

FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 3 OF 6



LOS ANGELES COUNTY, CALIFORNIA AND INCORPORATED AREAS

COMMUNITY NAME	NUMBER	COMMUNITY NAME	NUMBER
LOS ANGELES COUNTY UNINCORPORATED AREAS	065043	CITY OF CLAREMONT*	060109
CITY OF AGOURA HILLS	065072	CITY OF COMMERCE	060110
CITY OF ALHAMBRA*	060095	CITY OF COMPTON	060111
CITY OF ARCADIA*	065014	CITY OF COVINA*	065024
CITY OF ARTESIA*	060097	CITY OF CUDAHY	060657
CITY OF AVALON	060098	CITY OF CULVER CITY	060114
CITY OF AZUSA	065015	CITY OF DIAMOND BAR	060741
CITY OF BALDWIN PARK*	060100	CITY OF DOWNEY	060645
CITY OF BELL*	060101	CITY OF DUARTE*	065026
CITY OF BELL GARDENS	060656	CITY OF EL MONTE*	060658
CITY OF BELLFLOWER	060102	CITY OF EL SEGUNDO	060118
CITY OF BEVERLY HILLS*	060655	CITY OF GARDENA	060119
CITY OF BRADBURY*	065017	CITY OF GLENDALE*	065030
CITY OF BURBANK	065018	CITY OF GLENDORA*	065031
CITY OF CALABASAS	060749	CITY OF HAWAIIAN GARDENS*	065032
CITY OF CARSON	060107	CITY OF HAWTHORNE*	060123
CITY OF CERRITOS	060108	CITY OF HERMOSA BEACH	060124

*No Special Flood Hazard Areas Identified

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FLOOD INSURANCE STUDY NUMBER

06037CV003D

Version Number 2.3.3.2



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COMMUNITY NAME	NUMBER	COMMUNITY NAME	NUMBER
CITY OF HIDDEN HILLS	060125	CITY OF PICO RIVERA	060148
CITY OF HUNTINGTON PARK*	060126	CITY OF POMONA*	060149
CITY OF INDUSTRY*	065035	CITY OF RACHO PALOS VERDES	060464
CITY OF INGLEWOOD*	065036	CITY OF REDONDO BEACH	060150
CITY OF IRWINDALE*	060129	CITY OF ROLLING HILLS*	060151
CITY OF LA CAÑADA FLINTRIDGE*	060669	CITY OF ROLLING HILLS ESTATES*	065054
CITY OF LA HABRA HEIGHTS*	060701	CITY OF ROSEMEAD*	060153
CITY OF LA MIRADA	060131	CITY OF SAN DIMAS	060154
CITY OF LA PUENTE*	065039	CITY OF SAN FERNANDO*	060628
CITY OF LA VERNE	060133	CITY OF SAN GABRIEL*	065055
CITY OF LAKEWOOD	060130	CITY OF SAN MARINO*	065057
CITY OF LANCASTER	060672	CITY OF SANTA CLARITA	060729
CITY OF LAWDALE*	060134	CITY OF SANTA FE SPRINGS	060158
CITY OF LOMITA*	060135	CITY OF SANTA MONICA	060159
CITY OF LONG BEACH	060136	CITY OF SIERRA MADRE*	065059
CITY OF LOS ANGELES	060137	CITY OF SIGNAL HILL*	060161
CITY OF LYNWOOD	060635	CITY OF SOUTH EL MONTE*	060162
CITY OF MALIBU	060745	CITY OF SOUTH GATE	060163
CITY OF MANHATTAN BEACH	060138	CITY OF SOUTH PASADENA*	065061
CITY OF MAYWOOD*	060651	CITY OF TEMPLE CITY*	060653
CITY OF MONROVIA*	065046	CITY OF TORRANCE	060165
CITY OF MONTEBELLO	060141	CITY OF VERNON*	060166
CITY OF MONTEREY PARK*	065047	CITY OF WALNUT*	065069
CITY OF NORWALK	060652	CITY OF WEST COVINA	060666
CITY OF PALMDALE	060144	CITY OF WEST HOLLYWOOD*	060720
CITY OF PALOS VERDES ESTATES	060145	CITY OF WESTLAKE VILLAGE	060744
CITY OF PARAMOUNT	065049	CITY OF WHITTIER	060169
CITY OF PASADENA*	065050		

*No Special Flood Hazard Areas Identified

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Published Separately

Flood Insurance Rate Map (FIRM)

SECTION 6.0 – MAPPING METHODS

6.1 Vertical and Horizontal Control

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

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

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

Table 20: Countywide Vertical Datum Conversion
[Not Applicable to this Flood Risk Project]

