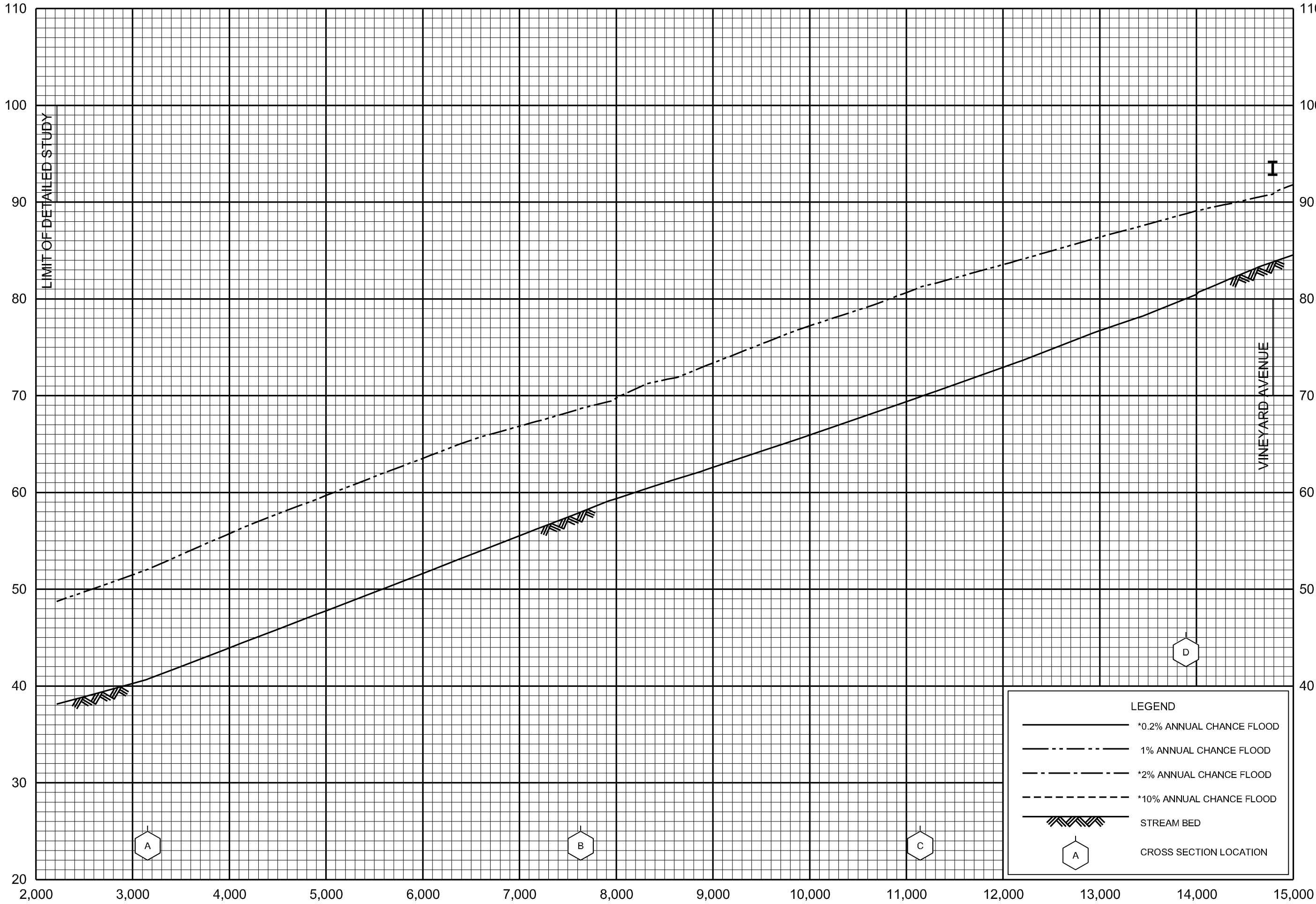
Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USGS Various	U.S. Department of the Interior, Geological Survey	<i>7.5-Minute Series Flood-Prone Area Maps, Scale 1:24,000, Contour Interval 5 feet: Ceres, California, 1971; Escalon, California, 1973; Salida, California, 1973; Brush Lake, California, 1970; Riverbank, California, 1969; Valley Springs SW, California, 1973; Farmington, California, 1973</i>			Various	topomaps.usgs.gov
USGS Various	U.S. Department of the Interior, Geological Survey	<i>7.5 Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 5 feet Crows Landing, California, 1952 (photo revised 1971); contour interval 20 feet: Patterson, California, 1953; photo revised 1971</i>			Various	topomaps.usgs.gov

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USGS various	U.S. Department of the Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale of 1:24,000, Contour Interval 5 feet: Avenal, CA 1952 (Photo revised 1968); Escalon, CA, 1968; Vernalis, CA, 1969; Ripon, CA, 1969; Salida, CA, 1969; riverbank, CA, 1969; Waterford, CA, 1969; Brush Lake, CA, 1969; Ceres, CA, 1969; Denair, CA, 1969; Crows Landing, CA, 1952 (Photo Revised 1971); Hatch, CA, 1962; Newman, CA, 1962 (Photo Revised 1971); Gustine, CA, 1960. Contour Interval 10 feet: Oakdale, CA, 1968; Paulsell, CA, 1968; Cooperstown, CA, 1968; Westley, CA, 1969 (Photo Revised 1980). Contour Interval 20 feet: Knights Ferry, CA, 1962; LaGrange, CA, 1962; Patterson, CA, 1953 (Photo revised 1971). Contour Interval 40 feet: Orestimba Peak, CA, 1955 (Photo revised 1971)</i>				
USWRC 1976	U.S. Water Resource Council	<i>Guidelines for Determining Flood Flow Frequency, Bulletin 17</i>			March 1976	

ELEVATION IN FEET (NAVD 88)



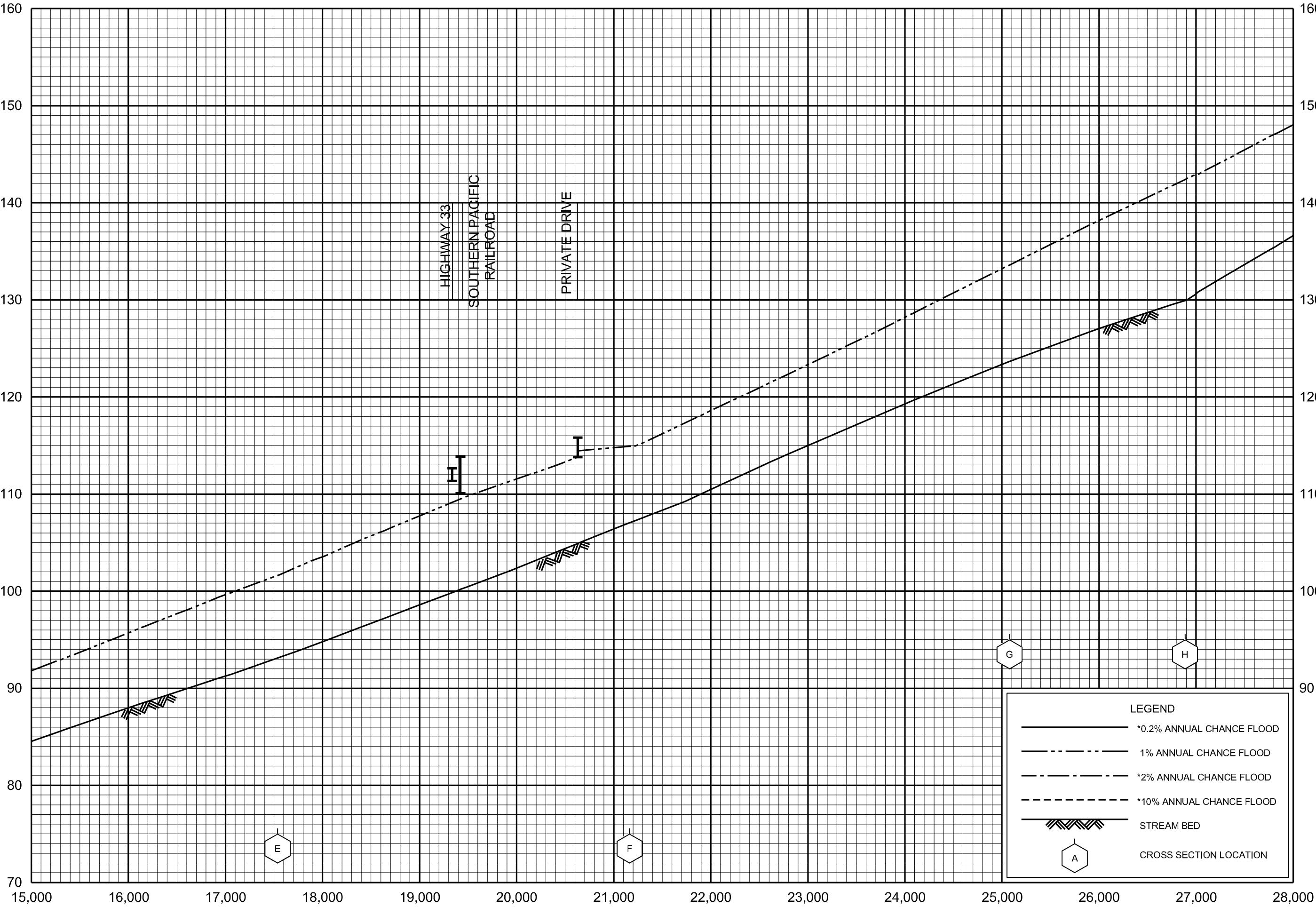
STREAM DISTANCE IN FEET ABOVE CONFLUENCE WITH SAN JOAQUIN RIVER

* DATA NOT AVAILABLE

FLOOD PROFILES
DEL PUERTO CREEK

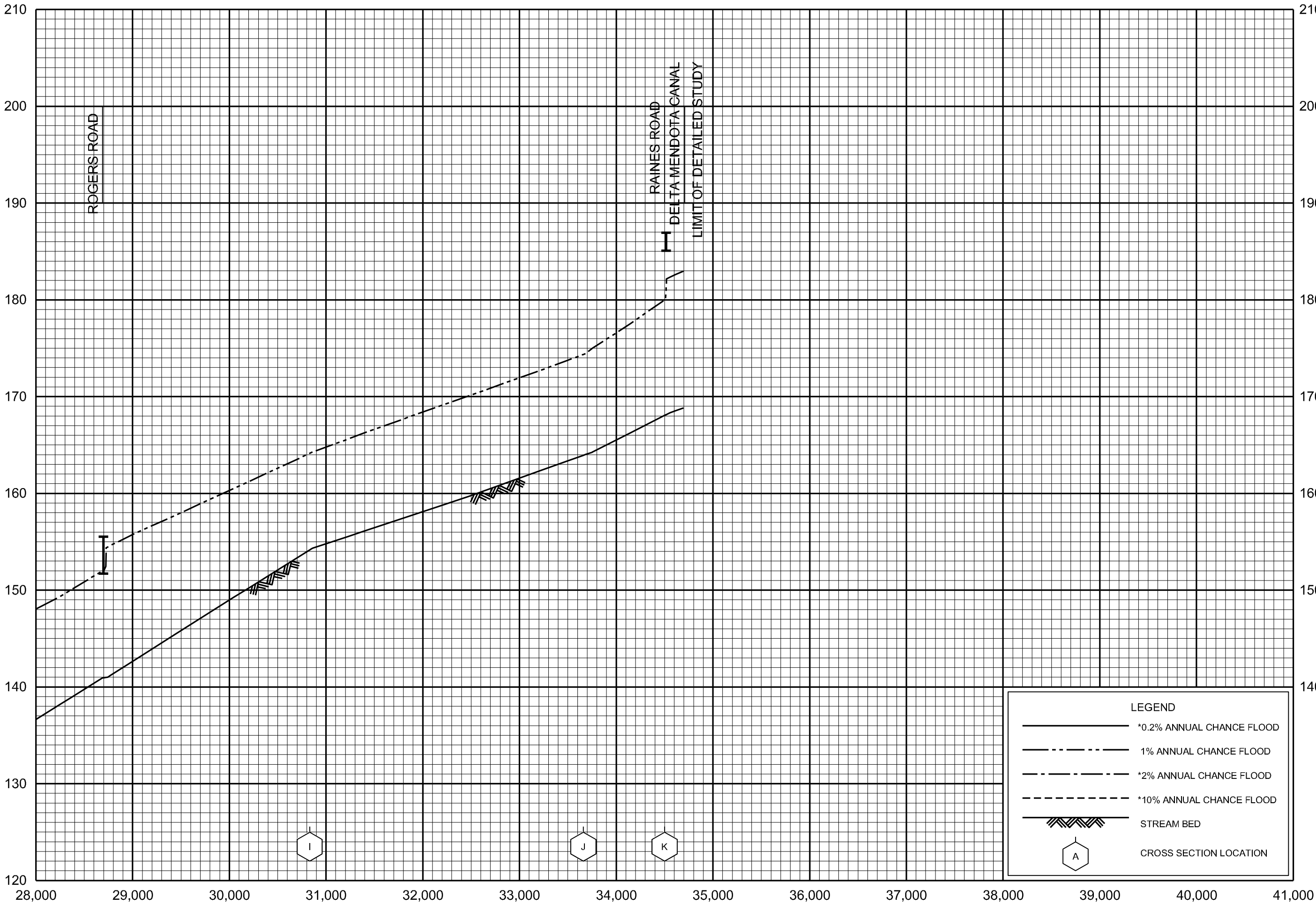
FEDERAL EMERGENCY MANAGEMENT AGENCY
STANISLAUS COUNTY, CA
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD 88)



* DATA NOT AVAILABLE

ELEVATION IN FEET (NAVD 88)



LEGEND

*0.2% ANNUAL CHANCE FLOOD

1% ANNUAL CHANCE FLOOD

*2% ANNUAL CHANCE FLOOD

*10% ANNUAL CHANCE FLOOD

STREAM BED

CROSS SECTION LOCATION

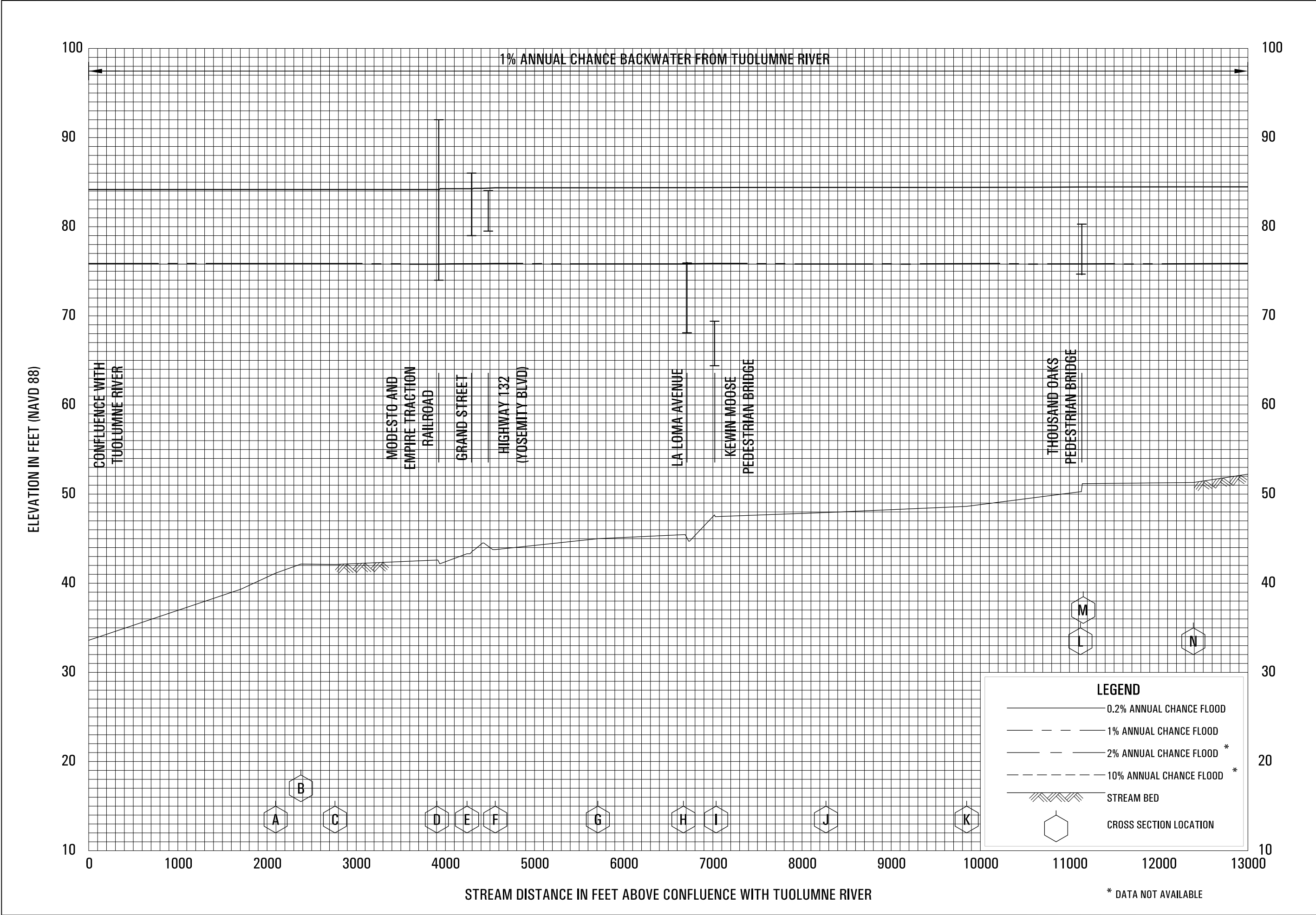
FEDERAL EMERGENCY MANAGEMENT AGENCY

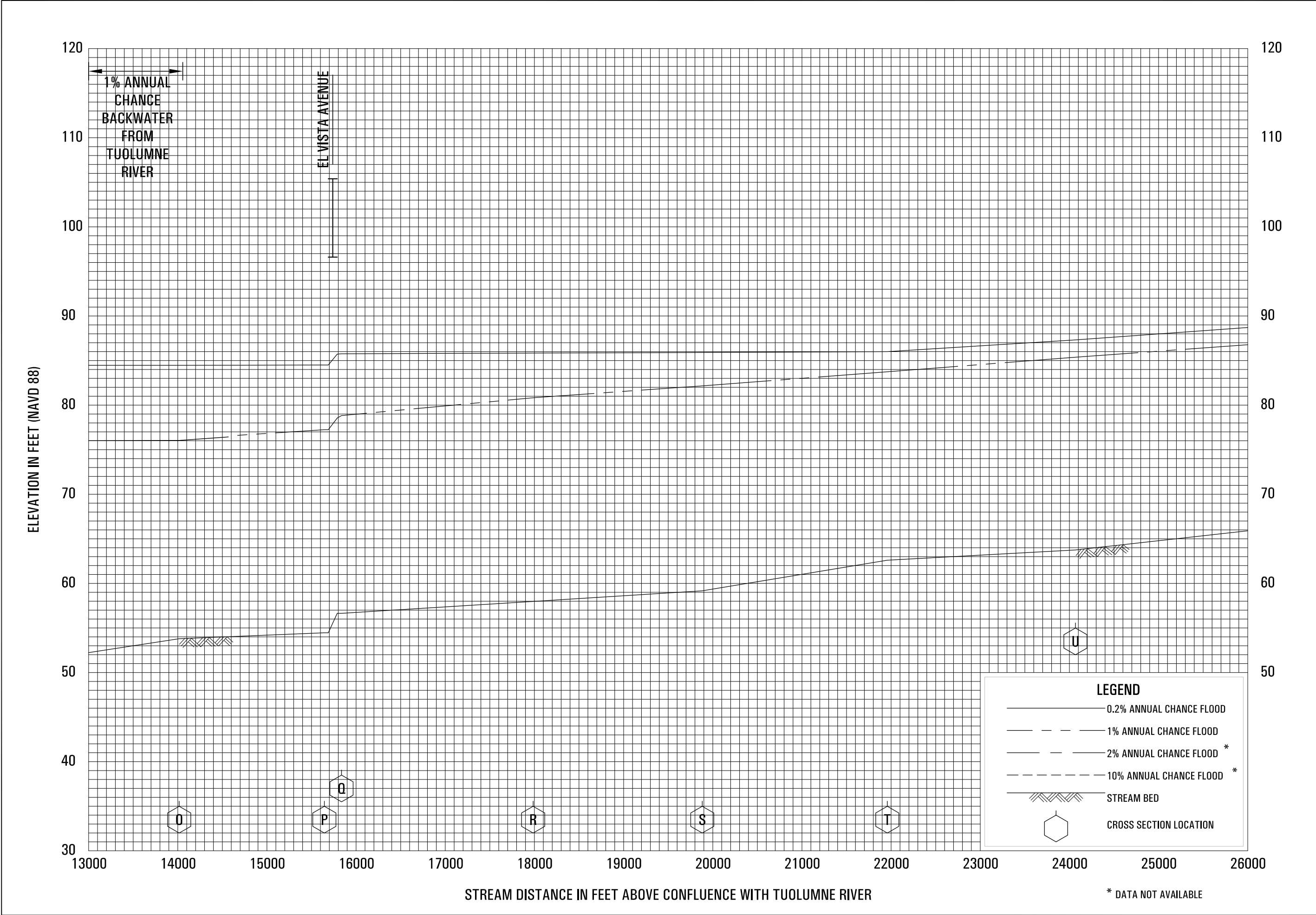
STANISLAUS COUNTY, CA
AND INCORPORATED AREAS

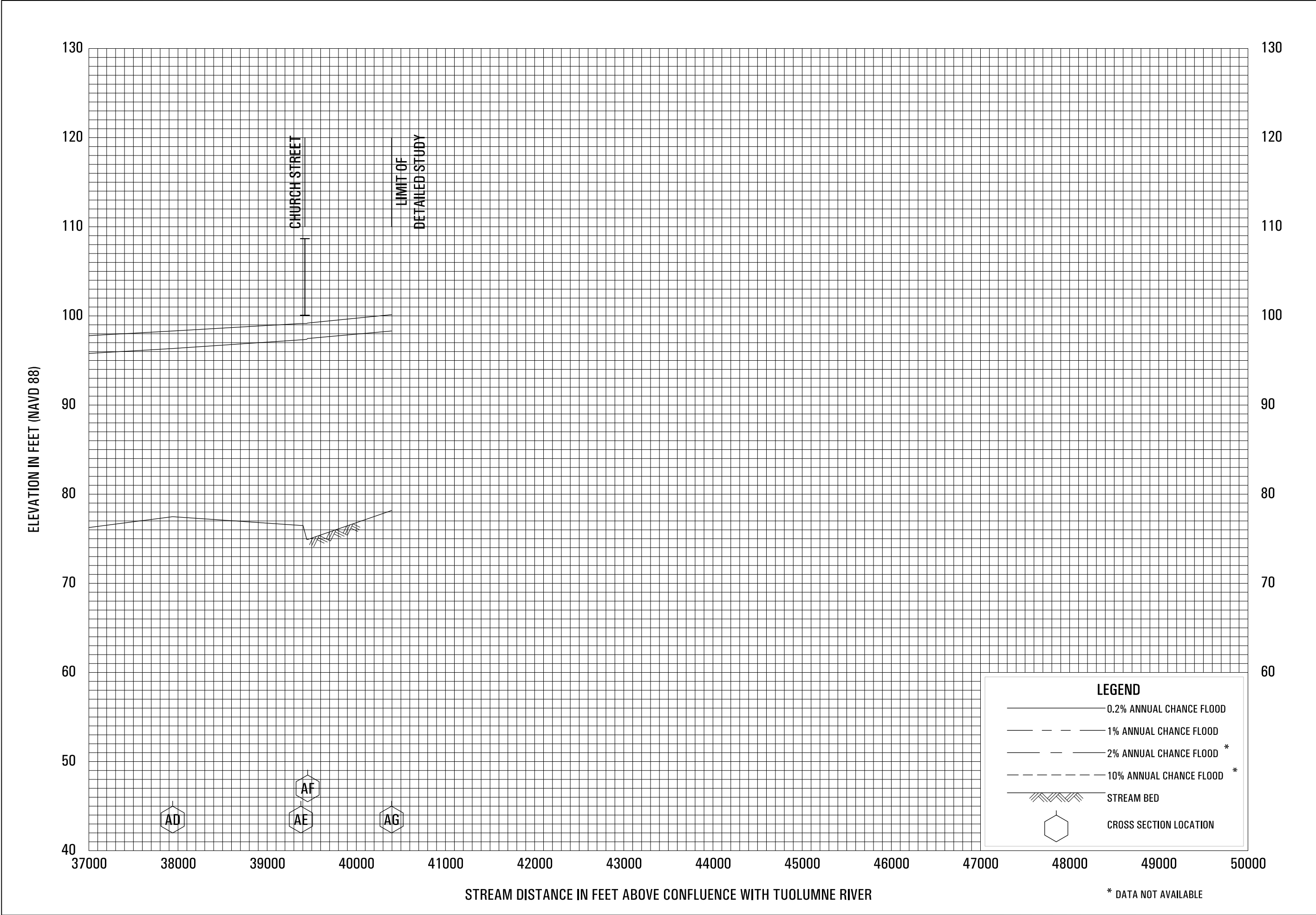
FLOOD PROFILES

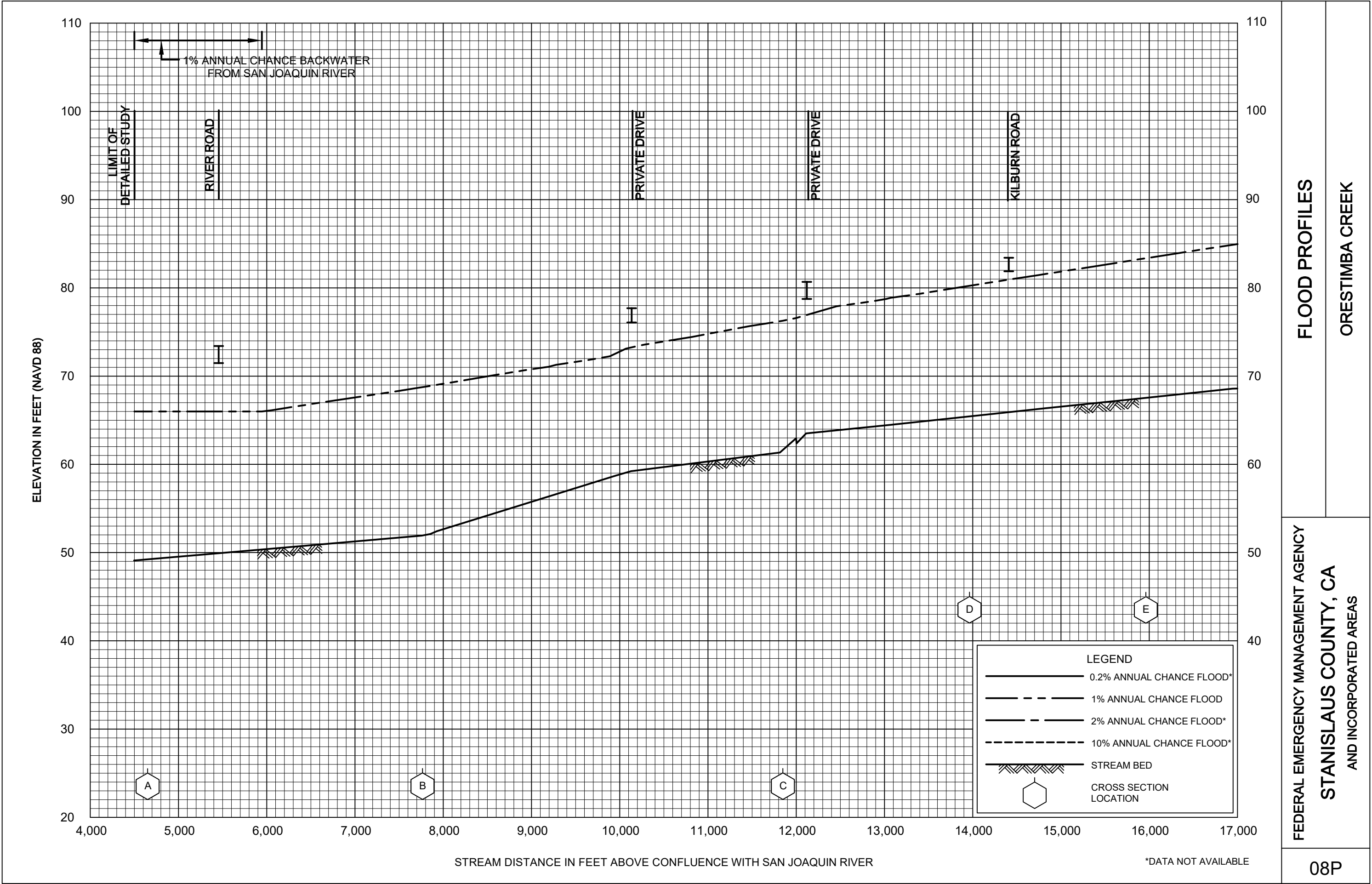
DEL PUERTO CREEK

* DATA NOT AVAILABLE

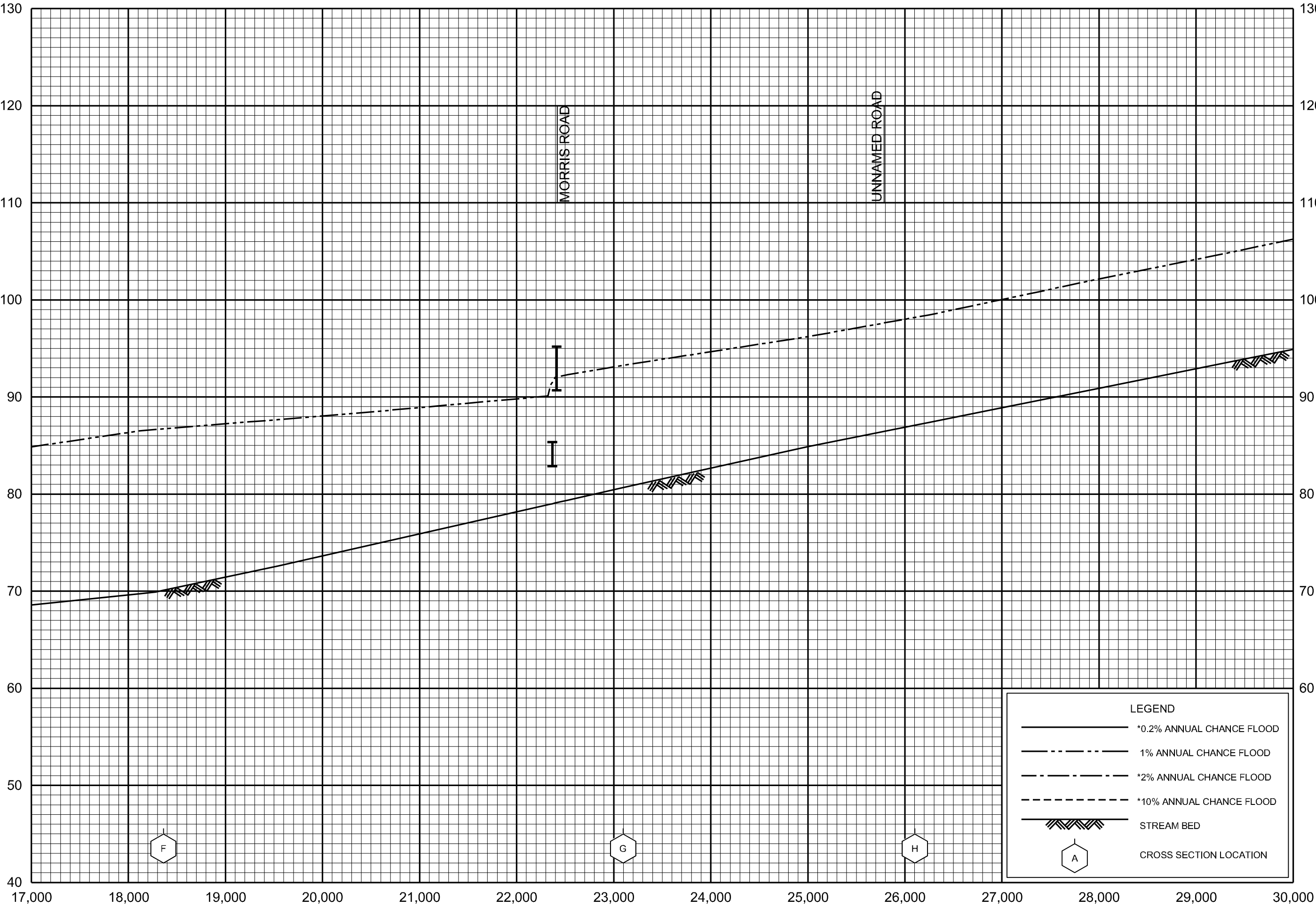








ELEVATION IN FEET (NAVD 88)



LEGEND

*0.2% ANNUAL CHANCE FLOOD

1% ANNUAL CHANCE FLOOD

*2% ANNUAL CHANCE FLOOD

*10% ANNUAL CHANCE FLOOD

STREAM BED

A

CROSS SECTION LOCATION

FEDERAL EMERGENCY MANAGEMENT AGENCY

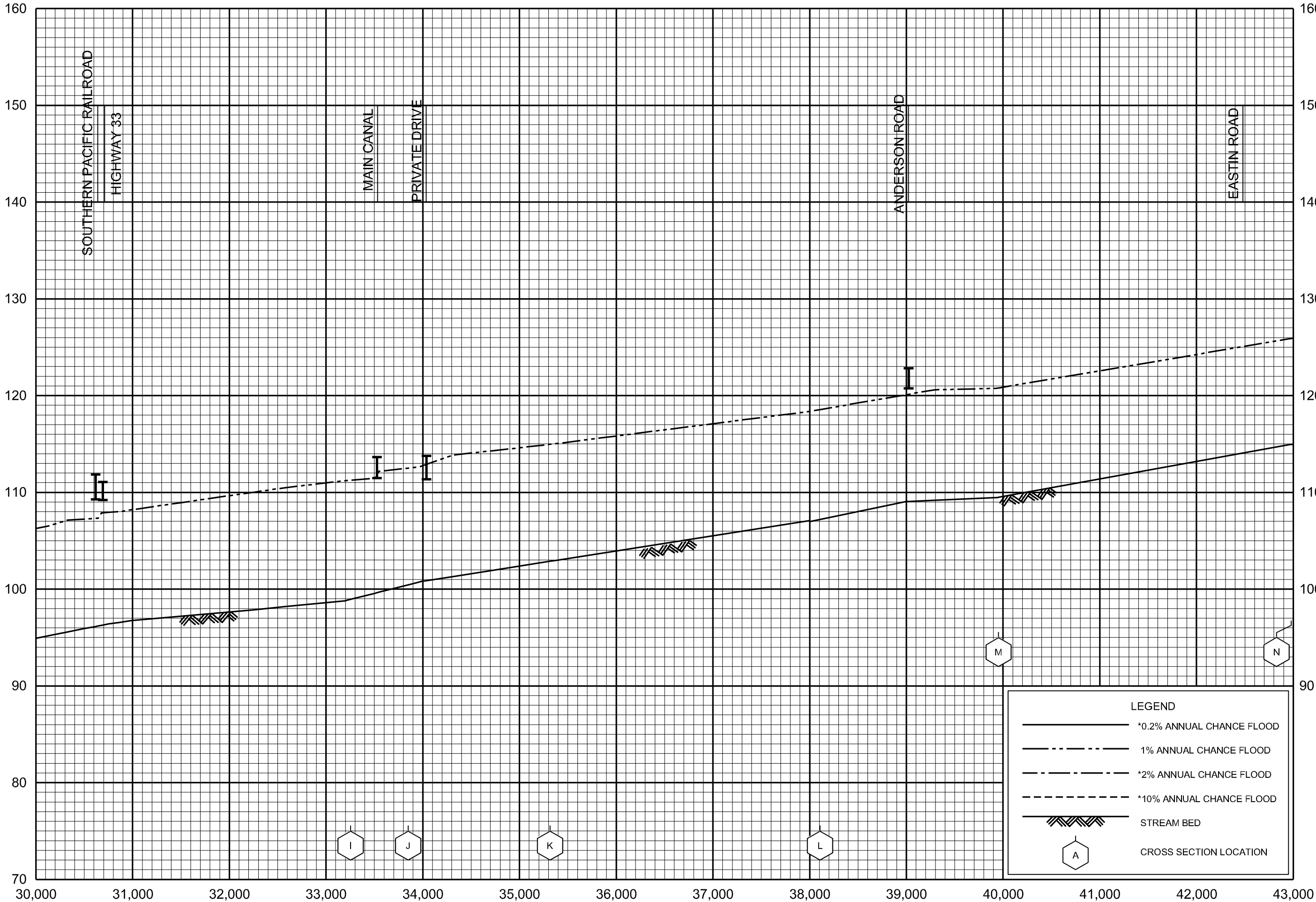
STANISLAUS COUNTY, CA
AND INCORPORATED AREAS

FLOOD PROFILES

ORESTIMBA CREEK

* DATA NOT AVAILABLE

ELEVATION IN FEET (NAVD 88)



