FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 1 OF 1

TRINITY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
TRINITY COUNTY UNINCORPORATED AREAS	**060401**

FEMA

REVISED: REVISED PRELIMINARY DEC 22 2014

FLOOD INSURANCE STUDY NUMBER
06105CV000C

Version Number 2.3.2.2

TABLE OF CONTENTS
Volume 1

		Page
SECTION 1.0 – INTRODUCTION		**1**
1.1	The National Flood Insurance Program	1
1.2	Purpose of this Flood Insurance Study Report	2
1.3	Jurisdictions Included in the Flood Insurance Study Project	2
1.4	Considerations for using this Flood Insurance Study Report	3
SECTION 2.0 – FLOODPLAIN MANAGEMENT APPLICATIONS		**15**
2.1	Floodplain Boundaries	15
2.2	Floodways	16
2.3	Base Flood Elevations	23
2.4	Non-Encroachment Zones	23
2.5	Coastal Flood Hazard Areas	23
2.5.1	Water Elevations and the Effects of Waves	23
2.5.2	Floodplain Boundaries and BFEs for Coastal Areas	24
2.5.3	Coastal High Hazard Areas	24
2.5.4	Limit of Moderate Wave Action	24
SECTION 3.0 – INSURANCE APPLICATIONS		**24**
3.1	National Flood Insurance Program Insurance Zones	24
3.2	Coastal Barrier Resources System	24
SECTION 4.0 – AREA STUDIED		**25**
4.1	Basin Description	25
4.2	Principal Flood Problems	25
4.3	Non-Levee Flood Protection Measures	27
4.4	Levees	29
SECTION 5.0 – ENGINEERING METHODS		**31**
5.1	Hydrologic Analyses	31
5.2	Hydraulic Analyses	34
5.3	Coastal Analyses	40
5.3.1	Total Stillwater Elevations	40
5.3.2	Waves	41
5.3.3	Coastal Erosion	41
5.3.4	Wave Hazard Analyses	41
5.4	Alluvial Fan Analyses	41
SECTION 6.0 – MAPPING METHODS		**41**
6.1	Vertical and Horizontal Control	41
6.2	Base Map	43
6.3	Floodplain and Floodway Delineation	44
6.4	Coastal Flood Hazard Mapping	63
6.5	FIRM Revisions	63

6.5.1 Letters of Map Amendment 63
6.5.2 Letters of Map Revision Based on Fill 63
6.5.3 Letters of Map Revision 64
6.5.4 Physical Map Revisions 64
6.5.5 Contracted Restudies 64
6.5.6 Community Map History 65

SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION 66
7.1 Contracted Studies 66
7.2 Community Meetings 67

SECTION 8.0 – ADDITIONAL INFORMATION 69

SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES 70

Figures

Page

Figure 1: FIRM Panel Index 7
Figure 2: FIRM Notes to Users 8
Figure 3: Map Legend for FIRM 11
Figure 4: Floodway Schematic 16
Figure 5: Wave Runup Transect Schematic 23
Figure 6: Coastal Transect Schematic 24
Figure 7: Frequency Discharge-Drainage Area Curves 34
Figure 8: 1% Annual Chance Total Stillwater Elevations for Coastal Areas 40
Figure 9: Transect Location Map 41

Tables

Page

Table 1: Listing of NFIP Jurisdictions 2
Table 2: Flooding Sources Included in this FIS Report 18
Table 3: Flood Zone Designations by Community 24
Table 4: Coastal Barrier Resources System Information 25
Table 5: Basin Characteristics 25
Table 6: Principal Flood Problems 25
Table 7: Historic Flooding Elevations 26
Table 8: Non-Levee Flood Protection Measures 27
Table 9: Levees 30
Table 10: Summary of Discharges 32
Table 11: Summary of Non-Coastal Stillwater Elevations 34
Table 12: Stream Gage Information used to Determine Discharges 34
Table 13: Summary of Hydrologic and Hydraulic Analyses 35
Table 14: Roughness Coefficients 40
Table 15: Summary of Coastal Analyses 40

Table 16: Tide Gage Analysis Specifics 41
Table 17: Coastal Transect Parameters 41
Table 18: Summary of Alluvial Fan Analyses 41
Table 19: Results of Alluvial Fan Analyses 41
Table 20: Countywide Vertical Datum Conversion 42
Table 21: Stream-by-Stream Vertical Datum Conversion 43
Table 22: Base Map Sources 44
Table 23: Summary of Topographic Elevation Data used in Mapping 44
Table 24: Floodway Data 46
Table 25: Flood Hazard and Non-Encroachment Data for Selected Streams 63
Table 26: Summary of Coastal Transect Mapping Considerations 63
Table 27: Incorporated Letters of Map Change 64
Table 28: Community Map History 66
Table 29: Summary of Contracted Studies Included in this FIS Report 66
Table 30: Community Meetings 68
Table 31: Map Repositories 69
Table 32: Additional Information 69
Table 33: Bibliography and References 71

Volume 1

Exhibits

Flood Profiles	Panel
Carter Gulch	01 P
Coffee Creek	02-03 P
East Weaver Creek	04 P
Ewing Gulch	05-06 P
Garden Gulch	07-08 P
Hayfork Creek	09-10 P
Kellogg Gulch	11 P
Middle Weaver Creek	12 P
Sidney Gulch	13-14 P
Ten Cent Gulch	15-16 P
Trinity River	17-25g P
Trinity River – Bucktail Left Cross Channel	25h P
Trinity River – Bucktail Right Side Channel	25i P
Weaver Creek / Middle Weaver Creek	26 P
West Weaver Creek	27 P

Published Separately

Flood Insurance Rate Map (FIRM)

FLOOD INSURANCE STUDY REPORT
TRINITY 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 insurance 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 60.3, *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 Trinity County, California.

The jurisdictions that are included in this project area, along with the Community Identification Number (CID) for each community and the 8-digit Hydrologic Unit Codes (HUC-8) sub-basins affecting each, are shown in Table 1. The Flood Insurance Rate Map (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.

The location of flood hazard data for participating communities in multiple jurisdictions is also indicated in the table.

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
Trinity County, Unincorporated Areas	060401	18010102, 18010104, 18010105, 18010211, 18010212	06105C0385E 06105C0405E 06105C0500E 06105C0725E 06105C0750E 06105C0775E 06105C0793F 06105C0794F 06105C0813F 06105C0814F 06105C0818F 06105C0875E 06105C0975E 06105C1000E 06105C1002F	

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Trinity County, Unincorporated Areas (continued)			06105C1006F 06105C1008F 06105C1009F 06105C1017F 06105C1027E 06105C1029E 06105C1034F 06105C1035F 06105C1036F 06105C1037F 06105C1038F 06105C1039F 06105C1041F 06105C1042F 06105C1043F 06105C1044F 06105C1052F 06105C1053F 06105C1054F 06105C1056F 06105C1058F 06105C1061F 06105C1065F 06105C1070E 06105C1180E 06105C1185E 06105C1187E 06105C1190E 06105C1191E 06105C1195E 06105C1225E 06105C1250E 06105C1275E 06105C1650E 06105C1675E 06105C1800E 06105C1825E 06105C1850E 06105C1975E 06105C2000E 06105C2025E	

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% annual chance flood elevation is also referred to as the Base Flood Elevation (BFE)); delineations of the 1% annual chance and 0.2% annual chance floodplains; and 1% 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 31, "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 Trinity County became effective on August 16, 1988. Refer to Table 28 for information about subsequent revisions to the FIRMs.

- Selected FIRM panels for the community may contain information (such as floodways and cross sections) that was previously shown separately on the corresponding Flood Boundary and Floodway Map panels. In addition, former flood hazard zone designations have been changed as follows:

Old Zone	New Zone
A1 through A30	AE
V1 through V30	VE
B	X (shaded)
C	X (unshaded)

- FEMA does not impose floodplain management requirements or special insurance ratings based on Limit of Moderate Wave Action (LiMWA) delineations at this time. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave. If the LiMWA is shown on the FIRM, it is being provided by FEMA as information only. For communities that do adopt Zone VE building standards in the area defined by the LiMWA, additional Community Rating System (CRS) credits are available. Refer to Section 2.5.4 for additional information about the LiMWA.

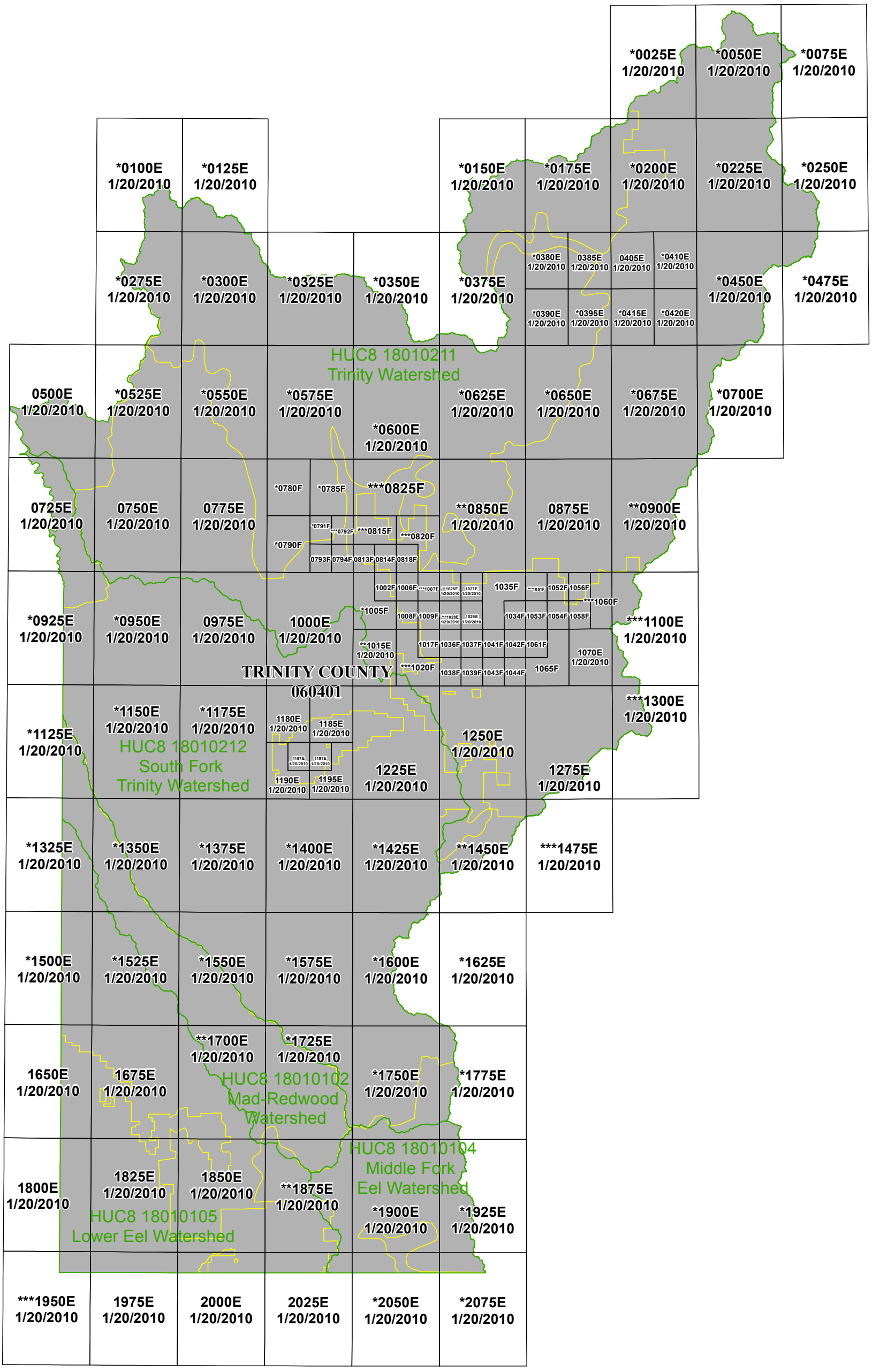
  The CRS is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. Visit the FEMA Web site at http://www.fema.gov or contact your appropriate FEMA Regional Office for more information about this program.

- Previous FIS Reports and FIRMs may have included levees that were accredited as reducing the risk associated with the 1% annual chance flood based on the information available and the mapping standards of the NFIP at that time. For FEMA to continue to accredit the identified levees, the levees must meet the criteria of the Code of Federal Regulations, Title 44, Section 65.10 (44 CFR 65.10), titled "Mapping of Areas Protected by Levee Systems."

  Since the status of levees is subject to change at any time, the user should contact the appropriate agency for the latest information regarding levees presented in Table 9 of this FIS Report. For levees owned or operated by the U.S. Army Corps of Engineers (USACE), information may be obtained from the USACE national levee database. For all other levees, the user is encouraged to contact the appropriate local community.

- 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 http://www.fema.gov.

(This page intentionally left blank)



N

1 inch = 41,250 feet 1:495,000

Feet
0 22,500 45,000 90,000

Map Projection:
Universal Transverse Mercator Zone 10 North;
North American Datum 1983

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

HTTP://MSC.FEMA.GOV

SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION

*PANEL NOT PRINTED - AREA IN ZONE D
**PANEL NOT PRINTED - NATIONAL FOREST IN ZONE D, REST OF PANEL IN ZONE X
***PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP INDEX

TRINITY COUNTY, CALIFORNIA and Incorporated Areas

PANELS PRINTED:

0385, 0405, 0500, 0725, 0750, 0775, 0793, 0794, 0813, 0814, 0818, 0875, 0975, 1000, 1002, 1006, 1008, 1009, 1017, 1027, 1029, 1034, 1035, 1036, 1037, 1038, 1039, 1041, 1042, 1043, 1044, 1052, 1053, 1054, 1056, 1058, 1061, 1065, 1070, 1180, 1185, 1187, 1190, 1191, 1195, 1225, 1250, 1275, 1650, 1675, 1800, 1825, 1850, 1975, 2000, 2025

FEMA

MAP NUMBER
06105CIND0C

MAP REVISED

Figure 2: FIRM Notes to Users

NOTES TO USERS

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 Map Service Center website at http://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 Map Service Center website or by calling the FEMA Map Information eXchange.

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 Map Service Center at the number listed above.

For community and countywide map dates, refer to Table 28 in this FIS Report.

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.

PRELIMINARY FIS REPORT: FEMA maintains information about map features, such as street locations and names, in or near designated flood hazard areas. Requests to revise information in or near designated flood hazard areas may be provided to FEMA during the community review period, at the final Consultation Coordination Officer's meeting, or during the statutory 90-day appeal period. Approved requests for changes will be shown on the final printed FIRM.

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.

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 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.

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.

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.

Figure 2. FIRM Notes to Users

PROJECTION INFORMATION: The projection used in the preparation of the map was Universal Transverse Mercator (UTM) Zone 10. The horizontal datum was NAD83, GRS1980 spheroid. 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 http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

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

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 31 of this FIS Report.

BASE MAP INFORMATION: Base map information shown on the FIRM was provided by Trinity County. 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.

Figure 2. FIRM Notes to Users

NOTES FOR FIRM INDEX

REVISIONS TO INDEX: As new studies are performed and FIRM panels are updated within Trinity County, CA, 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 28 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 Trinity County, CA**,** effective <date>**.**

ACCREDITED LEVEE NOTES TO USERS: Check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection for areas on this panel. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA Website at http://www.fema.gov/business/nfip/index.shtm.

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.

Figure 3: Map Legend for FIRM

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.*

	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, either at cross section locations or as static whole-foot elevations that apply throughout the 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

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.
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
NO SCREEN	Unshaded Zone X: Areas determined to be outside the 0.2% annual chance flood hazard
FLOOD HAZARD AND OTHER BOUNDARY LINES	
(ortho) (vector)	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	
Aqueduct *Channel* *Culvert* *Storm Sewer*	Channel, Culvert, Aqueduct, or Storm Sewer
Dam *Jetty* *Weir*	Dam, Jetty, Weir
	Levee, Dike, or Floodwall accredited or provisionally accredited to reduce the flood risk from the 1% annual chance flood.
	Levee, Dike or Floodwall not accredited to reduce the flood risk from the 1% annual chance flood.
Bridge	Bridge

Figure 3: Map Legend for FIRM

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AND OTHERWISE PROTECTED AREAS (OPA): *CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas. See Notes to Users for important information.*	
CBRS AREA 09/30/2009	Coastal Barrier Resources System Area: Labels are shown to clarify where this area shares a boundary with an incorporated area or overlaps with the floodway.
OTHERWISE PROTECTED AREA 09/30/2009	Otherwise Protected Area
REFERENCE MARKERS	
22.0	River mile Markers
CROSS SECTION & TRANSECT INFORMATION	
B 20.2	Lettered Cross Section with Regulatory Water Surface Elevation (BFE)
5280 21.1	Numbered Cross Section with Regulatory Water Surface Elevation (BFE)
17.5	Unlettered Cross Section with Regulatory Water Surface Elevation (BFE)
8	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.
513	Base Flood Elevation Line (shown for flooding sources for which no cross sections or profile are available)
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

Figure 3: Map Legend for FIRM

BASE MAP FEATURES	
Missouri Creek	River, Stream or Other Hydrographic Feature
234	Interstate Highway
234	U.S. Highway
234	State Highway
234	County Highway
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% annual chance (100-year) flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2% 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 Trinity 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% 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 23), study methodologies employed (Section 5.0), and flood risk, certain flooding sources may be mapped to show both the 1% and 0.2% 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% annual chance floodplain boundary on the FIRM, without published water surface elevations. In cases where the 1% and 0.2% annual chance floodplain boundaries are close together, only the 1% 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 Trinity County, CA, 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 13. 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% annual chance floodplain corresponds to the SFHAs. The 0.2% 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.

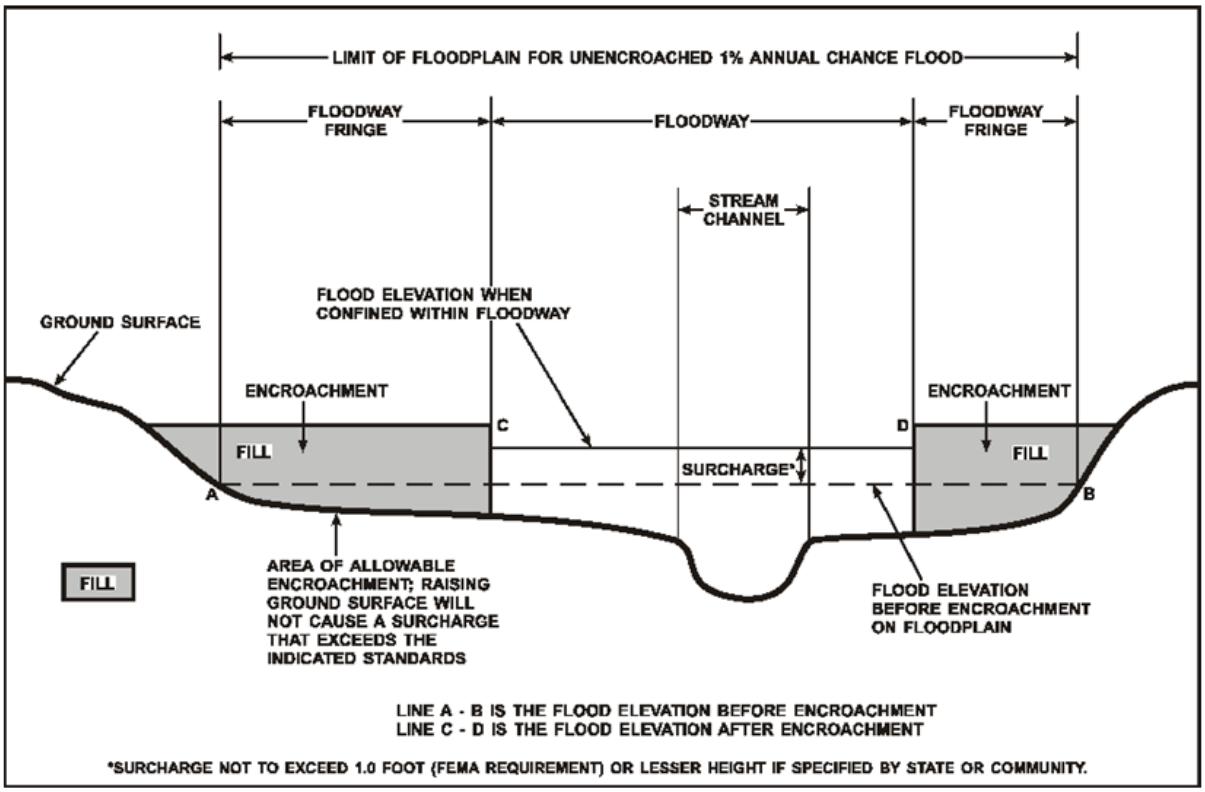
2.2 Floodways

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% 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% annual chance flood. The floodway fringe is the area between the floodway and the 1% 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% 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 24, “Floodway Data.”

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 (ft^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Barker Creek	Trinity County	*	*	18010212	0.5	n/a	N	A	*
Bean Gulch	Trinity County	*	*	*	*	*	N	A	*
Big Creek	Trinity County	*	*	18010212	3.0	n/a	N	A	*
Browns Creek	Trinity County	Confluence with Trinity River	Approximately 2.4 miles upstream of Smith Lane	18010211	11.9	n/a	N	A	05/2013
Can Creek	Trinity County	*	*	*	*	*	N	A	*
Canyon Creek	Trinity County	Downstream face of Highway 299 Bridge	Approximately 240 feet downstream of Power House Road	18010211	2.2	n/a	N	A	05/2013
Carr Creek	Trinity County	*	*	18010212	3.0	n/a	N	A	*
Carter Gulch	Trinity County	Confluence with Hayfork Creek	Approximately 960 feet upstream of Highway 3	18010212	1.0	n/a	N	A, AE	09/29/2005
Casouse Creek	Trinity County	*	*	18010105	0.6	n/a	N	A	*
Cedar Creek	Trinity County	*	*	18010212	1.1	n/a	N	A	*
Coffee Creek	Trinity County	Confluence with Trinity River	Approximately 1.1 miles upstream of Route 3	18010211	7.8	n/a	N	A, AE	*
Dry Lake	Trinity County	*	*	18010105	0.4	n/a	N	A	*

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (ft^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Duncan Gulch	Trinity County	*	*	18010212	2.0	n/a	N	A	*
Eel River	Trinity County	*	*	18010105	33.8	n/a	N	A	*
Eel River (North Fork)	Trinity County	*	*	18010105	16.5	n/a	N	A	*
Ewing Gulch	Trinity County	Confluence with Hayfork Creek	Approximately 820 feet upstream of Highway 3	18010212	1.0	n/a	N	A, AE	09/28/2005
Garden Gulch	Trinity County	Confluence with Sidney Gulch	Approximately 2,340 feet upstream of Easter Avenue	18010211	0.8	1.6	N	AE, AO	11/1998
Grass Valley Creek	Trinity County	Confluence with Trinity River	Approximately 4.0 miles upstream of Pawn Drive	18010211	10.4	n/a	N	A	05/2013
Hayfork Creek	Trinity County	Approximately 260 feet downstream of confluence of Salt Creek	Approximately 300 feet upstream of Oak Avenue	18010212	9.7	n/a	Y	A, AE	08/21/2006
Hoaglin Creek	Trinity County	*	*	18010105	1.6	n/a	N	A	*
Horse Ranch Lake	Trinity County	*	*	18010105	0.3	n/a	N	A	*
Hulls Creek	Trinity County	*	*	18010105	2.6	n/a	N	A	*
Indian Creek	Trinity County	Downstream face of Highway 299 Bridge	Approximately 2.4 miles upstream of Indian Creek Road	18010211	9.0	n/a	N	A	05/2013
Ke Kawaka Creek	Trinity County	*	*	18010105	12.1	n/a	N	A	*

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (ft^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Kellogg Gulch	Trinity County	Confluence with Hayfork Creek	Approximately 840 feet upstream of Highway 3	18010212	0.6	n/a	N	A, AE	09/29/2005
Kettenpom Creek	Trinity County	*	*	18010105	2.7	n/a	N	A	*
Kettenpom Lake	Trinity County	*	*	*	*	*	N	A	*
Kingsberry Gulch	Trinity County	*	*	18010212	1.8	n/a	N	A	*
Little Grass Valley Creek	Trinity County	*	*	18010211	1.1	n/a	N	A	*
Middle Weaver Creek	Trinity County	Approximately 0.7 mile upstream of Mill Street	Approximately 50 feet upstream of Forest Avenue	18010211	0.9	n/a	Y	AE, AO	11/1998
Morgan Gulch	Trinity County	*	*	18010212	0.6	n/a	N	A	*
Reading Creek	Trinity County	Confluence with Trinity River	Approximately 4.3 miles upstream of Blanchard Flat Road	18010211	9.0	n/a	N	A	05/2013
Rice Lake	Trinity County	*	*	18010105	1.2	n/a	N	A	*
Rush Creek	Trinity County	Confluence with Trinity River	Approximately 2,000 feet upstream of Lost Bridge Road	18010211	3.5	n/a	N	A	05/2013
Salt Creek	Trinity County	*	*	18010212	2.9	n/a	N	A	*
Sidney Gulch	Trinity County	Confluence with Middle Weaver Creek and Garden Gulch	Approximately 1,280 feet upstream of Memorial Road	18010211	0.6	n/a	N	AE, AO	11/1998

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (ft^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Ten Cent Gulch	Trinity County	Confluence with Weaver Creek	Approximately 1,240 feet upstream of Private Crossing	18010211	0.6	n/a	Y	AE, AO	11/1998
Thompson Gulch	Trinity County	*	*	18010212	0.3	n/a	N	A	*
Trinity River	Trinity County	North Fork Trinity River (River Mile 72.43)	Trinity Dam (River Mile 110.96)	18010211	38.7	n/a	Y	A, AE	05/2013
Trinity River Bucktail Left	Trinity County	Confluence with Trinity River	Divergence from Trinity River	18010211	0.3	n/a	Y	AE	05/2013
Trinity River Bucktail Right	Trinity	Confluence with Trinity River	Divergence from Trinity River	18010211	0.3	n/a	N	AE	05/2013
Tule Creek	Trinity County	*	*	18010212	1.9	n/a	N	A	*
Weaver Creek	Trinity County	Confluence with Trinity River	Confluence with Middle Weaver Creek/West Weaver Creek	18010211	6.3	n/a	N	A	05/2013
Weaver Creek (East)	Trinity County	Confluence with Weaver Creek	Approximately 2,240 feet upstream of confluence with Weaver Creek	18010211	2.2	n/a	Y	A, AE, Area with Reduced Flood Risk Due to Levee	11/1998
Weaver Creek / Middle Weaver Creek	Trinity County	*	*	18010211	0.3	n/a	Y	AE	11/1998
West Weaver Creek	Trinity County	Confluence with Middle Weaver Creek	Approximately 920 feet upstream of confluence with Middle Weaver Creek	18010211	0.2	n/a	Y	A, AE	11/1998

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (ft^2) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Wilson Creek	Trinity County	*	*	18010105	0.7	n/a	N	A	*

*Data Not Available

All floodways that were developed for this FIS project are shown on the FIRM using the symbology described in Figure 3. In cases where the floodway and l% 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 Base Flood Elevation (BFE) is the elevation of the 1% 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.

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. BFEs 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.

2.4 Non-Encroachment Zones

Some States and communities use non-encroachment zones to manage floodplain development. For flooding sources with medium flood risk, field surveys are often not collected and surveyed bridge and culvert geometry is not developed. Standard hydrologic and hydraulic analyses are still performed to determine BFEs in these areas. However, floodways are not typically determined, since specific channel profiles are not developed. To assist communities with managing floodplain development in these areas, a “non-encroachment zone” may be provided. While not a FEMA designated floodway, the non-encroachment zone represents that area around the stream that should be reserved to convey the 1% annual chance flood event. As with a floodway, all surcharges must fall within the acceptable range in the non-encroachment zone.

Non-encroachment determinations may be delineated where it is not possible to delineate floodways because specific channel profiles with bridge and culvert geometry were not developed. Any non-encroachment determinations for this FIS project have been tabulated for selected cross sections and are shown in Table 25, “Flood Hazard and Non-Encroachment Data for Selected Streams.”

2.5 Coastal Flood Hazard Areas

This section is not applicable to this FIS project.

2.5.1 Water Elevations and the Effects of Waves

This section is not applicable to this FIS project.

Figure 5: Wave Runup Transect Schematic

[Not applicable to this FIS project]

2.5.2 Floodplain Boundaries and BFEs for Coastal Areas

This section is not applicable to this FIS project.

2.5.3 Coastal High Hazard Areas

This section is not applicable to this FIS project.

Figure 6: Coastal Transect Schematic

[Not applicable to this FIS project]

2.5.4 Limit of Moderate Wave Action

This section is not applicable to this FIS 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% 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% annual chance floodplain boundary corresponds to the boundary of areas of additional flood hazards.

Table 3 lists the flood insurance zones in the unincorporated and incorporated areas of Trinity County.

Table 3: Flood Zone Designations by Community

Community	Flood Zone(s)
Trinity County, Unincorporated Areas	A, AE, AO, X, Area with Reduced Flood Risk Due to Levee

3.2 Coastal Barrier Resources System

The Coastal Barrier Resources Act (CBRA) of 1982 was established by Congress to create areas along the Atlantic and Gulf coasts and the Great Lakes, where restrictions for Federal financial assistance including flood insurance are prohibited. In 1990, Congress passed the Coastal Barrier Improvement Act (CBIA), which increased the extent of areas established by the CBRA and added "Otherwise Protected Areas" (OPA) to the system. These areas are collectively referred to as the John H. Chafee Coastal Barrier Resources System (CBRS). The CBRS boundaries that have been identified in the project area are in Table 4, "Coastal Barrier Resource System Information."

Table 4: Coastal Barrier Resources System Information

[Not applicable to this FIS project]

SECTION 4.0 – AREA STUDIED

4.1 Basin Description

Table 5 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 5: Basin Characteristics

HUC-8 Sub-Basin Name	HUC-8 Sub-Basin Number	Primary Flooding Source	Description of Affected Area	Drainage Area (square miles)
Mad-Redwood	18010102	Mad River	Flows through the mid lower half of Trinity County	1,422
Middle Fork Eel	18010104	Middle Fork Eel River	Affects the lower southeast corner of Trinity County	753
Lower Eel	18010105	Eel River	Affects the lower southwest quarter of Trinity County	1,530
Trinity	18010211	Trinity River	Largest watershed within Trinity County, encompassing the northern half of the county	2,038
South Fork Trinity	18010212	Hayfork Creek	Flows through the central portion of Trinity County	932

4.2 Principal Flood Problems

Table 6 contains a description of the principal flood problems that have been noted for Trinity County by flooding source.