A countywide conversion factor could not be generated for Los Angeles 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)
Amargosa Creek	+2.8
Anaverde Creek	+2.8
Avalon Canyon	+2.8
Big Rock Wash	+2.8
Cheseboro Creek	+2.9
Cold Creek	+2.9
Dark Canyon	+2.9
Dry Canyon	+2.9
Escondido Canyon	+2.9
Flow Along Empire Avenue	+2.8
Flowline No. 1	+2.8
Garapito Creek	+2.9
Hacienda Creek	+2.8
Kagel Canyon	+2.8
La Mirada Creek	+2.8
Lake Street Overflow	+2.8
Las Flores Canyon	+2.9
Las Virgenes Creek	+2.9
Liberty Canyon	+2.9
Lindero Canyon (Above Confluence with Medea Creek)	+2.9
Lindero Canyon (Above Lake Lindero)	+2.9
Little Rock Wash - Profile A	+2.8
Little Rock Wash - Profile B	+2.8
Little Rock Wash - Profile C	+2.8
Lobo Canyon	+2.9
Lockheed Drain Channel	+2.8
Lopez Canyon Channel	+2.8
Los Angeles River Left Overbank Path 2	+2.8
Los Angeles River Right Overbank Path 1	+2.8
Los Angeles River Right Overbank Path 2	+2.8
Malibu Creek	+2.9
Medea Creek	+2.9

Table 21: Stream-Based Vertical Datum Conversion, continued

Flooding Source	Average Vertical Datum Conversion Factor (feet)
Medea Creek (Above Ventura Freeway)	+2.9
Mill Creek	+2.8
North Overflow	+2.8
Old Topanga Canyon	+2.9
Overflow Area of Lockheed Drain Channel	+2.8
Overflow Area of Lockheed Storm Drain	+2.8
Palo Comando Creek	+2.9
Ramirez Canyon	+2.9
Rio Hondo River Left Overbank Path 3	+2.8
Rio Hondo River Left Overbank Path 5	+2.8
Rio Hondo River Left Overbank Path 6	+2.8
Rustic Canyon	+2.8
Santa Maria Canyon	+2.9
Stokes Canyon	+2.9
Topanga Canyon	+2.9
Trancas Creek	+2.9
Triunfo Creek	+2.9
Unnamed Canyon (Serra Retreat Area)	+2.9
Upper Los Angeles River Left Overbank	+2.8
Weldon Canyon	+2.9
Zuma Canyon	+2.9

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.

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

Table 22: Base Map Sources

Data Type	Data Provider	Data Date	Data Scale	Data Description
Digital Orthophoto	USGS	1994	1:12,000	Digital Orthophoto Quadrangles
Digital Orthophoto	Coastal Service Center	2011	*	Digital orthophotography
Digital Orthophoto	U.S. Department of Agriculture Farm Service Agency	2014	*	Digital orthophotography
Political boundaries	Los Angeles County Department of Public Works	2013	1:12,000	Municipal and county boundaries
Public Land Survey System (PLSS)	US Department of the Interior Bureau of Land Management	2008	1:12,000	Spatial and attribute information for PLSS area in digital format.
Transportation Features	U.S. Department of Commerce, U.S. Census Bureau, Geography Division	2014	1:12,000	TIGER/Line shapefile

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. For each coastal flooding source studied as part of this FIS Report, the mapped floodplain boundaries on the FIRM have been delineated using the inland extent of the 1% annual chance TWL, inland extent of wave overtopping, or PFD boundary determined at each transect; between transects, boundaries were delineated using land use and land cover data, the topographic elevation data described in Table 23, and knowledge of coastal flood processes. In ponding areas, flood elevations were determined at each junction of the model; between junctions, boundaries were interpolated using the topographic elevation data described in Table 23.

In cases where the 1% and 0.2% annual chance floodplain boundaries are close together, only the 1% annual chance floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

The floodway widths presented in this FIS Report and on the FIRM were computed for certain stream segments on the basis of equal conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. Table 2 indicates the flooding sources for which floodways have been determined. The results of the floodway computations for those flooding sources have been tabulated for selected cross sections and are shown in Table 24, "Floodway Data."

Table 23: Summary of Topographic Elevation Data used in Mapping

Community	Flooding Source	Source for Topographic Elevation Data					
		Description	Scale	Contour Interval	RMSE _z	Accuracy _z	Citation
Agoura Hills, City of	Lindero Canyon, Medea Creek	Topographic Map	1:480	2 ft	N/A	N/A	Los Angeles County Flood Control District, 1968
Avalon, City of	All flooding sources studied within community	Contour Lines	1:2,400	2 ft 5 ft	N/A	N/A	City of Avalon 1962
Avalon, City of	All flooding sources studied within community	Contour Lines	1:6,000	10 ft	N/A	N/A	City of Avalon
Beverly Hills, City of	All flooding sources studied within communities	Topographic Maps	1:24,000	5 ft	N/A	N/A	USGS 1972 (b)
Burbank, City of	All flooding sources studied within community	Contour Lines	1:100	2 ft	N/A	N/A	Analytical Surveys, Inc., May 1988
Burbank, City of	All flooding sources studied within communities	Topographic Maps	1:24,000	40 ft	N/A	N/A	USGS 1966
Calabasas, City of	All flooding sources studied within communities	Topographic Maps	1:24,000	25 ft	N/A	N/A	USGS 1967
Calabasas, City of; Long Beach, City of; Los Angeles County, Unincorporated Areas; Palos Verdes Estates, City of	Cold Creek, Dark Canyon, Las Virgenes Creek, Old Topanga Canyon, Unnamed Stream Main Reach, Unnamed Stream Tributary 1, Unnamed Stream Tributary 2	LIDAR	N/A	N/A	N/A	N/A	Los Angeles Region Imagery Acquisition Consortium (LAR-IAC) 2006

