

# FLOOD INSURANCE STUDY

## FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 1 OF 4



### PLACER COUNTY, CALIFORNIA AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
CITY OF AUBURN	060240
CITY OF COLFAX*	060441
CITY OF LINCOLN	060241
TOWN OF LOOMIS	060721
PLACER COUNTY UNINCORPORATED AREAS	060239
CITY OF ROCKLIN	060242
CITY OF ROSEVILLE	060243

\*No Special Flood Hazard Areas Identified



# FEMA

**REVISED:**

**TBD**

**PRELIMINARY 12/28/2015**

FLOOD INSURANCE STUDY NUMBER  
**06061CV001C**

Version Number 2.3.3.3

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West Branch	
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**Published Separately**

Flood Insurance Rate Map (FIRM)

# FLOOD INSURANCE STUDY REPORT PLACER COUNTY, CALIFORNIA

## SECTION 1.0 – INTRODUCTION

### 1.1 The National Flood Insurance Program

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

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

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

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

Participation in the NFIP is based on an agreement between local communities and the Federal Government. If a community adopts and enforces floodplain management regulations to reduce future flood risks to new construction and substantially improved structures in Special Flood Hazard Areas (SFHAs), the Federal Government will make flood insurance available within the community as a financial protection against flood losses. The community's floodplain management regulations must meet or exceed criteria established in accordance with Title 44 Code of Federal Regulations (CFR) Part 60.3, *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 Placer 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
Auburn, City of	060240	18020127 18020128	06061C0754H 06061C0755H 06061C0762H 06061C0763H 06061C0764H 06061C0770H 06061C0976H 06061C0977H	
Colfax, City of <sup>1</sup>	060441	18020126 18020128	06061C0500H	

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Lincoln, City of	060241	18020109 18020111	06061C0714H 06061C0715H 06061C0718H 06061C0719H 06061C0720H 06061C0927H 06061C0930H 06061C0931H 06061C0932H <sup>2</sup> 06061C0933H 06061C0934H 06061C0951H 06061C0953H	
Loomis, Town of	060721	18020111	06061C0953H 06061C0954H 06061C0960H 06061C0961H 06061C0962H 06061C0964H 06061C0966H 06061C0968H	
Placer County, Unincorporated Areas	060239	16050101 16050102 18020108 18020109 18020111 18020126 18020127 18020128	06061C0025H <sup>2</sup> 06061C0050H 06061C0175H 06061C0200H 06061C0225H 06061C0250H 06061C0329H 06061C0335H <sup>2</sup> 06061C0340H 06061C0341H 06061C0342H 06061C0343H 06061C0344H 06061C0353H 06061C0355H 06061C0360H 06061C0361H 06061C0365H 06061C0370H 06061C0395H 06061C0415H 06061C0425H 06061C0450H 06061C0475H 06061C0500H 06061C0525H 06061C0550H 06061C0625H 06061C0631H 06061C0632H <sup>2</sup> 06061C0633H 06061C0634H 06061C0650H 06061C0675H <sup>2</sup> 06061C0685H 06061C0700H 06061C0705H 06061C0710H 06061C0714H 06061C0715H 06061C0718H 06061C0719H 06061C0720H 06061C0730H 06061C0735H <sup>2</sup> 06061C0740H 06061C0744H 06061C0745H 06061C0754H 06061C0755H 06061C0758H 06061C0760H 06061C0761H <sup>2</sup> 06061C0762H	

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Placer County, Unincorporated Areas (continued)			06061C0763H 06061C0764H 06061C0770H 06061C0800H 06061C0825H 06061C0905H 06061C0910H 06061C0915H 06061C0920H 06061C0927H 06061C0929H 06061C0930H 06061C0931H 06061C0932H <sup>2</sup> 06061C0933H 06061C0936H 06061C0937H 06061C0938H <sup>2</sup> 06061C0939H 06061C0941H 06061C0951H 06061C0952H 06061C0953H 06061C0954H 06061C0960H 06061C0961H 06061C0962H 06061C0963H 06061C0964H 06061C0966H 06061C0967H 06061C0968H 06061C0969H 06061C0976H 06061C0977H 06061C0978H 06061C0979H 06061C0981H 06061C0986H 06061C0988H 06061C1005H 06061C1007H 06061C1010H <sup>2</sup> 06061C1026H 06061C1027H 06061C1031H 06061C1032H 06061C1051H 06061C1052H 06061C1053H 06061C1054H 06061C1056H 06061C1057H 06061C1060H	
Rocklin, City of	060242	18020109 18020111	06061C0933H 06061C0934H 06061C0941H 06061C0942H 06061C0944H 06061C0951H 06061C0953H 06061C0961H 06061C0962H 06061C0963H 06061C0964H	

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Roseville, City of	060243	18020109 18020111	06061C0905H 06061C0910H 06061C0915H 06061C0920H 06061C0936H 06061C0937H 06061C0938H <sup>2</sup> 06061C0939H 06061C0941H 06061C0942H 06061C0943H 06061C0944H 06061C0963H 06061C0964H 06061C1027H 06061C1031H 06061C1032H 06061C1051H 06061C1052H 06061C1053H 06061C1054H 06061C1056H	

<sup>1</sup> No Special Flood Hazard Areas Identified

<sup>2</sup> Panel Not Printed

#### 1.4 Considerations for using this Flood Insurance Study Report

The NFIP encourages State and local governments to implement sound floodplain management programs. To assist in this endeavor, each FIS Report provides floodplain data, which may include a combination of the following: 10-, 4-, 2-, 1-, and 0.2-percent annual chance flood elevations (the 1% 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 Placer County became effective on June 8, 1998. 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:

<u>Old Zone</u>	<u>New Zone</u>
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 [www.fema.gov/national-flood-insurance-program-community-rating-system](http://www.fema.gov/national-flood-insurance-program-community-rating-system) 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.”

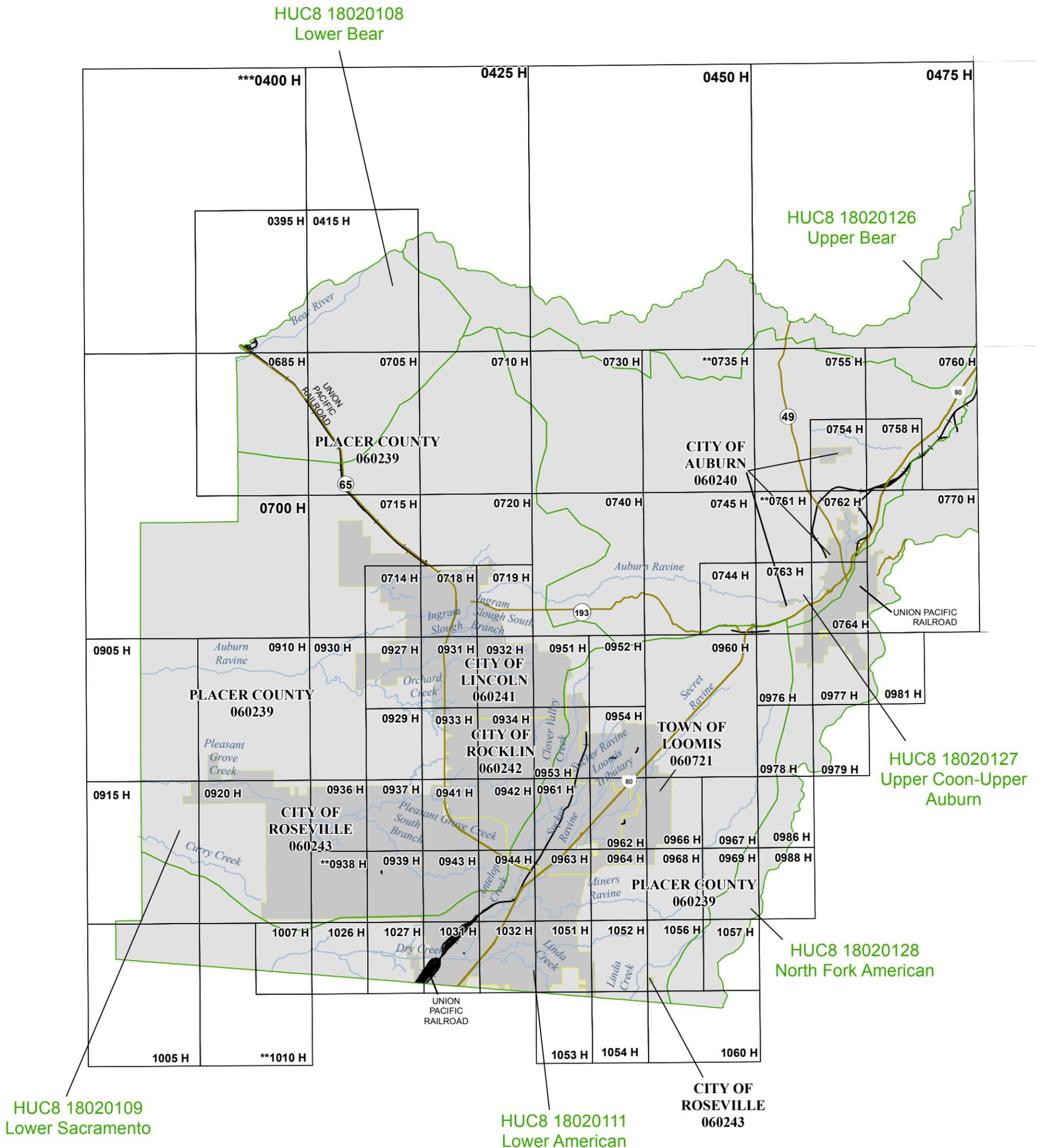
Since the status of levees is subject to change at any time, the user should contact the appropriate agency for the latest information regarding levees presented in Table 9 of this FIS Report. For levees owned or operated by the U.S. Army Corps of Engineers (USACE), information may be obtained from the USACE national levee database ([nld.usace.army.mil](http://nld.usace.army.mil)). 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 [www.fema.gov/online-tutorials](http://www.fema.gov/online-tutorials).

The FIRM Index in Figure 1 shows the overall FIRM panel layout within Placer County, and also displays the panel number and effective date for each FIRM panel in the county. Other information shown on the FIRM Index includes community boundaries, flooding sources, watershed boundaries, and United States Geological Survey (USGS) Hydrologic Unit Code – 8 (HUC-8) codes.

Figure 1: FIRM Panel Index

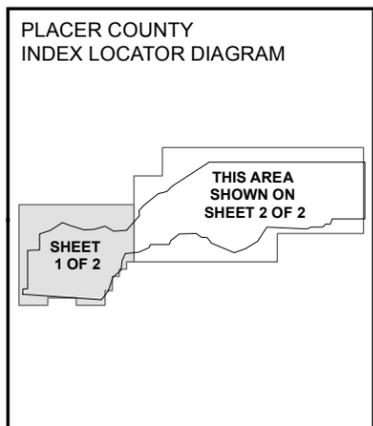


1 inch = 16,667 feet 1:200,000  
 0 4,000 8,000 16,000 24,000 32,000 Feet

Map Projection:  
 StatePlane California II FIPS 0402 Feet;  
 North American Datum 1983

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

SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION



**NATIONAL FLOOD INSURANCE PROGRAM**  
 FLOOD INSURANCE RATE MAP INDEX (Sheet 1 of 2)

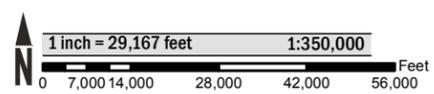
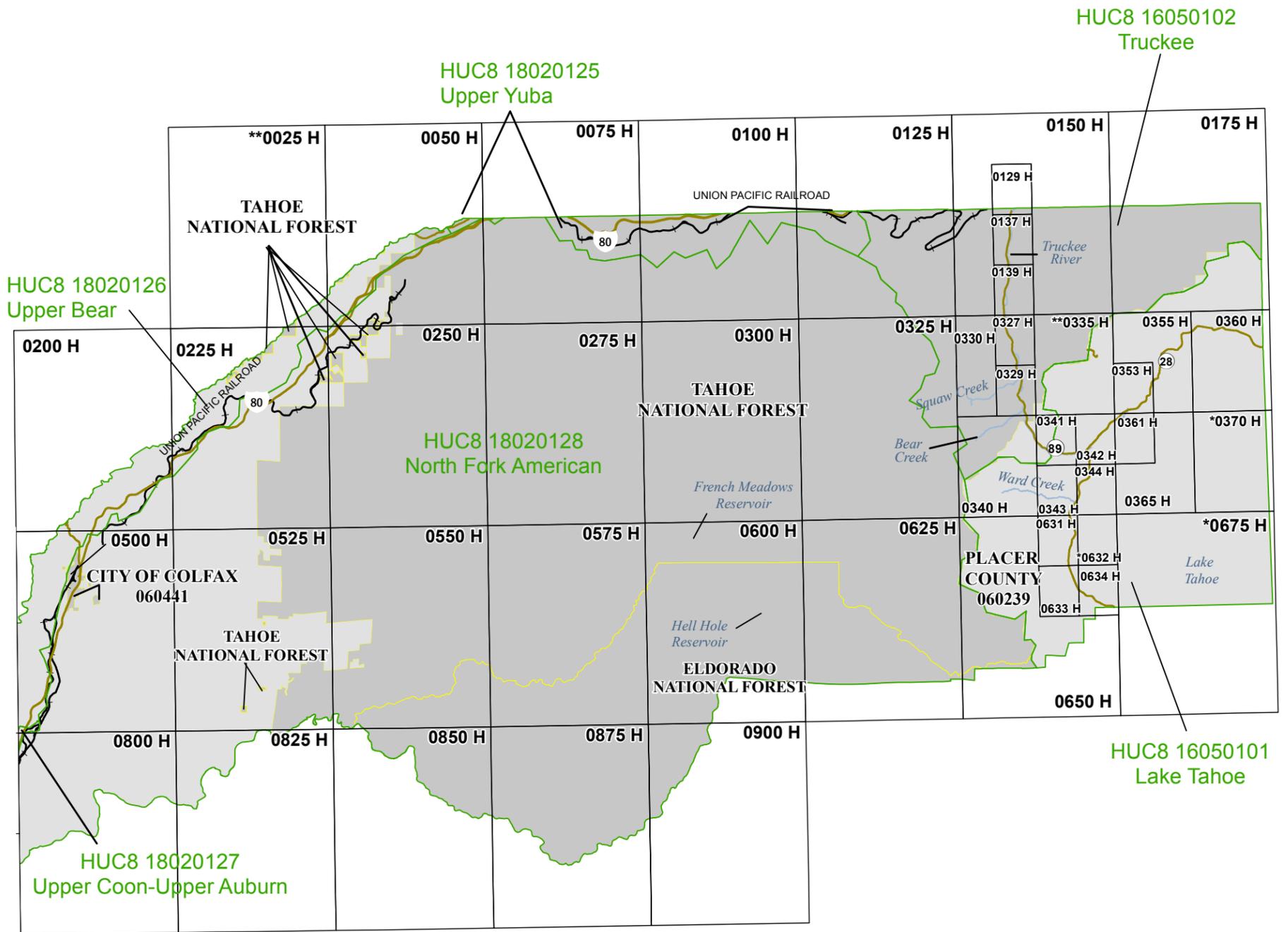
PLACER COUNTY, USA and Incorporated Areas  
 PANELS PRINTED:

0395, 0415, 0425, 0450, 0475, 0685, 0700, 0705, 0710, 0714, 0715, 0718, 0719, 0720, 0730, 0740, 0744, 0745, 0754, 0755, 0758, 0760, 0762, 0763, 0764, 0770, 0905, 0910, 0915, 0920, 0927, 0929, 0930, 0931, 0932, 0933, 0934, 0936, 0937, 0939, 0941, 0942, 0943, 0944, 0951, 0952, 0953, 0954, 0960, 0961, 0962, 0963, 0964, 0966, 0967, 0968, 0969, 0976, 0977, 0978, 0979, 0981, 0986, 0988, 1005, 1007, 1026, 1027, 1031, 1032, 1051, 1052, 1053, 1054, 1056, 1057, 1060

MAP NUMBER  
 06061CIND01A

MAP REVISED

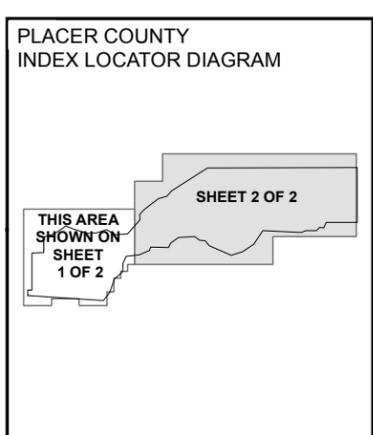
\* PANEL NOT PRINTED - AREA ALL WITHIN ZONE AE (EL 6232.3)  
 \*\* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS  
 \*\*\* PANEL NOT PRINTED - OUTSIDE COUNTY BOUNDARY



Map Projection:  
StatePlane California II FIPS 0402 Feet;  
North American Datum 1983

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

SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION



**NATIONAL FLOOD INSURANCE PROGRAM**  
FLOOD INSURANCE RATE MAP INDEX (Sheet 2 of 2)

**PLACER COUNTY, USA** and Incorporated Areas  
PANELS PRINTED:

0050, 0075, 0100, 0125, 0129, 0137, 0139, 0150, 0175, 0200, 0225, 0250, 0275, 0300, 0325, 0327, 0329, 0330, 0340, 0341, 0342, 0343, 0344, 0353, 0355, 0360, 0361, 0365, 0500, 0525, 0550, 0575, 0600, 0625, 0631, 0633, 0634, 0650, 0800, 0825, 0850, 0875, 0900



**FEMA**

MAP NUMBER  
06061CIND02A

MAP REVISED

\* PANEL NOT PRINTED - AREA ALL WITHIN ZONE AE (EL 6232.3)  
\*\* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS  
\*\*\* PANEL NOT PRINTED - OUTSIDE COUNTY BOUNDARY

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

**Figure 2: FIRM Notes to Users**

## **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 Flood Map Service Center website at [msc.fema.gov](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 Flood 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 Flood 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 Non-Coastal Stillwater Elevations tables within this FIS Report. Use the flood elevation data within the FIS Report in conjunction with the FIRM for construction and/or floodplain management.

**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.

## Figure 2. FIRM Notes to Users

**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.

**PROJECTION INFORMATION:** The projection used in the preparation of the map was STATE PLANE LAMBERT CONFORMAL CONIC, CALIFORNIA II ZONE. The horizontal datum was NAD1983, 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 [www.ngs.noaa.gov/](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 the USDA National Agriculture Imagery Program (NAIP). This information was photogrammetrically compiled at a scale of 1:24,000 from aerial photography dated 2014. Additional base map information was provided by the Placer County Geographic Information System Data Clearinghouse at scales of 1:6,000 or 1:24,000, by the Bureau of Land Management at a scale of 1:6,000, and by the USDA/NRCS – National Cartography & Geospatial Center at a scale of 1:24,000. For information about base maps, refer to Section 6.2 "Base Map" in this FIS Report.

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

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

### **NOTES FOR FIRM INDEX**

**REVISIONS TO INDEX:** As new studies are performed and FIRM panels are updated within

## Figure 2. FIRM Notes to Users

Placer 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 Placer County, CA, effective **09/09/9999**.

ACCREDITED LEVEE: 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 [www.fema.gov/national-flood-insurance-program](http://www.fema.gov/national-flood-insurance-program).

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

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

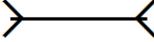
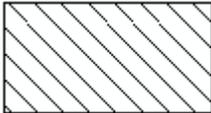
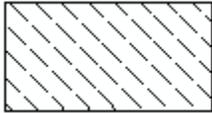
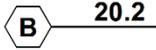
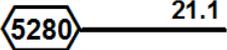
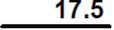
**Figure 3: Map Legend for FIRM**

<p><b>SPECIAL FLOOD HAZARD AREAS:</b> <i>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.</i></p>	
	<p>Special Flood Hazard Areas subject to inundation by the 1% annual chance flood (Zones A, AE, AH, AO, AR, A99, V and VE)</p>
<p>Zone A</p>	<p>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.</p>
<p>Zone AE</p>	<p>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.</p>
<p>Zone AH</p>	<p>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.</p>
<p>Zone AO</p>	<p>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.</p>
<p>Zone AR</p>	<p>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.</p>
<p>Zone A99</p>	<p>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.</p>
<p>Zone V</p>	<p>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.</p>
<p>Zone VE</p>	<p>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.</p>

**Figure 3: Map Legend for FIRM**

	<p>Regulatory Floodway determined in Zone AE.</p>
<p><b>OTHER AREAS OF FLOOD HAZARD</b></p>	
	<p>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.</p>
	<p>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.</p>
	<p>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. <a href="#">See Notes to Users for important information.</a></p>
<p><b>OTHER AREAS</b></p>	
	<p>Zone D (Areas of Undetermined Flood Hazard): The flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.</p>
	<p>Unshaded Zone X: Areas of minimal flood hazard.</p>
<p><b>FLOOD HAZARD AND OTHER BOUNDARY LINES</b></p>	
	<p>Flood Zone Boundary (white line on ortho-photography-based mapping; gray line on vector-based mapping)</p>
	<p>Limit of Study</p>
	<p>Jurisdiction Boundary</p>
	<p>Limit of Moderate Wave Action (LiMWA): Indicates the inland limit of the area affected by waves greater than 1.5 feet</p>

**Figure 3: Map Legend for FIRM**

<b>GENERAL STRUCTURES</b>	
 <i>Aqueduct</i> <i>Channel</i> <i>Culvert</i> <i>Storm Sewer</i>	Channel, Culvert, Aqueduct, or Storm Sewer
 <i>Dam</i> <i>Jetty</i> <i>Weir</i>	Dam, Jetty, Weir
	Levee, Dike, or Floodwall
 <i>Bridge</i>	Bridge
<b>COASTAL BARRIER RESOURCES SYSTEM (CBRS) AND OTHERWISE PROTECTED AREAS (OPA):</b> <i>CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas. See Notes to Users for important information.</i>	
 <b>CBRS AREA</b> <b>09/30/2009</b>	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.
 <b>OTHERWISE PROTECTED AREA</b> <b>09/30/2009</b>	Otherwise Protected Area
<b>REFERENCE MARKERS</b>	
	River mile Markers
<b>CROSS SECTION &amp; TRANSECT INFORMATION</b>	
	Lettered Cross Section with Regulatory Water Surface Elevation (BFE)
	Numbered Cross Section with Regulatory Water Surface Elevation (BFE)
	Unlettered Cross Section with Regulatory Water Surface Elevation (BFE)
	Coastal Transect

**Figure 3: Map Legend for FIRM**

	Profile Baseline: Indicates the modeled flow path of a stream and is shown on FIRM panels for all valid studies with profiles or otherwise established base flood elevation.
	Coastal Transect Baseline: Used in the coastal flood hazard model to represent the 0.0-foot elevation contour and the starting point for the transect and the measuring point for the coastal mapping.
	Base Flood Elevation Line
<b>ZONE AE (EL 16)</b>	Static Base Flood Elevation value (shown under zone label)
<b>ZONE AO (DEPTH 2)</b>	Zone designation with Depth
<b>ZONE AO (DEPTH 2) (VEL 15 FPS)</b>	Zone designation with Depth and Velocity
<b>BASE MAP FEATURES</b>	
	River, Stream or Other Hydrographic Feature
	Interstate Highway
	U.S. Highway
	State Highway
	County Highway
	Street, Road, Avenue Name, or Private Drive if shown on Flood Profile
	Railroad
	Horizontal Reference Grid Line
	Horizontal Reference Grid Ticks
	Secondary Grid Crosshairs
<b>Land Grant</b>	Name of Land Grant
<b>7</b>	Section Number
<b>R. 43 W. T. 22 N.</b>	Range, Township Number
<b>4276<sup>000</sup>mE</b>	Horizontal Reference Grid Coordinates (UTM)
<b>365000 FT</b>	Horizontal Reference Grid Coordinates (State Plane)
<b>80° 16' 52.5"</b>	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 Placer 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 Placer County, California, 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.