Table 6: Principal Flood Problems

Flooding Source	Description of Flood Problems
Trinity River	The flood season on the Trinity River usually lasts from October through April. Over 90 percent of yearly precipitation falls during these months. Statistically, December is the wettest month and has 20 percent or more of the rain. Floods on the Trinity River are somewhat controlled by the dams upstream of Lewiston. Some historical flood records date back to 1862, but the USGS has maintained gages on the Trinity River in and above the portion studied by detailed methods since 1912. To supplement the records at the gaging stations, newspaper files, historical documents, and records were searched for

Flooding Source	Description of Flood Problems
	information concerning past floods. The greatest flood recorded for the area occurred in December 1955. Floods have also been recorded for the years 1862, 1926, 1928, 1937, 1940, 1941, 1948, 1950, 1958, 1960, 1963, 1964, 1972, 1974, 1981, 1983, 1986, 1996, and 2006. The Trinity Journal reports that the December 1955 flood on the Trinity River caused extensive property damage. Bridges were inundated; roads, homes, buildings, and personal property were destroyed. Damage was estimated to be in the millions of dollars. The flood of December 1964 caused an estimated $3 million in damages. Trinity County was declared a disaster area because of the effects of this event. Rainfall, snow, and stormwater runoff caused the level of Trinity Lake to rise 35 feet. Damage to personal property, highways, bridges, and airports was extensive.

Table 7 contains information about historic flood elevations in the communities within Trinity County.

Table 7: Historic Flooding Elevations

Flooding Source	Location	Historic Peak (Feet NAVD88)	Event Date	Approximate Recurrence Interval (years)	Source of Data
Trinity River	Lewiston Gage	27.30	December 22, 1955	*	USGS gage
		20.80	February 28, 1940	*	
		21.10	January 7, 1948	*	
		21.00	October 30, 1950	*	
		20.56	February 24, 1958	*	
		13.88[1]	February 8, 1960	*	
		12.38[2]	April 20, 1963	*	
		10.41[3]	January 18, 1974	*	
		7.78[3]	March 24, 1995	*	
		*[3]	January 26, 1997	*	
		*[3]	March 19, 1983	*	
		*[3]	January 13, 2006	*	
Trinity River	Near Douglas City Gage	30.00	January 7, 1948	*	USGS gage
		28.57	October 30, 1950	*	
		21.93	December 29, 1945	*	
		20.65	March 18, 1949	*	
		*	December 27, 1945	*	
		12.54	December 30, 2005	*	

[1] Trinity Dam partially complete prior to initial countywide study in 1988
[2] Trinity Dam complete; Lewiston Dam partially complete prior to initial countywide study in 1998
[3] Trinity Dam and Lewiston Dam complete
* Data Not Available from effective FIS

4.3 Non-Levee Flood Protection Measures

Table 8 contains information about non-levee flood protection measures within Trinity County such as dams, jetties, and or dikes. Levees are addressed in Section 4.4 of this FIS Report.

Table 8: Non-Levee Flood Protection Measures

Flooding Source	Structure Name	Type of Measure	Location	Description of Measure
Countywide	N/A	Emergency Plan	N/A	In light of past experience and following the practice of other California counties, Trinity County has developed an emergency plan to guide actions during times of emergency. The plan outlines actions to be taken upon the occurrence of various types of disasters. A copy of this plan is available in the Office of the Board of Supervisors.
Trinity River	N/A	Record of Decision	N/A	In December 2000, the Record Of Decision for the Trinity River was signed into law. It directs agencies of the Department of Interior to follow a course of action that would implement recovery of the fish and wildlife population in the Trinity River while also continuing to provide water supplies for consumptive uses and power generation. The components of the selected course of action include variable annual instream flow releases, physical channel rehabilitation, sediment management, watershed restoration efforts, and infrastructure improvements affected by the peak in-stream flows. The prescribed release schedule to restore the fish and wildlife population downstream of the dam is best summarized in Section 3.2 of Reclamation's Trinity River Bridge Hydrologic Analysis in 2003.

Flooding Source	Structure Name	Type of Measure	Location	Description of Measure
Trinity River	Lewiston Dam	Dam	Upstream from the Town of Lewiston (lower dam)	Constructed by USBR. Regulates flow from the upper dam (Trinity) by transfer to Whiskeytown Reservoir for later release into the Central Valley system (Sacramento-San Joaquin River systems). Flood control was not a projected purpose of this dam. The dam, except for diversion of water into Whiskeytown Reservoir, does little to alter flood flows. Trinity Reservoir, because of its surcharge storage, provides a great deal of flood control incidental to its carry- over storage capacity.
Trinity River	Trinity Dam	Dam	Upstream from the Town of Lewiston (upper dam)	Constructed by USBR. Flood control was not a projected purpose of this dam. The crest of Trinity Dam, 537 feet above the foundation, has a length of 2,600 feet. The reservoir has a shoreline of 145 miles. As an example of the flood reduction capacity of the dam, the storm of January 1974 produced 105,000 cubic feet per second (cfs) inflow into Trinity Lake. This was reduced by storage behind the dam to approximately 15,000 cfs outflow. No specific river or flood forecast is issued for the Trinity River and its tributaries by the Federal-State River Forecast Center in Sacramento. However, forecasts of heavy rain are provided to Trinity County by the National Oceanic and Atmospheric Administration (NOAA) National Weather Service Forecast Office in San Francisco. The NOAA maintains year-round surveillance of weather conditions in the Trinity River Basin. Flood warnings and anticipated weather condition bulletins are issued by the National Weather Service (NWS) to city officials, radio and television stations, and the local press for further issuance to residents of the area

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% 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% 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 9. If the required information for a PAL is not submitted within the required timeframe, or if information indicates that a levee system not 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 Trinity County. Table 9, "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 9 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 31.

Table 9: Levees

Community	Flooding Source	Levee Location	Levee Owner	USACE Levee	Levee ID	Covered Under PL84-99 Program?	FIRM Panel(s)	Levee Status
Trinity County, Unincorporated Areas	Coffee Creek	Left Bank	*	Yes	1901052002	N	06105C1035F	Accredited
Trinity County, Unincorporated Areas	Coffee Creek	Left Bank	*	Yes	1901052003	N	06105C0405E	Accredited
Trinity County, Unincorporated Areas	East Weaver Creek	Right Bank	*	Yes	1901052001	N	06105C1035F	Accredited
Trinity County, Unincorporated Areas	East Weaver Creek	Left Bank	*	Yes	1901052000	N	06105C1035F	Accredited

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% 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.

The engineering analyses described here incorporate the results of previously issued Letters of Map Change (LOMCs) listed in Table 27, “Incorporated Letters of Map Change”, which include Letters of Map Revision (LOMRs). For more information about LOMRs, refer to Section 6.5, “FIRM Revisions.”

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 13. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation.

A summary of the discharges is provided in Table 10. Frequency Discharge-Drainage Area Curves used to develop the hydrologic models may also be shown in Figure 7: Frequency Discharge-Drainage Area Curves for selected flooding sources. A summary of Stillwater elevations developed for non-coastal flooding sources is provided in Table 11: Summary of Non-Coastal Stillwater Elevations. (Coastal Stillwater elevations are discussed in Section 5.3 and shown in Table 17: Coastal Transect Parameters.) Stream gage information is provided in Table 12: Stream Gage Information used to Determine Discharges.

Table 10: 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	0.2% Annual Chance
Carter Gulch	At mouth	3.19	470	*	820	960	1,200
Coffee Creek	Upstream of Highway 3	118	*	*	*	24,600	*
East Weaver Creek	At Highway 299 Bridge	13.5	*	*	*	4,780	5,850
Ewing Gulch	At mouth	2.07	330	*	560	650	810
Garden Gulch	At mouth	2.45	*	*	*	845	*
Hayfork Creek	Downstream of Salt Creek	243.3	17,600	*	27,800	32,500	42,100
	Upstream of Salt Creek	182.4	13,200	*	20,900	24,300	31,600
	Upstream of Ewing Gulch	167.4	12,100	*	16,100	22,300	29,000
Kellogg Gulch	At mouth	1.05	170	*	285	335	420
Middle Weaver Creek	At mouth just above Mill Street Bridge	6.43	*	*	*	2,110	2,610
Ten Cent Gulch	At Highway 299	0.67	*	*	*	250	310
Trinity River	At North Fork Tributary	1,301	40,040	**	75,500	94,830	159,600
	At Canyon Creek Near Junction City	1,065	31,150	**	57,600	71,910	121,710
	At Browns Creek	1,014	25,070	**	45,550	56,550	96,540
	At Reading Creek Near Douglas City	931	20,180	**	36,020	44,450	76,840
	At Weaver Creek Near Douglas City	900	18,260	**	32,300	39,750	69,230
	At Indian Creek	850	15,360	**	25,670	31,460	56,010
	At Grass Valley Creek	800	12,940	**	18,160	22,200	41,450
	At Rush Creek	755	11,090	**	11,250	11,370	21,700
	Lewiston Dam Outflow	719	11,000	**	11,000	11,000	17,840
	At confluence of Coffee Creek	277	*	**	*	51,500	*
	At USGS Gage No. 11523200	149	*	**	*	29,900	*
Trinity River Bucktail Left	At divergence from Trinity River	**	**	**	**	1,766	5,325

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)				
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Trinity River Bucktail Right	At divergence from Trinity River	**	**	**	**	477	2,490
Weaver Creek	Approximately 0.8 mile downstream of Mill Street bridge	28.34	*	*	*	8,330	10,270
West Weaver Creek	At mouth	8.12	*	*	*	2,575	*

* Data not available
** Not calculated for this FIS project

Figure 7: Frequency Discharge-Drainage Area Curves

[Not available from the effective FIS]

Table 11: Summary of Non-Coastal Stillwater Elevations

[Not applicable to this FIS project]

Table 12: Stream Gage Information used to Determine Discharges

[Not applicable to this FIS project]

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 on Table 24, “Floodway Data.”

A summary of the methods used in hydraulic analyses performed for this project is provided in Table 13. Roughness coefficients are provided in Table 14. 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 13: Summary of Hydrologic and Hydraulic Analyses

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Browns Creek	Confluence with Trinity River	Approximately 2.4 miles upstream of Smith Lane	Peak-flow frequency/Bulletin 17B	HEC-RAS 4.1	May 2013	A	The downstream reach of this tributary to the Trinity River was re-analyzed through hydraulic modeling to refine the approximate 1-percent annual chance floodplain boundaries.
Canyon Creek	Downstream face of Highway 299 Bridge	Approximately 240 feet downstream of Power House Road	Peak-flow frequency/Bulletin 17B	HEC-RAS 4.1	May 2013	A	The downstream reach of this tributary to the Trinity River was re-analyzed through hydraulic modeling to refine the approximate 1-percent annual chance floodplain boundaries.
Carter Gulch	Confluence with Hayfork Creek	Approximately 960 feet upstream of Highway 3	USGS Gage	HEC-2	September 28, 2005	A; AE	For the September 2, 2009 PIS revision, the starting water-surface elevations were computed by using the slope/area method. Cross-section area was obtained from field surveys obtained between October 2003 and May 2004 by CA DWR staff. Details on the hydraulic model can be found in Hydraulic Notes for Ewing, Carter and Kellogg Gulches Through Hayfork, California, Trinity County, September 28, 2005 (CA DWR, 2005).
Coffee Creek	Confluence with Trinity River	Approximately 1.1 miles upstream of Route 3	multiple-regression; USGS Gage	HEC-2	*	A; AE	The computed 1-percent annual chance water-surface elevation at the confluence of Coffee Creek was used as the starting water surface for the hydraulic analysis of Coffee Creek.

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
East Weaver Creek	Confluence with Weaver Creek	Approximately 2,240 feet upstream of confluence with Weaver Creek	Peak discharge vs. frequency curves	HEC-2	November 1998	A; AE; Areas with Reduced Risk Due to Levee	The starting water-surface elevation for East Fork and West Weaver Creeks were determined from the water-surface elevations on Weaver Creek. Cross-section data for East Fork and West Weaver Creeks and Sidney and Garden Gulches were obtained from field surveys.
Ewing Gulch	Confluence with Hayfork Creek	Approximately 820 feet upstream of Highway 3	USGS Gage	HEC-2	September 28, 2005	A; AE	For the September 2, 2009 PIS revision, the starting water-surface elevations were computed by using the slope/area method. Cross-section area was obtained from field surveys obtained between October 2003 and May 2004 by CA DWR staff. Details on the hydraulic model can be found in Hydraulic Notes for Ewing, Carter and Kellogg Gulches Through Hayfork, California, Trinity County, September 28, 2005 (CA DWR, 2005).
Garden Gulch	Confluence with Sidney Gulch	Approximately 2,340 feet upstream of Easter Avenue	Peak discharge vs. frequency curves	HEC-2	November 1998	AE; AO	The starting water-surface elevations along Sidney and Garden Gulches were determined from the water-surface elevations on Middle Weaver Creek. Cross-section data for East Fork and West Weaver Creeks and Sidney and Garden Gulches were obtained from field surveys.
Grass Valley Creek	Confluence with Trinity River	Approximately 4.0 miles upstream of Pawn Drive	Peak-flow frequency/Bulletin 17B	HEC-RAS 4.1	May 2013	A	The downstream reach of this tributary to the Trinity River was re-analyzed through hydraulic modeling to refine the approximate 1-percent annual chance floodplain boundaries.

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
Hayfork Creek	Approximately 260 feet downstream of confluence of Salt Creek	Approximately 300 feet upstream of Oak Avenue	USGS Gage	HEC-2	August 21, 2006	A; AE with Floodway	For the September 2, 2009 PIS revision, the starting water-surface elevations were computed by using the slope/area method. Cross-section area was obtained from field surveys obtained between October 2003 and May 2004 by CA DWR staff. Five updated cross sections reflecting the replacement of the State Highway 3 crossing over Hayfork Creek were provided by the California Department of Transportation (CalTrans) in July 2006 and incorporated into the hydraulic model. Manning's "n" roughness coefficients were adjusted in this same location based on coordination with CalTrans officials. A floodway was computed for Hayfork Creek from approximately 260 feet downstream of its confluence with Salt Creek to approximately 220 feet upstream of Bridge Street. The restudy also updated the hydraulic effects from the replacement bridges at Bridge Street and Highway 3 that crosses Hayfork Creek. Details on the hydraulic model can be found in Hayfork Creek Hydraulic Notes, Hayfork, California, Trinity County, August 21, 2006 (CA DWR, 2006).
Indian Creek	Downstream face of Highway 299 Bridge	Approximately 2.4 miles upstream of Indian Creek Road	Peak-flow frequency/Bulletin 17B	HEC-RAS 4.1	May 2013	A	The downstream reach of this tributary to the Trinity River was re-analyzed through hydraulic modeling to refine the approximate 1-percent annual chance floodplain boundaries.

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Kellogg Gulch	Confluence with Hayfork Creek	Approximately 840 feet upstream of Highway 3	USGS Gage	HEC-2	September 28, 2005	A; AE	For the September 2, 2009 PIS revision, the starting water-surface elevations were computed by using the slope/area method. Cross-section area was obtained from field surveys obtained between October 2003 and May 2004 by CA DWR staff. Details on the hydraulic model can be found in Hydraulic Notes for Ewing, Carter and Kellogg Gulches Through Hayfork, California, Trinity County, September 28, 2005 (CA DWR, 2005).
Middle Weaver Creek	Approximately 0.7 mile upstream of Mill Street	Approximately 50 feet upstream of Forest Avenue	Peak discharge vs. frequency curves	HEC-2	November 1998	AE with Floodway; AO	
Reading Creek	Confluence with Trinity River	Approximately 4.3 miles upstream of Blanchard Flat Road	Peak-flow frequency/Bulletin 17B	HEC-RAS 4.1	May 2013	A	The downstream reach of this tributary to the Trinity River was re-analyzed through hydraulic modeling to refine the approximate 1-percent annual chance floodplain boundaries.
Rush Creek	Confluence with Trinity River	Approximately 2,000 feet upstream of Lost Bridge Road	Peak-flow frequency/Bulletin 17B	HEC-RAS 4.1	May 2013	A	The downstream reach of this tributary to the Trinity River was re-analyzed through hydraulic modeling to refine the approximate 1-percent annual chance floodplain boundaries.
Sidney Gulch	Confluence with Middle Weaver Creek and Garden Gulch	Approximately 1,280 feet upstream of Memorial Road	Peak discharge vs. frequency curves	HEC-2	November 1998	AE; AO	The starting water-surface elevations along Sidney and Garden Gulches were determined from the water-surface elevations on Middle Weaver Creek. Cross-section data for East Fork and West Weaver Creeks and Sidney and Garden Gulches were obtained from field surveys.

Flooding Source	Study Limits		Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
	Downstream Limit	Upstream Limit					
Ten Cent Gulch	Confluence with Weaver Creek	Approximately 1,240 feet upstream of Private Crossing	Peak-flow frequency/Bulletin 17B	HEC-2	November 1998	AE; AO	The starting water-surface elevations for the Weaverville LMMP study were determined using the slope/area method for Weaver Creek, and the starting water- surface elevation for Ten Cent Gulch was determined using the coincident peak with Middle Weaver Creek.
Trinity River	North Fork Trinity River (River Mile 72.43)	Trinity Dam (River Mile 110.96)	Peak-flow frequency/Bulletin 17B	HEC-RAS 4.1	May 2013	A; AE with Floodway	
Trinity River Bucktail Left	Confluence with Trinity River	Divergence from Trinity River	Peak-flow frequency/Bulletin 17B	HEC-RAS 4.1	May 2013	AE with Floodway	
Trinity River Bucktail Right	Confluence with Trinity River	Divergence from Trinity River	Peak-flow frequency/Bulletin 17B	HEC-RAS 4.1	May 2013	AE	
Weaver Creek	Confluence with Trinity River	Confluence with Middle Weaver Creek/West Weaver Creek	Peak-flow frequency/Bulletin 17B	HEC-RAS 4.1	May 2013	A	The downstream reach of this tributary to the Trinity River was re-analyzed through hydraulic modeling to refine the approximate 1-percent annual chance floodplain boundaries.
West Weaver Creek	Confluence with Middle Weaver Creek	Approximately 920 feet upstream of confluence with Middle Weaver Creek	Peak discharge vs. frequency curves	HEC-2	November 1998	A; AE with Floodway	The starting water-surface elevation for East Fork and West Weaver Creeks were determined from the water-surface elevations on Weaver Creek. Cross-section data for East Fork and West Weaver Creeks and Sidney and Garden Gulches were obtained from field surveys.

Table 14: Roughness Coefficients

Flooding Source	Channel “n”	Overbank “n”
Browns Creek	0.040	0.050-0.070
Canyon Creek	0.040-0.050	0.030-0.080
Carter Gulch	0.020-0.080	*
Coffee Creek	0.040-0.080	*
East Weaver Creek	0.014-0.070	*
Ewing Gulch	0.020-0.080	*
Garden Gulch	0.014-0.070	*
Grass Valley Creek	0.040-0.080	0.030-0.080
Hayfork Creek	0.020-0.080	*
Indian Creek	0.040	0.030-0.080
Kellogg Gulch	0.020-0.080	*
Middle Weaver Creek	0.015-0.070	*
Reading Creek	0.040	0.040-0.100
Rush Creek	0.040-0.100	0.040-0.100
Sidney Gulch	0.014-0.070	*
Ten Cent Gulch	0.015-0.070	*
Trinity River	0.030-0.100	0.030-0.100
Trinity River Bucktail Left	0.040-0.050	0.030-0.100
Trinity River Bucktail Right	0.030-0.080	0.030-0.080
Weaver Creek	0.040	0.030-0.080
West Weaver Creek	0.014-0.070	*

*Data not available in effective FIS

5.3 Coastal Analyses

This section is not applicable to this FIS project.

Table 15: Summary of Coastal Analyses

[Not applicable to this FIS project]

5.3.1 Total Stillwater Elevations

This section is not applicable to this FIS project.

Figure 8: 1% Annual Chance Total Stillwater Elevations for Coastal Areas

[Not applicable to this FIS project]

Table 16: Tide Gage Analysis Specifics

[Not applicable to this FIS project]

5.3.2 Waves

This section is not applicable to this FIS project.

5.3.3 Coastal Erosion

This section is not applicable to this FIS project.

5.3.4 Wave Hazard Analyses

This section is not applicable to this FIS project.

Table 17: Coastal Transect Parameters

[Not applicable to this FIS project]

Figure 9: Transect Location Map

[Not applicable to this FIS project]

5.4 Alluvial Fan Analyses

This section is not applicable to this FIS project.

Table 18: Summary of Alluvial Fan Analyses

[Not applicable to this FIS project]

Table 19: Results of Alluvial Fan Analyses

[Not applicable to this FIS 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, or contact the National Geodetic Survey at the following address:

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

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 contact information services Branch of the NGS at (301) 713-3242, or visit their website at www.ngs.noaa.gov.

The datum conversion locations and values that were calculated for Trinity County are provided in Table 20.

Table 20: Countywide Vertical Datum Conversion

[Not applicable to this FIS project]

A countywide conversion factor could not be generated for Trinity County because the maximum variance from average exceeds 0.25 feet. Calculations for the vertical offsets on a Regional (zone) basis are depicted in Table 21.

Table 21: Vertical Datum Conversion

Flooding Source, Northern Zone	Average Vertical Datum Conversion Factor (feet)
Coffee Creek	3.26
Flooding Source, Southern Zone	**Average Vertical Datum Conversion Factor (feet)**
Carter Gulch	3.02
East Weaver Creek	3.02
Ewing Gulch	3.02
Garden Gulch	3.02
Hayfork Creek	3.02
Kellogg Creek	3.02
Middle Weaver Creek	3.02
Sidney Gulch	3.02
Ten Cent Gulch	3.02
Trinity River (Downstream Reach)	3.02
Weaver Creek	3.02
West Weaver Creek	3.02

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 Mapping Partners*, Appendix L.

Base map information shown on the FIRM was derived from the sources described in Table 22.

Table 22: Base Map Sources

Data Type	Data Provider	Data Date	Data Scale	Data Description
Digital Orthophoto	Trinity River Restoration Program (TRRP)	2012	6-inch resolution	Orthophotography
Digital Orthophoto	USDA/NAIP	2012	1:12,000	Orthophotography
Base map files	Trinity County	2010	*	Political boundaries, rivers, lakes, streams, in digital format
Transportation Features	U.S. Census Bureau	2013	1:100,000	Primary, Secondary, Local Roads; railroads

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 23.

In cases where the 1% and 0.2% annual chance floodplain boundaries are close together, only the 1% 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 24, “Floodway Data.”

Table 23: Summary of Topographic Elevation Data used in Mapping

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Scale	Contour Interval (ft)	Citation
Trinity County	Non-revised Streams	Between cross sections, the boundaries were interpolated using topographic maps.	1:4,800		USACE, 1976

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Scale	Contour Interval (ft)	Citation
Trinity County	Non-revised Streams	Because there were no topographic maps of a large enough scale to accurately interpolate floodplain boundaries between surveyed cross sections for streams in the Weaverville LMMP study, aerial photographic maps were used.	1:2,400		CH2M Hill FIRM, undated
Trinity County	Trinity River, Canyon Creek, Browns Creek, Reading Creek, Weaver Creek, Indian Creek, Grass Valley Creek, Rush Creek	Compilation of ground control, bathymetry, and LiDAR (Light Detection and Ranging) data acquired during the month of April 2009. A small area downstream of the confluence with North Fork Trinity River needed additional surveying to extend the topographic coverage of the left bank. This surveying was done in October 2010 by NRO staff using Trimble survey grade instruments. Floodplain boundaries were digitized using contours generated from LiDAR data. LiDAR and ground survey mapping of fish restoration sites constructed as part of the TRRP. This data was provided to DWR in August and November of 2013.		4	CADWR 2013

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

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Hayfork Creek								
A	0	349	3,676	8.8	2,283.0	2,283.0	2,284.0	1.0
B	260	359	3,862	8.4	2,284.1	2,284.1	2,284.9	0.8
C	532	340	3,901	6.2	2,285.3	2,285.3	2,286.0	0.7
D	837	304	3,260	7.5	2,285.7	2,285.7	2,286.4	0.7
E	1,103	248	2,753	8.8	2,286.3	2,286.3	2,286.8	0.5
F	1,359	237	2,702	9.0	2,287.1	2,287.1	2,287.6	0.5
G	1,809	308	3,247	7.5	2,288.8	2,288.8	2,289.3	0.5
H	2,162	343	3,654	6.7	2,289.8	2,289.8	2,290.2	0.4
I	2,611	302	2,420	10.0	2,290.5	2,290.5	2,290.9	0.4
J	3,011	282	2,647	9.2	2,293.1	2,293.1	2,293.2	0.1
K	3,483	187	2,123	11.5	2,294.8	2,294.8	2,294.8	0.0
L	3,884	180	2,305	10.5	2,296.5	2,296.5	2,296.7	0.2
M	4,333	281	3,353	7.3	2,297.7	2,297.7	2,298.6	0.9
N	4,596	228	2,704	9.0	2,297.7	2,297.7	2,298.6	0.9
O	4,690	212	2,513	9.7	2,299.5	2,299.5	2,300.0	0.5
P	5,180	203	2,489	9.8	2,300.9	2,300.9	2,301.4	0.5
Q	5,468	205	2,744	8.9	2,301.7	2,301.7	2,302.5	0.8
R	5,949	200	2,589	9.4	2,303.1	2,303.1	2,303.7	0.6
S	6,389	170	2,477	9.8	2,304.2	2,304.2	2,304.8	0.6
T	6,766	223	2,416	10.1	2,305.2	2,305.2	2,306.1	0.9
U	7,024	215	2,846	8.5	2,307.0	2,307.0	2,307.4	0.4
V	7,545	249	2,571	8.7	2,308.3	2,308.3	2,308.7	0.4
W	7,823	186	2,481	9.0	2,309.1	2,309.1	2,309.5	0.4
X	8,320	132	1,836	12.2	2,310.3	2,310.3	2,310.5	0.2
Y	8,814	200	2,434	9.2	2,312.6	2,312.6	2,313.3	0.7
Z	9,148	197	2,377	9.4	2,313.2	2,313.2	2,314.2	1.0

[1]Feet above Limit of Detailed Study*

*Limit of Detailed Study is approximately 260 feet downstream of confluence of Salt Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA AND INCORPORATED AREAS

FLOODWAY DATA

HAYFORK CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Hayfork Creek (continued)								
AA	9,453[1]	162	2,249	9.9	2,314.0	2,314.0	2,314.9	0.9
AB	9,836[1]	191	2,433	9.2	2,315.6	2,315.6	2,316.3	0.7
AC	10,171[1]	237	2,450	9.1	2,316.7	2,316.7	2,317.3	0.6
AD	10,596[1]	317	3,190	7.0	2,318.8	2,318.8	2,319.1	0.3
AE	10,948[1]	322	3,553	6.3	2,319.6	2,319.6	2,319.9	0.3
AF	11,408[1]	163	1,757	12.7	2,320.1	2,320.1	2,320.3	0.2
AG	11,515[1]	169	1,860	12.0	2,322.6	2,322.6	2,322.6	0.0
AH	11,635[1]	259	2,955	7.6	2,324.6	2,324.6	2,324.6	0.0
AI	11,804[1]	259	2,736	8.2	2,324.9	2,324.9	2,324.9	0.0
Middle Weaver Creek								
A	405[2]	72	293	7.2	1,963.2	1,963.2	1,964.2	1.0
B	910[2]	52	221	9.6	1,968.6	1,968.6	1,968.7	0.1
C	1,410[2]	71	318	6.6	1,977.8	1,977.8	1,978.5	0.7
D	1,720[2]	144	511	4.1	1,982.0	1,982.0	1,983.0	1.0
E	2,235[2]	82	362	5.8	1,989.1	1,989.1	1,989.2	0.1
F	2,600[2]	59	263	8.0	1,993.8	1,993.8	1,993.9	0.1
G	2,655[2]	163	300	7.0	1,998.7	1,998.7	1,998.7	0.0
H	2,725[2]	178	519	4.1	2,000.3	2,000.3	2,000.5	0.2
I	2,785[2]	142	899	2.3	2,000.9	2,000.9	2,001.0	0.1
J	3,150[2]	56	183	11.5	2,000.8	2,000.8	2,000.8	0.0
K	3,420[2]	69	223	9.5	2,006.7	2,006.7	2,006.7	0.0
L	3,530[2]	41	181	11.7	2,008.1	2,008.1	2,008.2	0.1

[1]Feet above Limit of Detailed Study*

*Limit of Detailed Study is approximately 260 feet downstream of confluence of Salt Creek

[2]Feet above Mill Street

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA AND INCORPORATED AREAS

FLOODWAY DATA

HAYFORK CREEK – MIDDLE WEAVER CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER-SURFACE ELEVATION (FEET NAVD)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Ten Cent Gulch								
A	935[1]	30	106	2.4	2,029.0	2,029.0	2,030.0	1.0
B	1,445[1]	48	46	5.4	2,037.5	2,037.5	2,037.5	0.0
C	1,705[1]	30	48	5.2	2,041.8	2,041.8	2,042.4	0.6
D	1,780[1]	64	119	2.1	2,042.9	2,042.9	2,043.6	0.7
E	2,045[1]	40	46	5.5	2,048.4	2,048.4	2,048.8	0.4
F	2,132[1]	69	108	2.3	2,049.7	2,049.7	2,050.6	0.9
G	2,445[1]	16	41	6.1	2,055.8	2,055.8	2,056.3	0.5
H	2,820[1]	17	32	7.8	2,067.1	2,067.1	2,067.2	0.1
I	3,145[1]	16	32	7.8	2,076.2	2,076.2	2,076.2	0.1
Weaver Creek								
A	-1,350[2]	242	1,002	8.3	1,935.1	1,935.1	1,936.1	1.0
B	-925[2]	196	729	11.4	1,942.3	1,942.3	1,942.3	0.0
C	-625[2]	160	808	10.3	1,947.4	1,947.4	1,947.6	0.2
D	-55[2]	186	701	6.0	1,954.4	1,954.4	1,955.4	1.0
E	15[2]	241	589	7.2	1,960.8	1,960.8	1,960.8	0.0
F	50[2]	280	1,703	2.5	1,962.6	1,962.6	1,962.6	0.0