Table 23: Summary of Topographic Elevation Data used in Mapping, continued

Community	Flooding Source	Source for Topographic Elevation Data					
		Description	Scale	Contour Interval	RMSE _z	Accuracy _z	Citation
Calabasas, City of; Los Angeles County, Unincorporated Areas	Las Virgenes Creek	Aerial Survey	1:1,200	5 ft	N/A	N/A	State of California, Division of Highways, 1969
El Monte, City of; La Habra Heights, City of; Whittier, City of	All flooding sources studied within communities	Topographic Maps	1:24,000	20 ft	N/A	N/A	USGS 1972 (c)
Hermosa Beach, City of; Redondo Beach, City of	All flooding sources studied within community	Aerial Photographs and Topographic Maps	1:4,800	2 ft	N/A	N/A	Abrams Aerial Survey Corporation, 1978
Inglewood, City of	All flooding sources studied within communities	Topographic Maps	1:24,000	5 ft	N/A	N/A	USGS 1964
La Habra Heights, City of	All flooding sources studied within communities	Topographic Maps	1:24,000	20 ft	N/A	N/A	USGS 1972 (d)
La Mirada, City of	La Mirada Creek	Topographic Map	1:1,200	2 ft	N/A	N/A	City of La Mirada, 1977
Long Beach, City of; Los Angeles, City of; South Gate, City of	All flooding sources studied within communities	Topographic Maps	1:24,000	5 ft	N/A	N/A	USGS 1946
Los Angeles, City of	All flooding sources studied within community	Drainage Maps	1:12,000	N/A	N/A	N/A	City of Los Angeles, 1977
Los Angeles, City of	All flooding sources studied within community	Drainage Maps	1:4,800	5 ft 25 ft	N/A	N/A	City of Los Angeles, undated
Los Angeles, City of	Rustic Canyon	Topographic Map	1:480	2 ft	N/A	N/A	Los Angeles County Flood Control District, October 1963
Los Angeles, City of	Weldon Canyon	Plans and Profile	1:480 1:48	N/A	N/A	N/A	City of Los Angeles, 1935

Table 23: Summary of Topographic Elevation Data used in Mapping, continued

Community	Flooding Source	Source for Topographic Elevation Data					
		Description	Scale	Contour Interval	RMSE _z	Accuracy _z	Citation
Los Angeles County, Unincorporated Areas	Escondido Canyon; Las Flores Canyon; Romero Canyon; Zuma Canyon	Topographic Map	1:1,200	5 ft	N/A	N/A	County of Los Angeles, County Engineer, 1957
Los Angeles County, Unincorporated Areas	Kagel Canyon	Topographic Map	1:480	2 ft	N/A	N/A	Los Angeles County Flood Control District, 1961
Los Angeles County, Unincorporated Areas; Malibu, City of	Malibu Creek	Aerial Survey	1:1,200	5 ft	N/A	N/A	State of California, Division of Highways, 1966
Los Angeles County, Unincorporated Areas	Mill Creek	Topographic Map	1:1,200	2 feet	N/A	N/A	Los Angeles County Flood Control District, 1978
Montebello, City of	All flooding sources within community	Topographic Maps	1:12,000	2 ft	N/A	N/A	City of Montebello, 1958
Palmdale, City of	Big Rock Wash and Little Rock Wash	Contour Lines	1:400	4 ft	N/A	N/A	California DWR 1990
Palmdale, City of	Little Rock Wash	Topographic Map	1:400	4 ft	N/A	N/A	Rick Engineering Company, February 1985
Redondo Beach, City of; Torrance, City of	All flooding sources studied within communities	Topographic Maps	1:24,000	20 ft	N/A	N/A	USGS 1963
Santa Fe Springs, City of	All flooding sources studied within community	Contour Lines	1:24,000	5 ft	N/A	N/A	*
Thousand Oaks, City of	All flooding sources studied within communities	Topographic Maps	1:24,000	20 ft	N/A	N/A	USGS 1981