**Table 2: Flooding Sources Included in this FIS Report**

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi <sup>2</sup> ) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Antelope Creek	Loomis, Town of; Placer County, Unincorporated Areas; Rocklin, City of; Roseville, City of	Confluence with Dry Creek/Miners Ravine	Citrus Colony Road	18020111	8.5		Y	AE	1998
Antelope Creek Overflow	Rocklin, City of	Confluence with Antelope Creek	Divergence from Antelope Creek	18020111	0.4		N	AE	2001
Antelope Creek Tributary	Loomis, Town of; Placer County, Unincorporated Areas	Confluence with Antelope Creek	80 feet upstream of Humphrey Road	18020111	1.0		Y	AE	1998
Auburn Ravine	Lincoln, City of; Placer County, Unincorporated Areas	1.07 miles downstream of South Brewer Road	1,368 feet upstream of Lozanos Road	18020127	23.2		Y	AE	2015
Auburn Ravine	Auburn, City of; Placer County, Unincorporated Areas	1,368 feet upstream of Lozanos Road	Luther Road	18020127	5.6		Y	AE, AO	1998
Auburn Ravine Dairy Road Tributary	Auburn, City of	Confluence with Auburn Ravine	Luther Road	18020127	1.0		Y	AE	1998
Barton (Polaris) Creek	Placer County, Unincorporated Areas	Confluence of Lake Forest Creek	680 feet upstream of Mouth	16050101	0.1		N	AE	2012
Bear Creek	Placer County, Unincorporated Areas	Confluence with Truckee River	225 feet upstream of Park Drive	16050102	2.8		Y	AE	2015
Bear River	Placer County, Unincorporated Areas	0.52 miles downstream Of Highway 65	4.75 miles upstream Of Highway 65	18020108	5.2		N	AE	2011

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi <sup>2</sup> ) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Bear River and Zone A tributaries	Placer County, Unincorporated Areas	4.75 miles upstream Of Highway 65	1 square mile drainage area of Zone A streams	18020108	19.6		N	A	1998
Camp Far West Reservoir	Placer County, Unincorporated Areas	Entire Coastline	Bear River	18020126		1.1	N	A	1998
Cirby Creek	Roseville, City of	Confluence with Dry Creek	1,400 feet upstream of Rocky Ridge Drive	18020111	3.0		Y	AE	2003
Clover Valley Creek	Placer County, Unincorporated Areas; Rocklin, City of	Confluence with Antelope Creek	3,330 feet upstream of Fairway View Drive	18020111	5.6		Y	AE	1998
Coon Creek and Zone A tributaries	Lincoln, City of; Placer County, Unincorporated Areas	Sutter County	1 square mile drainage area of Zone A streams	18020109	34.3		N	A	1998
Coyote Creek	Roseville, City of	Confluence with Pleasant Grove Creek	1,280 feet upstream of Bob Doyle Drive	18020109	1.6		N	AE	2006
Curry Creek	Placer County, Unincorporated Areas	1.33 miles downstream of South Brewer Road	12,540 feet upstream of Country Acres Lane	18020109	6.4		Y	AE	2015
Dry Creek	Placer County, Unincorporated Areas; Roseville, City of	0.54 miles downstream of Watt Avenue	Confluence Of Antelope Creek And Miners Ravine	18020111	8.9		Y	AE	1998
Dry Creek (near Auburn)	Placer County, Unincorporated Areas	Confluence with Coon Creek	3,360 feet upstream of Haines Road	18020127	3.1		Y	AE	1998
Dry Creek Antelope North Road Tributary East Branch	Placer County, Unincorporated Areas	Confluence with Dry Creek	860 feet upstream of Pfe Road	18020111	0.9		Y	AE	1998

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi <sup>2</sup> ) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Dry Creek Antelope North Road Tributary West Branch	Placer County, Unincorporated Areas	Confluence with Dry Creek Antelope North Road Tributary East Branch	780 feet upstream of Mouth	18020111	0.2		Y	AE	1998
Dry Creek Billy Mitchell Road Tributary	Placer County, Unincorporated Areas	Confluence with Dry Creek	2,640 feet upstream of Pfe Road	18020111	1.3		Y	AE	1998
Dry Creek Vineyard Road Tributary	Placer County, Unincorporated Areas; Roseville, City of	Confluence with Dry Creek	Brady Lane	18020111	2.5		Y	AE	1998
Dry Creek Walerga Road Tributary	Placer County, Unincorporated Areas	Confluence with Dry Creek	30 feet upstream of Crowder Lane	18020111	1.5		Y	AE	1998
French Meadows Reservoir	Placer County, Unincorporated Areas	Entire Coastline	Picayune Valley	18020128		2.1	N	A	1998
Folsom Lake	Placer County, Unincorporated Areas	Entire Coastline	North Fork American River	18020128		6.1	N	A	1998
Hell Hole Reservoir	Placer County, Unincorporated Areas	Entire Coastline	Rubicon River	18020128		1.9	N	A	1998
Ingram Slough	Lincoln, City of; Placer County, Unincorporated Areas	Confluence with Orchard Creek	0.5 miles downstream of Ferrari Ranch Road	18020109	1.1		N	A	2008
Ingram Slough	Lincoln, City of; Placer County, Unincorporated Areas	0.5 miles downstream of Ferrari Ranch Road	220 feet upstream of Oak Tree Ln	18020109	4.2		Y	AE	2008
Ingram Slough Irrigation Pond	Lincoln, City of	Confluence with Ingram Slough South Branch	Divergence from Ingram Slough South Branch	18020109	0.6		Y	AE	2008
Ingram Slough Overflow	Lincoln, City of	Confluence with Ingram Slough	Divergence from Auburn Ravine	18020109	0.4		Y	AE	2008

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi <sup>2</sup> ) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Ingram Slough South Branch	Lincoln, City of; Placer County, Unincorporated Areas	Confluence with Ingram Slough	3,190 feet upstream of Hidden Hills Lane	18020109	3.3		Y	AE	2008
Ingram Slough South Reach	Lincoln, City of	Confluence with Ingram Slough	Divergence from Ingram Slough	18020109	2.0		Y	AE	2008
Kaseberg Creek	Roseville, City of	Confluence with Pleasant Grove Creek	Fiddymment Road	18020109	1.3		N	AE	2006
Kaseberg Creek Tributary	Roseville, City of	Confluence with Kaseberg Creek	Fiddymment Road	18020109	0.5		N	AE	2006
Lake Forest Creek	Placer County, Unincorporated Areas	Confluence with Lake Tahoe	50 feet upstream of Highway 28	16050101	0.7		N	AE	2012
Lake Tahoe	Placer County, Unincorporated Areas	Entire Coastline	Entire Coastline	16050101		78.8	N	AE	2014
Linda Creek	Roseville, City of	Confluence with Cirby Creek	405 feet upstream of Old Auburn Road	18020111	2.7		Y	AE	2003
Linda Creek	Placer County, Unincorporated Areas; Roseville, City of	405 feet upstream of Old Auburn Road	East Hidden Lakes Drive	18020111	4.4		Y	AE	2015
Markham Ravine and Zone A tributaries	Placer County, Unincorporated Areas	Sutter County	Limit of Detailed Study (Approximately 100 feet Downstream of Nelson Lane)	18020109	15.8		N	A	1998
Markham Ravine	Lincoln, City of; Placer County, Unincorporated Areas	Approximately 100 feet Downstream of Nelson Lane	Fruitvale Road	18020109	5.1		Y	AE	1998
Markham Ravine Lower Tributary	Lincoln, City of	Confluence with Markham Ravine	650 feet upstream of Savannah Drive	18020109	1.8		Y	AE	1998

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi <sup>2</sup> ) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Markham Ravine Lower Tributary	Lincoln, City of	650 feet upstream of Savannah Drive	2,110 feet upstream of Joiner Parkway	18020109	1.8		N	A	1999
Markham Ravine Upper Tributary	Lincoln, City of; Placer County, Unincorporated Areas	Confluence with Markham Ravine	3,480 feet upstream of McCourtney Road	18020109	1.0		Y	AE	1998
Miners Ravine	Placer County, Unincorporated Areas; Roseville, City of	Confluence with Dry Creek	565 feet upstream of Newcastle Road	18020111	15.3		Y	AE	2001
North Fork American River and Zone A tributaries	Placer County, Unincorporated Areas	Folsom Lake	2.5 miles upstream of Soda Springs Road	18020128	160.3		N	A	1998
Orchard Creek	Lincoln, City of; Placer County, Unincorporated Areas	Confluence with Auburn Ravine	1,622 feet upstream of Fiddymment Road	18020109	2.5		Y	AE	2015
Orchard Creek	Lincoln, City of; Placer County, Unincorporated Areas	1,622 feet upstream of Fiddymment Road	7,593 feet upstream of Fiddymment Road	18020109	0.6		N	A	1998
Orchard Creek	Lincoln, City of; Placer County, Unincorporated Areas	7,593 feet upstream of Fiddymment Road	2,630 feet upstream of Highway 65	18020109	3.2		Y	AE	1998
Orchard Creek Tributary 1	Placer County, Unincorporated Areas	Confluence with Orchard Creek	185 feet upstream of Athens Ave	18020109	1.0		Y	AE	1998
Orchard Creek Tributary 2	Lincoln, City of; Placer County, Unincorporated Areas; Rocklin, City of	Confluence with Orchard Creek	560 feet upstream of Highway 65	18020109	2.0		Y	AE	1998
Orchard Creek Tributary 2-1	Lincoln, City of; Placer County, Unincorporated Areas	Confluence with Orchard Creek Tributary 2	1,890 feet upstream of Highway 65	18020109	1.3		Y	AE	1998

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi <sup>2</sup> ) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Orchard Creek Tributary 2-2	Placer County, Unincorporated Areas	Confluence with Orchard Creek Tributary 2	4,520 feet upstream of Mouth	18020109	0.8		Y	AE	1998
Orchard Creek Tributary 3	Lincoln, City of	Confluence with Orchard Creek	Divergence from Orchard Creek Tributary 3 – North Branch	18020109	2.9		Y	AE	2008
Orchard Creek Tributary 3 – North Branch	Lincoln, City of	Confluence with Orchard Creek Tributary 3	905 feet upstream of Twelve Bridges Drive	18020109	1.7		Y	AE	2008
Orchard Creek Tributary 3 – South Branch	Lincoln, City of	Confluence with Orchard Creek Tributary 3	Approximately 1,420 feet upstream of Ridge Top Lane	18020109	1.4		Y	AE	2008
Pleasant Grove Creek	Placer County, Unincorporated Areas; Rocklin, City of; Roseville, City of	1.06 miles downstream of South Brewer Road	1,474 feet upstream of Saint Andrews Drive	18020109	15.4		Y	AE	2015
Pleasant Grove Creek	Rocklin, City of	1,474 feet upstream of Saint Andrews Drive	5,870 feet upstream of S Brewer Road	18020109	0.9		Y	AE	2003
Pleasant Grove Creek North Branch	Placer County, Unincorporated Areas; Rocklin, City of; Roseville, City of	Confluence with Pleasant Grove Creek	1,490 feet upstream of Highway 65	18020109	3.6		Y	AE	2015
Pleasant Grove Creek South Branch	Roseville, City of	Confluence with Pleasant Grove Creek	400 feet upstream of Heritage Drive	18020109	6.3		Y	AE	1998
Pleasant Grove Creek Split Flow	Rocklin, City of	Confluence with Pleasant Grove Creek	2,200 feet upstream of Mouth	18020109	0.4		Y	AE	2015

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi <sup>2</sup> ) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Pleasant Grove Creek Tributary 1	Placer County, Unincorporated Areas; Rocklin, City of; Roseville, City of	Confluence with Pleasant Grove Creek	215 feet upstream of Highway 65 Exit 309 N Ramp	18020109	1.4		Y	AE	1998
Pleasant Grove Creek Tributary 2	Placer County, Unincorporated Areas; Rocklin, City of	Confluence with Pleasant Grove Creek	235 feet upstream of Sunset Boulevard	18020109	0.8		Y	AE	2015
Pleasant Grove Creek Tributary 3	Rocklin, City of	Confluence with Pleasant Grove Creek	780 feet downstream of Blue Oaks Boulevard	18020109	0.2		Y	AE, A	1998
Pleasant Grove Creek Tributary 4	Placer County, Unincorporated Areas ; Roseville, City of	Confluence with Pleasant Grove Creek	Fiddymont Road	18020109	4.0		N	A	1998
Rocklin City Tributary	Rocklin, City of	Confluence with Antelope Creek	840 feet upstream of Union Pacific Railroad	18020111	1.3		Y	AE,X	1998
Rubicon River and Zone A tributaries	Placer County, Unincorporated Areas	Oxbow Reservoir	Miller Lake	18020128	52.6		N	A	1998
Secret Ravine	Loomis, Town of; Placer County, Unincorporated Areas; Rocklin, City of; Roseville, City of	Confluence with Miners Ravine	King Road	18020111	7.7		Y	AE	1998
Secret Ravine	Placer County, Unincorporated Areas	King Road	2,370 feet upstream of Fairview Lane	18020111	2.7		N	A,X	1998
Secret Ravine – Aguilar Tributary	Placer County, Unincorporated Areas; Rocklin, City of	Confluence with Secret Ravine	1,450 feet upstream of El Don Drive	18020111	0.8		Y	AE	1998
Secret Ravine Upper Fork	Loomis, Town of	Confluence with Secret Ravine	590 feet upstream of Rachel Court	18020111	1.1		Y	AE	1998

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi <sup>2</sup> ) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Squaw Creek	Placer County, Unincorporated Areas	Confluence with Truckee River	2,345 feet upstream of Squaw Valley Road	16050102	2.9		Y	AE	2015
Squaw Creek - South Tributary	Placer County, Unincorporated Areas	Confluence with Squaw Creek	945 feet upstream of Squaw Peak Road	16050102	0.3		Y	AE	2015
Strap Ravine	Placer County, Unincorporated Areas; Roseville, City of	Confluence with Linda Creek	1,000 feet upstream of Granite Estates Road	18020111	4.0		Y	AE	1998
Sucker Ravine	Placer County, Unincorporated Areas; Rocklin, City of, Loomis, Town of	Confluence with Secret Ravine	70 feet upstream of Sparas Street	18020111	4.6		Y, N	AE	1998
Sucker Ravine Loomis Tributary	Loomis, Town of; Rocklin, City of	Confluence with Sucker Ravine	70 feet downstream of Stonegate Court	18020111	1.2		Y	AE	1998
Sucker Ravine Loomis Tributary	Loomis, Town of	70 feet downstream of Stonegate Court	153 feet upstream of South Walnut Street	18020111	0.5		Y	AE	2002
Sucker Ravine Loomis Tributary	Loomis, Town of	153 feet upstream of South Walnut Street	35 feet upstream of Horseshoe Bar Road	18020111	0.1		N	AE	1998
Sucker Ravine Overflow Channel No.1	Loomis, Town of; Rocklin, City of	Confluence with Secret Ravine	Divergence from Sucker Ravine	18020111	0.5		N	AE	1998
Sucker Ravine Overflow Channel No.2	Loomis, Town of	Confluence with Secret Ravine	180 feet upstream of Saunders Ave	18020111	0.4		N	AE	1998
Truckee River	Placer County, Unincorporated Areas	89.9 miles upstream of Pyramid Lake	90.5 miles upstream of Pyramid Lake	16050101	1.8		Y	AE	1998

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi <sup>2</sup> ) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Truckee River	Placer County, Unincorporated Areas	90.5 miles upstream of Pyramid Lake	92.38 miles upstream of Pyramid Lake	90.5 miles upstream of Pyramid Lake	0.7		Y	AE	2003
Truckee River	Placer County, Unincorporated Areas	92.38 miles upstream of Pyramid Lake	Lake Tahoe Dam	16050101	11.5		Y	AE	1998
Ward Creek	Placer County, Unincorporated Areas	Confluence with Lake Tahoe	19,078 feet upstream of Highway 89	16050101	4.1		Y	AE	1998

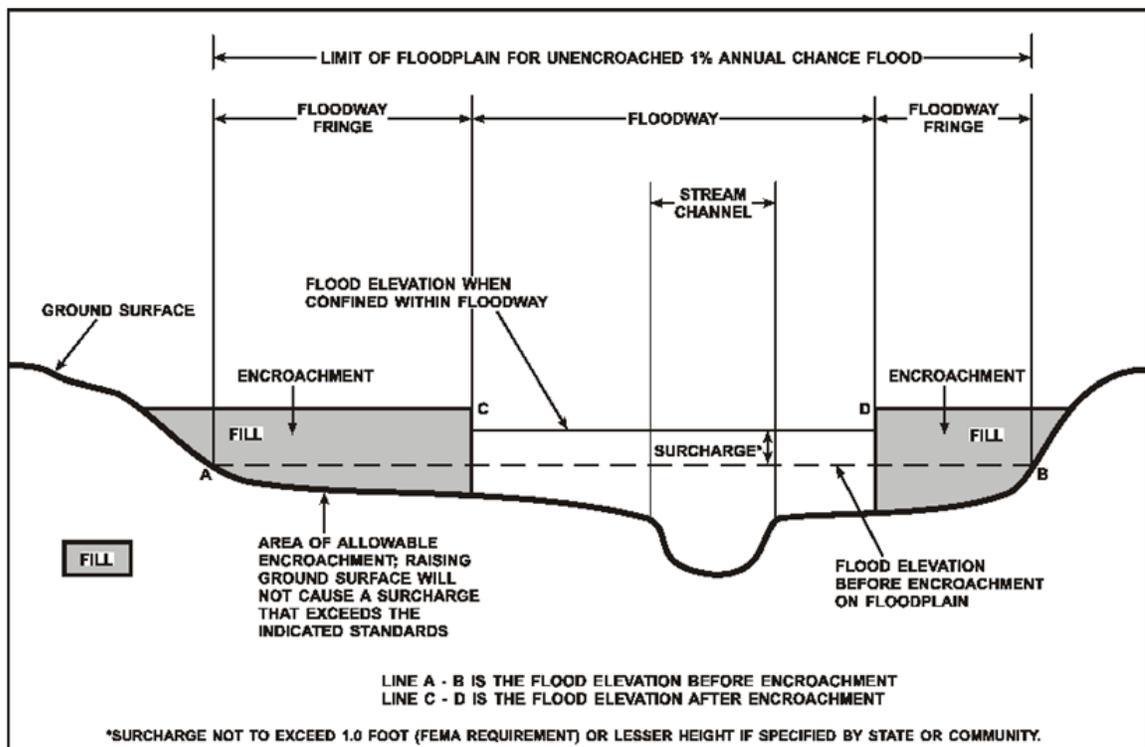
## 2.2 Floodways

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.”

All floodways that were developed for this Flood Risk Project are shown on the FIRM using the symbology described in Figure 3. In cases where the floodway and 1% 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**

This section is not applicable to this Flood Risk Project.

### **2.5 Coastal Flood Hazard Areas**

This section is not applicable to this Flood Risk Project.

#### **2.5.1 Water Elevations and the Effects of Waves**

This section is not applicable to this Flood Risk Project.

#### **Figure 5: Wave Runup Transect Schematic**

[Not Applicable to this Flood Risk Project]

#### **2.5.2 Floodplain Boundaries and BFEs for Coastal Areas**

This section is not applicable to this Flood Risk Project.

#### **2.5.3 Coastal High Hazard Areas**

This section is not applicable to this Flood Risk Project.

### Figure 6: Coastal Transect Schematic

[Not Applicable to this Flood Risk Project]

#### 2.5.4 Limit of Moderate Wave Action

This section is not applicable to this Flood Risk Project.

## SECTION 3.0 – INSURANCE APPLICATIONS

### 3.1 National Flood Insurance Program Insurance Zones

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

The 1% 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 Placer County.

**Table 3: Flood Zone Designations by Community**

Community	Flood Zone(s)
Auburn, City of	A, AE, AO, X
Colfax, City of	X
Lincoln, City of	A, AE, X
Loomis, Town of	A, AE, X
Placer County, Unincorporated Areas	A, AE, AO, X
Rocklin, City of	A, AE, AO, X
Roseville, City of	A, AE, X

### 3.2 Coastal Barrier Resources System

This section is not applicable to this Flood Risk Project.

**Table 4: Coastal Barrier Resources System Information**

[Not Applicable to this Flood Risk 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)
Lake Tahoe	16050101	Lake Tahoe	Areas that drain directly to Lake Tahoe.	148
Lower American	18020111	Dry Creek	Drains most of the southwest Placer County, including Town of Loomis and City of Rocklin.	95
Lower Bear	18020108	Bear River	Area near the Bear River in northwest Placer County, downstream of Camp Far West Reservoir.	29
Lower Sacramento	18020109	Auburn Ravine	Most developed watershed within Placer County, mostly encompassing cities of Lincoln, Rocklin, and Roseville.	175
North Fork American	18020128	North Fork American River	Largest watershed within Placer County comprised of mostly mountainous, forested areas.	778
Truckee	16050102	Truckee River	Area that drains to the Truckee River in northern Placer County.	103
Upper Bear	18020126	Bear River	Area that drains towards the Bear River in northern Placer County, upstream of Camp Far West Reservoir.	67
Upper Coon-Upper Auburn	18020127	Auburn Ravine	Area in western Placer County that drains City of Auburn.	88
Upper Yuba	18020125	South Yuba River	Area that drains to the Yuba River in northern Placer County.	20

## 4.2 Principal Flood Problems

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

**Table 6: Principal Flood Problems**

Flooding Source	Description of Flood Problems
Auburn Ravine	The February 1986 flood caused the most severe flooding on the study reach of Auburn Ravine of any event in the historic record. The only flood problem identified during the study that confirmed historic records, however, was overtopping of the roadway at Stonehouse Road, Forgotten Road, Highway 65 and Highway 193.
Dry Creek	Floods occur in the Dry Creek watershed as a result of short, intense rainfall in the period from fall through spring. Historic flood events occurred in December 1955, April 1958, October 1962, December 1964, March 1983, and February 1986. The February 1986 flood is the historic flood of record, and has been estimated in this watershed as a 1-to-2-percent flow exceedance event, depending on the specific location. According to the Dry Creek Watershed Flood Control Plan, the February 1986 flood caused widespread damage throughout the watershed (Montgomery 1992b). Most bridges and culverts were overtopped, the crossing at Rocky Ridge was washed out, and 30 sustained embankment damage, including Cook Riolo Road. Many major streets were closed. Several homes along Dry Creek were flooded downstream of Roseville.
Markham Ravine	Flooding of Gladding Road at Markham Ravine occurs even with frequent floods. No other history of flood hazards for Markham Ravine was available.
Miners Ravine	Miners Ravine has headwater characteristics of steep gradient and high confining terrain along its upper reaches. Boulders and rock outcroppings limit most flooding to near the channel. Miners Ravine contributes to Dry Creek at Roseville. Sixteen homes were reportedly flooded near Joe Rodgers Road, during the February 1986 historic flood of record (Montgomery 1992b). The event has been estimated in this watershed as a 1-to-2-percent flow exceedance event, depending on the specific location. The most recent significant flooding occurred in 1997 and the area mostly affected was a residential area near the intersection of Douglas Boulevard and Auburn-Folsom Road. For about ½ mile, the stream banks are low with wide overbanks. Flooding is generally characterized by shallow depths.

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

**Table 7: Historic Flooding Elevations**

Flooding Source	Location	Historic Peak (Feet NAVD88)	Event Date	Approximate Recurrence Interval (years)	Source of Data
Dry Creek	NP	NP	February 1986	100-200	Dry Creek Watershed Flood Control Plan
Bear River	658.5 ft d/s of XS 11.5	87.13	1997	NP	Yuba County
Bear River	267.4 ft d/s of XS 11.0	89.97	1997	NP	Yuba County

**4.3 Non-Levee Flood Protection Measures**

Table 8 contains information about non-levee flood protection measures within Placer 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
Lake Tahoe	Lake Tahoe Dam	Dam	At the outlet of Lake Tahoe	Lake Tahoe Dam controls the top six feet of Lake Tahoe. With the surface area of the lake, this creates a reservoir of 732,000-acre-feet capacity and regulates the lake outflow into the Truckee River. Flows are controlled by 17 gates, each 5 ft by 4 ft.

**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 no longer meets Section 65.10, FEMA will de-accredit the levee system and issue an effective FIRM showing the levee-impacted area as a SFHA.

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

FEMA coordinated with the USACE, the local communities, and other organizations to compile a list of levees that exist within Placer 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)
Lincoln, City of	Auburn Ravine	Right Bank	Lincoln, City of	No	1905047042	No	06061C0718H
Placer County, Unincorporated Areas	Bear River	Left Bank	Reclamation District No. 1001	No	1901047016	No	06061C0395H, 06061C0685H
Placer County, Unincorporated Areas	Bear River	Right Bank	Reclamation District No. 2103	No	1905047000	No	06061C0395H
Roseville, City of	Cirby Creek	Right Bank	City of Roseville, Public Works	No	1905047001	No	06061C1032H
Roseville, City of	Linda Creek	Right Bank	City of Roseville, Public Works	No	1905047039	No	06061C1032H
Roseville, City of	Linda Creek	Left Bank	City of Roseville, Public Works	No	1905047040	No	06061C1051H
Roseville, City of	Linda Creek	Right Bank	City of Roseville, Public Works	No	1905047041	No	06061C1051H

## **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 for selected flooding sources. A summary of stillwater elevations developed for non-coastal flooding sources is provided in Table 11. (Coastal stillwater elevations are discussed in Section 5.3 and shown in Table 17.) Stream gage information is provided in Table 12.

**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
Antelope Creek	Above Miners Ravine / Dry Creek	14.7	1,240	*	2,380	3,080	*
Antelope Creek	Above Clover Valley Creek	8.3	1,020	*	2,000	2,330	*
Antelope Creek	Above Antelope Creek Tributary	2.3	440	*	780	865	*
Antelope Creek Tributary	At Mouth	4.1	570	*	1200	1270	*
Auburn Ravine	Sutter County/Placer County Boundary	79.99	3,719	5,525	6,951	8,559	13,962
Auburn Ravine	Approximately 600 ft upstream of Brewer Road Bridge	63.85	3,411	5,127	6,464	7,918	12,593
Auburn Ravine	Near extension of Ferreira Road (no crossing)	60.15	3,559	5,357	6,736	8,240	12,948
Auburn Ravine	Near extension of South Dowd Road (no crossing), at confluence of Orchard Creek	58.51	4,675	7,131	8,922	10,840	16,557
Auburn Ravine	Approximately 2,000 ft upstream of Moore Road Bridge	35.92	3,725	5,367	6,261	7,147	9,627

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
Auburn Ravine	Proposed State Highway 65 Bypass Crossing location	34.44	5,077	7,330	8,432	9,615	11,893
Auburn Ravine	Approximately 500 ft downstream of Joiner Road Bridge	34.03	5,220	7,291	8,469	9,650	11,876
Auburn Ravine	Approximately 270 ft upstream of State Highway 65 Bridge, approximate location of start of lateral spill into Ingram Slough	33.86	5,451	7,441	8,619	9,855	12,921
Auburn Ravine	1,000 ft upstream of State Highway 193 Bridge	33.1	5,644	8,716	11,078	13,476	20,823
Auburn Ravine	Approx. 600 ft upstream of Fowler Street Bridge	31.86	6,865	10,284	12,882	15,643	22,983
Auburn Ravine	Approx. 250 ft downstream of Gold Hill Road Bridge	24.72	6,543	9,750	12,127	14,478	20,216
Auburn Ravine	1,500 ft upstream of Gold Hill Road Bridge	16.27	5,467	7,949	9,724	11,550	15,544
Auburn Ravine	Tributary confluence, 3,500 ft upstream of Gold Hill Road Bridge	14.63	5,159	7,454	9,059	10,773	14,331

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
Auburn Ravine	Tributary Confluence AU4A Shed, approximately 2600 ft downstream of Lozanos Road Crossing	9.96	3,583	4,939	5,978	7,139	9,185
Auburn Ravine	Upstream Limit of Study – 1,320 ft upstream of Lozanos Road Crossing.	4.18	2,545	3,470	4,009	4,739	6,041
Auburn Ravine	At Forgotten Road and Stone House Road	3.5	2,020	*	2,850	3,180	*
Auburn Ravine	At Highway 49 and Auburn Ravine Road	1.6	1,150	*	1,710	1,910	*
Auburn Ravine Dairy Road Tributary	*	*	*	*	*	*	*
Barton (Polaris) Creek	At Confluence with Lake Forest Creek	0.85	*	*	*	89	*
Bear Creek	Confluence at Truckee River	5.28	1,813	2,258	2,569	2,895	3,656
Bear Creek	Alpine Meadows Road (downstream of confluence with tributary)	4.07	1,448	1,808	2,057	2,320	2,941
Bear Creek	Dear Park Road	3.02	1,079	1,351	1,544	1,742	2,209
Bear Creek	Park Drive	2.78	996	1,249	1,426	1,610	2,042

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
Bear River	At Wheatland	292	*	*	*	44,100	*
Cirby Creek	At Mouth	19.5	1,930	*	3,190	4,130	*
Cirby Creek	Below Linda Creek	18.4	1,310	*	1,990	4,113	6,542
Cirby Creek	Above Linda Creek	2.1	1,720	*	3,570	793	1,159
Cirby Creek	Above Oak Ridge Drive	1.9	390	*	610	720	*
Clover Valley Creek	At Mouth	3.6	400	*	800	860	*
Coyote Creek	At confluence with Pleasant Grove Creek	0.87	*	*	*	400	*
Coyote Creek	At Station 735	0.73	*	*	*	361	*
Coyote Creek	At Station 1,990	0.43	*	*	*	251	*
Curry Creek	Brewer Road Crossing and Junction of North University Tributary	15.8	964	1,355	1,635	2,045	3,152
Curry Creek	Approximately 2,000 ft upstream of Brewer Road Crossing	8.24	800	1,110	1,350	1,579	2,146
Curry Creek	Approximately 1.1 mi upstream of Brewer Road Crossing	7.88	772	1,068	1,299	1,520	2,064
Curry Creek	Junction of South University Tributary	7.65	774	1,069	1,299	1,519	2,098