STREAM DISTANCE IN FEET CONFLUENCE WITH SAN JOAQUIN RIVER

* DATA NOT AVAILABLE

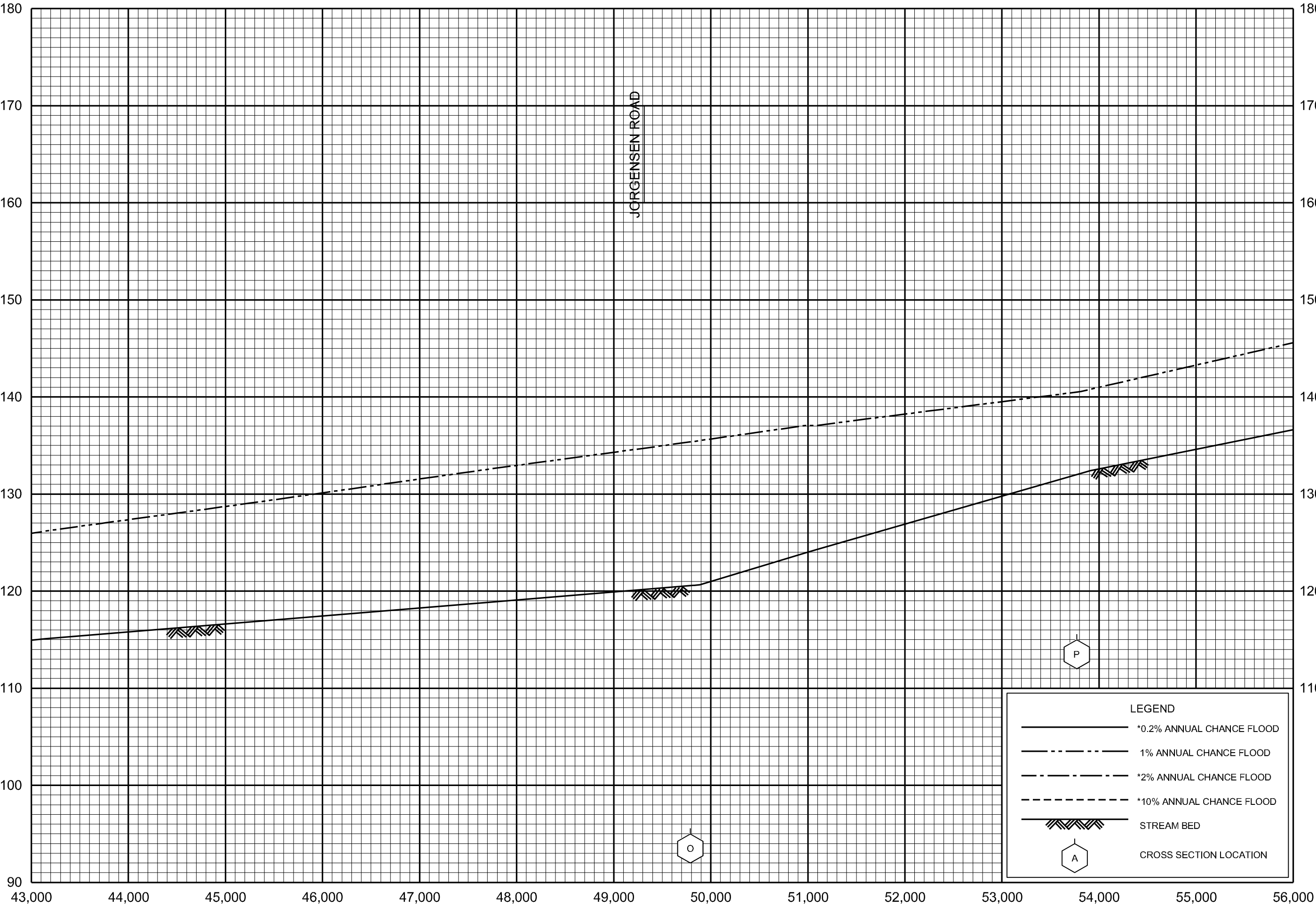
FEDERAL EMERGENCY MANAGEMENT AGENCY

FLOOD PROFILES

STANISLAUS COUNTY , CA
AND INCORPORATED AREAS

ORESTIMBA CREEK

ELEVATION IN FEET (NAVD 88)



STREAM DISTANCE IN FEET CONFLUENCE WITH SAN JOAQUIN RIVER

* DATA NOT AVAILABLE

FEDERAL EMERGENCY MANAGEMENT AGENCY

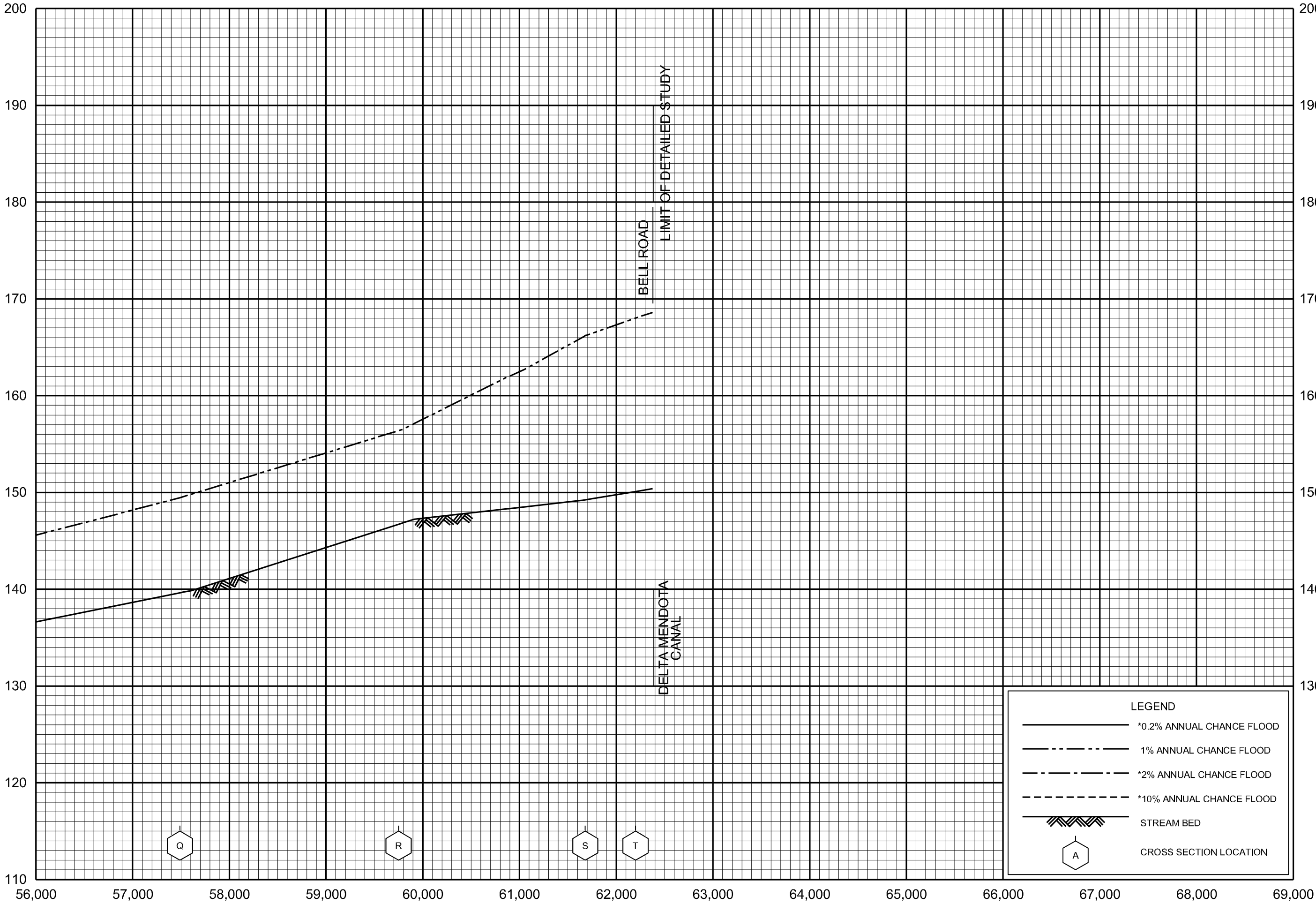
FLOOD PROFILES

STANISLAUS COUNTY, CA
AND INCORPORATED AREAS

ORESTIMBA CREEK

11P

ELEVATION IN FEET (NAVD 88)



STREAM DISTANCE IN FEET CONFLUENCE WITH SAN JOAQUIN RIVER

* DATA NOT AVAILABLE

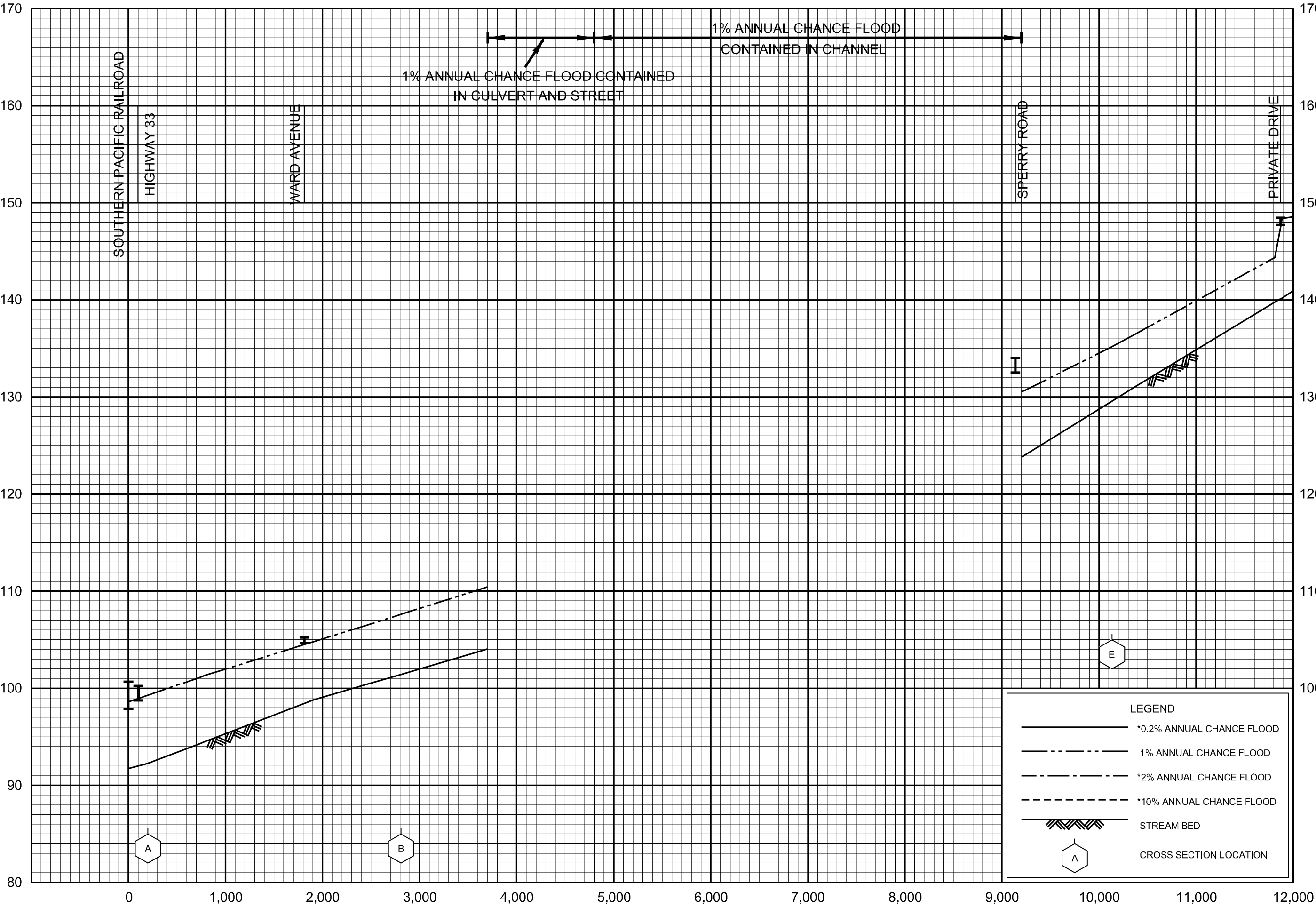
FEDERAL EMERGENCY MANAGEMENT AGENCY

STANISLAUS COUNTY, CA
AND INCORPORATED AREAS

FLOOD PROFILES

ORESTIMBA CREEK

ELEVATION IN FEET (NAVD 88)



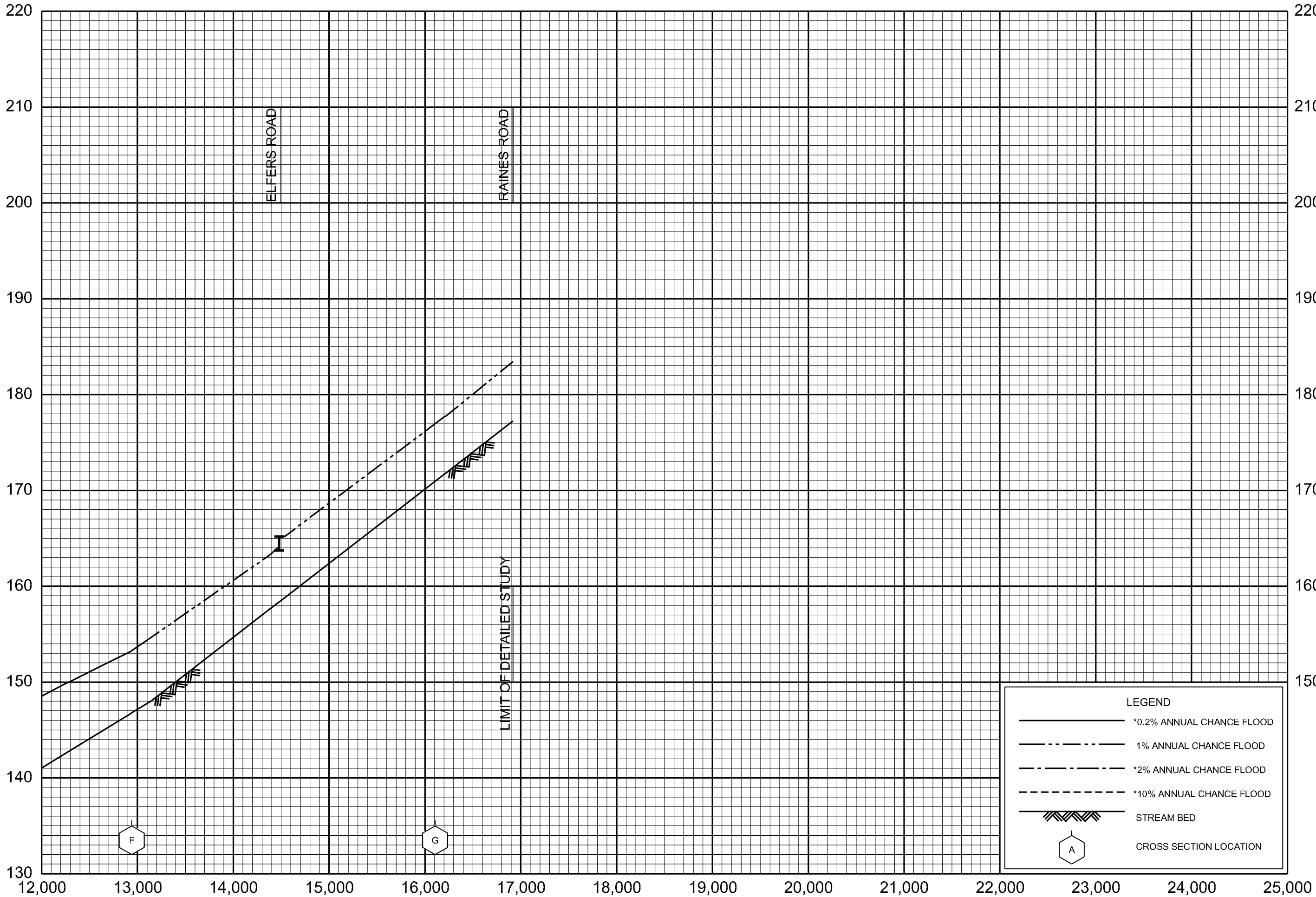
STREAM DISTANCE IN FEET ABOVE SOUTHERN PACIFIC RAILROAD BRIDGE

* DATA NOT AVAILABLE

FLOOD PROFILES
SALADO CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
STANISLAUS COUNTY, CA
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD 88)



STREAM DISTANCE IN FEET ABOVE SOUTHERN PACIFIC RAILROAD BRIDGE

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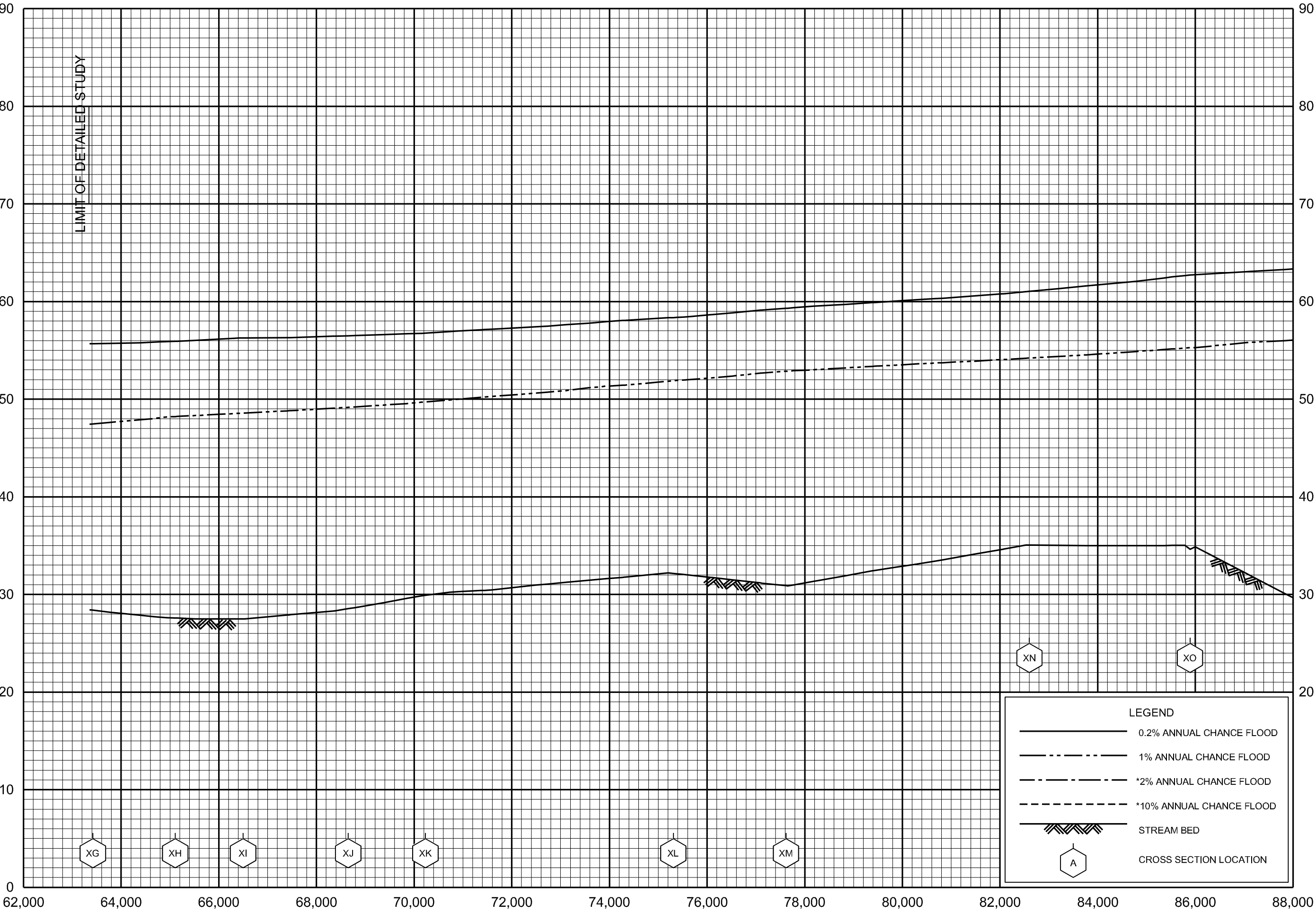
FLOOD PROFILES

SALADO CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

STANISLAUS COUNTY, CA
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD 88)



LIMIT OF DETAILED STUDY

LEGEND

0.2% ANNUAL CHANCE FLOOD

1% ANNUAL CHANCE FLOOD

*2% ANNUAL CHANCE FLOOD

*10% ANNUAL CHANCE FLOOD

STREAM BED

A

CROSS SECTION LOCATION

FEDERAL EMERGENCY MANAGEMENT AGENCY

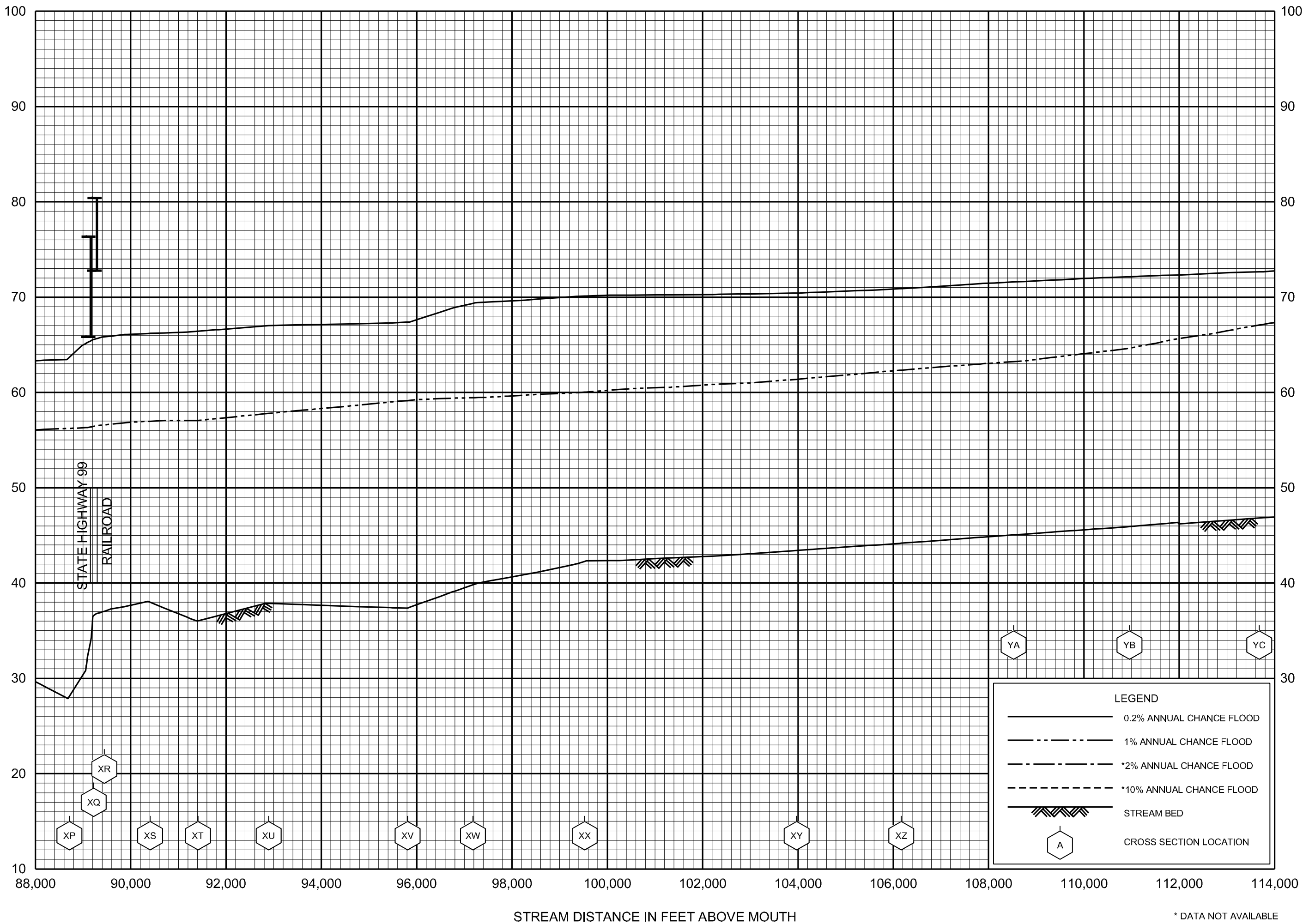
STANISLAUS COUNTY , CA
AND INCORPORATED AREAS

FLOOD PROFILES

STANISLAUS RIVER

* DATA NOT AVAILABLE

ELEVATION IN FEET (NAVD 88)



* DATA NOT AVAILABLE

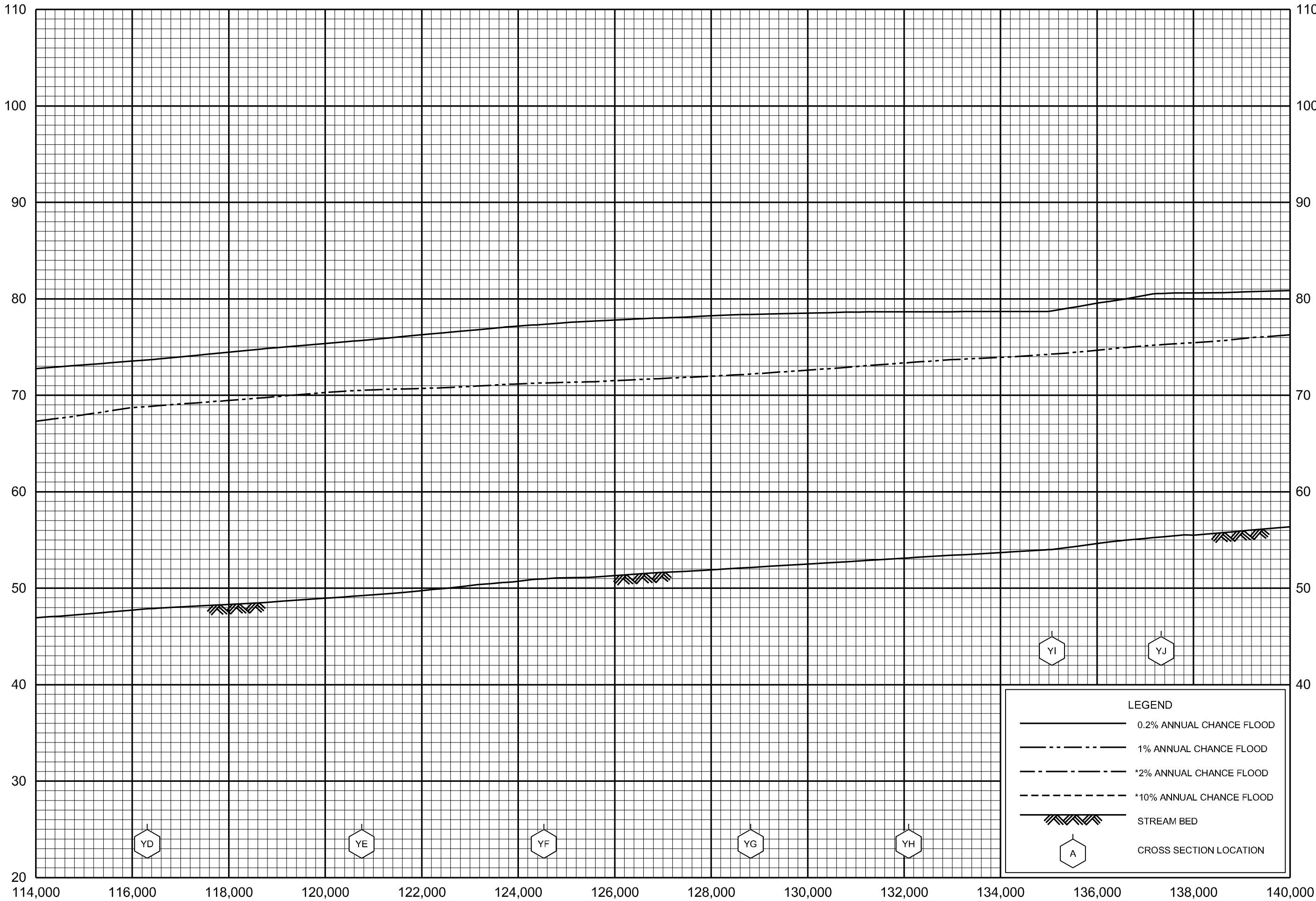
FEDERAL EMERGENCY MANAGEMENT AGENCY

FLOOD PROFILES

STANISLAUS COUNTY, CA
AND INCORPORATED AREAS

STANISLAUS RIVER

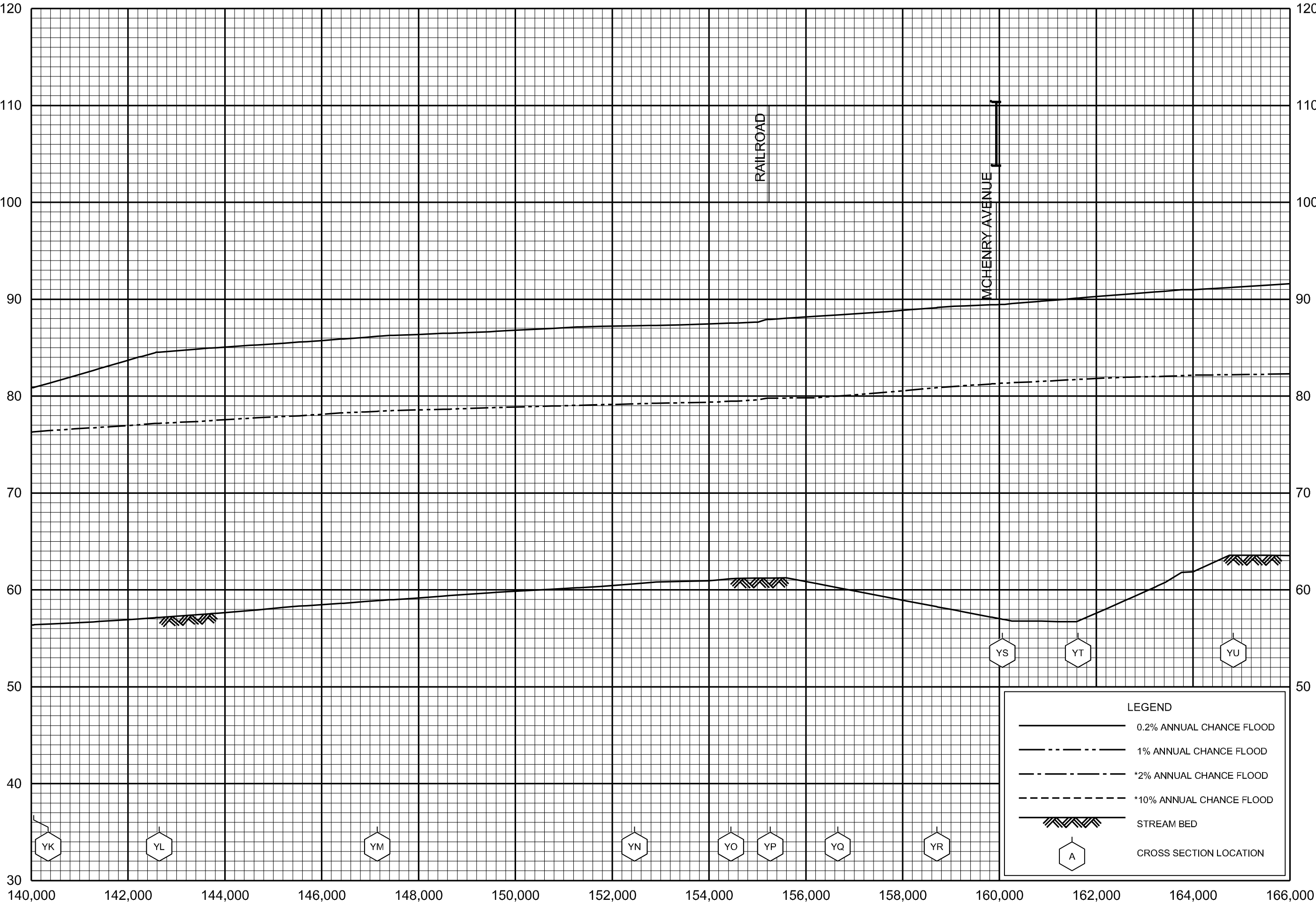
ELEVATION IN FEET (NAVD 88)



FLOOD PROFILES
STANISLAUS RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY
STANISLAUS COUNTY, CA
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD 88)

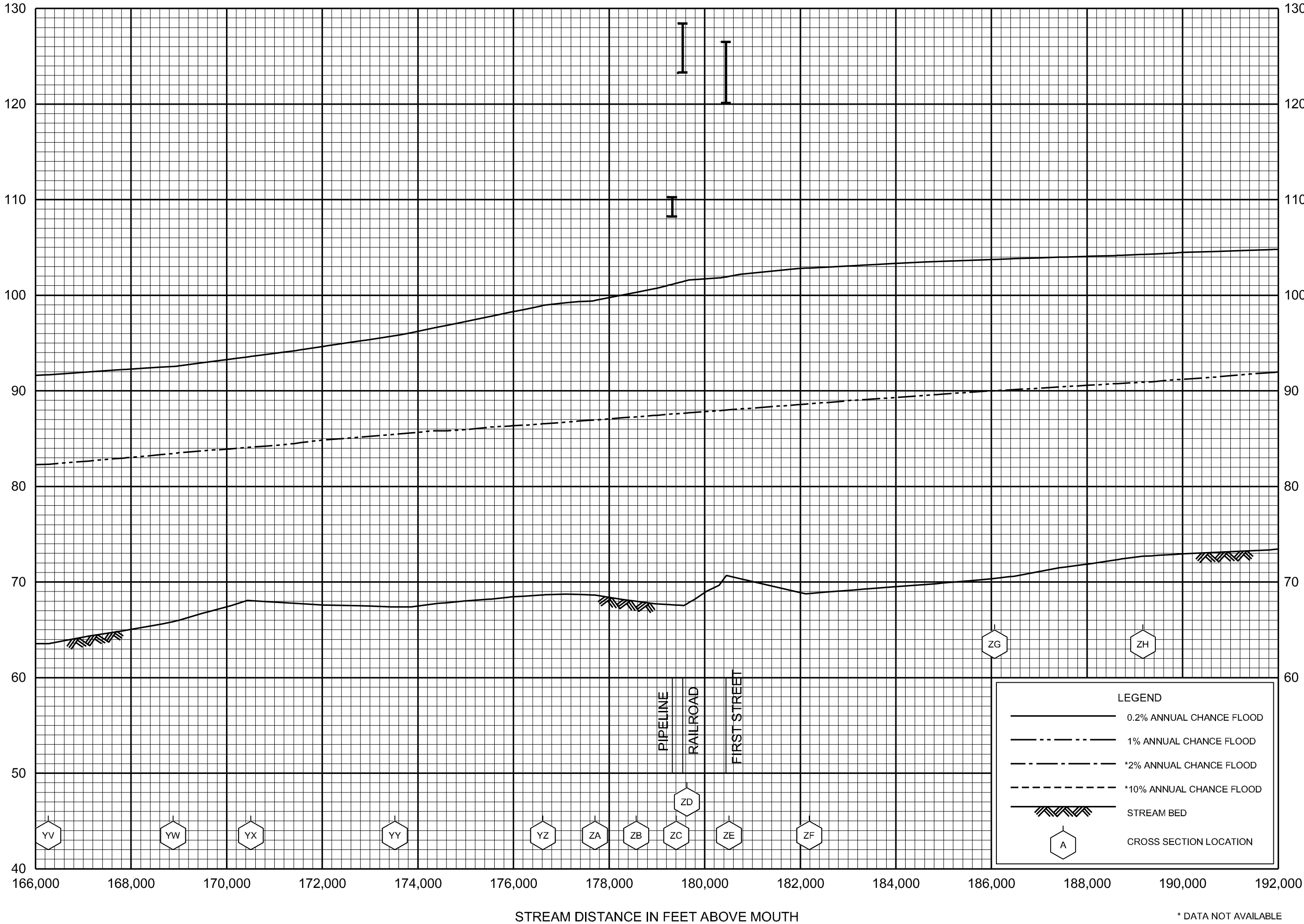


* DATA NOT AVAILABLE

FLOOD PROFILES
STANISLAUS RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY
STANISLAUS COUNTY, CA
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD 88)

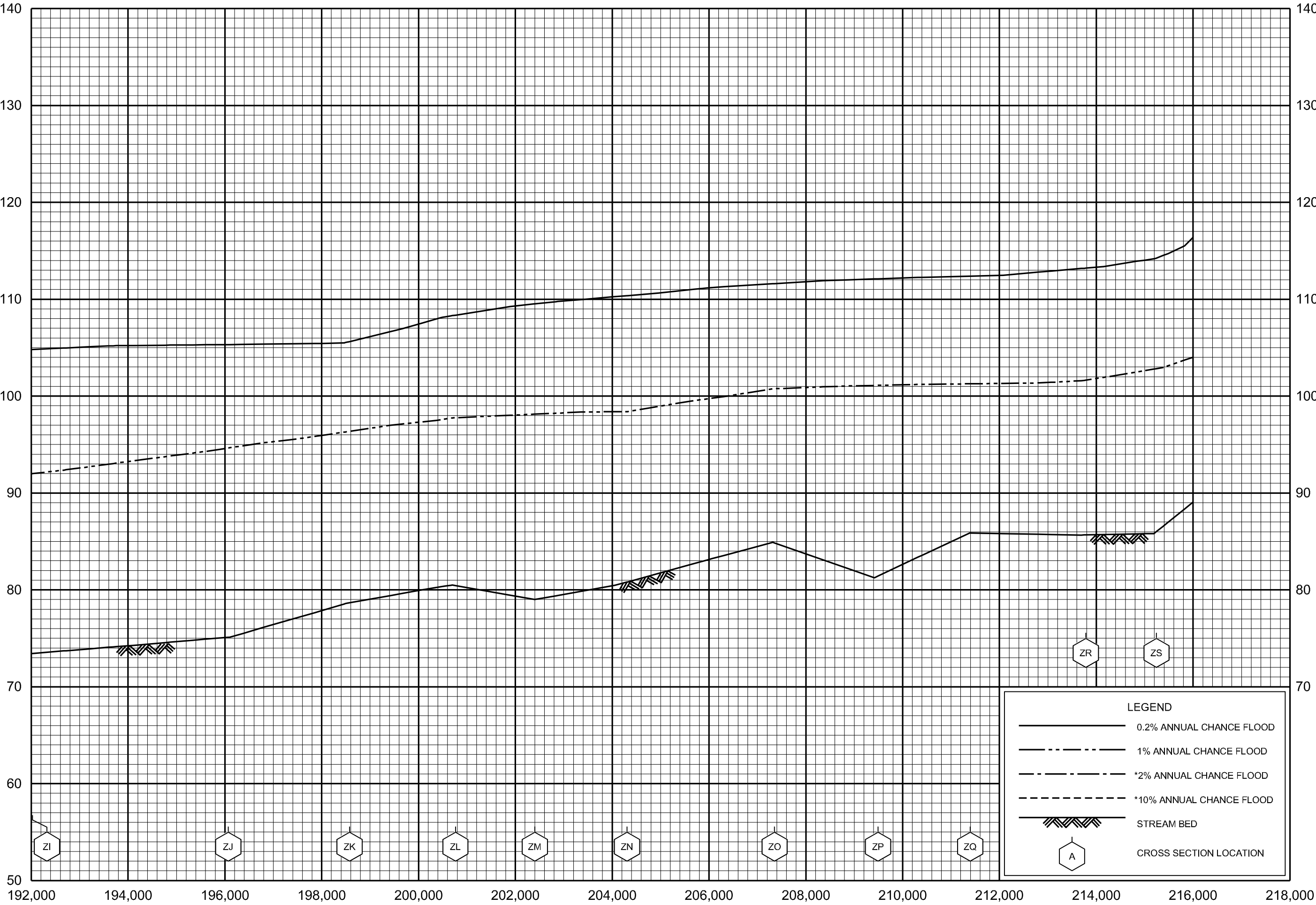


FLOOD PROFILES
STANISLAUS RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY
STANISLAUS COUNTY, CA
AND INCORPORATED AREAS