Table 23: Summary of Topographic Elevation Data used in Mapping, continued

Community	Flooding Source	Source for Topographic Elevation Data					
		Description	Scale	Contour Interval	RMSE _z	Accuracy _z	Citation
Torrance, City of	All flooding sources studied within community	Contour Lines	1:24,000	5 ft 20 ft	N/A	N/A	*
Torrance, City of	All flooding sources studied within community	Contour Lines	1:480	2 ft	N/A	N/A	*
Whittier, City of	All flooding sources studied within community	Topographic Maps	1:24,000	5 ft	N/A	N/A	USGS 1972

*Data not available

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 CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	1,220	104	354	10.5	2,744.4	2,744.4	2,744.4	0.0
B	1,410	105	342	10.9	2,745.2	2,745.2	2,745.2	0.0
C	2,110	310	535	7.0	2,756.3	2,756.3	2,756.4	0.1
D	2,400	285	403	9.3	2,760.6	2,760.6	2,761.0	0.4
E	3,020	579 ²	596	6.3	2,768.9	2,768.9	2,768.9	0.0
F	4,090	257 ²	436	8.6	2,785.3	2,785.3	2,785.9	0.6
G	4,371	480	549	6.8	2,800.2	2,800.2	2,800.7	0.5
H	4,476	480	3,261	1.1	2,801.2	2,801.2	2,801.9	0.7
I	5,251	140	391	9.5	2,803.2	2,803.2	2,803.2	0.0
J	8,501	57 ³	292	12.4	2,859.5	2,859.5	2,859.5	0.0
K	8,871	53 ³	329	11.0	2,869.2	2,869.2	2,869.2	0.0
L	9,261	80 ³	372	9.8	2,875.4	2,875.4	2,875.4	0.0
M	9,711	105 ³	488	7.4	2,879.8	2,879.8	2,880.3	0.5
N	10,191	127 ³	342	9.4	2,886.7	2,886.7	2,886.7	0.0
O	12,251	139 ³	549	5.8	2,905.7	2,905.7	2,905.7	0.0
P	12,581	139 ³	432	7.4	2,907.6	2,907.6	2,907.6	0.0
Q	13,291	220	1,008	3.2	2,914.0	2,914.0	2,914.1	0.1
R	13,561	220	1,401	2.3	2,914.4	2,914.4	2,914.6	0.2
S	13,941	250	997	3.2	2,914.6	2,914.6	2,914.9	0.3

¹Feet above Division Street

²Area of stilling basin – no floodway determined between sections

³Lies entirely outside corporate limits of City of Palmdale

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY LOS ANGELES COUNTY, CALIFORNIA AND INCORPORATED AREAS	FLOODWAY DATA FLOODING SOURCE: ANAVERDE CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
T	14,381	139	333	7.3	2,916.2	2,916.2	2,916.6	0.4
U	18,091	115	812	3.0	2,928.4	2,928.4	2,928.5	0.1
V	18,341	31	300	8.1	2,928.6	2,928.6	2,928.7	0.1
W	18,611	31	272	9.0	2,931.8	2,931.8	2,931.8	0.0

¹Feet above Division Street

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
LOS ANGELES COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ANAVERDE CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	650	100	149	7.23	1,150.8	1,150.8	1,150.8	0.0

¹Feet upstream from Northwest Edge of Osbourne Street

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
LOS ANGELES COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: KAGEL CANYON

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	4,164	60	216	9.63	192.8	192.8	192.8	0.0
B	4,780	120	243	8.29	204.8	204.8	204.8	0.0
C	5,400	150	149	7.23	219.8	219.8	219.8	0.0
D	6,130	65	230	7.97	235.6	235.6	235.6	0.0
E	7,350	29	180	9.81	259.2	259.2	259.2	0.0
F	8,220	49	141	12.01	281.6	281.6	281.6	0.0

¹Feet upstream of Latimer Road

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
LOS ANGELES COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: RUSTIC CANYON

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	106	191	2,235	9.0	737.0	737.0	737.0	0.0
B	2,997	238	2,449	7.9	747.6	747.6	747.9	0.3
C	5,561	262	2,437	8.0	756.0	756.0	756.9	0.9
D	7,584	308	3,884	5.0	770.6	770.6	770.6	0.0
E	9,813	135	2,609	7.2	783.4	783.4	783.7	0.3
F	12,066	308	3,544	5.0	790.1	790.1	790.5	0.4
G	14,071	310	2,920	6.0	800.5	800.5	800.5	0.0
H	16,651	144	1,803	8.8	811.7	811.7	812.6	0.9
I	19,121	257	2,029	7.6	825.2	825.2	825.9	0.7
J	21,133	130	1,372	11.1	833.8	833.8	834.2	0.4
K	23,133	190	1,159	13.1	842.2	842.2	842.4	0.2
L	25,905	142	1,788	8.4	861.2	861.2	861.2	0.0