[1]Feet above confluence with Middle Weaver Creek
[2]Feet from Mill Street

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA AND INCORPORATED AREAS

FLOODWAY DATA

TEN CENT GULCH – WEAVER CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	0[1]	585	16,057	5.9	1,388.6	1,388.6	1,389.6	1.0
B	1,939[1]	256	6,308	11.4	1,389.9	1,389.9	1,390.8	0.9
C	2,403[1]	259	6,721	10.7	1,390.6	1,390.6	1,391.4	0.8
D	2,992[1]	290	6,905	10.4	1,392.5	1,392.5	1,392.8	0.3
E	3,649[1]	367	8,330	8.6	1,393.5	1,393.5	1,394.4	0.9
F	4,666[1]	732	13,002	5.5	1,395.4	1,395.4	1,396.3	0.9
G	5,934[1]	251	6,495	11.1	1,396.2	1,396.2	1,397.1	0.9
H	6,072[1]	313	7,354	9.8	1,397.1	1,397.1	1,397.8	0.7
I	6,870[1]	338	7,772	9.3	1,399.2	1,399.2	1,399.8	0.6
J	7,095[1]	366	8,996	8.0	1,400.8	1,400.8	1,401.5	0.7
K	8,171[1]	370	8,645	8.3	1,401.6	1,401.6	1,402.3	0.7
L	8,940[1]	338	8,831	8.1	1,402.5	1,402.5	1,403.4	0.9
M	10,265[1]	451	9,297	7.7	1,403.7	1,403.7	1,404.5	0.8
N	10,476[1]	446	9,651	7.5	1,404.4	1,404.4	1,405.2	0.8
O	11,133[1]	703	13,040	5.5	1,405.9	1,405.9	1,406.8	0.9
P	12,714[1]	1,022	12,801	5.6	1,407.6	1,407.6	1,408.5	0.9
Q	13,154[1]	1,369	16,447	4.4	1,408.6	1,408.6	1,409.5	0.9
R	14,138[1]	1,577	18,448	3.9	1,409.5	1,409.5	1,410.4	0.9
S	16,211[1]	855	10,902	6.6	1,412.1	1,412.1	1,413.0	0.9
T	16,445[1]	800	10,617	6.8	1,412.5	1,412.5	1,413.4	0.9
U	16,636[1]	767	11,480	6.3	1,413.7	1,413.7	1,414.4	0.7
V	18,261[1]	475	7,002	10.3	1,416.6	1,416.6	1,417.5	0.9
W	18,515[1]	440	7,711	9.3	1,418.5	1,418.5	1,419.3	0.8

[1]Feet above Limit of Study (Limit of Study is Approximately 510 ft Downstream of Confluence of North Fork Trinity River)

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TRINITY RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	19,717[1]	422	7,923	9.1	1,421.1	1,421.1	1,421.7	0.6
Y	19,989[1]	429	8,498	8.5	1,422.6	1,422.6	1,423.6	1.0
Z	20,341[1]	410	7,671	9.4	1,422.9	1,422.9	1,423.9	1.0
AA	21,737[1]	274	5,868	12.3	1,426.5	1,426.5	1,427.2	0.7
AB	22,085[1]	448	7,450	9.7	1,428.0	1,428.0	1,428.7	0.7
AC	22,428[1]	591	11,555	6.2	1,430.9	1,430.9	1,431.5	0.6
AD	22,994[1]	622	10,145	7.1	1,431.0	1,431.0	1,431.6	0.6
AE	24,930[1]	323	7,311	9.8	1,435.2	1,435.2	1,435.3	0.1
AF	25,600[1]	395	8,134	8.8	1,436.4	1,436.4	1,437.0	0.6
AG	26,626[1]	545	8,085	8.9	1,437.3	1,437.3	1,438.0	0.7
AH	27,495[1]	645	6,346	11.3	1,440.3	1,440.3	1,440.3	0.0
AI	27,815[1]	615	7,244	9.9	1,441.6	1,441.6	1,441.7	0.1
AJ	28,124[1]	650	9,945	7.2	1,443.7	1,443.7	1,443.8	0.1
AK	29,288[1]	490	8,076	8.9	1,444.8	1,444.8	1,444.9	0.1
AL	29,748[1]	565	8,098	8.9	1,445.8	1,445.8	1,446.0	0.2
AM	30,284[1]	599	8,702	8.3	1,446.5	1,446.5	1,446.7	0.2
AN	31,100[1]	894	10,966	7.1	1,448.3	1,448.3	1,449.0	0.7
AO	31,842[1]	1,091	9,822	7.6	1,449.6	1,449.6	1,450.1	0.5
AP	32,360[1]	1,541	12,728	7.2	1,450.6	1,450.6	1,450.8	0.2
AQ	33,709[1]	562	7,164	10.0	1,454.0	1,454.0	1,454.7	0.7
AR	33,965[1]	548	8,583	8.4	1,454.9	1,454.9	1,455.8	0.9
AS	35,144[1]	339	5,177	13.9	1,457.0	1,457.0	1,457.3	0.3
AT	35,797[1]	313	4,199	17.1	1,457.6	1,457.6	1,458.2	0.6

[1]Feet above Limit of Study (Limit of Study is Approximately 510 ft Downstream of Confluence of North Fork Trinity River)

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TRINITY RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
AU	36,210[1]	364	5,560	12.9	1,460.5	1,460.5	1,461.2	0.7
AV	36,389[1]	464	7,687	9.4	1,462.5	1,462.5	1,463.3	0.8
AW	36,738[1]	483	7,058	9.0	1,462.6	1,462.6	1,463.5	0.9
AX	37,223[1]	395	8,115	7.8	1,468.0	1,468.0	1,468.7	0.7
AY	38,543[1]	285	5,546	11.5	1,469.0	1,469.0	1,469.6	0.6
AZ	38,997[1]	334	5,538	11.5	1,469.5	1,469.5	1,470.2	0.7
BA	39,107[1]	331	6,045	10.5	1,472.7	1,472.7	1,472.8	0.1
BB	39,229[1]	485	10,363	6.1	1,475.9	1,475.9	1,475.9	0.0
BC	40,353[1]	665	11,965	5.3	1,477.0	1,477.0	1,477.1	0.1
BD	42,265[1]	460	7,865	8.1	1,477.9	1,477.9	1,478.4	0.5
BE	42,494[1]	619	10,597	6.0	1,479.3	1,479.3	1,479.9	0.6
BF	42,802[1]	635	9,956	6.4	1,479.4	1,479.4	1,479.9	0.5
BG	43,982[1]	678	7,943	8.0	1,481.2	1,481.2	1,481.8	0.6
BH	44,488[1]	650	8,965	7.1	1,482.3	1,482.3	1,483.2	0.9
BI	44,933[1]	480	8,077	7.9	1,483.4	1,483.4	1,484.2	0.8
BJ	46,116[1]	608	8,769	7.3	1,488.4	1,488.4	1,488.8	0.4
BK	46,570[1]	651	11,794	5.0	1,489.3	1,489.3	1,490.2	0.9
BL	47,954[1]	330	6,443	9.1	1,489.9	1,489.9	1,490.8	0.9
BM	48,874[1]	326	6,074	9.7	1,491.4	1,491.4	1,492.1	0.7
BN	49,319[1]	329	6,712	8.8	1,493.0	1,493.0	1,493.9	0.9
BO	49,513[1]	360	7,603	7.7	1,494.3	1,494.3	1,495.1	0.8
BP	50,195[1]	625	11,391	5.2	1,495.5	1,495.5	1,496.3	0.8
BQ	50,885[1]	730	10,350	5.8	1,495.6	1,495.6	1,496.6	1.0

[1]Feet above Limit of Study (Limit of Study is Approximately 510 ft Downstream of Confluence of North Fork Trinity River)

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TRINITY RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
BR	52,398[1]	575	7,310	8.0	1,496.7	1,496.7	1,497.6	0.9
BS	52,745[1]	510	7,831	7.5	1,497.8	1,497.8	1,498.3	0.5
BT	53,439[1]	482	7,957	7.4	1,499.0	1,499.0	1,499.8	0.8
BU	54,282[1]	515	8,443	7.0	1,500.4	1,500.4	1,500.8	0.4
BV	54,542[1]	445	7,680	7.7	1,501.1	1,501.1	1,501.3	0.2
BW	55,407[1]	450	7,778	7.6	1,501.5	1,501.5	1,502.4	0.9
BX	56,234[1]	763	11,456	5.1	1,504.0	1,504.0	1,504.7	0.7
BY	56,729[1]	689	10,567	5.6	1,504.5	1,504.5	1,505.3	0.8
BZ	58,209[1]	683	7,944	7.4	1,505.7	1,505.7	1,506.1	0.4
CA	59,733[1]	259	4,704	12.5	1,507.0	1,507.0	1,507.8	0.8
CB	60,304[1]	375	5,642	10.4	1,510.2	1,510.2	1,510.5	0.3
CC	60,577[1]	297	5,335	11.0	1,511.1	1,511.1	1,511.6	0.5
CD	61,147[1]	379	6,346	9.3	1,513.8	1,513.8	1,514.6	0.8
CE	61,444[1]	425	7,245	8.1	1,514.6	1,514.6	1,515.5	0.9
CF	61,723[1]	463	7,996	7.4	1,515.2	1,515.2	1,516.2	1.0
CG	62,907[1]	293	6,112	9.6	1,516.7	1,516.7	1,517.5	0.8
CH	63,768[1]	447	8,019	7.3	1,519.1	1,519.1	1,519.9	0.8
CI	64,064[1]	424	7,713	7.6	1,519.4	1,519.4	1,520.2	0.8
CJ	64,794[1]	514	9,998	5.9	1,520.7	1,520.7	1,521.7	1.0
CK	66,088[1]	720	9,676	6.1	1,521.6	1,521.6	1,522.4	0.8
CL	66,500[1]	705	9,946	5.9	1,522.5	1,522.5	1,523.1	0.6
CM	67,761[1]	296	5,085	11.6	1,523.8	1,523.8	1,524.3	0.5
CN	68,392[1]	263	4,792	12.3	1,525.1	1,525.1	1,525.9	0.8

[1]Feet above Limit of Study (Limit of Study is Approximately 510 ft Downstream of Confluence of North Fork Trinity River)

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TRINITY RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
CO	68,646[1]	279	5,532	10.6	1,527.1	1,527.1	1,528.0	0.9
CP	69,204[1]	435	7,208	8.2	1,528.6	1,528.6	1,529.5	0.9
CQ	70,006[1]	352	6,395	9.2	1,529.7	1,529.7	1,530.6	0.9
CR	70,723[1]	373	6,944	8.5	1,531.0	1,531.0	1,532.0	1.0
CS	71,294[1]	398	7,249	8.1	1,531.7	1,531.7	1,532.6	0.9
CT	72,570[1]	286	5,246	11.2	1,533.3	1,533.3	1,534.0	0.7
CU	73,201[1]	449	7,954	7.4	1,537.1	1,537.1	1,538.0	0.9
CV	73,670[1]	498	8,169	7.2	1,537.5	1,537.5	1,538.5	1.0
CW	74,400[1]	360	7,837	7.2	1,540.0	1,540.0	1,541.0	1.0
CX	75,966[1]	226	4,907	11.5	1,541.8	1,541.8	1,542.7	0.9
CY	76,585[1]	239	5,373	10.5	1,543.4	1,543.4	1,544.4	1.0
CZ	77,302[1]	226	5,776	9.8	1,545.8	1,545.8	1,546.7	0.9
DA	77,594[1]	256	6,273	9.0	1,547.3	1,547.3	1,548.2	0.9
DB	77,848[1]	231	6,453	8.8	1,548.0	1,548.0	1,548.9	0.9
DC	79,223[1]	189	4,831	11.7	1,549.3	1,549.3	1,550.2	0.9
DD	79,736[1]	254	6,021	9.4	1,552.6	1,552.6	1,553.6	1.0
DE	80,773[1]	215	5,277	10.7	1,554.7	1,554.7	1,555.6	0.9
DF	81,050[1]	209	5,761	9.8	1,556.1	1,556.1	1,557.0	0.9
DG	81,640[1]	273	6,956	8.1	1,557.1	1,557.1	1,558.1	1.0
DH	82,619[1]	225	5,062	11.2	1,557.9	1,557.9	1,558.4	0.5
DI	82,800[1]	240	5,573	8.0	1,560.2	1,560.2	1,560.9	0.7
DJ	83,446[1]	235	5,979	7.4	1,560.9	1,560.9	1,561.7	0.8
DK	83,958[1]	240	5,772	7.7	1,561.5	1,561.5	1,562.4	0.9

[1]Feet above Limit of Study (Limit of Study is Approximately 510 ft Downstream of Confluence of North Fork Trinity River)

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TRINITY RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
DL	85,213[1]	231	5,034	8.8	1,562.6	1,562.6	1,563.5	0.9
DM	86,438[1]	192	5,052	8.8	1,565.4	1,565.4	1,566.4	1.0
DN	87,023[1]	339	6,397	7.0	1,567.8	1,567.8	1,568.8	1.0
DO	87,951[1]	376	6,176	7.2	1,568.8	1,568.8	1,569.8	1.0
DP	88,688[1]	226	3,956	11.2	1,570.1	1,570.1	1,570.9	0.8
DQ	89,566[1]	346	4,606	9.7	1,574.1	1,574.1	1,574.5	0.4
DR	89,765[1]	406	5,361	8.3	1,574.7	1,574.7	1,575.6	0.9
DS	90,022[1]	521	8,097	5.5	1,576.3	1,576.3	1,577.2	0.9
DT	91,151[1]	558	7,715	5.8	1,577.0	1,577.0	1,577.8	0.8
DU	92,582[1]	398	5,430	8.2	1,578.7	1,578.7	1,579.0	0.3
DV	93,628[1]	330	5,004	8.9	1,580.7	1,580.7	1,581.6	0.9
DW	94,135[1]	204	3,790	11.7	1,581.8	1,581.8	1,582.5	0.7
DX	94,400[1]	183	3,685	12.1	1,582.6	1,582.6	1,583.6	1.0
DY	95,046[1]	295	5,693	7.8	1,585.1	1,585.1	1,586.1	1.0
DZ	96,132[1]	263	4,762	9.3	1,587.1	1,587.1	1,587.9	0.8
EA	96,719[1]	275	4,514	9.9	1,587.7	1,587.7	1,588.1	0.4
EB	97,309[1]	233	4,186	10.6	1,589.7	1,589.7	1,590.6	0.9
EC	97,811[1]	230	4,069	10.9	1,590.2	1,590.2	1,591.0	0.8
ED	98,283[1]	221	4,223	10.5	1,592.1	1,592.1	1,593.1	1.0
EE	98,801[1]	302	4,637	9.6	1,593.6	1,593.6	1,594.4	0.8
EF	99,958[1]	283	4,168	10.7	1,595.2	1,595.2	1,596.1	0.9
EG	100,250[1]	210	3,746	11.9	1,596.4	1,596.4	1,597.3	0.9
EH	100,484[1]	190	3,387	13.1	1,596.7	1,596.7	1,597.5	0.8

[1]Feet above Limit of Study (Limit of Study is Approximately 510 ft Downstream of Confluence of North Fork Trinity River)

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TRINITY RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
EI	100,913[1]	207	3,567	12.5	1,597.6	1,597.6	1,598.4	0.8
EJ	101,290[1]	240	4,060	11.0	1,599.8	1,599.8	1,600.5	0.7
EK	101,574[1]	240	4,819	9.2	1,601.1	1,601.1	1,602.0	0.9
EL	102,393[1]	252	3,972	11.2	1,601.9	1,601.9	1,602.7	0.8
EM	102,586[1]	256	4,228	10.5	1,602.8	1,602.8	1,603.6	0.8
EN	102,839[1]	293	5,343	8.3	1,604.2	1,604.2	1,605.2	1.0
EO	103,828[1]	225	3,979	11.2	1,606.7	1,606.7	1,607.6	0.9
EP	104,040[1]	275	5,048	8.8	1,608.0	1,608.0	1,608.9	0.9
EQ	104,551[1]	269	4,676	9.5	1,609.3	1,609.3	1,610.2	0.9
ER	104,862[1]	294	4,952	9.0	1,610.0	1,610.0	1,611.0	1.0
ES	105,213[1]	298	4,945	9.0	1,610.6	1,610.6	1,611.5	0.9
ET	105,917[1]	368	6,577	6.8	1,612.8	1,612.8	1,613.5	0.7
EU	106,754[1]	400	6,238	7.1	1,613.3	1,613.3	1,614.2	0.9
EV	107,544[1]	273	4,154	10.7	1,614.2	1,614.2	1,615.0	0.8
EW	108,032[1]	243	3,708	12.0	1,615.7	1,615.7	1,616.2	0.5
EX	108,516[1]	280	4,343	10.2	1,619.5	1,619.5	1,619.5	0.0
EY	109,388[1]	272	4,804	9.3	1,623.0	1,623.0	1,623.1	0.1
EZ	109,926[1]	265	4,472	9.9	1,624.5	1,624.5	1,624.6	0.1
FA	110,215[1]	282	4,565	8.7	1,624.9	1,624.9	1,625.2	0.3
FB	111,019[1]	284	4,109	9.7	1,625.0	1,625.0	1,625.8	0.8
FC	111,333[1]	312	3,881	10.2	1,625.1	1,625.1	1,625.6	0.5
FD	111,961[1]	330	5,413	7.3	1,628.5	1,628.5	1,629.1	0.6
FE	112,259[1]	335	5,142	7.7	1,628.8	1,628.8	1,629.4	0.6

[1]Feet above Limit of Study (Limit of Study is Approximately 510 ft Downstream of Confluence of North Fork Trinity River)

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TRINITY RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
FF	113,564[1]	265	4,160	9.6	1,632.8	1,632.8	1,633.2	0.4
FG	114,264[1]	240	3,952	10.1	1,633.6	1,633.6	1,634.3	0.7
FH	114,484[1]	250	4,295	9.3	1,634.9	1,634.9	1,635.6	0.7
FI	115,341[1]	357	5,777	5.5	1,637.1	1,637.1	1,637.8	0.7
FJ	115,761[1]	397	6,347	5.0	1,637.7	1,637.7	1,638.3	0.6
FK	116,173[1]	340	5,378	5.9	1,637.9	1,637.9	1,638.4	0.5
FL	116,892[1]	360	5,198	6.1	1,638.3	1,638.3	1,638.9	0.6
FM	118,210[1]	290	3,848	8.2	1,639.5	1,639.5	1,640.1	0.6
FN	119,658[1]	305	4,191	7.5	1,642.8	1,642.8	1,643.4	0.6
FO	119,988[1]	265	4,034	7.8	1,643.7	1,643.7	1,644.4	0.7
FP	121,298[1]	284	3,897	8.1	1,646.0	1,646.0	1,646.7	0.7
FQ	121,928[1]	249	3,401	9.3	1,647.8	1,647.8	1,648.5	0.7
FR	122,145[1]	262	3,651	8.6	1,648.5	1,648.5	1,649.3	0.8
FS	123,062[1]	301	3,323	9.5	1,649.8	1,649.8	1,650.7	0.9
FT	123,468[1]	315	4,767	5.1	1,652.5	1,652.5	1,653.2	0.7
FU	125,488[1]	459	5,704	4.3	1,653.8	1,653.8	1,654.5	0.7
FV	126,984[1]	261	3,586	6.8	1,656.0	1,656.0	1,657.0	1.0
FW	127,399[1]	293	4,194	5.8	1,656.9	1,656.9	1,657.9	1.0
FX	128,121[1]	260	3,630	6.8	1,657.8	1,657.8	1,658.6	0.8
FY	128,828[1]	250	3,836	6.4	1,658.9	1,658.9	1,659.8	0.9
FZ	129,640[1]	213	3,224	7.6	1,659.7	1,659.7	1,660.7	1.0
GA	129,998[1]	189	3,284	7.5	1,660.8	1,660.8	1,661.7	0.9
GB	130,844[1]	248	3,702	6.6	1,662.2	1,662.2	1,663.2	1.0

[1]Feet above Limit of Study (Limit of Study is Approximately 510 ft Downstream of Confluence of North Fork Trinity River)

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TRINITY RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
GC	131,174[1]	207	3,217	7.6	1,662.8	1,662.8	1,663.7	0.9
GD	131,796[1]	230	3,260	7.5	1,663.5	1,663.5	1,664.4	0.9
GE	132,793[1]	263	3,223	7.6	1,664.6	1,664.6	1,665.3	0.7
GF	133,335[1]	249	3,333	7.4	1,666.0	1,666.0	1,666.8	0.8
GG	133,688[1]	228	3,093	7.9	1,667.0	1,667.0	1,667.8	0.8
GH	134,006[1]	234	3,485	7.0	1,668.7	1,668.7	1,669.6	0.9
GI	134,701[1]	185	3,060	7.7	1,669.7	1,669.7	1,670.5	0.8
GJ	135,653[1]	194	2,922	8.1	1,670.7	1,670.7	1,671.5	0.8
GK	136,246[1]	259	3,619	6.5	1,672.6	1,672.6	1,673.5	0.9
GL	137,378[1]	224	2,865	8.2	1,673.6	1,673.6	1,674.3	0.7
GM	137,620[1]	237	3,153	7.5	1,674.7	1,674.7	1,675.4	0.7
GN	138,321[1]	210	2,822	8.4	1,676.4	1,676.4	1,677.1	0.7
GO	138,757[1]	142	2,066	11.4	1,676.9	1,676.9	1,677.4	0.5
GP	139,122[1]	202	2,768	8.5	1,678.7	1,678.7	1,679.6	0.9
GQ	139,821[1]	186	2,698	8.7	1,679.8	1,679.8	1,680.7	0.9
GR	140,100[1]	244	3,341	7.1	1,681.1	1,681.1	1,682.0	0.9
GS	140,831[1]	182	2,511	9.4	1,682.0	1,682.0	1,682.8	0.8
GT	141,079[1]	246	3,512	6.7	1,683.4	1,683.4	1,684.3	0.9
GU	141,479[1]	210	2,923	8.1	1,683.7	1,683.7	1,684.6	0.9
GV	142,312[1]	210	2,852	8.3	1,685.5	1,685.5	1,686.3	0.8
GW	142,539[1]	211	2,816	8.4	1,686.0	1,686.0	1,686.8	0.8
GX	142,827[1]	210	2,871	8.2	1,687.2	1,687.2	1,688.1	0.9
GY	143,001[1]	224	3,027	7.8	1,687.6	1,687.6	1,688.6	1.0

[1]Feet above Limit of Study (Limit of Study is Approximately 510 ft Downstream of Confluence of North Fork Trinity River)

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TRINITY RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
GZ	144,261[1]	166	2,433	9.7	1,689.5	1,689.5	1,690.3	0.8
HA	144,748[1]	185	2,696	8.8	1,691.0	1,691.0	1,691.9	0.9
HB	145,294[1]	206	2,797	8.4	1,692.5	1,692.5	1,693.4	0.9
HC	145,571[1]	267	3,608	6.5	1,693.4	1,693.4	1,694.3	0.9
HD	146,015[1]	228	3,065	7.7	1,693.9	1,693.9	1,694.9	1.0
HE	146,803[1]	180	2,304	10.2	1,694.5	1,694.5	1,695.3	0.8
HF	147,277[1]	215	2,842	8.3	1,696.5	1,696.5	1,697.5	1.0
HG	147,729[1]	255	2,957	8.0	1,697.6	1,697.6	1,698.5	0.9
HH	148,452[1]	194	2,266	10.4	1,698.6	1,698.6	1,699.3	0.7
HI	148,930[1]	270	3,341	7.1	1,700.7	1,700.7	1,701.7	1.0
HJ	149,788[1]	175	2,454	9.6	1,702.1	1,702.1	1,702.8	0.7
HK	150,020[1]	210	2,786	8.5	1,702.7	1,702.7	1,703.7	1.0
HL	150,638[1]	190	2,606	9.1	1,704.5	1,704.5	1,705.4	0.9
HM	150,938[1]	174	2,447	9.6	1,704.7	1,704.7	1,705.6	0.9
HN	151,343[1]	237	2,890	8.2	1,705.8	1,705.8	1,706.7	0.9
HO	151,583[1]	212	2,952	8.0	1,706.9	1,706.9	1,707.7	0.8
HP	152,465[1]	193	2,433	9.7	1,707.8	1,707.8	1,708.6	0.8
HQ	152,751[1]	192	2,629	9.0	1,708.9	1,708.9	1,709.9	1.0
HR	153,167[1]	207	2,505	9.4	1,709.9	1,709.9	1,710.6	0.7
HS	154,045[1]	250	3,073	7.7	1,712.5	1,712.5	1,713.4	0.9
HT	154,438[1]	287	3,470	6.8	1,713.1	1,713.1	1,714.0	0.9
HU	155,307[1]	315	3,068	7.7	1,714.7	1,714.7	1,715.6	0.9
HV	155,932[1]	190	2,360	10.0	1,715.6	1,715.6	1,716.0	0.4

[1]Feet above Limit of Study (Limit of Study is Approximately 510 ft Downstream of Confluence of North Fork Trinity River)

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TRINITY RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
HW	156,663[1]	225	1,973	12.0	1,717.0	1,717.0	1,717.0	0.0
HX	156,875[1]	260	2,030	11.6	1,718.5	1,718.5	1,718.6	0.1
HY	157,075[1]	250	2,328	10.1	1,720.3	1,720.3	1,720.7	0.4
HZ	157,388[1]	205	2,122	11.1	1,720.8	1,720.8	1,721.7	0.9
IA	157,664[1]	206	2,303	10.2	1,722.3	1,722.3	1,723.3	1.0
IB	157,960[1]	245	2,718	8.7	1,724.3	1,724.3	1,725.0	0.7
IC	158,215[1]	252	2,907	8.1	1,725.1	1,725.1	1,726.1	1.0
ID	158,617[1]	295	3,121	7.6	1,725.6	1,725.6	1,726.5	0.9
IE	159,373[1]	210	3,051	7.7	1,727.6	1,727.6	1,728.6	1.0
IF	159,728[1]	460	7,124	3.3	1,729.1	1,729.1	1,730.0	0.9
IG	160,655[1]	344	3,192	9.5	1,729.9	1,729.9	1,730.7	0.8
IH	160,946[1]	273	3,815	6.2	1,731.8	1,731.8	1,732.2	0.4
II	162,619[1]	147	2,191	10.1	1,732.9	1,732.9	1,733.5	0.6
IJ	163,129[1]	149	2,342	9.5	1,733.6	1,733.6	1,734.1	0.5
IK	163,811[1]	205	2,687	8.3	1,734.6	1,734.6	1,735.3	0.7
IL	165,002[1]	215	2,728	8.1	1,736.9	1,736.9	1,737.7	0.8
IM	165,347[1]	285	3,306	6.7	1,737.8	1,737.8	1,738.7	0.9
IN	165,661[1]	352	4,140	5.4	1,738.8	1,738.8	1,739.6	0.8
IO	166,635[1]	264	2,784	8.0	1,740.0	1,740.0	1,741.0	1.0
IP	167,597[1]	185	2,327	9.5	1,742.6	1,742.6	1,743.3	0.7
IQ	168,347[1]	271	3,298	6.7	1,745.7	1,745.7	1,746.2	0.5
IR	168,874[1]	305	2,928	7.6	1,746.4	1,746.4	1,746.8	0.4
IS	169,155[1]	275	3,035	7.3	1,746.4	1,746.4	1,747.4	1.0

[1]Feet above Limit of Study (Limit of Study is Approximately 510 ft Downstream of Confluence of North Fork Trinity River)

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TRINITY RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
IT	169,505[1]	205	2,387	9.3	1,746.8	1,746.8	1,747.6	0.8
IU	169,879[1]	205	2,307	6.5	1,748.5	1,748.5	1,749.2	0.7
IV	170,827[1]	280	2,237	6.7	1,749.8	1,749.8	1,750.3	0.5
IW	171,571[1]	173	1,917	7.8	1,750.9	1,750.9	1,751.5	0.6
IX	172,849[1]	240	2,265	6.6	1,752.4	1,752.4	1,753.0	0.6
IY	173,117[1]	234	2,534	5.9	1,753.3	1,753.3	1,753.3	0.0
IZ	174,043[1]	225	1,921	7.8	1,754.1	1,754.1	1,754.5	0.4
JA	174,454[1]	255	2,340	6.4	1,754.9	1,754.9	1,755.5	0.6
JB	174,728[1]	235	2,064	7.0	1,755.0	1,755.0	1,755.9	0.9
JC	174,929[1]	177	1,905	7.6	1,755.9	1,755.9	1,756.7	0.8
JD	175,318[1]	271	2,316	6.2	1,756.6	1,756.6	1,757.3	0.7
JE	175,776[1]	276	3,590	3.4	1,763.1	1,763.1	1,763.3	0.2
JF	177,521[1]	215	2,580	4.9	1,763.7	1,763.7	1,764.4	0.7
JG	178,592[1]	222	2,554	5.0	1,765.0	1,765.0	1,766.0	1.0
JH	179,876[1]	215	2,456	5.9	1,766.8	1,766.8	1,767.6	0.8
JI	180,744[1]	161	1,454	9.9	1,767.5	1,767.5	1,768.2	0.7
JJ	181,059[1]	189	1,759	8.2	1,768.7	1,768.7	1,769.6	0.9
JK	181,389[1]	134	1,568	9.2	1,769.9	1,769.9	1,770.7	0.8
JL	181,648[1]	267	2,988	4.8	1,771.5	1,771.5	1,772.4	0.9
JM	181,860[1]	496	4,357	3.3	1,771.9	1,771.9	1,772.9	1.0
JN	183,114[1]	257	1,963	7.4	1,772.9	1,772.9	1,773.8	0.9
JO	183,436[1]	211	1,851	7.8	1,774.0	1,774.0	1,775.0	1.0
JP	183,725[1]	218	1,547	9.4	1,775.0	1,775.0	1,775.8	0.8

[1]Feet above Limit of Study (Limit of Study is Approximately 510 ft Downstream of Confluence of North Fork Trinity River)

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TRINITY RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
JQ	184,037[1]	208	1,697	8.5	1,776.3	1,776.3	1,777.0	0.7
JR	184,327[1]	204	1,771	8.2	1,777.0	1,777.0	1,777.8	0.8
JS	184,669[1]	220	1,732	8.4	1,777.8	1,777.8	1,778.6	0.8
JT	185,006[1]	255	2,055	7.0	1,779.4	1,779.4	1,780.0	0.6
JU	185,151[1]	279	2,921	5.0	1,780.1	1,780.1	1,781.1	1.0
JV	185,586[1]	320	2,184	6.3	1,780.7	1,780.7	1,781.4	0.7
JW	186,019[1]	210	1,865	7.4	1,781.7	1,781.7	1,782.6	0.9
JX	186,405[1]	194	1,955	7.0	1,782.7	1,782.7	1,783.4	0.7
JY	187,142[1]	255	2,002	6.9	1,784.8	1,784.8	1,785.6	0.8
JZ	187,520[1]	330	2,765	5.0	1,786.2	1,786.2	1,787.1	0.9
KA	187,910[1]	230	1,795	7.7	1,786.6	1,786.6	1,787.2	0.6
KB	188,254[1]	210	1,719	8.0	1,788.8	1,788.8	1,789.2	0.4
KC	189,009[1]	217	2,479	4.6	1,789.7	1,789.7	1,790.6	0.9
KD	190,706[1]	255	1,995	5.7	1,790.5	1,790.5	1,791.4	0.9
KE	191,464[1]	242	2,004	5.7	1,791.7	1,791.7	1,792.6	0.9
KF	192,095[1]	236	1,878	6.1	1,793.5	1,793.5	1,794.5	1.0
KG	192,464[1]	210	2,058	5.5	1,794.5	1,794.5	1,795.5	1.0
KH	193,703[1]	155	1,740	6.5	1,795.7	1,795.7	1,796.6	0.9
KI	194,463[1]	195	1,582	7.2	1,797.5	1,797.5	1,797.9	0.4
KJ	194,925[1]	150	1,303	8.7	1,797.9	1,797.9	1,798.8	0.9
KK	195,256[1]	170	1,454	7.8	1,798.7	1,798.7	1,799.6	0.9
KL	195,499[1]	170	1,351	8.4	1,799.3	1,799.3	1,800.1	0.8
KM	196,237[1]	600	2,464	4.6	1,802.3	1,802.3	1,803.2	0.9

[1]Feet above Limit of Study (Limit of Study is Approximately 510 ft Downstream of Confluence of North Fork Trinity River)

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TRINITY RIVER

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
KN	196,463[1]	665	3,217	3.5	1,803.0	1,803.0	1,803.9	0.9
KO	197,496[1]	321	2,041	5.6	1,805.6	1,805.6	1,806.2	0.6
KP	197,764[1]	284	2,138	5.3	1,806.6	1,806.6	1,807.2	0.6
KQ	198,335[1]	139	1,541	7.4	1,807.5	1,807.5	1,808.0	0.5
KR	199,365[1]	153	1,370	8.3	1,808.7	1,808.7	1,809.1	0.4
KS	199,721[1]	220	1,740	6.5	1,809.6	1,809.6	1,810.3	0.7
KT	200,298[1]	263	2,027	5.6	1,811.3	1,811.3	1,811.9	0.6
KU	200,514[1]	216	1,696	6.7	1,811.5	1,811.5	1,812.1	0.6
KV	201,477[1]	185	1,596	7.1	1,813.8	1,813.8	1,814.5	0.7
KW	201,814[1]	186	1,701	6.7	1,814.7	1,814.7	1,815.4	0.7
KX	202,515[1]	146	1,511	7.5	1,815.6	1,815.6	1,816.4	0.8
KY	203,171[1]	159	1,635	7.0	1,816.8	1,816.8	1,817.7	0.9
KZ	203,821[1]	210	1,725	6.6	1,818.6	1,818.6	1,819.5	0.9
LA	204,077[1]	208	1,661	6.9	1,819.6	1,819.6	1,820.4	0.8
LB	204,484[1]	252	1,448	7.9	1,820.8	1,820.8	1,821.4	0.6
Trinity River Bucktail Left								
A	1,250[2]	69	331	5.3	1,764.2	1,764.2	1,764.5	0.3
B	1,505[2]	47	285	6.2	1,765.2	1,765.2	1,765.6	0.4

[1]Feet Above Limit of Study (Limit of Study is Approximately 510 ft Downstream of Confluence of North Fork Trinity River)
[2]Feet Above Confluence With Trinity River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TRINITY RIVER – TRINITY RIVER BUCKTAIL LEFT

Table 25: Flood Hazard and Non-Encroachment Data for Selected Streams

[Not applicable to this FIS project]

6.4 Coastal Flood Hazard Mapping

This section is not applicable to this FIS project.