* DATA NOT AVAILABLE

ELEVATION IN FEET (NAVD 88)



* DATA NOT AVAILABLE

FLOOD PROFILES
STANISLAUS RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY
STANISLAUS COUNTY, CA
AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD 88)



FLOOD PROFILES

STANISLAUS RIVER

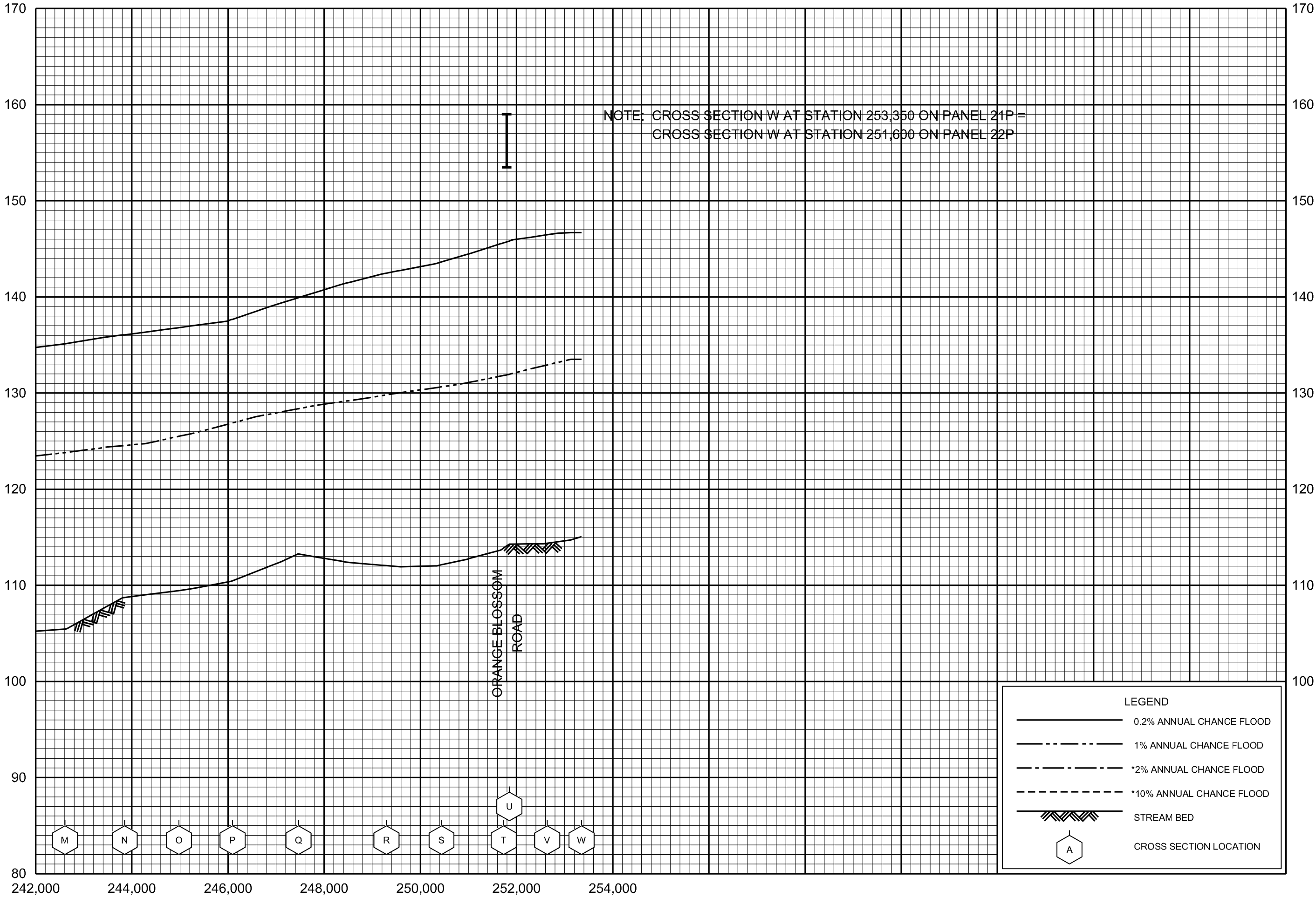
FEDERAL EMERGENCY MANAGEMENT AGENCY

STANISLAUS COUNTY, CA
AND INCORPORATED AREAS

21P

* DATA NOT AVAILABLE

ELEVATION IN FEET (NAVD 88)

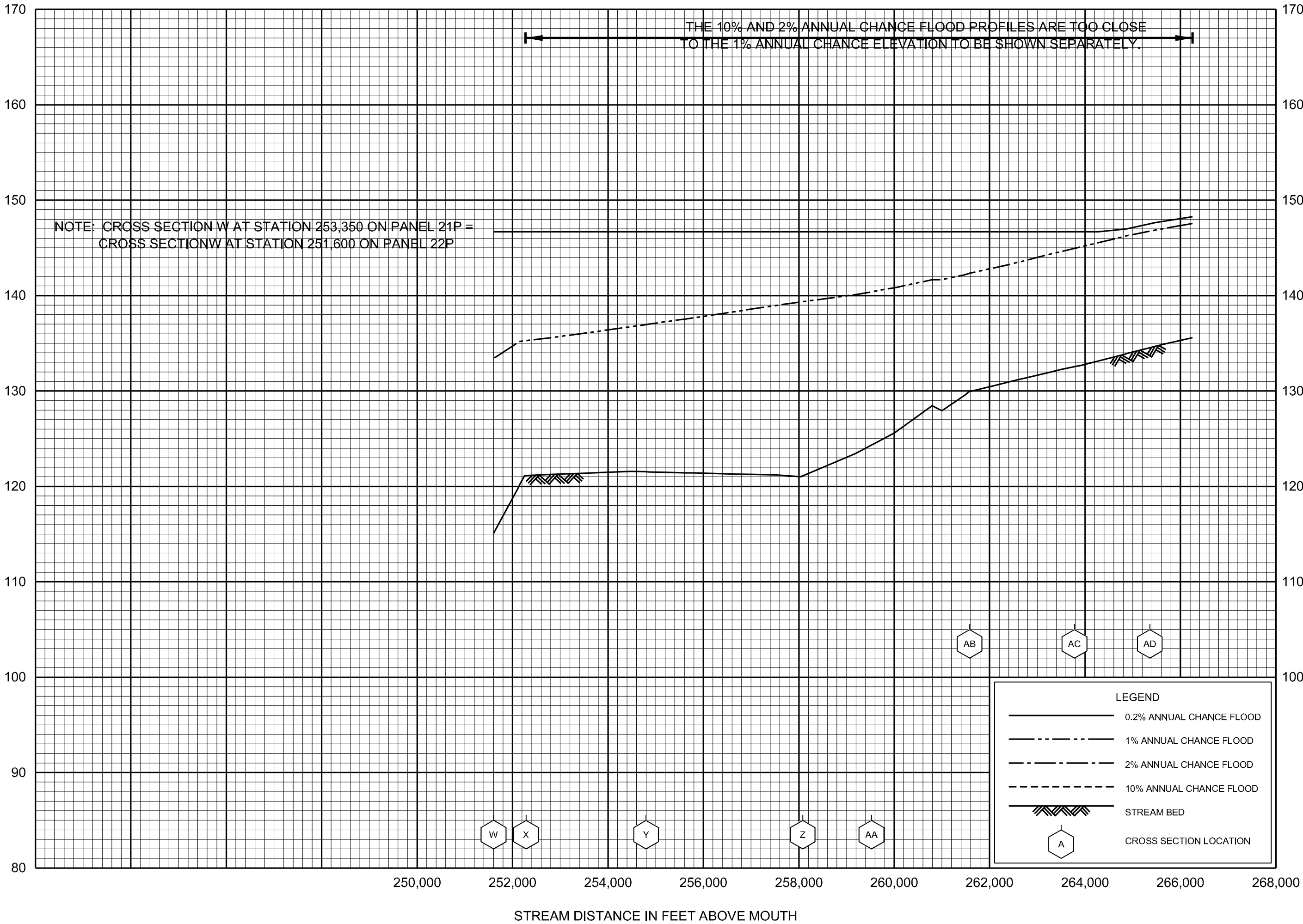


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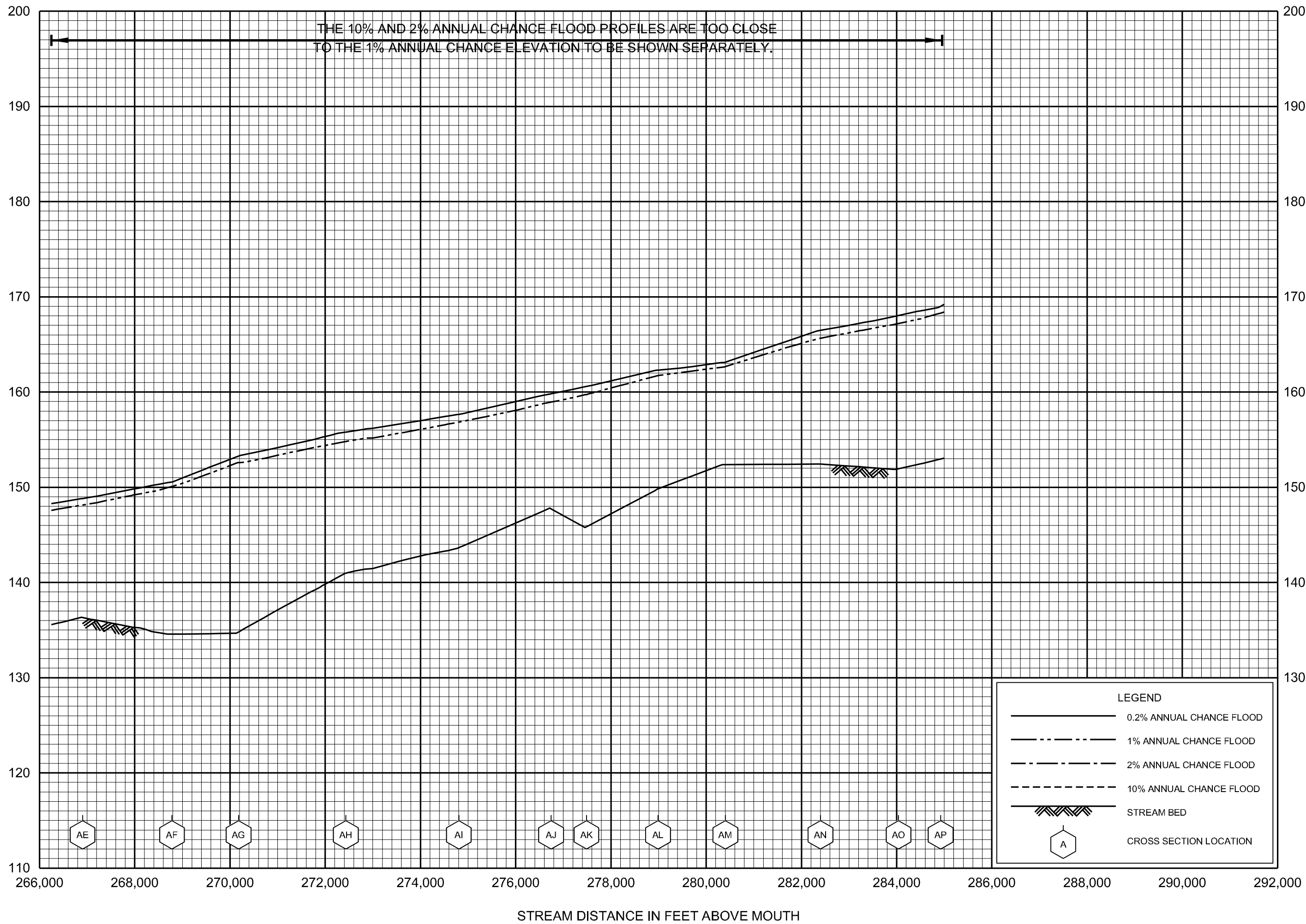
STREAM DISTANCE IN FEET ABOVE MOUTH

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ELEVATION IN FEET (NAVD 88)



ELEVATION IN FEET (NAVD 88)



FLOOD PROFILES

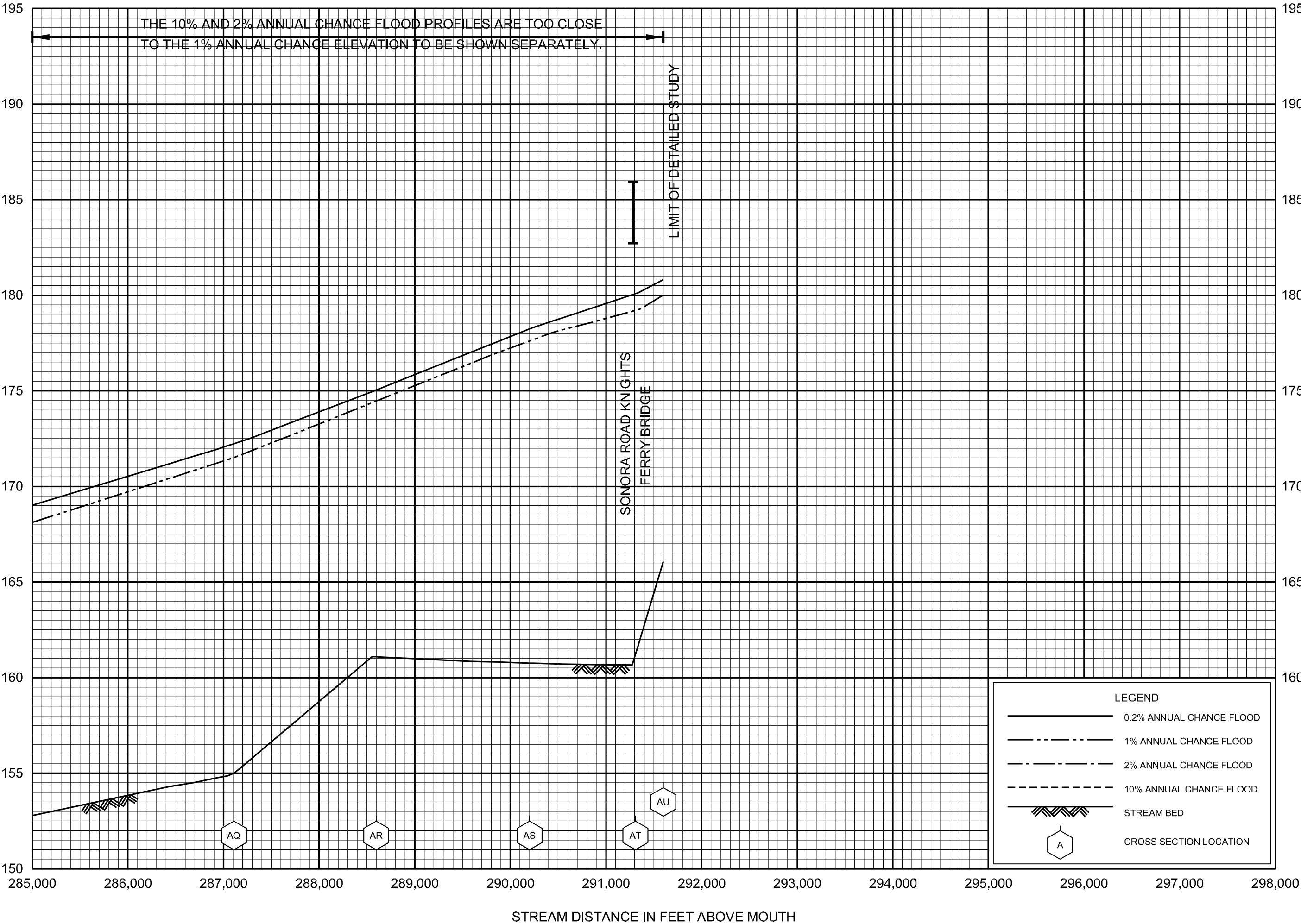
STANISLAUS RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

STANISLAUS COUNTY, CA

AND INCORPORATED AREAS

ELEVATION IN FEET (NAVD 88)



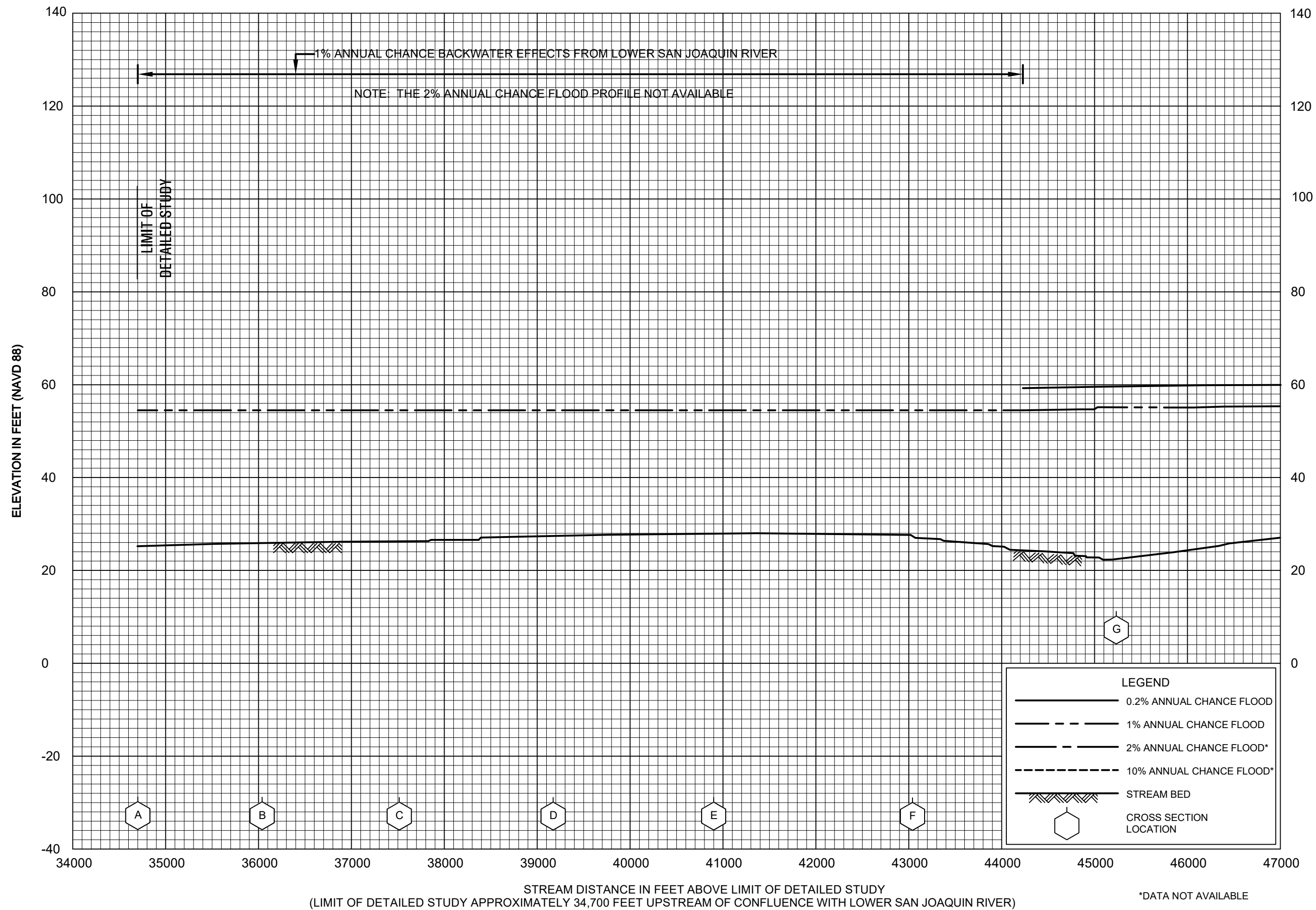
FLOOD PROFILES

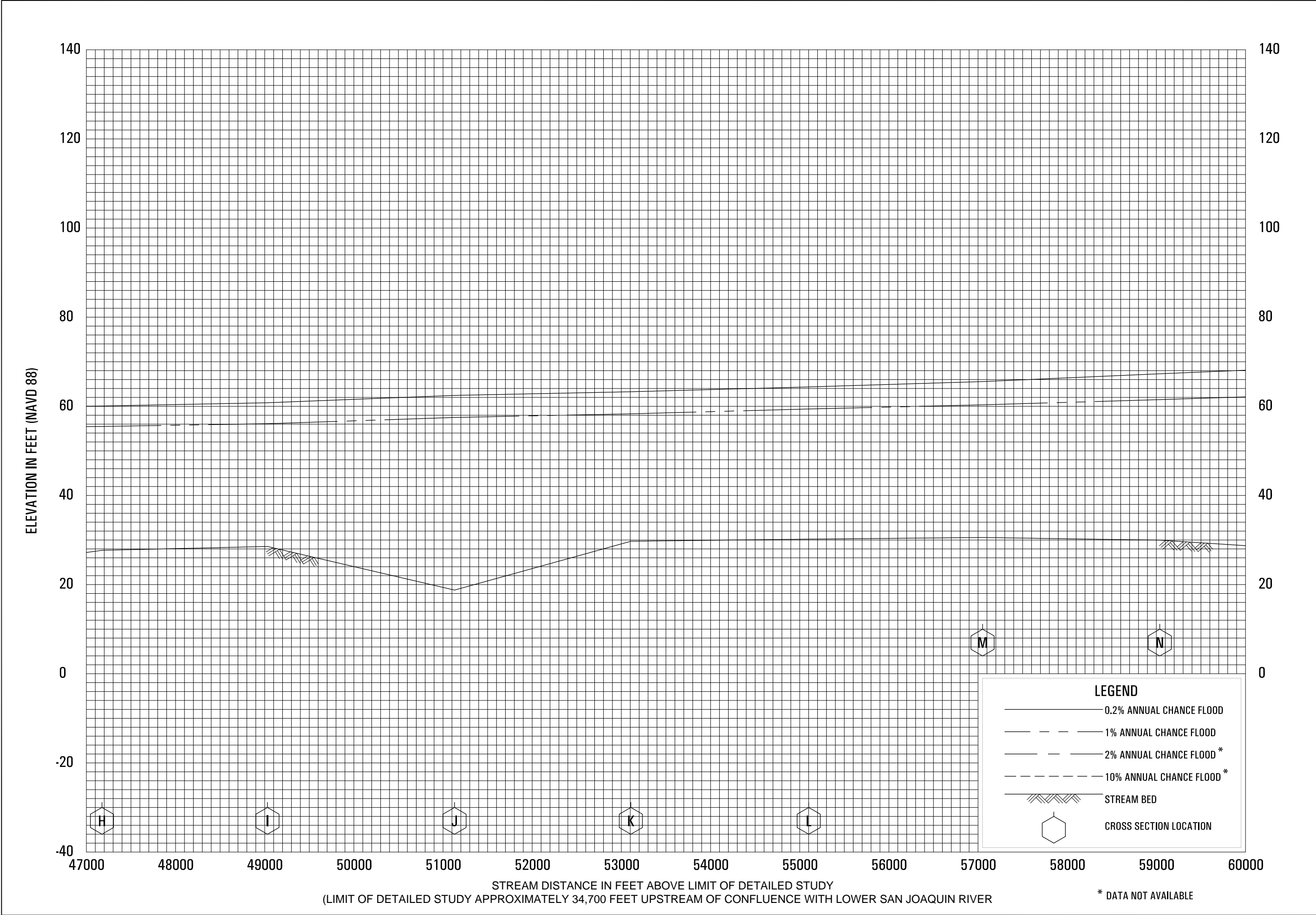
STANISLAUS RIVER

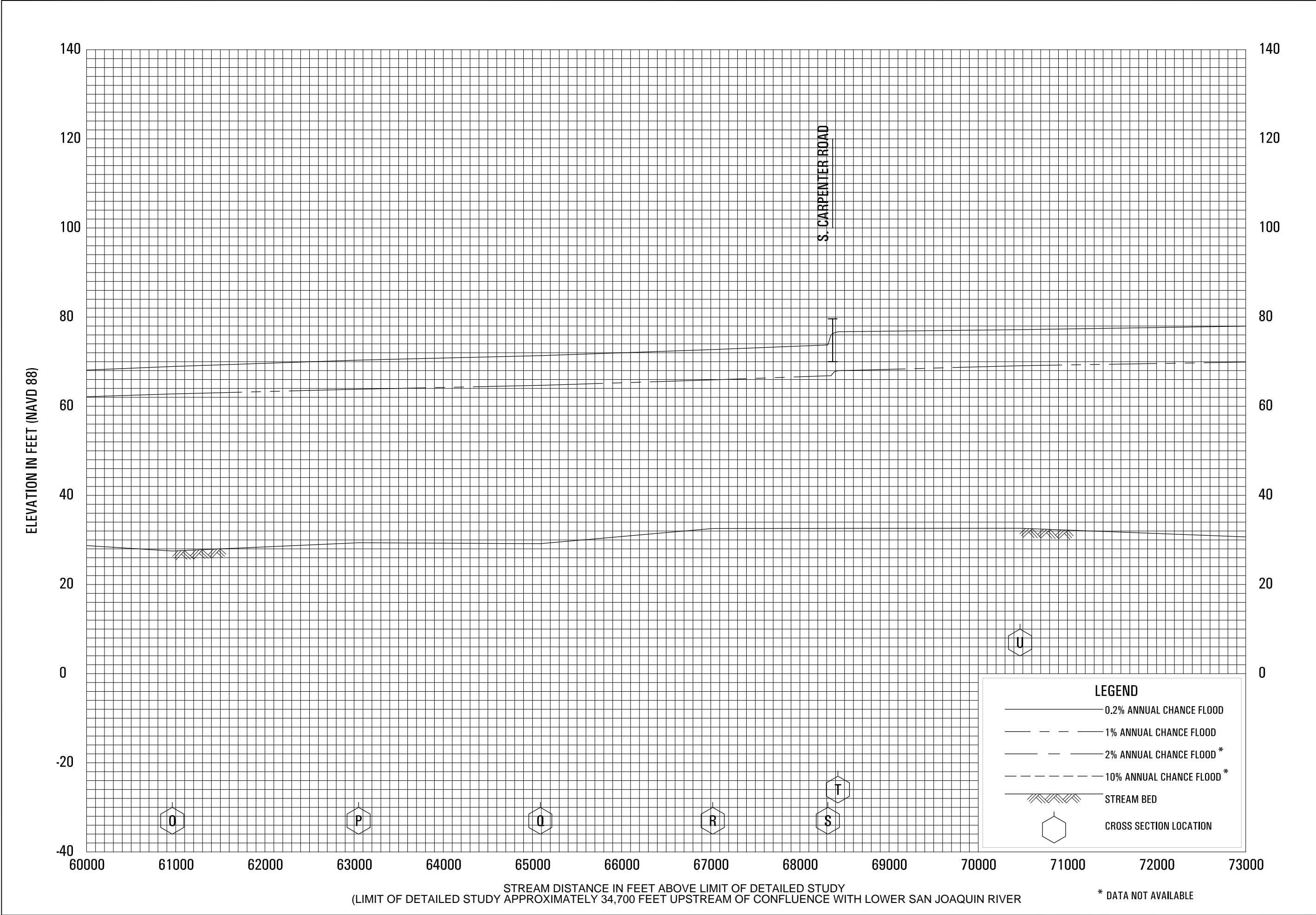
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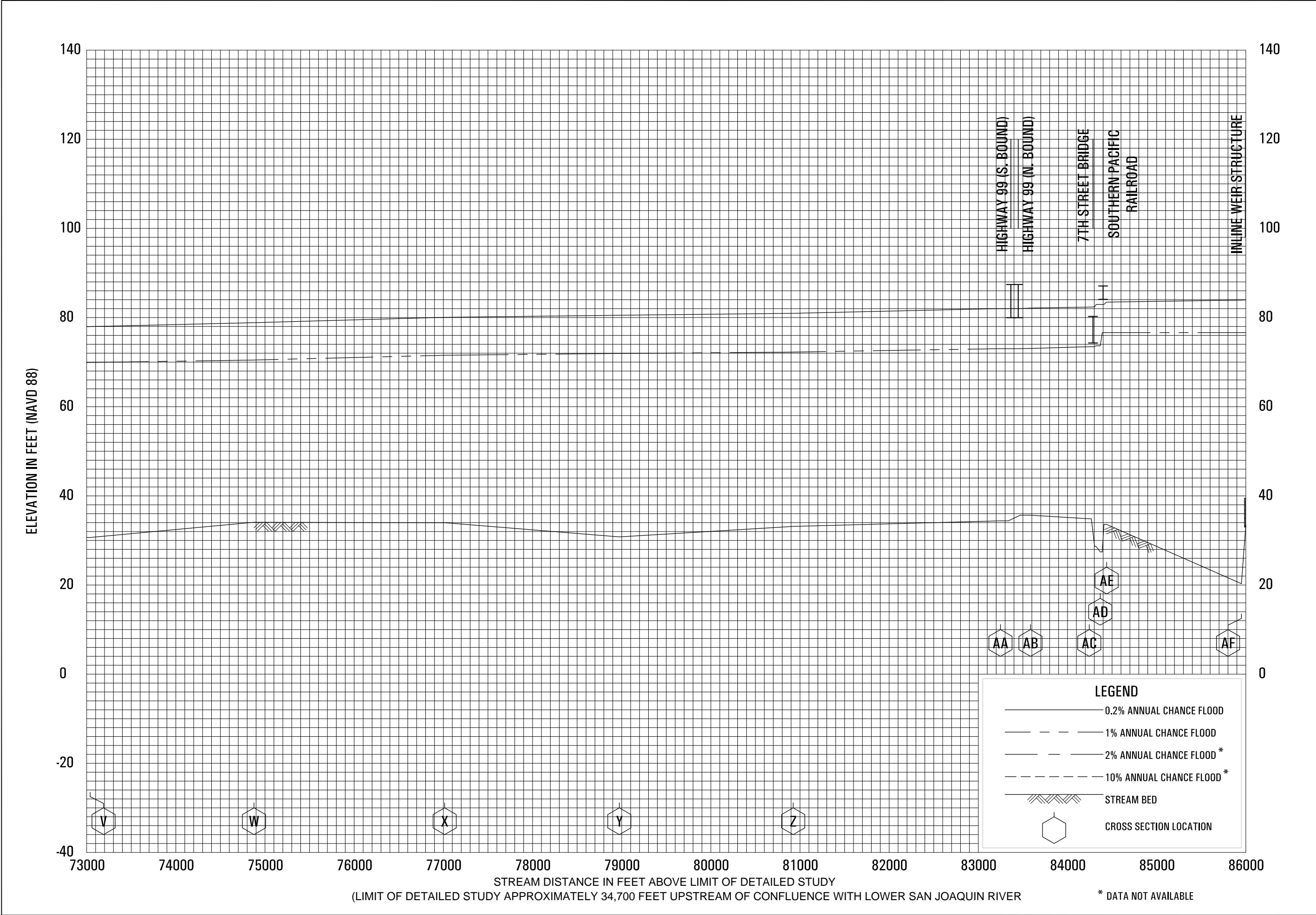
STANISLAUS COUNTY, CA