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
Curry Creek	Upstream limit of Study – Tributary confluences 1 mi downstream of Baseline Road	4.71	484	662	810	957	1,320
Dry Creek	At Corporate Limits of Sacramento County	89.3	6,020	*	10,500	14,000	*
Dry Creek (Near Auburn)	At Limit of Detailed Study	7.3	1,130	*	1,770	2,160	3,630
Dry Creek (Near Auburn)	Haines Road at Red Hawk Ranch Reservoir	6.5	970	*	1,550	1,900	3,300
Dry Creek (Near Auburn)	End of Study to Haines Road	4.5	680	*	1,100	1,350	2,300
Dry Creek Antelope North Road Tributary East Branch	At Dry Creek	2.0	775	*	1,190	1,350	*
Dry Creek Antelope North Road Tributary West Branch	*	*	*	*	*	*	*
Dry Creek Billy Mitchell Road Tributary	At Dry Creek	0.7	215	*	350	390	*
Dry Creek Vineyard Road Tributary	At Dry Creek	1.7	525	*	845	960	*

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
Dry Creek Walerga Road Tributary	At Dry Creek	1.3	250	*	450	485	*
Ingram Slough	Highway 65	*	*	*	*	4,170	8,196
Ingram Slough Irrigation Pond	*	*	*	*	*	*	*
Ingram Slough Overflow	*	*	*	*	*	*	*
Ingram Slough South Branch	*	*	*	*	*	*	*
Ingram Slough South Reach	*	*	*	*	*	*	*
Kaseberg Creek	At confluence with Pleasant Grove Creek	4.86	*	*	*	1,489	*
Kaseberg Creek	At confluence with Kaseberg Creek Tributary	4.14	*	*	*	1,432	*
Kaseberg Creek Tributary	At confluence with Kaseberg Creek	0.48	*	*	*	275	*
Lake Forest Creek	At Mouth	1.6	*	*	*	238	*
Lake Forest Creek	North of State Route 28	0.4	*	*	*	82	*
Linda Creek	At Rocky Ridge Road	16.2	2,010	*	3,510	4,160	*
Linda Creek	Old Auburn Road	10.31	1,299	1,805	2,304	2,807	4,018
Linda Creek	Wedgewood Drive	1.77	362	479	585	709	1,002

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
Linda Creek	Barton Road	1.52	362	479	585	709	1,002
Linda Creek	Auburn-Folsom Road	0.57	199	262	312	370	513
Markham Ravine	Nelson Lane	8.36	600	*	1,200	1,720	*
Markham Ravine	Lakeside Drive	5.22	380	*	760	1,070	*
Markham Ravine	Fruitvale Road	2.0	670	*	1,090	1,520	*
Markham Ravine Lower Tributary	At Mouth	1.71	710	*	1,130	1,300	*
Markham Ravine Lower Tributary	Joiner Parkway	0.77	410	*	630	730	*
Markham Ravine Upper Tributary	At Mouth	0.80	420	*	680	800	*
Miners Ravine	At Mouth	42.50	3,380	*	7,000	7,840	*
Miners Ravine	At Sierra College Boulevard	16.60	*	*	*	4,900	*
Miners Ravine	At Dick Cook Road	4.11	*	*	*	3,150	*
Miners Ravine	At Horseshoe Bar Road	2.99	*	*	*	2,500	*
Miners Ravine	At King Road	1.94	*	*	*	1,800	*
Miners Ravine	At Newcastle Road	0.50	*	*	*	500	*
Orchard Creek	Just before confluence with Auburn Ravine	19.46	2,590	3,424	4,001	4,533	8,473
Orchard Creek	Fiddymont Road	15.75	2,590	3,424	4,001	4,533	8,473

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
Orchard Creek	At Upper Limit of Detailed Study	10.90	1,270	*	1,970	2,410	4,030
Orchard Creek	At Confluence with Orchard Creek Tributary 3	9.80	1,180	*	1,830	2,240	3,770
Orchard Creek	At Confluence with Orchard Creek Tributary 2	7.00	880	*	1,360	1,660	2,740
Orchard Creek	At Confluence with Orchard Creek Tributary 1	3.10	450	*	680	830	1,380
Orchard Creek Tributary 1	At Confluence with Orchard Creek	0.7	150	*	220	270	440
Orchard Creek Tributary 2	At Confluence with Orchard Creek	2.1	410	*	630	760	1,260
Orchard Creek Tributary 2	At Confluence with Orchard Creek Tributary 2-1	1.4	230	*	440	540	880
Orchard Creek Tributary 2	At Confluence with Orchard Creek Tributary 2-2	0.9	180	*	270	330	530
Orchard Creek Tributary 2-1	At Confluence with Orchard Creek Tributary 2	0.6	120	*	170	210	340
Orchard Creek Tributary 2-2	At Confluence with Orchard Creek Tributary 2	0.5	140	*	220	260	420

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
Orchard Creek Tributary 3	At Highway 65	*	*	*	*	1,270	1,456
Orchard Creek Tributary 3	At Confluence with Orchard Creek	3.9	450	*	690	840	1,390
Orchard Creek Tributary 3 North Branch	*	*	*	*	*	*	*
Orchard Creek Tributary 3 South Branch	*	*	*	*	*	*	*
Pleasant Grove Creek	West of Locust Road	45.28	2,907	4,156	5,176	6,225	8,765
Pleasant Grove Creek	Brewer Road	43.35	2,927	4,178	5,199	6,250	8,776
Pleasant Grove Creek	Pettigrew Road	41.68	2,962	4,221	5,245	6,296	8,802
Pleasant Grove Creek	PL10D Boundary	37.36	2,742	3,852	4,770	5,726	8,056
Pleasant Grove Creek	PL10B Boundary	29.80	2,655	3,646	4,450	5,222	6,825
Pleasant Grove Creek	Junction of Kaseburg Creek	27.90	2,568	3,518	4,281	5,032	6,578
Pleasant Grove Creek	Old Fiddymont Road	23.17	2,167	2,934	3,526	4,090	5,310
Pleasant Grove Creek	East of Foothills Boulevard	15.11	1,563	2,086	2,475	2,878	3,809

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
Pleasant Grove Creek	Pleasant Grove Creek North Branch Confluence	14.17	1,474	1,963	2,324	2,716	3,609
Pleasant Grove Creek	Industrial Avenue/Railroad	11.60	1,381	1,816	2,114	2,421	3,097
Pleasant Grove Creek	State Highway 65	8.02	959	1,185	1,367	1,590	2,013
Pleasant Grove Creek	Sunset Boulevard	5.23	770	961	1,121	1,328	1,667
Pleasant Grove Creek	0.5 mi upstream of Stanford Ranch Road	2.72	694	955	1,170	1,366	1,942
Pleasant Grove Creek	Whitney Oaks Drive	1.82	142	199	250	305	394
Pleasant Grove Creek	At Station 24,820	0.9	160	*	235	275	470
Pleasant Grove Creek North Branch	At Mouth	2.16	190	268	333	396	560
Pleasant Grove Creek North Branch	Upstream of State Highway 65	0.52	70	99	125	154	230
Pleasant Grove Creek South Branch	At Blue Oaks Boulevard	6.4	1,004	*	1,650	1,916	3,411
Pleasant Grove Creek South Branch	At Pleasant Grove Boulevard	5.1	849	*	1,600	1,802	3,334

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
Pleasant Grove Creek South Branch	At confluence with Right Tributary	4.93	440	*	690	820	1,080
Pleasant Grove Creek South Branch	Downstream of Union Pacific Railroad	3.24	350	*	540	640	850
Pleasant Grove Creek South Branch	Upstream of Diamond Oaks Golf Course	1.06	110	*	170	210	280
Pleasant Grove Creek Split Flow	At Divergence from Pleasant Grove Creek	NP	196	274	339	422	563
Pleasant Grove Creek Tributary 1	At Confluence with Pleasant Grove Creek	3.4	400	*	610	750	1,260
Pleasant Grove Creek Tributary 1	At Unnamed Tributary	2.9	350	*	530	640	1,070
Pleasant Grove Creek Tributary 2	At Confluence with Pleasant Grove Creek	1.0	180	*	280	330	550
Pleasant Grove Creek Tributary 3	At Confluence with Pleasant Grove Creek	1.3	200	*	300	370	610
Rocklin City Tributary	At Mouth	1.1	96	*	168	214	390
Rocklin City Tributary	At Sunset Boulevard	0.7	58	*	84	115	210
Rocklin City Tributary	Upstream of Second Street	0.4	45	*	60	82	157
Secret Ravine	At Mouth	22.6	1,890	*	3,800	4,200	*

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
Secret Ravine	Below Confluence with Sucker Ravine	21.1	1,860	*	3,800	4,150	*
Secret Ravine	Below Confluence with Secret Ravine – Aguilar Tributary	18.1	1,660	*	3,400	3,710	*
Secret Ravine	Below Loomis and King Road Tributaries	12.7	1,330	*	2,540	3,080	*
Secret Ravine – Aguilar Tributary	At Mouth	1.8	370	*	550	570	*
Secret Ravine Upper Fork	At Mouth	3.0	160	*	250	280	*
Secret Ravine Upper Fork	Interstate Highway 80	0.6	100	*	220	230	*
Squaw Creek	State Highway 89	8.01	2,684	3,345	3,807	4,298	5,401
Squaw Creek	Squaw Valley Road (downstream of Golf Course)	7.68	2,589	3,230	3,677	4,156	5,225
Squaw Creek	Squaw Valley Road (upstream of Golf Course)	5.48	2,428	3,039	3,472	3,921	4,954
Squaw Creek	North Tributary Confluence	3.69	1,225	1,531	1,748	1,976	2,490
Squaw Creek – South Tributary	At Mouth	1.79	581	722	823	922	1,161
Strap Ravine	Above Confluence with Secret Ravine	4.1	490	*	840	920	*
Sucker Ravine	At Mouth	3.0	520	*	950	1,150	*

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
Sucker Ravine	Above Confluence with Loomis Tributary	1.4	380	*	600	610	*
Sucker Ravine Loomis Tributary	At Mouth	0.7	210	*	370	380	*
Sucker Ravine Loomis Tributary	Upstream of Stonegate	*	*	*	*	116	*
Sucker Ravine Overflow Channel No. 1	*	*	*	*	*	*	*
Sucker Ravine Overflow Channel No. 2	*	*	*	*	*	*	*
Tributary to Pleasant Grove Creek Tributary 4	Approximately 1,600 feet upstream of Pleasant Grove Creek Tributary 4	0.1	45	*	*	76	*
Truckee River	At Placer County Boundary	556	4,900	*	12,000	14,300	17,000
Truckee River	At Confluence With Cabin Creek	550	4,300	*	10,400	12,250	14,900
Truckee River	At Confluence With Pole Creek	540	3,500	*	8,700	10,600	12,700
Truckee River	At Confluence With Squaw Creek	529	2,400	*	5,750	7,000	9,000
Truckee River	At Confluence With Bear Creek	513	850	*	2,650	3,350	4,350

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
Ward Creek	At Limit of Detailed Study	9.7	1,825	*	2,605	2,936	3,608
Ward Creek	At Confluence With Unnamed Tributary	8.0	1,631	*	2,311	2,602	3,190

\*Not calculated for this Flood Risk Project

**Figure 7: Frequency Discharge-Drainage Area Curves**

[Not Applicable to this Flood Risk Project]

**Table 11: Summary of Non-Coastal Stillwater Elevations**

Flooding Source	Location	Elevations (feet NAVD88)				
		10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Lake Tahoe	Placer County, Unincorporated Areas	*	*	*	6,232.3	*

\*Not calculated for this Flood Risk Project

## **Table 12: Stream Gage Information used to Determine Discharges**

[Not Applicable to this Flood Risk 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 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
Antelope Creek	Confluence with Dry Creek/Miners Ravine	Citrus Colony Road	NP	NP	1998	AE w/ Floodway	
Antelope Creek Overflow	Confluence with Antelope Creek	Divergence from Antelope Creek	NP	NP	2001	AE	
Antelope Creek Tributary	Confluence with Antelope Creek	80 feet upstream of Humphrey Road	NP	NP	1998	AE w/ Floodway	
Auburn Ravine	1.07 miles downstream of South Brewer Road	1,368 feet upstream of Lozanos Road	HEC-HMS 3.0 and up (Dec 2005)	HEC-RAS 3.1.1 and up	2015	AE w/ Floodway	
Auburn Ravine	1,368 feet upstream of Lozanos Road	Luther Road	NP	NP	1998	AE w/ Floodway, AO	
Auburn Ravine Dairy Road Tributary	Confluence with Auburn Ravine	Luther Road	NP	NP	1998	AE w/ Floodway	
Barton (Polaris) Creek	Confluence of Lake Forest Creek	680 feet upstream of Mouth	NP	NP	2012	AE	
Bear Creek	Confluence with Truckee River	225 feet upstream of Park Drive	HEC-HMS 3.0 and up (Dec 2005)	HEC-RAS 3.1.1 and up	2015	AE w/ Floodway	
Bear River	0.52 miles downstream Of Highway 65	4.75 miles upstream Of Highway 65	NP	NP	2011	AE	
Bear River and Zone A tributaries	4.75 miles upstream Of Highway 65	1 square mile drainage area of Zone A streams	NP	NP	1998	A	
Camp Far West Reservoir	Entire Coastline	Bear River	NP	NP	1998	A	

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
Cirby Creek	Confluence with Dry Creek	1,400 feet upstream of Rocky Ridge Drive	NP	NP	2003	AE w/ Floodway	
Clover Valley Creek	Confluence with Antelope Creek	3,330 feet upstream of Fairway View Drive	NP	NP	1998	AE w/ Floodway	
Coon Creek and Zone A tributaries	Sutter County	1 square mile drainage area of Zone A streams	NP	NP	1998	A	
Coyote Creek	Confluence with Pleasant Grove Creek	1,280 feet upstream of Bob Doyle Drive	NP	NP	2006	AE	
Curry Creek	1.33 miles downstream of South Brewer Road	12,540 feet upstream of Country Acres Lane	HEC-HMS 3.0 and up (Dec 2005)	HEC-RAS 3.1.1 and up	2015	AE w/ Floodway	
Dry Creek	0.54 miles downstream of Watt Avenue	Confluence Of Antelope Creek And Miners Ravine	NP	NP	1998	AE w/ Floodway	
Dry Creek (near Auburn)	Confluence with Coon Creek	3,360 feet upstream of Haines Road	NP	NP	1998	AE w/ Floodway	
Dry Creek Antelope North Road Tributary East Branch	Confluence with Dry Creek	860 feet upstream of Pfe Road	NP	NP	1998	AE w/ Floodway	
Dry Creek Antelope North Road Tributary West Branch	Confluence with Dry Creek Antelope North Road Tributary East Branch	780 feet upstream of Mouth	NP	NP	1998	AE w/ Floodway	
Dry Creek Billy Mitchell Road Tributary	Confluence with Dry Creek	2,640 feet upstream of Pfe Road	NP	NP	1998	AE w/ Floodway	

Flooding Source	Study Limits Downstream Limit	Study Limits Upstream Limit	Hydrologic Model or Method Used	Hydraulic Model or Method Used	Date Analyses Completed	Flood Zone on FIRM	Special Considerations
Dry Creek Vineyard Road Tributary	Confluence with Dry Creek	Brady Lane	NP	NP	1998	AE w/ Floodway	
Dry Creek Walerga Road Tributary	Confluence with Dry Creek	30 feet upstream of Crowder Lane	NP	NP	1998	AE w/ Floodway	
French Meadows Reservoir	Entire Coastline	Picayune Valley	NP	NP	1998	A	
Folsom Lake	Entire Coastline	North Fork American River	NP	NP	1998	A	
Hell Hole Reservoir	Entire Coastline	Rubicon River	NP	NP	1998	A	
Ingram Slough	Confluence with Orchard Creek	0.5 miles downstream of Ferrari Ranch Road	NP	NP	2008	A	
Ingram Slough	0.5 miles downstream of Ferrari Ranch Road	220 feet upstream of Oak Tree Ln	NP	NP	2008	AE w/ Floodway	
Ingram Slough Irrigation Pond	Confluence with Ingram Slough South Branch	Divergence from Ingram Slough South Branch	NP	NP	2008	AE w/ Floodway	
Ingram Slough Overflow	Confluence with Ingram Slough	Divergence from Auburn Ravine	NP	NP	2008	AE w/ Floodway	
Ingram Slough South Branch	Confluence with Ingram Slough	3,190 feet upstream of Hidden Hills Lane	NP	NP	2008	AE w/ Floodway	
Ingram Slough South Reach	Confluence with Ingram Slough	Divergence from Ingram Slough	NP	NP	2008	AE w/ Floodway	
Kaseberg Creek	Confluence with Pleasant Grove Creek	Fiddymont Road	NP	NP	2006	AE	

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
Kaseberg Creek Tributary	Confluence with Kaseberg Creek	Fiddymment Road	NP	NP	2006	AE	
Lake Forest Creek	Confluence with Lake Tahoe	50 feet upstream of Highway 28	NP	NP	2012	AE	
Lake Tahoe	Entire Coastline	Entire Coastline	NP	NP	2014	AE	
Linda Creek	Confluence with Cirby Creek	405 feet upstream of Old Auburn Road	NP	NP	2003	AE w/ Floodway	
Linda Creek	405 feet upstream of Old Auburn Road	East Hidden Lakes Drive	HEC-HMS 3.0 and up (Dec 2005)	HEC-RAS 3.1.1 and up	2015	AE w/ Floodway	
Markham Ravine and Zone A tributaries	Sutter County	Limit of Detailed Study (Approximately 100 feet Downstream of Nelson Lane)	NP	NP	1998	A	
Markham Ravine	Approximately 100 feet Downstream of Nelson Lane	Fruitvale Road	NP	NP	1998	AE w/ Floodway	
Markham Ravine Lower Tributary	Confluence with Markham Ravine	650 feet upstream of Savannah Drive	NP	NP	1998	AE w/ Floodway	
Markham Ravine Lower Tributary	650 feet upstream of Savannah Drive	2,110 feet upstream of Joiner Parkway	NP	NP	1999	A	
Markham Ravine Upper Tributary	Confluence with Markham Ravine	3,480 feet upstream of McCourtney Road	NP	NP	1998	AE w/ Floodway	
Miners Ravine	Confluence with Dry Creek	565 feet upstream of Newcastle Road	NP	NP	2001	AE w/ Floodway	

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
North Fork American River and Zone A tributaries	Folsom Lake	2.5 miles upstream of Soda Springs Road	NP	NP	1998	A	
Orchard Creek	Confluence with Auburn Ravine	1,622 feet upstream of Fiddymment Road	HEC-HMS 3.0 and up (Dec 2005)	HEC-RAS 3.1.1 and up	2015	AE w/ Floodway	
Orchard Creek	1,622 feet upstream of Fiddymment Road	7,593 feet upstream of Fiddymment Road					
Orchard Creek	7,593 feet upstream of Fiddymment Road	2,630 feet upstream of Highway 65	NP	NP	2008	AE w/ Floodway	
Orchard Creek Tributary 1	Confluence with Orchard Creek	185 feet upstream of Athens Ave	NP	NP	1998	AE w/ Floodway	
Orchard Creek Tributary 2	Confluence with Orchard Creek	560 feet upstream of Highway 65	NP	NP	1998	AE w/ Floodway	
Orchard Creek Tributary 2-1	Confluence with Orchard Creek Tributary 2	1,890 feet upstream of Highway 65	NP	NP	1998	AE w/ Floodway	
Orchard Creek Tributary 2-2	Confluence with Orchard Creek Tributary 2	4,520 feet upstream of Mouth	NP	NP	1998	AE w/ Floodway	
Orchard Creek Tributary 3	Confluence with Orchard Creek	Divergence from Orchard Creek Tributary 3 – North Branch	NP	NP	2008	AE w/ Floodway	
Orchard Creek Tributary 3 – North Branch	Confluence with Orchard Creek Tributary 3	905 feet upstream of Twelve Bridges Drive	NP	NP	2008	AE w/ Floodway	

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
Orchard Creek Tributary 3 – South Branch	Confluence with Orchard Creek Tributary 3	Approximately 1,420 feet upstream of Ridge Top Lane	NP	NP	2008	AE w/ Floodway	
Pleasant Grove Creek	1.06 miles downstream of South Brewer Road	1,474 feet upstream of Saint Andrews Drive	HEC-HMS 3.0 and up (Dec 2005)	HEC-RAS 3.1.1 and up	2015	AE w/ Floodway	
Pleasant Grove Creek	1,474 feet upstream of Saint Andrews Drive	5,870 feet upstream of S Brewer Road	NP	NP	2003	AE w/ Floodway	
Pleasant Grove Creek North Branch	Confluence with Pleasant Grove Creek	1,490 feet upstream of Highway 65	HEC-HMS 3.0 and up (Dec 2005)	HEC-RAS 3.1.1 and up	2015	AE w/ Floodway	
Pleasant Grove Creek South Branch	Confluence with Pleasant Grove Creek	400 feet upstream of Heritage Drive	NP	NP	1998	AE w/ Floodway	
Pleasant Grove Creek Split Flow	Confluence with Pleasant Grove Creek	2,200 feet upstream of Mouth	HEC-HMS 3.0 and up (Dec 2005)	HEC-RAS 3.1.1 and up	2015	AE w/ Floodway	
Pleasant Grove Creek Tributary 1	Confluence with Pleasant Grove Creek	215 feet upstream of Highway 65 Exit 309 N Ramp	NP	NP	1998	AE w/ Floodway	
Pleasant Grove Creek Tributary 2	Confluence with Pleasant Grove Creek	235 feet upstream of Sunset Boulevard	HEC-HMS 3.0 and up (Dec 2005)	HEC-RAS 3.1.1 and up	2015	AE w/ Floodway	
Pleasant Grove Creek Tributary 3	Confluence with Pleasant Grove Creek	780 feet downstream of Blue Oaks Boulevard	NP	NP	1998	AE w/ Floodway	
Pleasant Grove Creek Tributary 4	Confluence with Pleasant Grove Creek	Fiddymment Road	NP	NP	1998	A	

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
Rocklin City Tributary	Confluence with Antelope Creek	840 feet upstream of Union Pacific Railroad	NP	NP	1998	AE w/ Floodway	
Rubicon River and Zone A tributaries	Oxbow Reservoir	Miller Lake	NP	NP	1998	A	
Secret Ravine	Confluence with Miners Ravine	King Road	NP	NP	1998	AE w/ Floodway	
Secret Ravine	King Road	2,370 feet upstream of Fairview Lane	NP	NP	1998	A, X	
Secret Ravine – Aguilar Tributary	Confluence with Secret Ravine	1,450 feet upstream of El Don Drive	NP	NP	1998	AE w/ Floodway	
Secret Ravine Upper Fork	Confluence with Secret Ravine	590 feet upstream of Rachel Court	NP	NP	1998	AE w/ Floodway	
Squaw Creek	Confluence with Truckee River	2,345 feet upstream of Squaw Valley Road	HEC-HMS 3.0 and up (Dec 2005)	HEC-RAS 3.1.1 and up	2015	AE w/ Floodway	
Squaw Creek - South Tributary	Confluence with Squaw Creek	945 feet upstream of Squaw Peak Road	HEC-HMS 3.0 and up (Dec 2005)	HEC-RAS 3.1.1 and up	2015	AE w/ Floodway	
Strap Ravine	Confluence with Linda Creek	1,000 feet upstream of Granite Estates Road	NP	NP	1998	AE w/ Floodway	
Sucker Ravine	Confluence with Secret Ravine	70 feet upstream of Sparas Street	NP	NP	1998	AE w/ Floodway	
Sucker Ravine Loomis Tributary	Confluence with Sucker Ravine	70 feet downstream of Stonegate Court	NP	NP	1998	AE	

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
Sucker Ravine Loomis Tributary	70 feet downstream of Stonegate Court	153 feet upstream of South Walnut Street	NP	NP	1998	AE w/ Floodway	
Sucker Ravine Loomis Tributary	153 feet upstream of South Walnut Street	35 feet upstream of Horseshoe Bar Road	NP	NP	2002	AE w/ Floodway	
Sucker Ravine Overflow Channel No.1	Confluence with Secret Ravine	Divergence from Sucker Ravine	NP	NP	1998	AE	
Sucker Ravine Overflow Channel No.2	Confluence with Secret Ravine	180 feet upstream of Saunders Ave	NP	NP	1998	AE	
Truckee River	89.9 miles upstream of Pyramid Lake	90.5 miles upstream of Pyramid Lake	NP	NP	1998	AE	
Truckee River	90.5 miles upstream of Pyramid Lake	92.38 miles upstream of Pyramid Lake	NP	NP	2003	AE w/ Floodway	
Truckee River	92.38 miles upstream of Pyramid Lake	Lake Tahoe Dam	NP	NP	1998	AE w/ Floodway	
Ward Creek	Confluence with Lake Tahoe	19,078 feet upstream of Highway 89	NP	NP	1998	AE w/ Floodway	

**Table 14: Roughness Coefficients**

Flooding Source	Channel "n"	Overbank "n"
Auburn Ravine	0.015-0.071	0.015-0.070
Bear Creek	0.065-0.080	0.040-0.100
Cirby Creek	0.035-0.080	0.035-0.100
Clover Valley Creek	0.030-0.040	0.030-0.150
Curry Creek	0.060-0.10	0.04-0.06
Dry Creek	0.045-0.100	0.055-0.100
Ingram Slough	0.035-0.100	0.035-0.200
Linda Creek	0.045-0.100	0.035-0.100
Markham Ravine	0.030-0.100	0.035-0.050
Miners Ravine	0.045-0.060	0.045-0.060
Miners Ravine	0.100	0.020-0.150
Orchard Creek Tributary 3	0.050-0.080	0.060
Pleasant Grove Creek	0.060-0.090	0.050
Secret Ravine	0.030-0.075	0.030-0.200
Squaw Creek	0.055	0.080
Strap Ravine	0.030-0.080	0.035-0.100

### **5.3 Coastal Analyses**

This section is not applicable to this Flood Risk Project.

#### **Table 15: Summary of Coastal Analyses**

[Not Applicable to this Flood Risk Project]

#### **5.3.1 Total Stillwater Elevations**

This section is not applicable to this Flood Risk Project.