Table 26: Summary of Coastal Transect Mapping Considerations

[Not applicable to this FIS 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 to FIS projects 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 31, "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. A LOMA cannot be issued for properties located on the PFD (primary frontal dune).

To obtain an application for a LOMA, visit http://www.fema.gov 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 http://www.fema.gov/plan/prevent/fhm/ot_lmreq.shtm.

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 http://www.fema.gov 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 http://www.fema.gov/plan/prevent/fhm/ot_lmreq.shtm.

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 http://www.fema.gov 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 Trinity County FIRM are listed in Table 27.

Table 27: Incorporated Letters of Map Change

[Not applicable to this FIS project]

6.5.4 Physical Map Revisions

PMRs are 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 http://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 Trinity County. Previously, separate FIRMs, Flood Hazard Boundary Maps (FHBMs) 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 28, "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 28 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 Flood Hazard Boundary Map (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. This is the first effective date that is shown on the FIRM panel.

- *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 Physical Map Revisions (PMR) 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 Trinity County FIRMs in countywide format was 08/16/1988.

Table 28: Community Map History

Community Name	Initial Identification Date (First NFIP Map Published)	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Trinity County Unincorporated Areas	12/13/1977	12/13/1977	None	08/16/1988	02/16/1990 04/17/1996 09/2/2009 01/20/2010

SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION

7.1 Contracted Studies

Table 29 provides a summary of the contracted studies, by flooding source, that are included in this FIS Report.

Table 29: Summary of Contracted Studies Included in this FIS Report

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
*	1988	USACE San Francisco District	*	*	Trinity County Uninc. Areas
Coffee Creek, Trinity River	04/17/1996	Ensign & Buckley, Consulting Engineers	EMW-90-C-3133	*	Trinity County Uninc. Areas
East Weaver Creek, Garden Gulch, Middle Weaver Creek, Sidney Gulch, Ten Cent Gulch, Weaver Creek, West Weaver Creek	04/17/1996	USACE	Interagency Agreement FMW-87-E-2549, Project Order No. 8, for the Limited Map Maintenance Program (LMMP)	November 1998	Trinity County Uninc. Areas
Multiple Streams (detailed study)	04/17/1996	USACE, San Francisco District	*	August 1989	Uninc. Town of Weaverville

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Hayfork Creek	09/02/2009	California Department of Water Resources (CADWR), Northern District	*	August 21, 2006	Uninc. Town of Hayfork
Carter Gulch, Kellogg Gulch, Ewing Gulch	09/02/2009	California Department of Water Resources (CADWR), Northern District	*	September 28, 2005	Uninc. Town of Hayfork
Trinity River, Canyon Creek, Browns Creek, Reading Creek, Weaver Creek, Indian Creek, Grass Valley Creek, Rush Creek	<date>	California Department of Water Resources Northern Region Office (NRO)	EMF-2008-GR-0808, EMF-2011-GR-1109	March 2014	Trinity County Uninc. Areas

7.2 Community Meetings

The dates of the community meetings held for this FIS project and any previous FIS projects are shown in Table 30. 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 30: Community Meetings

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Trinity County, Unincorporated Areas	08/16/1988	02/21/1986	Initial CCO	*
		12/10/1986	Final CCO	*
Trinity County, Unincorporated Areas	02/16/1990	*	Initial CCO	*
		*	Final CCO	*
Trinity County, Unincorporated Areas	04/17/1996	May 15, 1992	Initial CCO	*
		*	Final CCO	*
Trinity County, Unincorporated Areas	09/02/2009	12/28/2006	Initial CCO	*
		02/20/2008	Final CCO	*
Trinity County, Unincorporated Areas	*	12/12/2006	Initial CCO	*
		*	Final CCO	*
Trinity County, Unincorporated Areas	<date>	09/09/2008	Initial CCO	*
		03/12/2014	Final CCO	Kathleen Schaefer, FEMA Region IX Richard Tippett, Director of Transportation, Trinity County Judy Pflueger, Supervisor District 1, Trinity County Rodney Whittler, Trinity River Restoration Program DJ Brandrowski, Trinity River Restoration Program Todd Hillaire, DWR Joe Reiss, Waterworks Maureen Teubert, Western Shasta Resource Conservation District

*Data not available

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 http://www.fema.gov.

The additional data that was used for this project includes the FIS Report and FIRM that were previously prepared for Trinity County (FEMA 2010).

Table 31 is a list of the locations where FIRMs for Trinity 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 31: Map Repositories

Community	Address	City	State	Zip Code
Trinity County, Unincorporated Areas	Planning Department & Planning Commission 61 Airport Road	Weaverville	CA	96093

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 32.

Table 32 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 32: Additional Information

FEMA and the NFIP	
FEMA and FEMA Engineering Library website	http://www.fema.gov
NFIP website	http://www.fema.gov/business/nfip
NFHL Dataset	http://msc.fema.gov
FEMA Region IX	1111 Broadway, Suite 1200, Oakland, CA 94607-4052 1-800-621-3362
Other Federal Agencies	
USGS website	http://www.usgs.gov

Hydraulic Engineering Center website	http://www.hec.usace.army.mil
State Agencies and Organizations	
State NFIP Coordinator	Mr. James Eto CA DWR, State NFIP Coordinator Floodplain Management Branch 3464 El Camino Avenue, Suite 200 Sacramento, CA 95821
State GIS Coordinator	David Harris Agency Information Officer California Resources Agency 1416 Ninth Street, Room 1311 Sacramento, CA 95814 Phone: (916) 445-5088 david.harris@resources.ca.gov

SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES

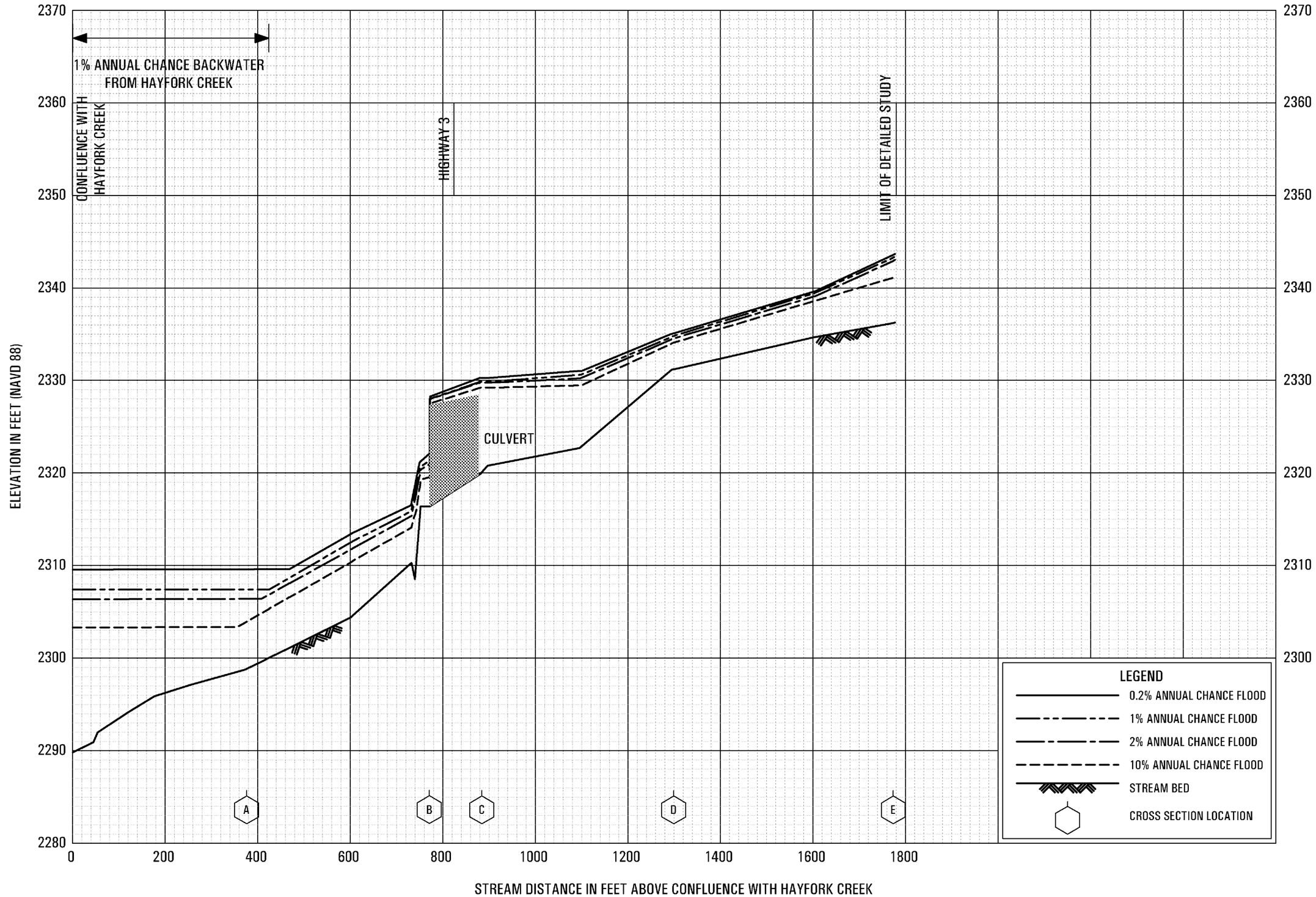
Table 33 includes sources used in the preparation of and cited in this FIS Report as well as additional studies that have been conducted in the study area.

Table 33: 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
CH2M Hill (undated)	CH2M Hill Firm.	Aerial photographic maps developed for Trinity County, Scale 1:2,400				
-	Federal Emergency Management Agency, Federal Insurance Administration	Flood Hazard Boundary Map, Trinity County, California (Unincorporated Areas)			1977	
-	Federal Emergency Management Agency	Flood Insurance Study Trinity County, California (Unincorporated Areas)			September 2, 2009	
-	U.S. Army Corps of Engineers, San Francisco District	Flood Plain Management Services Program, Hayfork Streams, Trinity County, California, Special Study			August 1991	
-	U.S. Army Corps of Engineers, San Francisco District	Flood Plain Management Services Special Study, Weaverville Streams, Trinity County, California			August 1989	
-	U.S. Army Corps of Engineers, San Francisco District	Hydrology for Limited Map Maintenance Program Flood Insurance Study, Middle Weaver Creek, Weaverville, Trinity County, California			September 1988	
-	U.S. Army Corps of Engineers, San Francisco District	Flood Plain Information, Trinity River, Lewiston Lake to Junction City, Trinity County, California			April 1976	

Citation in this FIS	Publisher/ Issuer	*Publication Title*, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
-	U.S. Army Corps of Engineers, Hydrologic Engineering Center	HEC-2 Water-Surface Profiles		Davis, California		
-	U.S. Army Corps of Engineers	Hydrologic Engineering Center, HEC-RAS, Version 3.1, River Analysis System		Davis, California		
-	U.S. Department of the Interior, Geological Survey	Guidelines for Determining Flood Flow Frequency			March 1982	
-	U.S. Department of the Interior, Bureau of Reclamation, Mid-Pacific Region	Trinity River, Flood Plain Information, Junction city to Weitchpec		Sacramento, California	August 1979	
-	U.S. Department of the Interior, Geological Survey	Magnitude and Frequency of Floods in California			June 1977	
-	U.S. Department of the Interior, Geological Survey	Professional Paper 422-K, Erosion and Deposition Produced by the Flood of December 1964 on Coffee Creek, Trinity County, California			1967	
-	California Department of Water Resources, Northern District	Hayfork Creek Flood Insurance Study Draft Hydrology Report			March 15, 2004	
-	California Department of Water Resources, Northern District	Hayfork Creek Hydraulic Notes, Hayfork, California, Trinity County			August 21, 2006	

Citation in this FIS	Publisher/ Issuer	*Publication Title*, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
-	California Department of Water Resources, Northern District	Hydraulic Notes for Ewing, Carter and Kellogg Gulches Through Hayfork, California, Trinity County			September 28, 2005	
-	U.S. Geological Survey	Magnitude and Frequency of Floods in California, Water-Resources Investigations 77-21		Menlo Park, California	June 1977	
CADWR 2013	California Department of Water Resources Northern Region Office	Trinity River Flood Insurance Study Hydraulic Analysis	California Department of Water Resources Northern Region Office		March2014	
-	California Department of Water Resources Northern Region Office	Trinity River Hydrology Report	California Department of Water Resources Northern Region Office		January 2011	



FLOOD PROFILES

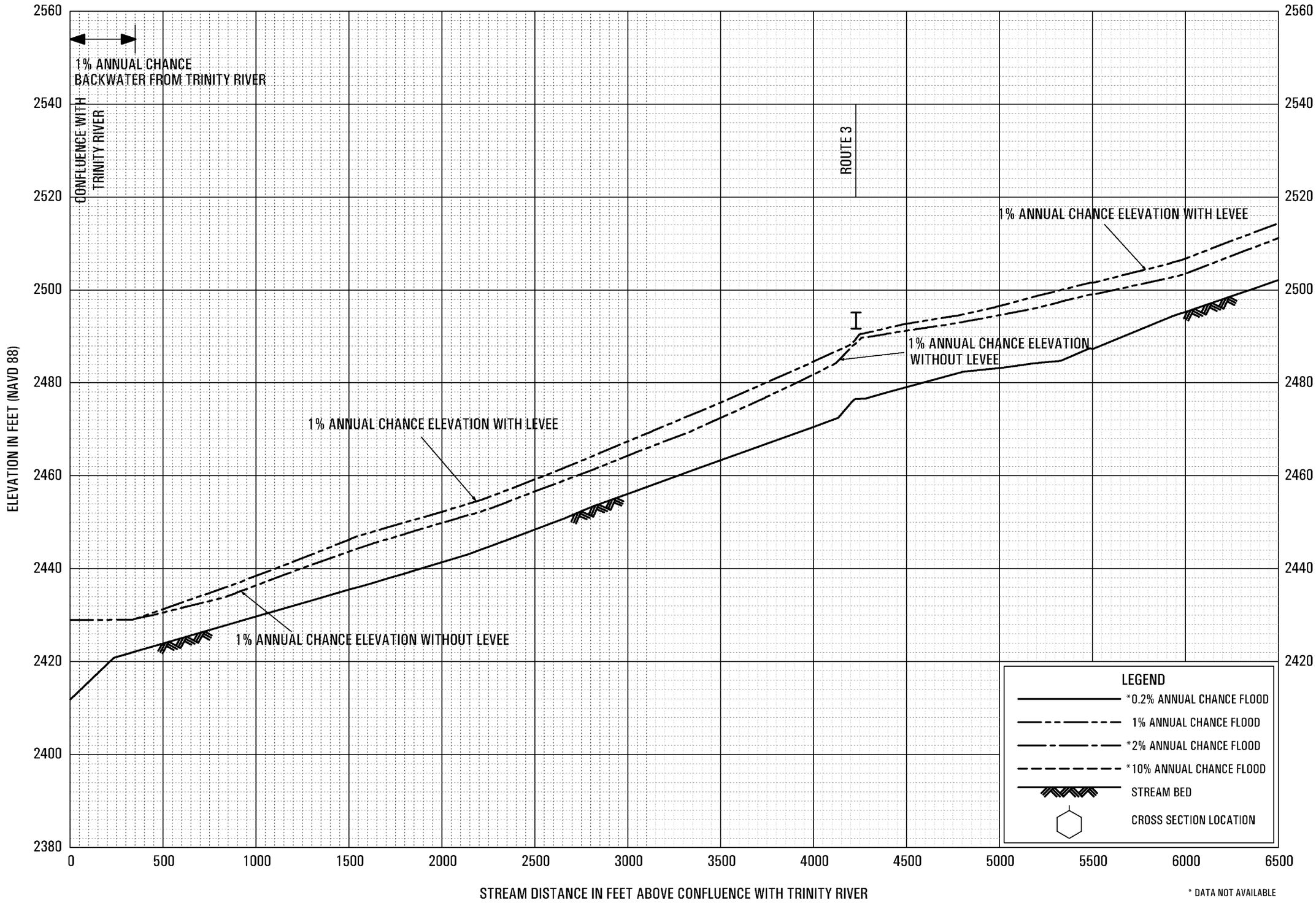
CARTER GULCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS

01P



FLOOD PROFILES

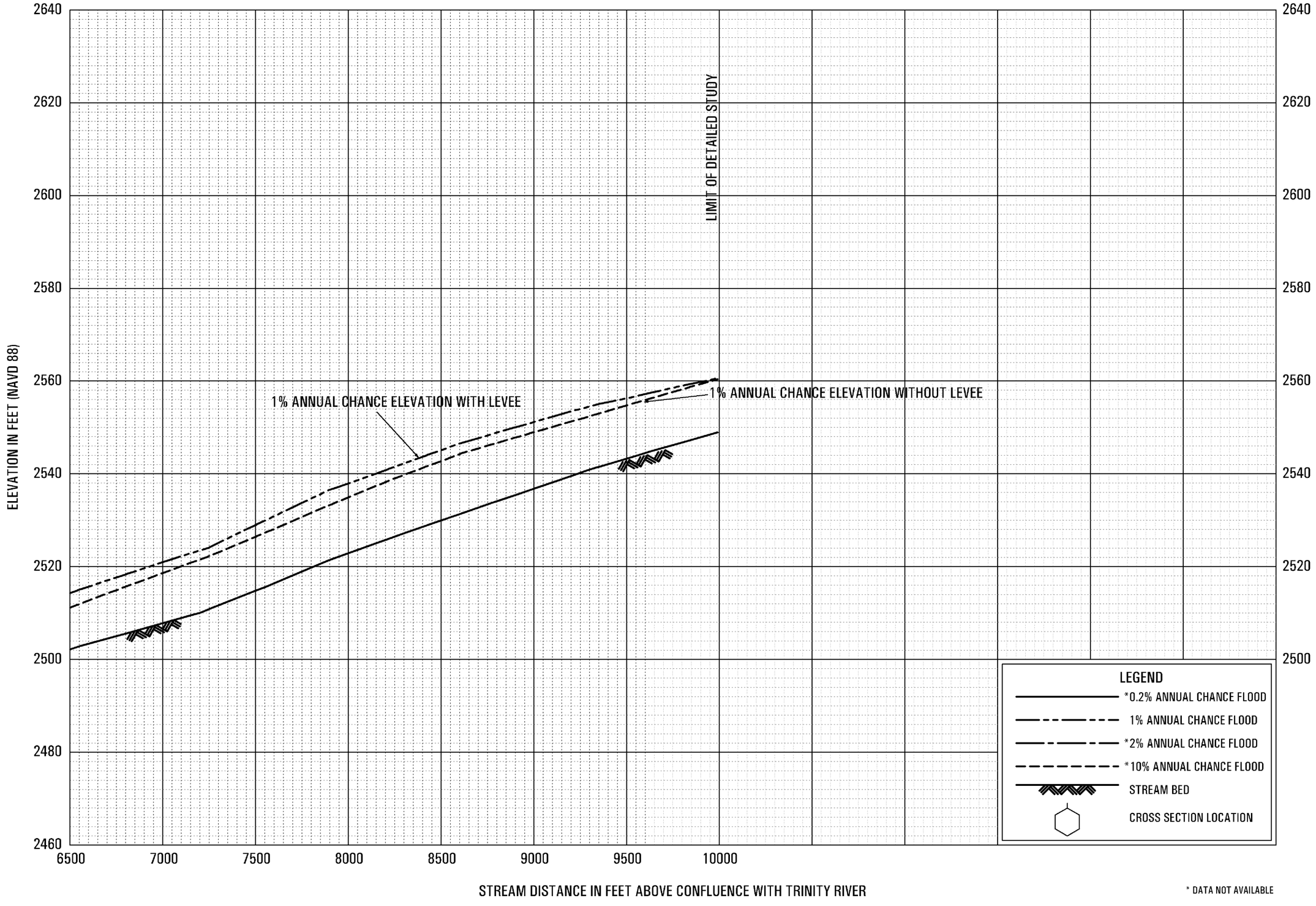
COFFEE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS

02P



FLOOD PROFILES

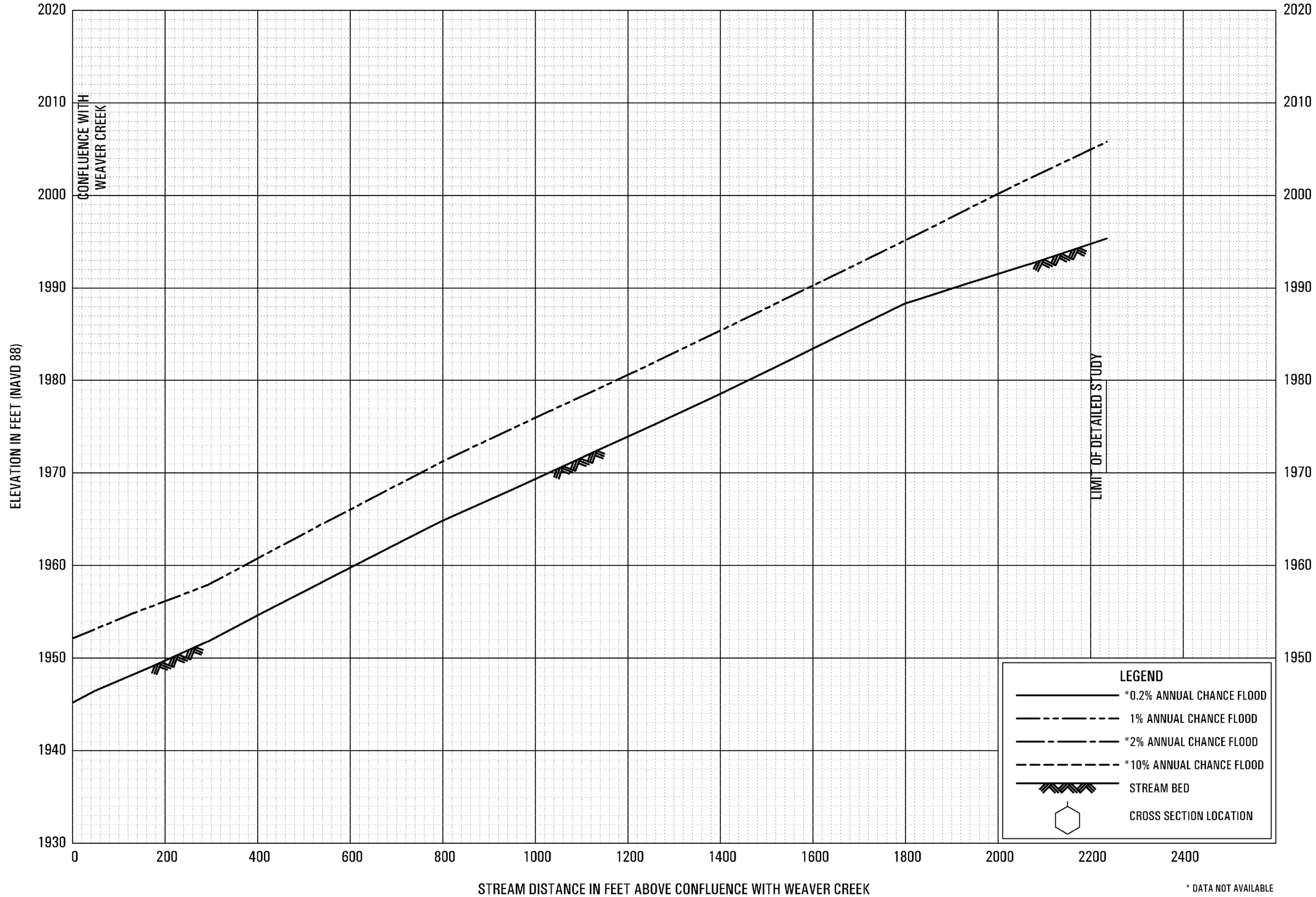
COFFEE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS

03P



FLOOD PROFILES

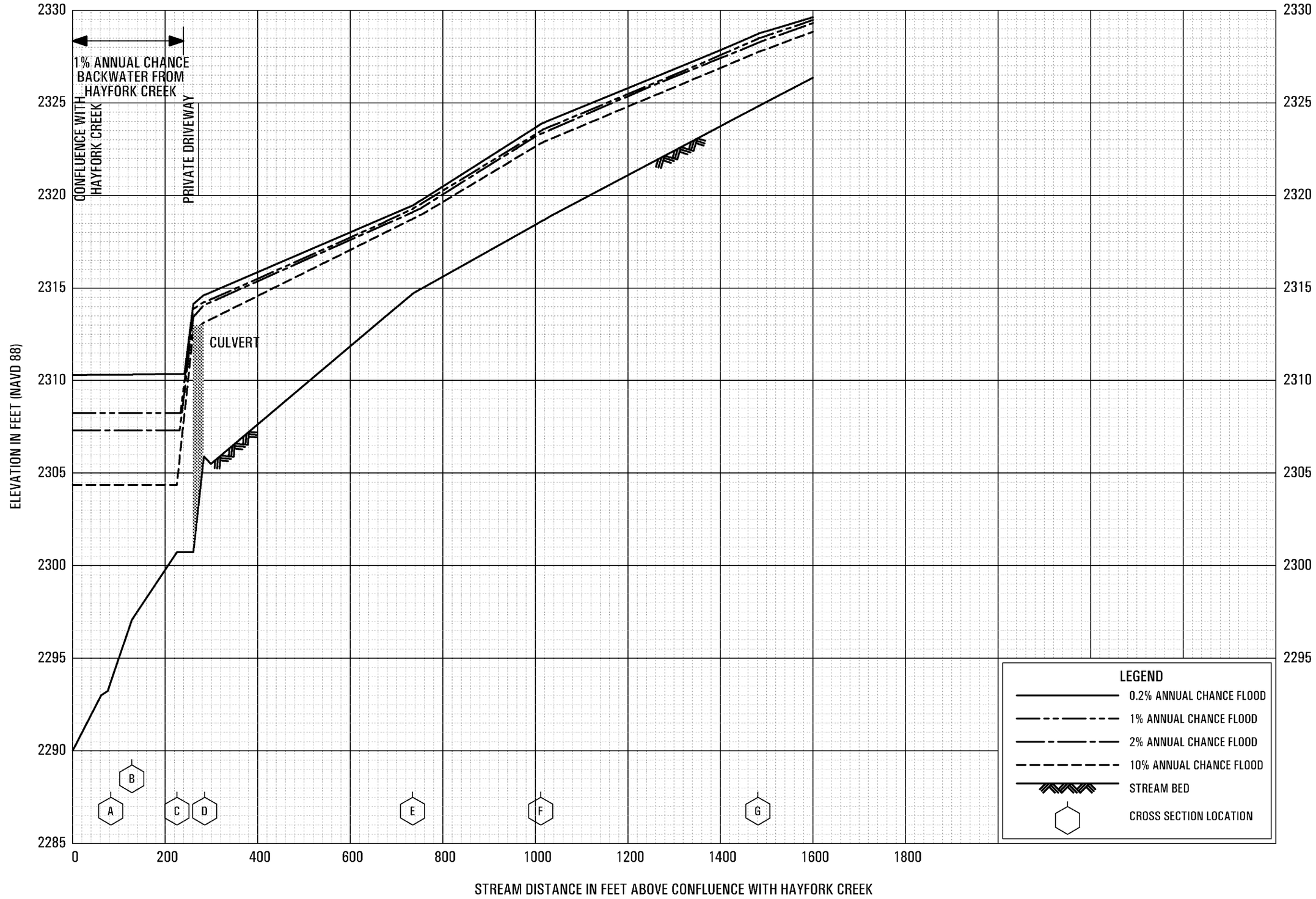
EAST WEAVER CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS

04P



FLOOD PROFILES

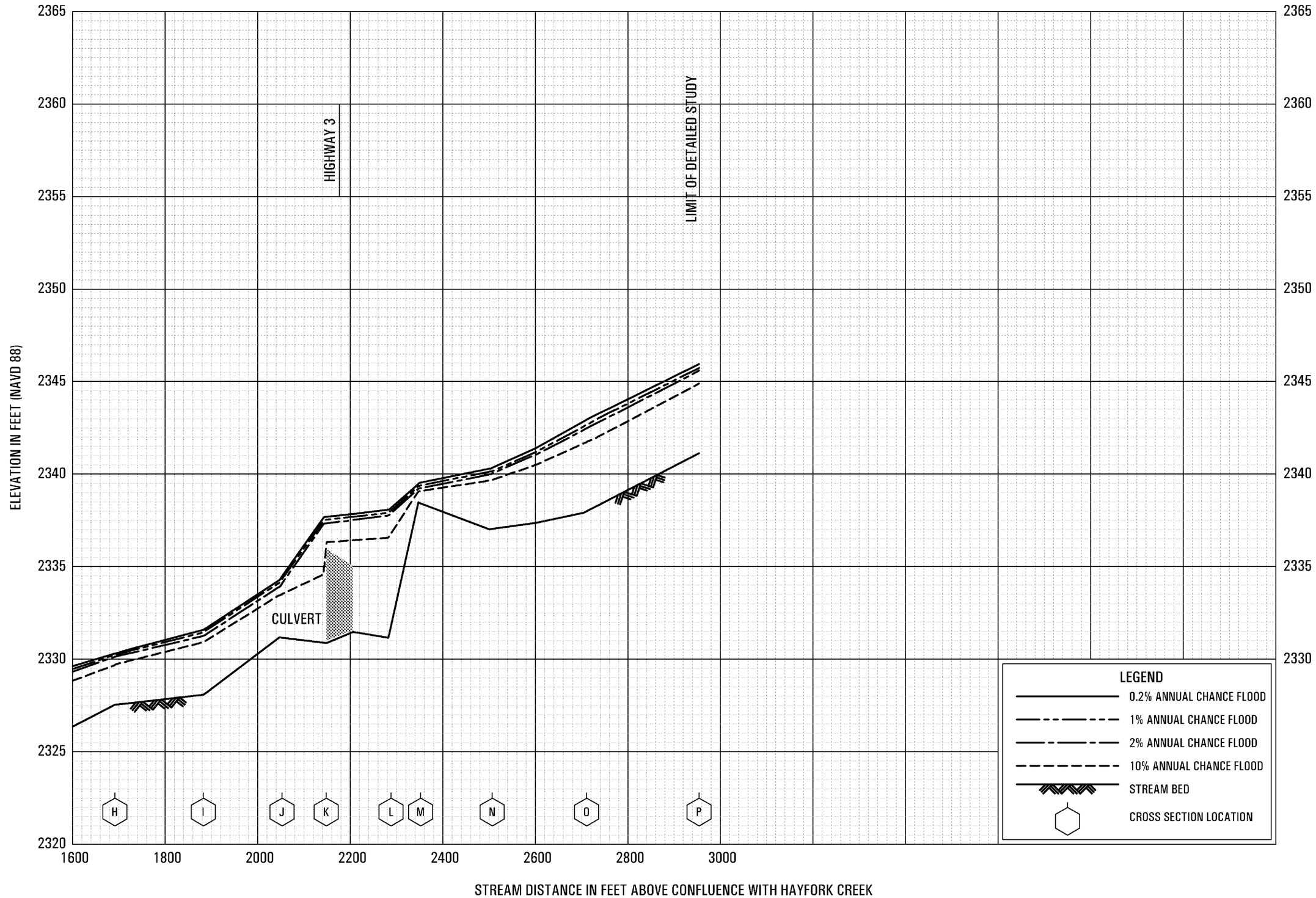
EWING GULCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS

05P



FLOOD PROFILES

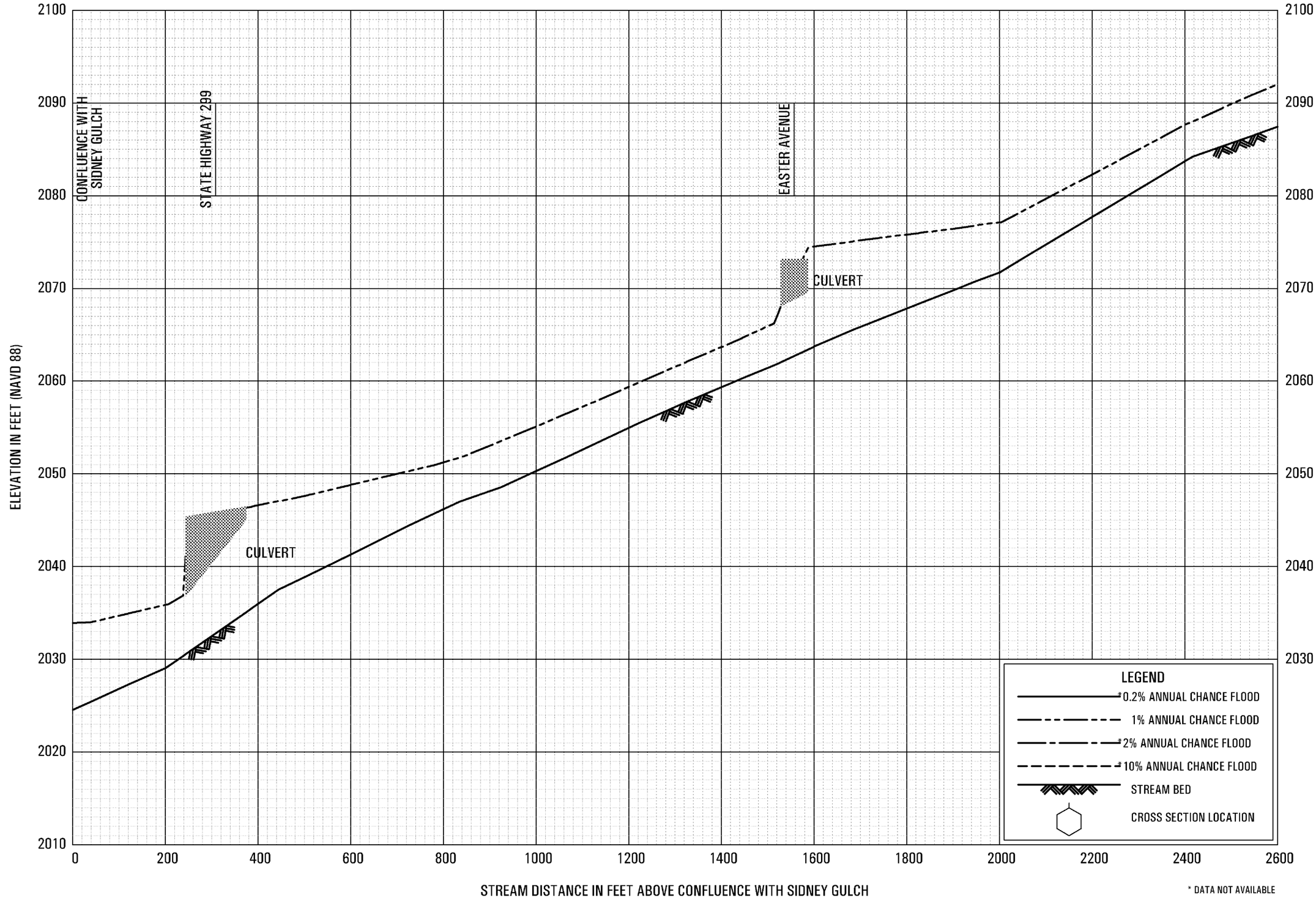
EWING GULCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS

06P



FLOOD PROFILES

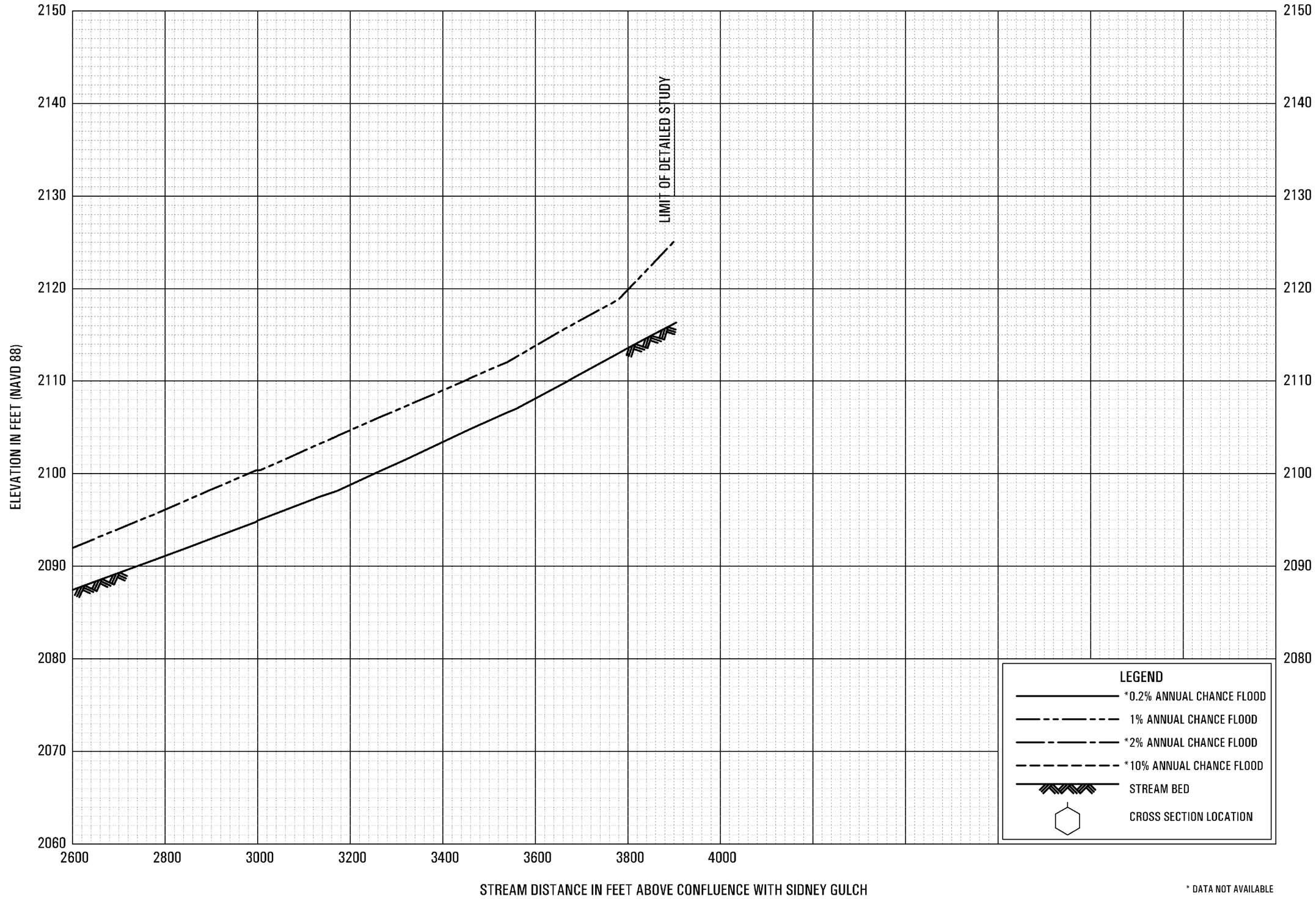
GARDEN GULCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS

07P



FLOOD PROFILES

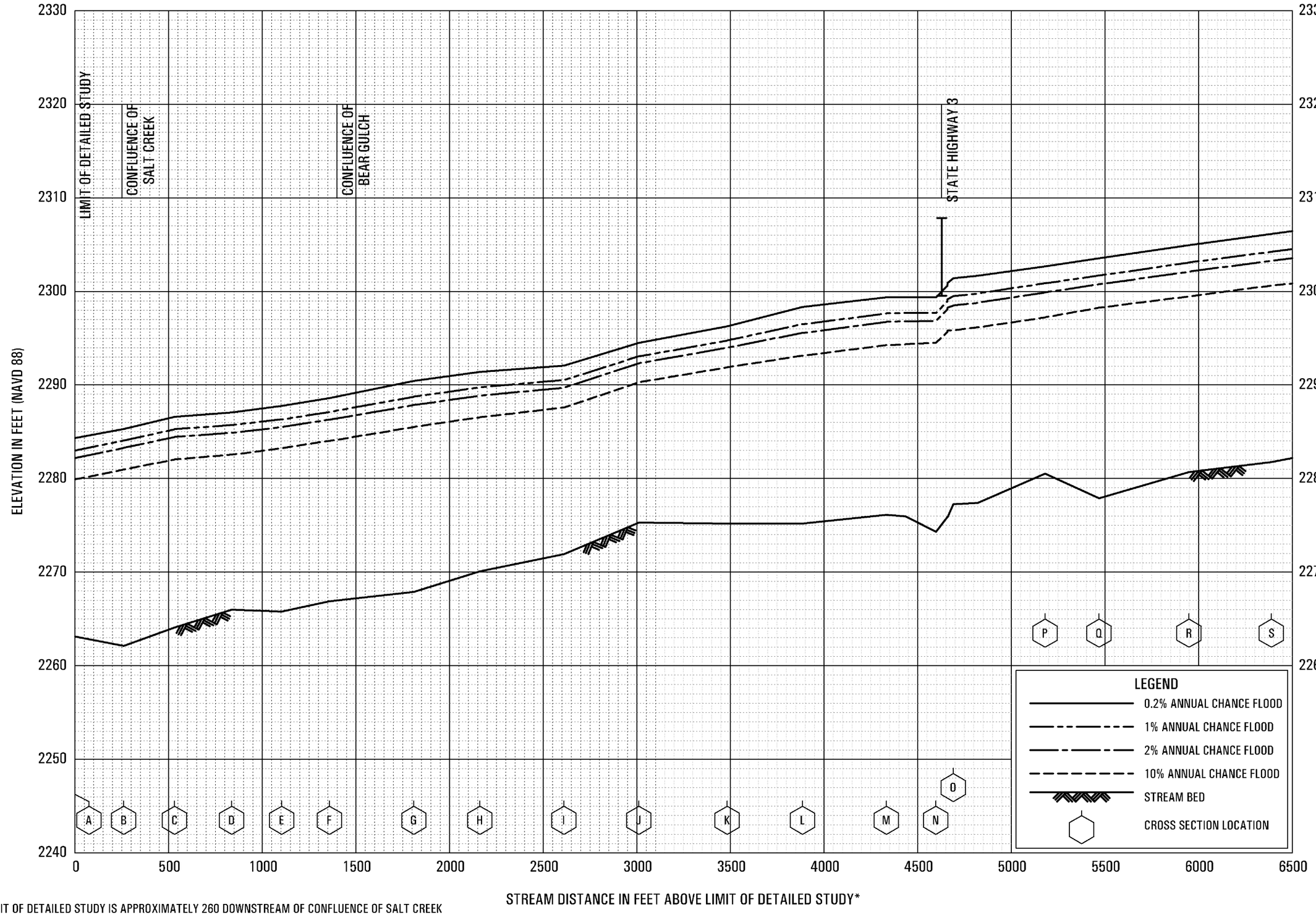
GARDEN GULCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS

08P



*LIMIT OF DETAILED STUDY IS APPROXIMATELY 260 DOWNSTREAM OF CONFLUENCE OF SALT CREEK

FLOOD PROFILES

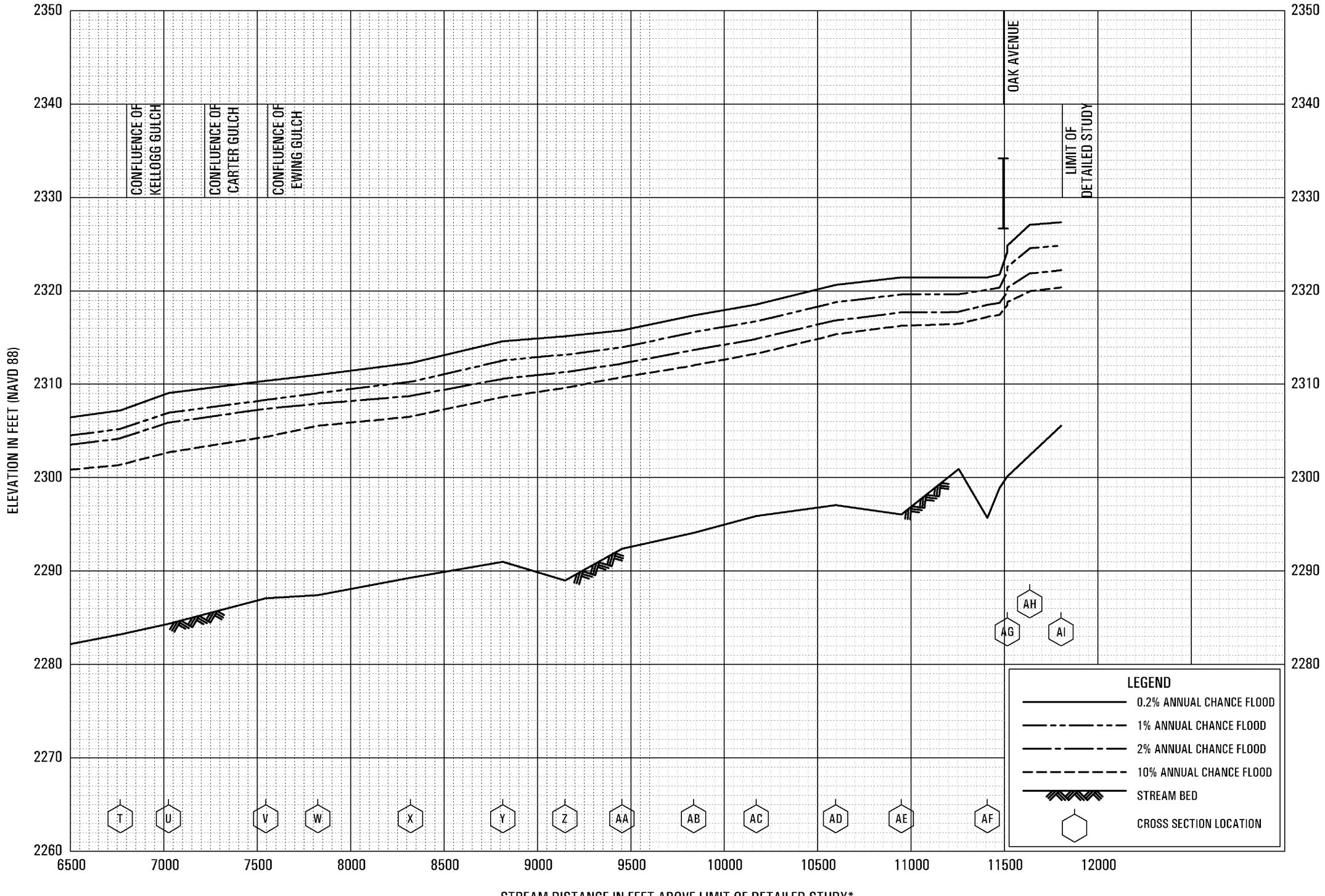
HAYFORK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS

09P



*LIMIT OF DETAILED STUDY IS APPROXIMATELY 260 DOWNSTREAM OF CONFLUENCE OF SALT CREEK

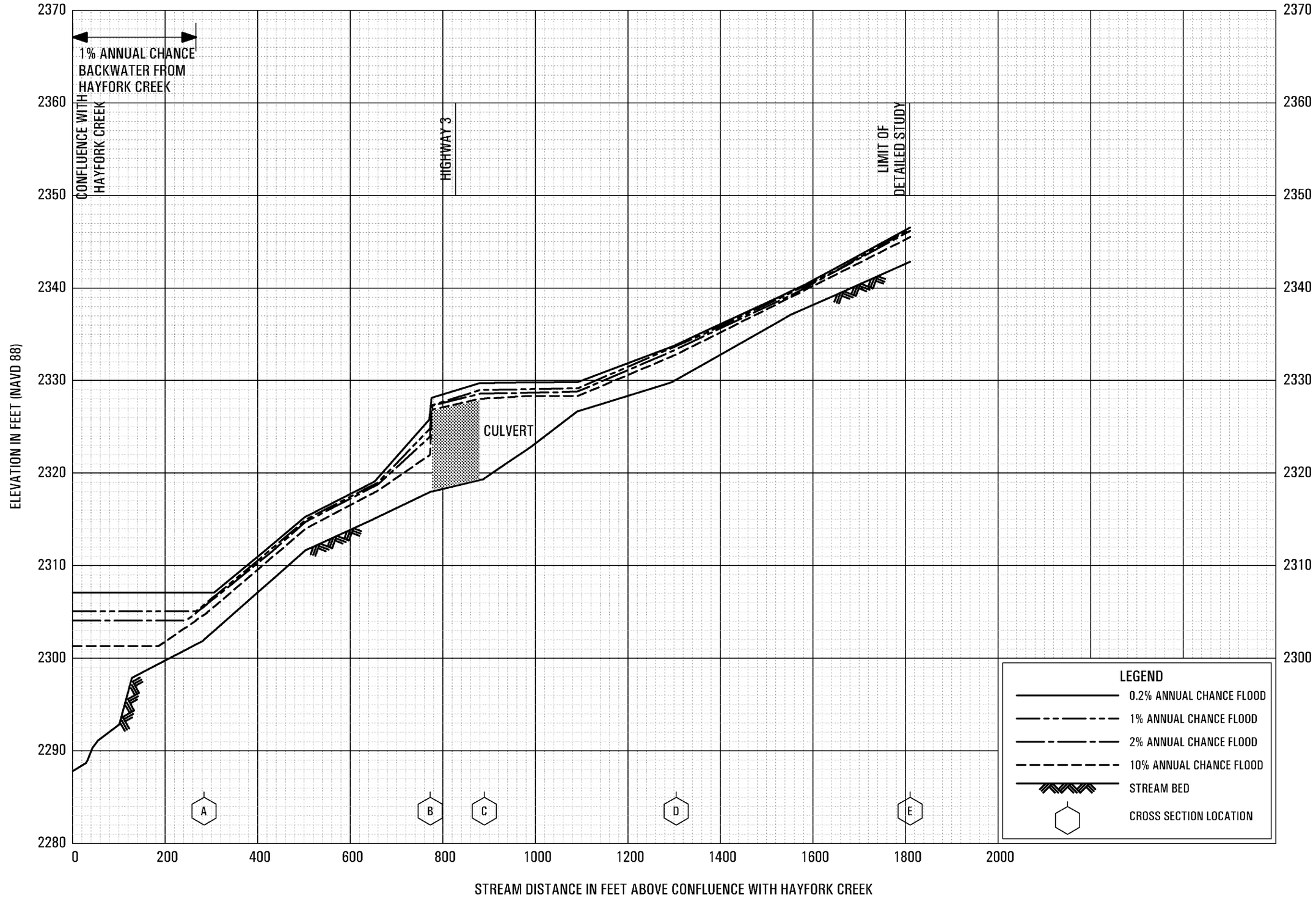
FLOOD PROFILES

HAYFORK CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



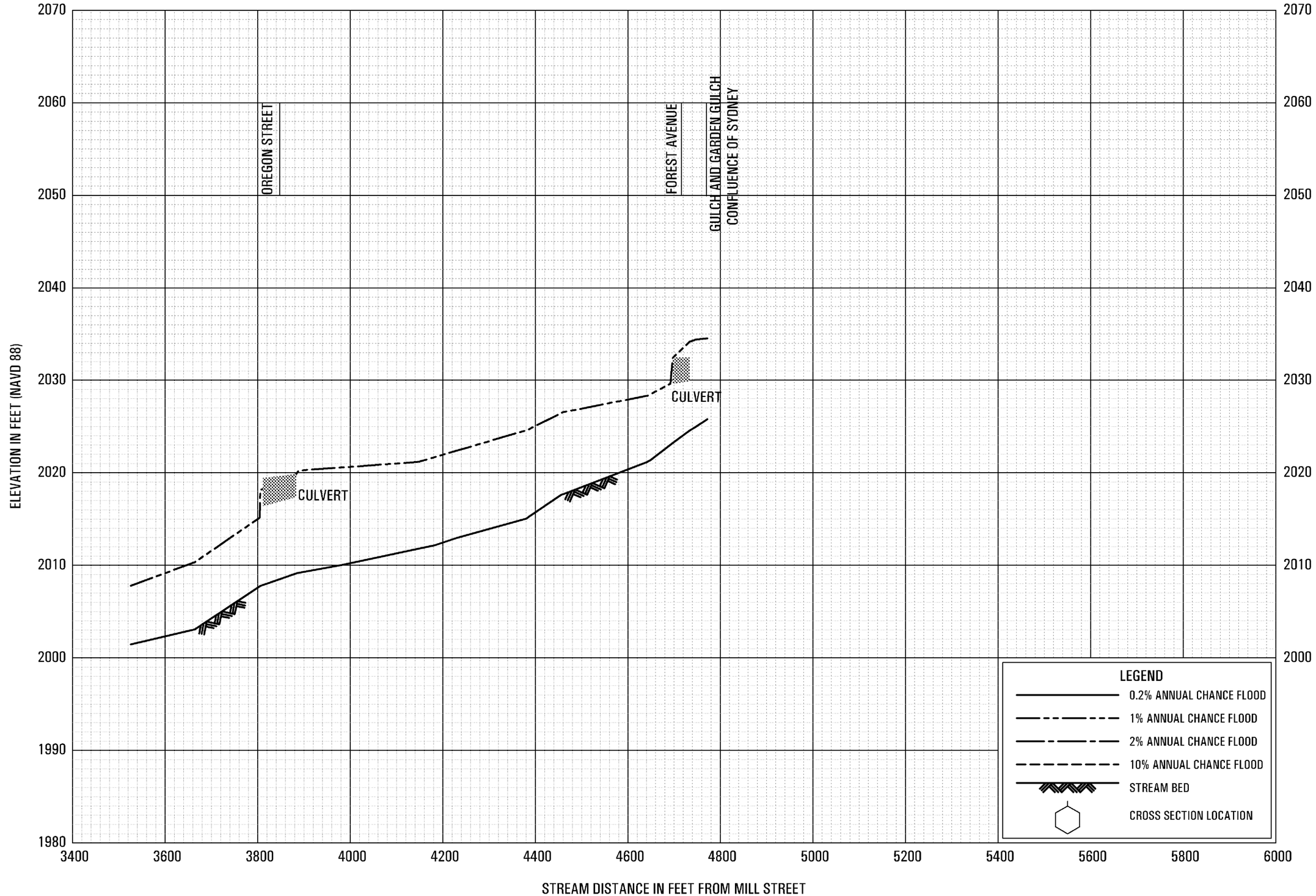
FLOOD PROFILES

KELLOGG GULCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



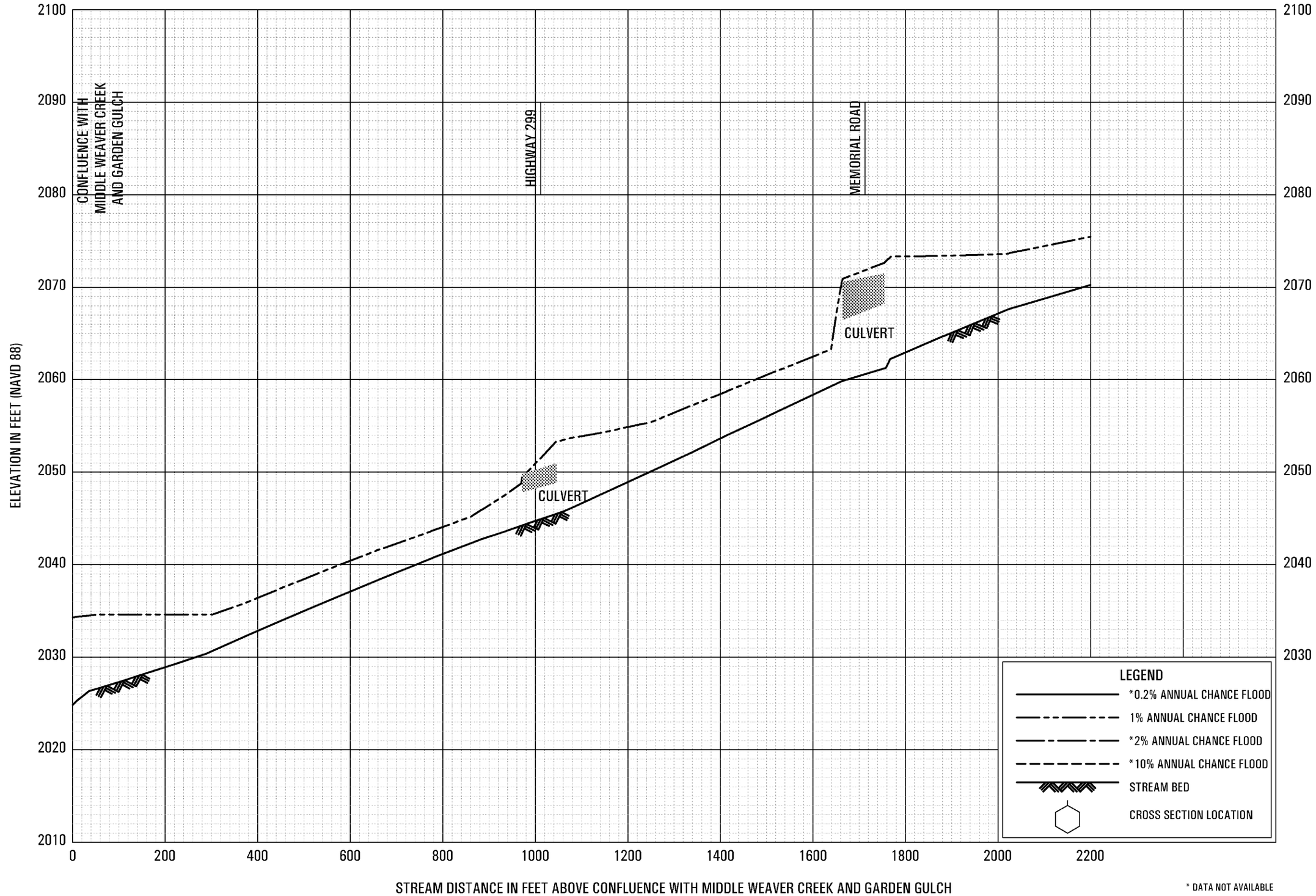
FLOOD PROFILES

MIDDLE WEAVER CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



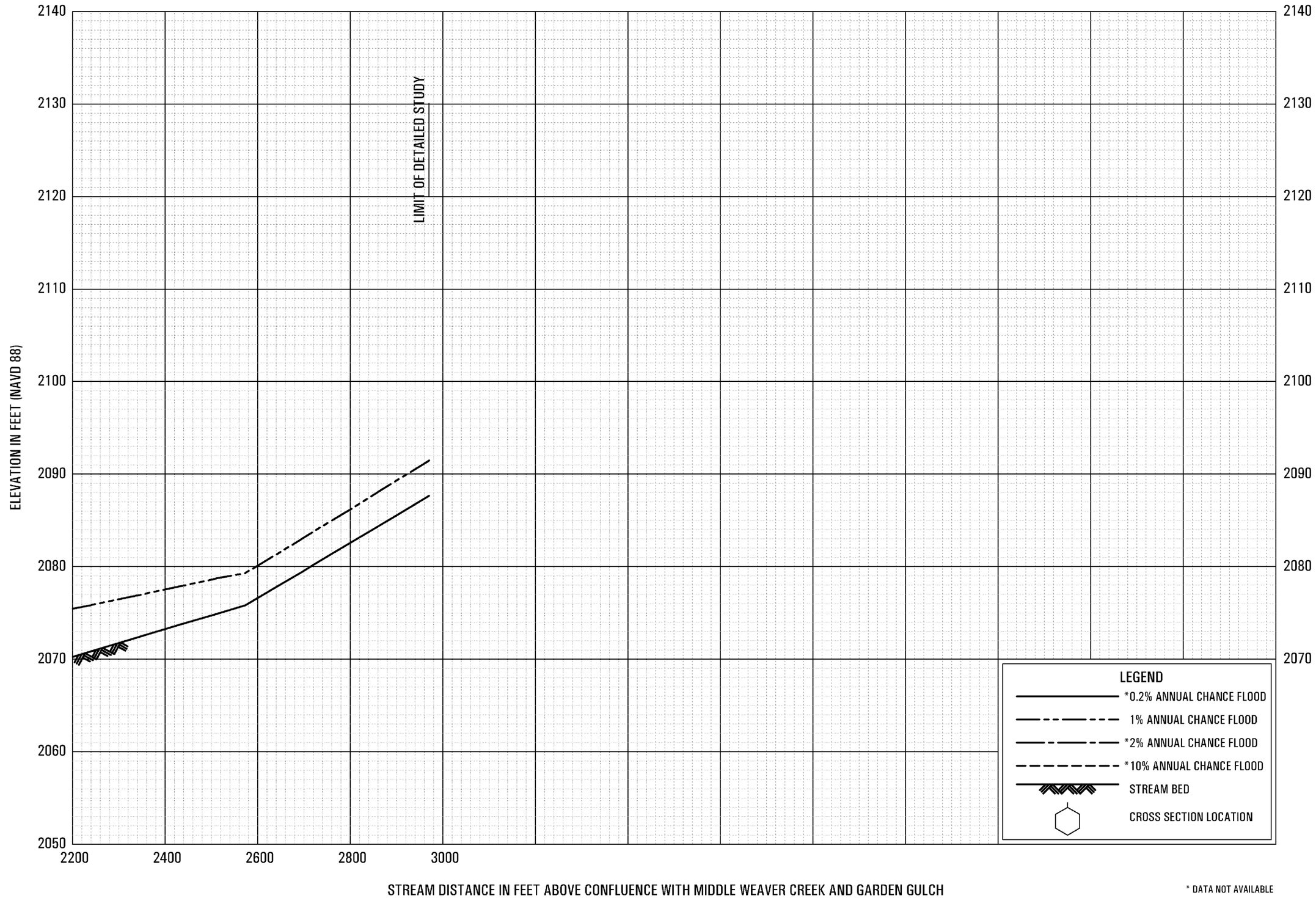
FLOOD PROFILES

SIDNEY GULCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



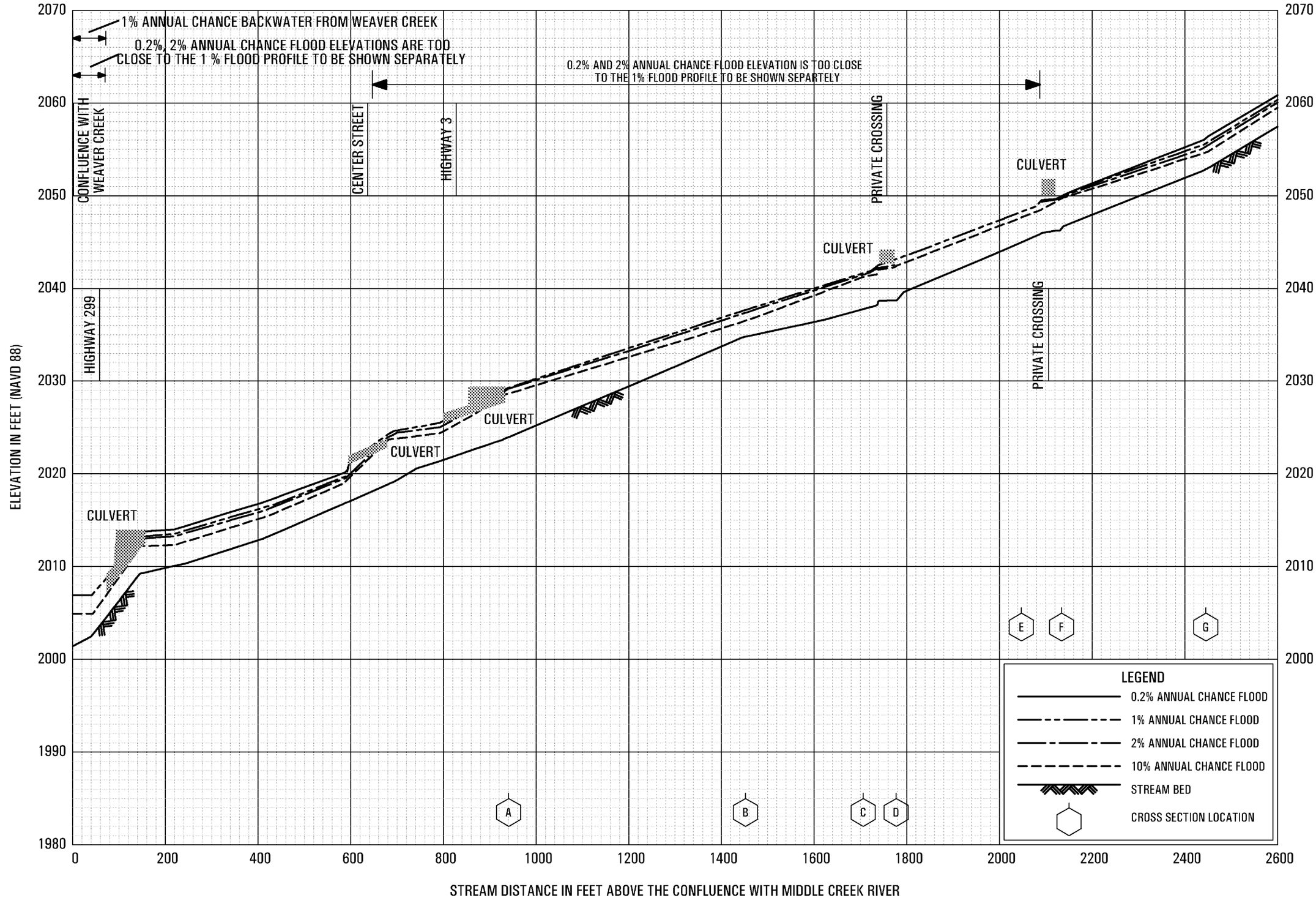
FLOOD PROFILES

SIDNEY GULCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



FLOOD PROFILES

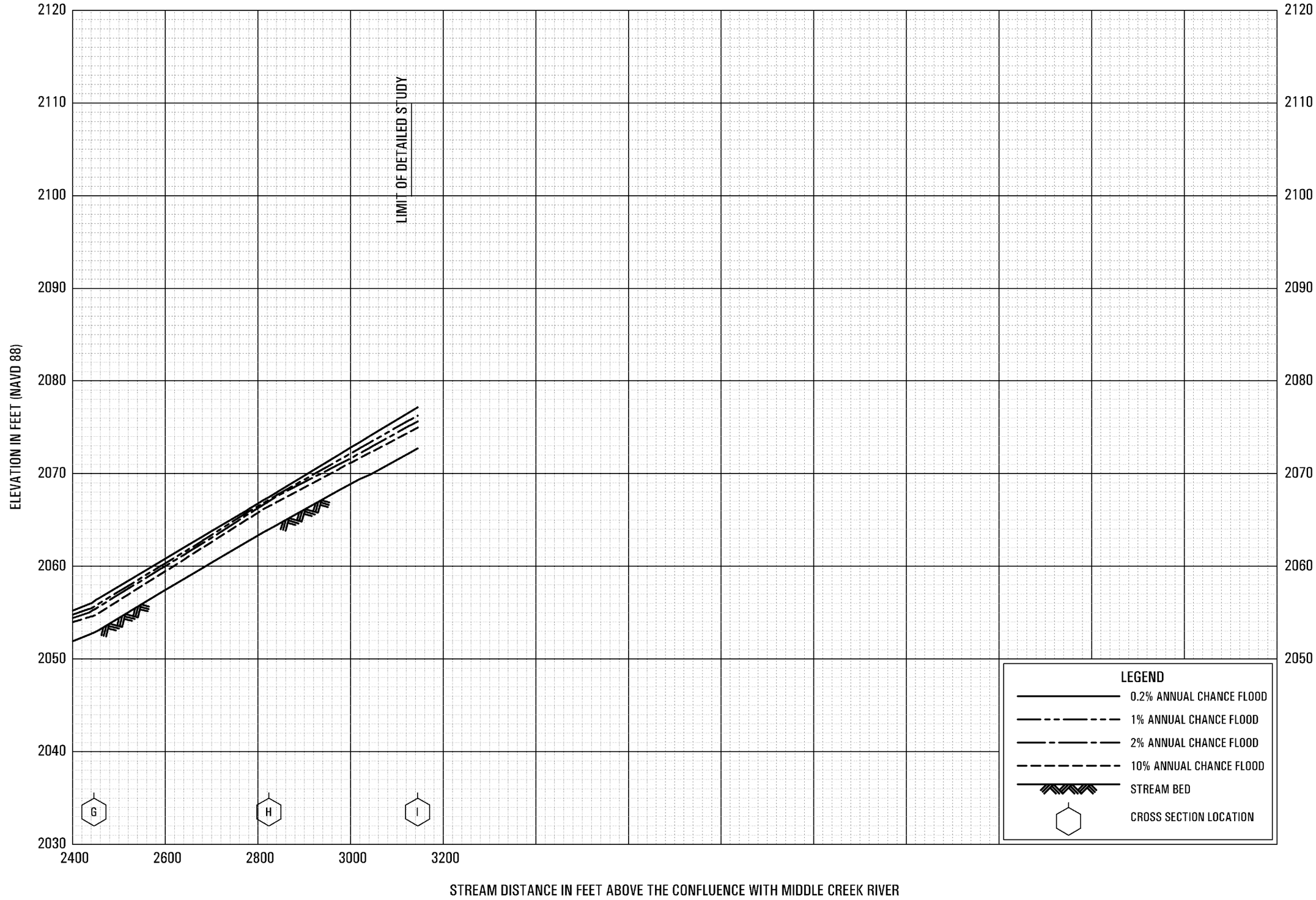
TEN CENT GULCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS