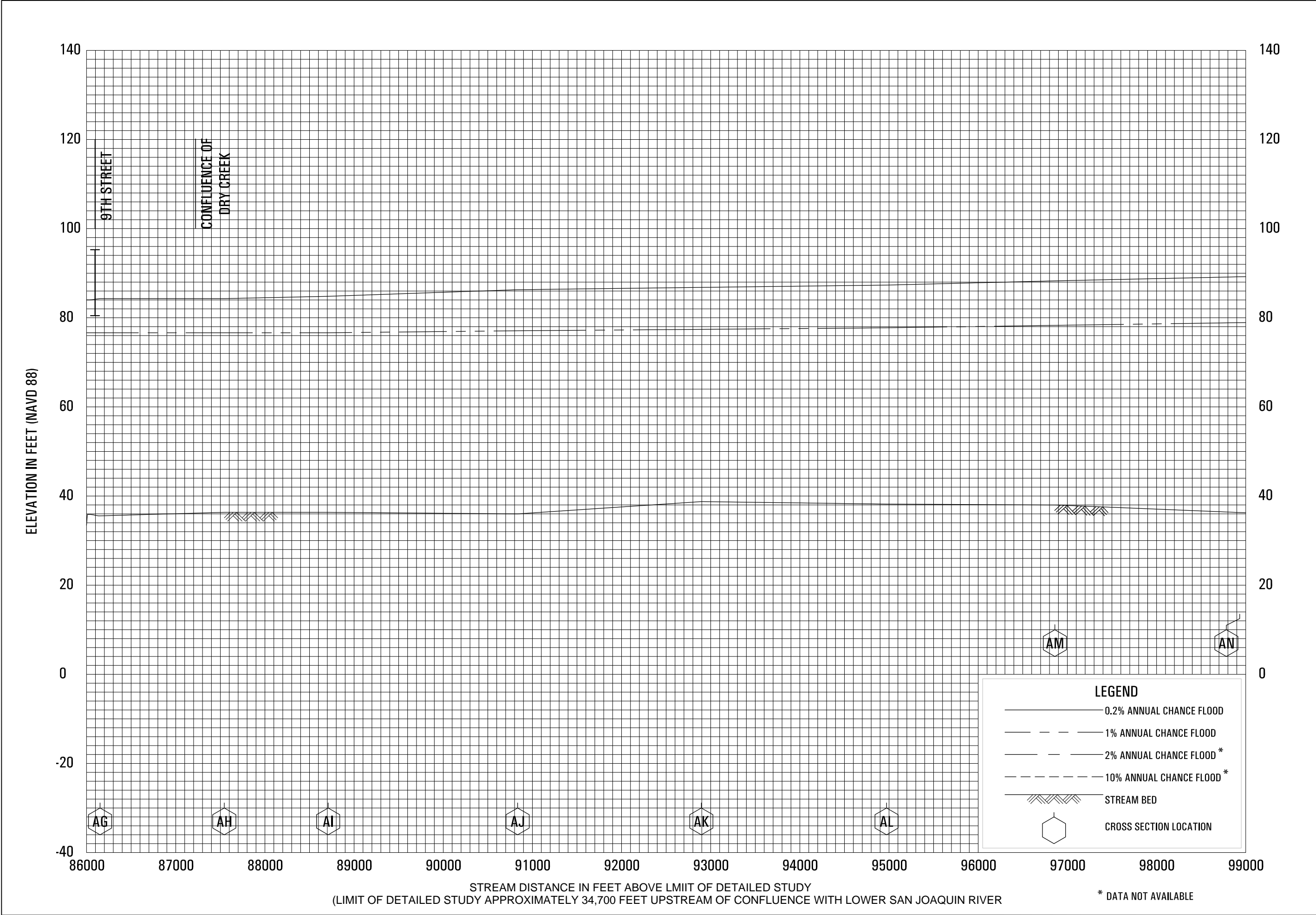
AND INCORPORATED AREAS

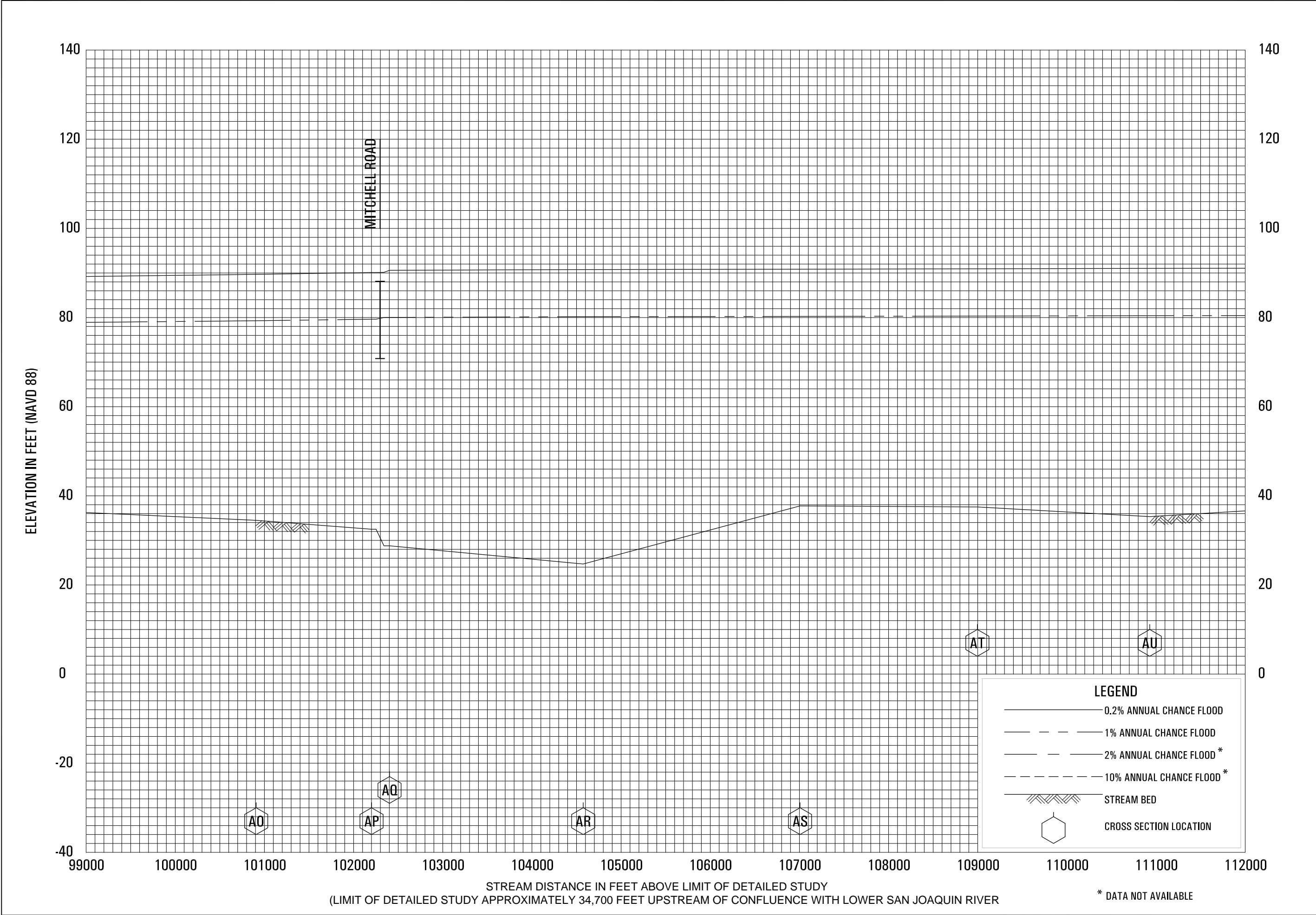


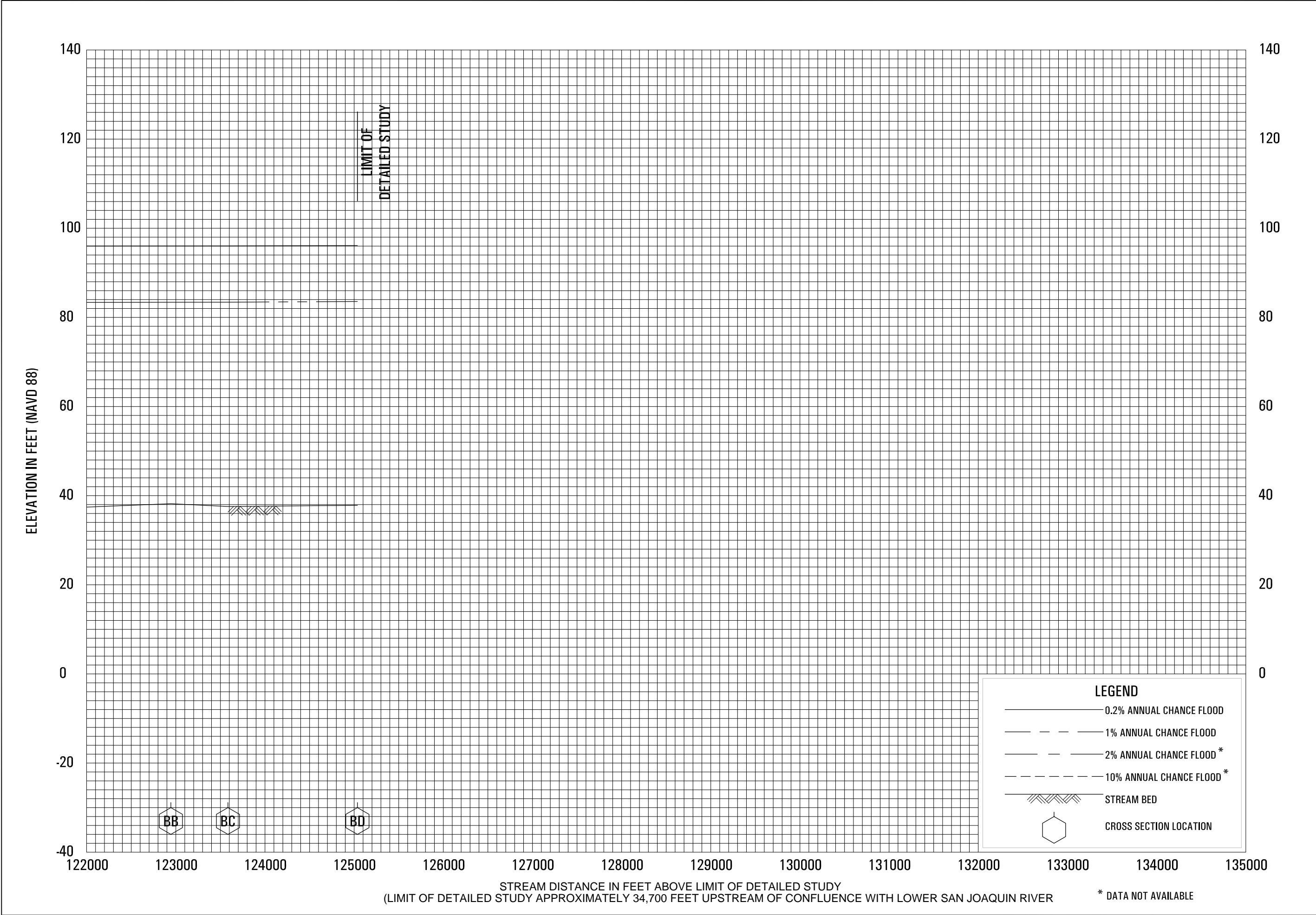




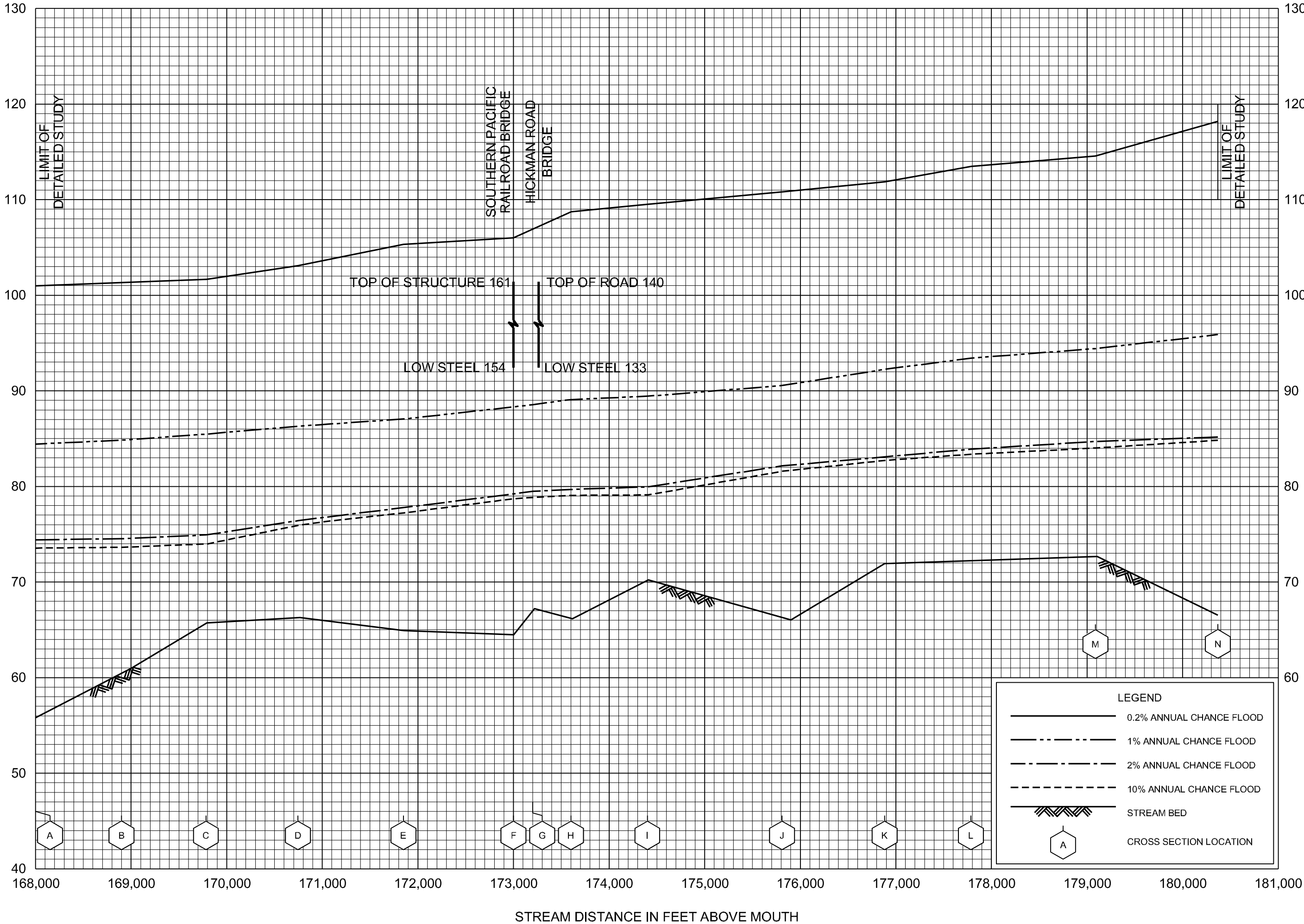








ELEVATION IN FEET (NAVD 88)



FLOOD PROFILES

TUOLUMNE RIVER AT WATERFORD

FEDERAL EMERGENCY MANAGEMENT AGENCY

STANISLAUS COUNTY, CA
AND INCORPORATED AREAS

NFIP FLOODPLAIN MANAGEMENT REGULATIONS TECHNICAL REVIEW

REVIEWED BY: MIRA HAHN FLOODPLAIN MANAGEMENT SPECIALIST, FEMA, ON
APRIL 1, 2020

NOTE: The missing requirements are identified using Track Changes, based on the
2020 California Model Ordinance.

Chapter 15.12

FLOOD DAMAGE PREVENTION

Sections:

Article I. General Provisions

- 15.12.010 Statutory authorization.
- 15.12.020 Statement of purpose.

Article II. Definitions

- 15.12.100 Definitions.

Article III. General Provisions

- 15.12.200 Lands to which this chapter applies.
- 15.12.210 Basis for establishing flood-prone areas.
- 15.12.220 Compliance.
- 15.12.230 Abrogation and greater restrictions.
- 15.12.240 Interpretation.
- 15.12.250 Warning and disclaimer of liability.
- 15.12.260 Severability.

Article IV. Administration

- 15.12.300 Permit.
- 15.12.310 Designation of the floodplain administrator.
- 15.12.320 Duties and responsibilities of the floodplain administrator.

Article V. Provisions for Flood Hazard Reduction

- 15.12.400 Standards of construction.
- 15.12.410 Standards for subdivisions or other proposed new development.
- 15.12.420 Standards for utilities.
- 15.12.430 Floodways.

Article I. General Provisions

15.12.010 Statutory authorization.

The Legislature of the State of California has in Government Code Sections 65302, 65560, and 65800 conferred upon local governments the authority to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the city council of the city of Hughson does hereby adopt the following floodplain management regulations. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.020 Statement of purpose.

It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- A. Protect human life and health;
- B. Minimize expenditure of public money for costly flood control projects;
- C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. Minimize prolonged business interruptions;
- E. Minimize damage to public facilities and utilities such as water and gas mains; electric, telephone and sewer lines; and streets and bridges located in areas of special flood hazard;
- F. Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future blighted areas caused by flood damage;
- G. Ensure that potential buyers are notified that property is in an area of special flood hazard; and
- H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

Article II. Definitions

15.12.100 Definitions.

Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application.

- A. “Area of special flood hazard” means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year.
- B. “Base flood” means a flood which has a one percent chance of being equaled or exceeded in any given year (also called the “100-year flood”). “Base flood” is the term used throughout this chapter.
- “Basement” means, for the purpose of floodplain management, the portion of a building having its floor subgrade (below ground level) on all sides.
- C. Building. See “structure.”
- D. “Development” means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.
- E. “Flood” or “flooding” means:
 - 1. A general and temporary condition of partial or complete inundation of normally dry land areas from: the overflow of inland or tidal waters; the unusual and rapid accumulation or runoff of surface waters from any source; or mudslides (i.e., mudflows) which are proximately caused by flooding as defined herein and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.

2. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusual and unforeseeable event which results in flooding as defined in this definition.

Flood Insurance Rate Map (FIRM) means an official map of a community, on which the Administrator has delineated both the special hazard areas and the risk premium zones applicable to the community.

F. "Floodplain" or "flood-prone area" means any land area susceptible to being inundated by water from any source – see "flooding."

G. "Floodplain administrator" is the individual appointed to administer and enforce the floodplain management regulations.

H. "Floodplain management" means the operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing, where possible, natural resources in the floodplain, including but not limited to emergency preparedness plans, flood control works, floodplain management regulations, and open space plans.

I. "Floodplain management regulations" means this chapter and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as grading and erosion control) and other application of police power which control development in flood-prone areas. This term describes federal, state or local regulations in any combination thereof which provide standards for preventing and reducing flood loss and damage.

Flood proofing means any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

J. "Governing body" is the local governing unit, i.e., county or municipality, that is empowered to adopt and implement regulations to provide for the public health, safety and general welfare of its citizenry.

Highest adjacent grade means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

K. "Historic structure" means any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of the Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
2. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
3. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or
4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either by an approved state program as determined by the Secretary of the Interior or directly by the Secretary of the Interior in states with approved programs.

“Lowest Floor” means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; Provided, that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of Sec. ____

L. “Manufactured home” means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term “manufactured home” does not include a “recreational vehicle.”

M. “Manufactured home park or subdivision” means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

N. “New construction,” for floodplain management purposes, means structures for which the “start of construction” commenced on or after the effective date of floodplain management regulations adopted by this community (September 26, 2008), and includes any subsequent improvements to such structures.

O. One-Hundred-Year Flood or 100-Year Flood. See “base flood.”

P. “Recreational vehicle” means a vehicle which is:

1. Built on a single chassis;
2. Four hundred square feet or less when measured at the largest horizontal projection;
3. Designed to be self-propelled or permanently towable by a light-duty truck; and
4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Q. “Start of construction” includes substantial improvement and other proposed new development and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days from the date of the permit. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

R. “Structure” means a walled and roofed building that is principally above ground; this includes a gas or liquid storage tank or a manufactured home.

S. “Substantial damage” means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

T. “Substantial improvement” means any reconstruction, rehabilitation, addition, or other proposed new development of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement. This

term includes structures which have incurred “substantial damage,” regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a structure to correct existing violations or state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
2. Any alteration of a “historic structure”; provided, that the alteration will not preclude the structure’s continued designation as a “historic structure.” (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

Article III. General Provisions

15.12.200 Lands to which this chapter applies.

This chapter shall apply to all areas identified as flood-prone within the jurisdiction of the city of Hughson. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.210 Basis for establishing flood-prone areas.

The areas of special flood hazard identified by the Federal Emergency Management Agency (FEMA) in the Flood Insurance Study (FIS) dated September 26, 2008, Stanislaus County, California, and Incorporated Areas with accompanying Flood Insurance Rate Maps (FIRMs) and Flood Boundary and Floodway Maps (FBFMs), , and all subsequent amendments and/or revisions, are hereby adopted by reference and declared to be part of this chapter. This FIS and attendant mapping are the minimum area of applicability of this chapter and may be supplemented by studies for other areas which allow implementation of this chapter and which are recommended to the city council by the floodplain administrator. The floodplain administrator shall obtain, review, and reasonably utilize any base flood data available from other federal or state agencies or other source to identify flood-prone areas within the jurisdiction of city of Hughson. This data will be on file at the city of Hughson, City Hall, 7018 Pine Street, Hughson, California, 95326. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.220 Compliance.

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this chapter and other applicable regulations. Violation of the requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Nothing herein shall prevent the city council from taking such lawful action as is necessary to prevent or remedy any violation. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.230 Abrogation and greater restrictions.

This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this chapter and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.240 Interpretation.

In the interpretation and application of this chapter, all provisions shall be considered as minimum requirements, liberally construed in favor of the governing body, and deemed neither to limit nor repeal any other powers granted under state statutes. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.250 Warning and disclaimer of liability.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or

natural causes. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the city council, city of Hughson, any officer or employee thereof, the state of California, the Federal Insurance Administration, or Federal Emergency Management Agency for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.260 Severability.

This chapter and the various parts thereof are hereby declared to be severable. Should any section of this chapter be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the chapter as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

Article IV. Administration

15.12.300 Permit.

Prior to issuance of any permit obtained for all proposed construction or other development in the community, including the placement of manufactured homes, a determination shall be made as to whether such construction or other development is within flood-prone areas. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.310 Designation of the floodplain administrator.

The community development director, as the floodplain administrator, is hereby appointed to administer, implement, and enforce this chapter by granting or denying development permits in accord with its provisions. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.320 Duties and responsibilities of the floodplain administrator.

The duties and responsibilities of the floodplain administrator shall include, but not be limited to, the following:

A. Permit Review. Review all development permit applications to determine:

1. Permit requirements of this chapter have been satisfied;
2. All other required state and federal permits have been obtained; and
3. The site is reasonably safe from flooding.

B. Review and Use of Any Other Base Flood Data. The floodplain administrator shall obtain, review, and reasonably utilize any base flood data available from other federal or state agency or other source.

C. Notification of Other Agencies.

1. Alteration or Relocation of a Watercourse.
 - a. Notify adjacent communities and the California Department of Water Resources prior to alteration or relocation;
 - b. Submit evidence of such notification to the Federal Emergency Management Agency; and
 - c. Assure that the flood carrying capacity within the altered or relocated portion of said watercourse is maintained.
- (2) Base flood elevation changes due to physical alterations:

- a. Require applicants who submit hydrologic and hydraulic engineering analyses to support permit applications to submit to FEMA the data and information necessary to maintain the Flood Insurance Rate Maps when the analyses indicate changes in base flood elevations, flood hazard area boundaries, or floodway designations; such submissions shall be made within 6 months of such data becoming available.
2. Changes in Corporate Boundaries.
 - a. Notify FEMA in writing whenever the corporate boundaries have been modified by annexation or other means and include a copy of the map of the community clearly delineating the new corporate limits. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

VARIANCES

Nature of variances. The considerations and conditions for variances set forth in this article are based on the general principle of zoning law that variances pertain to a piece of property and are not personal in nature. A variance may be issued for a parcel of property with physical characteristics so unusual that complying with the requirements of these regulations would create an exceptional hardship to the applicant or the surrounding property owners. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not to the structure, its inhabitants, or the property owners. The issuance of a variance is for floodplain management purposes only. Federal flood insurance premium rates are determined by the National Flood Insurance Program according to actuarial risk and will not be modified by the granting of a variance.

It is the duty of the **{community governing body}** to promote public health, safety and welfare and minimize losses from flooding. This duty is so compelling and the implications of property damage and the cost of insuring a structure built below flood level are so serious that variances from the elevation or other requirements in the building codes should be quite rare. The long term goal of preventing and reducing flood loss and damage, and minimizing recovery costs, inconvenience, danger, and suffering, can only be met when variances are strictly limited. Therefore, the variance requirements in these regulations are detailed and contain multiple provisions that must be met before a variance can be properly issued. The criteria are designed to screen out those situations in which alternatives other than a variance are more appropriate.

Variances; general. The **{body to hear variances}** shall hear and decide requests for variances from the strict application of these regulations.

Limitations on authority. The **{body to hear variances}** shall base its determination on technical justifications submitted by applicants, the considerations and conditions set forth in this article, the comments and recommendations of the Floodplain Administrator and Building Official, as applicable, and has the right to attach such conditions to variances as it deems necessary to further the purposes and objectives of these regulations and the building code.

Records. The Floodplain Administrator shall maintain a permanent record of all variance actions, including justification for issuance.

Historic structures. A variance is authorized to be issued for the repair, improvement, or rehabilitation of a historic structure upon a determination that the proposed repair, improvement, or rehabilitation will not preclude the structure's continued designation as a historic structure, and the variance is the minimum necessary to preserve the historic character and design of the structure. When the proposed work precludes the structure's


continued designation as a historic building, a variance shall not be granted and the structure and any repair, improvement, and rehabilitation shall be subject to the requirements of the building code.

Restrictions in floodways. A variance shall not be issued for any proposed development in a floodway when any increase in flood levels would result during the base flood discharge, as evidenced by the applicable analyses required in Section 105-3(1) of these regulations.

Functionally dependent uses. A variance is authorized to be issued for the construction or substantial improvement necessary for the conduct of a functionally dependent use provided the criteria in Section 1612 of the building code (CCR Title 24 Part 2) or Section R322 of the residential code (CCR Title 24 Part 2.5) are met, as applicable, and the variance is the minimum necessary to allow the construction or substantial improvement, and that all due consideration has been given to use of methods and materials that minimize flood damages during the base flood and create no additional threats to public safety.

The following section for Agricultural structures is OPTIONAL. If this section is DELETED, the next two sections MUST be renumbered (no cross references are affected) and the definition for "agricultural structures" must be removed..

Agricultural structures. A variance is authorized to be issued for the construction or substantial improvement of agricultural structures that are not elevated or dry floodproofed, provided the requirements of this section are satisfied and:

- (1) A determination has been made that the proposed agricultural structure:
 - (a) Is used exclusively in connection with the production, harvesting, storage, raising, or drying of agricultural commodities and livestock, or storage of tools or equipment used in connection with these purposes or uses, and will be restricted to such exclusive uses.
 - (b) Has low damage potential.
 - (c) Does not increase risks and pose a danger to public health, safety, and welfare if flooded and contents are released, including but not limited to the effects of flooding on manure storage, livestock confinement operations, liquified natural gas terminals, and production and storage of highly volatile, toxic, or water-reactive materials.
 - (d) Is not located in a coastal high hazard area (Zone V/VE), except for aquaculture structures dependent on close proximity to water.
 - (e)  Complies with the wet floodproofing construction requirements of Section 107-8(2), below.
- (2) Wet floodproofing construction requirements.
 - (a) Anchored to resist flotation, collapse, and lateral movement.
 - (b) When enclosed by walls, walls have flood openings that comply with the flood opening requirements of ASCE 24, Chapter 2.
 - (c) Flood damage-resistant materials are used below the base flood elevation.
 - (d) Mechanical, electrical, and utility equipment are elevated above the base flood elevation.

Considerations for issuance of variances. In reviewing applications for variances, all technical evaluations, all relevant factors, all other requirements of these regulations and the building code, as applicable, and the following shall be considered:

- (1) The danger that materials and debris may be swept onto other lands resulting in further injury or damage.
- (2) The danger to life and property due to flooding or erosion damage.
- (3) The susceptibility of the proposed development, including contents, to flood damage and the effect of such damage on current and future owners.
- (4) The importance of the services provided by the proposed development to the community.
- (5) The availability of alternate locations for the proposed development that are not subject to flooding or erosion and the necessity of a waterfront location, where applicable.
- (6) The compatibility of the proposed development with existing and anticipated development.
- (7) The relationship of the proposed development to the comprehensive plan and floodplain management program for that area.
- (8) The safety of access to the property in times of flood for ordinary and emergency vehicles.
- (9) The expected heights, velocity, duration, rate of rise and debris and sediment transport of the floodwater and the effects of wave action, if applicable, expected at the site.
- (10) The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, streets and bridges.

Conditions for issuance of variances. Variances shall only be issued upon:

- (1) Submission by the applicant of a showing of good and sufficient cause that the unique characteristics of the size, configuration or topography of the site limit compliance with any provision of these regulations or renders the elevation standards of the building code inappropriate.
- (2) A determination that failure to grant the variance would result in exceptional hardship due to the physical characteristics of the land that render the lot undevelopable.
- (3) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, nor create nuisances, cause fraud on or victimization of the public or future property owners, or conflict with existing local laws or ordinances.
- (4) A determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- (5) When the request is to allow construction of the lowest floor of a new building or substantial improvement of a building below the base flood elevation, notification to the applicant in writing over the signature of the Floodplain Administrator

specifying the difference between the base flood elevation and the proposed elevation of the lowest floor, stating that issuance of a variance to construct below the elevation required in the building code will result in increased premium rates for federal flood insurance up to amounts as high as \$25 for \$100 of insurance coverage, and that such construction below the required elevation increases risks to life and property.

Article V. Provisions for Flood Hazard Reduction

15.12.400 Standards of construction.

If a proposed building site is in a flood-prone area, all new construction and substantial improvements, including manufactured homes, shall:

A. Be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

B. Be constructed:

1. With materials and utility equipment resistant to flood damage;
2. Using methods and practices that minimize flood damage;
3. With electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.410 Standards for subdivisions or other proposed new development.

If a subdivision proposal or other proposed new development, including manufactured home parks or subdivisions, is in a flood-prone area, any such proposals shall be reviewed to assure that:

A. All such proposals are consistent with the need to minimize flood damage within the flood-prone area;

B. All public utilities and facilities such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage; and

C. Adequate drainage is provided to reduce exposure to flood hazards. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

In addition to the requirements of 15.12.410 of these regulations, where any portion of proposed subdivisions, including proposals for manufactured home parks and subdivisions, lies within a flood hazard area, the following shall be required:

- (1) The flood hazard area shall be delineated on preliminary subdivision plats.
- (2) Where the subdivision has more than 50 lots or is larger than 5 acres and base flood elevations are not included on the FIRM, the base flood elevations determined in accordance with **Section “Site Plans and Construction Documents - (Information in flood hazard areas without base flood elevations (approximate Zone A))”** of these regulations.
- (3) When, as part of a proposed subdivision, fill will be placed to support buildings, the fill shall be placed in accordance with the building code and approval of the subdivision shall require submission of as-built elevations for each filled pad certified by a licensed land surveyor or registered civil engineer.

15.12.420 Standards for utilities.

A. All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate:

1. Infiltration of flood waters into the systems; and
2. Discharge from the systems into flood waters.

B. On-site waste disposal systems shall be located to avoid impairment to them, or contamination from them during flooding. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.430 Floodways.

Until a regulated floodway is adopted, no new construction, substantial development, or other development (including infill) shall be permitted within Zone A unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other development, will not increase the water surface elevation of the base flood more than one foot at any point within the lands under the jurisdiction of the city of Hughson. (Ord. 20-02 § 1, 2020)

**CITY OF HUGHSON
CITY COUNCIL
ORDINANCE NO. 2021 - 06**

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF HUGHSON AMENDING
MUNICIPAL CODE CHAPTER 15.12 – FLOOD DAMAGE PREVENTION TO TITLE 15
“BUILDINGS AND CONSTRUCTION” OF THE CITY MUNICIPAL CODE**

WHEREAS, the Legislature of the State of California has, in Government Code Sections 65302, 65560, and 65800, conferred upon local governments the authority to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Federal Emergency Management Agency has identified special flood hazard areas within the boundaries of **CITY OF HUGHSON** and such areas may be subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare, and

WHEREAS, the **CITY OF HUGHSON** was accepted for participation in the National Flood Insurance Program on September 26, 2008 and the **CITY COUNCIL** desires to continue to meet the requirements of Title 44 Code of Federal Regulations, Sections 59 and 60, necessary for such participation; and

WHEREAS, pursuant to the California Health and Safety Code, Division 13, Part 1.5 and Part 2.5, the **CITY OF HUGHSON** is required to administer and enforce the *California Building Standards Code*, and such building codes contain certain provisions that apply to the design and construction of buildings and structures in flood hazard areas; and

WHEREAS, the **CITY COUNCIL** has determined that it is in the public interest to adopt the proposed floodplain management regulations that are coordinated with the *California Building Standards Code*.

NOW, THEREFORE THE CITY COUNCIL OF THE CITY OF HUGHSON DOES ORDAIN THAT THE FOLLOWING FLOODPLAIN MANAGEMENT REGULATIONS ARE HEREBY ADOPTED:

Section 1. Chapter 15.12 of Title 15 of the Hughson Municipal Code is amended as follows:

Article I. General Provisions

15.12.010 Statutory authorization.

The Legislature of the State of California has in Government Code Sections 65302, 65560, and 65800 conferred upon local governments the authority to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the city council of the city of Hughson does hereby adopt the following floodplain management regulations. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.020 Statement of purpose.

It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- A. Protect human life and health;
- B. Minimize expenditure of public money for costly flood control projects;
- C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. Minimize prolonged business interruptions;
- E. Minimize damage to public facilities and utilities such as water and gas mains; electric, telephone and sewer lines; and streets and bridges located in areas of special flood hazard;
- F. Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future blighted areas caused by flood damage;
- G. Ensure that potential buyers are notified that property is in an area of special flood hazard; and
- H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

Article II. Definitions

15.12.100 Definitions.

Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application.

- A. “Area of special flood hazard” means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year.
- B. “Base flood” means a flood which has a one percent chance of being equaled or exceeded in any given year (also called the “100-year flood”). “Base flood” is the term used throughout this chapter.
- C. “Basement” means, for the purpose of floodplain management, the portion of a building having its floor subgrade (below ground level) on all sides.
- D. Building. See “structure.”
- E. “Development” means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.
- F. “Flood” or “flooding” means:
 - 1. A general and temporary condition of partial or complete inundation of normally dry land areas from: the overflow of inland or tidal waters; the unusual and rapid accumulation

or runoff of surface waters from any source; or mudslides (i.e., mudflows) which are proximately caused by flooding as defined herein and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.

2. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusual and unforeseeable event which results in flooding as defined in this definition.

G. “Flood Insurance Rate Map” (FIRM) means an official map of a community, on which the Administrator has delineated both the special hazard areas and the risk premium zones applicable to the community.

H. “Floodplain” or “flood-prone area” means any land area susceptible to being inundated by water from any source – see “flooding.”

I. “Floodplain administrator” is the individual appointed to administer and enforce the floodplain management regulations.

J. “Floodplain management” means the operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing, where possible, natural resources in the floodplain, including but not limited to emergency preparedness plans, flood control works, floodplain management regulations, and open space plans.

K. “Floodplain management regulations” means this chapter and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as grading and erosion control) and other application of police power which control development in flood-prone areas. This term describes federal, state or local regulations in any combination thereof which provide standards for preventing and reducing flood loss and damage.

L. “Flood proofing” means any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents.

M. “Governing body” is the local governing unit, i.e., county or municipality, that is empowered to adopt and implement regulations to provide for the public health, safety and general welfare of its citizenry.

N. “Highest adjacent grade” means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

O. “Historic structure” means any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of the Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

2. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
3. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or
4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either by an approved state program as determined by the Secretary of the Interior or directly by the Secretary of the Interior in states with approved programs.

P. "Lowest Floor" means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; Provided, that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of Section 15.12.400.

Q. "Manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle."

R. "Manufactured home park or subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

S. "New construction," for floodplain management purposes, means structures for which the "start of construction" commenced on or after the effective date of floodplain management regulations adopted by this community (September 26, 2008), and includes any subsequent improvements to such structures.

T. One-Hundred-Year Flood or 100-Year Flood. See "base flood."

U. "Recreational vehicle" means a vehicle which is:

1. Built on a single chassis;
2. Four hundred square feet or less when measured at the largest horizontal projection;
3. Designed to be self-propelled or permanently towable by a light-duty truck; and
4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

V. "Start of construction" includes substantial improvement and other proposed new development and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days from the date of the permit. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does

it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

W. “Structure” means a walled and roofed building that is principally above ground; this includes a gas or liquid storage tank or a manufactured home.

X. “Substantial damage” means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Y. “Substantial improvement” means any reconstruction, rehabilitation, addition, or other proposed new development of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage,” regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a structure to correct existing violations or state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
2. Any alteration of a “historic structure”; provided, that the alteration will not preclude the structure’s continued designation as a “historic structure.” (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

Article III. General Provisions

15.12.200 Lands to which this chapter applies.

This chapter shall apply to all areas identified as flood-prone within the jurisdiction of the city of Hughson. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.210 Basis for establishing flood-prone areas.

The areas of special flood hazard identified by the Federal Emergency Management Agency (FEMA) in the Flood Insurance Study (FIS) dated September 26, 2008, Stanislaus County, California, and Incorporated Areas with accompanying Flood Insurance Rate Maps (FIRMs) and Flood Boundary and Floodway Maps (FBFMs), dated September 26, 1980, and all subsequent amendments and/or revisions, are hereby adopted by reference and declared to be part of this chapter. This FIS and attendant mapping are the minimum area of applicability of this chapter and may be supplemented by studies for other areas which allow implementation of this chapter and which are recommended to the city council by the floodplain administrator. The floodplain administrator shall obtain, review, and reasonably utilize any base flood data available from other federal or state agencies or other source to identify flood-prone areas within the jurisdiction of city of Hughson. This data will be on file at the city of Hughson, City Hall, 7018 Pine Street, Hughson, California, 95326. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.220 Compliance.

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this chapter and other applicable regulations. Violation of the requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Nothing herein shall prevent the city council from taking such lawful action as is necessary to prevent or remedy any violation. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.230 Abrogation and greater restrictions.

This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this chapter and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.240 Interpretation.

In the interpretation and application of this chapter, all provisions shall be considered as minimum requirements, liberally construed in favor of the governing body, and deemed neither to limit nor repeal any other powers granted under state statutes. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.250 Warning and disclaimer of liability.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the city council, city of Hughson, any officer or employee thereof, the state of California, the Federal Insurance Administration, or Federal Emergency Management Agency for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.260 Severability.

This chapter and the various parts thereof are hereby declared to be severable. Should any section of this chapter be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the chapter as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

Article IV. Administration**15.12.300 Permit.**

Prior to issuance of any permit obtained for all proposed construction or other development in the community, including the placement of manufactured homes, a determination shall be made as to whether such construction or other development is within flood-prone areas. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.310 Designation of the floodplain administrator.

The community development director, as the floodplain administrator, is hereby appointed to administer, implement, and enforce this chapter by granting or denying development permits in accord with its provisions. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.320 Duties and responsibilities of the floodplain administrator.

The duties and responsibilities of the floodplain administrator shall include, but not be limited to, the following:

A. Permit Review. Review all development permit applications to determine:

1. Permit requirements of this chapter have been satisfied;
2. All other required state and federal permits have been obtained; and
3. The site is reasonably safe from flooding.

B. Review and Use of Any Other Base Flood Data. The floodplain administrator shall obtain, review, and reasonably utilize any base flood data available from other federal or state agency or other source.

C. Notification of Other Agencies.

1. Alteration or Relocation of a Watercourse.

- a. Notify adjacent communities and the California Department of Water Resources prior to alteration or relocation;
- b. Submit evidence of such notification to the Federal Emergency Management Agency; and
- c. Assure that the flood carrying capacity within the altered or relocated portion of said watercourse is maintained.

2. Base flood elevation changes due to physical alterations:

- a. Require applicants who submit hydrologic and hydraulic engineering analyses to support permit applications to submit to FEMA the data and information necessary to maintain the Flood Insurance Rate Maps when the analyses indicate changes in base flood elevations, flood hazard area boundaries, or floodway designations; such submissions shall be made within 6 months of such data becoming available.

3. Changes in Corporate Boundaries.

- a. Notify FEMA in writing whenever the corporate boundaries have been modified by annexation or other means and include a copy of the map of the community clearly delineating the new corporate limits. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.330 Variances

A. Nature of variances. The considerations and conditions for variances set forth in this article are based on the general principle of zoning law that variances pertain to a piece of property and are not personal in nature. A variance may be issued for a parcel of property with physical characteristics so unusual that complying with the requirements of these regulations would create an exceptional hardship to the applicant or the surrounding property owners. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not to the structure, its inhabitants, or the property owners. The issuance of a variance is for floodplain management purposes only. Federal flood

insurance premium rates are determined by the National Flood Insurance Program according to actuarial risk and will not be modified by the granting of a variance.

It is the duty of the **City Council** to promote public health, safety and welfare and minimize losses from flooding. This duty is so compelling and the implications of property damage and the cost of insuring a structure built below flood level are so serious that variances from the elevation or other requirements in the building codes should be quite rare. The long-term goal of preventing and reducing flood loss and damage, and minimizing recovery costs, inconvenience, danger, and suffering, can only be met when variances are strictly limited. Therefore, the variance requirements in these regulations are detailed and contain multiple provisions that must be met before a variance can be properly issued. The criteria are designed to screen out those situations in which alternatives other than a variance are more appropriate.

B. Variances; general. The **Planning Commission** shall hear and decide requests for variances from the strict application of these regulations.

C. Limitations on authority. The **Planning Commission** shall base its determination on technical justifications submitted by applicants, the considerations and conditions set forth in this article, the comments and recommendations of the Floodplain Administrator and Building Official, as applicable, and has the right to attach such conditions to variances as it deems necessary to further the purposes and objectives of these regulations and the building code.

D. Records. The Floodplain Administrator shall maintain a permanent record of all variance actions, including justification for issuance.

E. Historic structures. A variance is authorized to be issued for the repair, improvement, or rehabilitation of a historic structure upon a determination that the proposed repair, improvement, or rehabilitation will not preclude the structure's continued designation as a historic structure, and the variance is the minimum necessary to preserve the historic character and design of the structure. When the proposed work precludes the structure's continued designation as a historic building, a variance shall not be granted and the structure and any repair, improvement, and rehabilitation shall be subject to the requirements of the building code.

F. Restrictions in floodways. A variance shall not be issued for any proposed development in a floodway when any increase in flood levels would result during the base flood discharge, as evidenced by the applicable analyses required in Section 105-3(1) of these regulations.