¹Feet above confluence with Malibu Lake

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
LOS ANGELES COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TRIUNFO CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	342	14	19	6.7	149.4	149.4	149.4	0.0
B	434	30	24	5.2	174.5	174.5	174.5	0.0
C	482	41	27	4.6	177.1	177.1	177.1	0.0
D	539	28	24	5.3	182.6	182.6	183.4	0.8
E	586	35	26	4.9	185.2	185.2	185.3	0.1
F	888	32	25	5.0	196.3	196.3	196.3	0.0
G	934	39	27	4.7	199.2	199.2	199.2	0.0
H	960	37	26	4.8	203.2	203.2	203.2	0.0
I	1,040	27	24	5.3	207.8	207.8	208.1	0.3
J	1,256	58	30	4.2	213.4	213.4	213.6	0.2
K	1,582	60	70	1.8	216.2	216.2	216.2	0.0
L	1,722	26	9	3.4	233.7	233.7	233.7	0.0
M	1,823	35	10	3.1	240.4	240.4	240.4	0.0
N	2,054	29	40	0.8	246.7	246.7	247.3	0.6
O	2,373	11	7	4.6	257.9	257.9	257.9	0.0
P	2,485	32	10	3.2	268.7	268.7	268.7	0.0
Q	2,506	19 ²	2	1.8	272.1	272.1	272.1	0.0
R	2,700	9 ²	2	1.3	277.8	277.8	277.8	0.0
S	2,858	34	90	9.2	283.9	283.9	283.9	0.0
T	3,031	75	122	6.8	293.3	293.3	293.3	0.0

¹Feet above Pacific Ocean

²1% annual chance flood discharge contained in structure

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY LOS ANGELES COUNTY, CALIFORNIA AND INCORPORATED AREAS	FLOODWAY DATA FLOODING SOURCE: UNNAMED STREAM MAIN REACH
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LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
U	3,246	24	63	9.2	300.6	300.6	300.6	0.0
V	3,699	21	60	9.6	326.3	326.3	326.3	0.0
W	3,774	33	70	8.3	336.2	336.2	336.2	0.0
X	3,946	22	61	9.5	338.6	338.6	338.6	0.0
Y	4,068	27	65	8.9	350.7	350.7	350.7	0.0
Z	4,261	36	72	8.0	355.6	355.6	355.6	0.0
AA	4,380	55	83	7.0	369.4	369.4	369.5	0.1
AB	4,434	35	72	8.1	372.0	372.0	372.0	0.0
AC	4,490	33	156	3.7	373.1	373.1	373.1	0.0
AD	4,565	8	1	2.3	379.3	379.3	379.3	0.0
AE	5,024	16	4	0.8	410.4	410.4	410.4	0.0
AF	5,087	37	18	4.0	416.7	416.7	416.7	0.0
AG	5,136	24	15	4.6	422.9	422.9	422.9	0.0
AH	5,153	39	18	3.9	428.5	428.5	428.6	0.1
AI	5,177	48	19	3.6	429.3	429.3	429.3	0.0
AJ	5,520	18	2	1.7	472.0	472.0	472.1	0.1
AK	5,533	7	2	1.3	472.4	472.4	472.4	0.0

¹Feet above Pacific Ocean

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY LOS ANGELES COUNTY, CALIFORNIA AND INCORPORATED AREAS	FLOODWAY DATA
		FLOODING SOURCE: UNNAMED STREAM MAIN REACH

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
AL	5,626	9	1	2.2	488.1	488.1	488.1	0.0
AM	5,648	44	18	3.7	497.9	497.9	497.9	0.0
AN	5,730	54	35	4.7	521.6	521.6	521.6	0.0
AO	5,753	33	30	5.5	523.5	523.5	523.5	0.0
AP	5,792	30	29	5.6	523.8	523.8	523.9	0.1
AQ	5,934	30	12	1.8	526.9	526.9	526.9	0.0
AL	5,626	9	1	2.2	488.1	488.1	488.1	0.0
AM	5,648	44	18	3.7	497.9	497.9	497.9	0.0
AN	5,730	54	35	4.7	521.6	521.6	521.6	0.0
AO	5,753	33	30	5.5	523.5	523.5	523.5	0.0
AP	5,792	30	29	5.6	523.8	523.8	523.9	0.1
AQ	5,934	30	12	1.8	526.9	526.9	526.9	0.0

¹Feet above Pacific Ocean

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
LOS ANGELES COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: UNNAMED STREAM MAIN REACH

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	57	30	23	5.0	380.3	380.3	380.3	0.0
B	239	23	46	2.6	388.1	388.1	388.4	0.3
C	314	27	22	5.3	399.3	399.3	399.3	0.0
D	366	25	22	5.4	410.1	410.1	410.3	0.2
E	546	18	20	6.0	421.7	421.7	421.8	0.1
F	799	33	24	4.9	441.6	441.6	441.6	0.0
G	935	29	23	5.1	457.0	457.0	457.0	0.0
H	1,009	18	6	3.3	458.9	458.9	458.9	0.0
I	1,051	29	25	5.3	463.7	463.7	463.7	0.0
J	1,145	25	24	5.6	493.2	493.2	493.2	0.0
K	1,227	22	23	5.8	508.2	508.2	508.2	0.0
L	1,343	15	21	6.6	514.4	514.4	514.4	0.0
M	1,374	26	24	5.6	525.7	525.7	525.7	0.0
N	1,400	23	57	2.4	526.3	526.3	526.3	0.0