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

[Not Applicable to this Flood Risk Project]

#### **Table 16: Tide Gage Analysis Specifics**

[Not Applicable to this Flood Risk Project]

#### **5.3.2 Waves**

This section is not applicable to this Flood Risk Project.

#### **5.3.3 Coastal Erosion**

This section is not applicable to this Flood Risk Project.

#### **5.3.4 Wave Hazard Analyses**

This section is not applicable to this Flood Risk Project.

#### **Table 17: Coastal Transect Parameters**

[Not Applicable to this Flood Risk Project]

#### **Figure 9: Transect Location Map**

[Not applicable to this Flood Risk Project]

### **5.4 Alluvial Fan Analyses**

This section is not applicable to this Flood Risk Project.

#### **Table 18: Summary of Alluvial Fan Analyses**

[Not Applicable to this Flood Risk Project]

#### **Table 19: Results of Alluvial Fan Analyses**

[Not Applicable to this Flood Risk Project]

## SECTION 6.0 – MAPPING METHODS

### 6.1 Vertical and Horizontal Control

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

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

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

**Table 20: Countywide Vertical Datum Conversion**

Quadrangle Name	Quadrangle Corner	Latitude	Longitude	Conversion from NGVD29 to NAVD88 (feet)
Auburn	NW	39.000	-121.125	2.418
Bunker Hill	NW	39.125	-120.500	3.612
Bunker Hill	SE	39.000	-120.375	3.527
Citrus Heights	NW	38.750	-121.375	2.418
Colfax	NW	39.125	-121.000	2.569

Quadrangle Name	Quadrangle Corner	Latitude	Longitude	Conversion from NGVD29 to NAVD88 (feet)
Devil Peak	NW	39.000	-120.625	3.051
Duncan Peak	NW	39.250	-120.625	3.504
Folsom	NW	38.750	-121.250	2.556
Foresthill	NW	39.125	-120.875	2.792
Georgetown	NW	39.000	-120.875	2.700
Gold Hill	NW	39.000	-121.250	2.313
Granite Chief	NW	39.250	-120.375	3.786
Greek Store	NW	39.125	-120.625	3.353
Greenwood	NW	39.000	-121.000	2.612
Homewood	NW	39.125	-120.250	4.213
Kings Beach	NW	39.250	-120.125	4.301
Kings Beach	SE	39.125	-120.000	3.924
Lincoln	NW	39.000	-121.375	2.162
Martis Peak	SE	39.250	-120.000	4.108
Meeks Bay	NW	39.125	-120.125	3.953
Michigan Bluff	NW	39.125	-120.750	3.117
Pilot Hill	NW	38.875	-121.125	2.569
Pleasant Grove	NW	38.875	-121.500	2.316
Rio Linda	NW	38.750	-121.500	2.428
Robbs Peak	NW	39.000	-120.500	3.330
Rocklin	NW	38.875	-121.250	2.398
Rocklin	SE	38.750	-121.125	2.592
Roseville	NW	38.875	-121.375	2.326
Royal Gorge	NW	39.250	-120.500	3.615
Tahoe City	NW	39.250	-120.250	4.288
Tunnel Hill	NW	39.000	-120.750	2.825
Wentworth Springs	NW	39.125	-120.375	3.740
Wentworth Springs	SE	39.000	-120.250	3.875
Westville	NW	39.250	-120.750	3.199
Average Conversion from NGVD29 to NAVD88 = 3.132 feet				

A countywide conversion factor could not be generated for Placer County because the maximum variance from average exceeds 0.25 feet. Calculations for the vertical offsets on a stream by stream basis are depicted in Table 21.

**Table 21: Stream-Based Vertical Datum Conversion**

Flooding Source	Average Vertical Datum Conversion Factor (feet)
Antelope Creek	2.49
Antelope Creek Overflow	2.38
Antelope Creek Tributary	2.51
Auburn Ravine	2.40
Auburn Ravine Dairy Road Tributary	2.55
Barton (Polaris) Creek	4.04
Bear Creek	4.12
Bear River	2.19
Cirby Creek	2.53
Clover Valley Creek	2.47
Coyote Creek	2.35
Dry Creek	2.47
Dry Creek (Near Auburn)	2.53
Dry Creek Antelope North Road Tributary East Branch	2.46
Dry Creek Antelope North Road Tributary West Branch	2.47
Dry Creek Billy Mitchell Road Tributary	2.46
Dry Creek Vineyard Road Tributary	2.44
Dry Creek Walerga Road Tributary	2.43
Ingram Slough	2.34
Ingram Slough Irrigation Pond	2.34
Ingram Slough Overflow	2.34
Ingram Slough South Branch	2.34
Ingram Slough South Reach	2.34
Kaseberg Creek	2.35
Kaseberg Creek Tributary	2.35
Lake Forest Creek	4.04
Linda Creek	2.58
Markham Ravine	2.34
Markham Ravine Lower Tributary	2.34
Markham Ravine Upper Tributary	2.35

Flooding Source	Average Vertical Datum Conversion Factor (feet)
Miners Ravine	2.56
Orchard Creek	2.33
Orchard Creek Tributary 1	2.33
Orchard Creek Tributary 2	2.33
Orchard Creek Tributary 2-1	2.33
Orchard Creek Tributary 2-2	2.33
Orchard Creek Tributary 3	2.37
Orchard Creek Tributary 3 - North Branch	2.37
Orchard Creek Tributary 3 - South Branch	2.37
Pleasant Grove Creek	2.38
Pleasant Grove Creek North Branch	2.32
Pleasant Grove Creek South Branch	2.38
Pleasant Grove Creek Split Flow	2.32
Pleasant Grove Creek Tributary 1	2.33
Pleasant Grove Creek Tributary 2	2.33
Pleasant Grove Creek Tributary 3	2.36
Rocklin City Tributary	2.50
Secret Ravine	2.53
Secret Ravine - Aguilar Tributary	2.53
Secret Ravine Upper Fork	2.54
Squaw Creek	4.10
Squaw Creek – South Tributary	4.15
Strap Ravine	2.57
Sucker Ravine	2.52
Sucker Ravine Loomis Tributary	2.53
Sucker Ravine Overflow Channel No.1	2.51
Sucker Ravine Overflow Channel No.2	2.36
Truckee River	4.03
Ward Creek	4.08

## 6.2 Base Map

The FIRMs and FIS Report for this project have been produced in a digital format. The flood hazard information was converted to a Geographic Information System (GIS) format that meets FEMA’s FIRM database specifications and geographic information standards. This information is

provided in a digital format so that it can be incorporated into a local GIS and be accessed more easily by the community. The FIRM Database includes most of the tabular information contained in the FIS Report in such a way that the data can be associated with pertinent spatial features. For example, the information contained in the Floodway Data table and Flood Profiles can be linked to the cross sections that are shown on the FIRMs. Additional information about the FIRM Database and its contents can be found in FEMA’s *Guidelines and Standards for Flood Risk Analysis and Mapping*, [www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping](http://www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping).

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
Placer County, CA DFIRM	FEMA	6/8/1998	1:6,000	Initial Countywide Digital Flood Insurance Rate Map database for Placer County
Towns, Cities, and Jurisdictions of Placer County	Placer County Geographic Information System Data Clearinghouse	1/1/2010	1:6,000	Municipal and county boundaries
Orthophoto of Placer County	Aerial Photography Field Office	1/1/2014	1:24,000	Color orthoimagery was provided for areas of the county.
Water lines and areas for Placer County	Placer County Geographic Information System Data Clearinghouse	1/1/2010	1:24,000	Streams, rivers, and lakes were derived from USGS 1:24000 quadrangles and other Placer County sources.
Cadastral PLSS Standardized Data	Bureau of Land Management	9/19/2011	1:6,000	PLSS data were digitized from USGS quadrangles
Street centerlines of Placer County	Placer County Geographic Information System Data Clearinghouse	1/1/2010	1:6,000	Roads and railroads for areas of the county.
8-Digit Watershed Boundary	USDA/NRCS-National Cartography & Geospatial Center	10/10/2010	1:24,000	The 8-digit Hydrologic Unit Codes (HUC-8) sub-basins for areas of the county.

### 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 23 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	RMSE <sub>z</sub>	Accuracy <sub>z</sub>	Citation
Placer County and Incorporated Areas	All areas in Western and Eastern Extents	Light Detection and Ranging data (LiDAR)	1:500	1 ft	6.6 cm	13 cm	USGS 2012
Placer County and Incorporated Areas	Far Western Extents	Light Detection and Ranging data (LiDAR)	1:500	1 ft	3.4 cm	6.7 cm	CVFED 2010

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. Rounded whole-foot elevations may be shown on the FIRM in coastal areas, areas of ponding, and other areas with static base flood elevations.

**Table 24: Floodway Data**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Antelope Creek								
A	1,076	216	1,319	2.3	160.2	160.2	161.1	0.9
B	3,786	245	1,821	1.7	168.1	168.1	168.4	0.3
C	5,124	111	1,160	2.7	175.2	175.2	176.2	1.0
D	6,737	123	986	3.1	176.1	176.1	177.0	0.9
E	7,935	153	983	3.1	177.7	177.7	178.3	0.6
F	9,787	211	993	3.1	181.5	181.5	182.2	0.7
G	10,782	124	512	6.0	184.2	184.2	185.4	1.2
H	11,118	95	615	5.0	185.9	185.9	186.5	0.6
I	11,854	81	619	5.1	189.5	189.5	190.1	0.6
J	12,321	103	1,043	3.0	190.3	190.3	190.8	0.5
K	12,811	51	312	10.2	190.5	190.5	190.6	0.1
L	13,869	150	944	3.4	195.0	195.0	195.9	0.9
M	14,559	120	686	4.6	196.4	196.4	197.2	0.8
N	15,134	84	559	5.7	198.8	198.8	199.3	0.5
O	15,443	134	830	3.8	200.3	200.3	200.5	0.2
P	16,167	95	485	6.5	201.8	201.8	202.3	0.5
Q	16,615	64	405	7.8	203.6	203.6	203.9	0.3
R-S <sup>2</sup>								
T	20,014	124	633	5.0	213.5	213.5	214.0	0.5
U	22,705	102	639	5.0	223.2	223.2	223.9	0.7
V	23,828	96	679	4.7	227.2	227.2	227.8	0.6
W	25,027	75	461	5.1	232.5	232.5	232.5	0.0
X	25,800	110	1,247	1.9	239.5	239.5	239.5	0.0
Y	26,449	51	490	4.8	239.5	239.5	239.7	0.2
Z	27,368	108	397	5.9	241.2	241.2	241.2	0.0

<sup>1</sup>Distance in feet above confluence with Dry Creek/Miners Ravine

<sup>2</sup>Floodway not determined

<b>TABLE 24</b>	<b>FEDERAL EMERGENCY MANAGEMENT AGENCY PLACER COUNTY, CA AND INCORPORATED AREAS</b>	<b>FLOODWAY DATA</b>
		<b>FLOODING SOURCE: ANTELOPE CREEK</b>

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Antelope Creek								
AA	28,201 <sup>1</sup>	105	415	5.6	251.0	251.0	251.1	0.1
AB	29,010 <sup>1</sup>	190	867	2.7	257.8	257.8	258.7	0.9
AC	30,052 <sup>1</sup>	305	1,141	2.0	272.8	272.8	273.7	0.9
AD	30,922 <sup>1</sup>	213	814	2.8	276.7	276.7	277.0	0.3
AE	32,057 <sup>1</sup>	132	509	4.5	282.4	282.4	282.5	0.1
AF	32,767 <sup>1</sup>	80	272	8.0	287.6	287.6	287.8	0.2
AG	33,519 <sup>1</sup>	193	954	2.3	295.6	295.6	295.6	0.0
AH	34,537 <sup>1</sup>	118	640	3.4	301.7	301.7	301.7	0.0
AI	35,502 <sup>1</sup>	100	476	4.6	305.3	305.3	306.1	0.8
AJ	36,652 <sup>1</sup>	157	553	3.9	313.9	313.9	314.3	0.4
AK	37,800 <sup>1</sup>	107	625	3.5	321.0	321.0	321.3	0.3
AL	41,596 <sup>1</sup>	75	114	7.6	344.0	344.0	344.0	0.0
AM	42,131 <sup>1</sup>	130	371	2.3	348.0	348.0	348.4	0.4
AN	43,916 <sup>1</sup>	293	414	1.8	354.3	354.3	354.7	0.4
AO	44,576 <sup>1</sup>	356	454	1.6	356.3	356.3	356.5	0.2
AP	45,846 <sup>1</sup>	259	273	2.7	364.4	364.4	364.4	0.0
Antelope Creek Tributary								
A	300 <sup>2</sup>	100	343	3.7	344.1	344.1	344.4	0.3
B	398 <sup>2</sup>	95	321	4.0	345.7	345.7	345.8	0.1
C	858 <sup>2</sup>	256	509	2.5	347.1	347.1	347.4	0.3
D	1,383 <sup>2</sup>	45	141	9.0	350.0	350.0	350.5	0.5
E	1,473 <sup>2</sup>	440	1,528	0.8	354.0	354.0	354.0	0.0
F	2,211 <sup>2</sup>	268	331	3.8	354.8	354.8	354.8	0.0
G	2,691 <sup>2</sup>	395	732	1.6	359.5	359.5	359.5	0.0
H	3,012 <sup>2</sup>	539	605	1.9	360.4	360.4	360.4	0.0
I	3,767 <sup>2</sup>	140	779	1.5	364.4	364.4	364.4	0.0
J	4,262 <sup>2</sup>	38	116	9.9	370.8	370.8	370.8	0.0
K	4,977 <sup>2</sup>	240	536	2.2	377.1	377.1	377.1	0.0

<sup>1</sup>Distance in feet above confluence with Dry Creek/Miners Ravine

<sup>2</sup>Distance in feet above confluence with Antelope Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

FLOODING SOURCE: ANTELOPE CREEK - ANTELOPE CREEK  
TRIBUTARY

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Auburn Ravine								
A	19,351	2,486	4,259	1.9	57.7	57.7	58.5	0.8
B	21,875	3,018	7,145	1.1	61.3	61.3	62.3	0.9
C	23,316	1,307	2,365	3.4	63.7	63.7	64.0	0.3
D	25,318	1,230	3,076	2.7	66.1	66.1	66.9	0.9
E	27,815	830	1,578	5.2	69.3	69.3	70.0	0.7
F	30,302	1,430	3,989	2.1	72.6	72.6	73.5	0.9
G	32,805	1,652	2,190	3.8	74.8	74.8	75.6	0.8
H	34,441	1,902	3,255	2.5	77.5	77.5	77.9	0.4
I	36,675	813	2,405	3.4	80.7	80.7	81.5	0.8
J	39,178	854	2,769	3.0	84.1	84.1	84.9	0.8
K	41,459	651	2,508	3.3	88.1	88.1	89.0	0.9
L	43,196	661	2,874	3.8	90.2	90.2	91.0	0.8
M	46,237	1,742	4,759	2.3	94.9	94.9	95.8	0.9
N	49,695	790	1,945	3.8	99.8	99.8	100.5	0.7
O	52,129	315	1,856	4.6	104.2	104.2	104.8	0.6
P	53,793	1,177	4,020	1.8	108.2	108.2	109.1	0.8
Q	56,945	507	1,890	5.1	111.5	111.5	112.2	0.7
R	59,500	435	2,005	4.8	117.5	117.5	118.3	0.8
S	60,958	1,014	3,318	2.9	119.9	119.9	120.9	0.9
T	63,788	650	2,576	3.7	124.0	124.0	124.9	0.9
U	66,813	604	2,483	3.9	129.1	129.1	129.9	0.8
V	67,309	427	1,967	4.9	130.2	130.2	131.0	0.8
W	69,707	330	2,436	4.0	135.2	135.2	136.1	0.9
X	71,127	661	5,712	1.7	141.0	141.0	141.1	0.1
Y	73,033	881	4,181	2.4	141.5	141.5	141.9	0.3
Z	74,047	522	2,436	4.1	144.1	144.1	144.9	0.9

<sup>1</sup>Distance in feet above confluence with East Side Canal

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: AUBURN RAVINE**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Auburn Ravine								
AA	74,997	667	3,242	3.0	146.5	146.5	147.4	0.9
AB	76,454	429	2,667	3.7	152.2	152.2	153.0	0.8
AC	77,463	425	3,885	2.5	157.2	157.2	158.2	1.0
AD	78,878	345	2,033	6.6	159.9	159.9	160.5	0.6
AE	80,066	517	5,220	2.6	161.8	161.8	162.5	0.7
AF	80,974	585	4,498	3.0	162.0	162.0	162.7	0.7
AG	82,025	440	3,018	4.5	162.8	162.8	163.5	0.7
AH	82,632	700	7,818	1.7	174.3	174.3	175.3	1.0
AI	84,538	486	3,470	4.5	175.4	175.4	176.3	0.9
AJ	85,098	415	2,813	5.6	176.3	176.3	177.2	0.9
AK	87,585	490	3,006	5.2	185.1	185.1	185.2	0.2
AL	89,887	807	4,321	3.6	192.2	192.2	192.3	0.1
AM	93,514	390	1,715	9.1	206.8	206.8	207.2	0.4
AN	97,110	122	1,571	10.0	221.4	221.4	221.8	0.4
AO	99,591	359	3,661	4.3	233.6	233.6	234.3	0.6
AP	101,793	97	1,149	13.6	242.1	242.1	243.0	1.0
AQ	103,694	430	2,435	7.3	254.0	254.0	254.2	0.2
AR	105,098	115	1,538	10.3	257.3	257.3	257.8	0.4
AS	106,693	317	3,967	3.7	268.4	268.4	269.1	0.7
AT	109,803	109	1,075	13.5	282.5	282.5	282.7	0.2
AU	113,098	315	2,459	5.9	309.4	309.4	309.7	0.3
AV	114,275	241	2,400	6.0	313.4	313.4	313.5	0.1
AW	116,366	464	2,179	6.6	327.3	327.3	327.3	0.0
AX	118,356	395	2,917	5.5	338.5	338.5	339.4	0.9
AY	119,576	334	2,770	4.2	348.3	348.3	348.9	0.6
AZ	122,607	140	851	12.7	366.1	366.1	366.4	0.3

<sup>1</sup>Distance in feet above confluence with East Side Canal

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: AUBURN RAVINE**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Auburn Ravine								
BA	124,883	123	1,013	10.2	425.0	425.0	425.0	0.0
BB	126,092	76	943	11.0	457.2	457.2	457.2	0.0
BC	128,457	132	869	11.9	516.0	516.0	516.1	0.1
BD	130,532	89	830	12.5	545.2	545.2	545.3	0.1
BE	132,607	96	993	8.6	580.5	580.5	580.9	0.4
BF	135,759	97	989	7.2	623.2	623.2	623.8	0.6
BG	138,600	123	820	5.8	673.9	673.9	674.5	0.6
BH	139,313	66	729	6.5	689.3	689.3	689.4	0.1
BI	140,622	45	555	8.5	708.1	708.1	708.6	0.5
BJ	141,971	93	468	12.7	760.8	760.8	760.8	0.0
BK	142,691	114	514	11.6	776.8	776.8	776.8	0.0
BL	143,511	79	440	13.5	800.5	800.5	800.5	0.0
BM	143,876	85	480	12.4	808.3	808.3	808.3	0.0
BN	144,826	89	459	13.0	838.6	838.6	838.6	0.0
BO	145,316	127	514	11.6	854.0	854.0	854.0	0.0
BP	146,591	101	524	10.9	878.6	878.6	878.8	0.2
BQ	146,826	145	593	9.7	883.0	883.0	883.0	0.0
BR	147,426	120	564	10.2	894.8	894.8	894.8	0.0
BS	147,756	74	662	8.7	909.1	909.1	909.1	0.0
BT	148,071	58	308	11.5	909.3	909.3	909.3	0.0
BU	148,361	38	244	14.6	917.9	917.9	917.9	0.0
BV	148,476	67	502	5.8	922.3	922.3	922.3	0.0
BW	148,776	71	291	10.1	925.0	925.0	925.1	0.1
BX	149,071	44	234	12.6	931.2	931.2	931.4	0.2
BY	149,246	72	981	3.5	946.9	946.9	946.9	0.0
BZ	149,606	97	710	4.9	947.0	947.0	947.0	0.0

<sup>1</sup>Distance in feet above confluence with East Side Canal

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: AUBURN RAVINE**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Auburn Ravine								
CA	150,181	49	262	13.3	961.8	961.8	961.8	0.0
CB	150,486	97	1,917	1.8	992.4	992.4	992.8	0.4
CC	150,971	88	1,006	3.4	992.4	992.4	992.7	0.3
CD	151,491	20	195	17.8	998.8	998.8	998.8	0.0
CE	151,591	74	529	6.6	1,004.1	1,004.1	1,004.1	0.0
CF	151,956	24	195	16.3	1,015.9	1,015.9	1,015.9	0.0
CG	152,696	58	262	12.1	1,048.6	1,048.6	1,048.6	0.0
CH	153,396	42	236	13.5	1,095.0	1,095.0	1,095.0	0.0
CI	155,826	90	506	6.3	1,171.1	1,171.1	1,171.1	0.0
CJ	155,916	53	379	5.4	1,171.4	1,171.4	1,171.4	0.0
CK	156,206	56	420	4.9	1,180.9	1,180.9	1,180.9	0.0
CL	156,731	96	247	8.2	1,188.5	1,188.5	1,188.5	0.0
CM	156,931	65	200	10.2	1,193.8	1,193.8	1,193.8	0.0
CN	157,116	120	269	7.6	1,197.8	1,197.8	1,197.8	0.0
CO-CS <sup>2</sup>								
CT	159,616	84	1,263	1.6	1,260.8	1,260.8	1,260.8	0.0
CU	160,097	48	244	8.4	1,262.0	1,262.0	1,262.6	0.6
CV	160,711	80	343	5.9	1,272.7	1,272.7	1,273.4	0.7
CW	161,296	68	295	6.9	1,278.8	1,278.8	1,279.8	1.0
CX	161,696	74	337	6.1	1,283.0	1,283.0	1,283.7	0.7
CY	162,391	56	310	6.2	1,295.7	1,295.7	1,296.7	1.0
CZ	162,881	55	253	7.5	1,302.2	1,302.2	1,302.9	0.7
DA	163,146	50	190	10.1	1,308.9	1,308.9	1,309.5	0.6
DB	163,506	26	130	7.8	1,316.8	1,316.8	1,317.6	0.8
DC	163,896	151	420	2.4	1,326.8	1,326.8	1,326.8	0.0
DD	164,146	52	146	6.9	1,329.6	1,329.6	1,330.4	0.8

<sup>1</sup>Distance in feet above confluence with East Side Canal

<sup>2</sup>Data not available

<b>TABLE 24</b>	<b>FEDERAL EMERGENCY MANAGEMENT AGENCY PLACER COUNTY, CA AND INCORPORATED AREAS</b>	<b>FLOODWAY DATA</b>
		<b>FLOODING SOURCE: AUBURN RAVINE</b>

LOCATION		FLOODWAY			1% ANNUAL CHANCE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Auburn Ravine								
DE	164,471	102	315	3.2	1,340.2	1,340.2	1,340.9	0.7
DF	164,556	38	105	9.7	1,342.7	1,342.7	1,342.8	0.1
DG	164,671	29	124	8.2	1,346.6	1,346.6	1,347.5	0.9
DH	164,891	36	103	9.8	1,352.8	1,352.8	1,352.9	0.1
DI	165,081	59	125	8.1	1,359.6	1,359.6	1,359.6	0.0
DJ	165,406	43	136	7.5	1,372.2	1,372.2	1,372.8	0.6
DK	165,566	44	114	8.9	1,375.3	1,375.3	1,375.8	0.5
DL	165,731	38	99	9.3	1,378.8	1,378.8	1,379.6	0.8
DM	165,866	30	109	8.4	1,382.4	1,382.4	1,382.8	0.4
DN	166,036	34	102	8.9	1,387.2	1,387.2	1,387.7	0.5
DO	166,416	34	94	9.7	1,400.2	1,400.2	1,400.2	0.0
DP	166,736	76	195	4.7	1,409.6	1,409.6	1,409.9	0.3
DQ	166,886	48	107	8.5	1,413.3	1,413.3	1,413.3	0.0
DR	167,066	31	93	9.9	1,419.8	1,419.8	1,419.8	0.0
DS	167,411	51	178	5.1	1,431.0	1,431.0	1,431.2	0.2
DT	167,486	65	316	2.9	1,436.1	1,436.1	1,436.1	0.0
DU	168,341	29	65	8.5	1,460.1	1,460.1	1,460.1	0.0
DV	168,941	37	106	5.2	1,477.5	1,477.5	1,477.8	0.3
DW	169,321	15	54	10.1	1,486.6	1,486.6	1,487.5	0.9
DX	169,846	32	115	4.8	1,498.9	1,498.9	1,499.8	0.9
DY	169,971	38	79	6.9	1,501.9	1,501.9	1,502.0	0.1
DZ	170,126	27	63	8.8	1,507.8	1,507.8	1,508.1	0.3
EA	170,226	30	92	6.0	1,510.7	1,510.7	1,511.7	1.0
EB	170,326	25	62	8.9	1,518.0	1,518.0	1,518.3	0.3
EC	170,486	94	101	5.5	1,531.4	1,531.4	1,531.4	0.0

<sup>1</sup>Distance in feet above confluence with East Side Canal

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: AUBURN RAVINE**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Auburn Ravine Dairy Road Tributary								
A	0	22	70	7.5	1,312.0 <sup>2</sup>	1,310.4	1,311.4	1.0
B	100	17	54	9.6	1,313.9	1,313.9	1,313.9	0.0
C	320	27	53	9.8	1,320.9	1,320.9	1,320.9	0.0
D	580	29	63	8.3	1,328.9	1,328.9	1,328.9	0.0
E	980	41	70	7.4	1,337.4	1,337.4	1,337.4	0.0
F	1,220	115	259	2.0	1,339.9	1,339.9	1,340.1	0.2
G	1,380	68	80	6.5	1,341.7	1,341.7	1,342.0	0.3
H	1,575	130	135	3.9	1,346.1	1,346.1	1,346.1	0.0
I	1,885	63	225	2.3	1,350.7	1,350.7	1,351.7	1.0
J	2,095	45	71	7.3	1,353.0	1,353.0	1,353.0	0.0
K	2,245	28	61	8.5	1,359.0	1,359.0	1,359.0	0.0
L	2,565	20	62	8.4	1,375.2	1,375.2	1,375.3	0.1
M	3,000	26	50	8.0	1,389.6	1,389.6	1,389.9	0.3
N	3,620	53	64	6.3	1,425.6	1,425.6	1,425.6	0.0
O	4,115	81	86	4.7	1,450.5	1,450.5	1,450.5	0.0
P	4,390	61	98	4.1	1,456.3	1,456.3	1,456.3	0.0
Q	4,550	77	196	2.0	1,461.4	1,461.4	1,461.4	0.0
R	4,730	22	48	8.3	1,464.9	1,464.9	1,464.9	0.0
S	4,990	27	67	6.0	1,470.8	1,470.8	1,471.2	0.4
T	5,250	40	58	6.9	1,476.8	1,476.8	1,476.8	0.0