G. Functionally dependent uses. A variance is authorized to be issued for the construction or substantial improvement necessary for the conduct of a functionally dependent use provided the criteria in Section 1612 of the building code (CCR Title 24 Part 2) or Section R322 of the residential code (CCR Title 24 Part 2.5) are met, as applicable, and the variance is the minimum necessary to allow the construction or substantial improvement, and that all due consideration has been given to use of methods and materials that minimize flood damages during the base flood and create no additional threats to public safety.

H. Agricultural structures. A variance is authorized to be issued for the construction or substantial improvement of agricultural structures that are not elevated or dry floodproofed, provided the requirements of this section are satisfied and:

1. A determination has been made that the proposed agricultural structure:

- a. Is used exclusively in connection with the production, harvesting, storage, raising, or drying of agricultural commodities and livestock, or storage of tools or equipment used in connection with these purposes or uses, and will be restricted to such exclusive uses.
- b. Has low damage potential.
- c. Does not increase risks and pose a danger to public health, safety, and welfare if flooded and contents are released, including but not limited to the effects of flooding on manure storage, livestock confinement operations, liquified natural gas terminals, and production and storage of highly volatile, toxic, or water-reactive materials.
- d. Complies with the wet floodproofing construction requirements of Section 107-8(2), below.

2. Wet floodproofing construction requirements.

- a. Anchored to resist flotation, collapse, and lateral movement.
- b. When enclosed by walls, walls have flood openings that comply with the flood opening requirements of ASCE 24, Chapter 2.
- c. Flood damage-resistant materials are used below the base flood elevation.
- d. Mechanical, electrical, and utility equipment are elevated above the base flood elevation.

I. Considerations for issuance of variances. In reviewing applications for variances, all technical evaluations, all relevant factors, all other requirements of these regulations and the building code, as applicable, and the following shall be considered:

- 1. The danger that materials and debris may be swept onto other lands resulting in further injury or damage.
- 2. The danger to life and property due to flooding or erosion damage.
- 3. The susceptibility of the proposed development, including contents, to flood damage and the effect of such damage on current and future owners.
- 4. The importance of the services provided by the proposed development to the community.
- 5. The availability of alternate locations for the proposed development that are not subject to flooding or erosion and the necessity of a waterfront location, where applicable.
- 6. The compatibility of the proposed development with existing and anticipated development.
- 7. The relationship of the proposed development to the comprehensive plan and floodplain management program for that area.
- 8. The safety of access to the property in times of flood for ordinary and emergency vehicles.
- 9. The expected heights, velocity, duration, rate of rise and debris and sediment transport of the floodwater and the effects of wave action, if applicable, expected at the site.

10. The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, streets and bridges.

J. Conditions for issuance of variances. Variances shall only be issued upon:

1. Submission by the applicant of a showing of good and sufficient cause that the unique characteristics of the size, configuration, or topography of the site limit compliance with any provision of these regulations or renders the elevation standards of the building code inappropriate.
2. A determination that failure to grant the variance would result in exceptional hardship due to the physical characteristics of the land that render the lot undevelopable.
3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, nor create nuisances, cause fraud on or victimization of the public or future property owners, or conflict with existing local laws or ordinances.
4. A determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
5. When the request is to allow construction of the lowest floor of a new building or substantial improvement of a building below the base flood elevation, notification to the applicant in writing over the signature of the Floodplain Administrator specifying the difference between the base flood elevation and the proposed elevation of the lowest floor, stating that issuance of a variance to construct below the elevation required in the building code will result in increased premium rates for federal flood insurance up to amounts as high as \$25 for \$100 of insurance coverage, and that such construction below the required elevation increases risks to life and property.

Article V. Provisions for Flood Hazard Reduction

15.12.400 Standards of construction.

If a proposed building site is in a flood-prone area, all new construction and substantial improvements, including manufactured homes, shall:

- A. Be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
- B. Be constructed:
 1. With materials and utility equipment resistant to flood damage;
 2. Using methods and practices that minimize flood damage;
 3. With electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.410 Standards for subdivisions or other proposed new development.

If a subdivision proposal or other proposed new development, including manufactured home parks or subdivisions, is in a flood-prone area, any such proposals shall be reviewed to assure that:

- A. All such proposals are consistent with the need to minimize flood damage within the flood-prone area;
- B. All public utilities and facilities such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage; and
- C. Adequate drainage is provided to reduce exposure to flood hazards. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)
- D. In addition to the requirements of 15.12.410 of these regulations, where any portion of proposed subdivisions, including proposals for manufactured home parks and subdivisions, lies within a flood hazard area, the following shall be required:
 - 1. The flood hazard area shall be delineated on preliminary subdivision plats.
 - 2. Where the subdivision has more than 50 lots or is larger than 5 acres and base flood elevations are not included on the FIRM, the base flood elevations determined in accordance with Section 15.12.400 of these regulations.
 - 3. When, as part of a proposed subdivision, fill will be placed to support buildings, the fill shall be placed in accordance with the building code and approval of the subdivision shall require submission of as-built elevations for each filled pad certified by a licensed land surveyor or registered civil engineer.

15.12.420 Standards for utilities.

- A. All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate:
 - 1. Infiltration of flood waters into the systems; and
 - 2. Discharge from the systems into flood waters.
- B. On-site waste disposal systems shall be located to avoid impairment to them, or contamination from them during flooding. (Ord. 20-02 § 1, 2020; Ord. 16-05 § 1, 2016)

15.12.430 Floodways.

Until a regulated floodway is adopted, no new construction, substantial development, or other development (including infill) shall be permitted within Zone A unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other development, will not increase the water surface elevation of the base flood more than one foot at any point within the lands under the jurisdiction of the city of Hughson. (Ord. 20-02 § 1, 2020)

Section 2. This ordinance is not intended to and shall not be construed or given effect in a manner that imposes upon the City or any officer or employee thereof a mandatory duty of care toward persons and property within or without the city so as to provide a basis of civil liability for damages, except as otherwise imposed by law.

Section 3. If any provision of this ordinance or application thereof to any person or circumstances is held invalid, such invalidity shall not affect other provisions or applications of the ordinance which can be given effect without the invalid provision or application, and to this end the provisions of this ordinance are severable. The city council hereby declares that it would have adopted this ordinance irrespective of the validity of any particular portion thereof.

Section 4. This ordinance shall become effective thirty (30) days after its final passage.

Section 5. Within fifteen (15) days after its final passage, the City Clerk shall cause this ordinance to be posted in full accordance with Section 36933 of the Government Code.

The foregoing ordinance was introduced, and the title thereof read at the regular meeting of the City Council of the City of Hughson held on June 28, 2021, and by a unanimous vote of the council members present, further reading was waived.

On motion of councilperson_____, seconded by councilperson _____, the second reading of the foregoing ordinance was waived, and this ordinance was duly passed by the City Council of the City of Hughson at a regular meeting thereof held on July 12, 2021, by the following vote:

AYES:

NOES:

ABSTENTIONS:

ABSENT:

APPROVED:

GEORGE CARR, Mayor

ATTEST:

ASHTON GOSE, Deputy City Clerk



CITY COUNCIL AGENDA ITEM NO. 3.4

SECTION 3: CONSENT CALENDAR

Meeting Date: July 12, 2021
Subject: Approval of the Treasurer's Report for February 2021
Presented By: Ashton Gose, Management Analyst
Approved By: Merry Mayhew

Staff Recommendation:

Review and approve the City of Hughson Treasurer's Report for February 2021.

Background and Discussion:

The City Treasurer reviews the City's cash and investment practices and approves the monthly Treasury Reports and a quarterly Investment Portfolio Report. As of February 2021, the City of Hughson has a cash and investment balance total of \$25,575,939 with \$2,869,286 invested. All investment actions executed since the last report have been made in full compliance of the City of Hughson's Investment Policy. The City of Hughson will meet its expenditure obligations for the next six months as required by California Government Code Section 53646 (b) (2) and (3) respectively.

The Treasurer report for February 2021 reflects the most current representation of the City's funds and investments and provides a necessary outlook for both past, and present investment and spending habits. While investments and funds differ from time to time, it is the goal of the City to maintain safety and stability with its funds, while additionally promoting prudence and growth.

Attached is the City of Hughson Treasurer's Report for February 2021, along with supplementary graphs depicting the percentage of the City's total funds, a breakdown of the Developer Impact Fees, and an additional line plot graph further demonstrating the Developer Impact Fees. This graph depicts the Developer Impact Fees' actual balance for the past five years. After review and evaluation of the report, City staff has researched funds with a significant deficit balance and submit the following detailed explanation for February 2021:

Transportation Capital and CDBG Street Project Fund:

The Transportation Capital Project Fund currently reflects a negative balance of

(\$235,680), which is a negative difference of \$7,128 from the previous year. The CDBG Street Project Fund currently reflects a negative balance of (\$42,247) reflecting a negative difference of \$28,233 from the previous year. As the City continues to produce transportation projects, the transportation fund will likely continue to show a negative balance. City staff will continue to monitor and report the status of these reimbursements as the funds become available.

Fiscal Impact:

As of February 2021, the City's cash, and investments total \$25,575,939. This compares to a February 2020 balance of \$22,572,696 and represents an increase of \$3,003,243.

**City of Hughson
Treasurer's Report
February 2021**

	MONEY MARKET	GENERAL	REDEVELOPMENT**	TOTAL
Bank Statement Totals	\$ 20,790,369.81	\$ 2,156,622.04	\$ -	\$ 22,946,991.85
Adjustment	\$ (2,823,011.40)	\$ 4,476.13		
Outstanding Deposits +	\$ 58,879.16	\$ 1,197.68	\$ -	\$ 60,076.84
Outstanding Checks/transfers -	\$ (150.24)	\$ (273,065.46)	\$ -	\$ (273,215.70)
ADJUSTED TOTAL	\$ 18,026,087.33	\$ 1,889,230.39	\$ -	\$ 22,733,852.99
Investments: Various				\$ 1,153,172.29
Multi-Bank WWTP				\$ 1,631,277.54
Investments: L.A.I.F.		\$ 42,485.74	\$ 42,350.61	\$ 84,836.35

General Ledger Adjustments

Wages Payable -27,199.79

TOTAL CASH & INVESTMENTS

\$ 25,575,939.38

<u>Books - All Funds</u>	<u>February 2020</u>	<u>February 2021</u>	<u>Difference</u>	<u>% of Variance</u>
100 GENERAL FUND	2721890.65	3,550,000.33	828,109.68	30.42%
105 GENERAL FUND CONTINGENCY RESERVE	975047.75	977,051.06	2,003.31	0.21%
110 FIXED ASSESTS	0	-	0.00	n/a
210 SEWER	3210715.05	2,774,859.20	-435,855.85	-13.58%
215 SEWER FIXED ASSET REPLACEMENT	4576495.37	4,832,005.16	255,509.79	5.58%
220 SEWER DEV IMPACT FEE	1791416.01	2,190,184.96	398,768.95	22.26%
225 WWTP Expansion 2008	549437.37	(2,315,236.17)	-2,864,673.54	-521.38%
240 WATER	1973240.89	353,624.61	-1,619,616.28	-82.08%
245 Water TCP123	-5355.3	2,807,138.97	2,812,494.27	52517.96%
250 WATER DEV IMPACT FEE	-18064.25	112,070.10	130,134.35	720.40%
255 Water Fixed Asset Replacement	1046745.09	3,453,020.54	2,406,275.45	229.88%
270 COMMUNITY/SENIOR CENTER	11439.17	8,168.89	-3,270.28	-28.59%
280 U.S.F. Resource Com. Center	-386.64	(665.44)	-278.80	-72.11%
310 Garbage/Refuse	103275.85	151,851.69	48,575.84	47.04%
320 GAS TAX 2103	146290.25	169,395.51	23,105.26	15.79%
321 GAS TAX 2105	53560.29	70,639.71	17,079.42	31.89%
322 GAS TAX 2106	-1489.08	3,241.28	4,730.36	317.67%
323 GAS TAX 2107	42108.33	47,921.38	5,813.05	13.80%
324 GAS TAX 2107.5	2172.14	3,172.14	1,000.00	46.04%
325 Measure L SALES TAX-ROADS	268847.63	582,529.03	313,681.40	116.68%
326 SB-1 ROADS MAINTENANCE REHABILITATION	260622.19	263,548.93	2,926.74	1.12%
340 LANDSCAPE LIGHTING DISTRICT	126049.23	(8.59)	-126,057.82	-100.01%
350 BENEFIT ASSESMENT DISTRICT	-954.08	(2.67)	951.41	99.72%
360 COMMUNITY FACILITIES DISTRICT	0	7,255.15	7,255.15	#DIV/0!
370 COMMUNITY ENHANCEMENT DEV IMPACT FEE	148319.46	181,277.61	32,958.15	22.22%
371 TRENCH CUT FUND	77516.7	3,093.60	-74,423.10	-96.01%
372 IT RESERVE	93346.75	101,415.79	8,069.04	8.64%
373 SELF-INSURANCE	73303.49	73,303.49	0.00	0.00%
374 DIABILITY ACCESS AND EDUCATION	1253.22	2,594.88	1,341.66	107.06%
381 AB109 PUBLIC SAFETY	35722.29	35,722.29	0.00	0.00%
382 ASSET FORFEITURE	1660.43	1,660.43	0.00	0.00%
383 VEHICLE ABATEMENT	26394.46	30,118.48	3,724.02	14.11%
384 SUPPLEMENTAL LAW ENFORCEMENT SERVICE I	252390.1	365,695.94	113,305.84	44.89%
385 FEDERAL FUNDED OFFICER FUND	6620	6,620.00	0.00	0.00%
390 98-EDBG-605 BUSINESS ASSISTANCE	93595.6	93,595.60	0.00	0.00%
391 96-EDBG-438 Grant	403.43	403.43	0.00	0.00%
392 94-STBG-799 HOUSING REHAB	225667.23	227,937.14	2,269.91	1.01%
393 HOME Program Grant (FTHB)	35043.29	35,043.29	0.00	0.00%
394 96-STBG-1013 Grant	210747.36	211,165.36	418.00	0.20%
395 CALHOME REHAB	40000	40,000.00	0.00	0.00%
410 LOCAL TRANSPORTATION	71671.34	51,671.34	-20,000.00	-27.91%
415 LOCAL TRANSPORTATION NON MOTORIZED	13219	13,219.00	0.00	0.00%
420 TRANSPORTATION STREET PROJECTS	-228552.19	(235,680.14)	-7,127.95	-3.12%
425 PUBLIC WORKS STREET PROJECTS-CDBG	-14013.98	(42,246.60)	-28,232.62	-201.46%
450 STORM DRAIN DEV IMPACT FEE	484096.92	583,968.86	99,871.94	20.63%
451 PUBLIC FACILITY DEV IMPACT FEE	1373962.38	1,478,894.94	104,932.56	7.64%

452 PUBLIC FACILITY STREET DEV IMPACT FEE	39414.47	181,463.76	142,049.29	360.40%
453 PARK DEV IMPACT FEE	523685.45	611,322.01	87,636.56	16.73%
454 PARKLAND IN LIEU	406088.3	477,004.41	70,916.11	17.46%
510 WATER/SEWER DEPOSIT	67743.2	83,286.99	15,543.79	22.95%
520 RDA SUCCESSOR AGENCY	401805.23	433,488.12	31,682.89	7.89%
521 RDA FIXED ASSETS	-	-	0.00	n/a
530 LANDSCAPE LIGHTING DISTRICT	6862.76	9,170.35	2,307.59	n/a
531 LANDSCAPE LIGHTING DISTRICT	38049.27	54,838.76	16,789.49	n/a
532 LANDSCAPE LIGHTING DISTRICT	16678.55	31,542.53	14,863.98	n/a
533 LANDSCAPE LIGHTING DISTRICT	21663.14	41,778.83	20,115.69	n/a
534 LANDSCAPE LIGHTING DISTRICT	-42206.02	(31,542.11)	10,663.91	n/a
535 LANDSCAPE LIGHTING DISTRICT	6797.99	10,292.83	3,494.84	n/a
536 LANDSCAPE LIGHTING DISTRICT	8991.18	22,981.41	13,990.23	n/a
537 LANDSCAPE LIGHTING DISTRICT	-45925.15	(50,249.93)	-4,324.78	n/a
538 LANDSCAPE LIGHTING DISTRICT	-24616.48	(27,813.26)	-3,196.78	n/a
539 LANDSCAPE LIGHTING DISTRICT	23093.13	28,071.34	4,978.21	n/a
540 LANDSCAPE LIGHTING DISTRICT	31499.3	49,796.16	18,296.86	n/a
541 LANDSCAPE LIGHTING DISTRICT	25625.25	31,781.31	6,156.06	n/a
542 LANDSCAPE LIGHTING DISTRICT	3661.73	4,981.39	1,319.66	n/a
543 LANDSCAPE LIGHTING DISTRICT	0	17,928.34	17,928.34	n/a
550 BENEFIT ASSESMENT DISTRICT	64463.34	70,245.37	5,782.03	n/a
551 BENEFIT ASSESMENT DISTRICT	6963.14	14,105.15	7,142.01	n/a
552 BENEFIT ASSESMENT DISTRICT	95704.6	124,382.54	28,677.94	n/a
553 BENEFIT ASSESMENT DISTRICT	-1812.06	3,084.16	4,896.22	n/a
554 BENEFIT ASSESMENT DISTRICT	35989.52	50,880.90	14,891.38	n/a
555 BENEFIT ASSESMENT DISTRICT	0	15,493.16	15,493.16	n/a
560 BENEFIT ASSESMENT DISTRICT	7004.97	16,384.36	9,379.39	n/a
Developer Impact Fees ***	4,342,830.44	5,339,182.24	996,351.80	
TOTAL ALL FUNDS:	22,572,696.00	25,575,939.38	3,003,243.38	
Break Down of Impact Fees ***				
220 SEWER DEV IMPACT FEE	1,791,416.01	\$2,190,184.96	398,768.95	22.26%
250 WATER DEV IMPACT FEE	-18,064.25	\$112,070.10	130,134.35	720.40%
370 COMMUNITY ENHANCEMENT DEV IMPACT FEE	148,319.46	\$181,277.61	32,958.15	22.22%
450 STORM DRAIN DEV IMPACT FEE	484,096.92	\$583,968.86	99,871.94	20.63%
451 PUBLIC FACILITY DEV IMPACT FEE	1,373,962.38	\$1,478,894.94	104,932.56	7.64%
452 PUBLIC FACILITY STREET DEV IMPACT FEE	39,414.47	\$181,463.76	142,049.29	360.40%
453 PARK DEV IMPACT FEE	523,685.45	\$611,322.01	87,636.56	16.73%
Break Down of Impact Fees ***	4,342,830.44	5,339,182.24	996,351.80	22.94%

I hereby certify that the investment activity for this reporting period conforms with the Investment Policy adopted by the Hughson City Council, and the California Government Code Section 53601. I also certify that there are adequate funds available to meet the City of Hughson's budgeted and actual expenditures for the next six months.

Reviewed By: Anna Nicholas, Director of Finance

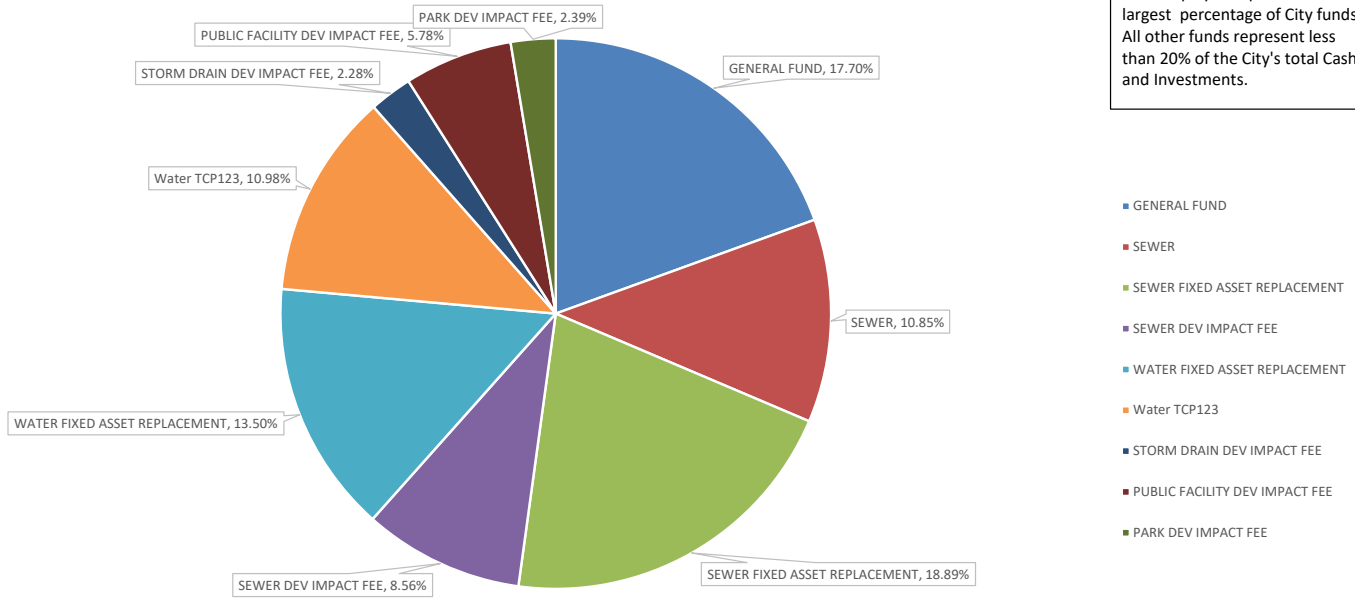
July 6, 2021

Date

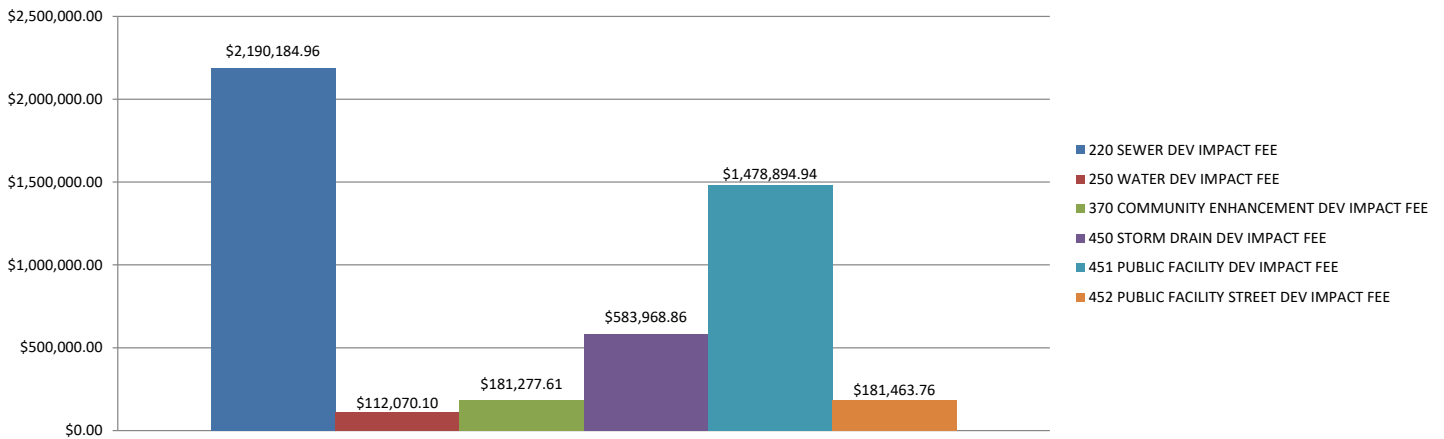
Treasurer's Report - Charts and Graphs February 2021

Percentage of Fund -February 2021

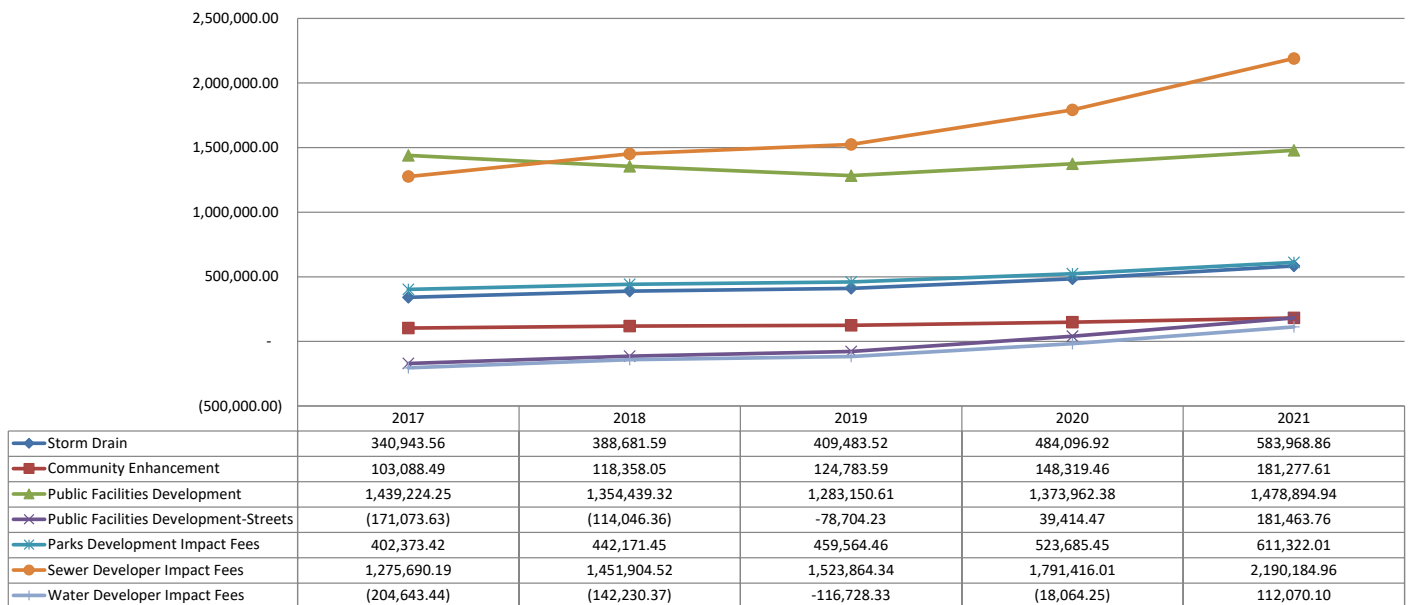
Note:
Data displayed represents largest percentage of City funds. All other funds represent less than 20% of the City's total Cash and Investments.



February 2021 Breakdown of Developer Impact Fees



5 Year Trend for Developer Impact Fees for the Month of February





CITY COUNCIL AGENDA ITEM NO. 3.5

SECTION 3: CONSENT CALENDAR

Meeting Date: July 12, 2021
Subject: Approval of the Treasurer's Report for March 2021
Presented By: Ashton Gose, Management Analyst
Approved By: Merry Mayhew

Staff Recommendation:

Review and approve the City of Hughson Treasurer's Report for March 2021.

Background and Discussion:

The City Treasurer reviews the City's cash and investment practices and approves the monthly Treasury Reports and a quarterly Investment Portfolio Report. As of March 2021, the City of Hughson has a cash and investment balance total of \$25,680,970 with \$2,856,916 invested. All investment actions executed since the last report have been made in full compliance of the City of Hughson's Investment Policy. The City of Hughson will meet its expenditure obligations for the next six months as required by California Government Code Section 53646 (b) (2) and (3) respectively.

The Treasurer report for March 2021 reflects the most current representation of the City's funds and investments and provides a necessary outlook for both past, and present investment and spending habits. While investments and funds differ from time to time, it is the goal of the City to maintain safety and stability with its funds, while additionally promoting prudence and growth.

Attached is the City of Hughson Treasurer's Report for March 2021, along with supplementary graphs depicting the percentage of the City's total funds, a breakdown of the Developer Impact Fees, and an additional line plot graph further demonstrating the Developer Impact Fees. This graph depicts the Developer Impact Fees' actual balance for the past five years. After review and evaluation of the report, City staff has researched funds with a significant deficit balance and submit the following detailed explanation for March 2021:

Transportation Capital and CDBG Street Project Fund:

The Transportation Capital Project Fund currently reflects a negative balance of

(\$235,680), which is a negative difference of \$2,377 from the previous year. The CDBG Street Project Fund currently reflects a negative balance of (\$50,711) reflecting a negative difference of \$36,397 from the previous year. As the City continues to produce transportation projects, the transportation fund will likely continue to show a negative balance. City staff will continue to monitor and report the status of these reimbursements as the funds become available.

Fiscal Impact:

As of March 2021, the City's cash, and investments total \$25,680,970. This compares to a March 2020 balance of \$19,801,787 and represents an increase of \$5,879,183.

City of Hughson
Treasurer's Report
March 2021

	MONEY MARKET	GENERAL	REDEVELOPMENT**	TOTAL
Bank Statement Totals	\$ 20,590,337.39	\$ 2,284,820.37	\$ -	\$ 22,875,157.76
Adjustment	\$ 30.00	\$ 6,313.72		
Outstanding Deposits +	\$ 31,740.76	\$ 33,097.50	\$ -	\$ 64,838.26
Outstanding Checks/transfers -	\$ (100.00)	\$ (81,821.51)	\$ -	\$ (81,921.51)
ADJUSTED TOTAL	\$ 20,622,008.15	\$ 2,242,410.08	\$ -	\$ 22,858,074.51
Investments: Various				\$ 1,146,098.05
Multi-Bank WWTP				\$ 1,625,981.97
Investments: L.A.I.F.		\$ 42,485.74	\$ 42,350.61	\$ 84,836.35

General Ledger Adjustments

Wages Payable -34,020.96

TOTAL CASH & INVESTMENTS

\$ 25,680,969.92

<u>Books - All Funds</u>	<u>March 2020</u>	<u>March 2021</u>	<u>Difference</u>	<u>% of Variance</u>
100 GENERAL FUND	2650762.21	3,589,033.70	938,271.49	35.40%
105 GENERAL FUND CONTINGENCY RESERVE	975364.68	976,860.57	1,495.89	0.15%
110 FIXED ASSESTS	0	-	0.00	n/a
210 SEWER	2829065.05	2,289,874.03	-539,191.02	-19.06%
215 SEWER FIXED ASSET REPLACEMENT	4642896.36	4,902,276.08	259,379.72	5.59%
220 SEWER DEV IMPACT FEE	1791998.3	2,244,767.23	452,768.93	25.27%
225 WWTP Expansion 2008	-276448.13	(1,886,563.74)	-1,610,115.61	-582.43%
240 WATER	1968495.31	265,877.81	-1,702,617.50	-86.49%
245 Water TCP123	-5464.47	2,807,004.26	2,812,468.73	51468.28%
250 WATER DEV IMPACT FEE	-18064.25	127,287.10	145,351.35	804.64%
255 Water Fixed Asset Replacement	-522517.41	3,550,158.60	4,072,676.01	779.43%
270 COMMUNITY/SENIOR CENTER	10470.08	9,366.80	-1,103.28	-10.54%
280 U.S.F. Resource Com. Center	-2744.02	(536.25)	2,207.77	80.46%
310 Garbage/Refuse	108916.78	110,493.52	1,576.74	1.45%
320 GAS TAX 2103	149412.95	140,205.74	-9,207.21	-6.16%
321 GAS TAX 2105	52543.33	71,928.02	19,384.69	36.89%
322 GAS TAX 2106	-2753.08	(437.77)	2,315.31	84.10%
323 GAS TAX 2107	35376.76	48,247.87	12,871.11	36.38%
324 GAS TAX 2107.5	1922.14	2,922.14	1,000.00	52.03%
325 Measure L SALES TAX-ROADS	330346.77	628,898.57	298,551.80	90.38%
326 SB-1 ROADS MAINTENANCE REHABILITATION	271618.56	273,327.13	1,708.57	0.63%
340 LANDSCAPE LIGHTING DISTRICT	126047.72	-	-126,047.72	-100.00%
350 BENEFIT ASSESMENT DISTRICT	-954.08	-	954.08	100.00%
360 COMMUNITY FACILITIES DISTRICT	0	7,255.15	7,255.15	#DIV/0!
370 COMMUNITY ENHANCEMENT DEV IMPACT FEE	148367.68	185,256.32	36,888.64	24.86%
371 TRENCH CUT FUND	77516.7	3,093.60	-74,423.10	-96.01%
372 IT RESERVE	95846.75	103,896.02	8,049.27	8.40%
373 SELF-INSURANCE	73303.49	73,303.49	0.00	0.00%
374 DIABILITY ACCESS AND EDUCATION	1310.52	2,709.48	1,398.96	106.75%
381 AB109 PUBLIC SAFETY	35722.29	35,722.29	0.00	0.00%
382 ASSET FORFEITURE	1660.43	1,660.43	0.00	0.00%
383 VEHICLE ABATEMENT	26078.34	36,322.85	10,244.51	39.28%
384 SUPPLEMENTAL LAW ENFORCEMENT SERVICE I	247017.43	381,169.16	134,151.73	54.31%
385 FEDERAL FUNDED OFFICER FUND	6620	6,620.00	0.00	0.00%
390 98-EDBG-605 BUSINESS ASSISTANCE	93595.6	93,595.60	0.00	0.00%
391 96-EDBG-438 Grant	403.43	403.43	0.00	0.00%
392 94-STBG-799 HOUSING REHAB	225823.61	227,892.71	2,069.10	0.92%
393 HOME Program Grant (FTHB)	35043.29	35,043.29	0.00	0.00%
394 96-STBG-1013 Grant	210815.86	211,124.19	308.33	0.15%
395 CALHOME REHAB	40000	40,000.00	0.00	0.00%
410 LOCAL TRANSPORTATION	71671.34	51,671.34	-20,000.00	-27.91%
415 LOCAL TRANSPORTATION NON MOTORIZED	13219	13,219.00	0.00	0.00%
420 TRANSPORTATION STREET PROJECTS	-233302.71	(235,680.14)	-2,377.43	-1.02%
425 PUBLIC WORKS STREET PROJECTS-CDBG	-14313.98	(50,711.40)	-36,397.42	-254.28%
450 STORM DRAIN DEV IMPACT FEE	484254.27	595,108.81	110,854.54	22.89%
451 PUBLIC FACILITY DEV IMPACT FEE	1373971.35	1,490,804.23	116,832.88	8.50%

452 PUBLIC FACILITY STREET DEV IMPACT FEE	39414.47	197,867.76	158,453.29	402.02%
453 PARK DEV IMPACT FEE	518954.07	621,868.75	102,914.68	19.83%
454 PARKLAND IN LIEU	406220.3	484,873.86	78,653.56	19.36%
510 WATER/SEWER DEPOSIT	68858.1	86,896.02	18,037.92	26.20%
520 RDA SUCCESSOR AGENCY	377935.83	367,331.76	-10,604.07	-2.81%
521 RDA FIXED ASSETS	-	-	0.00	n/a
530 LANDSCAPE LIGHTING DISTRICT	5953.46	7,963.23	2,009.77	n/a
531 LANDSCAPE LIGHTING DISTRICT	37402.11	53,449.92	16,047.81	n/a
532 LANDSCAPE LIGHTING DISTRICT	15142.16	29,599.17	14,457.01	n/a
533 LANDSCAPE LIGHTING DISTRICT	20544.48	39,731.98	19,187.50	n/a
534 LANDSCAPE LIGHTING DISTRICT	-43288.82	(32,953.60)	10,335.22	n/a
535 LANDSCAPE LIGHTING DISTRICT	6124.45	9,437.13	3,312.68	n/a
536 LANDSCAPE LIGHTING DISTRICT	8279.4	21,946.13	13,666.73	n/a
537 LANDSCAPE LIGHTING DISTRICT	-47445.14	(51,765.64)	-4,320.50	n/a
538 LANDSCAPE LIGHTING DISTRICT	-25924.88	(29,282.88)	-3,358.00	n/a
539 LANDSCAPE LIGHTING DISTRICT	22146.7	27,297.92	5,151.22	n/a
540 LANDSCAPE LIGHTING DISTRICT	30063.65	47,308.86	17,245.21	n/a
541 LANDSCAPE LIGHTING DISTRICT	24760.42	30,690.98	5,930.56	n/a
542 LANDSCAPE LIGHTING DISTRICT	2871.35	4,053.01	1,181.66	n/a
543 LANDSCAPE LIGHTING DISTRICT	0	17,515.36	17,515.36	n/a
550 BENEFIT ASSESMENT DISTRICT	63587.92	69,762.03	6,174.11	n/a
551 BENEFIT ASSESMENT DISTRICT	5765.26	12,939.70	7,174.44	n/a
552 BENEFIT ASSESMENT DISTRICT	94883.38	123,252.03	28,368.65	n/a
553 BENEFIT ASSESMENT DISTRICT	-3437.15	1,056.76	4,493.91	n/a
554 BENEFIT ASSESMENT DISTRICT	35085.14	48,852.55	13,767.41	n/a
555 BENEFIT ASSESMENT DISTRICT	0	14,922.41	14,922.41	n/a
560 BENEFIT ASSESMENT DISTRICT	6974.13	15,883.46	8,909.33	n/a
Developer Impact Fees ***	4,338,895.89	5,462,960.20	1,124,064.31	
TOTAL ALL FUNDS:	19,801,787.04	25,680,969.92	5,879,182.88	
Break Down of Impact Fees ***				
220 SEWER DEV IMPACT FEE	1,791,998.30	\$2,244,767.23	452,768.93	25.27%
250 WATER DEV IMPACT FEE	-18,064.25	\$127,287.10	145,351.35	804.64%
370 COMMUNITY ENHANCEMENT DEV IMPACT FEE	148,367.68	\$185,256.32	36,888.64	24.86%
450 STORM DRAIN DEV IMPACT FEE	484,254.27	\$595,108.81	110,854.54	22.89%
451 PUBLIC FACILITY DEV IMPACT FEE	1,373,971.35	\$1,490,804.23	116,832.88	8.50%
452 PUBLIC FACILITY STREET DEV IMPACT FEE	39,414.47	\$197,867.76	158,453.29	402.02%
453 PARK DEV IMPACT FEE	518,954.07	\$621,868.75	102,914.68	19.83%
Break Down of Impact Fees ***	4,338,895.89	5,462,960.20	1,124,064.31	25.91%

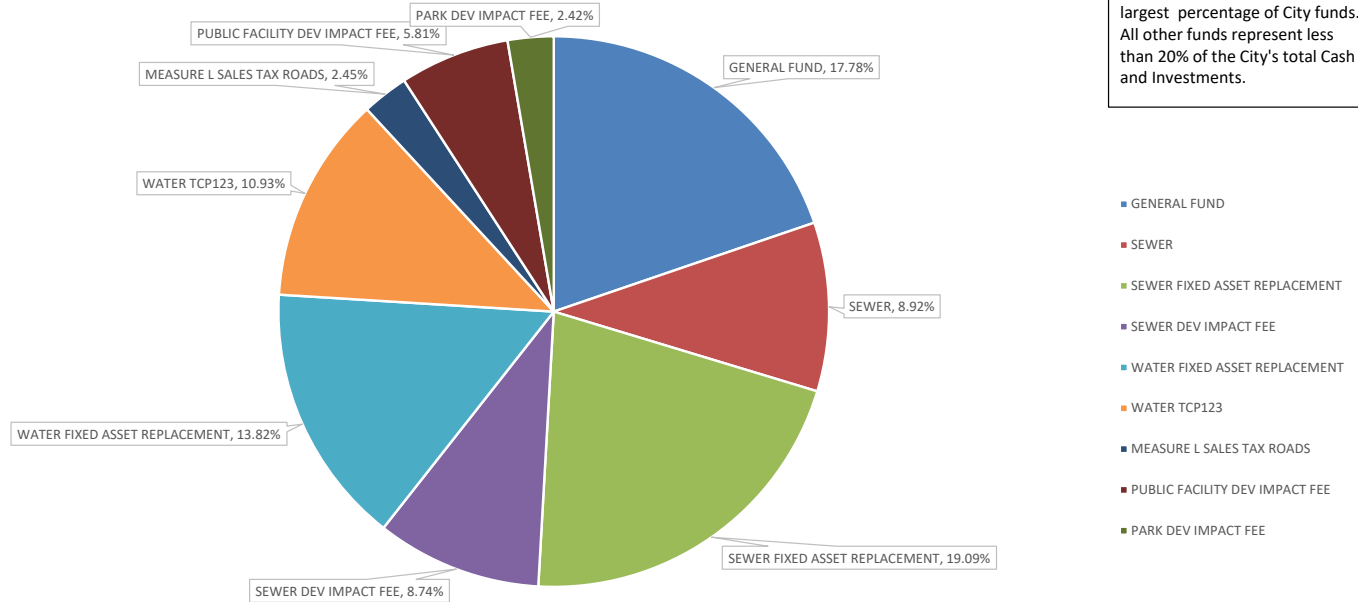
I hereby certify that the investment activity for this reporting period conforms with the Investment Policy adopted by the Hughson City Council, and the California Government Code Section 53601. I also certify that there are adequate funds available to meet the City of Hughson's budgeted and actual expenditures for the next six months.