15P



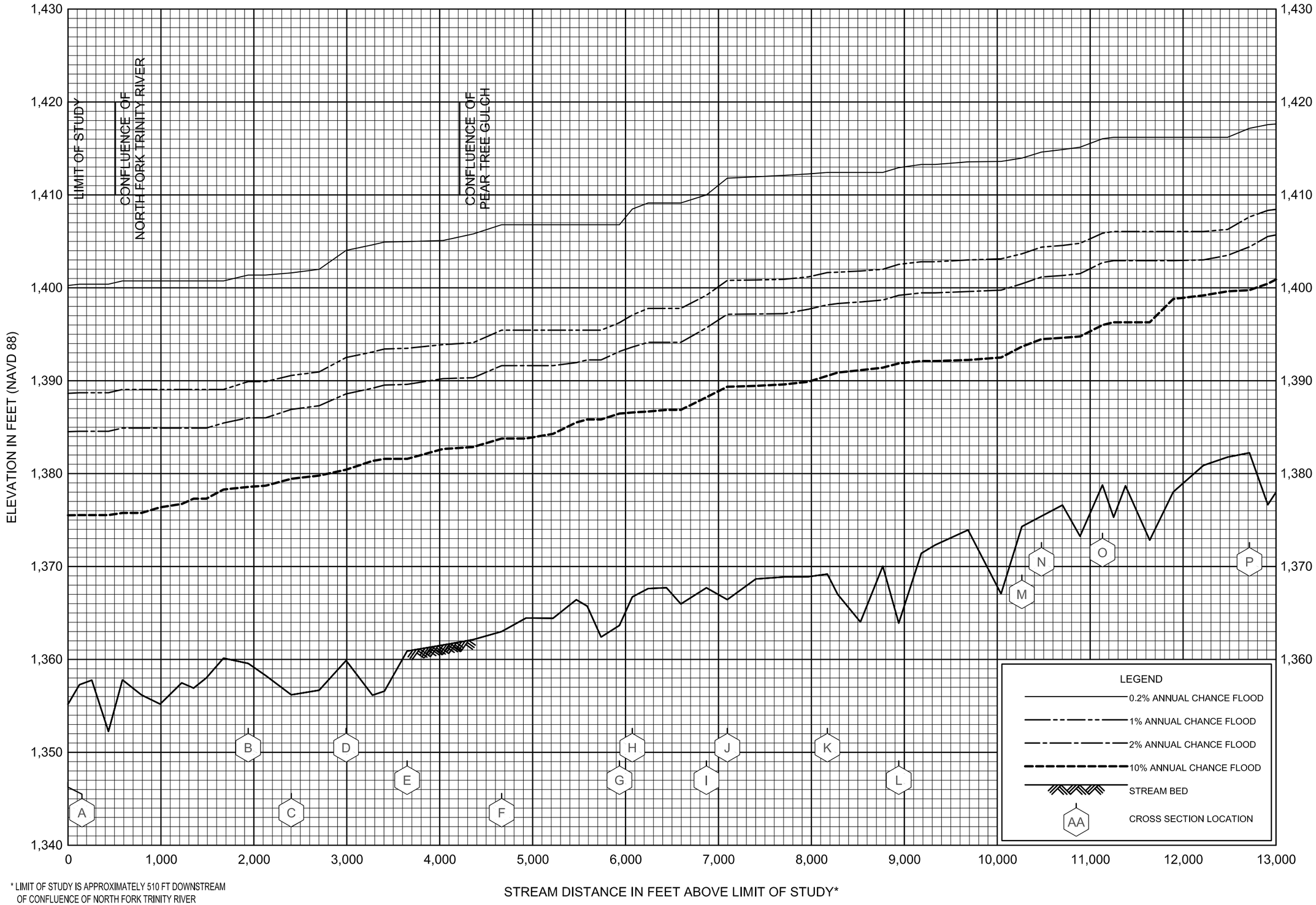
FLOOD PROFILES

TEN CENT GULCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



* LIMIT OF STUDY IS APPROXIMATELY 510 FT DOWNSTREAM OF CONFLUENCE OF NORTH FORK TRINITY RIVER

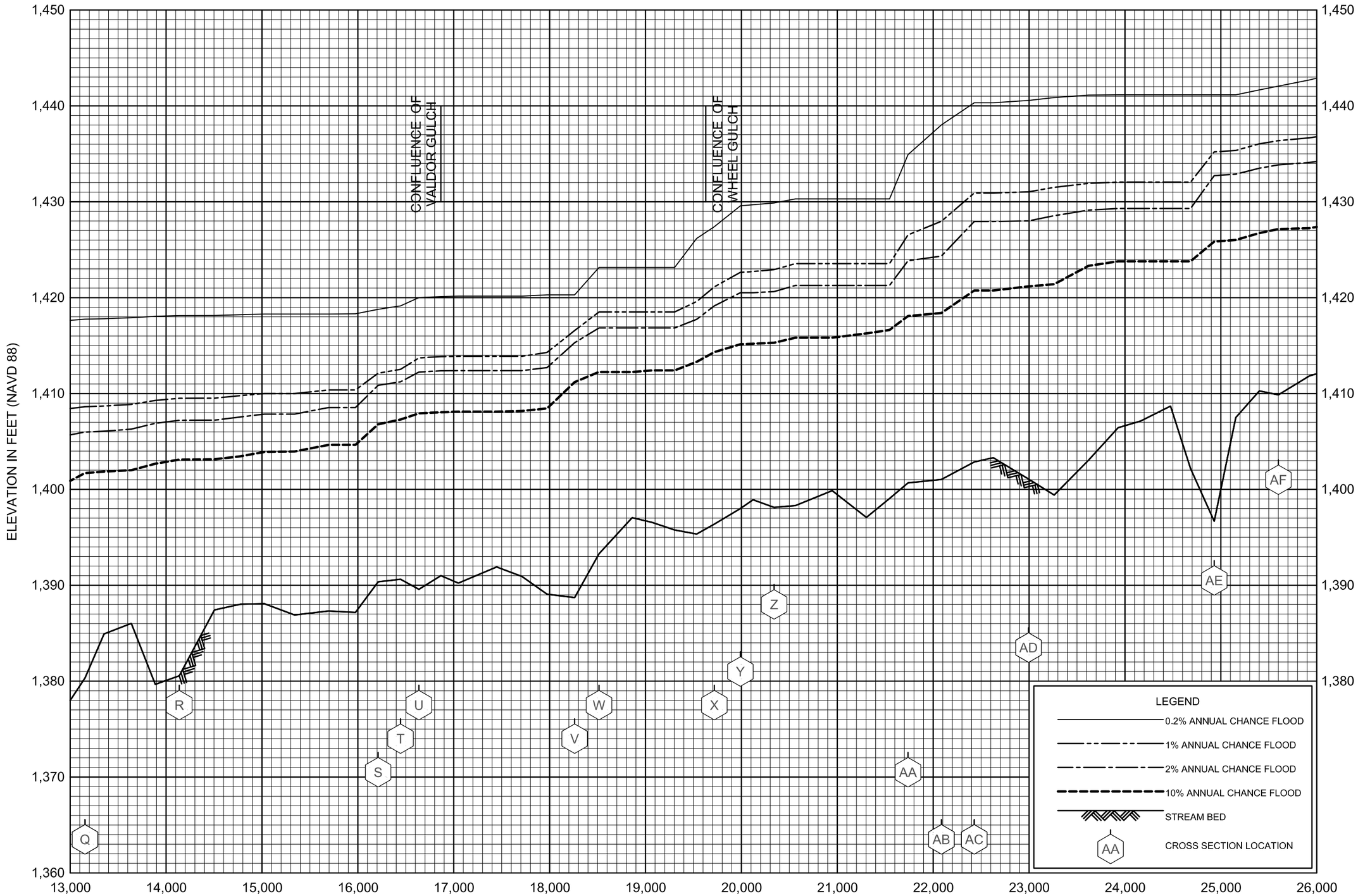
FLOOD PROFILES

TRINITY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



* LIMIT OF STUDY IS APPROXIMATELY 510 FT DOWNSTREAM OF CONFLUENCE OF NORTH FORK TRINITY RIVER

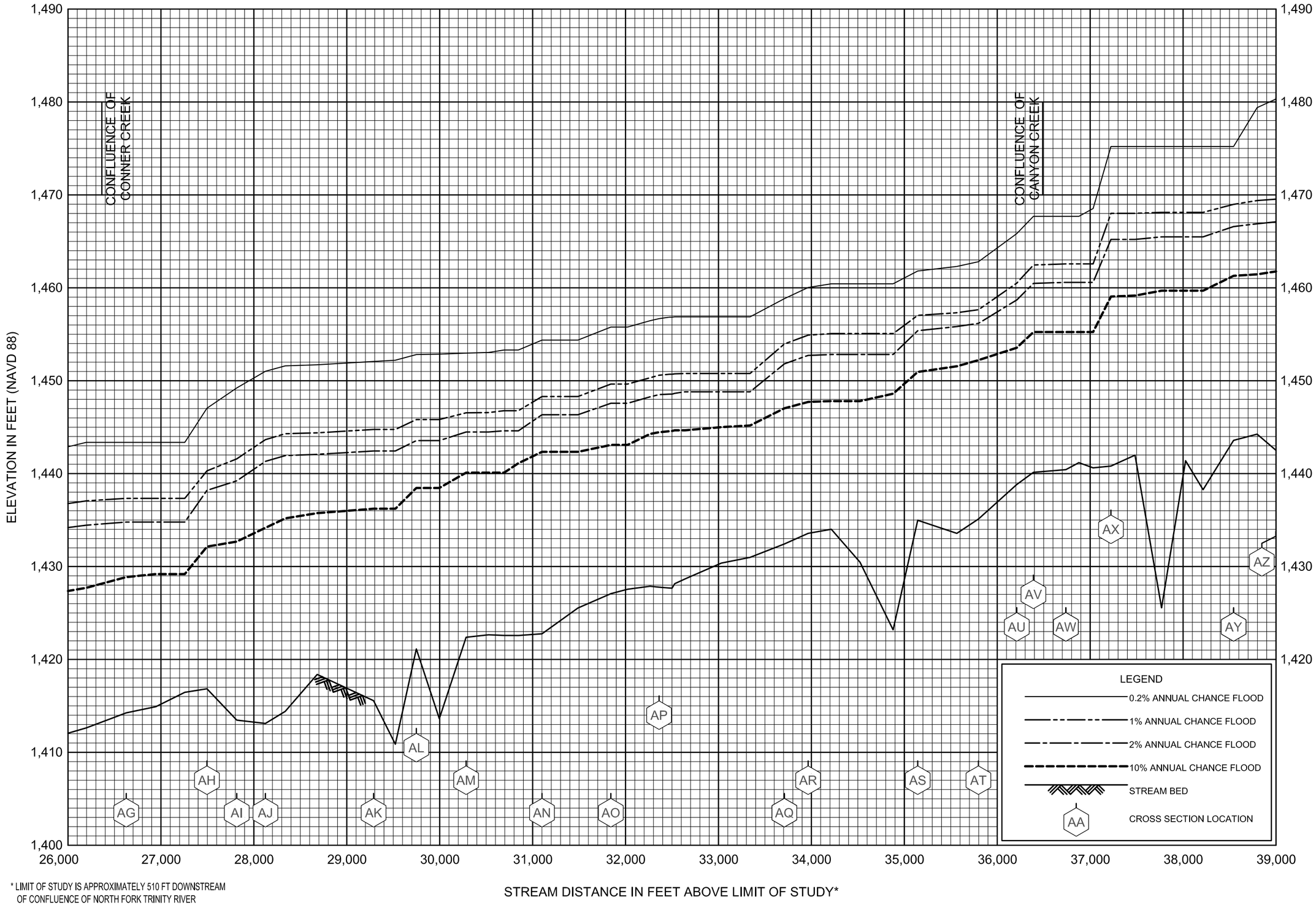
FLOOD PROFILES

TRINITY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



* LIMIT OF STUDY IS APPROXIMATELY 510 FT DOWNSTREAM OF CONFLUENCE OF NORTH FORK TRINITY RIVER

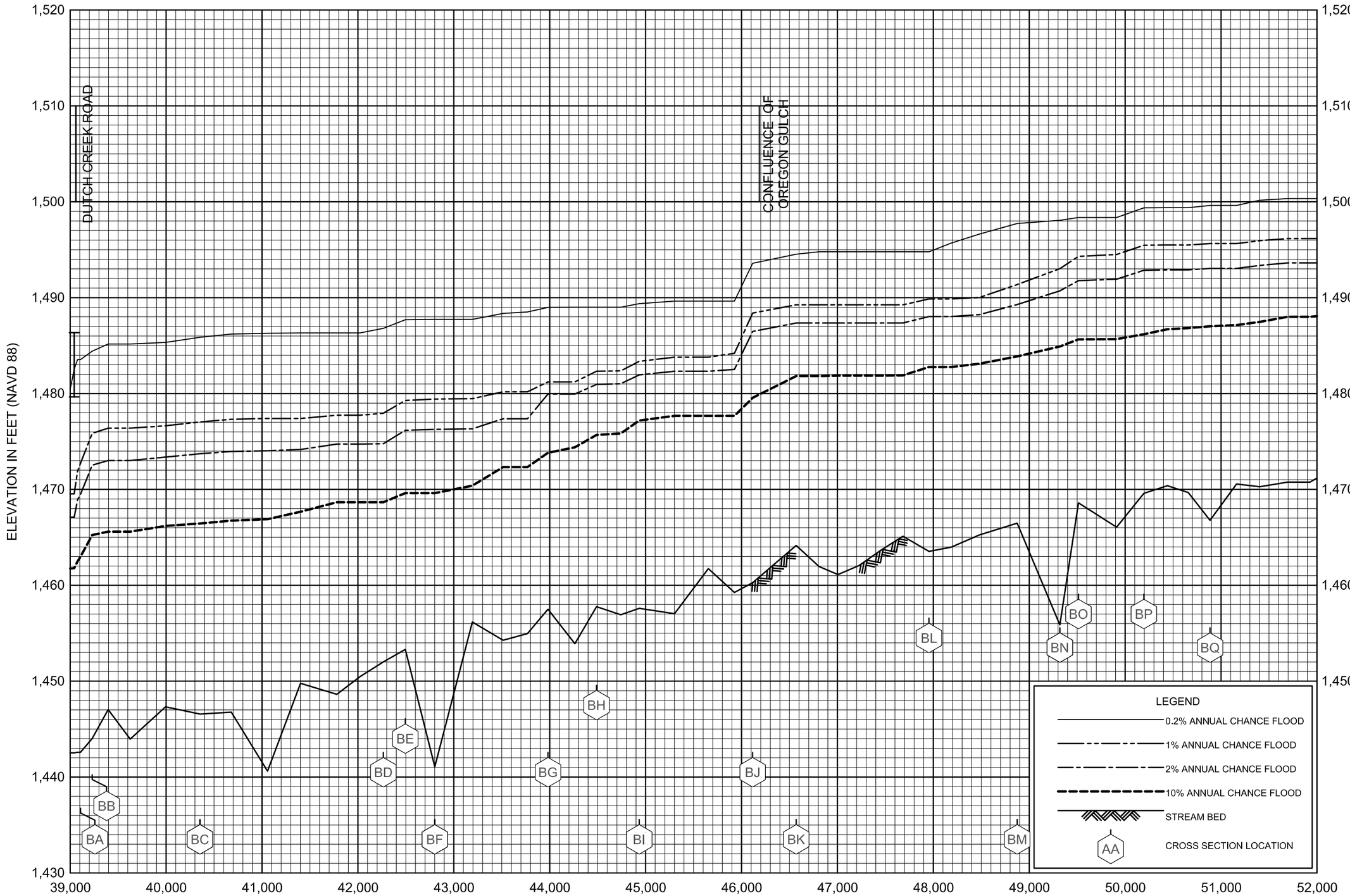
FLOOD PROFILES

TRINITY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



* LIMIT OF STUDY IS APPROXIMATELY 510 FT DOWNSTREAM OF CONFLUENCE OF NORTH FORK TRINITY RIVER

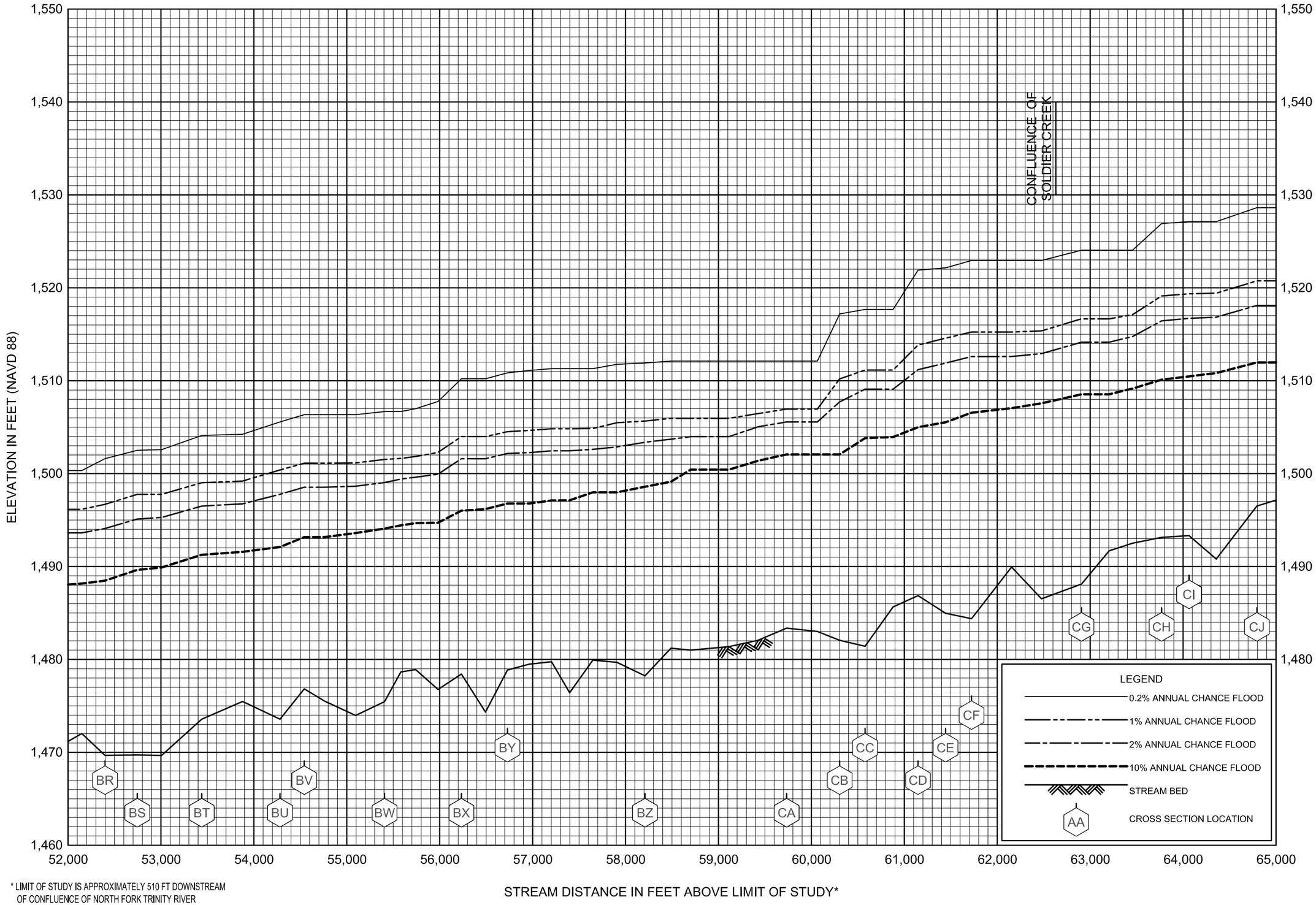
FLOOD PROFILES

TRINITY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



* LIMIT OF STUDY IS APPROXIMATELY 510 FT DOWNSTREAM OF CONFLUENCE OF NORTH FORK TRINITY RIVER

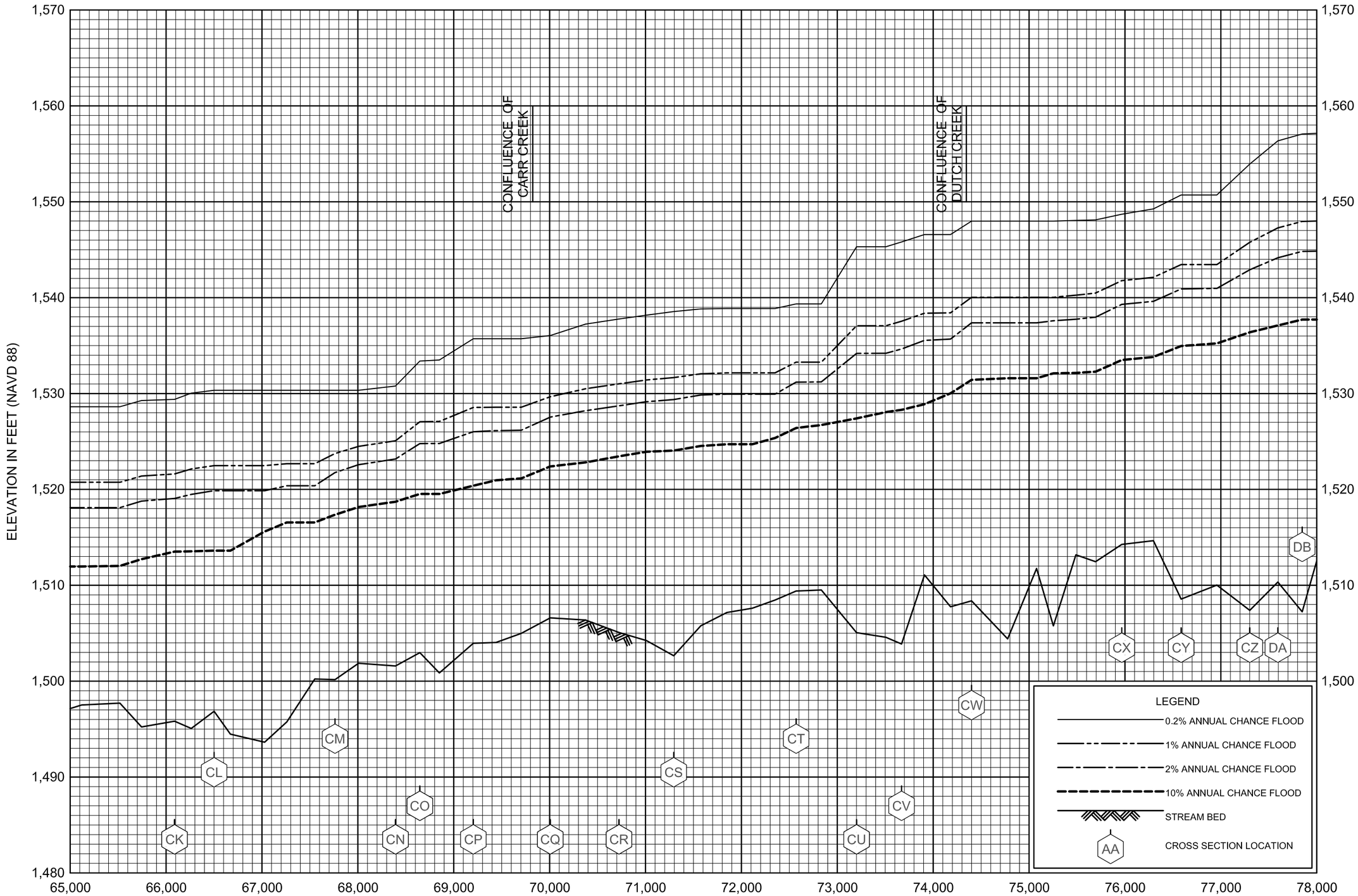
FLOOD PROFILES

TRINITY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



* LIMIT OF STUDY IS APPROXIMATELY 510 FT DOWNSTREAM OF CONFLUENCE OF NORTH FORK TRINITY RIVER

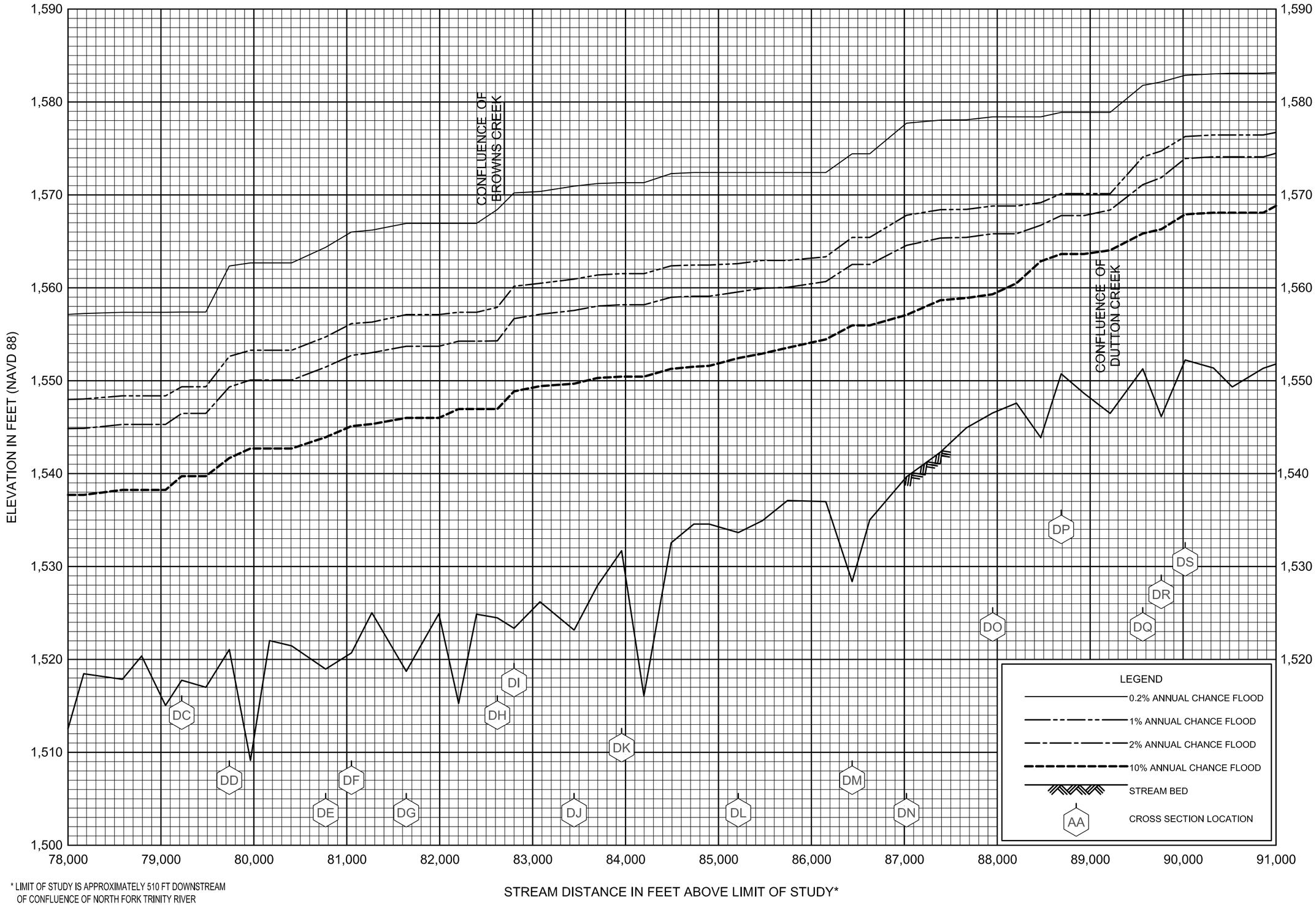
FLOOD PROFILES

TRINITY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



* LIMIT OF STUDY IS APPROXIMATELY 510 FT DOWNSTREAM OF CONFLUENCE OF NORTH FORK TRINITY RIVER

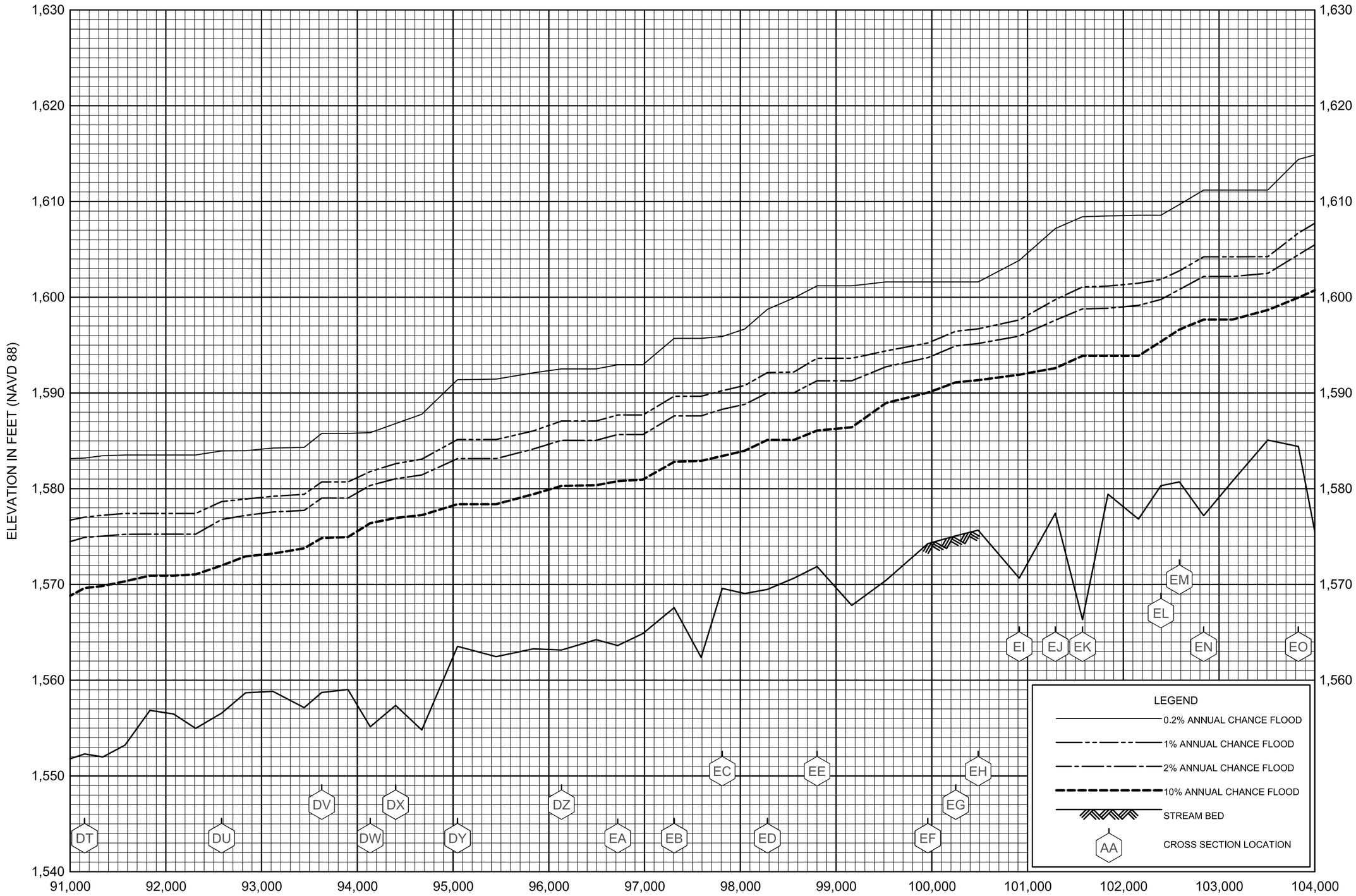
FLOOD PROFILES

TRINITY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



* LIMIT OF STUDY IS APPROXIMATELY 510 FT DOWNSTREAM OF CONFLUENCE OF NORTH FORK TRINITY RIVER

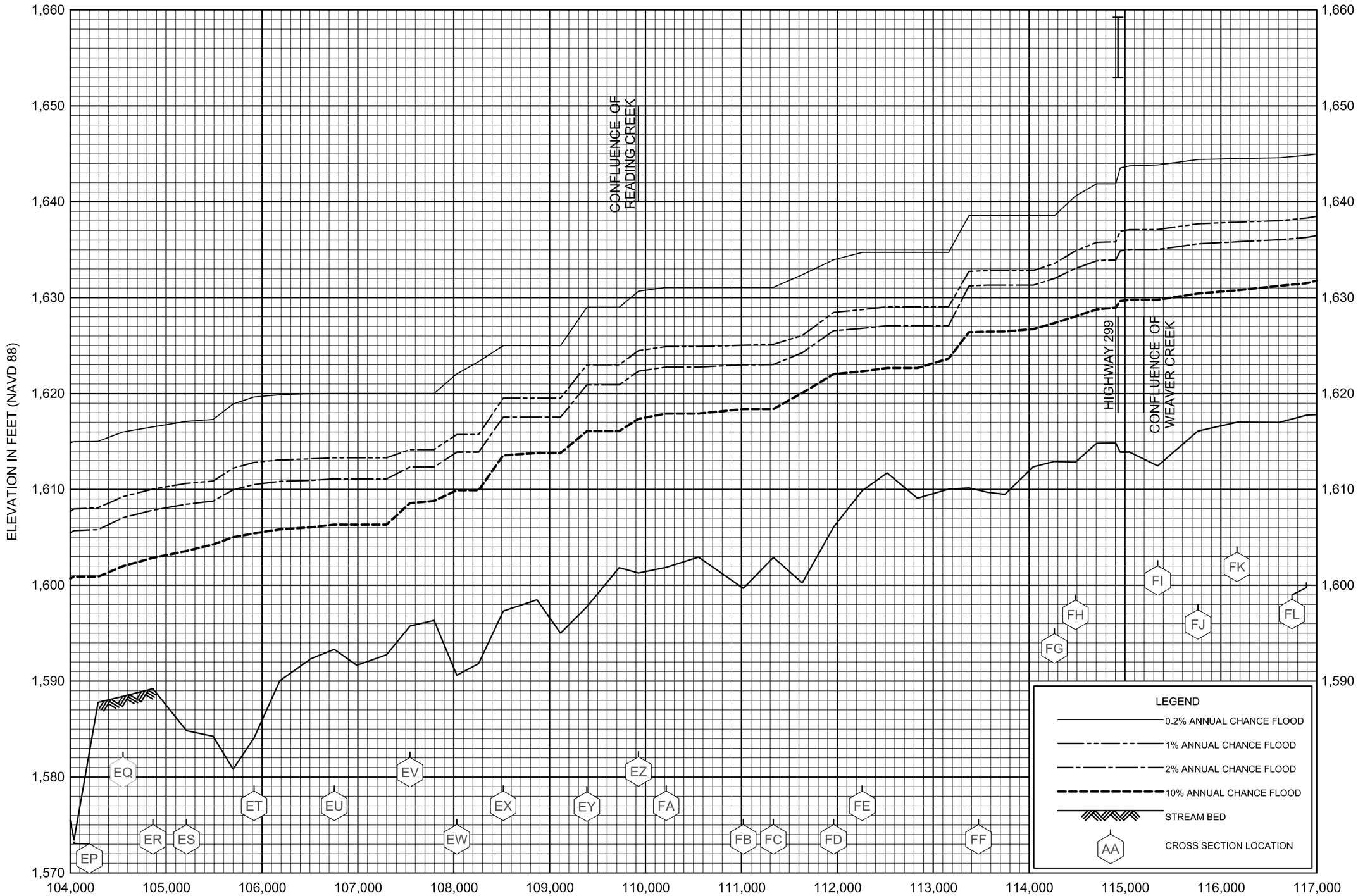
FLOOD PROFILES

TRINITY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



* LIMIT OF STUDY IS APPROXIMATELY 510 FT DOWNSTREAM OF CONFLUENCE OF NORTH FORK TRINITY RIVER

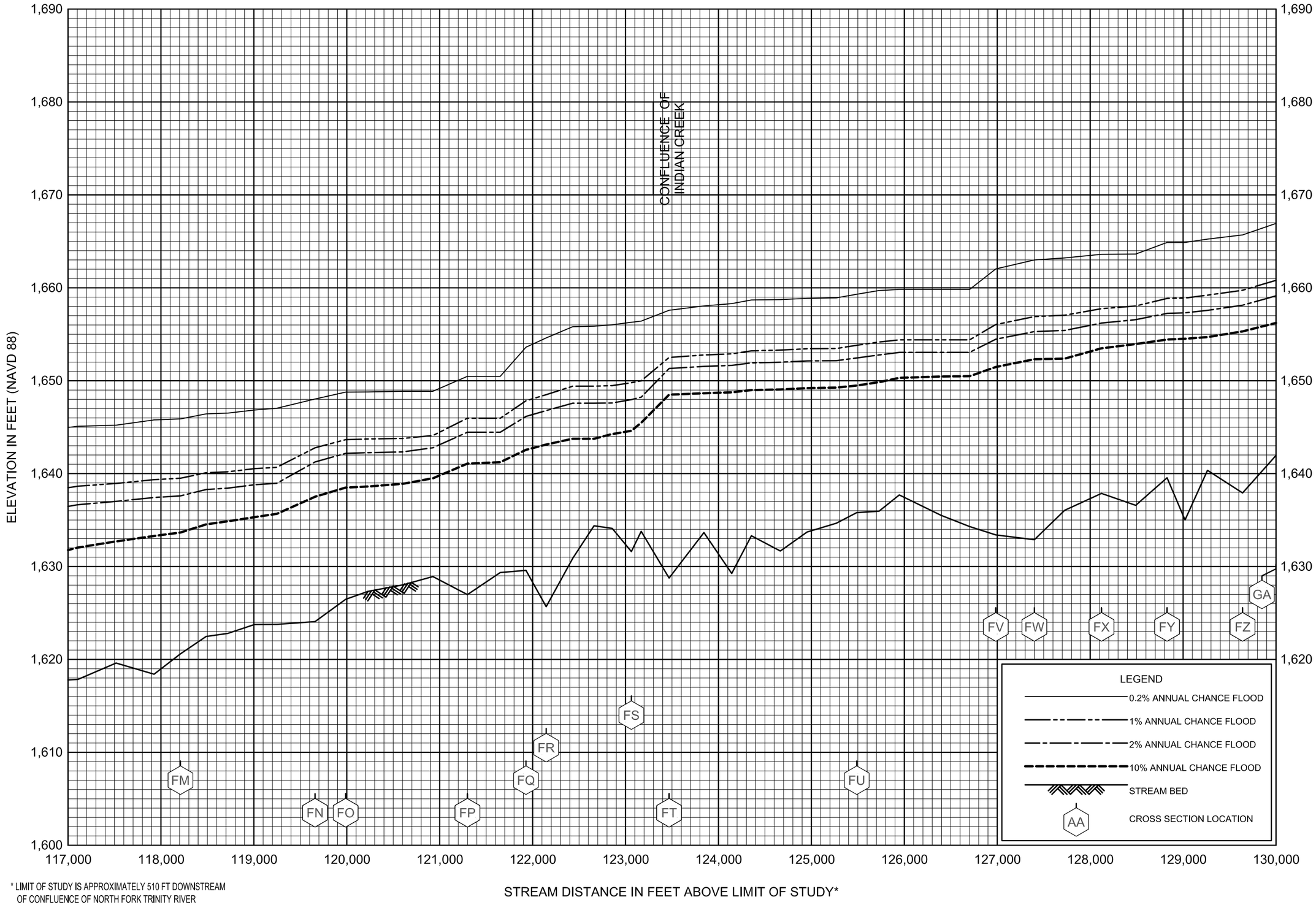
FLOOD PROFILES

TRINITY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