<sup>1</sup>Distance in feet above confluence with Auburn Ravine

<sup>2</sup>Due to backwater effects from Auburn Ravine

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

FLOODING SOURCE: AUBURN RAVINE DAIRY ROAD TRIBUTARY

LOCATION		FLOODWAY			1% ANNUAL CHANCE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Bear Creek								
A	84	175	509	5.7	6,169.1	6,169.1	6,169.1	0.4
B	1,030	70	278	10.4	6,203.5	6,203.5	6,203.5	0.0
C	2,925	158	445	6.5	6,264.0	6,264.0	6,264.0	0.5
D	5,169	89	400	7.2	6,299.3	6,299.3	6,299.3	0.1
E	6,056	68	276	10.5	6,326.7	6,326.7	6,326.7	0.2
F	8,379	62	241	9.6	6,396.2	6,396.2	6,396.2	0.0
G	9,984	58	256	9.1	6,430.8	6,430.8	6,430.8	1.0
H	10,423	158	699	3.3	6,440.5	6,440.5	6,440.5	0.0
I	12,133	33	151	11.6	6,479.4	6,479.4	6,479.4	0.1
J	13,395	35	151	10.7	6,553.1	6,553.1	6,553.1	0.1
K	14,546	91	476	7.1	6,603.4	6,603.4	6,603.4	0.0
L	14,768	47	166	9.7	6,619.4	6,619.4	6,619.4	0.0

<sup>1</sup>Distance in feet above confluence with Truckee River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: BEAR CREEK**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Cirby Creek								
A	125	103	983	4.2	134.5	128.8 <sup>2</sup>	129.8	1.0
B	1,625	86	766	5.4	134.5	130.0 <sup>2</sup>	130.8	0.8
C	2,905	62	412	10.0	134.5	132.2 <sup>2</sup>	132.9	0.7
D	3,095	65	462	8.9	134.5	133.5 <sup>2</sup>	133.7	0.2
E	4,193	68	590	7.0	135.6	135.6	136.0	0.4
F	4,490	95	831	4.9	137.1	137.1	137.5	0.4
G	4,683	149	1,064	3.9	137.5	137.5	137.8	0.3
H	5,526	239	1,598	2.6	139.5	139.5	139.6	0.1
I	6,135	279	1,532	2.7	139.9	139.9	140.2	0.3
J	9,999	40	155	4.7	146.0	146.0	146.1	0.1
K	10,938	208	208	3.5	147.4	147.4	147.9	0.5
L	11,804	218	218	3.4	148.6	148.6	149.2	0.6
M	11,859	293	293	2.5	148.8	148.8	149.4	0.6
N	12,463	19	106	5.5	149.3	149.3	149.8	0.5
O	12,560	35	118	4.9	151.5	151.5	151.9	0.4
P	13,826	33	126	4.1	158.8	158.8	158.8	0.0
Q	13,908	46	289	1.8	161.0	161.0	161.8	0.8
R	14,413	37	194	1.7	161.7	161.7	162.4	0.7
S	14,552	46	216	1.6	163.0	163.0	163.7	0.7
T	15,305	32	89	3.8	165.5	165.5	165.8	0.3
U	16,219	35	95	3.6	168.2	168.2	168.4	0.2

<sup>1</sup>Distance in feet above confluence with Dry Creek  
<sup>2</sup>Elevation computed without consideration of backwater effects from Dry Creek

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY PLACER COUNTY, CA AND INCORPORATED AREAS	<b>FLOODWAY DATA</b>
		FLOODING SOURCE: CIRBY CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Clover Valley Creek								
A	280	23	80	10.7	229.5 <sup>2</sup>	226.5	226.5	0.0
B	610	65	624	1.4	238.8	238.8	238.8	0.0
C	1,470	38	224	3.8	238.9	238.9	238.9	0.0
D	2,990	38	121	7.1	248.3	248.3	248.3	0.0
E	4,060	56	108	7.9	253.2	253.2	253.2	0.0
F	4,910	50	356	2.4	261.7	261.7	261.8	0.1
G	6,095	43	183	4.7	265.8	265.8	266.0	0.2
H	7,265	49	103	8.3	272.4	272.4	272.4	0.0
I	7,940	83	503	1.7	277.9	277.9	278.0	0.1
J	9,030	23	81	10.6	282.5	282.5	282.5	0.0
K	9,645	49	253	3.4	290.9	290.9	291.2	0.3
L	10,380	62	245	3.5	294.7	294.7	295.1	0.4
M	11,065	294	278	3.1	298.8	298.8	298.9	0.1
N	11,820	37	166	5.2	303.8	303.8	304.3	0.5
O	12,345	136	438	1.7	308.0	308.0	308.3	0.3
P	12,945	506	1,035	0.7	308.1	308.1	308.4	0.3
Q	14,885	104	167	4.4	324.4	324.4	324.4	0.0
R	16,690	119	141	5.2	342.3	342.3	342.3	0.0
S	18,840	57	132	5.6	364.2	364.2	364.8	0.6
T	20,855	29	85	8.7	378.1	378.1	378.5	0.4
U	22,700	33	82	9.0	396.2	396.2	396.2	0.0
V	24,640	32	81	9.2	420.9	420.9	421.2	0.3
W	25,945	132	620	1.2	437.6	437.6	437.6	0.0
X	26,785	32	81	9.1	440.7	440.7	440.7	0.0
Y	27,930	27	76	9.8	461.5	461.5	461.5	0.0
Z	29,840	44	100	7.4	493.4	493.4	493.6	0.2
AA	30,285	50	109	6.8	499.5	499.5	499.6	0.1

<sup>1</sup> Distance in feet above confluence with Antelope Creek

<sup>2</sup> Due to backwater effects from Antelope Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: CLOVER VALLEY CREEK**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Curry Creek								
A	12,687	558	1,322	3.0	48.7	48.7	49.1	0.4
B	14,220	568	1,019	2.0	49.5	49.5	50.5	1.0
C	15,408	486	1,044	2.0	50.9	50.9	51.9	1.0
D	15,922	395	690	3.0	51.9	51.9	52.7	0.8
E	16,748	550	1,434	1.4	52.8	52.8	53.7	0.9
F	18,085	453	986	2.1	54.2	54.2	55.2	1.0
G	19,551	848	1,893	0.8	55.3	55.3	56.1	0.8
H	19,767	79	434	3.7	57.8	57.8	58.3	0.5
I	20,929	209	713	2.2	59.2	59.2	59.7	0.5
J	21,988	208	733	2.2	60.3	60.3	61.0	0.7
K	22,984	219	759	2.0	61.4	61.4	62.3	0.9
L	24,666	142	454	3.4	62.6	62.6	63.5	0.9
M	25,549	136	551	2.8	64.3	64.3	65.3	1.0
N	26,594	157	579	2.6	65.3	65.3	66.3	1.0
O	27,609	300	832	1.8	66.6	66.6	67.5	0.9
P	28,390	311	682	2.2	67.9	67.9	68.8	1.0
Q	28,918	101	143	6.7	69.6	69.6	70.2	0.6
R	30,134	110	242	4.0	70.5	70.5	71.3	0.9
S	31,000	34	193	5.0	74.0	74.0	74.2	0.2
T	31,540	145	482	2.6	75.8	75.8	76.1	0.2
U	32,486	46	272	3.5	77.5	77.5	78.0	0.5
V	33,458	214	824	1.5	78.6	78.6	79.4	0.9
W	35,148	187	601	1.6	79.5	79.5	80.5	1.0
X	36,807	51	333	2.9	81.4	81.4	82.2	0.8
Y	37,676	139	544	1.8	81.9	81.9	82.8	0.9
Z	38,165	51	260	3.7	82.5	82.5	83.4	0.9

<sup>1</sup> Distance in feet above Confluence with Pleasant Grove Creek Canal

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: CURRY CREEK**

LOCATION		FLOODWAY			1% ANNUAL CHANCE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Dry Creek								
A	20	695	4,983	2.8	82.2	82.2	83.2	1.0
B	515	768	5,190	2.7	82.8	82.8	83.8	1.0
C	2,225	1,154	5,663	2.5	84.1	84.1	85.0	0.9
D	3,700	702	3,131	4.5	85.4	85.4	86.3	0.9
E	4,485	653	3,586	3.9	87.3	87.3	88.0	0.7
F	5,205	722	4,226	3.3	88.1	88.1	89.1	1.0
G	5,975	1,170	5,491	2.5	89.0	89.0	90.0	1.0
H	6,675	830	4,072	3.4	89.8	89.8	90.8	1.0
I	7,690	657	3,913	3.6	91.3	91.3	92.1	0.8
J	9,115	769	3,790	3.7	93.2	93.2	93.7	0.5
K	9,910	650	3,880	3.6	94.7	94.7	95.3	0.6
L	11,135	500	4,439	3.2	96.0	96.0	96.7	0.7
M	12,240	514	4,028	3.5	97.1	97.1	97.9	0.8
N	12,860	908	6,967	2.0	97.7	97.7	98.5	0.8
O	13,500	508	4,212	3.3	98.1	98.1	98.9	0.8
P	14,310	600	4,951	2.8	99.1	99.1	99.8	0.7
Q	15,150	346	3,366	4.2	100.4	100.4	100.9	0.5
R	16,035	376	3,740	3.7	102.1	102.1	102.4	0.3
S	16,930	371	3,806	3.7	103.3	103.3	103.6	0.3
T	17,420	460	4,356	3.2	103.9	103.9	104.3	0.4
U	18,270	381	3,562	3.9	105.5	105.5	105.8	0.3
V	19,795	205	3,478	4.0	112.7	112.7	112.7	0.0
W	20,580	596	7,066	2.0	112.9	112.9	113.1	0.2
X	21,110	520	5,996	2.3	113.0	113.0	113.2	0.2
Y	21,560	546	6,520	2.1	113.1	113.1	113.3	0.2
Z	22,040	680	6,925	2.0	113.3	113.3	113.5	0.2

<sup>1</sup> Distance in feet above Sacramento/Placer County Border

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: DRY CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Dry Creek								
AA	22,925	677	6,663	2.1	113.7	113.7	113.9	0.2
AB	23,795	641	5,130	2.7	114.4	114.4	114.6	0.2
AC	24,485	645	5,114	2.7	115.6	115.6	115.7	0.1
AD	24,833	620	998	14.0	117.1	117.1	117.9	0.8
AE	27,025	719	7,106	2.0	121.1	121.1	121.7	0.6
AF	28,856	150	1,518	9.2	121.4	121.4	122.1	0.7
AG	28,977	171	2,155	6.5	122.2	122.2	122.9	0.7
AH	30,308	339	2,570	5.4	126.4	126.4	126.6	0.2
AI	30,547	195	2,769	5.1	126.4	126.4	126.4	0.0
AJ	31,268	407	4,772	2.9	128.8	128.8	129.4	0.6
AK	31,415	468	4,632	3.0	130.8	130.8	131.8	1.0
AL	33,037	319	3,836	3.7	131.6	131.6	132.4	0.8
AM	35,822	148	1,832	7.5	139.0	139.0	139.3	0.3
AN	37,084	323	2,936	4.7	140.9	140.9	141.6	0.7
AO	38,437	371	2,463	4.2	143.4	143.4	144.3	0.9
AP	38,523	315	2,604	4.0	144.0	144.0	144.9	0.9
AQ	38,936	445	2,877	3.6	144.4	144.4	145.3	0.9
AR	40,433	123	1,263	8.2	147.1	147.1	147.6	0.5
AS	40,548	130	1,315	7.9	148.1	148.1	148.5	0.4
AT	41,071	147	1,511	6.9	149.6	149.6	149.9	0.3
AU	41,121	145	1,818	5.7	150.3	150.3	150.7	0.4
AV	41,529	93	1,154	9.0	150.3	150.3	150.8	0.5
AW	42,030	229	2,082	5.0	151.8	151.8	152.4	0.6
AX	43,294	781	5,080	2.0	153.5	153.5	154.4	0.9
AY	43,934	245	2,326	4.5	153.7	153.7	154.5	0.8
AZ	45,518	250	1,999	5.2	156.5	156.5	157.3	0.8

<sup>1</sup> Distance in feet above Sacramento/Placer County Border

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: DRY CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Dry Creek (Near Auburn)								
A	15,590	65	222	9.7	1,260.7	1,260.7	1,260.7	0.0
B	16,370	245	1,211	1.8	1,273.7	1,273.7	1,274.1	0.4
C	17,600	76	293	7.4	1,285.2	1,285.2	1,285.7	0.5
D	18,875	50	192	11.2	1,301.5	1,301.5	1,301.8	0.3
E	21,580	33	153	12.4	1,337.7	1,337.7	1,337.7	0.0
F	22,750	115	267	7.1	1,346.6	1,346.6	1,347.1	0.5
G	23,660	25	141	13.5	1,363.7	1,363.7	1,363.7	0.0
H	24,610	28	211	9.0	1,380.3	1,380.3	1,381.3	1.0
I	25,800	107	255	7.4	1,397.7	1,397.7	1,397.7	0.0
J	27,470	79	245	7.7	1,422.5	1,422.5	1,422.6	0.1
K	28,340	61	259	5.2	1,435.0	1,435.0	1,435.5	0.5
L	29,130	30	227	6.0	1,441.9	1,441.9	1,442.3	0.4
M	30,670	92	269	5.0	1,468.1	1,468.1	1,468.3	0.2

<sup>1</sup>Distance in feet above confluence with Coon Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

FLOODING SOURCE: DRY CREEK (NEAR AUBURN)

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Dry Creek Antelope North Road Tributary East Branch								
A	490 <sup>1</sup>	189	654	2.1	113.5 <sup>3</sup>	107.0	107.9	0.9
B	735 <sup>1</sup>	214	848	1.6	113.5 <sup>3</sup>	107.4	108.1	0.7
C	1,300 <sup>1</sup>	98	378	3.6	113.5 <sup>3</sup>	108.1	108.5	0.4
D	2,785 <sup>1</sup>	73	361	3.4	113.5 <sup>3</sup>	109.3	110.0	0.7
E	3,655 <sup>1</sup>	28	158	7.8	113.5 <sup>3</sup>	109.7	110.2	0.5
Dry Creek Antelope North Road Tributary West Branch								
A	120 <sup>2</sup>	62	239	0.5	113.5 <sup>3</sup>	109.0	109.2	0.2
B	625 <sup>2</sup>	12	16	6.7	113.5 <sup>3</sup>	111.0	111.0	0.0
Dry Creek Billy Mitchell Road Tributary								
A	1,050 <sup>1</sup>	100	323	1.2	98.5 <sup>3</sup>	92.8	93.6	0.8
B	1,460 <sup>1</sup>	25	116	3.4	98.5 <sup>3</sup>	93.8	94.3	0.5
C	2,150 <sup>1</sup>	104	171	2.3	98.5 <sup>3</sup>	96.2	97.1	0.9
D	3,000 <sup>1</sup>	274	227	1.7	101.4	101.4	101.4	0.0
E	3,380 <sup>1</sup>	179	162	2.4	102.8	102.8	102.9	0.1
F	3,730 <sup>1</sup>	194	184	2.1	104.6	104.6	104.6	0.0
G	4,340 <sup>1</sup>	144	748	0.5	111.9	111.9	112.4	0.5
H	4,880 <sup>1</sup>	150	445	0.9	112.0	112.0	112.5	0.5

<sup>1</sup>Distance in feet above confluence with Dry Creek  
<sup>2</sup>Distance in feet above confluence with Dry Creek Antelope North Road Tributary (East Branch)  
<sup>3</sup>Due to backwater effects from Dry Creek

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY	<b>FLOODWAY DATA</b>
	PLACER COUNTY, CA AND INCORPORATED AREAS	FLOODING SOURCE: DRY CREEK ANTELOPE NORTH ROAD TRIBUTARY (EAST BRANCH) -DRY CREEK ANTELOPE NORTH ROAD TRIBUTARY (WEST BRANCH) -DRY CREEK-BILLY MITCHELL ROAD TRIBUTARY

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Dry Creek Vineyard Road Tributary								
A	7,010	115	343	2.8	114.4	114.4	114.4	0.0
B	7,960	116	430	2.2	117.9	117.9	117.9	0.0
C	8,450	157	571	1.7	118.8	118.8	118.8	0.0
D	9,030	80	130	7.4	120.7	120.7	120.7	0.0
E	9,540	178	421	2.3	125.5	125.5	125.5	0.0
F	10,100	55	254	3.8	127.4	127.4	127.5	0.1
G	10,620	200	442	2.2	127.6	127.6	128.4	0.8
H	11,045	30	100	9.6	130.2	130.2	130.6	0.4
I	11,965	75	355	2.7	133.6	133.6	134.6	1.0
J	12,475	147	362	2.7	134.7	134.7	135.4	0.7
K	12,715	29	94	10.2	135.7	135.7	135.7	0.0
L	12,965	90	119	8.1	136.8	136.8	136.8	0.0
Dry Creek Walerga Road Tributary								
A	3,780	86	185	2.6	95.0	95.0	95.0	0.0
B	4,350	76	349	1.4	98.3	98.3	99.0	0.7
C	5,040	60	166	2.9	98.6	98.6	99.4	0.8
D	5,865	83	207	2.3	101.3	101.3	101.3	0.0
E	7,295	117	155	3.1	104.8	104.8	104.8	0.0
F	8,135	NA	NA	NA	106.4	NA	NA	NA

<sup>1</sup>Distance in feet above confluence with Dry Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

FLOODING SOURCE: DRY CREEK VINEYARD ROAD TRIBUTARY -  
DRY CREEK WALERGA ROAD TRIBUTARY

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Ingram Slough								
A	6,238	335	722	1.1	122.9	122.9	123.5	0.6
B	6,738	160	600	1.3	123.1	123.1	123.7	0.6
C	7,328	116	425	1.8	123.9	123.9	124.3	0.4
D	7,803	141	488	1.6	124.4	124.4	124.6	0.2
E	8,563	67	281	2.7	125.8	125.8	125.9	0.1
F	8,963	43	445	2.9	126.9	126.9	126.9	0.0
G	9,063	43	297	2.7	127.4	127.4	127.5	0.1
H	10,243	115	409	1.9	130.8	130.8	131.4	0.6
I	11,143	41	717	4.2	131.9	131.9	132.4	0.5
J	11,393	60	292	2.9	132.7	132.7	133.1	0.4
K	12,448	121	430	1.9	134.1	134.1	134.5	0.4
L	13,208	213	484	1.7	135.4	135.4	135.9	0.5
M	13,623	300	1,761	0.5	136.0	136.0	136.5	0.5
N	13,898	80	335	2.4	136.2	136.2	136.8	0.6
O	14,298	73	358	2.3	137.4	137.4	137.8	0.3
P	15,043	80	369	2.2	138.4	138.4	138.8	0.4
Q	16,203	34	187	6.4	140.8	140.8	141.4	0.6
R	16,493	35	342	3.4	144.3	144.3	144.4	0.1
S	16,563	117	961	0.9	144.5	144.5	144.7	0.2
T	16,948	106	653	1.3	144.6	144.6	144.8	0.2
U	17,213	29	291	3.7	146.2	146.2	146.4	0.2
V	17,593	83	548	1.6	146.6	146.6	146.8	0.2
W	17,933	78	499	1.7	146.8	146.8	147.0	0.2
X	18,213	171	1,844	0.5	146.9	146.9	147.2	0.3
Y	18,533	417	5,268	0.2	146.9	146.9	147.2	0.3
Z	18,848	95	537	7.8	147.3	147.3	147.8	0.5

<sup>1</sup>Distance in feet above confluence with Orchard Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: INGRAM SLOUGH**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Ingram Slough								
AA	19,020	171	1,084	3.9	149.2	149.2	149.7	0.5
AB	19,600	117	760	5.2	149.7	149.7	150.3	0.6
AC	20,045	118	837	4.8	151.6	151.6	152.2	0.6
AD	20,260	118	904	4.4	152.5	152.5	153.1	0.6
AE	20,660	117	759	2.2	153.5	153.5	154.0	0.5
AF	21,015	77	514	3.2	153.9	153.9	154.5	0.6
AG	21,097	182	871	1.9	154.4	154.4	155.0	0.6
AH	21,457	150	1,651	1.0	154.5	154.5	155.1	0.6
AI	21,947	368	1,874	0.9	154.6	154.6	155.2	0.6
AJ	22,217	129	1,429	1.1	154.6	154.6	155.2	0.6
AK	22,777	147	822	2.0	155.3	155.3	155.8	0.5
AL	23,517	98	646	2.1	158.0	158.0	158.5	0.5
AM	24,412	65	424	3.2	159.7	159.7	160.2	0.5
AN	25,017	101	742	1.8	161.1	161.1	161.6	0.5
AO	25,137	56	536	3.2	161.2	161.2	161.7	0.5
AP	25,287	60	480	2.9	161.7	161.7	162.3	0.6
AQ	26,217	75	556	2.5	163.7	163.7	164.2	0.5
AR	26,677	286	2,126	0.6	164.9	164.9	165.4	0.5
AS	26,977	74	511	2.5	165.4	165.4	165.9	0.5
AT	27,827	48	260	9.4	183.1	183.1	183.1	0.0
AU	28,087	192	732	1.7	186.5	186.5	186.6	0.0

<sup>1</sup>Distance in feet above confluence with Orchard Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: INGRAM SLOUGH**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Ingram Slough Irrigation Pond								
A	0	69	734	0.4	154.5	154.5	155.1	0.6
B	420	85	862	0.3	154.5	154.5	155.1	0.6
C	580	130	83	3.5	154.9	154.9	155.0	0.1
D	955	258	1,210	0.2	159.5	159.5	159.5	0.0
E	1,945	225	708	0.4	159.5	159.5	159.5	0.0
Ingram Slough Overflow								
A	335	139	660	5.5	153.2	153.2	153.8	0.6
B	850	82	450	8.1	154.3	154.3	154.7	0.4
C	1,215	174	1,361	2.7	156.5	156.5	157.0	0.5
D	1,435	116	868	4.2	156.6	156.6	157.1	0.5
E	1,680	113	1,089	3.4	157.1	157.1	157.8	0.7

<sup>1</sup>Distance in feet above confluence with Ingram Slough

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

FLOODING SOURCE: INGRAM SLOUGH IRRIGATION POND -  
INGRAM SLOUGH OVERFLOW

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Ingram Slough South Branch								
A	210	49	105	2.8	149.9	149.9	150.4	0.5
B	770	80	148	2.0	151.0	151.0	151.5	0.5
C	1,200	89	186	1.6	151.8	151.8	152.2	0.4
D	2,235	192	301	1.9	153.2	153.2	153.4	0.2
E	3,105	110	159	1.9	154.4	154.4	154.6	0.2
F	3,795	55	131	2.3	155.5	155.5	155.7	0.2
G	4,610	80	180	1.6	157.1	157.1	157.5	0.4
H	5,190	234	231	1.3	158.2	158.2	158.4	0.2
I	5,530	340	474	0.6	158.6	158.6	158.7	0.1
J	6,335	215	226	2.5	160.0	160.0	160.0	0.0
K	7,330	153	252	2.3	162.3	162.3	162.7	0.4
L	8,815	158	220	2.6	167.1	167.1	167.4	0.3
M	10,030	20	490	5.5	173.2	173.2	173.2	0.0
N	11,035	340	489	1.8	177.0	177.0	177.5	0.5
O	11,845	115	211	4.2	186.0	186.0	186.4	0.4
P	13,250	46	57	4.4	203.4	203.4	204.0	0.6
Q	14,025	35	59	4.2	212.8	212.8	213.0	0.2
R	15,195	108	70	3.5	224.9	224.9	225.0	0.1
S	16,010	6	67	11.1	239.5	239.5	239.5	0.0
T	16,550	118	50	3.7	249.3	249.3	249.3	0.0
U	17,400	49	53	3.5	258.3	258.3	258.3	0.0
V	18,675	14	56	7.5	284.3	284.3	284.3	0.0
W	19,485	30	40	4.6	298.6	298.6	298.7	0.1

<sup>1</sup>Distance in feet above confluence with Ingram Slough

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: INGRAM SLOUGH SOUTH BRANCH**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Ingram Slough South Reach								
A	115	608	10,281	0.3	122.7	122.7	123.2	0.5
B	510	141	2,079	1.6	122.7	122.7	123.2	0.5
C	1,110	77	588	5.8	123.7	123.7	124.1	0.4
D	2,005	90	787	4.3	126.5	126.5	127.0	0.5
E	3,050	300	5,607	0.6	127.0	127.0	127.6	0.6
F	3,675	89	784	4.3	127.2	127.2	127.7	0.5
G	4,160	102	1,076	3.2	127.9	127.9	128.2	0.3
H	4,560	204	2,179	1.6	128.1	128.1	128.7	0.6
I	4,880	102	1,100	3.2	128.4	128.4	128.9	0.5
J	5,050	73	849	4.1	128.5	128.5	129.0	0.5
K	5,160	73	891	3.9	129.2	129.2	129.6	0.4
L	6,040	60	587	6.0	130.3	130.3	130.3	0.0
M	6,545	68	529	6.7	133.3	133.3	133.8	0.5
N	7,050	81	701	4.8	135.3	135.3	135.5	0.2
O	7,575	117	1,150	2.9	136.8	136.8	137.1	0.3
P	8,475	79	789	4.2	139.4	139.4	139.8	0.4
Q	9,375	77	756	4.4	142.1	142.1	142.6	0.5
R	10,125	68	465	7.1	144.4	144.4	144.8	0.4
S	10,360	68	582	5.7	146.2	146.2	146.5	0.3
T	10,555	285	3,606	0.9	146.9	146.9	147.4	0.5