Reviewed By: Anna Nicholas

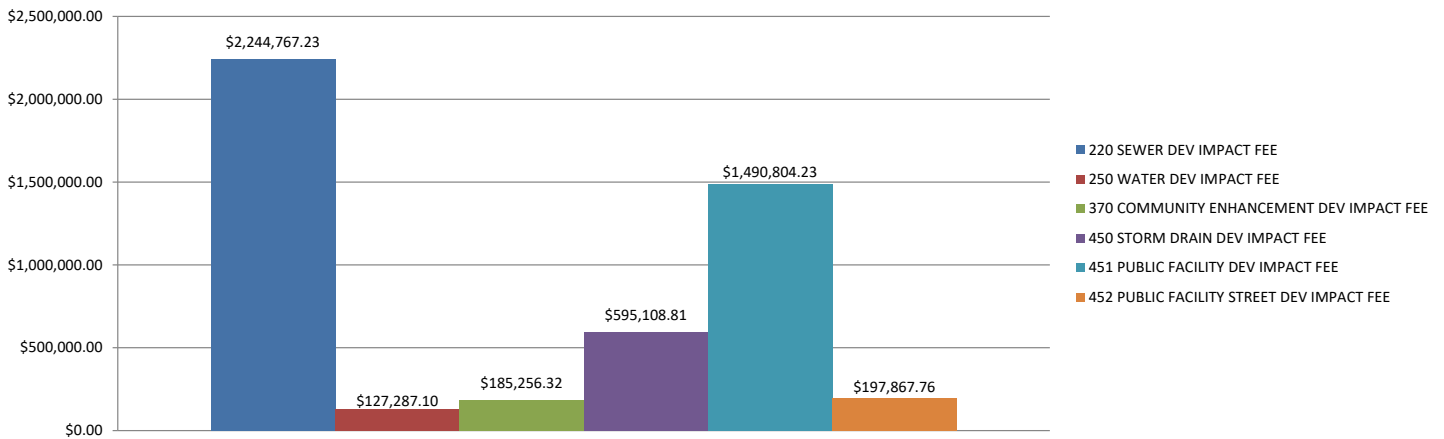
Date

Treasurer's Report - Charts and Graphs March 2021

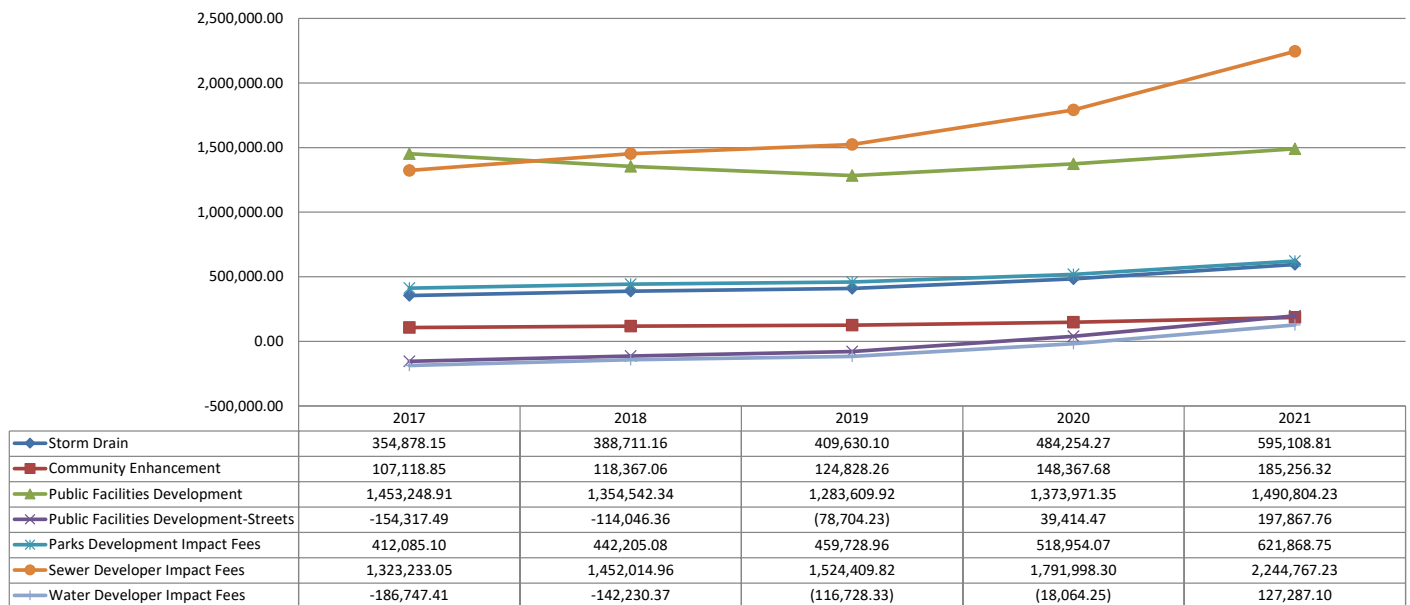
Percentage of Fund -March 2021



March 2021 Breakdown of Developer Impact Fees



5 Year Trend for Developer Impact Fees for the Month of March





CITY COUNCIL AGENDA ITEM NO. 3.6

SECTION 3: CONSENT CALENDAR

Meeting Date: July 12, 2021
Subject: Approval of the Treasurer's Investment Portfolio Report for March 2021
Presented By: Ashton Gose, Management Analyst
Approved By: Merry Mayhew

Staff Recommendation:

Review and approve the City of Hughson Treasurer's Quarterly Investment Portfolio Report for March 2021.

Summary:

The City Treasurer reviews the City's investment practices and approves the quarterly Portfolio of Investments Report. As of March 2021, the City of Hughson's investment total is \$2,856,916 and has a total cash and investment balance of \$25,680,970. All investment actions executed since the last report have been made in full compliance of the City of Hughson's Investment Policy. The City of Hughson will meet its expenditure obligations for the next six months as required by California Government Code Section 53646 (b) (2) and (3) respectively.

Discussion:

The Investment Portfolio Report is intended to provide supplementary documentation of the City of Hughson's investment practices. According to the City of Hughson's Investment Policy, the City Treasurer shall submit to the City Council a quarterly investment report containing a complete description of the portfolio, the type of investments, the issuers, maturity dates, par and dollar values, and the current market values of each component of the portfolio. As per the City's Investment Policy, when dealing with investment activities, the City of Hughson's primary objectives, in order of priority, are safety, liquidity, and return on investments.

The City of Hughson has utilized MBS Account Executive, Michael DeGeeter, as a third-party investor. According to Mr. DeGeeter, a 5-year Certificate of Deposit (CD) laddering approach is utilized for the City's investment practices. This approach layers various CDs depending on interest rates and timing, which allows for reduced portfolio rates and a continuous stream of maturity dates. Mr. DeGeeter states that

this CD approach has always spread positively for the City of Hughson and has had the highest yield of any spread thus far.

Attached is the City of Hughson Treasurer's Investment Portfolio Report for March 2021 along with supplementary graphs depicting the percentage of the City's portfolio of investments. City staff submits the following summary of investments:

Certificates of Deposits

The reported investments in CDs reflect the City's most current balance statement as of March 2021. The two accounts share a combined balance of \$2,748,573, comprising 97.03% of the City's total portfolio of investments. This compares with the balance in December 2020, three months prior, of \$2,786,714.

L.A.I.F. Investments

The reported Local Agency Investment Fund (L.A.I.F.) investments reflect the City's most current balance statement as of March 2021. The two L.A.I.F. accounts share a combined balance of \$84,836, comprising of 2.97% of the City's total portfolio of investments. This compares with the L.A.I.F. accounts balance in December 2020, three months prior, of \$84,702.

Fiscal Impact:

As of March 2021, the total investments balance for the City of Hughson is \$2,856,916 accounting for 11.12% of the City's total cash and investments. The total cash and investment amount is \$25,680,970. Of the amounts invested, 2.97% is invested in L.A.I.F. investments, and 97.03% is invested in Certificates of Deposit. City staff will continue to monitor and report on the City of Hughson's investment practices.

**City of Hughson
Portfolio of Investments
March 2021**

	MONEY MARKET	GENERAL	REDEVELOPMENT**	TOTAL
Bank Statement Totals	\$ 20,590,337.39	\$ 2,284,820.37	\$ -	\$ 22,875,157.76
Adjustment-Direct Deposit Payroll	\$ 30.00	\$ 6,313.72	\$ -	\$ -
Outstanding Deposits +	\$ 31,740.76	\$ 33,097.50	\$ -	\$ 64,838.26
Outstanding Checks/transfers -	\$ (100.00)	\$ (81,821.51)	\$ -	\$ (81,921.51)
ADJUSTED TOTAL	\$ 20,622,008.15	\$ 2,242,410.08	\$ -	\$ 22,858,074.51
Investments: Various				\$ 1,146,098.05
Multi-Bank WWTP				\$ 1,625,981.97
Investments: L.A.I.F.		\$ 42,485.74	\$ 42,350.61	\$ 84,836.35
General Ledger Adjustments				
Wages Payable				-34,020.96
Total Investments				\$ 2,856,916.37
Total Cash & Investments				\$ 25,680,969.92

All investment actions executed since the last report have been made in full compliance with the Investment Policy. The City of Hughson will meet its expenditure obligations for the next six months as required by California Government Code Section 53646 (b)(2) and (3) respectively.

Breakdown of Investments

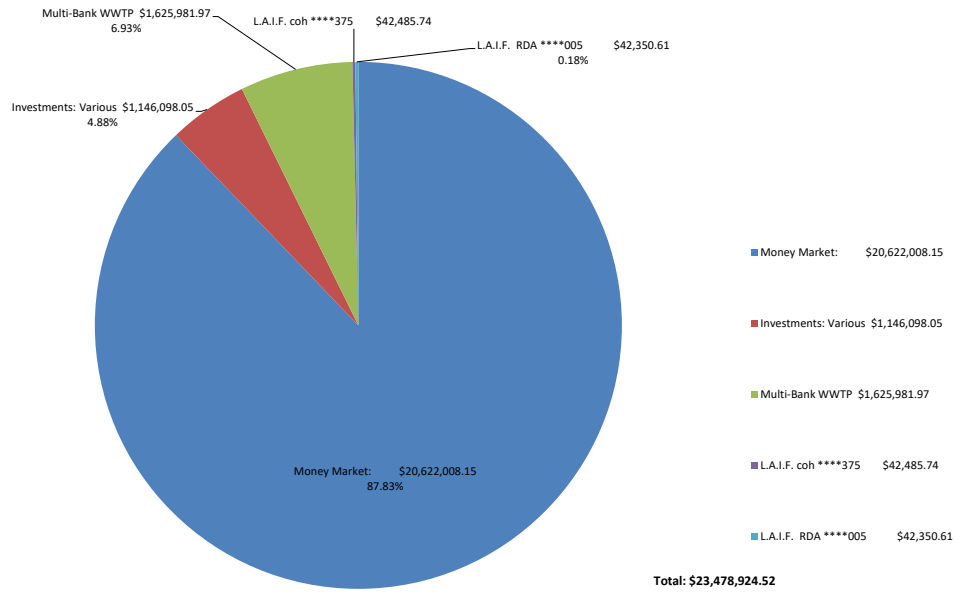
Investments: Various - ***850							
Description	Maturity Dates	Quantity	Opening Balance	Closing Balance	Interest Accrued	% of Portfolio	
Cash, Money Funds And Bank Deposits:			\$ 2,081.55	\$ 3,414.37	\$ -	0.30%	
Total:			\$ 1,153,172.29	\$ 1,146,098.05	\$ -		
Fixed Income (Certificate of Deposits)	Maturity Dates	Quantity	Market Price	Market Value	Interest Accrued	Rate of Return	% of Portfolio
SALLIE MAE BK SALT LAKE CITY UT	04/15/20-10/20/2020	120,000.00	\$102.5220	\$ 123,026.40	\$ 768.66	1.360%	10.73%
American Express Centurion	04/26/17-04/26/2022	100,000.00	\$102.4570	\$ 102,457.00	\$ 1,025.75	2.340%	8.94%
BMO HARRIS Chicago	9/28/20-3/28/25	175,000.00	\$99.9750	\$ 174,956.25	\$ 7.19	0.500%	15.27%
Discover BK Greenwood Del CTF	11/21/18-11/22/21	37,000.00	\$102.0570	\$ 37,761.09	\$ 428.29	3.180%	3.29%
MEDALLION BK SAL LAKE	11/18/20-11/18/25	70,000.00	\$99.2020	\$ 69,441.40	\$ 13.71	0.550%	6.06%
TEXAS EXCHANGE BK CROWLEY	11/25/20-11/25/25	55,000.00	\$98.6700	\$ 54,268.50	\$ 5.42	0.600%	4.74%
Corporate Bond	10/30/20-10/30/25	130,000.00	\$94.6940	\$ 123,102.20	\$ 541.67	1.050%	10.74%
SALLIE MAE BK SALT LAKE CITY UT	06/12/18 - 06/14/21	27,000.00	\$100.6140	\$ 27,165.78	\$ 239.67	2.980%	2.37%
Capital One NATL ASSN MCLEAN VA CTF	09/28/16 - 09/28/21	126,000.00	\$100.7010	\$ 126,883.26	\$ 17.61	1.680%	11.07%
JP Morgan Chase BK NA Columbus Ohio	11/10/20-11/10/25	250,000.00	\$99.0140	\$ 247,535.00	\$ 482.88	0.500%	21.60%
SALLIE MAE BK SALT LAKE CITY	6/3/2020-12/03/20	55,000.00	\$101.9760	\$ 56,086.80	\$ 151.14	0.830%	4.89%
Total CDs				\$ 1,142,683.68	\$ 3,681.99		99.70%
Total Investments: Various Holdings				\$ 1,146,098.05	\$ 3,681.99		100.00%
Total Portfolio Investment							40.12%

Multi-Bank WWTP - ***934							
Description	Maturity Dates	Quantity	Opening Balance	Closing Balance	Interest Accrued	% of Portfolio	
Cash, Money Funds, and Bank Deposits:			\$18,407.37	\$ 20,092.60	\$ -	1.24%	
Total:			\$1,631,277.54	\$ 1,625,981.97	\$ -		
Fixed Income (Certificate of Deposits)	Maturity Dates	Quantity	Market Price	Market Value	Interest Accrued	Rate of Return	% of Portfolio
MORGAN STANLEY PRIVATE BK	04/25/19-04/25/24	100,000.00	\$107.3870	\$ 107,387.00	\$ 1,182.88	2.560%	6.60%
STATE BK INDIA Chicago	7/10/20-7/10/25	98,000.00	\$101.6770	\$ 99,643.46	\$ 214.79	0.980%	6.13%
STATE BK INDIA New York	06/10/20-12/10/20	125,000.00	\$101.9690	\$ 127,461.25	\$ 399.14	1.020%	7.84%
USALLIANCE NEW YORK	09/27/18-09/27/21	106,000.00	\$101.4970	\$ 107,586.82	\$ 36.01	3.050%	6.62%
BMW BK NORTH AMER	8/14/20-08/14/23	55,000.00	\$100.1970	\$ 55,108.35	\$ 20.34	0.290%	3.39%
MEDALLION BK SALT LAKE	11/18/20-11/18/25	125,000.00	\$99.2020	\$ 124,002.50	\$ 24.49	0.550%	7.63%
Morgan Stanley BK N A SALT LAKE CITY	05/03/18-05/03/21	65,000.00	\$100.2570	\$ 65,167.05	\$ 751.15	2.840%	4.01%
Capital One NATL ASSN MCLEAN VA CTF	09/28/16 - 09/28/21	51,000.00	\$100.7010	\$ 51,357.51	\$ 7.13	1.680%	3.16%
FIRST TECHNOLOGY FED MTN VIEW	05/10/18-02/10/22	250,000.00	\$102.5180	\$ 256,295.00	\$ 431.51	2.920%	15.76%
American Express Centurion Bk CTF DEP	04/26/17 - 04/26/22	67,000.00	\$102.4570	\$ 68,646.19	\$ 687.25	2.340%	4.22%
TEXAS EXCHANGE	9/11/20-12/11/24	250,000.00	\$100.0530	\$ 250,132.50	\$ 68.49	0.490%	15.38%
SALLIE MAE	7/1/20-7/1/25	98,000.00	\$100.8630	\$ 98,845.74	\$ 191.17	0.790%	6.08%
Corporate Bond	11/18/20-11/18/25	200,000.00	\$97.1280	\$ 194,256.00	\$ 738.89	1.020%	11.95%
Total CDs				\$ 1,605,889.37	\$ 4,753.24		98.76%
Total Multi-Bank WWTP Holdings				\$ 1,625,981.97	\$ 4,753.24		100.00%
Total Portfolio Investment							56.91%

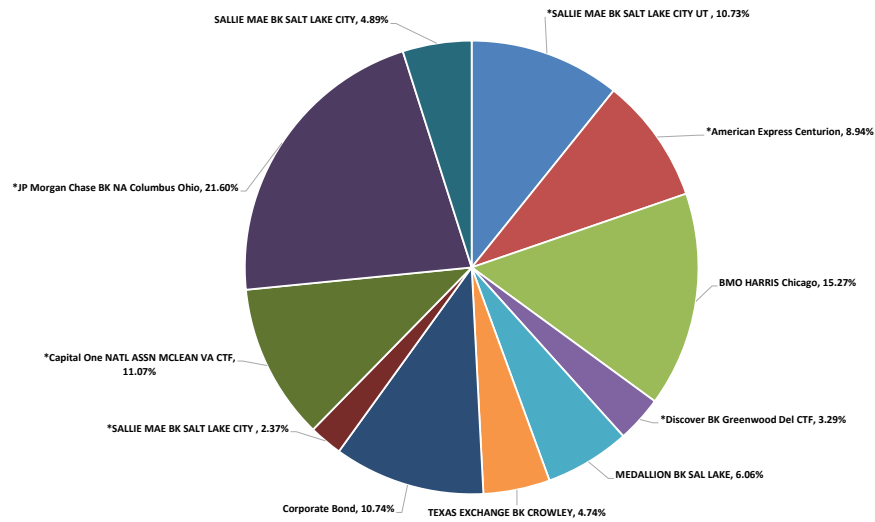
L.A.I.F. Investments							
Account #	Quarterly Interest		Interest Rate	Total			% of Investment
	Quarter Begin	Principal Earned as of March					
	as of December 2020	2021					
****375 COH	\$ 42,418.67	\$ 67.07	0.053%	\$ 42,485.74			50.08%
****005 RDA	\$ 42,283.75	\$ 66.86	0.053%	\$ 42,350.61			49.92%
Total L.A.I.F. Investments Holdings				\$ 84,836.35			100.00%
Total Portfolio Investment							2.97%

Charts and Graphs

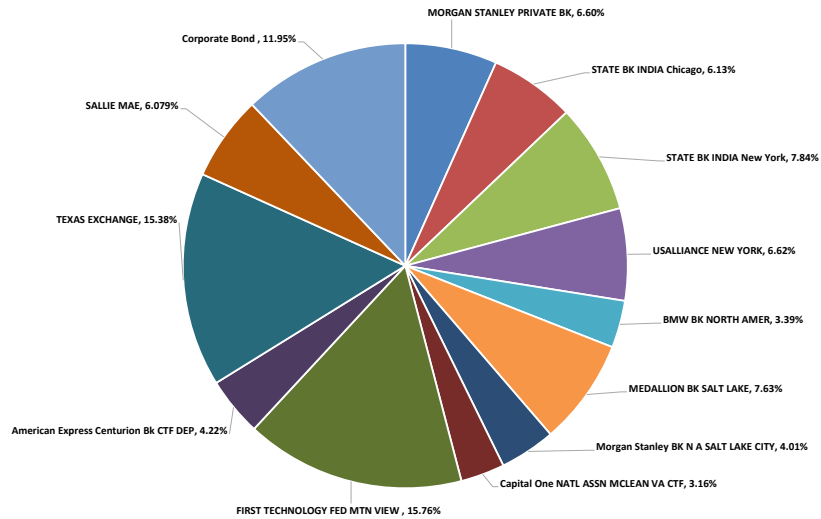
Total Portfolio of Investment (Including Money Market Cash) March 2021



Breakdown of Investments: Various - * 850 March 2021**



Breakdown of Multi-Bank WWTP - * 934 March 2021**





CITY COUNCIL AGENDA ITEM NO. 3.7

SECTION 3: CONSENT CALENDAR

Meeting Date: July 12, 2021
Subject: Designation of the Voting Delegate for the League of California Cities Annual Conference
Enclosures: Annual Conference Voting Procedures
Voting Delegate/Alternative Form
Presented By: Ashton Gose, Deputy City Clerk
Approved By: Merry Mayhew

Staff Recommendation:

Approve designating Mayor George Carr as the Voting Delegate for the League of California Cities Annual Conference on September 22-24, 2021, in Sacramento, California.

Background and Overview:

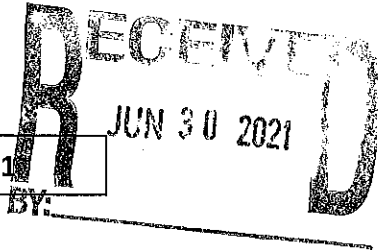
The League membership considers and takes action on resolutions that establish policy at the Annual Business Meeting that takes place during the Conference.

Mayor Carr is scheduled to attend the League of California Cities Annual Conference. In order to vote on behalf of the City of Hughson the City Council must designate a voting delegate. Each Member City has the right to cast one vote on matters pertaining to league policy.

Upon approval, City staff will register with the League confirming Mayor George Carr as the voting delegate representing the City of Hughson.

Fiscal Impact:

Costs associated with the 2021 League of California Cities Annual Conference and Exposition total approximately \$1,100 per attendee (conference and hotel) and are included as part of the City's budget on an annual basis to ensure City representation.



Council Action Advised by August 31, 2021

June 16, 2021

TO: City Managers and City Clerks

**RE: DESIGNATION OF VOTING DELEGATES AND ALTERNATES
League of California Cities Annual Conference & Expo – September 22-24, 2021**

Cal Cities 2021 Annual Conference & Expo is scheduled for September 22-24, 2021 in Sacramento. An important part of the Annual Conference is the Annual Business Meeting (during General Assembly) on Friday, September 24. At this meeting, Cal Cities membership considers and acts on resolutions that establish Cal Cities policy.

In order to vote at the Annual Business Meeting, your city council must designate a voting delegate. Your city may also appoint up to two alternate voting delegates, one of whom may vote if the designated voting delegate is unable to serve in that capacity.

Please complete the attached Voting Delegate form and return it to Cal Cities office no later than Wednesday, September 15. This will allow us time to establish voting delegate/alternate records prior to the conference.

Please note: Our number one priority will continue to be the health and safety of participants. We are working closely with the Sacramento Convention Center to ensure that important protocols and cleaning procedures continue, and if necessary, are strengthened. Attendees can anticipate updates as the conference approaches.

- **Action by Council Required.** Consistent with Cal Cities bylaws, a city's voting delegate and up to two alternates must be designated by the city council. When completing the attached Voting Delegate form, please attach either a copy of the council resolution that reflects the council action taken, or have your city clerk or mayor sign the form affirming that the names provided are those selected by the city council. Please note that designating the voting delegate and alternates **must** be done by city council action and cannot be accomplished by individual action of the mayor or city manager alone.
- **Conference Registration Required.** The voting delegate and alternates must be registered to attend the conference. They need not register for the entire conference; they may register for Friday only. Conference registration will open mid-June at www.cacities.org. In order to cast a vote, at least one voter must be present at the Business Meeting and in possession of the voting delegate card. Voting delegates and alternates need to pick up their conference badges before signing in and picking up the voting delegate card at the Voting Delegate Desk. This will enable them to receive the special sticker on their name badges that will admit them into the voting area during the Business Meeting.
- **Transferring Voting Card to Non-Designated Individuals Not Allowed.** The voting delegate card may be transferred freely between the voting delegate and alternates, but

only between the voting delegate and alternates. If the voting delegate and alternates find themselves unable to attend the Business Meeting, they may *not* transfer the voting card to another city official.

- **Seating Protocol during General Assembly.** At the Business Meeting, individuals with the voting card will sit in a separate area. Admission to this area will be limited to those individuals with a special sticker on their name badge identifying them as a voting delegate or alternate. If the voting delegate and alternates wish to sit together, they must sign in at the Voting Delegate Desk and obtain the special sticker on their badges.

The Voting Delegate Desk, located in the conference registration area of the Sacramento Convention Center, will be open at the following times: Wednesday, September 22, 8:00 a.m. – 6:00 p.m.; Thursday, September 23, 7:00 a.m. – 4:00 p.m.; and Friday, September 24, 7:30 a.m. – 11:30 a.m. The Voting Delegate Desk will also be open at the Business Meeting on Friday, but will be closed during roll calls and voting.

The voting procedures that will be used at the conference are attached to this memo. Please share these procedures and this memo with your council and especially with the individuals that your council designates as your city's voting delegate and alternates.

Once again, thank you for completing the voting delegate and alternate form and returning it to the League's office by Wednesday, September 15. If you have questions, please call Darla Yacub at (916) 658-8254.

Attachments:

- Annual Conference Voting Procedures
- Voting Delegate/Alternate Form



Annual Conference Voting Procedures

1. **One City One Vote.** Each member city has a right to cast one vote on matters pertaining to Cal Cities policy.
2. **Designating a City Voting Representative.** Prior to the Annual Conference, each city council may designate a voting delegate and up to two alternates; these individuals are identified on the Voting Delegate Form provided to the Cal Cities Credentials Committee.
3. **Registering with the Credentials Committee.** The voting delegate, or alternates, may pick up the city's voting card at the Voting Delegate Desk in the conference registration area. Voting delegates and alternates must sign in at the Voting Delegate Desk. Here they will receive a special sticker on their name badge and thus be admitted to the voting area at the Business Meeting.
4. **Signing Initiated Resolution Petitions.** Only those individuals who are voting delegates (or alternates), and who have picked up their city's voting card by providing a signature to the Credentials Committee at the Voting Delegate Desk, may sign petitions to initiate a resolution.
5. **Voting.** To cast the city's vote, a city official must have in their possession the city's voting card and be registered with the Credentials Committee. The voting card may be transferred freely between the voting delegate and alternates, but may not be transferred to another city official who is neither a voting delegate or alternate.
6. **Voting Area at Business Meeting.** At the Business Meeting, individuals with a voting card will sit in a designated area. Admission will be limited to those individuals with a special sticker on their name badge identifying them as a voting delegate or alternate.
7. **Resolving Disputes.** In case of dispute, the Credentials Committee will determine the validity of signatures on petitioned resolutions and the right of a city official to vote at the Business Meeting.



CITY: Hughson

2021 ANNUAL CONFERENCE
VOTING DELEGATE/ALTERNATE FORM

Please complete this form and return it to Cal Cities office by Wednesday, September 15, 2021. Forms not sent by this deadline may be submitted to the Voting Delegate Desk located in the Annual Conference Registration Area. Your city council may designate one voting delegate and up to two alternates.

To vote at the Annual Business Meeting (General Assembly), voting delegates and alternates must be designated by your city council. Please attach the council resolution as proof of designation. As an alternative, the Mayor or City Clerk may sign this form, affirming that the designation reflects the action taken by the council.

Please note: Voting delegates and alternates will be seated in a separate area at the Annual Business Meeting. Admission to this designated area will be limited to individuals (voting delegates and alternates) who are identified with a special sticker on their conference badge. This sticker can be obtained only at the Voting Delegate Desk.

1. VOTING DELEGATE

Name: George Carr
Title: Mayor

2. VOTING DELEGATE - ALTERNATE

Name: _____
Title: _____

3. VOTING DELEGATE - ALTERNATE

Name: _____
Title: _____

PLEASE ATTACH COUNCIL RESOLUTION DESIGNATING VOTING DELEGATE AND ALTERNATES OR

ATTEST: I affirm that the information provided reflects action by the city council to designate the voting delegate and alternate(s).

Name: Ashton Gose
Mayor or (City Clerk) (Signature)
(circle one)

Email: agose@hughson.org
Date: 7.12.21 Phone: 209 883 4054

Please complete and return by Wednesday, September 15, 2021 to:

Darla Yacub, Assistant to the Administrative Services Director
E-mail: dyacub@cacities.org
Phone: (916) 658-8254



CITY COUNCIL AGENDA ITEM NO. 3.8

SECTION 3: CONSENT CALENDAR

Meeting Date: July 12, 2021
Subject: Acceptance of the Willdan Proposal for Design and Engineering of the Whitmore Avenue Pedestrian Crossing and Sidewalk Improvement Project
Enclosure: Proposal for the Design and Engineering of the Whitmore Avenue Pedestrian Crossing and Sidewalk Improvements
Presented By: Rachel Wyse, Community Development Director

Approved By: 

Staff Recommendation:

Accept the Willdan Proposal for design and engineering of the Whitmore Avenue Pedestrian Crossing and Sidewalk Improvement Project.

Background:

The Whitmore and BNSF overcrossing, located east of Tully Road and west of Santa Fe Avenue was identified as requiring pedestrian improvements to increase traffic safety for pedestrians, bike riders, and cars traveling on Whitmore Avenue. Currently, the only pedestrian improvements are the sidewalks that end at Dollar Tree and the building formerly known as Cozy Corner to the west of the overcrossing and the sidewalks around the Chevron gas station to the east of the overcrossing. Sidewalks along the southeastern portion of Whitmore Avenue do not begin until the southeast corner of Whitmore Avenue and Charles Street.

City staff began conversations with Willdan regarding this project in 2016 and in 2017 brought Resolution No. 2017-29 to City Council to allow the City Manager to Execute Administering Agency-State Agreement and Program Supplement Agreement for this project as was required to utilize the Surface Transportation Block Grant (STBG) Program funds allocated for this project. Since then, staff has worked with Willdan to modify the design and most recently to resolve issues with Caltrans for reimbursement on design work. Unfortunately, staff and Willdan were unable to come to repayment terms with Caltrans and, as such, have determined that using the STBG grant funds for construction is less onerous than the process Cal Trans requires in order to obtain funds for project design. Consequently, funds from SB 1 have been allocated to the design phase of the project and construction monies will be charged against the STBG grant funds earmarked for this project.

Discussion:

In an effort to get this Project back on track, an updated scope of work was requested from Willdan and is attached. There are eight tasks which include subtasks. The main tasks to be completed by Willdan are:

- Task 1 – Project Management and Administration
- Task 2 – Preliminary Engineering and Design
- Task 3 – Utility Relocation Coordination
- Task 4 – Right of Way Engineering
- Task 5 – Final Design (PS&E)
- Task 6 – Bidding and Award Assistance
- Task 7 – Engineering During Construction
- Task 8 – Funding Administration

Task 4 includes an optional task for additional support for right of way acquisition; however, the subtask was included in the final budget since the subtask will not be optional should the City have to proceed with a condemnation of property adjacent to the right of way as a part of this project.

Fiscal Impact:

Willdan estimates the cost at \$246,347.90 for professional design and engineering services to prepare plans, specifications, and estimates (PS&E) for the Whitmore Avenue Pedestrian and Sidewalk Improvement Project. With a 10% contingency added, the total estimated cost is \$270,983.

The design and engineering of the Whitmore Pedestrian and Sidewalk Improvement Project will be funded through Senate Bill (SB)1 funds. Currently the City has a fund balance of \$295,897 in SB1 funds (Fund 326) and approximately \$11,000 in revenue is received monthly. A budget adjustment will be made to appropriate the funds for use.



June 24, 2021 (Revised)

Mrs. Merry Mayhew
City Manager
City of Hughson
7018 Pine Street, P.O. Box 9
Hughson, CA 95326

Subject: Proposal for Professional Engineering services for the Whitmore Avenue Sidewalk Improvement Project

Dear Mrs. Mayhew:

Willdan Engineering (Willdan) is pleased to submit this proposal to provide professional engineering services to prepare plans, specifications, and estimates (PS&E) for sidewalk improvements and proposed grade crossing improvements for Whitmore Avenue and Burlington Northern Santa Fe Railway (BNSF) in Hughson, California.

Willdan understands that the City of Hughson (City) has a federally funded Congestion Management Air Quality (CMAQ) grant and a Surface Transportation Block Grant Program (STBGP) grant to construct a new sidewalk, a new bike lane and construct new asphalt pavement along the south side of Whitmore Avenue from the end of the existing sidewalk near the Dollar Tree store, across the BNSF railroad right-of-way, and ending at Charles Street. The City has \$611,824 authorized for Preliminary Engineering (E-76 PE) and is expected to reallocate the funds for the construction phase. The preliminary and final engineering phase of the project will be funded through local monies.

The length of the new sidewalk is approximately 520 feet from the easterly end of the existing sidewalk along the south side of Whitmore Avenue to the southwest corner of Whitmore/Charles. Along the proposed route for the new sidewalk, there are railroad crossing arms to stop vehicular traffic on Whitmore Avenue, several driveways, an intersection with Santa Fe Avenue, a small commercial establishment, a vacant lot, one private residence and a former gas station.

Willdan understands that this sidewalk will close a critical gap for pedestrians along Whitmore Avenue. This project will provide improved safety to pedestrians and bicyclists desiring to cross the BNSF railroad tracks to access commercial shopping opportunities on each side of the tracks. Currently, there is no pedestrian pathway or bike lane along the south side of Whitmore Avenue. Bicyclists and pedestrians are forced to share the very narrow eastbound lane of Whitmore Avenue with a steady volume of cars and trucks. This project will separate bicyclists and pedestrians from all vehicles thereby increasing the safety for all users.

Scope Factors

1. Standards
2. City of Hughson Standard Specifications and Stanislaus County PW Standards as supplemented by 2018 Caltrans Standards. Right of Way
 - a. According to County Assessor's maps, the existing right of way of Whitmore Avenue varies between 40 feet and 90 feet wide in the area of the project. There are existing

improvements along the south side that appear to be on or near the south right of way line. Our surveying sub-consultant will obtain and review the Assessor's Maps and research available recorded maps to verify if existing right of way exists.

- b. Additional right of way may be required to relocate joint utility poles, and from the private residence near the corner of Charles Street. CEQA will need to be completed before the City can make offers to purchase additional right of way and/or easements.
- c. We anticipate three properties that will have ROW impacts for the ultimate widening of Whitmore Avenue and the installation of bike lane and a sidewalk. Right of way appraisals and acquisition will be required.
- d. Prepare legal description and plat for up to two (3) right of way dedications.

3. Utilities

- a. There is a line of joint power poles along the south side that carry telecommunications (ATT & Comcast) and secondary power (120-240v) owned by Turlock Irrigation District. Willdan will coordinate with ATT, Comcast and Turlock Irrigation District to determine the most cost-effective way to complete the project with the minimum need to re-locate existing utilities.
- b. The City has sewer and water facilities in the roadway. The sewer and water mains are within the existing paved area. Water meter boxes and sewer cleanouts were observed along the south side of Whitmore Avenue. It is assumed that the existing private residence and the commercial establishment have at least 2 City utility boxes in their frontage which will need to be adjusted to final grade.
- c. There is evidence along the south side of Whitmore Avenue of standing water during storm events. There are currently no storm drainage facilities along the south side. There are storm drain inlets along the north side of Whitmore Avenue east of Santa Fe. Connections across Whitmore Avenue to the existing storm drainage facilities will be included in the final project design.
- d. Coordination with utility companies, through the standard A, B, C letter process will be required to verify the exact location of utilities and avoid any conflicts. Effort and fee for the A and B letters is included with this proposal. The effort for the C letters is not included since the effort is dependent on the extent of conflict and the utility company requirements.