¹Feet above confluence with Unnamed Stream Main Reach

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
LOS ANGELES COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: UNNAMED STREAM TRIBUTARY 1

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	207	23	26	6.1	284.8	284.8	284.8	0.0
B	623	31	29	5.5	322.6	322.6	322.7	0.1
C	744	39	31	5.1	334.4	334.4	334.4	0.0
D	803	44	46	3.5	335.6	335.6	335.7	0.1
E	913	24	26	6.0	344.2	344.2	344.2	0.0
F	1,699	27	28	5.8	395.9	395.9	395.9	0.0
G	2,039	33	29	5.4	431.2	431.2	431.2	0.0
H	2,405	26	49	7.8	455.1	455.1	455.2	0.1
I	2,523	24	54	7.1	470.0	470.0	470.1	0.1
J	2,569	29	91	4.2	470.9	470.9	471.5	0.6
K	2,674	35	53	7.1	482.7	482.7	482.7	0.0
L	2,692	30	51	7.4	487.8	487.8	487.8	0.0
M	2,822	52	90	3.6	498.0	498.0	498.4	0.4
N	2,943	35	130	2.8	498.3	498.3	498.5	0.2

¹Feet above confluence with Unnamed Stream Main Reach

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY LOS ANGELES COUNTY, CALIFORNIA AND INCORPORATED AREAS	FLOODWAY DATA
		FLOODING SOURCE: UNNAMED STREAM TRIBUTARY 2

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	1,290	70	210	5.4	1377.9	1337.9	1337.9	0.0

¹Feet upstream of Golden State Freeway Bridge

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY LOS ANGELES COUNTY, CALIFORNIA AND INCORPORATED AREAS	FLOODWAY DATA
		FLOODING SOURCE: WELDON CANYON

**Table 25: Flood Hazard and Non-Encroachment Data for Selected Streams
[Not Applicable to this Flood Risk Project]**

6.4 Coastal Flood Hazard Mapping

Flood insurance zones and BFEs including the wave effects were identified based on the results from the wave hazard analyses.

For the City of Torrance, because there are no existing structures and no likelihood of structures being built in the future below an elevation of 7.9 feet along the Torrance coastline, only an approximate coastal high-hazard area has been shown.

For the remaining areas of Los Angeles County impacted by coastal flooding processes, analyses of the hydraulic characteristics of flooding from oceanic sources were carried out to provide estimates of the elevations of floods of selected recurrence intervals along each of the shorelines. The limit of runup was used to designate flood zones.

In order to obtain runup values for the various flood producing mechanisms, data on offshore bathymetry and beach profiles were obtained from U.S. Coast and Geodetic Survey and National Oceanic and Atmospheric Administration bathymetric charts; USGS topographic maps; surveys of beach profiles conducted by the USACE, Los Angeles District; and from aerial photographs of the study area. Sources for topographic data are shown in Table 23.

Zone VE is subdivided into elevation zones and BFEs are provided on the FIRM.

The limit of Zone VE shown on the FIRM is defined as the farthest inland extent of any of these criteria (determined for the 1% annual chance flood condition):

- The *primary frontal dune zone* is defined in 44 CFR Section 59.1 of the NFIP regulations. The primary frontal dune represents a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes that occur immediately landward and adjacent to the beach. The primary frontal dune zone is subject to erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune zone occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.
- The *wave runup zone* occurs where the (eroded) ground profile is 3.0 feet or more below the 1-percent annual chance TWL.
- The *wave overtopping splash zone* is the area landward of the crest of an overtopped barrier, in cases where the potential 1-percent annual chance TWL.
- The *breaking wave height zone* occurs where 3-foot or greater wave heights could occur (this is the area where the wave crest profile is 2.1 feet or more above the total stillwater elevation).
- The *high-velocity flow zone* is landward of the overtopping splash zone (or area on a sloping beach or other shore type), where the product of depth of flow times the flow

velocity squared (hv^2) is greater than or equal to $200 \text{ ft}^3/\text{sec}^2$. This zone may only be used on the Pacific Coast.

The SFHA boundary indicates the limit of SFHAs shown on the FIRM as either “V” zones or “A” zones.

Table 26 indicates the coastal analyses used for floodplain mapping and the criteria used to determine the inland limit of the open-coast Zone VE and the SFHA boundary at each transect.