<sup>1</sup>Distance in feet above confluence with Ingram Slough

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: INGRAM SLOUGH SOUTH REACH**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Linda Creek								
A	1,568	98	562	7.1	141.9	141.9	142.0	0.1
B	2,796	76	644	4.2	145.3	145.3	145.5	0.2
C	4,124	159	1,076	3.7	147.8	147.8	147.9	0.1
D	5,327	570	2,528	1.6	149.0	149.0	149.5	0.5
E	6,569	689	2,543	1.6	150.3	150.3	150.9	0.6
F	8,281	260	1,754	2.4	155.5	155.5	156.0	0.5
G	8,600	209	1,447	2.9	156.8	156.8	157.2	0.4
H	10,141	220	1,529	2.7	157.8	157.8	158.2	0.4
I	10,476	170	1,097	3.7	157.9	157.9	158.3	0.4
J	11,499	160	764	5.4	159.4	159.4	159.6	0.2
K	11,741	204	862	3.8	159.7	159.7	160.6	0.9
L	12,363	191	836	3.9	160.2	160.2	161.0	0.8
M	12,967	215	694	4.8	161.8	161.8	162.0	0.2
N	13,563	117	599	5.6	164.7	164.7	164.7	0.0
O	14,140	83	624	4.5	166.4	166.4	167.4	1.0
P	14,567	69	642	4.4	167.0	167.0	168.0	1.0
Q	14,651	59	567	5.0	167.4	167.4	168.3	0.9
R	15,013	242	1,310	2.1	168.1	168.1	169.0	0.9
S	15,928	65	475	5.9	168.9	168.9	169.6	0.8
T	16,205	200	1,086	2.1	169.7	169.7	170.6	0.9
U	16,741	160	706	3.2	171.5	171.5	172.2	0.7
V	42684	80	233	3.1	271.9	271.9	271.9	0.0
W	43169	45	178	4.0	273.3	273.3	273.8	0.5
X	43259	50	204	3.5	273.4	273.4	274.1	0.7
Y	43317	50	415	1.7	278.0	278.0	278.6	0.6
Z	43639	55	294	2.4	278.1	278.1	278.7	0.6

<sup>1</sup> Distance in feet above confluence with Cirby Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: LINDA CREEK**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Linda Creek								
AA	44,252	25	148	4.8	281.9	281.9	282.0	0.2
AB	44,315	35	213	3.3	283.3	283.3	283.4	0.0
AC	45,186	35	129	5.5	292.3	292.3	292.3	0.0
AD	46,005	67	113	6.3	305.4	305.4	305.4	0.0
AE	46,026	79	440	1.6	308.6	308.6	308.9	0.3
AF	46,453	40	131	5.2	309.3	309.3	309.3	0.0
AG	46,839	76	139	4.9	312.4	312.4	312.8	0.3
AH	46,860	96	179	3.8	314.0	314.0	314.1	0.1
AI	47,092	41	133	5.2	321.3	321.3	321.3	0.0
AJ	47,863	150	1,152	0.6	321.9	321.9	321.9	0.0
AK	48,407	39	90	8.7	321.5	321.5	321.5	0.0
AL	48,539	33	112	7.0	324.2	324.2	324.2	0.0
AM	48,597	40	221	3.6	325.1	325.1	325.1	0.0
AN	48,682	116	315	2.5	327.3	327.3	327.3	0.0
AO	49,014	45	107	7.3	328.7	328.7	328.9	0.2
AP	49,056	50	226	3.5	329.4	329.4	330.3	0.9
AQ	49,738	40	149	5.3	331.1	331.1	331.9	0.8
AR	49,806	40	106	7.4	332.0	332.0	332.2	0.2
AS	49,848	70	399	2.0	336.1	336.1	336.7	0.6
AT	50,070	130	732	1.1	336.2	336.2	336.8	0.6
AU	50,841	57	173	4.5	336.6	336.6	337.6	1.0
AV	51,723	59	117	4.6	344.7	344.7	345.1	0.4
AW	51,797	63	158	3.4	345.5	345.5	346.0	0.4
AX	51,839	65	209	2.6	346.2	346.2	347.1	0.9
AY	52,483	30	108	5.0	349.0	349.0	349.4	0.4
AZ	53,597	44	81	5.5	359.9	359.9	360.3	0.4

<sup>1</sup> Distance in feet above confluence with Cirby Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: LINDA CREEK**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Linda Creek								
BA	53,629	65	134	3.0	360.0	360.0	361.0	1.0
BB	54,294	60	125	3.0	365.5	365.5	366.0	0.6
BC	54,315	60	132	2.8	365.4	365.4	366.2	0.8
BD	54,954	46	58	6.4	377.3	377.3	377.3	0.0
BE	55,165	40	221	1.7	381.2	381.2	382.1	0.9
BF	55,488	48	114	3.3	381.7	381.7	382.4	0.7
BG	55,530	80	360	1.0	385.7	385.7	386.5	0.9
BH	55,957	26	69	5.4	386.9	386.9	387.1	0.3
BI	56,359	25	95	3.9	392.0	392.0	392.8	0.8
BJ	56,438	40	218	1.7	396.6	396.6	397.5	0.9
BK	56,702	25	141	2.5	396.7	396.7	397.6	0.9
BL	56,908	30	55	6.3	399.7	399.7	399.8	0.1
BM	57,172	55	192	1.8	401.1	401.1	401.9	0.9
BN	57,621	23	46	7.5	404.1	404.1	404.1	0.0
BO	58,096	22	53	6.5	407.4	407.4	407.8	0.4
BP	58,307	31	62	5.6	411.4	411.4	411.8	0.4
BQ	58,355	100	414	0.8	416.4	416.4	416.6	0.1
BR	58,809	132	245	1.4	416.5	416.5	416.6	0.2
BS	58,867	248	421	0.8	418.6	418.6	418.7	0.1
BT	59,067	140	542	0.6	418.6	418.6	418.8	0.1
BU	59,912	128	148	2.3	424.1	424.1	424.1	0.0
BV	59,976	224	347	1.0	425.3	425.3	425.3	0.0
BW	60,261	130	266	1.7	426.2	426.2	426.2	0.0
BX	60,599	93	166	2.1	428.6	428.6	428.6	0.1
BY	60,942	90	96	3.6	435.2	435.2	435.2	0.0
BZ	60,995	40	157	2.2	437.2	437.2	438.0	0.8

<sup>1</sup> Distance in feet above confluence with Cirby Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: LINDA CREEK**

LOCATION		FLOODWAY			1% ANNUAL CHANCE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Linda Creek								
CA	61,628	12	47	7.3	444.2	444.2	444.3	0.2
CB	61,728	14	51	6.8	445.3	445.3	445.5	0.2
CC	61,977	15	57	6.1	449.0	449.0	449.6	0.7
CD	62,135	15	39	9.0	451.8	451.8	451.8	0.0
CE	62,241	82	251	1.4	453.9	453.9	454.9	1.0
CF	62,489	30	48	7.2	455.6	455.6	455.7	0.1
CG	62,605	40	189	1.8	458.6	458.6	459.4	0.8
CH	62,916	20	42	8.2	459.6	459.6	460.1	0.6

<sup>1</sup> Distance in feet above confluence with Cirby Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: LINDA CREEK**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Markham Ravine								
A	0	205	747	2.3	110.6	110.6	111.6	1.0
B	208	308	1,315	1.3	112.6	112.6	113.1	0.5
C	1,068	234	890	1.9	112.6	112.6	113.1	0.5
D	1,708	321	1,043	1.6	112.9	112.9	113.3	0.4
E	2,063	265	528	3.3	113.2	113.2	113.5	0.3
F	2,479	534	2,326	0.6	116.9	116.9	116.9	0.0
G	2,789	1,026	1,313	1.0	116.9	116.9	116.9	0.0
H	3,719	634	1,065	1.2	117.1	117.1	117.1	0.0
I	4,584	175	240	4.5	117.5	117.5	117.6	0.1
J	5,474	351	602	1.8	119.4	119.4	119.4	0.0
K	5,881	272	736	1.5	121.2	121.2	121.2	0.0
L	6,611	256	398	2.7	121.5	121.5	121.5	0.0
M	7,100	350	2,631	0.4	123.7	123.7	123.7	0.0
N	7,555	196	1,089	1.0	123.7	123.7	123.7	0.0
O	8,040	249	1,197	0.9	124.4	124.4	124.4	0.0
P	9,295	432	191	5.6	124.6	124.6	124.6	0.0
Q	10,535	81	216	4.9	133.1	133.1	133.1	0.0
R	11,450	101	162	6.6	138.6	138.6	138.6	0.0
S	12,065	335	406	2.6	141.8	141.8	141.8	0.0
T	12,445	66	253	4.2	146.3	146.3	146.3	0.0
U	12,870	65	190	5.6	146.5	146.5	146.5	0.0
V	13,230	503	395	2.7	148.6	148.6	148.7	0.1
W	13,965	424	1,000	1.1	149.2	149.2	149.3	0.1
X	14,315	134	295	3.6	149.3	149.3	149.4	0.1
Y	14,775	64	209	5.1	152.0	152.0	152.0	0.0
Z	15,979	731	1,823	0.9	155.3	155.3	155.4	0.1

<sup>1</sup>Distance in feet above Limit of Detailed Study (approximately 100 feet downstream of Nelson Lane)

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: MARKHAM RAVINE

LOCATION		FLOODWAY			1% ANNUAL CHANCE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Markham Ravine								
AA	16,464	572	1,173	1.4	155.4	155.4	155.5	0.1
AB	16,984	324	414	4.0	156.2	156.2	156.2	0.0
AC	17,594	190	551	3.0	159.1	159.1	159.6	0.5
AD	17,941	596	1,185	1.4	161.2	161.2	161.8	0.6
AE	18,541	675	824	2.0	162.1	162.1	162.9	0.8
AF	18,733	449	1,727	0.9	164.6	164.6	164.6	0.0
AG	19,263	274	621	2.4	164.7	164.7	164.8	0.1
AH	20,183	273	413	3.7	167.1	167.1	167.7	0.6
AI	20,793	229	554	2.7	169.3	169.3	169.6	0.3
AJ	21,533	662	752	2.0	170.6	170.6	171.1	0.5
AK	22,488	2,080	826	1.8	174.0	174.0	174.0	0.0
AL	23,298	1,979	749	2.0	176.3	176.3	176.3	0.0
AM	24,178	2,409	10,159	0.1	182.3	182.3	182.7	0.4
AN	24,388	971	2,230	0.6	182.3	182.3	182.7	0.4
AO	25,213	530	639	2.0	184.0	184.0	184.3	0.3
AP	26,513	87	177	7.2	189.9	189.9	190.3	0.4

<sup>1</sup>Distance in feet above Limit of Detailed Study (approximately 100 feet downstream of Nelson Lane)

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: MARKHAM RAVINE

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Markham Ravine Lower Tributary								
A	0	134	400	1.5	114.5 <sup>2</sup>	114.5	115.5	1.0
B	305	172	513	1.2	114.8 <sup>2</sup>	114.8	115.6	0.8
C	495	21	60	9.8	118.2	118.2	118.2	0.0
D	630	206	1,181	0.5	119.8	119.8	119.8	0.0
E	2,090	195	614	1.0	119.8	119.8	119.8	0.0
F	3,305	53	81	7.3	119.9	119.9	119.9	0.0
G	3,785	135	1,111	0.7	128.6	128.6	128.8	0.2
H	4,690	105	747	1.1	128.6	128.6	128.8	0.2
I	6,005	132	568	1.4	128.7	128.7	128.9	0.2
J	7,320	230	555	1.4	129.2	129.2	129.4	0.2
K	8,350	156	288	2.7	130.1	130.1	130.2	0.1
L	9,230	162	296	2.7	132.1	132.1	132.3	0.2
Markham Ravine Upper Tributary								
A	60	142	551	1.5	181.8	181.8	181.8	0.0
B	780	140	172	4.6	181.9	181.9	182.0	0.1
C	840	123	253	3.2	183.9	183.9	184.4	0.5
D	1,285	79	238	3.4	184.8	184.8	185.8	1.0
E	2,272	101	332	2.4	191.6	191.6	191.6	0.0
F	2,782	217	162	4.9	193.3	193.3	193.3	0.0
G	3,562	240	414	1.9	196.0	196.0	196.0	0.0

<sup>1</sup>Distance in feet above confluence with Markham Ravine

<sup>2</sup>Due to backwater effects from Markham Ravine

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

FLOODING SOURCE: MARKHAM RAVINE LOWER TRIBUTARY -  
MARKHAM RAVINE UPPER TRIBUTARY

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Miners Ravine								
A	882	165	1,021	7.7	159.9	159.9	160.7	0.8
B	4,680	182	1,192	6.6	177.4	177.4	178.1	0.7
C	6,220	131	938	6.6	184.2	184.2	184.9	0.7
D	7,925	115	895	6.9	197.6	197.6	198.5	0.9
E	9,401	92	718	8.6	205.5	205.5	206.2	0.7
F	10,637	98	652	9.4	215.7	215.7	215.9	0.2
G	12,634	131	766	5.1	223.7	223.7	224.5	0.8
H	15,002	101	791	4.9	237.2	237.2	238.0	0.8
I	16,200	146	660	3.7	239.1	239.1	239.7	0.6
J	17,550	406	1,441	1.7	246.2	246.2	247.1	0.9
K	19,180	255	2,236	1.8	254.2	254.2	255.2	1.0
L	20,650	138	1,100	3.6	256.5	256.5	257.5	1.0
M	21,900	225	1,584	2.5	262.0	262.0	262.8	0.8
N	23,500	214	2,258	1.8	275.0	275.0	275.9	0.9
O	24,500	125	660	6.1	280.1	280.1	280.9	0.8
P	25,600	100	779	5.1	289.5	289.5	289.6	0.1
Q	26,650	100	620	6.4	297.7	297.7	298.6	0.9
R	28,050	90	595	6.7	313.5	313.5	314.3	0.8
S	29,660	165	1,081	3.7	322.2	322.2	323.2	1.0
T	31,429	180	1,816	2.2	334.9	334.9	335.0	0.1
U	32,150	113	705	5.7	335.3	335.3	336.0	0.7
V	32,900	165	951	4.2	343.3	343.3	344.3	1.0
W	34,000	331	1,899	2.1	350.5	350.5	350.8	0.3
X	34,737	171	997	4.0	356.4	356.4	357.3	0.9
Y	36,500	289	1,506	1.7	363.5	363.5	364.5	1.0
Z	37,280	330	1,903	2.1	366.6	366.6	367.6	1.0

<sup>1</sup>Distance in feet above confluence with Dry Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: MINERS RAVINE

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Miners Ravine								
AA	38,230	235	853	4.7	369.2	369.2	369.9	0.7
AB	39,180	285	1,726	2.3	372.3	372.3	373.2	0.9
AC	40,020	140	1,027	3.7	381.4	381.4	381.6	0.2
AD	40,500	225	1,140	3.3	382.2	382.2	383.2	1.0
AE	42,800	153	1,137	3.3	399.5	399.5	400.3	0.8
AF	44,273	218	1,821	2.1	402.9	402.9	403.8	0.9
AG	46,013	184	1,145	3.3	409.6	409.6	410.3	0.7
AH	47,508	180	887	4.3	416.4	416.4	416.9	0.5
AI	48,843	221	1,546	2.5	424.7	424.7	425.4	0.7
AJ	50,193	222	890	3.5	429.5	429.5	430.5	1.0
AK	51,703	250	1,043	3.0	440.9	440.9	441.8	0.9
AL	52,737	276	1,647	1.9	448.3	448.3	449.2	0.9
AM	54,062	281	1,809	1.7	456.7	456.7	457.7	1.0
AN	54,932	280	1,838	1.7	458.2	458.2	459.1	0.9
AO	56,862	220	1,543	2.0	467.1	467.1	467.9	0.8
AP	57,884	161	1,212	2.6	472.7	472.7	473.7	1.0
AQ	58,569	140	1,033	3.0	481.3	481.3	482.2	0.9
AR	59,669	211	1,521	2.1	486.1	486.1	486.9	0.8
AS	61,409	62	347	7.2	497.6	497.6	498.5	0.9
AT	62,517	115	655	3.8	511.0	511.0	511.6	0.6
AU	63,767	107	333	7.5	514.1	514.1	514.6	0.5
AV	64,937	60	246	10.2	526.2	526.2	526.3	0.1
AW	66,472	51	284	8.8	560.6	560.6	561.4	0.8
AX	67,579	137	872	2.1	567.9	567.9	568.8	0.9
AY	68,899	83	276	6.5	579.7	579.7	579.7	0.0
AZ	70,444	43	266	6.8	599.4	599.4	600.0	0.6

<sup>1</sup>Distance in feet above confluence with Dry Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: MINERS RAVINE**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Miners Ravine								
BA	71,700 <sup>1</sup>	25	172	10.5	614.4	614.4	614.4	0.0
BB	73,234 <sup>1</sup>	100	437	4.1	633.8	633.8	634.4	0.6
BC	73,743 <sup>1</sup>	86	414	3.4	638.4	638.4	639.2	0.8
BD	75,138 <sup>1</sup>	89	404	3.5	656.6	656.6	657.4	0.8
BE	76,118 <sup>1</sup>	50	282	5.0	673.8	673.8	674.6	0.8
BF	77,438 <sup>1</sup>	39	136	10.3	696.4	696.4	696.9	0.5
BG	78,373 <sup>1</sup>	99	530	2.6	718.2	718.2	718.6	0.4
BH	79,623 <sup>1</sup>	40	183	2.7	745.9	745.9	746.1	0.2
BI	80,740 <sup>1</sup>	16	50	10.1	773.6	773.6	773.6	0.0
BJ	81,133 <sup>1</sup>	17	77	6.5	787.2	787.2	787.8	0.6

<sup>1</sup>Distance in feet above confluence with Dry Creek

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY PLACER COUNTY, CA AND INCORPORATED AREAS	<b>FLOODWAY DATA</b>
		<b>FLOODING SOURCE: MINERS RAVINE</b>

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Orchard Creek								
A	1,536 <sup>1</sup>	650	2,434	1.9	96.7	96.7	97.7	1.0
B	3,432 <sup>1</sup>	876	4,779	1.2	98.5	98.5	98.8	0.2
C	5,306 <sup>1</sup>	352	3,465	3.3	99.8	99.8	99.8	0.1
D	7,772 <sup>1</sup>	355	1,875	3.1	102.6	102.6	103.3	0.7
E	9,800 <sup>1</sup>	715	3,424	1.6	104.2	104.2	105.0	0.8
F	10,164 <sup>1</sup>	853	3,081	2.1	105.3	105.3	106.1	0.9
G	13,723 <sup>1</sup>	650	3,002	1.6	108.3	108.3	108.9	0.6
H	20,200 <sup>1</sup>	84	592	4.1	111.7	111.7	112.7	1.0
I	22,160 <sup>1</sup>	332	1,015	2.4	112.9	112.9	113.9	1.0
J	24,090 <sup>1</sup>	265	906	2.7	115.1	115.1	116.1	1.0
K	24,990 <sup>1</sup>	323	1,240	1.8	115.8	115.8	116.8	1.0
L	26,500 <sup>1</sup>	293	935	2.4	116.5	116.5	117.5	1.0
M	28,910 <sup>1</sup>	404	1,194	1.4	118.5	118.5	119.5	1.0
N	30,700 <sup>1</sup>	69	330	5.0	120.1	120.1	121.1	1.0
O	33,320 <sup>1</sup>	47	180	4.6	125.0	125.0	126.0	1.0
P	34,150 <sup>1</sup>	454	744	1.1	128.6	128.6	128.7	0.1
Q	36,220 <sup>1</sup>	264	235	3.5	132.8	132.8	132.8	0.0
Orchard Creek Tributary 1								
A	990 <sup>2</sup>	79	231	1.2	115.6	115.6	116.6	1.0
B	1,880 <sup>2</sup>	29	63	4.3	115.8	115.8	116.7	0.9
C	2,400 <sup>2</sup>	40	105	2.6	117.2	117.2	118.2	1.0
D	3,880 <sup>2</sup>	30	65	4.1	118.3	118.3	119.3	1.0
E	5,040 <sup>2</sup>	22	48	5.6	120.9	120.9	121.7	0.8
F	5,540 <sup>2</sup>	50	102	2.6	122.8	122.8	123.6	0.8

<sup>1</sup>Distance in feet above confluence with Auburn Ravine

<sup>2</sup>Distance in feet above confluence with Orchard Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

FLOODING SOURCE: ORCHARD CREEK - ORCHARD CREEK  
TRIBUTARY 1

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Orchard Creek Tributary 2								
A	1,680 <sup>1</sup>	317	903	0.8	117.3	117.3	118.3	1.0
B	2,810 <sup>1</sup>	202	496	1.5	118.4	118.4	119.4	1.0
C	6,250 <sup>1</sup>	65	185	1.8	124.5	124.5	125.3	0.8
D	6,790 <sup>1</sup>	23	59	5.6	125.0	125.0	125.7	0.7
E	8,000 <sup>1</sup>	105	261	1.3	126.9	126.9	127.9	1.0
F	9,120 <sup>1</sup>	85	205	1.6	127.9	127.9	128.7	0.8
G	11,100 <sup>1</sup>	35	95	3.5	132.7	132.7	132.8	0.1
Orchard Creek Tributary 2-1								
A	1,270 <sup>2</sup>	184	652	0.3	124.5	124.5	124.5	0.0
B	3,430 <sup>2</sup>	114	122	1.7	124.6	124.6	124.9	0.3
C	4,680 <sup>2</sup>	65	104	2.0	126.8	126.8	127.1	0.3
D	5,510 <sup>2</sup>	22	116	1.8	130.4	130.4	130.9	0.5
E	6,360 <sup>2</sup>	90	127	1.6	130.4	130.4	131.1	0.7
Orchard Creek Tributary 2-2								
A	2,360 <sup>2</sup>	20	50	5.2	127.3	127.3	127.9	0.6
B	2,990 <sup>2</sup>	69	147	1.8	128.6	128.6	129.5	0.9
C	3,490 <sup>2</sup>	27	65	4.0	129.2	129.2	130.1	0.9
D	4,280 <sup>2</sup>	29	46	5.7	136.3	136.3	136.3	0.0

<sup>1</sup>Distance in feet above confluence with Orchard Creek

<sup>2</sup>Distance in feet above confluence with Orchard Creek Tributary 2

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

FLOODING SOURCE: ORCHARD CREEK TRIBUTARY 2 - ORCHARD  
CREEK TRIBUTARY 2-1 - ORCHARD CREEK TRIBUTARY 2-2

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Orchard Creek Tributary 3								
A	490	26	110	7.6	121.6	121.6	122.1	0.5
B	920	51	221	3.8	123.7	123.7	124.1	0.4
C	1,380	38	187	4.5	124.6	124.6	124.9	0.3
D	1,880	124	245	3.4	125.6	125.6	126.0	0.4
E	2,320	57	195	4.3	126.3	126.3	127.1	0.8
F	3,590	57	208	4.0	130.6	130.6	131.0	0.4
G	4,040	181	442	1.9	131.1	131.1	131.7	0.6
H	4,388	180	393	3.2	131.5	131.5	132.5	1.0
I	5,548	152	573	2.0	136.1	136.1	136.5	0.4
J	6,628	149	522	2.2	140.5	140.5	141.1	0.6
K	7,948	232	578	2.0	141.7	141.7	142.7	1.0
L	9,148	232	461	2.5	145.2	145.2	146.1	0.9
M	9,998	285	537	2.1	149.3	149.3	150.2	0.9
N	10,948	200	449	2.5	155.2	155.2	155.8	0.6
O	11,898	213	337	3.4	161.4	161.4	161.8	0.4
P	12,498	213	472	2.4	166.1	166.1	166.5	0.4
Q	12,958	39	193	9.8	171.6	171.6	171.6	0.0
R	13,158	38	502	2.5	180.3	180.3	180.3	0.0
S	13,641	379	2,009	0.6	180.4	180.4	180.4	0.0
T	14,841	198	364	3.1	187.7	187.7	187.7	0.0
U	15,441	405	1,019	1.1	190.7	190.7	190.9	0.2

<sup>1</sup>Distance in feet above confluence with Orchard Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: ORCHARD CREEK TRIBUTARY 3**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Orchard Creek Tributary 3 North Branch								
A	15,801	55	209	4.0	197.2	197.2	197.6	0.4
B	16,201	69	152	5.4	201.7	201.7	201.8	0.1
C	16,341	45	137	6.0	204.2	204.2	205.1	0.9
D	16,801	99	894	0.9	217.6	217.6	217.6	0.0
E	17,601	75	196	4.1	223.0	223.0	223.7	0.7
F	18,201	52	143	5.7	233.4	233.4	233.6	0.2
G	18,801	107	196	4.1	242.5	242.5	243.5	1.0
H	19,125	62	145	5.6	247.2	247.2	247.4	0.2
I	19,401	37	365	2.3	256.3	256.3	256.3	0.0
J	19,821	105	251	4.0	256.4	256.4	257.4	1.0
K	20,421	91	263	3.8	264.9	264.9	265.1	0.2
L	21,021	110	329	3.0	274.1	274.1	274.1	0.0
M	21,621	60	151	6.6	285.0	285.0	285.0	0.0
N	22,221	166	400	2.5	299.2	299.2	299.2	0.0
O	22,421	40	447	6.1	300.7	300.7	300.7	0.0
P	22,821	23	592	11.1	307.8	307.8	307.8	0.0
Q	23,021	127	603	1.7	310.3	310.3	310.5	0.2
R	23,421	81	145	3.6	312.0	312.0	312.2	0.2

<sup>1</sup>Distance in feet above confluence with Orchard Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: ORCHARD CREEK TRIBUTARY 3 - NORTH  
BRANCH**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Orchard Creek Tributary 3 South Branch								
A	885	38	58	7.1	190.7	190.7	190.7	0.0
B	1,285	64	284	1.6	195.5	195.5	195.5	0.0
C	1,365	52	292	1.4	198.9	198.9	198.9	0.0
D	1,865	83	110	3.8	207.4	207.4	208.1	0.7
E	1,925	42	61	6.8	209.8	209.8	210.1	0.3
F	2,265	54	982	1.2	217.9	217.9	218.0	0.1
G	2,689	79	151	3.8	219.0	219.0	219.2	0.2
H	3,289	70	135	4.2	226.1	226.1	226.5	0.4
I	3,889	61	107	5.4	235.6	235.6	236.1	0.5
J	4,489	85	142	4.0	244.2	244.2	244.4	0.2
K	5,089	70	171	3.3	253.1	253.1	253.3	0.2
L	5,689	73	151	3.8	260.9	260.9	261.0	0.1
M	6,029	36	97	2.6	267.1	267.1	267.2	0.1
N	6,204	36	1,709	0.6	273.8	273.8	273.9	0.1
O	6,654	141	313	0.7	273.8	273.8	274.0	0.2
P	7,054	96	108	2.0	279.7	279.7	279.7	0.0
Q	7,454	253	80	2.7	298.3	298.3	298.3	0.0