4. Environmental

- a. Willdan's environmental staff will manage the environmental process for both the California Environmental Quality Act (CEQA) and the National Environmental Protection Act (NEPA). Our staff will prepare all necessary environmental reports and documents. The City Council will ultimately need to adopt the final CEQA document.

5. Grant Funding Administration (E-76 Construction Phase)

- a. Willdan will manage the project work in compliance with federal transportation grant requirements to get it to the funding allocated for the Construction phase (E-76 CON).
- b. Willdan will monitor expenditures through the life of the project, and update the budget as needed during the design, bidding, and award.
- c. Willdan will prepare and submit reimbursement requests on a 4-month cycle including preparation of other required reporting documentation.

6. Subconsultants
 - a. Geotechnical sub-consultant to perform sub-surface investigation and determine R-value for pavement structural section design.
 - b. Railroad Coordination and Railroad Crossing Design.
7. Design and Drafting
 - a. Assume the following sheets will be required:
 - ✓ Title Sheet
 - ✓ General Notes, Legend Sheet
 - ✓ Typical Sections and Details Sheet
 - ✓ Drainage Details Sheet if needed
 - ✓ Street Plan and Profile Sheets – 4 each (1" = 20')
 - ✓ Whitmore Avenue Signing and Striping Sheet – 1 each
 - ✓ Railroad Grade Crossing Sheet – 1 each
 - ✓ Railroad Grading Crossing Detail – 1 each**Total of 9 sheets**
8. Schedule
 - a. City Approve Task Order: July 2021
 - b. Prepare Base Map: August 2021
 - c. Preliminary Engineering: approx. 18 months starting in October 2021
 - d. Environmental – assume runs concurrently with Preliminary Engineering
 - e. Right of Way – need response to Utility A & B letters to determine schedule
 - f. Utilities Relocation Coordination:
 - i. A Letter – 2 months
 - ii. B Letter – 3 months
 - iii. C Letter – if needed (to be determined)
 - g. Bidding & Award of Contract: 3 months after PSE approved.
 - h. Construction: Summer 2023 or later (depends on RW, Environmental and Utility relocation processes)

Work Plan - Proposed Tasks and Sub-Tasks

Category 1 – DESIGN PROJECT MANAGEMENT

Task 1.0 - Project Management and Administration

Willdan will provide design project management for each phase and task of the project from preliminary engineering through bidding and awarding of a construction contract. Management activities consist of coordinating and attending meetings, project scheduling, budget tracking, coordination, quality assurance, and project administration for the Willdan Task Order.

Willdan will prepare and route PS&E submittals for review by other Hughson staff. Upon return of review comments, Willdan will prepare a single compilation of review comments and coordinate resolution of any conflicts or differences between review comments.

Willdan senior project management and design personnel will provide QA/QC and a detailed review of each major PS&E submittal. A Willdan Resident Engineer will also provide a constructability review of the 65% and 95% PS&E submittals.

Project administration performed by Willdan shall consist of monitoring and maintaining the project to ensure it is delivered successfully – on time and within the approved scope and budget. Project administration tasks generally include overseeing the project development team, managing other City consultant contracts and deliverables, preparing billing statements, processing invoices, preparing progress reports, managing public outreach, monitoring project expenditures versus funding, analyzing the project budget and expenditures, and other essential project administration tasks. Project files will be maintained for the duration of the project. Progress reports and billing statements will be prepared following the end of each billing cycle.

Coordinate with environmental staff during preparation of the environmental technical studies (as needed) and the environmental determination and final documents.

Deliverables:

- Project Administration
- Budget tracking and management
- Progress meeting agendas and minutes
- Project schedule and updates
- Billing cycle progress reports
- QA/QC documentation / progress submittal review / response to comments / constructability review
- Coordinate with the environmental consultant leading up to adoption of the environmental document

Category 2 – PRELIMINARY ENGINEERING AND DESIGN SERVICES

Task 2.0 – Topographic Survey and Base Map

Willdan has already performed topographic field survey and will incorporate the data into Base Map.

Deliverables:

- Base Map with all topographic surveying information

Task 2.1 – Geotechnical Investigation

Willdan will obtain the services of a geotechnical sub-consultant to perform a sub-surface investigation for determining roadway structure design parameters.

Deliverables:

- Geotechnical Investigation Report

Task 2.2 – PES Environmental Report

Willdan has completed most of the PES requirements, but upon discussion with Caltrans, two additional studies are required prior to approval, this includes the Community Impact Assessment and Initial Site Assessment. Furthermore, due to the delay on the project, revalidation of prior submittal will be required prior to receiving PES approval.

Task 2.3 - Community Impact Assessment (CIA)

Caltrans has requested Willdan prepare a Community Impact Assessment report. The CIA is needed to address the utility relocation, property access, temporary road closures/detours, and Right of Way acquisition impacts.

Deliverables:

- Community Impact Assessment (CIA) Memo

Task 2.3 - Initial Site Assessment (ISA)

Willdan will prepare Initial Site Assessment (ISA). The ISA is needed to address potential hazardous waste concerns since excavation, ground disturbance, and striping removal is anticipated.

Deliverables:

- Initial Site Assessment (ISA) Memo

Task 3 Right of Way Engineering and Acquisition Support

Task 3.0 – Right of Way Mapping

Willdan and our surveying sub-consultant will assemble record documents necessary to accurately depict the existing public right of way on the Base Map.

Deliverables:

- Base Map with Right of Way incorporated

Task 3.1 – Acquisition Plats and Legal Descriptions

Willdan will prepare up to three legal descriptions and plat for right of way dedication.

Task 3.2 – Right of Way Acquisition Services

Task 3.2.1. Valuation Services

Willdan's subconsultant will develop three (3) appraisals that report the estimated fair market value of the right of way and temporary construction easement (if needed) required of each property. The Appraisal Reports will be narrative appraisal reports prepared in conformance with and subject to the requirements of the Code of Professional Ethics and the Standards of Professional Practice of the Appraisal Institute, which fully incorporate the Uniform Standards of Professional Appraisal Practice (USPAP) of the Appraisal Foundation, requirements related to the Uniform Relocation Assistance and Real Property Acquisition Act and state and federal statutes. Appraisal Mapping, Plat Maps and Legal Descriptions for the properties to be appraised will be prepared by Willdan.

The Appraisals will be completed within 7 weeks from receipt of appraisal mapping and notice to proceed from the City.

Deliverables:

- Three (3) electronic Appraisal Reports that meet State and Federal Standards. Printed and bound copies will be provided upon request.

Assumptions:

- The fee assumes all appraisals are awarded together and commence at the same time.
- No severance damages to the parcel remainders.
- No residential or business relocation is involved.
- Full documentation to Federal and State standards for all tasks.
- No expert witness testimony.
- No Coordination with State or Federal right of way departments, other than listed in scope.
- Notice of Decision to Appraise letter will be sent within 5 days of Notice to Proceed.
- Plats and Legal Descriptions will be provided by the Client.
- Expert witness testimony is not included in the scope, but is available, and will be paid on a case by case basis. Hours and fee will be negotiated based on a scope of work change based on the fee schedule.

Task 3.2.2 – Right -of-Way Appraisal Review

We understand a review of the appraisals will be required and must be completed by an independent reviewer. Our subconsultant, BRI has enlisted the expertise of Tim Landis with Sierra West Valuation Services to complete a review of the subject parcels and the comparables. We have worked with Mr. Landis for over ten years on numerous assignments throughout Northern California. Mr. Landis is willing to seek additional documentation or ask tough questions concerning consistency and methodology to produce an objective work product.

The Appraisal Reviews will be delivered within 2 weeks of completion of the Appraisal Reports. The fee is due upon completion of the reports.

Deliverables:

- Three (3) electronic USPAP Standard 3 and 4 compliant Appraisal Reviews will be provided with the Appraisal Reports. Printed and bound copies will be provided upon request.

Task 3.3. Acquisition Services

Upon completion of the Appraisals and establishment of Approval to Acquire for the parcels, we will work with the City to develop the contract and conveyance documents necessary to make offers. We will meet with the owners and convey documents up to 6 times in the first 60 days until acceptance or impasse is reached. Steps within the acquisition process are outlined below:

1. Review the project concept and design with staff and other consultants.
2. Review appraisals, title reports, maps and descriptions of the required parcels.
3. Prepare right-of-way contracts and other acquisition documents.
4. May meet with the property owners to discuss the project in general; review of maps and legal descriptions; confirm information about occupants/owners and make the official First Written Offer to owner.
5. The acquisition task assumes a settlement by the sixth contact by telephone or e-mail. A recommendation to the City will be made after impasse has been reached.

6. Deliver signed right-of-way contract and signed and acknowledged documents for a close transaction or deliver a memorandum explaining impasse.
7. If the property owner provides a counter-offer, we will prepare a recommendation to the City to accept, reject, or modify the counter-offer.
8. If the City accepts the counter-offer, we will prepare an Administrative Settlement that complies with State and Federal guidelines.
9. Our acquisition agents will maintain a parcel diary to document all interactions with property owners and their tenants.
10. We will prepare a final report, including transfer of all pertinent correspondence and files to the City.

Deliverables:

- Three (3) signed purchase agreements and associated deeds for recording.
- A completed file on each negotiation, acquisition, and project settlement.

Assumptions:

- Offer will be accepted within 60 days of initiation of negotiations.
- No in-person meetings with the owner. All contacts will be by phone, US Mail or e-mail.
- Six (6) contacts will be made with each owner unless the owner refuses.
- Impasse will be declared and file will be turned over to City after 60 days.
- No eminent domain support, however, this can be added as a separate task order.

Exclusions

- Obtaining tenant consent/releases or quit claim deeds.
- Obtaining partial or full reconveyances, financing statement releases or subordination agreements.
- Providing support for Resolutions of Necessity (RON) and/or condemnation activities.
- Continued negotiations with property owners after the RON is obtained.

Task 3.4. Title/ Escrow Services

Willdan's Subconsultant will deliver documents and checks to escrow company, review all documents for submission to escrow companies, review title and escrow documents, and apply extensive acquisition experience so that the project acquires good title and property rights necessary for the completion of the project. BRI will coordinate escrow closings and file all applicable forms and documents with the County Assessor's office.

Tasks to be considered include:

- Three (3) Preliminary Title Reports @ \$900 each.
- Work with title company to follow through with appropriate lenders, beneficiaries and trustees. Title Company to draft partial release and partial reconveyances.
- Prepare and send Request for Invoice and Demand to the Title Company.
- Copy and forward fully executed purchase agreement from the City.
- Send all executed acquisition documents through escrow and transmit to the appropriate parties, (property owner and the City).
- Prepare transmittal and forward closed files to the City.

Deliverables:

Facilitate Title and Escrow support as outlined above for three (3) parcels.

Task 3.5. Condemnation Support (OPTIONAL TASK)

BRI's team of appraisers and acquisition agents strive to provide tailored services with the goal to complete the transaction in the best interest of all parties involved while adhering to all applicable regulations and guidelines. However, even with the best intentions and attention to details, some acquisitions will need to be completed through condemnation. Our team will support the City by preparing staff reports and presentations to the City Council for the Resolution of Necessity (RON). In addition, we will work with the City legal team to develop the 30-day notice of hearing for the RON and provide assistance in preparing any legal declarations in support of the court hearings. Our appraisers are qualified and available to provide testimony during condemnation trials as an additional service. We will provide support services to the condemnation attorney such as appearing as an expert witness, delivery of parcel file including the title report, legal description, appraisal, negotiation records and all correspondence; and assisting the attorney with locating the property owner and other interest holders. Our subconsultant will bill Condemnation services based on an hourly rate and on agreed upon budget should these service be required.

Assumptions

- All parcels are awarded and commence together.
- Additional services requested by the City and/or resulting from a change in the Scope of Services such as post-appraisal meetings, consultations, presentations/briefings, pre-trial conferences, court or briefing preparation, depositions, court appearances, etc., will be performed on a time and materials basis per the BRI 2021 Hourly Rates & Billing Policy, attached hereto or, at a separately negotiated fee.
- This proposal assumes no relocation assistance, property management or excess land disposal will be required.
- This proposal assumes no Permits to Enter for environmental or geotechnical studies will be needed.
- No severance damages to the parcel remainders.
- Full documentation to Federal and State standards for all tasks.
- No expert witness testimony.
- The actual costs may differ from task to task, but the overall budget will not exceed the "Total Budget" shown in the above table.
- No Coordination with State or Federal right of way departments, other than listed in scope.
- This proposal assumes no relocation activities will be needed. If relocation becomes necessary, a separate cost and scope document will be prepared and approved before services are provided.
- Any external audit support will be billed on a time and material basis, as well as the following:
 - A change in engineering once the acquisition process has begun;
 - Addition of a parcel;
 - Addition of easements, or other property rights; and
 - Any additional professional expertise.

Task 4 Utility Relocation Coordination

Task 4.0 – Utility Relocation Management

Willdan will manage the utility relocation process in accordance with the grant requirements; affected utilities are anticipated to include, City water, sewer and storm drains, ATT telecommunications, Comcast telecommunications, Turlock Irrigation District power lines, and PG&E gas mains and facilities.

Deliverables:

- Records of communications with Utility Entities

Task 4.1 – Utility “A” Letters – Request for Information

Utility “A” letters will be sent to the utility companies requesting information regarding their facilities and existence of prior rights within the project limits. Upon receipt, the Base Map will be updated to include approx. location of each utility.

Deliverables:

- Utility “A” Letters
- Incorporate utility features into Base Map as appropriate

Task 4.2 – Utility “B” Letters – Notice of Conflict

Utility “B” Conflict Letters will be prepared and sent out to the appropriate utility companies indicating conflicts and requesting a response as to financial responsibility, project or utility.

Deliverables:

- Utility “B” Letters
- Plans will show proposed utility relocations

Task 4.3 – Utility “C” Letters – Relocation

The following is a preliminary description of potential work for this task. This work is not included in this scope-fee proposal.

Utility “C” letters will be sent out to the appropriate utility companies as necessary to continue the coordination and avoid conflicts.

This effort does not include negotiations and engineering support work involved if utilities have superior rights and the City needs to pay relocation costs.

Deliverables:

- To be determined

Task 5 Final Design (Plans, Specifications and Estimate)

Task 5.0 – Prepare 35% Design

Willdan will develop the selected preliminary design configuration and prepare the 35% plans and Engineer's opinion of probable construction costs for the project. The entire plan set is anticipated to include the following sheets: Title Sheet, General Notes/Legend, Typical Sections & Details, Plan & Profile Sheets (4 ea.), Signing and Striping Plan and Railroad Crossing Plans and Details.

Deliverables:

- 35% Plans and Estimate

Task 5.1 – Determine Design Scope for Environmental Document (APE)

On an as-needed basis, Willdan will provide technical information to complete the following (if necessary):

Deliverables:

- Prepare project description and limits of work for Area of Potential Effect (APE) map.
- Incorporate environmental mitigations into plans and specifications.

Task 5.2 – Prepare 65% Design

Willdan will develop the 65% plans and estimate incorporating comments received on the 35% plans and estimate submittal. Design will be refined and details added to complete the 65% plan submittal. The Engineer's opinion of probable construction costs will be updated based upon the 65% design plans. Any significant environmental mitigations affecting design scope need to be incorporated in during this task.

Deliverables:

- 65% Plans and Estimate

Task 5.3 – Coordination with BNSF Railroad and the State Public Utilities Commission

Task 5.3.1 – Right of Entry (ROE) Permit Application

Willdan's subconsultant will prepare a Right of Entry (ROE) permit application required to allow the City and our Team to enter the UPRR railroad corridor to conduct field activities within 25 feet from the nearest track. The cost for obtaining flagging and Railroad Protective Liability Insurance (RLPI), are not included in this task.

Task 5.3.2 – Preliminary Design

We will prepare preliminary design in AutoCAD illustrating the proposed grade crossing improvements. The grade crossing plans listed above will include proposed warning devices, crossing panel improvements, railroad signal equipment, roadway and sidewalk improvements.

Task 5.3.3 – Diagnostic Meeting/Agency Review

We will schedule a field diagnostic meeting with the City of Hughson, BNSF and CPUC to evaluate and discuss existing conditions and proposed improvements. The diagnostic meeting presents the preliminary design plans to all parties for the purpose of obtaining input from all rail entities prior to beginning the final design effort. The diagnostic meeting will confirm the basis for the proposed improvements and will initiate the agency review process.

Task 5.3.4 – Final Design

We will prepare the final design plans, specifications and estimates (PS&E) following the agency review period. The PS&E package would address the comments generated by the reviewing entities in Tasks 4 and 5. The specifications will consist of special provisions to be inserted in the City's boilerplate specifications. In addition, we will prepare an opinion of probable construction costs including construction items and quantities.

Task 5.3.5 – Easement/License Coordination

We will coordinate with BNSF for the preparation of easements or licenses required for new improvements to be constructed within BNSF property. The easements or licenses are assumed to be prepared and executed by BNSF.

Task 5.3.6 – Construction and Maintenance (C&M) Agreement

Our subconsultant will coordinate the preparation of a Construction and Maintenance (C&M) agreement defining the roles and responsibilities of the City and BNSF, if any. The C&M agreement will define payment responsibilities for construction of the grade crossing improvements and require an estimate for railroad signal improvements to be prepared by BNSF.

Task 5.3.7 – CPUC Application

We will prepare one (1) application to be submitted to the CPUC for the proposed grade crossing modifications. There are two types of applications that can be prepared depending on the extents of the improvements. The preparation of a CPUC application would cover the ultimate (i.e., permanent) improvements and not interim improvements during construction. Considering improvements will be done within existing right of way, this task assumes a General Order 88B (GO-88B) application will be required. This application will discuss the proposed improvements and safety requirements.

Task 5.4 – Prepare 95% Design, Special Provisions, and Estimate (PS&E)

Willdan will develop the 95% PS&E incorporating comments received on the 65% plans and estimate submittal and any Phase 2 involvement following confirmation by BNSF and the State PUC. Design will be refined and details added to complete the 95% plan submittal. Draft Special Provisions will be developed and the Engineer's opinion of probable construction costs will be updated based upon the 95% design plans and draft special provisions. This task includes determining the DBE construction contract goal.

Deliverables:

- 95% Plans and Estimate
- Draft Special Provisions

Task 5.5 – Prepare 100% (Final) Design, Special Provisions, and Estimate (PS&E)

Willdan will develop the 100% (final) PS&E incorporating comments received on the 95% PS&E submittal. Design will be refined, and details added to complete the 100% plan submittal. Final Special Provisions will be developed, and the Engineer's opinion of probable construction costs will be updated based upon the 100% design plans and final special provisions. Update the DBE goal.

Deliverables:

- Final Plans, Special Provisions, and Estimate

Bidding and Award Assistance

Task 6.0 – Prepare Bid Documents

Willdan will assemble and format the final bid package including incorporating the final special provisions, with the City's construction contract boiler plate. Prepare draft City Council staff report requesting design approval and bid authorization. Determine the advertising schedule. Willdan will coordinate the reproduction of the bid package for distribution to plan holders. Willdan will ensure the proper advertising notices are published on the City's website, in the local newspapers, and with the local builder's exchange(s).

Deliverables:

- Draft Council Staff report requesting bid authorization and design approval
- Assembled bid package

Task 6.1 – Bidding Assistance

Willdan will provide support to the City during the bidding of the project. This support may include response to bidder inquiries, clarifications, preparation of addenda, and attendance at a pre-bid meeting.

Deliverables:

- Respond to Bidder Requests for Clarification
- Prepare and Issue Addendums as needed
- Attend Bid Opening (if needed)

Task 6.2 – Award Assistance

Willdan will provide support to the City for the award of the construction contract. This will include evaluation of bid proposals, bid tabulation, recommendation of the lowest responsive and

responsible bidder, preparation of draft staff report and resolution for award recommendation, and coordination of final contract execution.

Deliverables:

- City Council Staff Report and Resolution for construction contract award

Task 7 – Engineering During Construction

During the construction period, Willdan will be on call to provide analysis and interpretation of the drawings and specifications and respond to request for information (RFI). Willdan will review and respond to material submittals for compliance with the contract. If required, Willdan will assist the City's contractor with site meetings (assumed two meetings).

Deliverables:

- City Council Staff Report and Resolution for construction contract award

Task 8 – Funding Administration

Task 8.1 - Request for Authorization (RFA) to Proceed with Construction (CON) Package – Upon receiving CEQA and NEPA clearance and begin preparing RFA for CON package (including right of way certification and utility certification) to initiate the obligation of federal funds by Caltrans for the construction of the project.

Deliverables:

- Prepare LAPM Exhibit 13-A Short Form Right of Way Certification Local Assistance Project and Utility Cover Adjustment Summary or LAPM Exhibit 13-B Right of Way Certification Local Assistance
- LAPM Exhibits: 3-A Project Authorization/Adjustment Request, 12-D PS&E Checklist, 15-A Local Agency Construction Contract Administration Checklist, and 4-A Local Programs Agreement Checklist.
- Prepare LAPM Exhibits: 7-B Field Review, 7-C Roadway Data, and 7-G Field Review Attendance Roster.
- Calculate the DBE project goals for construction and construction engineering using LAPM Exhibit 9-D DBE Contract Goal Methodology.
- Submit package to the City for signing and mailing to the Caltrans DLAE with the final signed P&S.

Task 8.2 - Progress Invoicing – Prepare progress invoices for preliminary engineering at least every 6 months. Monitor the Inactive Obligations List on the Caltrans Local Assistance website and notify City staff of any pending deadlines to submit invoice.

Deliverables:

- Prepare LAPM Exhibits: 5-A Federal-Aid Invoice, 5-J Local Agency Invoice Review Checklist and 5-K Billing Summary Support Phases based on the following items provided by the City: LAPM Exhibit 10-O2 Consultant Contract DBE Commitment, Exhibit 10-K Consultant Annual Certification of Indirect Costs and Financial Management System, and design consultant invoices and cancelled checks.
- Submit package to the City for signing and mailing to the Caltrans DLAE.

Fee

Willdan's not-to-exceed fee for the proposed tasks is **\$246,347.90**. The fee will be billed on a time-and-materials basis. Refer to Exhibit A for the fee breakdown.

Please indicate the City's approval and authorization to proceed by either printing out and signing two originals and returning one hard copy original to our office, or by scanning one signed original and returning it by email.

Thank you for the opportunity to continue to serve the City of Hughson. We recognize the importance of this project for the City. Should you have any questions regarding this proposal, please contact me at (714) 393-1963 or tpeter@willdan.com.

Respectfully submitted,

Approval and Authorization to Proceed by:

WILLDAN ENGINEERING

CITY OF HUGHSON



Tyrone Peter, PE
Deputy Director of Engineering

Signature

Date

Enclosure

910005/WW.00.60/P21-233_22122

EXHIBIT A


CITY OF HUGHSON
WHITMORE AVENUE STPL AND CMAQ PROJECT
ESTIMATED FEE
Friday, June 18, 2021

SUMMARY TASK	WILLDAN											Estimated Hours	Railroad Subconsultant (JMD) DBE	Bender Rosenthal ROW Acquisition	Geotechnical Subconsultant (Blackburn)	Estimated Cost
	Deputy Director of Engineering	Principal Project Manager	Principal Planner	City Engineer I	Senior Engineer III	Designer II	Assistant Engineer IV	Assistant Engineer III	Assistant Engineer I	Drafter II	Administrative Assistant II					
	\$199	\$199	\$176	\$150	\$177	\$139	\$149	\$144	\$121	\$125	\$95					
Task 1 - Project Management and Administration																
Kick-off Meeting				4.0	4.0							8.0				\$ 1,308.00
Progress Meetings, Agendas and Minutes				24.0								24.0				\$ 3,600.00
Quality Assurance/Quality Control				20.0								20.0				\$ 3,000.00
Project Coordination	12.0			8.0								20.0				\$ 3,588.00
Project Schedule and Updates	12.0			8.0								20.0				\$ 3,588.00
Subtotal	24.0	0.0	0.0	64.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	92.0	\$ -	\$ -	\$ -	\$ 15,084.00
Task 2 - Preliminary Engineering and Design																
Research and Development				4.0	12.0							16.0				\$ 2,724.00
Field Review				4.0	4.0			4.0	4.0			16.0				\$ 2,368.00
Geotechnical and Pavement Report				4.0	4.0							8.0			\$ 11,316.00	\$ 12,624.00
Preliminary Environmental Document (PES)			12.0									12.0				\$ 2,112.00
Initial Site Assessment (ISA)			12.0									12.0				\$ 2,112.00
Community Impact Assessment (CIA)			14.0									14.0				\$ 2,464.00
CEQA and NEPA - Environmental Clearance			60.0									60.0				\$ 10,560.00
Subtotal	0.0	0.0	98.0	12.0	20.0	0.0	0.0	4.0	4.0	0.0	0.0	138.0	\$ -	\$ -	\$ 11,316.00	\$ 34,964.00
Task 3 - Utility Relocation Coordination																
Utility A Letters					2.0			4.0				6.0				\$ 930.00
Utility B Letters					2.0			4.0				6.0				\$ 930.00
Utility C Letters					2.0			4.0				6.0				\$ 930.00
Coordinate Relocations					8.0			6.0				14.0				\$ 2,280.00
Subtotal	0.0	0.0	0.0	0.0	14.0	0.0	0.0	18.0	0.0	0.0	0.0	32.0	\$ -	\$ -	\$ -	\$ 5,070.00
Task 4 - Right of Way Engineering																
Legal Description and Plan (3 properties)		18.0				12.0						30.0				\$ 5,250.00
Temporary Construction Easement (3 properties)		10.0				12.0						22.0				\$ 3,658.00
Right of Way Mapping				4.0		8.0						12.0				\$ 1,712.00
Right of Way Appraisals, Acquisition				4.0		12.0						16.0		\$ 45,425.00		\$ 47,693.00
Subtotal	0.0	28.0	0.0	8.0	0.0	44.0	0.0	0.0	0.0	0.0	0.0	80.0	\$ -	\$ 45,425.00	\$ -	\$ 58,313.00
Task 5 - Final Design (PS&E)																
35% Plan Preparation	4.0			4.0	60.0		8.0	8.0	4.0			88.0				\$ 13,652.00
Area of Potential Effect Map												0.0				\$ -
65% Plan Preparation	8.0			4.0	48.0		6.0	24.0				90.0	\$ 12,932.90			\$ 27,076.90
Coordination with BNSF and CPUC	2.0			24.0								26.0	\$ 40,676.65			\$ 44,674.65
95% Plans, Specification and Estimate	1.0			4.0	24.0		2.0	16.0				47.0	\$ 6,243.35			\$ 13,594.35
100% Plans, Specification and Estimate	1.0			1.0	16.0		1.0	4.0	8.0		2.0	33.0	\$ 4,600.00			\$ 9,515.00
Subtotal	16.0	0.0	0.0	37.0	148.0	0.0	17.0	52.0	12.0	0.0	2.0	284.0	\$ 64,452.90	\$ -	\$ -	\$ 108,512.90
Task 6 - Bidding and Award Assistance																
Respond to Bidder Request				4.0	2.0							6.0				\$ 954.00
Prepare and Issue Addendum				4.0	2.0							6.0				\$ 954.00
Attend Bid Opening				4.0								4.0				\$ 600.00
Prepare Bid Analysis				4.0								4.0				\$ 600.00
Subtotal	0.0	0.0	0.0	16.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	\$ -	\$ -	\$ -	\$ 3,108.00
Task 7 - Engineering during Construction																
Bidding Addendums and RFI's				4.0	2.0							6.0				\$ 954.00
Pre-construction Meeting				4.0	4.0							8.0				\$ 1,308.00
Construction RFI's and Material Submittal Reviews				4.0	4.0			16.0				24.0				\$ 3,612.00
Record Drawings				2.0	12.0							14.0				\$ 2,424.00
Subtotal	0.0	0.0	0.0	14.0	22.0	0.0	0.0	16.0	0.0	0.0	0.0	52.0	\$ -	\$ -	\$ -	\$ 8,298.00
Task 8 - Funding Administration																
Prepare E-76 CON Package	2.0			50.0								52.0				\$ 7,898.00
Grant Funding Administration Invoicing (Construction Phase)				34.0								34.0				\$ 5,100.00
Subtotal	2.0	0.0	0.0	84.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	86.0	0.0	0.0	0.0	\$ 12,998.00
TOTAL	42.0	28.0	98.0	235.0	212.0	44.0	17.0	90.0	16.0	0.0	2.0	784.0	\$ 64,452.90	\$ 45,425.00	\$ 11,316.00	\$ 246,347.90



CITY COUNCIL AGENDA ITEM NO. 3.9

SECTION 3: CONSENT CALENDAR

Meeting Date: July 12, 2021
Subject: Adopt Resolution No. 2021-25, Approving the Professional Services Agreement with JSWWC Water & Wastewater Management for Consulting Services and Adopt Resolution No. 2021-26, Approving the Professional Services Agreement with JSWWC Water & Wastewater Management for the Water Meter Register Replacement Project
Enclosure: Professional Services Agreements
Presented By: Rachel Wyse, Community Development Director
Approved By: 

Staff Recommendations:

1. Adopt Resolution No. 2021-25, approving the Professional Services Agreement with JSWWC Water and Wastewater Management for consulting services at the Wastewater Treatment Plant and the Public Water System.
2. Adopt Resolution No. 2021-26, approving the Professional Services Agreement with JSWWC Water and Wastewater Management for the Meter Register Replacement Project.
3. Authorize the City Manager to execute the Professional Services Agreements with JSWWC Water and Wastewater Management, inclusive of any final edits by the City Attorney.

Background and Discussion:

The City of Hughson has used JSWWC Water and Wastewater Management (JSWWC) since 2014, as the Acting Grade 3 Wastewater Treatment Plant Chief Operator and as a Water Distribution Operator II and Water Treatment Operator II consultant on the City's Public Water System. In addition, JSWWC provides emergency coverage in association with the City of Hughson water and wastewater certified personnel.

The City is working to formalize agreements with consultants and shift any regularly needed and/or required services to professional service agreements. This agreement formalizes the consulting work needed for the City's WWTP and Public Water System.

JSWCC will continue to provide consulting services and regulatory guidance to support the City's efforts to maintain compliance with the State of California's requirements. JSWCC's tasks for each fiscal year include one day a week onsite, well site checks and wastewater rounds in coordination with the City's Utility Superintendent for troubleshooting purposes, review of the computer SCADA system, making changes in systems to ensure optimal operation, monthly, quarterly and annual report preparation and submittals including the EAR and Drought Report, Sampling of water, training of City staff as needed, general oversight of the water and wastewater systems as the acting Chief Operator, and assistance with system issues, improvements, and or changes that benefit the water system operation.

In addition, the City Council approved the Water Meter Register Project (Project) approximately two years ago. The Project will update the registers on every water meter allowing for readings to automatically translate to the City's Finance System (Tyler) to ensure utility billings are complete, accurate, and timely.

City staff anticipated completing the project within two years with the current city staffing level. Unfortunately, due to vacancies and difficulty in filling the positions during the pandemic, the Project has stalled. As new homes are built the updated meter registers are placed, including the Province Place and Euclid South Developments. Approximately 180-meter registers have been placed at new homes and by City staff at meters that are currently on the manual read list. The Utilities Superintendent reached out to several companies in the past to get a cost to complete the project and after discussions with Jared Steeley of JSWWC, who is currently consulting with the City of Hughson, Mr. Steeley provided an estimate to replace approximately 2200-meter registers at a cost of \$14.25 each, approximately \$31,350. For this project, JSWWC will remove and replace the ¾" and 1" meter registers with city supplied registers, record the old meter reading prior to replacement and tag with the city supplied bar code, clean out all water boxes of dirt and debris for proper install, and load and unload old and new registers at the wastewater facility daily.

This Water Meter Register Replacement Project is important as California is no stranger to drought and with California experiencing a second consecutive dry winter, the Governor recently announced an emergency proclamation related to drought preparedness. City staff anticipate that the Project will save on water usage by residents having the ability to directly monitor their accounts in order to detect leaks, track water usage in real time, and by alerting staff in the event of meter tampering. In addition, with the additional development of housing, the efficiency of the meter reading process will reduce the need to hire additional staff for the sole purpose of keeping up with monthly meter reads.

City staff continue to look for more efficient and effective ways to serve the Hughson community and the Water Meter Register Replacement Project will provide staff with a more efficient and automated system, saving approximately 20 hours of manually

reading meters monthly, reduce time spent on starts and stops of service an estimated 10-15 times a month, and reduce hours of reviewing water usage histories including discussions with residents regarding the potential for water meter register malfunction, water leaks, etc. Residents will be able to view the history of their water usage in their account, set notifications should water usage exceed a limit the account holder sets, and provide leak detection notifications.

Fiscal Impact:

The fiscal impact for consulting services for the WWTP and the Public Water System is approximately \$45,000 annually. The Water Meter Register Project is estimated at \$31,350 and the cost is based on the number of registers placed. The two Agreements will be funded from the Water Fund and is included in the Proposed Fiscal Year 2021-2022 Proposed Budget. Funds will be budgeted annually for the consulting work at the Wastewater Treatment Plant and the Public Water System.

**CITY COUNCIL
CITY OF HUGHSON
RESOLUTION NO. 2021-25**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HUGHSON
APPROVING THE PROFESSIONAL SERVICES AGREEMENT WITH
JSWWC WATER & WASTEWATER MANAGEMENT FOR CONSULTING SERVICES AT
THE WASTEWATER TREATMENT PLANT AND THE PUBLIC WATER SYSTEM**

WHEREAS, the State of California requires a Grade 3 Wastewater Treatment Plant Chief Operator for the City's Wastewater Treatment Plant, and a certified Water Distribution Operator II and Water Treatment Operator II for the Public Water System; and

WHEREAS, the City of Hughson has determined that it requires the professional services of a consultant for operations at the Wastewater Treatment Plant and the Public Water System; and

WHEREAS, The City has used JSWWC Water and Wastewater Management (JSWWC) since 2014, as the Acting Grade 3 Wastewater Treatment Plant Chief Operator and as a Water Distribution Operator II and Water Treatment Operator II consultant on the City's Public Water System; and

WHEREAS, JSWCC will continue to provide consulting services and regulatory guidance to support the City's efforts to maintain compliance with the State of California's requirements as shown in the Scope of Work and Approved Fee Schedule attached as "Exhibit A'.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Hughson does hereby approve the Professional Services Agreement with JSWWC Water & Wastewater Management for consulting services at the Wastewater Treatment Plant and the Public Water System attached hereto as Attachment "A" and authorizes the City Manager to sign the agreement.

PASSED AND ADOPTED by the City Council of the City of Hughson at its regularly scheduled meeting on this 12th day of July 2021 by the following roll call vote:

AYES:

NOES:

ABSTENTIONS:

ABSENT:

»
»
»

APPROVED:

GEORGE CARR, Mayor

ATTEST:

ASHTON GOSE, Deputy City Clerk

PROFESSIONAL SERVICE AGREEMENT
(City of Hughson/JSWWC Water & Wastewater Management)

THIS PROFESSIONAL SERVICES AGREEMENT (“Agreement”) is entered into by and between the City of Hughson, a California municipal corporation (“City”) and JSWWC Water & Wastewater Management (“Consultant”).

RECITALS

WHEREAS, the City has determined that it requires the professional services of a consultant for City of Hughson water and wastewater operations (“Project”).

WHEREAS, the Consultant represents that it is fully qualified to perform such professional services for the Project by virtue of its experience and the training, education and expertise of its principals and employees.

WHEREAS, the Consultant further represents that it is willing to accept responsibility for performing such services in accordance with the terms and conditions set forth in this Agreement.

NOW, THEREFORE, for and in consideration of the mutual covenants and conditions herein contained, City and Consultant agree as follows:

1. **DEFINITIONS**

1.1. “Scope of Services” means the professional services as are generally set forth in Exhibit A.

1.2. “Approved Fee Schedule” means the compensation rates as are set forth in Exhibit A.

1.3. “Commencement Date” means July 1, 2021.

1.4. “Task Order” means written direction by the City to Consultant to perform a specific scope of work of the Project.

1.5. “Project” means the interim operation of the wastewater treatment facility and water distribution system.

1.6. “Expiration Date” means the date the Project evaluation is completed.

2. **TERM**

The term of this Agreement shall commence at 12:00 a.m. on the Commencement Date and shall expire at 11:59 p.m. on the Expiration Date unless extended by written agreement of the parties or terminated earlier in accordance with Section **15** (“Termination”) below.

3. CONSULTANT'S SERVICES

3.1. Consultant shall perform the services identified in the Scope of Services and in any and all individual Task Orders specifying the fees and the services for each Task Order under this Agreement. City shall have the right to request, in writing, changes in the Scope of Services. Any such changes mutually agreed upon by the parties, and any corresponding increase or decrease in compensation, shall be incorporated by written amendment to this Agreement. In no event shall the total compensation and costs payable to Consultant under this Agreement exceed the sums specified by each Task Order unless specifically approved in advance and in writing by City.

3.2. Consultant shall perform all work to the highest professional standards of Consultant's profession and in a manner reasonably satisfactory to City. Consultant shall comply with all applicable federal, state, and local laws and regulations, including the conflict of interest provisions of Government Code Section 1090 and the Political Reform Act (Government Code Section 81000 et seq.).

3.3. Consultant represents that it has, or will secure at its own expense, all personnel required to perform the services identified in the Scope of Services. All such services shall be performed by Consultant or under its supervision, and all personnel engaged in the work shall be qualified to perform such services. The Community Services Director, or his/her designee shall be Consultant's project administrator and shall have direct responsibility for management of Consultant's performance under this Agreement. No change shall be made in Consultant's project administrator without City's prior written consent.