Table 26: Summary of Coastal Transect Mapping Considerations

Flooding Source and Location	Wave Runup Elevation ¹ (feet)			Wave Setup Elevation ¹ (feet)		
	10% Annual Chance	1% Annual Chance	0.2% Annual Chance	10% Annual Chance	1% Annual Chance	0.2% Annual Chance
PACIFIC OCEAN						
At Will Rogers Beach, Approximately 400 feet South of the Intersection of Tramonto Drive and Porto Marina Way	14.3	19	22.1	*	*	*
At Will Rogers Beach, Approximately 300 feet South of the Intersection of Breve Way and Porta Marina Way	13.4	17.5	20.4	*	*	*
At Will Rogers Beach, at Sunset Boulevard Extended	11.3	13.9	16.5	*	*	*
At Will Rogers Beach at Temescal Canyon Road Extended	10.9	13.3	15.8	*	*	*
At Will Rogers Beach, Approximately 900 feet South of the Intersection of Beirut Avenue and Via De Las Olas	11	13.5	16	*	*	*
At Will Rogers Beach at Entrada Drive Extended	12	15.1	17.8	*	*	*
At Venice Beach at Washington Street Extended	12	15.1	17.8	*	*	*
At Marina Del Ray Entrance Channel and Ballona Creek	*	*	*	7.7	8.9	11.1
At Dockweiler Beach, at Culver Boulevard Extended	11.3	14	16.6	*	*	*
At Dockweiler Beach, at Beaumont Street Extended	11.9	14.9	17.6	*	*	*

Table 26: Summary of Coastal Transect Mapping Considerations, continued

Flooding Source and Location	Wave Runup Elevation ¹ (feet)			Wave Setup Elevation ¹ (feet)		
	10% Annual Chance	1% Annual Chance	0.2% Annual Chance	10% Annual Chance	1% Annual Chance	0.2% Annual Chance
At Dockweiler Beach, at Foutainbleau Street Extended	12.5	15.9	18.7	*	*	*
At Dockweiler Beach, at Ipswich Street Extended	13.7	18	21	*	*	*
At Dockweiler Beach, Approximately 900 feet Northwest of the Intersection of Imperial Highway and Vista Del Mar	13.1	17.1	19.9	*	*	*
At Dockweiler Beach, Approximately 5,000 feet Northwest of the Corporate Limits	12.8	16.1	18.9	*	*	*
At Dockweiler Beach, Approximately 4,100 feet Northwest of the Corporate Limits	12	15.2	17.9	*	*	*
Along Dockweiler Beach, Approximately 3,400 feet Northwest of the Corporate Limits	11.5	14.2	16.8	*	*	*
Along Dockweiler Beach, Approximately 2,400 feet Northwest of the Corporate Limits	10.9	13.3	15.8	*	*	*
Along Dockweiler Beach, Approximately 1,000 feet Northwest of the Corporate Limits	11.5	14.3	16.9	*	*	*
Along Dockweiler Beach, Approximately 100 feet Northwest of the Corporate Limits	12.1	15.3	18.1	*	*	*
At Corporate Limits, at Royal Palms Beach, Approximately 1,000 feet Northwest of Shad Place Extended	14.1	18.7	21.7	*	*	*
At Royal Palms Beach, at Anchovy Avenue Extended	12.9	16.7	19.5	*	*	*
At Whites Point	12.3	15.7	18.4	*	*	*

Table 26: Summary of Coastal Transect Mapping Considerations, continued

Flooding Source and Location	Wave Runup Elevation ¹ (feet)			Wave Setup Elevation ¹ (feet)		
	10% Annual Chance	1% Annual Chance	0.2% Annual Chance	10% Annual Chance	1% Annual Chance	0.2% Annual Chance
At Beach, at Weymouth Avenue Extended	13.5	17.7	20.6	*	*	*
At Point Fermin Beach, at Barbara Street Extended	12.3	15.7	18.4	*	*	*
At Point Fermin Beach, at Cabrillo Avenue Extended	13.8	18.2	21.2	*	*	*
Approximately 1,000 feet North of Point Fermin along Beach	17.4	24.7	28.3	*	*	*
At Beach, at Carolina Street Extended	16.5	22.7	26.1	*	*	*
At Beach, at Pacific Avenue Extended	15.5	21	24.3	*	*	*
At Cabrillo Beach, at 40th Street Extended	14.1	18.7	21.7	*	*	*
At Los Angeles Harbor	*	*	*	7.7	8.9	11.1
Catalina Avenue Extended at Beach	7.3	7.9	8.2	*	*	*
Approximately 1,500 feet North of Catalina Avenue Extended along Beach	8.8	10	10.7	*	*	*
At Hamilton Beach	7.9	8.8	9.2	*	*	*
At Sequit Point	11.5	14.3	16.9	*	*	*
At Arroyo Sequit Mouth	10.7	13	15.5	*	*	*
Approximately 800 feet East of Arroyo Sequit Mouth along Beach	11.5	14.3	17	*	*	*
Approximately 800 feet South of the Intersection of Nicholas Beach Road and Pacific Coast Highway	12	15.2	17.8	*	*	*
Approximately 2,400 feet West of Los Alisos Canyon Creek Mouth along Beach	14.3	19	22	*	*	*
At Los Alisos Canyon Creek Mouth	12	15.1	17.8	*	*	*