<sup>1</sup>Distance in feet above confluence with Orchard Creek Tributary 3

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: ORCHARD CREEK TRIBUTARY 3 - SOUTH  
BRANCH**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Pleasant Grove Creek								
A	16,933	1,280	3,719	2.3	52.4	52.4	53.3	0.9
B	18,770	1,491	4,491	1.4	54.1	54.1	54.9	0.8
C	20,571	1,000	3,259	2.1	56.4	56.4	56.9	0.5
D	22,076	797	2,826	2.2	58.3	58.3	59.1	0.9
E	22,097	1,193	4,860	1.6	58.3	58.3	59.3	1.0
F	23,248	1,000	3,101	2.0	58.9	58.9	59.8	0.9
G	25,249	239	1,519	4.1	61.6	61.6	62.0	0.4
H	27,287	900	3,270	1.9	64.1	64.1	65.1	1.0
I	27,820	900	3,009	2.1	64.8	64.8	65.6	0.9
J	28,813	600	3,010	2.1	66.1	66.1	66.8	0.7
K	29,779	538	2,256	2.8	67.1	67.1	67.9	0.8
L	30,307	581	3,311	1.9	68.0	68.0	68.8	0.9
M	31,332	400	2,622	2.4	69.5	69.5	70.4	0.8
N	32,504	293	2,481	2.3	71.2	71.2	72.0	0.8
O	33,692	275	2,516	2.3	72.3	72.3	73.0	0.8
P	35,165	195	2,115	2.7	73.6	73.6	74.4	0.8
Q	36,052	275	2,742	1.9	74.4	74.4	75.2	0.8
R	36,997	198	1,589	3.7	75.0	75.0	75.8	0.9
S	37,018	173	1,728	3.0	75.6	75.6	76.2	0.6
T	38,449	250	2,518	2.1	76.5	76.5	77.3	0.7
U	38,961	144	1,270	4.1	76.7	76.7	77.5	0.8
V	39,959	78	874	6.0	78.4	78.4	79.1	0.7
W	41,195	87	1,019	5.1	80.7	80.7	81.1	0.4
X	42,615	177	1,603	3.3	81.3	81.3	82.3	1.0
Y	43,893	280	2,204	2.4	81.9	81.9	82.8	0.9
Z	44,743	425	2,524	2.1	82.1	82.1	83.1	1.0

<sup>1</sup>Distance in feet above Pleasant Grove Creek Canal

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: PLEASANT GROVE CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Pleasant Grove Creek								
AA	45,524	424	2,155	2.4	82.3	82.3	83.3	1.0
AB	45,545	394	2,027	2.6	82.5	82.5	83.4	1.0
AC	46,728	113	1,132	4.5	83.2	83.2	84.1	0.9
AD	46,749	110	1,177	4.3	84.0	84.0	84.7	0.6
AE	47,388	164	1,522	3.3	84.6	84.6	85.5	0.9
AF	48,782	179	1,542	3.3	85.6	85.6	86.5	1.0
AG	49,574	267	2,038	2.5	86.3	86.3	87.1	0.8
AH	50,329	220	1,576	3.2	86.8	86.8	87.5	0.7
AI	51,755	116	1,277	3.2	88.0	88.0	88.7	0.7
AJ	52,768	132	1,200	3.4	89.1	89.1	89.7	0.6
AK	53,766	74	911	4.5	90.3	90.3	90.9	0.6
AL	54,183	178	1,748	2.9	90.5	90.5	91.4	0.9
AM	54,986	64	1,133	4.0	90.8	90.8	91.7	0.9
AN	55,049	58	1,099	4.2	91.1	91.1	92.1	1.0
AO	56,084	182	1,356	2.2	92.1	92.1	93.0	0.9
AP	56,892	121	1,072	2.7	92.9	92.9	93.8	0.9
AQ	56,966	89	922	3.2	93.5	93.5	93.9	0.4
AR	57,679	67	772	3.8	94.2	94.2	94.7	0.6
AS	58,883	259	1,783	1.7	94.8	94.8	95.8	1.0
AT	60,039	68	621	4.7	96.5	96.5	97.2	0.7
AU	60,498	162	1,143	2.5	97.6	97.6	98.4	0.7
AV	61,380	336	1,904	1.5	98.0	98.0	98.8	0.8
AW	62,040	175	1,106	2.6	98.6	98.6	99.4	0.8
AX	63,466	84	937	3.1	100.1	100.1	101.0	0.9
AY	63,587	87	774	3.7	100.3	100.3	101.2	0.9
AZ	64,875	308	1,635	1.8	101.5	101.5	102.4	0.9

<sup>1</sup>Distance in feet above Pleasant Grove Creek Canal

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: PLEASANT GROVE CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Pleasant Grove Creek								
BA	66,148	88	918	2.7	103.3	103.3	104.1	0.8
BB	66,507	76	597	4.1	103.7	103.7	104.4	0.8
BC	67,283	268	1,144	2.1	104.3	104.3	105.2	0.9
BD	68,450	200	1,247	1.9	105.1	105.1	106.0	0.9
BE	69,664	171	913	2.7	105.8	105.8	106.8	0.9
BF	70,272	72	731	3.3	107.3	107.3	108.0	0.7
BG	71,349	42	488	5.0	109.6	109.6	110.5	0.9
BH	71,370	40	432	5.6	110.7	110.7	110.7	0.0
BI	71,507	81	855	2.8	110.9	110.9	111.5	0.6
BJ	72,246	162	860	1.9	111.2	111.2	111.9	0.7
BK	73,239	250	894	1.8	111.4	111.4	112.2	0.9
BL	74,485	95	627	2.5	112.7	112.7	113.4	0.7
BM	74,617	65	599	2.7	113.8	113.8	114.5	0.7
BN	74,744	47	361	4.5	114.5	114.5	114.7	0.2
BO	75,932	132	610	1.7	115.0	115.0	115.7	0.7
BP	76,951	106	355	4.1	116.6	116.6	117.0	0.4
BQ	77,584	94	439	3.5	120.6	120.6	121.1	0.5
BR	78,096	31	244	5.7	121.3	121.3	121.9	0.7
BS	78,308	106	763	1.9	122.8	122.8	123.2	0.4
BT	79,269	92	422	3.3	123.9	123.9	124.7	0.8
BU	80,425	61	260	5.1	128.8	128.8	129.4	0.6
BV	81,085	66	383	3.5	131.5	131.5	132.4	0.9
BW	81,919	11	84	15.8	134.1	134.1	134.1	0.0
BX	82,146	87	1,314	1.3	142.9	142.9	142.9	0.0
BY	83,429	100	745	2.2	143.0	143.0	143.3	0.3
BZ	84,797	228	1,447	1.1	143.4	143.4	144.2	0.7

<sup>1</sup>Distance in feet above Pleasant Grove Creek Canal

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: PLEASANT GROVE CREEK**

LOCATION		FLOODWAY			1% ANNUAL CHANCE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Pleasant Grove Creek								
CA	86,090	72	437	3.6	144.5	144.5	145.1	0.6
CB	86,808	60	483	3.2	146.1	146.1	146.9	0.8
CC	86,893	60	485	3.2	146.4	146.4	147.3	0.9
CD	87,812	87	468	3.3	149.0	149.0	149.5	0.5
CE	88,878	50	313	5.0	151.1	151.1	151.6	0.6
CF	89,026	60	401	3.3	151.3	151.3	152.1	0.8
CG	89,908	154	219	6.2	159.3	159.3	159.9	0.6
CH	90,431	156	427	3.2	163.4	163.4	164.3	0.8
CI	91,281	163	468	2.9	166.9	166.9	167.8	0.9
CJ	92,199	80	223	6.1	170.3	170.3	170.9	0.6
CK	92,896	116	514	2.7	173.4	173.4	174.3	0.9
CL	93,567	150	530	2.6	176.6	176.6	177.4	0.8
CM	94,248	85	524	2.6	179.5	179.5	180.3	0.7
CN	94,755	100	332	3.1	181.8	181.8	182.8	1.0
CO	95,246	66	167	6.1	184.1	184.1	184.6	0.5
CP	96,122	51	332	3.1	191.2	191.2	191.8	0.6
CQ	96,217	51	313	3.2	191.3	191.3	192.0	0.6
CR	96,967	43	179	1.7	199.8	199.8	200.4	0.7
CS	97,691	15	35	8.7	204.0	204.0	204.1	0.1
CT	97,810	51	104	3.8	209.5	209.5	209.5	0.0
CU	99,093	38	74	4.6	226.4	226.4	226.4	0.0
CV	101,084	62	115	4.9	251.6	251.6	251.6	0.0
CW	102,646	48	66	4.1	287.0	287.0	287.4	0.4

<sup>1</sup>Distance in feet above Pleasant Grove Creek Canal

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: PLEASANT GROVE CREEK**

LOCATION		FLOODWAY			1% ANNUAL CHANCE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Pleasant Grove Creek North Branch								
A	375	200	915	0.4	102.6	102.6	103.5	1.0
B	850	169	509	0.6	102.6	102.6	103.6	1.0
C	1,151	158	508	0.6	102.8	102.8	103.7	0.9
D	1,864	135	276	1.1	103.8	103.8	104.5	0.6
E	2,746	50	191	1.6	105.8	105.8	106.5	0.7
F	3,701	30	144	2.2	108.4	108.4	109.1	0.7
G	4,008	39	138	2.3	108.8	108.8	109.7	1.0
H	4,198	14	280	2.9	109.3	109.3	110.2	0.9
I	4,250	77	374	1.4	111.2	111.2	112.0	0.8
J	4,826	150	571	0.5	111.3	111.3	112.1	0.8
K	5,650	112	229	1.4	111.9	111.9	112.5	0.6
L	6,442	69	164	1.9	112.9	112.9	113.7	0.8
M	7,344	77	208	1.5	113.5	113.5	114.5	0.9
N	8,073	63	169	1.8	114.4	114.4	115.2	0.9
O	9,208	39	108	1.4	116.9	116.9	117.7	0.8
P	9,884	32	103	1.5	117.3	117.3	118.1	0.7
Q	10,248	13	115	1.8	117.8	117.8	118.5	0.7
R	10,349	13	124	1.7	118.1	118.1	118.7	0.6
S	11,521	17	78	2.0	119.8	119.8	120.2	0.4
T	12,007	14	58	2.7	120.7	120.7	121.3	0.6
U	12,060	9	53	2.9	120.9	120.9	121.4	0.6
V	12,112	10	56	2.7	120.9	120.9	121.5	0.6
W	12,207	11	98	2.3	121.1	121.1	121.7	0.6
X	12,265	11	67	2.3	121.2	121.2	121.8	0.6
Y	12,413	18	58	2.7	121.5	121.5	122.1	0.6
Z	13,100	36	88	1.7	122.7	122.7	123.5	0.8

<sup>1</sup>Distance in feet above Pleasant Grove Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

FLOODING SOURCE: PLEASANT GROVE CREEK NORTH BRANCH

LOCATION		FLOODWAY			1% ANNUAL CHANCE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Pleasant Grove Creek North Branch								
AA	13,807	38	88	1.8	123.4	123.4	124.3	0.8
AB	14,805	31	74	2.1	125.8	125.8	126.1	0.3
AC	14,842	8	31	4.9	125.8	125.8	126.1	0.3
AD	15,048	8	35	4.4	126.5	126.5	126.6	0.2
AE	15,851	32	81	1.9	127.8	127.8	128.4	0.5
AF	16,431	30	96	1.6	132.9	132.9	133.0	0.1

<sup>1</sup>Distance in feet above Pleasant Grove Creek

<b>TABLE 24</b>	<b>FEDERAL EMERGENCY MANAGEMENT AGENCY PLACER COUNTY, CA AND INCORPORATED AREAS</b>	<b>FLOODWAY DATA</b>
		<b>FLOODING SOURCE: PLEASANT GROVE CREEK NORTH BRANCH</b>

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Pleasant Grove Creek South Branch								
A	2,099	124	1011	1.9	94.2	94.2	95.1	0.9
B	3,104	127	904	2.1	94.6	94.6	95.4	0.8
C	4,104	87	576	3.4	95.6	95.6	96.6	1.0
D	4,892	32	173	5.1	96.4	96.4	97.0	0.6
E	5,381	48	281	3.1	97.8	97.8	98.6	0.8
F	6,886	52	216	4.1	98.8	98.8	99.7	0.9
G	8,960	42	262	3.4	101.2	101.2	102.1	0.9
H	10,580	30	202	4.2	103.1	103.1	104.1	1.0
I	11,841	43	283	2.9	105.1	105.1	105.7	0.6
J	13,281	50	215	3.8	107.2	107.2	107.7	0.5
K	14,624	57	304	2.3	109.8	109.8	110.4	0.6
L	16,626	53	240	2.9	111.9	111.9	112.7	0.8
M	18,634	41	246	2.8	114.2	114.2	115.0	0.8
N	19,872	35	141	4.5	116.1	116.1	116.8	0.7
O	20,746	29	141	4.5	117.2	117.2	117.8	0.6
P	20,982	33	189	3.4	118.2	118.2	118.8	0.6
Q	22,170	36	156	4.1	119.9	119.9	120.4	0.5
R	23,939	57	268	2.4	122.4	122.4	122.8	0.4
S	24,135	40	212	1.8	123.3	123.3	123.5	0.2
T	24,710	33	139	2.4	123.4	123.4	123.8	0.4
U	25,680	55	153	1.9	125.6	125.6	125.9	0.3
V	27,148	36	36	5.8	131.1	131.1	131.3	0.2
W	28,242	44	47	4.5	146.6	146.6	147.1	0.5
X	29,357	48	113	1.9	151.9	151.9	152.1	0.2
Y	32,078	31	73	2.9	156.8	156.8	156.9	0.1
Z	33,629	35	56	3.8	159.6	159.6	159.9	0.3

<sup>1</sup>Distance in feet above confluence with Pleasant Grove Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: PLEASANT GROVE CREEK SOUTH BRANCH**

LOCATION		FLOODWAY			1% ANNUAL CHANCE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Pleasant Grove Creek Split Flow								
BO	75,731 <sup>1</sup>	116	162	3.2	115.7	115.7	116.1	0.4
BP	76,080 <sup>1</sup>	197	223	2.3	117.7	117.7	117.8	0.2
BQ	76,159 <sup>1</sup>	271	325	1.6	118.0	118.0	118.2	0.2
Pleasant Grove Creek Tributary 1								
A	1,350 <sup>2</sup>	76	381	1.7	108.8	108.8	109.6	0.8
B	2,420 <sup>2</sup>	44	166	3.9	110.1	110.1	110.6	0.5
C	2,950 <sup>2</sup>	56	242	2.6	111.0	111.0	111.2	0.2
D	3,150 <sup>2</sup>	56	234	2.7	111.8	111.8	112.1	0.3
E	4,350 <sup>2</sup>	49	130	4.9	115.3	115.3	115.3	0.0
F	5,480 <sup>2</sup>	46	162	3.9	117.4	117.4	118.2	0.8
G	6,060 <sup>2</sup>	46	211	3.0	118.3	118.3	119.2	0.9
H	7,120 <sup>2</sup>	37	148	4.3	119.6	119.6	120.6	1.0

<sup>1</sup>Distance in feet above Pleasant Grove Creek Canal  
<sup>2</sup>Distance in feet above confluence with Pleasant Grove Creek

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY PLACER COUNTY, CA AND INCORPORATED AREAS	FLOODWAY DATA
		FLOODING SOURCE: PLEASANT GROVE CREEK SPLIT FLOW - PLEASANT GROVE CREEK TRIBUTARY 1

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Pleasant Grove Creek Tributary 2								
A	176 <sup>1</sup>	104	114	2.9	115.7	115.7	115.7	0.0
B	578 <sup>1</sup>	54	87	3.8	119.0	119.0	119.2	0.1
C	1,353 <sup>1</sup>	74	178	1.9	121.8	121.8	121.8	0.0
D	1,492 <sup>1</sup>	105	315	1.1	122.4	122.4	122.4	0.0
E	2,662 <sup>1</sup>	52	117	2.8	124.5	124.5	124.5	0.0
F	3,935 <sup>1</sup>	61	113	2.9	127.8	127.8	127.8	0.0
Pleasant Grove Creek Tributary 3								
A	540 <sup>1</sup>	42	38	5.3	121.5 <sup>3</sup>	121.5	121.7	0.2
B	900 <sup>1</sup>	23	59	3.4	122.9	122.9	123.9	1.0
C	1,400 <sup>1</sup>	46	94	2.1	124.7	124.7	125.2	0.5
Rocklin City Tributary								
A	1,020 <sup>2</sup>	29	113	1.9	190.4	190.4	190.5	0.1
B	1,870 <sup>2</sup>	56	173	1.2	191.9	191.9	192.5	0.6
C	2,420 <sup>2</sup>	94	170	1.3	193.6	193.6	194.6	1.0
D	4,683 <sup>2</sup>	104	340	0.3	218.2	218.2	218.5	0.3
E	5,497 <sup>2</sup>	60	180	0.6	220.9	220.9	221.2	0.3
F	6,467 <sup>2</sup>	20	52	2.2	225.5	225.5	226.5	1.0
G	7,603 <sup>2</sup>	18	30	2.7	231.4	231.4	232.0	0.6
H	9,900 <sup>2</sup>	12	28	2.9	242.6	242.6	243.0	0.4
I	10,700 <sup>2</sup>	15	22	3.8	250.9	250.9	251.9	1.0

<sup>1</sup>Distance in feet above confluence with Pleasant Grove Creek

<sup>2</sup>Distance in feet above confluence with Antelope Creek

<sup>3</sup>Due to backwater effects from Pleasant Grove Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

PLACER COUNTY, CA  
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: PLEASANT GROVE CREEK TRIBUTARY 2-  
PLEASANT GROVE CREEK TRIBUTARY 3 - ROCKLIN CITY TRIBUTARY

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Secret Ravine								
A	303	190	1,509	2.8	173.7	173.7	174.7	1.0
B	368	149	889	4.7	174.1	174.1	175.0	0.9
C	2,510	277	1,302	3.2	182.9	182.9	183.7	0.8
D	4,955	150	928	4.5	191.2	191.2	192.1	0.9
E	5,613	135	1,208	3.5	193.5	193.5	194.4	0.9
F	6,614	155	1,368	3.1	197.6	197.6	198.6	1.0
G	7,294	238	1,351	3.1	198.3	198.3	199.3	1.0
H	8,249	281	1,122	3.7	200.2	200.2	201.2	1.0
I	9,069	262	1,043	4.0	203.0	203.0	203.9	0.9
J	9,879	164	1,070	3.9	205.7	205.7	206.6	0.9
K	10,634	72	655	6.4	209.1	209.1	210.1	1.0
L	11,364	144	1,242	3.4	212.1	212.1	212.9	0.8
M	12,164	59	607	6.9	214.5	214.5	215.1	0.6
N	12,529	102	953	4.4	216.3	216.3	217.3	1.0
O	12,979	68	330	12.7	220.3	220.3	220.3	0.0
P	13,789	50	551	7.5	234.6	234.6	235.5	0.9
Q	14,439	66	537	7.7	239.6	239.6	240.6	1.0
R	14,919	75	728	5.7	243.8	243.8	244.5	0.7
S	15,819	195	1,228	3.4	247.7	247.7	248.3	0.6
T	16,329	94	648	6.4	250.0	250.0	250.5	0.5
U	17,219	72	573	6.5	255.0	255.0	255.5	0.5
V	18,229	153	813	4.6	260.1	260.1	260.4	0.3
W	19,449	123	337	10.0	263.7	263.7	263.7	0.0
X	21,509	192	790	4.3	277.8	277.8	278.2	0.4
Y	22,499	43	281	12.0	282.5	282.5	282.6	0.1
Z	23,499	136	577	5.9	289.8	289.8	290.7	0.9

<sup>1</sup>Distance in feet above confluence with Miners Ravine

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: SECRET RAVINE**

LOCATION		FLOODWAY			1% ANNUAL CHANCE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Secret Ravine								
AA	24,389	207	2,004	1.7	301.8	301.8	301.8	0.0
AB	24,929	258	1,801	1.9	301.9	301.9	301.9	0.0
AC	26,624	131	259	13.1	304.2	304.2	304.8	0.6
AD	27,984	202	1,072	3.2	318.8	318.8	318.8	0.0
AE	29,044	171	517	6.5	322.0	322.0	322.0	0.0
AF	30,054	286	895	3.8	327.7	327.7	327.8	0.1
AG	30,484	198	731	4.6	329.6	329.6	329.6	0.0
AH	32,119	51	394	8.6	339.7	339.7	340.0	0.3
AI	32,834	132	826	4.1	342.3	342.3	342.8	0.5
AJ	34,689	370	1,734	1.8	355.8	355.8	356.7	0.9
AK	35,689	95	460	6.7	359.6	359.6	360.2	0.6
AL	37,889	430	1,447	2.1	369.8	369.8	370.7	0.9
AM	38,839	210	530	5.8	374.7	374.7	374.7	0.0
AN	39,559	569	1,207	2.5	379.1	379.1	379.2	0.1
AO	40,700	N/A	N/A	N/A	387.5	N/A	N/A	N/A

<sup>1</sup>Distance in feet above confluence with Miners Ravine

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SECRET RAVINE

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Secret Ravine- Aguilar Tributary								
A	540	67	150	3.8	256.7	256.7	257.7	1.0
B	820	26	211	2.7	270.5	270.5	270.5	0.0
C	985	28	93	6.1	270.5	270.5	270.5	0.0
D	1,280	65	86	6.6	275.0	275.0	275.0	0.0
E	2,325	85	94	6.0	283.4	283.4	283.9	0.5
F	2,565	150	560	1.0	290.0	290.0	290.0	0.0
G	3,120	242	450	1.3	290.1	290.1	290.1	0.0
H	3,985	67	87	6.5	298.5	298.5	298.6	0.1
Secret Ravine Upper Fork								
A	1,205	25	34	6.8	367.6	367.6	367.6	0.0
B	1,640	103	379	0.7	374.1	374.1	374.9	0.8
C	3,010	108	108	1.2	391.4	391.4	391.5	0.1
D	3,625	158	67	1.9	394.9	394.9	394.9	0.0
E	4,320	108	41	1.5	398.9	398.9	398.9	0.0
F	4,960	25	23	2.6	403.2	403.2	403.5	0.3

<sup>1</sup>Distance in feet above confluence with Secret Ravine

<b>TABLE 24</b>	<b>FEDERAL EMERGENCY MANAGEMENT AGENCY PLACER COUNTY, CA AND INCORPORATED AREAS</b>	<b>FLOODWAY DATA</b>
		<b>FLOODING SOURCE: SECRET RAVINE-AGUILAR TRIBUTARY - SECRET RAVINE UPPER FORK</b>

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Squaw Creek								
A	106 <sup>1</sup>	84	515	8.3	6,074.7	6,074.7	6,074.7	0.0
B	729 <sup>1</sup>	87	415	10.4	6,089.1	6,089.1	6,089.1	0.0
C	2,260 <sup>1</sup>	66	341	12.6	6,131.5	6,131.5	6,131.6	0.0
D	3,817 <sup>1</sup>	91	457	9.4	6,163.6	6,163.6	6,163.6	0.0
E	4,509 <sup>1</sup>	68	613	7.0	6,174.9	6,174.9	6,174.9	0.0
F	6,336 <sup>1</sup>	370	1,754	2.4	6,176.7	6,176.7	6,177.1	0.4
G	8,131 <sup>1</sup>	324	792	5.0	6,181.2	6,181.2	6,182.0	0.8
H	10,486 <sup>1</sup>	284	1,375	2.9	6,190.7	6,190.7	6,190.8	0.1
I	11,473 <sup>1</sup>	58	414	9.5	6,199.3	6,199.3	6,199.7	0.4
J	12,007 <sup>1</sup>	90	663	5.9	6,203.9	6,203.9	6,203.9	0.0
K	12,392 <sup>1</sup>	79	684	5.7	6,205.1	6,205.1	6,205.1	0.0
L	13,174 <sup>1</sup>	77	747	5.3	6,206.9	6,206.9	6,206.9	0.0
M	13,776 <sup>1</sup>	201	1,724	2.3	6,208.8	6,208.8	6,208.8	0.0
N	13,950 <sup>1</sup>	222	1,541	1.3	6,208.9	6,208.9	6,208.9	0.0
O	14,620 <sup>1</sup>	71	347	5.7	6,212.7	6,212.7	6,212.7	0.0
P	15,544 <sup>1</sup>	47	205	9.7	6,261.9	6,261.9	6,261.9	0.1
Squaw Creek - South Tributary								
A	37 <sup>2</sup>	100	539	1.7	6,208.9	6,208.9	6,208.9	0.0
B	517 <sup>2</sup>	53	187	5.2	6,217.8	6,217.8	6,218.1	0.3
C	1,447 <sup>2</sup>	15	81	11.4	6,252.9	6,252.9	6,253.1	0.2

<sup>1</sup>Distance in feet above confluence with Truckee River

<sup>2</sup>Distance in feet above confluence with Squaw Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

FLOODING SOURCE: SQUAW CREEK - SQUAW CREEK-SOUTH  
TRIBUTARY

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Strap Ravine								
A	1,466	147	473	1.9	159.9	159.9	160.6	0.7
B	2,145	108	268	3.4	161.0	161.0	161.7	0.7
C	2,505	185	410	2.2	161.5	161.5	162.3	0.8
D	3,075	104	296	3.1	163.0	163.0	163.7	0.7
E	4,360	130	292	3.1	168.0	168.0	168.8	0.8
F	5,142	53	140	6.5	176.2	176.2	176.5	0.3
G	5,674	98	302	3.0	185.5	185.5	185.5	0.0
H	6,754	102	565	1.6	194.6	194.6	195.3	0.7
I	7,199	112	286	3.2	197.3	197.3	197.3	0.0
J	8,289	145	259	3.5	202.6	202.6	202.6	0.0
K	9,030	129	351	2.6	205.6	205.6	206.4	0.8
L	10,639	98	268	3.4	214.3	214.3	215.0	0.7
M	11,755	298	1,107	0.8	222.7	222.7	222.7	0.0
N	12,305	244	167	5.1	223.1	223.1	223.1	0.0
O	13,115	240	316	2.7	229.6	229.6	229.6	0.0
P	13,820	240	598	1.4	239.2	239.2	239.2	0.0
Q	15,450	101	207	4.1	251.6	251.6	251.8	0.2
R	16,220	92	151	5.6	256.9	256.9	257.1	0.2
S	17,850	76	222	3.8	268.4	268.4	268.5	0.1
T	18,920	102	218	3.9	282.0	282.0	282.9	0.9
U	19,400	69	174	4.9	284.8	284.8	285.3	0.5
V	20,270	215	685	1.2	298.5	298.5	299.0	0.5
W	21,170	472	1,138	0.7	303.1	303.1	303.1	0.0

<sup>1</sup>Distance in feet above confluence with Linda Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: STRAP RAVINE