4. COMPENSATION

4.1. City agrees to compensate Consultant for the services provided under this Agreement, and Consultant agrees to accept in full satisfaction for such services, payment in accordance with the Approved Fee Schedule.

4.2. Consultant shall submit to City an invoice for the services performed pursuant to this Agreement on a monthly basis. Each invoice shall itemize the services rendered during the billing period and the amount due. Within ten business days of receipt of each invoice, City shall notify Consultant in writing of any disputed amounts included on the invoice. Within thirty (30) calendar days of receipt of each invoice, City shall pay all undisputed amounts included on the invoice. City shall not withhold applicable taxes or other authorized deductions from payments made to Consultant.

4.3. Payments for any services requested by City and not included in the Scope of Services shall be made to Consultant by City on a time-and-materials basis using Consultant's standard fee schedule.

5. OWNERSHIP OF WRITTEN PRODUCTS

All reports, documents, or other written material ("written products") developed by Consultant in the performance of this Agreement shall be and remain the property of City without restriction or limitation upon its use or dissemination by City. Consultant may take and retain copies of such written products as desired, but no such written products shall be the subject of a copyright application by Consultant.

6. RELATIONSHIP OF PARTIES

Consultant is, and shall at all times remain as to City, a wholly independent contractor. Consultant shall have no power to incur any debt, obligation, or liability on behalf of City or otherwise to act on behalf of City as an agent. Neither City nor any of its agents shall have control over the conduct of Consultant or any of Consultant's employees, except as set forth in this Agreement. Consultant shall not represent that it is, or that any of its agents or employees are, in any manner employees of City.

7. CONFIDENTIALITY

All data, documents, discussion, or other information developed or received by Consultant or provided for performance of this Agreement are deemed confidential and shall not be disclosed by Consultant without prior written consent by City. City shall grant such consent if disclosure is legally required. Upon request, all City data shall be returned to City upon the termination or expiration of this Agreement.

8. INDEMNIFICATION

8.1. To the fullest extent permitted by law, Consultant shall indemnify, hold harmless and defend City, its officers, agents, employees and volunteers from and against any and all claims and losses, costs or expenses for any damage due to death or injury to any person and injury to any property resulting from any alleged intentional, reckless, negligent, or otherwise wrongful acts, errors or omissions of Consultant or any of its officers, employees, servants, agents, or subcontractors in the performance of this Agreement. Such costs and expenses shall include reasonable attorneys' fees incurred by counsel of City's choice.

8.2. City shall have the right to offset against the amount of any compensation due Consultant under this Agreement any amount due City from Consultant as a result of Consultant's failure to pay City promptly any indemnification arising under this Section 8 and related to Consultant's failure to either (i) pay taxes on amounts received pursuant to this Agreement or (ii) comply with applicable workers' compensation laws.

8.3. The obligations of Consultant under this Section 8 will not be limited by the provisions of any workers' compensation act or similar act. Consultant expressly waives any statutory immunity under such statutes or laws as to City, its officers, agents, employees, and volunteers.

8.4. Consultant agrees to obtain executed indemnity agreements with provisions identical to those set forth here in this Section 8 from each and every subcontractor or any other person or entity involved by, for, with or on behalf of Consultant in the performance of this Agreement. In the event Consultant fails to obtain such indemnity obligations from others as required herein, Consultant agrees to be fully responsible and indemnify, hold harmless and defend City, its officers, agents, employees and volunteers from and against any and all claims and losses, costs or expenses for any damage due to death or injury to any person and injury to any property resulting from any alleged intentional, reckless, negligent, or otherwise wrongful acts, errors or omissions of Consultant's subcontractors or any other person or entity involved by, for, with or on behalf of Consultant in the performance of this Agreement. Such costs and expenses shall include reasonable attorneys' fees incurred by counsel of City's choice.

8.5. City does not, and shall not, waive any rights that it may possess against Consultant because of the acceptance by City, or the deposit with City, of any insurance policy or certificate required pursuant to this Agreement. This hold harmless and indemnification provision shall apply regardless of whether any insurance policies are determined to be applicable to the claim, demand, damage, liability, loss, cost, or expense.

9. INSURANCE

9.1. During the term of this Agreement, Consultant shall carry, maintain, and keep in full force and effect insurance against claims for death or injuries to persons or damages to property that may arise from or in connection with Consultant's performance of this Agreement. Such insurance shall be of the types and in the amounts as set forth below:

9.1.1. Comprehensive General Liability Insurance with coverage limits of not less than One Million Dollars (\$1,000,000), per occurrence and in the aggregate, including products and operations hazard, contractual insurance, broad form property damage, independent consultants, personal injury, underground hazard, and explosion and collapse hazard where applicable.

9.1.2. Automobile Liability Insurance for vehicles used in connection with the performance of this Agreement with minimum limits of One Million Dollars (\$1,000,000) per claimant and One Million dollars (\$1,000,000) per incident.

9.1.3. Worker's Compensation insurance as required by the laws of the State of California.

9.2. Consultant shall require each of its subcontractors to maintain insurance coverage that meets all the requirements of this Agreement.

9.3. The policy or policies required by this Agreement shall be issued by an insurer admitted in the State of California and with a rating of at least A:VII in the latest edition of Best's Insurance Guide.

9.4. Consultant agrees that if it does not keep the aforesaid insurance in full force and effect, City may either (i) immediately terminate this Agreement; or (ii) take out the necessary insurance and pay, at Consultant's expense, the premium thereon.

9.5. At all times during the term of this Agreement, Consultant shall maintain on file with City a certificate or certificates of insurance showing that the aforesaid policies are in effect in the required amounts and naming the City and its officers, employees, agents and volunteers as additional insureds. Consultant shall, prior to commencement of work under this Agreement, file with City such certificate(s).

9.6. Consultant shall provide proof that policies of insurance required herein expiring during the term of this Agreement have been renewed or replaced with other policies providing at least the same coverage. Such proof will be furnished at least two weeks prior to the expiration of the coverages.

9.7. The general liability and automobile policies of insurance required by this Agreement shall contain an endorsement naming City and its officers, employees, agents, and volunteers as additional insureds. All of the policies required under this Agreement shall contain an endorsement providing that the policies cannot be canceled or reduced except on thirty days' prior written notice to City. Consultant agrees to require its insurer to modify the certificates of insurance to delete any exculpatory wording stating that failure of the insurer to mail written notice of

cancellation imposes no obligation, and to delete the word “endeavor” with regard to any notice provisions.

9.8. The insurance provided by Consultant shall be primary to any coverage available to City. Any insurance or self-insurance maintained by City and/or its officers, employees, agents, or volunteers, shall be in excess of Consultant’s insurance and shall not contribute with it.

9.9. All insurance coverage provided pursuant to this Agreement shall not prohibit Consultant, and Consultant’s employees, agents, or subcontractors, from waiving the right of subrogation prior to a loss. Consultant hereby waives all rights of subrogation against the City.

9.10. Any deductibles or self-insured retentions must be declared to and approved by the City. At the option of City, Consultant shall either reduce or eliminate the deductibles or self-insured retentions with respect to City, or Consultant shall procure a bond guaranteeing payment of losses and expenses.

9.11. Procurement of insurance by Consultant shall not be construed as a limitation of Consultant’s liability or as full performance of Consultant’s duties to indemnify, hold harmless and defend under Section 8 of this Agreement.

10. MUTUAL COOPERATION

10.1. City shall provide Consultant with all pertinent data, documents, and other requested information as is reasonably available for the proper performance of Consultant’s services under this Agreement.

10.2. In the event any claim or action is brought against City relating to Consultant’s performance in connection with this Agreement, Consultant shall render any reasonable assistance that City may require.

11. RECORDS AND INSPECTIONS

Consultant shall maintain full and accurate records with respect to all matters covered under this Agreement for a period of three years after the expiration or termination of this Agreement. City shall have the right to access and examine such records, without charge, during normal business hours. City shall further have the right to audit such records, to make transcripts therefrom and to inspect all program data, documents, proceedings, and activities.

12. PERMITS AND APPROVALS

Consultant shall obtain, at its sole cost and expense, all permits and regulatory approvals necessary in the performance of this Agreement. This includes, but shall not be limited to, encroachment permits and building and safety permits and inspections.

13. OTHER BUSINESS ACTIVITIES

Consultant may continue to be engaged or employed in any other business, trade, profession, or other activity while providing services to the City.

14. NOTICES

Any notices, bills, invoices, or reports required by this Agreement shall be deemed received on: (i) the day of delivery if delivered by hand, facsimile or overnight courier service during Consultant's and City's regular business hours; or (ii) on the third business day following deposit in the United States mail if delivered by mail, postage prepaid, to the addresses listed below (or to such other addresses as the parties may, from time to time, designate in writing).

If to City:

City of Hughson
P.O. Box 9
Hughson, CA 95326
Telephone: (209) 883-4054
Facsimile: (209) 883-2638

With courtesy copy to:

Daniel J. Schroeder, City Attorney
Neumiller & Beardslee
P.O. Box 20
3121 W. March Lane, Suite 100
Stockton, CA 95219
Telephone: (209) 948-8200
Facsimile: (209-) 948-4910

If to Consultant:

Jared Steele
JSWWC Water & Wastewater Management
PO Box 1063
Denair, CA 95316

15. SURVIVING COVENANTS

The parties agree that the covenants contained in Section 7, Section 8, Paragraph 10.2, and Section 11 of this Agreement shall survive the expiration or termination of this Agreement.

16. TERMINATION

16.1. City shall have the right to terminate this Agreement for any reason on thirty calendar days' written notice to Consultant. Consultant shall have the right to terminate this Agreement for any reason on thirty calendar days' written notice

to City. Consultant agrees to cease all work under this Agreement on or before the effective date of any notice of termination. All City data, documents, objects, materials, or other tangible things shall be returned to City upon the termination or expiration of this Agreement.

16.2. If City terminates this Agreement due to no fault or failure of performance by Consultant, then Consultant shall be paid based on the work satisfactorily performed at the time of termination. In no event shall Consultant be entitled to receive more than the amount that would be paid to Consultant for the full performance of the services required by this Agreement.

17. GENERAL PROVISIONS

17.1. Consultant shall not delegate, transfer, subcontract or assign its duties or rights hereunder, either in whole or in part, without City's prior written consent, and any attempt to do so shall be void and of no effect. City shall not be obligated or liable under this Agreement to any party other than Consultant.

17.2. In the performance of this Agreement, Consultant shall not discriminate against any employee, subcontractor, or applicant for employment because of race, color, creed, religion, sex, marital status, sexual orientation, national origin, ancestry, age, physical or mental disability or medical condition.

17.3. Consultant agrees to comply with the regulations of City's "Conflict of Interest Code." Said Code is in accordance with the requirements of the Political Reform Act of 1974. Consultant covenants that it presently has no interest, and shall not have any interest, direct or interest, which would conflict in any manner with the performance of service required hereunder. The term "conflict" shall include, as a minimum, the definition of a "conflict of interest" under the California Fair Political Practices Act and the City of Hughson Conflict of Interest Code, as that term is applied to consultants.

17.4. In accomplishing the scope of services of this Agreement, Consultant(s) may be performing a specialized or general service for the City, and there is a substantial likelihood that the consultant's work product will be presented, either written or orally, for the purpose of influencing a governmental decision. As a result, employees of the Consultant or the Consultant itself may be subject to a Category "1" disclosure of the City's Conflict of Interest Code. If in fact this applies to the Consultant a form 700 must be filed.

17.5. The captions appearing at the commencement of the sections hereof, and in any paragraph thereof, are descriptive only and for convenience in reference to this Agreement. Should there be any conflict between such heading, and the section or paragraph thereof at the head of which it appears, the section or paragraph thereof, as the case may be, and not such heading, shall control and govern in the construction of this Agreement. Masculine or feminine pronouns shall be substituted for the neuter form and vice versa, and the plural shall be

substituted for the singular form and vice versa, in any place or places herein in which the context requires such substitution(s).

17.6. The waiver by City or Consultant of any breach of any term, covenant or condition herein contained shall not be deemed to be a waiver of such term, covenant or condition or of any subsequent breach of the same or any other term, covenant or condition herein contained. No term, covenant or condition of this Agreement shall be deemed to have been waived by City or Consultant unless in writing.

17.7. Consultant shall not be liable for any failure to perform if Consultant presents acceptable evidence, in City's sole judgment, that such failure was due to causes beyond the control and without the fault or negligence of Consultant.

17.8. Each right, power and remedy provided for herein or now or hereafter existing at law, in equity, by statute, or otherwise shall be cumulative and shall be in addition to every other right, power, or remedy provided for herein or now or hereafter existing at law, in equity, by statute, or otherwise. The exercise, the commencement of the exercise, or the forbearance of the exercise by any party of any one or more of such rights, powers or remedies shall not preclude the simultaneous or later exercise by such party of any of all of such other rights, powers or remedies. In the event legal action shall be necessary to enforce any term, covenant or condition herein contained, the party prevailing in such action, whether reduced to judgment or not, shall be entitled to its reasonable court costs, including accountants' fees, if any, and attorneys' fees expended in such action. The venue for any litigation shall be Stanislaus County, California.

17.9. If any term or provision of this Agreement or the application thereof to any person or circumstance shall, to any extent, be invalid or unenforceable, then such term or provision shall be amended to, and solely to, the extent necessary to cure such invalidity or unenforceability, and in its amended form shall be enforceable. In such event, the remainder of this Agreement, or the application of such term or provision to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby, and each term and provision of this Agreement shall be valid and be enforced to the fullest extent permitted by law.

17.10. This Agreement shall be governed and construed in accordance with the laws of the State of California.

17.11. If either party initiates an action to enforce the terms hereof or declare rights hereunder, the parties agree that the venue thereof shall be the County of Stanislaus, State of California. Consultant hereby waives any rights it might have to remove any such action pursuant to California Code of Civil Procedure Section 394.

17.12. All documents referenced as exhibits in this Agreement are hereby incorporated into this Agreement. In the event of any material discrepancy between the express provisions of this Agreement and the provisions of any document incorporated herein by reference, the provisions of this Agreement shall prevail. This instrument contains the entire Agreement between City and Consultant with respect to the transactions contemplated herein. No other prior oral or written agreements are binding upon the parties. Amendments hereto or deviations here from shall be effective and binding only if made in writing and executed by City and Consultant.

TO EFFECTUATE THIS AGREEMENT, the parties have caused their duly authorized representatives to execute this Agreement on the dates set forth below.

“City”
City of Hughson

By: _____
Merry Mayhew, City Manager

Date: _____

“Consultant”

By: _____
Jared Steeley, JSWWC

Date: 07/09/2021

Attest:

By _____
Ashton Gose, Deputy City Clerk

Date: _____

Approved as to form:

By: _____
Daniel J. Schroeder, City Attorney

Date: _____

EXHIBIT A
SCOPE OF WORK
AND
APPROVED FEE SCHEDULE

JSWWC will perform the following:

- One day per week onsite (8 hours) includes all lab data review, operations and review, sample planning with operators, file review, data entry, onsite trouble shooting with ops staff, general water system management
- Quarterly Arsenic, Chlorine usage and 123-TCP sampling coordination and reporting to DDW
- Annual duties include the electronic Annual Report to the Drinking Water Program (22 pages), CCR assistance, Drought Report
- Well site checks/Wastewater rounds (as needed)
- Computer SCADA system review
- Water & Wastewater System changes as necessary for optimal operation
- Any safety and operational duties that are normally incurred in day to day system operations
- Monthly, quarterly, and annual report preparation and submittals including the EAR and Drought Report
- Sampling to be provided by JSWWC & City Operators with analyses by Cranmer CEI Lab
- Training of city personnel as needed
- General oversight of the water & wastewater system (with Jaime) as the acting Chief Operator
- Assistance with system issues, improvements and or changes that benefit the water system operation
- JSWWC will make changes necessary to the water/wastewater system when and if needed.
- ALL changes and water system adjustments will be discussed/adjusted by California State Certified Operators only.
- Assist with any and all adjustments as needed with the City of Hughson operators. Our goal is to not modify the current plan of operations unless there is a need to do so.
- Will operate the distribution system and wastewater facility to our best ability and if changes are necessary, the City of Hughson designated personnel will be made aware of the current state BEFORE a change is made unless it is in an emergency.
- All information will be given to the assigned system regulators as required under Title 22 for system operational changes. We will inform the County, State and Office of Emergency Services of the contact names and numbers. All required insurance liability coverages and workman's comp certificates can be provided upon request.

The cost for operations is as follows:

Scheduled hourly - \$65.00

Overtime - \$95.00 (any time spent after 8 hours)

Emergency - \$150.00 (Unscheduled Call-outs 2 hour minimum)

Laboratory samples to be invoiced separate of the monthly cost for operations oversight. Costs for lab samples are subject to change as changes in pricing may occur. Normal monthly samples for water and wastewater are as follows:

Water

Weekly bacteria samples - 2 per week \$23.00

Weekly Arsenic samples Well 8 - 2 per week \$18.00

Quarterly Arsenic Wells 3 & 4

Quarterly Nitrate - all wells \$18.00

Quarterly 123-TCP all wells \$185.00 per sample site

There are annual and triennial sampling that is required for this water system. New well #9 is not included as we do not know what is required yet.

Annual Samples – TTHM/HAA5 samples are due every June or July

Triennial - July 2021 is the triennial (3 year) sampling event that results in several samples having to be collected from all of the operating online wells.

Wastewater

Influent - Monthly BOD \$22.50 each (normally one per month)

Effluent - Weekly BOD \$22.50 each x 4 per month, TSS \$18.50 x 4 per month

Effluent- Ammonia as N \$33.00 x 1 per month, TDS \$18.50 x 1 per month, NasNo3 \$18.00 x 1 per month

Wastewater Chief Operator Licensing is charged at \$600 per month. This covers the State required licensing for the City of Hughson. This also includes monthly, quarterly and annual report prep with Jaime V. as well as signing each report prior to submission.

**CITY COUNCIL
CITY OF HUGHSON
RESOLUTION NO. 2021-26**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HUGHSON
APPROVING THE PROFESSIONAL SERVICES AGREEMENT WITH
JSWWC WATER & WASTEWATER MANAGEMENT FOR THE WATER METER
REGISTER REPLACEMENT PROJECT**

WHEREAS, the City Council approved the Water Meter Register Replacement Project on June 24, 2019; and

WHEREAS, the City of Hughson has determined that it requires the professional services of a consultant for the Water Meter Register Replacement Project; and

WHEREAS, the consultant represents that it is fully qualified to perform such professional services for the Project by virtue of its experience and the training, education and expertise of its principals and employees; and

WHEREAS, JSWCC will assist in replacing meter registers on the City's water system as shown in the Scope of Work and Approved Fee Schedule, dated May 12, 2021, attached as "Exhibit A'.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Hughson does hereby approve the Professional Services Agreement with JSWWC Water & Wastewater Management for the Water Meter Register Replacement Project attached hereto as Attachment "A" and authorizes the City Manager to sign the agreement.

PASSED AND ADOPTED by the City Council of the City of Hughson at its regularly scheduled meeting on this 12th day of July 2021 by the following roll call vote:

AYES:

NOES:

ABSTENTIONS:

ABSENT:

»
»
»
»

APPROVED:

**_____
GEORGE CARR, Mayor**

ATTEST:

**_____
ASHTON GOSE, Deputy City Clerk**

PROFESSIONAL SERVICE AGREEMENT
(City of Hughson/JSWWC Water & Wastewater Management)

THIS PROFESSIONAL SERVICES AGREEMENT (“Agreement”) is entered into by and between the City of Hughson, a California municipal corporation (“City”) and JSWWC Water & Wastewater Management (“Consultant”).

RECITALS

WHEREAS, the City has determined that it requires the professional services of a consultant for City of Hughson water and wastewater operations (“Project”).

WHEREAS, the Consultant represents that it is fully qualified to perform such professional services for the Project by virtue of its experience and the training, education and expertise of its principals and employees.

WHEREAS, the Consultant further represents that it is willing to accept responsibility for performing such services in accordance with the terms and conditions set forth in this Agreement.

NOW, THEREFORE, for and in consideration of the mutual covenants and conditions herein contained, City and Consultant agree as follows:

1. **DEFINITIONS**

1.1. “Scope of Services” means the professional services as are generally set forth in Consultant’s May 12, 2021, proposal to City attached hereto as Exhibit A.

1.2. “Approved Fee Schedule” means the compensation rates as are set forth in the “Fee Estimate” within Exhibit A.

1.3. “Commencement Date” means July 1, 2021.

1.4. “Task Order” means written direction by the City to Consultant to perform a specific scope of work of the Project.

1.5. “Project” means the replacement of the City water meters as set forth in Exhibit A.

1.6. “Expiration Date” means the date the Project evaluation is completed.

2. **TERM**

The term of this Agreement shall commence at 12:00 a.m. on the Commencement Date and shall expire at 11:59 p.m. on the Expiration Date or June 30, 2022, whichever occurs first, unless extended by written agreement of the parties or terminated earlier in accordance with

Section 15 (“Termination”) below.

3. CONSULTANT’S SERVICES

3.1. Consultant shall perform the services identified in the Scope of Services and in any and all individual Task Orders specifying the fees and the services for each Task Order under this Agreement. City shall have the right to request, in writing, changes in the Scope of Services. Any such changes mutually agreed upon by the parties, and any corresponding increase or decrease in compensation, shall be incorporated by written amendment to this Agreement. In no event shall the total compensation and costs payable to Consultant under this Agreement exceed the sums specified by each Task Order unless specifically approved in advance and in writing by City.

3.2. Consultant shall perform all work to the highest professional standards of Consultant’s profession and in a manner reasonably satisfactory to City. Consultant shall comply with all applicable federal, state and local laws and regulations, including the conflict of interest provisions of Government Code Section 1090 and the Political Reform Act (Government Code Section 81000 et seq.).

3.3. Consultant represents that it has, or will secure at its own expense, all personnel required to perform the services identified in the Scope of Services. All such services shall be performed by Consultant or under its supervision, and all personnel engaged in the work shall be qualified to perform such services. The Community Services Director, or his/her designee shall be Consultant’s project administrator and shall have direct responsibility for management of Consultant’s performance under this Agreement. No change shall be made in Consultant’s project administrator without City’s prior written consent.

4. COMPENSATION

4.1. City agrees to compensate Consultant for the services provided under this Agreement, and Consultant agrees to accept in full satisfaction for such services, payment in the amount of \$31,350.00.

4.2. Consultant shall submit to City an invoice for the services performed pursuant to this Agreement on a monthly basis. Each invoice shall itemize the services rendered during the billing period and the amount due. Within ten business days of receipt of each invoice, City shall notify Consultant in writing of any disputed amounts included on the invoice. Within thirty (30) calendar days of receipt of each invoice, City shall pay all undisputed amounts included on the invoice. City shall not withhold applicable taxes or other authorized deductions from payments made to Consultant.

4.3. Payments for any services requested by City and not included in the Scope of Services shall be made to Consultant by City on a time-and-materials basis using Consultant's standard fee schedule.

5. OWNERSHIP OF WRITTEN PRODUCTS

All reports, documents or other written material ("written products") developed by Consultant in the performance of this Agreement shall be and remain the property of City without restriction or limitation upon its use or dissemination by City. Consultant may take and retain copies of such written products as desired, but no such written products shall be the subject of a copyright application by Consultant.

6. RELATIONSHIP OF PARTIES

Consultant is, and shall at all times remain as to City, a wholly independent contractor. Consultant shall have no power to incur any debt, obligation, or liability on behalf of City or otherwise to act on behalf of City as an agent. Neither City nor any of its agents shall have control over the conduct of Consultant or any of Consultant's employees, except as set forth in this Agreement. Consultant shall not represent that it is, or that any of its agents or employees are, in any manner employees of City.

7. CONFIDENTIALITY

All data, documents, discussion, or other information developed or received by Consultant or provided for performance of this Agreement are deemed confidential and shall not be disclosed by Consultant without prior written consent by City. City shall grant such consent if disclosure is legally required. Upon request, all City data shall be returned to City upon the termination or expiration of this Agreement.

8. INDEMNIFICATION

8.1. To the fullest extent permitted by law, Consultant shall indemnify, hold harmless and defend City, its officers, agents, employees and volunteers from and against any and all claims and losses, costs or expenses for any damage due to death or injury to any person and injury to any property resulting from any alleged intentional, reckless, negligent, or otherwise wrongful acts, errors or omissions of Consultant or any of its officers, employees, servants, agents, or subcontractors in the performance of this Agreement. Such costs and expenses shall include reasonable attorneys' fees incurred by counsel of City's choice.

8.2. City shall have the right to offset against the amount of any compensation due Consultant under this Agreement any amount due City from Consultant as a result of Consultant's failure to pay City promptly any indemnification arising under this Section 8 and related to Consultant's failure to either (i) pay taxes on amounts received pursuant to this Agreement or (ii) comply with applicable workers' compensation laws.

8.3. The obligations of Consultant under this Section 8 will not be limited by the provisions of any workers' compensation act or similar act. Consultant expressly waives any statutory immunity under such statutes or laws as to City, its officers, agents, employees and volunteers.

8.4. Consultant agrees to obtain executed indemnity agreements with provisions identical to those set forth here in this Section 8 from each and every subcontractor or any other person or entity involved by, for, with or on behalf of Consultant in the performance of this Agreement. In the event Consultant fails to obtain such indemnity obligations from others as required herein, Consultant agrees to be fully responsible and indemnify, hold harmless and defend City, its officers, agents, employees and volunteers from and against any and all claims and losses, costs or expenses for any damage due to death or injury to any person and injury to any property resulting from any alleged intentional, reckless, negligent, or otherwise wrongful acts, errors or omissions of Consultant's subcontractors or any other person or entity involved by, for, with or on behalf of Consultant in the performance of this Agreement. Such costs and expenses shall include reasonable attorneys' fees incurred by counsel of City's choice.

8.5. City does not, and shall not, waive any rights that it may possess against Consultant because of the acceptance by City, or the deposit with City, of any insurance policy or certificate required pursuant to this Agreement. This hold harmless and indemnification provision shall apply regardless of whether or not any insurance policies are determined to be applicable to the claim, demand, damage, liability, loss, cost or expense.

9. INSURANCE

9.1. During the term of this Agreement, Consultant shall carry, maintain, and keep in full force and effect insurance against claims for death or injuries to persons or damages to property that may arise from or in connection with Consultant's performance of this Agreement. Such insurance shall be of the types and in the amounts as set forth below:

9.1.1. Comprehensive General Liability Insurance with coverage limits of not less than One Million Dollars (\$1,000,000), per occurrence and in the aggregate, including products and operations hazard, contractual insurance, broad form property damage, independent consultants, personal injury, underground hazard, and explosion and collapse hazard where applicable.

9.1.2. Automobile Liability Insurance for vehicles used in connection with the performance of this Agreement with minimum limits of One Million Dollars (\$1,000,000) per claimant and One Million dollars (\$1,000,000) per incident.

9.1.3. Worker's Compensation insurance as required by the laws of the State of California.

9.2. Consultant shall require each of its subcontractors to maintain insurance coverage that meets all of the requirements of this Agreement.

9.3. The policy or policies required by this Agreement shall be issued by an insurer admitted in the State of California and with a rating of at least A:VII in the latest edition of Best's Insurance Guide.

9.4. Consultant agrees that if it does not keep the aforesaid insurance in full force and effect, City may either (i) immediately terminate this Agreement; or (ii) take out the necessary insurance and pay, at Consultant's expense, the premium thereon.

9.5. At all times during the term of this Agreement, Consultant shall maintain on file with City a certificate or certificates of insurance showing that the aforesaid policies are in effect in the required amounts and naming the City and its officers, employees, agents and volunteers as additional insureds. Consultant shall, prior to commencement of work under this Agreement, file with City such certificate(s).

9.6. Consultant shall provide proof that policies of insurance required herein expiring during the term of this Agreement have been renewed or replaced with other policies providing at least the same coverage. Such proof will be furnished at least two weeks prior to the expiration of the coverages.

9.7. The general liability and automobile policies of insurance required by this Agreement shall contain an endorsement naming City and its officers, employees, agents and volunteers as additional insureds. All of the policies required under this Agreement shall contain an endorsement providing that the policies cannot be canceled or reduced except on thirty days' prior written notice to City. Consultant agrees to require its insurer to modify the certificates of insurance to delete any exculpatory wording stating that failure of the insurer to mail written notice of

cancellation imposes no obligation, and to delete the word “endeavor” with regard to any notice provisions.

9.8. The insurance provided by Consultant shall be primary to any coverage available to City. Any insurance or self-insurance maintained by City and/or its officers, employees, agents or volunteers, shall be in excess of Consultant’s insurance and shall not contribute with it.

9.9. All insurance coverage provided pursuant to this Agreement shall not prohibit Consultant, and Consultant’s employees, agents or subcontractors, from waiving the right of subrogation prior to a loss. Consultant hereby waives all rights of subrogation against the City.

9.10. Any deductibles or self-insured retentions must be declared to and approved by the City. At the option of City, Consultant shall either reduce or eliminate the deductibles or self-insured retentions with respect to City, or Consultant shall procure a bond guaranteeing payment of losses and expenses.

9.11. Procurement of insurance by Consultant shall not be construed as a limitation of Consultant’s liability or as full performance of Consultant’s duties to indemnify, hold harmless and defend under Section 8 of this Agreement.

10. MUTUAL COOPERATION

10.1. City shall provide Consultant with all pertinent data, documents and other requested information as is reasonably available for the proper performance of Consultant’s services under this Agreement.

10.2. In the event any claim or action is brought against City relating to Consultant’s performance in connection with this Agreement, Consultant shall render any reasonable assistance that City may require.

11. RECORDS AND INSPECTIONS

Consultant shall maintain full and accurate records with respect to all matters covered under this Agreement for a period of three years after the expiration or termination of this Agreement. City shall have the right to access and examine such records, without charge, during normal business hours. City shall further have the right to audit such records, to make transcripts therefrom and to inspect all program data, documents, proceedings, and activities.

12. PERMITS AND APPROVALS

Consultant shall obtain, at its sole cost and expense, all permits and regulatory approvals necessary in the performance of this Agreement. This includes, but shall not be limited to, encroachment permits and building and safety permits and inspections.

13. NOTICES

Any notices, bills, invoices, or reports required by this Agreement shall be deemed received on: (i) the day of delivery if delivered by hand, facsimile or overnight courier service during Consultant's and City's regular business hours; or (ii) on the third business day following deposit in the United States mail if delivered by mail, postage prepaid, to the addresses listed below (or to such other addresses as the parties may, from time to time, designate in writing).

If to City:

City of Hughson
P.O. Box 9
Hughson, CA 95326
Telephone: (209) 883-4054
Facsimile: (209) 883-2638

With courtesy copy to:

Daniel J. Schroeder, City Attorney
Neumiller & Beardslee
P.O. Box 20
3121 W. March Lane, Suite 100
Stockton, CA 95219
Telephone: (209) 948-8200
Facsimile: (209-) 948-4910

If to Consultant:

Jared Steele
JSWWC Water & Wastewater Management
PO Box 1063
Denair, CA 95316

14. SURVIVING COVENANTS

The parties agree that the covenants contained in Section 7, Section 8, Paragraph 10.2 and Section 11 of this Agreement shall survive the expiration or termination of this Agreement.

15. TERMINATION

15.1. City shall have the right to terminate this Agreement for any reason on thirty calendar days' written notice to Consultant. Consultant shall have the right to terminate this Agreement for any reason on thirty calendar days' written notice to City. All City data, documents, objects, materials or other tangible things shall be returned to City upon the termination or expiration of this Agreement.

15.2. If City terminates this Agreement due to no fault or failure of performance by Consultant, then Consultant shall be paid based on the work satisfactorily performed at the time of termination. In no event shall Consultant be entitled to receive more than the amount that would be paid to Consultant for the full performance of the services required by this Agreement.

16. GENERAL PROVISIONS

16.1. Consultant shall not delegate, transfer, subcontract or assign its duties or rights hereunder, either in whole or in part, without City's prior written consent, and any attempt to do so shall be void and of no effect. City shall not be obligated or liable under this Agreement to any party other than Consultant.

16.2. In the performance of this Agreement, Consultant shall not discriminate against any employee, subcontractor, or applicant for employment because of race, color, creed, religion, sex, marital status, sexual orientation, national origin, ancestry, age, physical or mental disability or medical condition.

16.3. Consultant agrees to comply with the regulations of City's "Conflict of Interest Code." Said Code is in accordance with the requirements of the Political Reform Act of 1974. Consultant covenants that it presently has no interest, and shall not have any interest, direct or indirect, which would conflict in any manner with the performance of service required hereunder. The term "conflict" shall include, as a minimum, the definition of a "conflict of interest" under the California Fair Political Practices Act and the City of Hughson Conflict of Interest Code, as that term is applied to consultants.

16.4. In accomplishing the scope of services of this Agreement, Consultant(s) may be performing a specialized or general service for the City, and there is a substantial likelihood that the consultant's work product will be presented, either written or orally, for the purpose of influencing a governmental decision. As a result, employees of the Consultant or the Consultant itself may be subject to a Category "1" disclosure of the City's Conflict of Interest Code. If in fact this applies to the Consultant a form 700 must be filed.

16.5. The captions appearing at the commencement of the sections hereof, and in any paragraph thereof, are descriptive only and for convenience in reference to this Agreement. Should there be any conflict between such heading, and the section or paragraph thereof at the head of which it appears, the section or paragraph thereof, as the case may be, and not such heading, shall control and govern in the construction of this Agreement. Masculine or feminine pronouns shall be substituted for the neuter form and vice versa, and the plural shall be substituted for the singular form and vice versa, in any place or places herein in which the context requires such substitution(s).

16.6. The waiver by City or Consultant of any breach of any term, covenant or condition herein contained shall not be deemed to be a waiver of such term,

covenant or condition or of any subsequent breach of the same or any other term, covenant or condition herein contained. No term, covenant or condition of this Agreement shall be deemed to have been waived by City or Consultant unless in writing.

16.7. Consultant shall not be liable for any failure to perform if Consultant presents acceptable evidence, in City's sole judgment, that such failure was due to causes beyond the control and without the fault or negligence of Consultant.

16.8. Each right, power and remedy provided for herein or now or hereafter existing at law, in equity, by statute, or otherwise shall be cumulative and shall be in addition to every other right, power, or remedy provided for herein or now or hereafter existing at law, in equity, by statute, or otherwise. The exercise, the commencement of the exercise, or the forbearance of the exercise by any party of any one or more of such rights, powers or remedies shall not preclude the simultaneous or later exercise by such party of any of all of such other rights, powers or remedies. In the event legal action shall be necessary to enforce any term, covenant or condition herein contained, the party prevailing in such action, whether reduced to judgment or not, shall be entitled to its reasonable court costs, including accountants' fees, if any, and attorneys' fees expended in such action. The venue for any litigation shall be Stanislaus County, California.

16.9. If any term or provision of this Agreement or the application thereof to any person or circumstance shall, to any extent, be invalid or unenforceable, then such term or provision shall be amended to, and solely to, the extent necessary to cure such invalidity or unenforceability, and in its amended form shall be enforceable. In such event, the remainder of this Agreement, or the application of such term or provision to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby, and each term and provision of this Agreement shall be valid and be enforced to the fullest extent permitted by law.

16.10. This Agreement shall be governed and construed in accordance with the laws of the State of California.

16.11. If either party initiates an action to enforce the terms hereof or declare rights hereunder, the parties agree that the venue thereof shall be the County of Stanislaus, State of California. Consultant hereby waives any rights it might have to remove any such action pursuant to California Code of Civil Procedure Section 394.

16.12. All documents referenced as exhibits in this Agreement are hereby incorporated into this Agreement. In the event of any material discrepancy between the express provisions of this Agreement and the provisions of any document incorporated herein by reference, the provisions of this Agreement shall prevail. This instrument contains the entire Agreement between City and Consultant with respect to the transactions contemplated herein. No other prior

oral or written agreements are binding upon the parties. Amendments hereto or deviations here from shall be effective and binding only if made in writing and executed by City and Consultant.

TO EFFECTUATE THIS AGREEMENT, the parties have caused their duly authorized representatives to execute this Agreement on the dates set forth below.

"City"
City of Hughson

By: _____
Merry Mayhew, City Manager

Date: _____

"Consultant"

By: _____
Jared Steeley, JSWWC

Date: _____ 07/09/2021

Attest:

By _____
Ashton Gose, Deputy City Clerk

Date: _____

Approved as to form:

By: _____
Daniel J. Schroeder, City Attorney

Date: _____

EXHIBIT A
SCOPE OF WORK
AND
APPROVED FEE SCHEDULE

JSWWC Water & Wastewater Management

City of Hughson
Attn: Jaime Velasquez
Utilities Superintendent
7018 Pine Street
Hughson, CA 95326

May 12, 2021

JSWWC Water & Wastewater Management appreciates the opportunity to prepare a bid for your Meter Register Replacement Project. This will include an agreement with the City of Hughson (COH) and JSWWC.

JSWWC looks forward in working with you to assist in replacing the meter registers on your water system. This quote is estimated per register and is for 1 employee of JSWWC.

Pricing

\$14.25 per meter register supplied by COH

It is estimated to take 2 months (63 days) to complete the replacement meter register project provided there are no unforeseen circumstances. Per Jaime Velasquez outlook, there are 2200 meters to be replaced.

2200 meters x \$14.25 each = \$31,350.00

Scope

1. Remove and replace the $\frac{3}{4}$ " and 1" meter register with City supplied wireless register.
2. Record old meter reading prior to replacement and tag with City supplied bar code.
3. Clean out all water boxes of dirt and debris for proper install.
4. Load and unload old and new registers at the wastewater facility daily.

All insurances and safety PPE will be followed in addition to providing the necessary paperwork to show meter readings at time of changeout. Safety cones and safety vests will be used. Insurance certificates and workman's comp certificates available upon request.

Prevailing wage was factored for this quote.

Quote valid for 30 days!

Jared Steeley
Jared Steeley