* LIMIT OF STUDY IS APPROXIMATELY 510 FT DOWNSTREAM OF CONFLUENCE OF NORTH FORK TRINITY RIVER

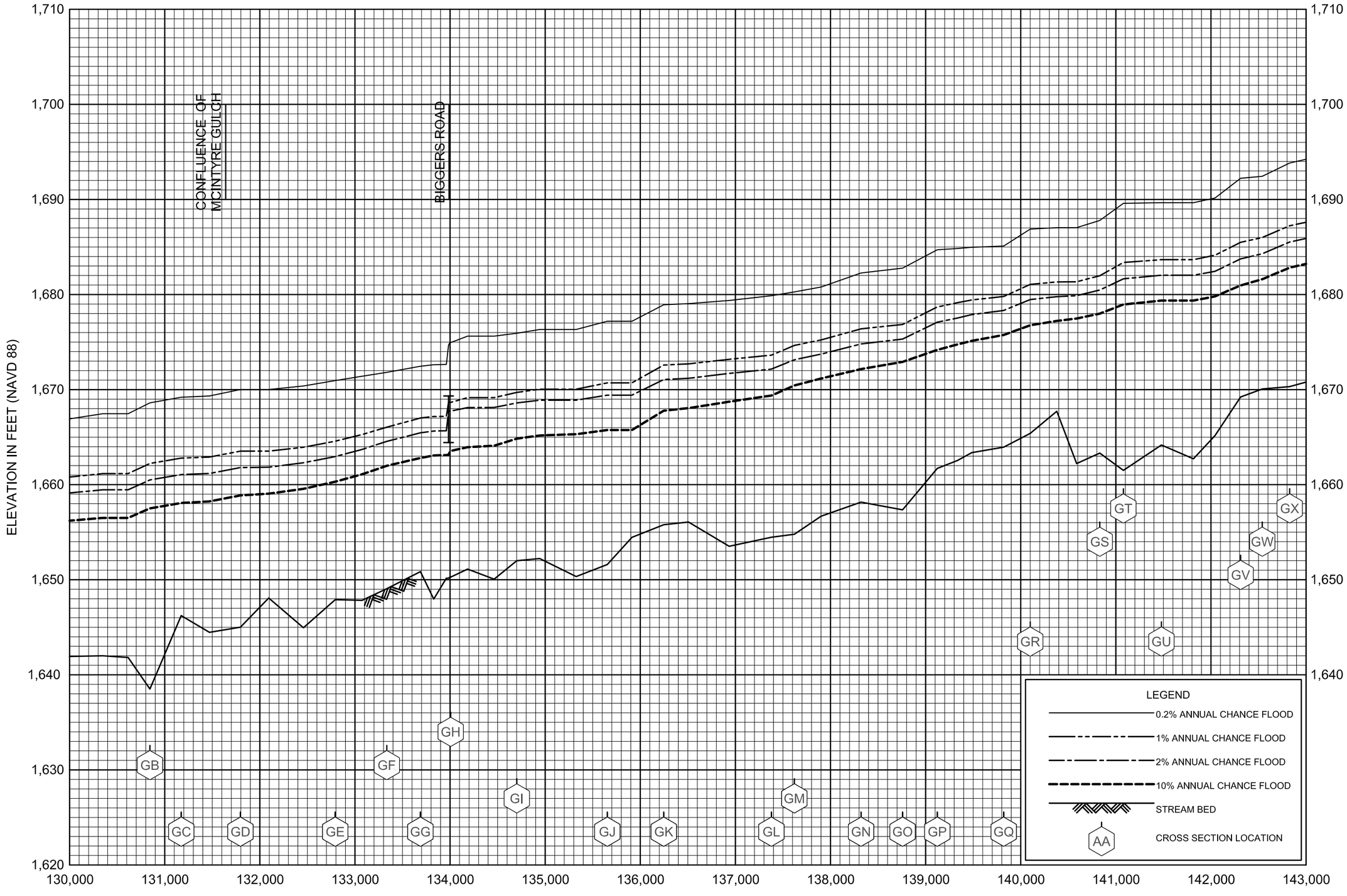
FLOOD PROFILES

TRINITY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



* LIMIT OF STUDY IS APPROXIMATELY 510 FT DOWNSTREAM OF CONFLUENCE OF NORTH FORK TRINITY RIVER

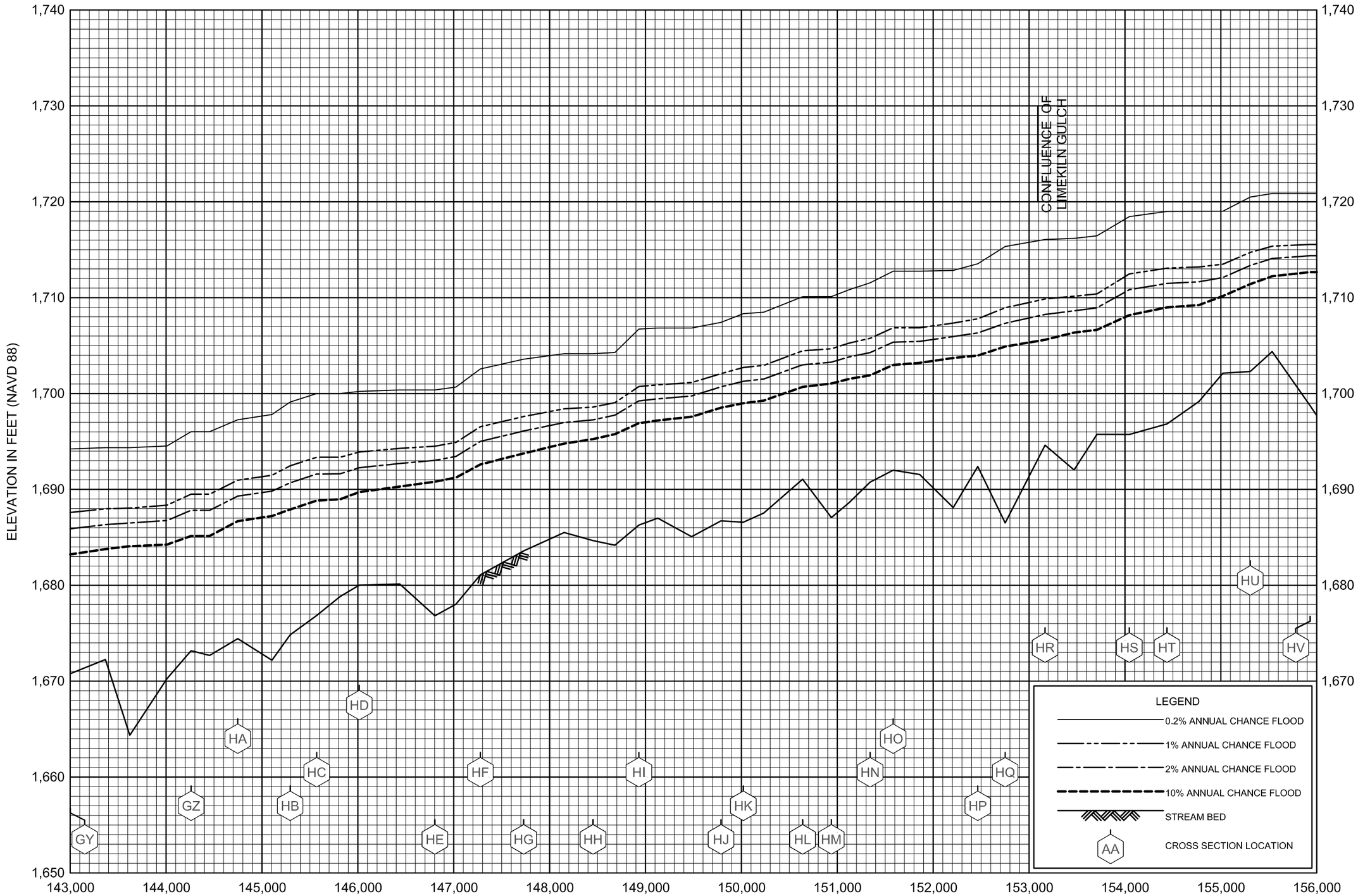
FLOOD PROFILES

TRINITY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



* LIMIT OF STUDY IS APPROXIMATELY 510 FT DOWNSTREAM OF CONFLUENCE OF NORTH FORK TRINITY RIVER

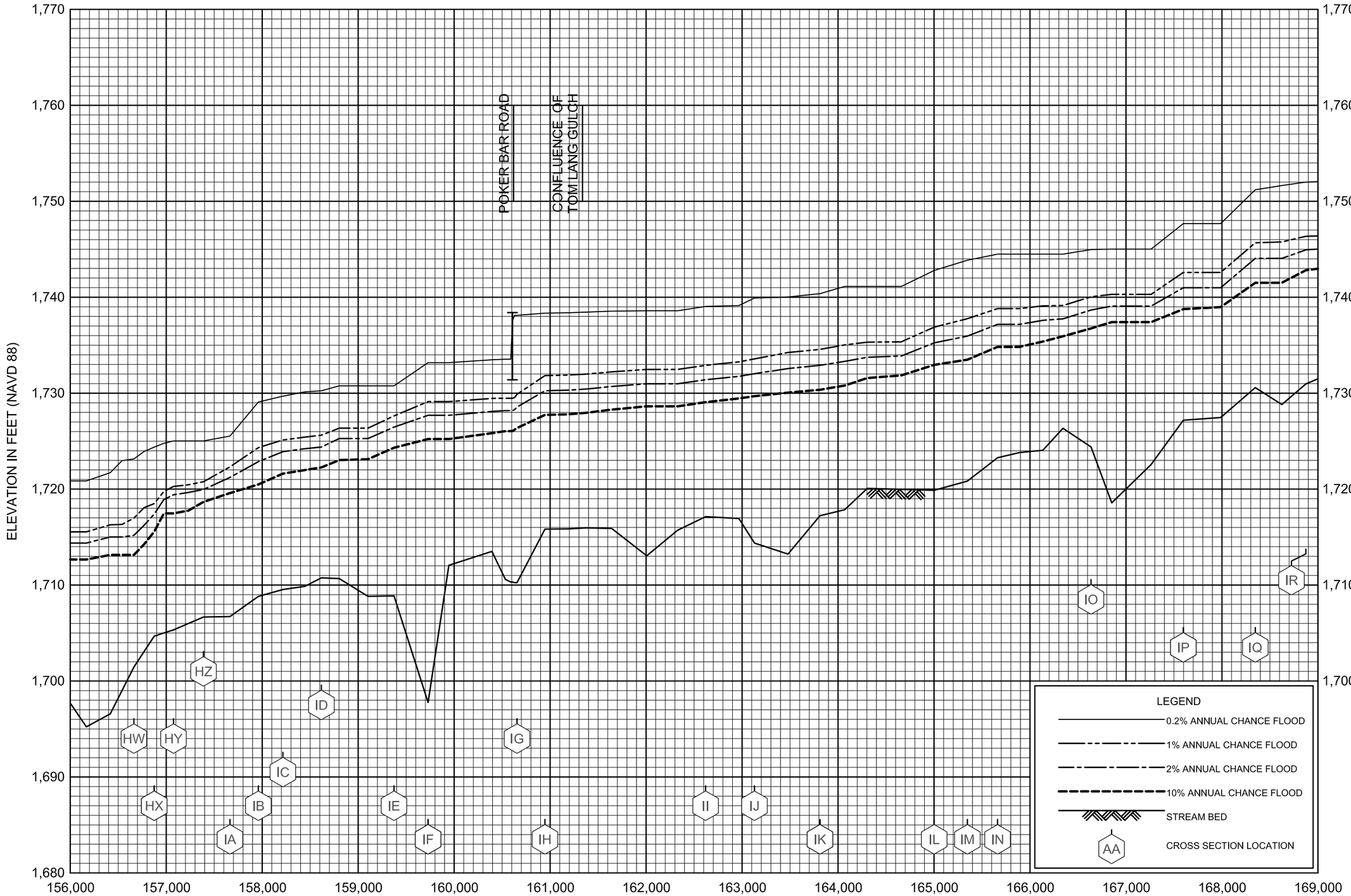
FLOOD PROFILES

TRINITY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



* LIMIT OF STUDY IS APPROXIMATELY 510 FT DOWNSTREAM OF CONFLUENCE OF NORTH FORK TRINITY RIVER

FLOOD PROFILES

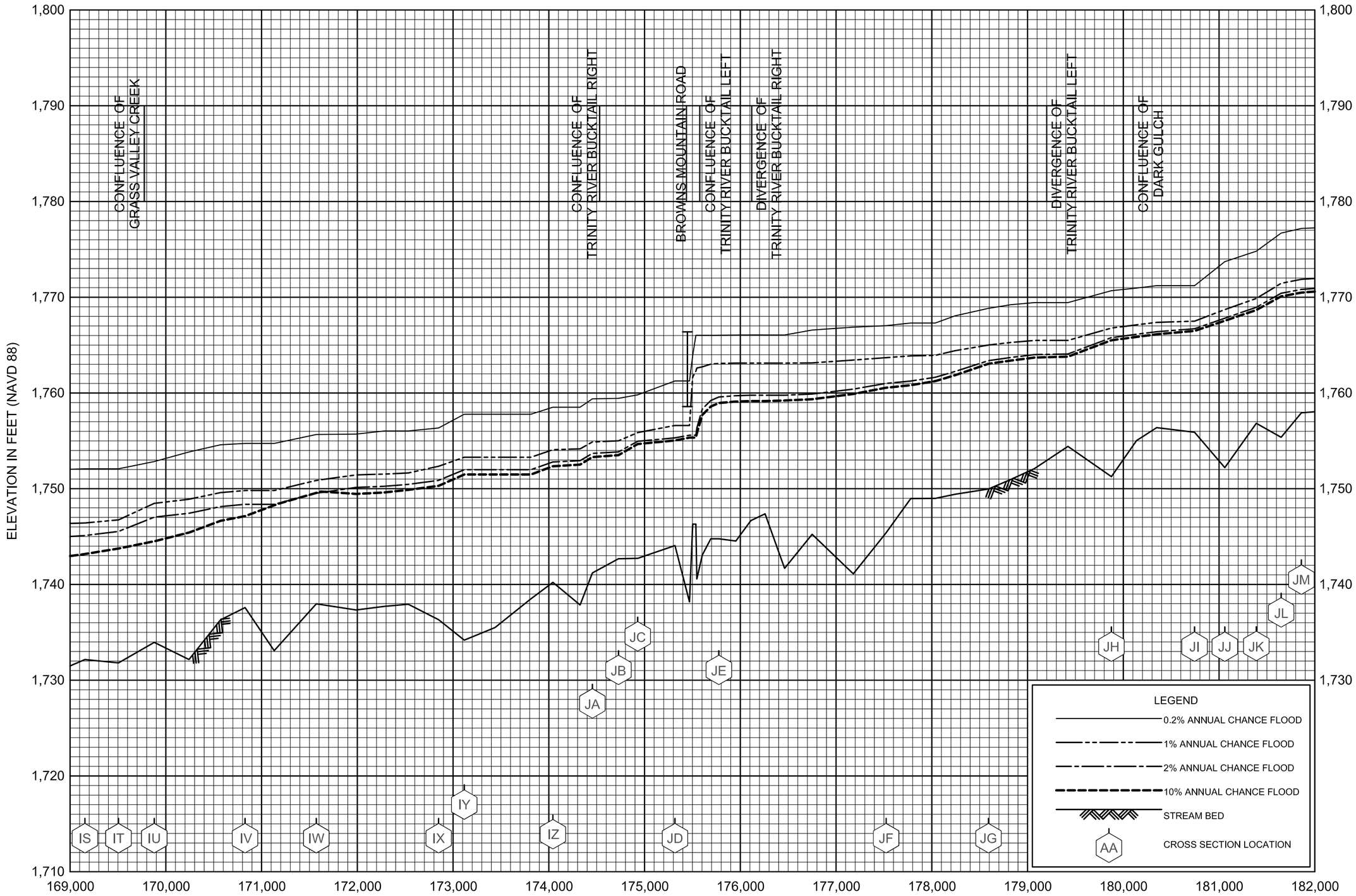
TRINITY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS

25dP



* LIMIT OF STUDY IS APPROXIMATELY 510 FT DOWNSTREAM OF CONFLUENCE OF NORTH FORK TRINITY RIVER

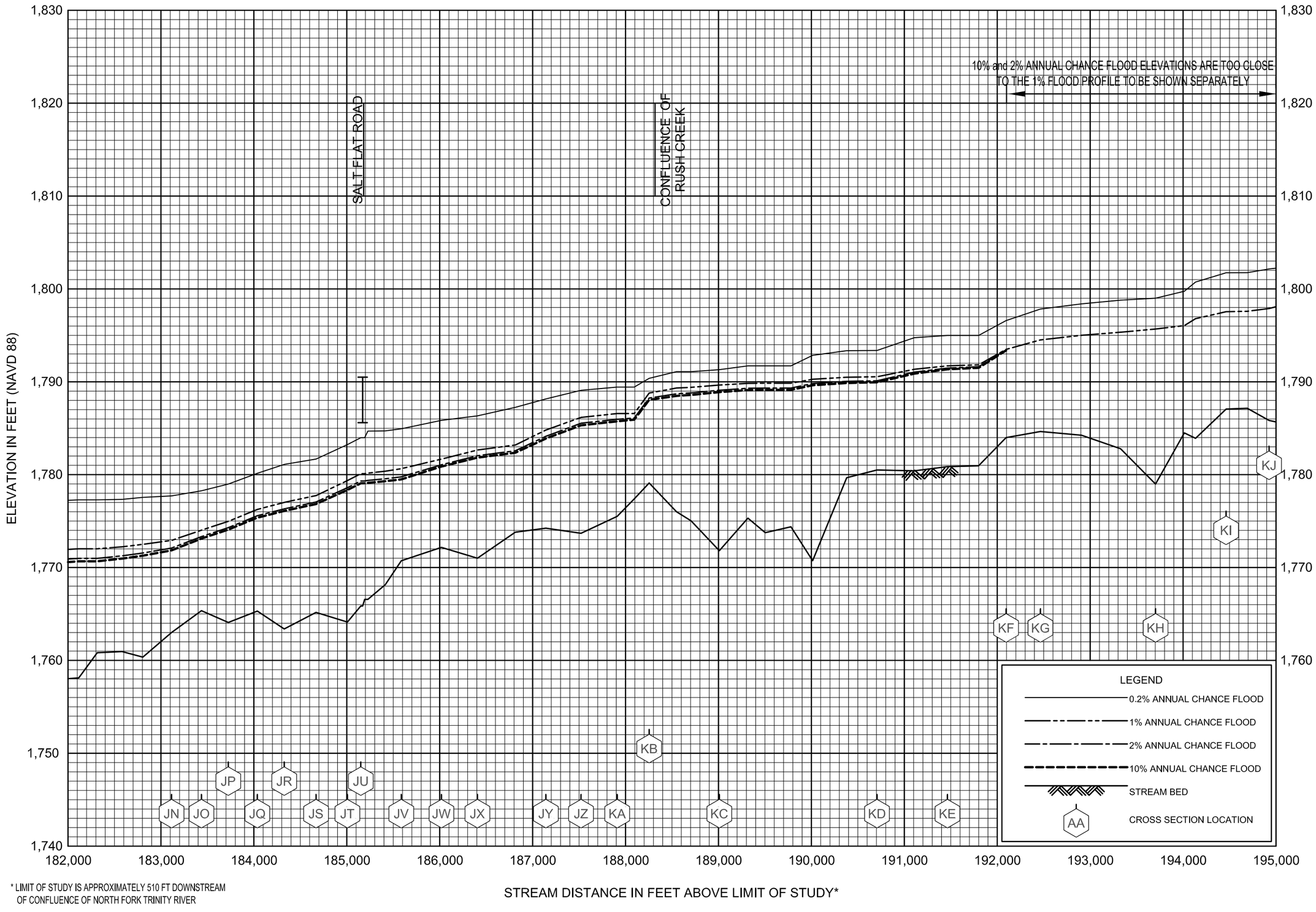
FLOOD PROFILES

TRINITY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



* LIMIT OF STUDY IS APPROXIMATELY 510 FT DOWNSTREAM OF CONFLUENCE OF NORTH FORK TRINITY RIVER

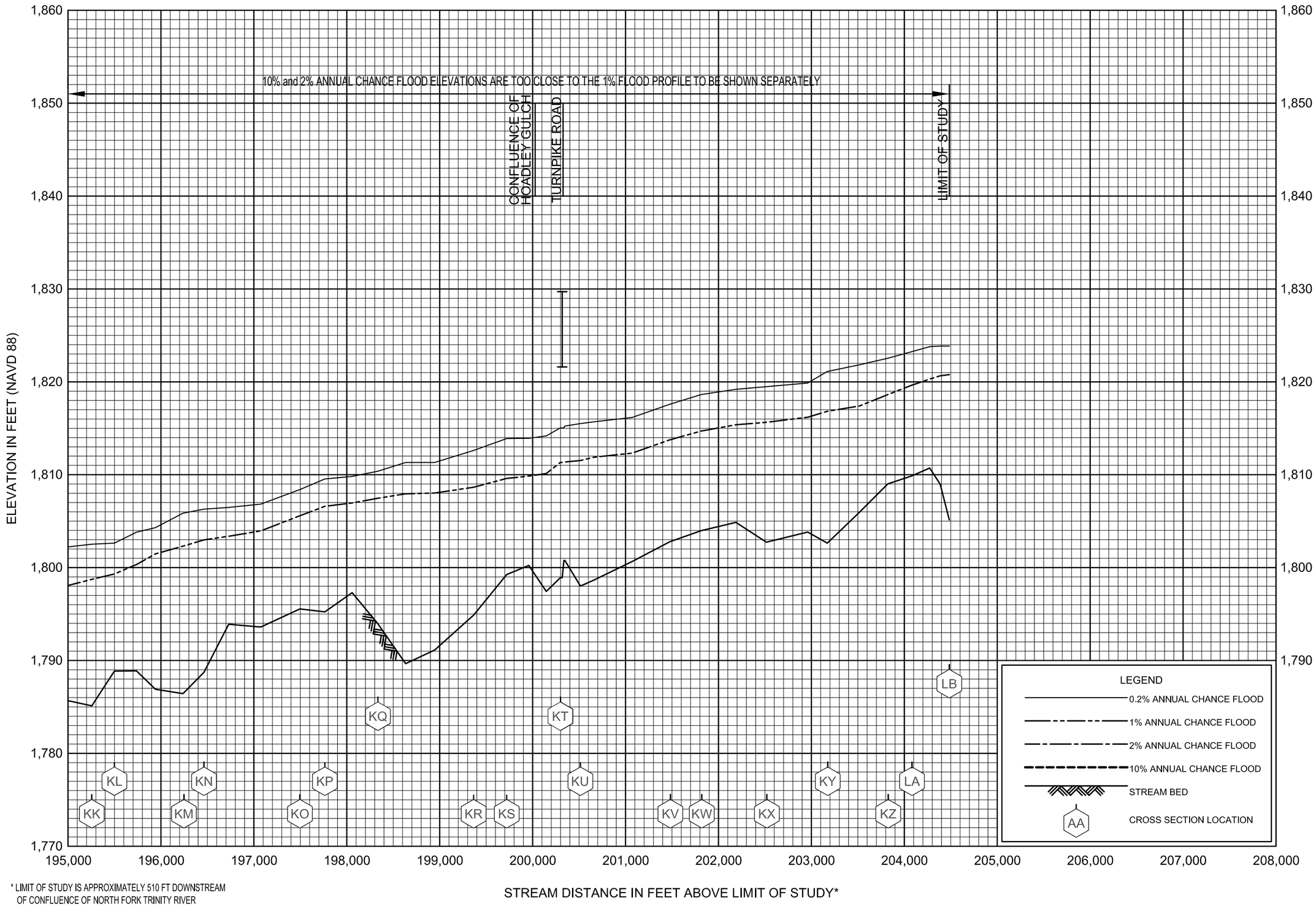
FLOOD PROFILES

TRINITY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



* LIMIT OF STUDY IS APPROXIMATELY 510 FT DOWNSTREAM OF CONFLUENCE OF NORTH FORK TRINITY RIVER

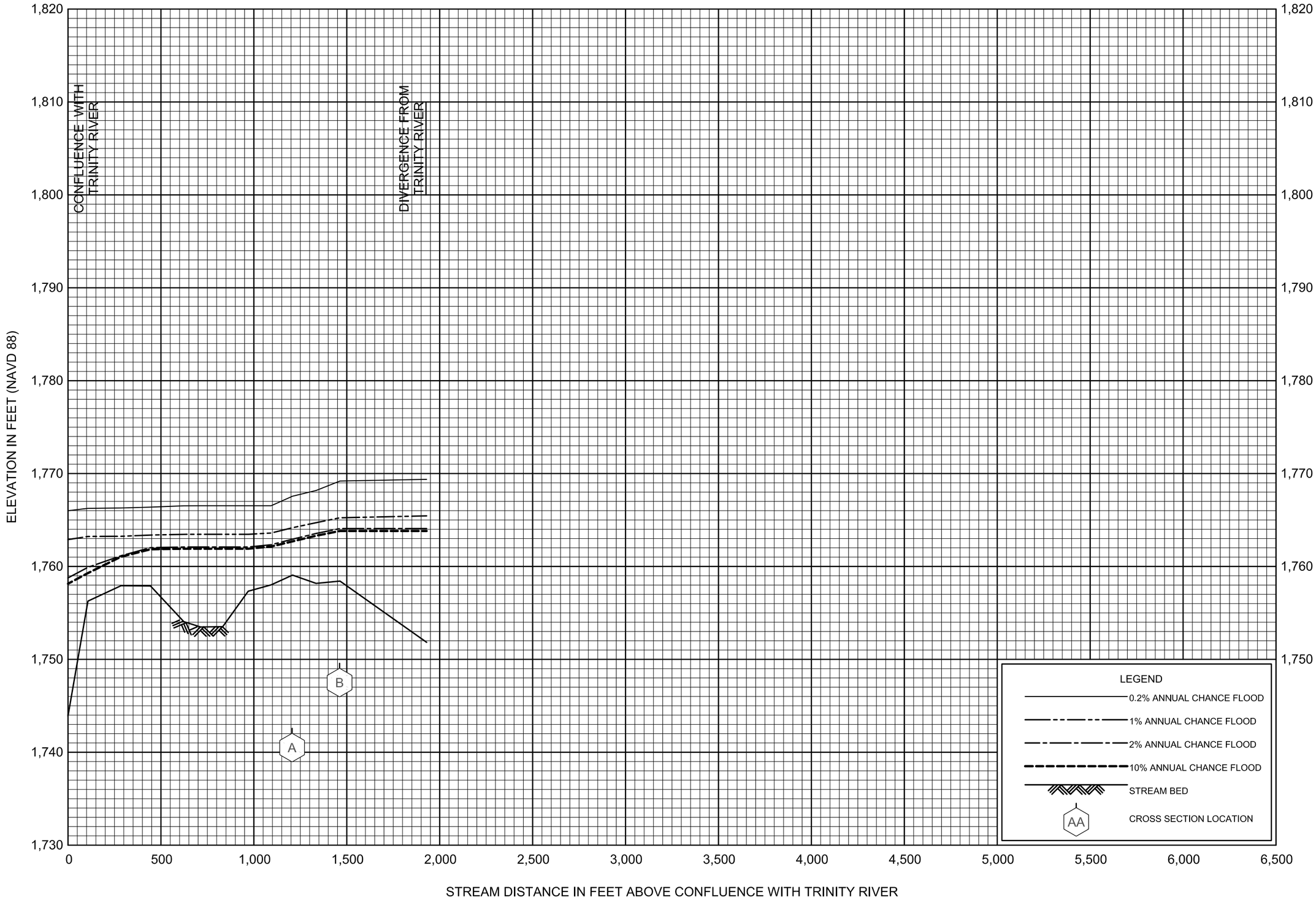
FLOOD PROFILES

TRINITY RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



FLOOD PROFILES

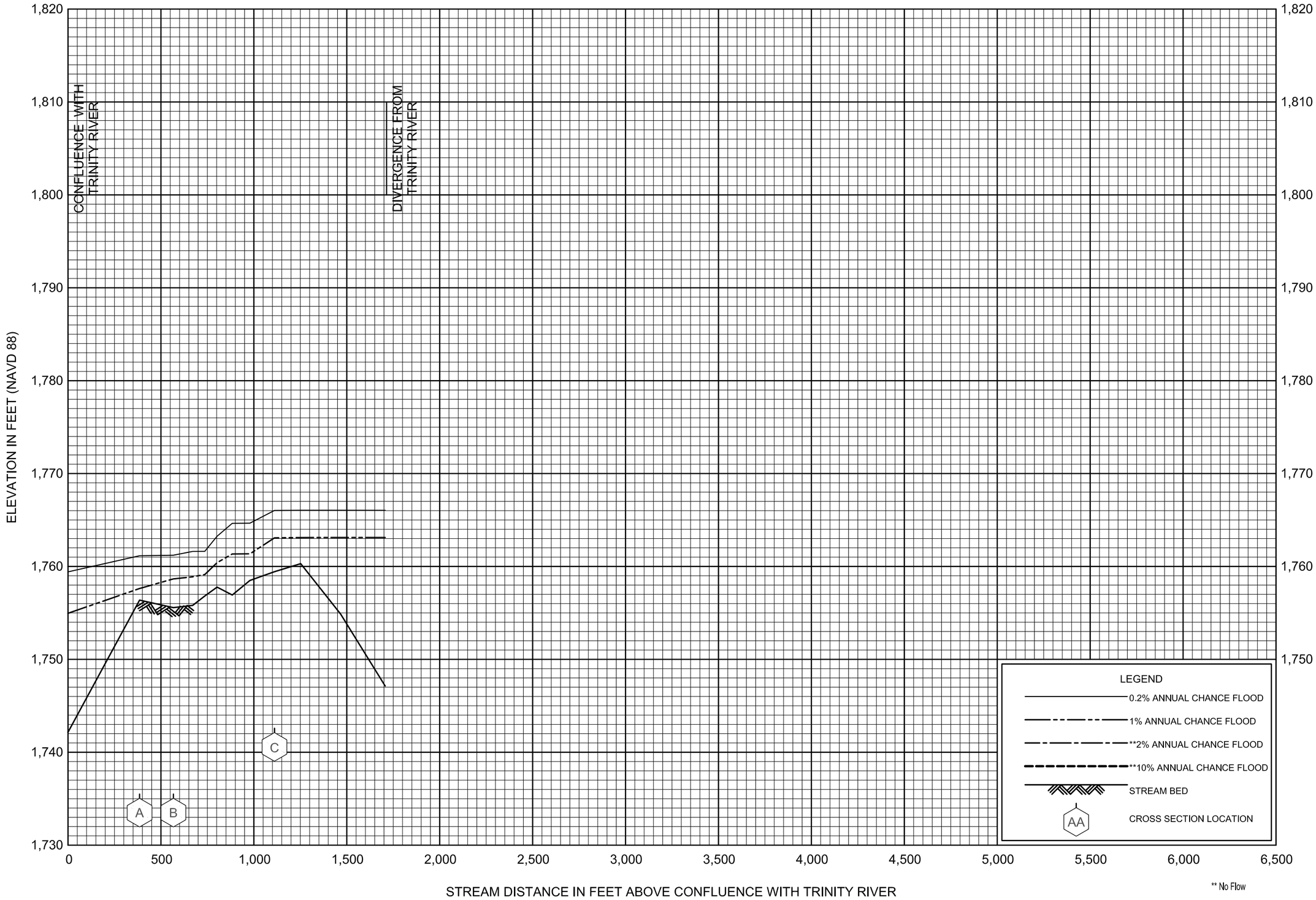
TRINITY RIVER BUCKTAIL LEFT

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS

25hP



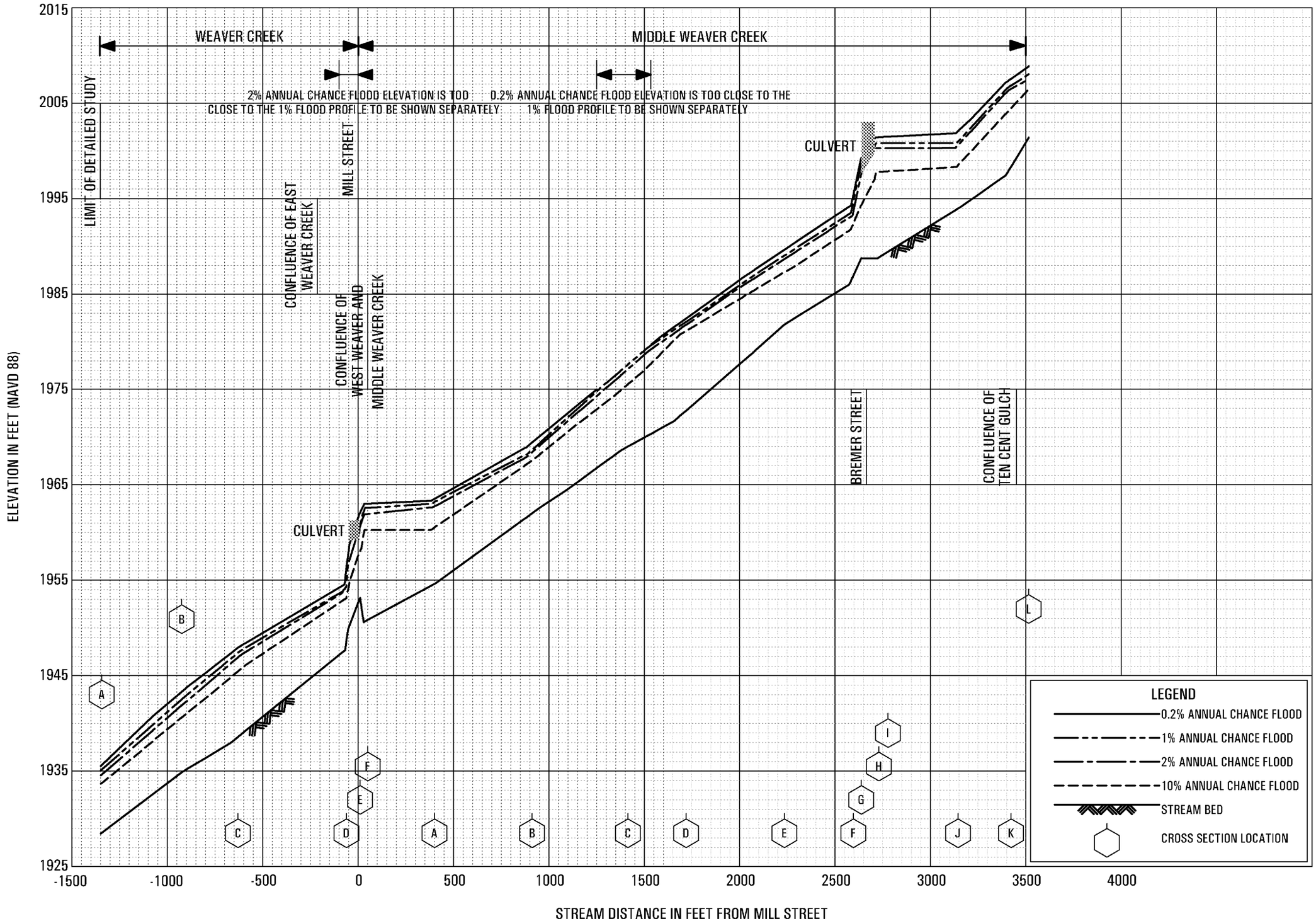
FLOOD PROFILES

TRINITY RIVER BUCKTAIL RIGHT

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



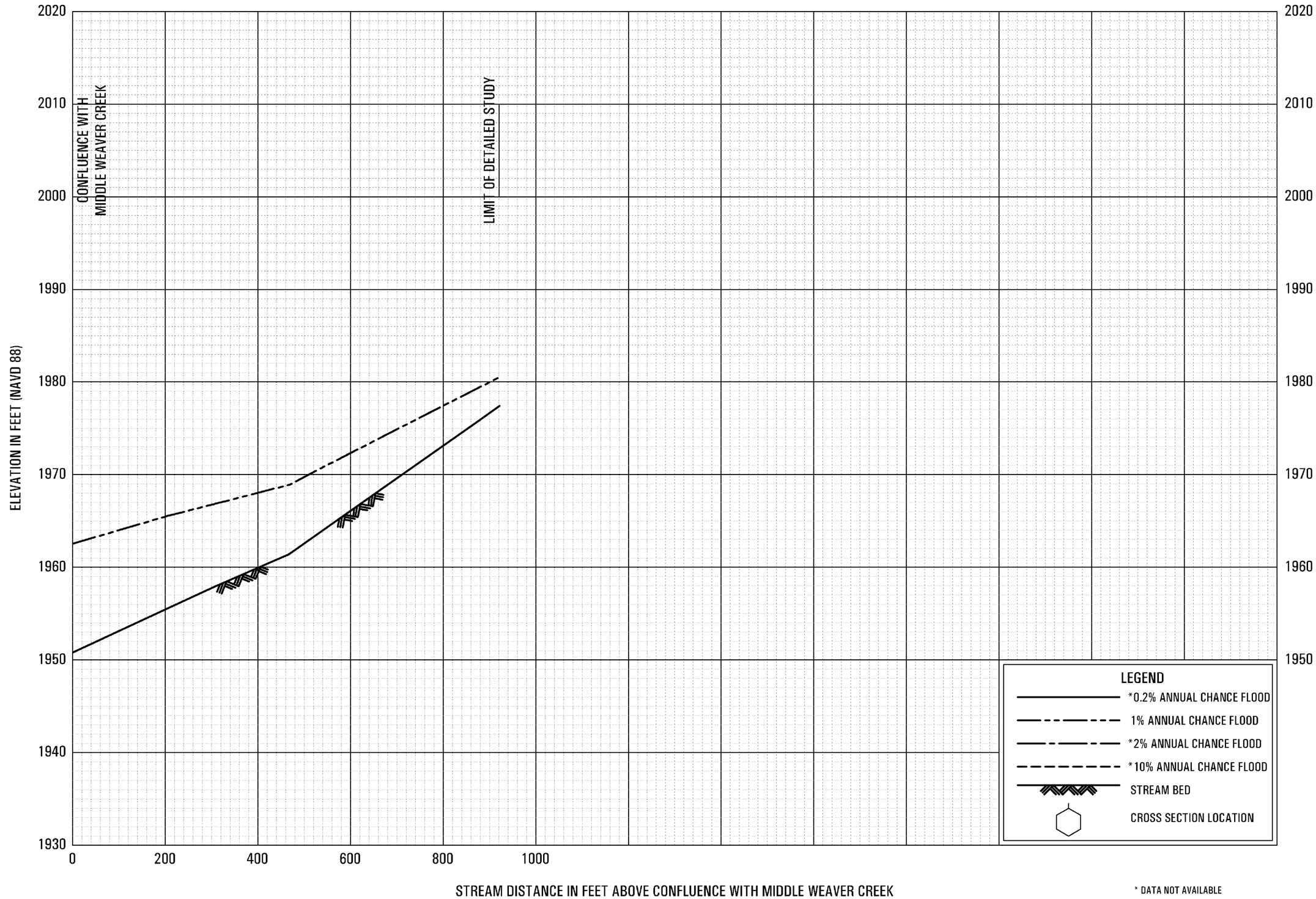
FLOOD PROFILES

WEAVER CREEK / MIDDLE WEAVER CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS



FLOOD PROFILES

WEST WEAVER CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

TRINITY COUNTY, CA

AND INCORPORATED AREAS