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Sucker Ravine								
A	500	73	218	4.4	237.0	237.0	237.0	0.0
B	840	135	322	2.9	238.5	238.5	238.5	0.0
C	1,860	178	438	2.6	255.9	255.9	255.9	0.0
D	2,220	29	105	10.9	256.0	256.0	256.0	0.0
E	2,350	287	776	1.5	260.5	260.5	260.5	0.0
F	2,480	470	2,017	0.6	260.5	260.5	260.5	0.0
G	3,060	630	605	1.9	260.5	260.5	260.5	0.0
H	3,480	40	116	9.8	261.4	261.4	261.4	0.0
I	4,235	262	725	2.4	268.6	268.6	268.6	0.0
J	4,580	228	680	2.9	268.7	268.7	268.7	0.0
K	4,890	304	449	2.6	270.3	270.3	270.3	0.0
L	5,055	337	888	1.3	270.6	270.6	270.6	0.0
M	5,495	328	615	1.9	271.1	271.1	271.1	0.0
N	6,285	216	463	2.5	273.8	273.8	273.8	0.0
O	6,855	214	259	4.5	277.9	277.9	277.9	0.0
P	7,330	250	431	2.7	280.9	280.9	280.9	0.0
Q	8,760	251	607	1.9	287.4	287.4	287.7	0.3
R	9,290	273	730	1.6	288.4	288.4	289.1	0.7
S	10,005	110	353	3.3	291.3	291.3	291.4	0.1
T	10,590	170	778	1.5	295.4	295.4	296.4	1.0
U	10,750	216	870	1.3	295.5	295.5	296.5	1.0
V	10,960	303	974	1.1	297.8	297.8	297.8	0.0
W	11,280	300	830	1.3	298.9	297.8	297.9	0.1
X	11,800	41	164	6.7	300.7	297.8	298.6	0.8
Y	12,625	320	455	1.3	303.6	302.7	302.7	0.0
Z	13,685	276	219	2.8	307.3	304.6	305.2	0.6

<sup>1</sup>Distance in feet above confluence with Secret Ravine

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: SUCKER RAVINE**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Sucker Ravine								
AA	14,340 <sup>1</sup>	100	221	2.8	309.6	309.1	309.7	0.6
AB - AJ <sup>2</sup>								
AK	21,321 <sup>1</sup>	90	132	4.1	341.6	341.6	341.6	0.0
AL	22,546 <sup>1</sup>	120	171	3.2	354.0	354.0	354.0	0.0
AM	23,530 <sup>1</sup>	60	65	8.3	361.0	361.0	361.0	0.0
AN	24,390 <sup>1</sup>	55	79	6.8	368.5	368.5	368.5	0.0
AO	24,805 <sup>1</sup>	170	180	3.0	371.2	371.2	371.2	0.0
Sucker Ravine Loomis Tributary								
A	1,340 <sup>3</sup>	101	197	1.7	307.0	307.0	307.6	0.6
B	3,640 <sup>3</sup>	167	260	1.3	319.6	319.6	319.9	0.3
C	4,550 <sup>3</sup>	400	271	1.3	324.1	324.1	324.1	0.0
D	5,445 <sup>3</sup>	50	98	3.5	331.1	331.1	331.1	0.0
E	6,625 <sup>3</sup>	38	90	3.8	340.4	340.4	340.4	0.0
<sup>1</sup> Distance in feet above confluence with Secret Ravine <sup>2</sup> No floodway determined <sup>3</sup> Distance in feet above confluence with Sucker Ravine								
<b>TABLE 24</b>	<b>FEDERAL EMERGENCY MANAGEMENT AGENCY PLACER COUNTY, CA AND INCORPORATED AREAS</b>				<b>FLOODWAY DATA</b>			
					<b>FLOODING SOURCE: SUCKER RAVINE - SUCKER RAVINE LOOMIS TRIBUTARY</b>			

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Truckee River								
A	487,872	255	1,683	8.5	5,841.2	5,841.2	5,842.2	1.0
B	489,456	142	1,422	10.1	5,850.3	5,850.3	5,851.3	1.0
C	491,040	174	1,420	10.1	5,857.1	5,857.1	5,858.1	1.0
D	492,624	157	1,640	8.7	5,863.3	5,863.3	5,864.3	1.0
E	494,208	159	1,628	8.8	5,867.9	5,867.9	5,868.9	1.0
F	495,792	150	1,781	8.0	5,874.6	5,874.6	5,875.6	1.0
G	497,376	105	971	13.2	5,880.8	5,880.8	5,881.4	0.6
H	498,960	190	973	13.2	5,886.8	5,886.8	5,886.9	0.1
I	500,544	218	1,229	11.6	5,897.4	5,897.4	5,897.4	0.0
J	502,022	114	1,155	12.4	5,904.9	5,904.9	5,905.9	1.0
K	503,712	177	1,363	9.0	5,912.3	5,912.3	5,913.3	1.0
L	505,296	162	1,575	7.8	5,920.6	5,920.6	5,921.6	1.0
M	506,880	131	885	13.8	5,931.1	5,931.1	5,931.1	0.0
N	508,464	125	857	14.3	5,940.7	5,940.7	5,940.7	0.0
O	510,101	141	913	13.4	5,951.5	5,951.5	5,951.5	0.0
P	512,160	183	1,286	9.5	5,968.7	5,968.7	5,969.7	1.0
Q	514,272	100	1,120	10.9	5,977.9	5,977.9	5,978.9	1.0
R	515,856	175	1,478	8.3	5,985.8	5,985.8	5,986.8	1.0
S	517,968	213	1,120	10.9	5,999.6	5,999.6	5,999.6	0.0
T	519,024	193	971	10.9	6,010.1	6,010.1	6,010.1	0.0
U	520,872	176	1,817	5.8	6,028.6	6,028.6	6,029.6	1.0
V	522,984	168	1,658	6.4	6,032.4	6,032.4	6,033.4	1.0
W	524,726	119	1,145	9.3	6,039.2	6,039.2	6,040.2	1.0
X	525,888	227	952	11.1	6,046.6	6,046.6	6,046.6	0.0
Y	527,472	197	1,142	9.3	6,057.3	6,057.3	6,057.3	0.0
Z	529,584	129	664	10.5	6,077.0	6,077.0	6,077.0	0.0

<sup>1</sup>Distance in feet above confluence with Pyramid Lake

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: TRUCKEE RIVER**

LOCATION		FLOODWAY			1% ANNUAL CHANGE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Truckee River								
AA	531,062	146	652	10.7	6,088.4	6,088.4	6,088.4	0.0
AB	532,752	93	547	12.8	6,111.3	6,111.3	6,111.3	0.0
AC	534,389	81	527	13.3	6,135.3	6,135.3	6,135.3	0.0
AD	535,973	65	506	13.8	6,155.5	6,155.5	6,155.5	0.0
AE	537,768	199	1,347	5.2	6,167.1	6,167.1	6,168.1	1.0
AF	539,510	212	1,307	5.4	6,173.9	6,173.9	6,174.9	1.0
AG	540,936	110	336	10.0	6,190.0	6,190.0	6,190.0	0.0
AH	542,626	87	847	4.0	6,202.1	6,202.1	6,202.8	0.7
AI	544,685	94	938	3.6	6,203.3	6,203.3	6,204.1	0.8
AJ	546,163	152	1,411	2.4	6,204.6	6,204.6	6,205.6	1.0
AK	548,275	129	973	3.4	6,205.9	6,205.9	6,206.9	1.0
AL	550,176	110	833	4.0	6,207.4	6,207.4	6,208.4	1.0
AM	551,707	49	413	8.1	6,209.8	6,209.8	6,210.6	0.8
AN	553,502	63	465	7.2	6,213.5	6,213.5	6,214.5	1.0
AO	554,770	69	485	6.9	6,219.5	6,219.5	6,220.0	0.5
AP	556,195	102	707	4.7	6,222.6	6,222.6	6,223.5	0.9
AQ	557,990	412	2,003	1.7	6,227.2	6,227.2	6,227.6	0.4
AR	560,102	79	675	5.0	6,229.2	6,229.2	6,230.1	0.9
AS	561,422	69	682	4.9	6,231.1	6,231.1	6,232.0	0.9

<sup>1</sup>Distance in feet above confluence with Pyramid Lake

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: TRUCKEE RIVER**

LOCATION		FLOODWAY			1% ANNUAL CHANCE WATER-SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Ward Creek								
A	1,060	63	254	11.6	6,246.6	6,246.6	6,246.6	0.0
B	1,990	63	256	11.5	6,263.3	6,263.3	6,263.3	0.0
C	3,070	53	241	12.2	6,297.1	6,297.1	6,297.1	0.0
D	3,930	160	375	7.8	6,326.5	6,326.5	6,326.5	0.0
E	5,060	46	237	12.4	6,363.8	6,363.8	6,364.3	0.5
F	6,200	27	192	15.3	6,398.4	6,398.4	6,398.4	0.0
G	8,080	106	303	9.7	6,452.2	6,452.2	6,452.2	0.0
H	9,160	92	336	8.7	6,469.9	6,469.9	6,470.2	0.3
I	10,260	53	241	12.2	6,488.8	6,488.8	6,489.0	0.2
J	11,800	276	686	4.3	6,509.7	6,509.7	6,510.7	1.0
K	13,420	71	265	11.1	6,536.9	6,536.9	6,536.9	0.0
L	14,460	47	216	12.1	6,553.6	6,553.6	6,554.2	0.6
M	15,270	82	295	8.8	6,564.3	6,564.3	6,564.7	0.4
N	16,840	61	232	11.2	6,591.2	6,591.2	6,591.3	0.1
O	18,600	76	275	9.5	6,621.8	6,621.8	6,622.1	0.3
P	19,820	98	322	8.1	6,643.5	6,643.5	6,644.4	0.9

<sup>1</sup>Distance in feet above confluence with Lake Tahoe

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY  
PLACER COUNTY, CA  
AND INCORPORATED AREAS

**FLOODWAY DATA**

**FLOODING SOURCE: WARD CREEK**

Non-encroachment areas 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 Flood Risk Project have been tabulated for selected cross sections and are shown in Table 25. The non-encroachment width indicates the measured distance left and right (looking downstream) from the mapped center of the stream to the non-encroachment boundary based on a surcharge of 1.0 foot or less.

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

[Not Applicable to this Flood Risk Project]

## **6.4 Coastal Flood Hazard Mapping**

This section is not applicable to this Flood Risk Project.

**Table 26: Summary of Coastal Transect Mapping Considerations**

[Not Applicable to this Flood Risk Project]

## **6.5 FIRM Revisions**

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

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

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

For more information about how to apply for a LOMA, call the FEMA Map Information

eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627).

### **6.5.2 Letters of Map Revision Based on Fill**

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

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

A tutorial for LOMR-F is available at [www.fema.gov/online-tutorials](http://www.fema.gov/online-tutorials).

### **6.5.3 Letters of Map Revision**

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

To obtain an application for a LOMR, visit [www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/mt-2-application-forms-and-instructions](http://www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/mt-2-application-forms-and-instructions) 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 Placer County FIRM are listed in Table 27.

**Table 27: Incorporated Letters of Map Change**

Case Number	Effective Date	Flooding Source	FIRM Panel(s)
99-09-169P	1/6/1999	Markham Ravine Lower Tributary	06061C0714H 06061C0718H
99-09-637P	3/10/2000	Griff Creek	06061C0360H
02-09-862P	9/26/2002	Sucker Ravine Loomis Tributary	06061C0954H 06061C0962H
02-09-511P	1/28/2003	South Branch Pleasant Grove Creek	06061C0943H
02-09-1258P	5/28/2003	Linda Creek	06061C1032H 06061C1051H 06061C1053H
02-09-810P	8/13/2003	Pleasant Grove Creek	06061C0934H 06061C0953H
05-09-0152P	8/9/2005	Sucker Ravine	06061C0961H
07-09-1869X	9/24/2007	Pleasant Grove Creek	06061C0936H
10-09-1224P	3/24/2010	Tributary to Pleasant Grove Creek Tributary 4	06061C0936H
09-09-2897P	2/11/2011	Rocklin City Tributary	06061C0961H 06061C0963H
10-09-3735P	2/28/2011	Bear River	06061C0395H 06061C0415H 06061C0685H
12-09-0102P	6/4/2012	Lake Forest Creek	06061C0342H 06061C0353H 06061C0361H
13-09-2062P	12/13/2013	Secret Ravine	06061C0962H
15-09-0659P	8/21/2015	Sucker Ravine	06061C0961H

#### **6.5.4 Physical Map Revisions**

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 [www.fema.gov](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](http://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 Placer County. Previously, separate FIRMs, Flood Hazard Boundary Maps (FHBM) and/or Flood Boundary and Floodway Maps (FBFM) 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.
- *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 Placer County FIRMs in countywide format was 06/8/1998.

**Table 28: Community Map History**

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Auburn, City of <sup>1</sup>	05/31/1974	N/A	N/A	06/08/1998	N/A
Colfax, City of <sup>1,2</sup>	06/08/1998	N/A	N/A	06/08/1998	N/A
Lincoln, City of	05/24/1974	10/10/1975	N/A	02/03/1982	06/08/1998
Loomis, Town of	12/29/1986	N/A	N/A	09/30/1987	06/08/1998 11/21/2001
Placer County, Unincorporated Areas	07/12/1977	04/03/1979	N/A	04/03/1979	02/05/1983 04/18/1983 01/16/1987 11/15/1989 05/02/1991 06/08/1998 11/21/2001
Rocklin, City of	07/19/1974	04/16/1976	N/A	05/15/1984	09/28/1990 06/08/1998 11/21/2001
Roseville, City of	08/02/1974	01/14/1977	10/25/1977	12/15/1983	06/08/1998 11/21/2001

<sup>1</sup> This community did not have a FIRM prior to the first countywide FIRM for Flood County

<sup>2</sup> No Special Flood Hazard Areas Identified

## 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.

### 7.2 Community Meetings

The dates of the community meetings held for this Flood Risk Project and previous Flood Risk Projects are shown in Table 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 29: Summary of Contracted Studies Included in this FIS Report**

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Miners Ravine	11/21/2001	USACE Sacramento District	EMW-96-1A-0195	November 2001	Placer County, Unincorporated Areas; Roseville, City of
Dry Creek and tributaries, Markham Ravine and portions of Auburn Ravine		Philip Williams & Associates	EMW-91-C-3363	June 1994	Auburn, City of; Lincoln, City of; Loomis, Town of; Placer County, Unincorporated Areas; Rocklin, City of; Roseville, City of
Zone A areas		Gill and Pulver Engineers, Inc.	H-4824	November 1980	Lincoln, City of; Loomis, Town of; Placer County, Unincorporated Areas
		Gill and Pulver Engineers, Inc.	N/A	July 1988	Rocklin, City of
		Nolte Associates, Inc	84-211	April 1987	Roseville, City of
Natomas East Drainage Canal (Zone A)		USACE Sacramento District	ENW-87-E-2509	January 1989	Placer County, Unincorporated Areas
Truckee River		Hale-Tippen Consultants	N/A	May 1991	Placer County, Unincorporated Areas
Auburn Ravine, Bear Creek, Curry Creek, Linda Creek, Orchard Creek, Pleasant Grove Creek and Squaw Creek	9/9/9999	RBF Consulting, Civil Engineering Solutions, Inc. and Dewberry Consultants	Placer County Flood Control and Water Conservation District CTP - MAS #1	April 2015	Lincoln, City of; Placer County, Unincorporated Areas; Rocklin, City of; Roseville, City of
All Ingram Slough and Orchard Creek Tributary 3 reaches	9/9/9999	Civil Engineering Solutions, Inc.	N/A	2008	Lincoln, City of

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Update of RBF model of Auburn Creek at Gold Hill Road and Linda Creek upstream of LOMR 02-09-1258P, Pleasant Grove Creek Tributary 2	9/9/9999	BakerAECOM	FEMA Contract HSFEHQ-09-D-0368, TO HSFE09-10-J-0025 and TO HSFE09-14-J-0025	2015	Placer County, Unincorporated Areas; Rocklin, City of; Roseville, City of

**Table 30: Community Meetings**

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Auburn, City of	9/9/9999	06/02/2005	INITIAL CCO	FEMA, the community, and the study contractor
		03/05/2014	INTERMEDIATE CCO	FEMA, the community, and the study contractor.
		9/9/9999	FINAL CCO	FEMA, the community, and the study contractor
Colfax, City of <sup>1</sup>	9/9/9999	06/02/2005	INITIAL CCO	FEMA, the community, and the study contractor.
		9/9/9999	FINAL CCO	FEMA, the community, and the study contractor.
Lincoln, City of	9/9/9999	06/02/2005	INITIAL CCO	FEMA, the community, and the study contractor.
		03/05/2014	INTERMEDIATE CCO	FEMA, the community, and the study contractor.
		9/9/9999	FINAL CCO	FEMA, the community, and the study contractor.
Loomis, Town of	9/9/9999	06/02/2005	INITIAL CCO	FEMA, the community, and the study contractor.
		9/9/9999	FINAL CCO	FEMA, the community, and the study contractor.
Placer County, Unincorporated Areas	9/9/9999	06/02/2005	INITIAL CCO	FEMA, the community, and the study contractor.
		03/05/2014	INTERMEDIATE CCO	FEMA, the community, Placer County Department of Public Works, Flood Control & Water Conservation District, and the study contractor.
		9/9/9999	FINAL CCO	FEMA, the community, and the study contractor.
Rocklin, City of	9/9/9999	06/02/2005	INITIAL CCO	FEMA, the community, and the study contractor.
		03/05/2014	INTERMEDIATE CCO	FEMA, the community, and the study contractor.
		9/9/9999	FINAL CCO	FEMA, the community, and the study contractor.
Roseville, City of	9/9/9999	06/02/2005	INITIAL CCO	FEMA, the community, and the study contractor.
		03/05/2014	INTERMEDIATE CCO	FEMA, the community, and the study contractor.
		9/9/9999	FINAL CCO	FEMA, the community, and the study contractor.

## SECTION 8.0 – ADDITIONAL INFORMATION

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

The additional data that was used for this project includes the FIS Report and FIRM that were previously prepared for Sacramento County and Sutter County, (FEMA 2006).

Table 31 is a list of the locations where FIRMs for Placer 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
Auburn, City of	1225 Lincoln Way, Planning and Public Works Department	Auburn	CA	95603
Colfax, City of <sup>1</sup>	NP	Colfax	CA	95713
Lincoln, City of	600 Sixth Street Community Development Department	Lincoln	CA	95648
Loomis, Town of	3665 Taylor Road, Town Hall	Loomis	CA	95650
Placer County, Unincorporated Areas	3091 County Center Drive Placer County Public Works	Auburn	CA	95603
Rocklin, City of	3970 Rocklin Road, Engineering Department	Rocklin	CA	95677
Roseville, City of	316 Vernon Street, Engineering Department	Roseville	CA	95678

<sup>1</sup> No Special Flood Hazard Areas Identified

The National Flood Hazard Layer (NFHL) dataset is a compilation of effective FIRM databases and LOMCs. Together they create a GIS data layer for a State or Territory. The NFHL is updated as studies become effective and extracts are made available to the public monthly. NFHL data can be viewed or ordered from the website shown in Table 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	<a href="http://www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/engineering-library">www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/engineering-library</a>
NFIP website	<a href="http://www.fema.gov/national-flood-insurance-program">www.fema.gov/national-flood-insurance-program</a>
NFHL Dataset	<a href="http://msc.fema.gov">msc.fema.gov</a>
FEMA Region IX	1111 Broadway, Suite 1200 Oakland, CA 94607 (510) 627-7029
Other Federal Agencies	
USGS website	<a href="http://www.usgs.gov">www.usgs.gov</a>
Hydraulic Engineering Center website	<a href="http://www.hec.usace.army.mil">www.hec.usace.army.mil</a>
State Agencies and Organizations	
State NFIP Coordinator	Ricardo Pineda, PE, CFM California Dept. of Water 1416 9th Street, Room 1601 Sacramento, CA 95814 (916) 574-0611 rpineda@water.ca.gov
State GIS Coordinator	James Eto California Dept. of Water Resources 3464 El Camino Avenue, Suite 200 Sacramento, CA 95821 (916) 574-1409 jeto@water.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
AmAerial 1988	American Aerial Surveys	<i>Topographic Maps. Scale 1"=200', contour interval 4 feet</i>			1988	
BLM 2011	Bureau of Land Management	<i>Cadastral PLSS Standardized Data</i>	BLM Cadastral Survey	Sacramento, CA	9/19/2011	<a href="http://www.geocommunicator.gov">www.geocommunicator.gov</a>
BOC 2010	U.S. Bureau of the Census	<i>State and County QuickFacts</i>	Population Division, Population Projections Branch		18-Nov-15	<a href="http://quickfacts.census.gov/qfd/states/06/06061.html">quickfacts.census.gov/qfd/states/06/06061.html</a>
Cartwright 1970	Cartwright Aerial Surveys, Inc.	<i>Topographic Maps. Scale 1:2,400, Contour Intervals 2 and 4 feet, Rocklin, California</i>			11-Oct-70	
CH2M 1991	CH2M Hill	<i>Auburn Ravine, Coon, and Pleasant Grove Creeks – Flood Mitigation Plan (Draft)</i>			1991	
Civil 2008	Civil Engineering Solutions, Inc.	<i>South Lincoln Master Drainage Plan (SLMP)</i>		City of Lincoln, Placer County	September, 2008	
FEMA 1998	Federal Emergency Management Agency	<i>Placer County, CA DFIRM</i>	FEMA	Washington, D.C.	6/8/1998	FEMA Flood Map Service Center <a href="http://msc.fema.gov">msc.fema.gov</a>

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
FEMA 2008a	Federal Emergency Management Agency	<i>Flood Insurance Study, Sutter County, California Unincorporated Areas</i>		Washington, D.C.	2-Dec-08	FEMA Flood Map Service Center <a href="http://msc.fema.gov">msc.fema.gov</a>
FEMA 2008b	Federal Emergency Management Agency	<i>Flood Insurance Study, Sacramento County, California Unincorporated Areas</i>		Washington, D.C.	8-Dec-08	FEMA Flood Map Service Center <a href="http://msc.fema.gov">msc.fema.gov</a>
Hale-Tippin Undated	Hale-Tippin Consultants	<i>Base Flood Elevation Profile and 100-year Flood Plain Limits, 500-Year Flood Plain Limits, Scale 1:40, Contour Interval 2 feet, Truckee River, California.</i>				
Law Undated	Law Engineers	<i>Topographic Maps. Scale 1:4,800, Contour Interval 2 feet: Pleasant Grove Creek Basin, California</i>				
Montgomery 1992a	Montgomery, James M	<i>Auburn/Bowman Community Plan Hydrology Study</i>	Montgomery, James M		1992	
Montgomery 1992b	Montgomery, James M.	<i>Final Report: Dry Creek Watershed Flood Control Plan</i>	Montgomery, James M.		1992	

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
Nolte 1984	Pugh-Nolte and Associates	<i>Aerial Photography 1984. Scale 1:6,600, Roseville, California</i>			13-Dec-84	
Nolte 2003	Nolte Associates, Inc	<i>Pleasant Grove Creek and Linda Creek Hydrology</i>			Sep-03	
Nolte 2004a	Nolte Associates, Inc	<i>Squaw and Bear Creek Hydrology</i>			Mar-04	
Nolte 2004b	Nolte Associates, Inc	<i>Auburn Ravine and Orchard Creek Hydrology</i>			Sep-04	
Nolte Undated	Nolte Associates, Inc	<i>Topographic Maps. Scale 1"=100', contour interval 2 feet</i>				
Placer Undated	South East Placer County #146	<i>Topographic Maps. Scale 1"=100', contour interval 2 feet</i>				
PlacerDPW 1975	Placer County Department of Public Works	<i>Placer County Regional Wastewater Management Study, Topographic Mapping, Scale 1:1,200, Contour Interval 2 feet</i>			5-Sep-75	
PlacerFC 1993	Placer County Flood Control and Water Conservation District	<i>Stormwater Management Manual</i>			1993	

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
PlacerGIS 2010a	Placer County Geographic Information System Data Clearinghouse	<i>Street centerlines of Placer County</i>	Placer County Spatial Database Engine	Placer County, CA	1/1/2010	<a href="http://www.placer.ca.gov">www.placer.ca.gov</a>
PlacerGIS 2010b	Placer County Geographic Information System Data Clearinghouse	<i>Towns, Cities, and Jurisdictions of Placer County</i>	Placer County Spatial Database Engine	Placer County, CA	1/1/2010	<a href="http://www.placer.ca.gov">www.placer.ca.gov</a>
PlacerGIS 2010c	Placer County Geographic Information System Data Clearinghouse	<i>Water lines and areas for Placer County</i>	Placer County Spatial Database Engine	Placer County, CA	1/1/2010	<a href="http://www.placer.ca.gov">www.placer.ca.gov</a>
PWA 1992	Philip Williams & Associates, Ltd	<i>Topographic Maps, Scale 1:2,400, Contour Interval 2 feet</i>			Feb-92	
TMW 1979	Thomas-McKeegan-Wegener	<i>Aerial Photography 1979, Scale 1:4,800, Pleasant Grove Creek and Tributaries, May 2, 1979; Orchard Creek and Tributaries, May 2, 1979; Dry Creek (near Auburn), May 16, 1979; Ward Creek, August 24, 1979</i>		Placer County, California	Various	

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USACE 1971	U.S. Department of the Army, Corps of Engineers	<i>Floodplain Information Truckee River, Placer County, California</i>	Sacramento District		Jun-71	
USACE 1973	U.S. Department of the Army, Corps of Engineers	<i>HEC – 1 Hydrograph Package</i>	Hydrologic Engineering Center		1973	
USACE 1974	U.S. Department of the Army, Corps of Engineers	<i>Floodplain Information Truckee River and Martis Creek, Nevada and Placer Counties, California.</i>	Sacramento District		Jun-74	
USACE 1979	U.S. Department of the Army, Corps of Engineers	<i>Hydrology for Floodplain Information, Lake Tahoe Basin, California – Nevada</i>	Sacramento District		Feb-79	
USACE 1990	U.S. Department of the Army, Corps of Engineers	<i>HEC – 2 Water Surface Profiles</i>	Hydrologic Engineering Center		1990	
USDA 2014	U.S. Department of Agriculture, Farm Service Agency	<i>Orthophoto of Placer County</i>	Aerial Photography Field Office	2222 W. 2300 South, Salt Lake City, UT	1/1/2014	
USGS 1967	U.S. Department of Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 20 Feet. Rocklin, CA (1967)</i>		Washington, D.C.	1967	<a href="http://topomaps.usgs.gov">topomaps.usgs.gov</a>

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USGS 1969a	U.S. Department of Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000, enlarged to a scale of 1:9,600, Contour Interval 40 Feet. Tahoe City, CA (1955, Photo revised 1969)</i>		Washington, D.C.	Various	<a href="http://topomaps.usgs.gov">topomaps.usgs.gov</a>
USGS 1969b	U.S. Department of Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000, enlarged to a scale of 1:9,600, Contour Interval 40 Feet. Truckee, CA (1955, Photo revised 1969)</i>		Washington, D.C.	Various	<a href="http://topomaps.usgs.gov">topomaps.usgs.gov</a>