Table 26: Summary of Coastal Transect Mapping Considerations, continued

Flooding Source and Location	Wave Runup Elevation ¹ (feet)			Wave Setup Elevation ¹ (feet)		
	10% Annual Chance	1% Annual Chance	0.2% Annual Chance	10% Annual Chance	1% Annual Chance	0.2% Annual Chance
Approximately 900 feet Southeast of the Intersection of Encinal Canyon Road and Pacific Coast Highway along Beach	12.3	15.7	18.4	*	*	*
At Encinal Canyon Creek Mouth	12.9	16.7	19.5	*	*	*
Approximately 250 feet South of the Intersection of Seal Level Drive and Roxanne Beach Road	10.9	13.3	15.8	*	*	*
At Lechuza Point	15.5	20.8	24.3	*	*	*
At Steep Hill Canyon Creek Mouth	13.1	17	19.9	*	*	*
At Trancas Creek	10.9	13.3	15.8	*	*	*
Approximately 200 feet West of Point Dume	12.4	16	18.8	*	*	*
At Point Dume	15.5	20.8	24.3	*	*	*
At Dume Cove, Approximately 500 feet Southeast of the Intersection of Dume Drive and Cliffside Drive	13.1	16.9	19.9	*	*	*
At Dume Cove, Approximately 400 feet South of the Intersection of Fernhill Drive and Cliffside Drive	12.1	15.3	18.1	*	*	*
At Dume Cove, Approximately 750 feet South of the Intersection of Grayfox Street and Cliffside Drive	13.1	16.9	19.9	*	*	*
At Paradise Cove, at Walnut Canyon	12.4	15.8	18.6	*	*	*
At Paradise Cove, Approximately 2,000 feet Northeast of Walnut Canyon Creek Mouth along Beach	15.8	20.8	24.3	*	*	*
At Paradise Cove, at Ramirez Canyon Mouth	11.5	14.3	16.9	*	*	*

Table 26: Summary of Coastal Transect Mapping Considerations, continued

Flooding Source and Location	Wave Runup Elevation ¹ (feet)			Wave Setup Elevation ¹ (feet)		
	10% Annual Chance	1% Annual Chance	0.2% Annual Chance	10% Annual Chance	1% Annual Chance	0.2% Annual Chance
At Escondido Beach, at Escondido Canyon Mouth	10.7	12.9	15.5	*	*	*
At Escondido Beach, Approximately 200 feet East of the Intersection of Latigo Shore Place and Latigo Shore Drive	11.5	14.3	16.9	*	*	*
Approximately 500 feet West of Solstice Canyon Creek Mouth along Beach	13.9	18.3	21.3	*	*	*
At Solstice Canyon Creek Mouth	12.1	15.3	18.1	*	*	*
At Corral Beach, at Corral Canyon Creek Mouth	11.3	13.9	16.4	*	*	*
At Corral Beach, Approximately 250 feet South of the Intersection of Malibu Road and Pacific Coast Highway	13	16.9	19.6	*	*	*
Approximately 1,500 feet East of Corral Canyon Creek Mouth along Beach	13	16.9	19.6	*	*	*
At Puerco Beach, Approximately 200 feet South of the Intersection of Puerco Canyon Road and Malibu Road	11.3	13.9	16.4	*	*	*
At Puerco Beach, at Puerco Canyon Creek Mouth	13	16.9	19.6	*	*	*
At Amarillo Beach, Approximately 2,200 feet East of Marie Canyon Creek Mouth along Beach	11.3	13.9	16.4	*	*	*
At Amarillo Beach, Approximately 3,000 feet East of Marie Canyon Creek Mouth Along Beach	13	16.9	19.6	*	*	*

Table 26: Summary of Coastal Transect Mapping Considerations, continued

Flooding Source and Location	Wave Runup Elevation ¹ (feet)			Wave Setup Elevation ¹ (feet)		
	10% Annual Chance	1% Annual Chance	0.2% Annual Chance	10% Annual Chance	1% Annual Chance	0.2% Annual Chance
Along Dockweiler Beach, Approximately 1,000 feet Northwest of the Corporate Limits	11.3	13.9	16.4	*	*	*
Along Dockweiler Beach, Approximately 100 feet Northwest of the Corporate Limits	10.6	12.8	15.2	7.7	8.9	11.1
At Corporate Limits, at Royal Palms Beach, Approximately 1,000 feet Northwest of Shad Place Extended	11.3	13.9	16.4	*	*	*
At Royal Palms Beach, at Anchovy Avenue Extended	11.6	14.5	17.1	*	*	*
At Whites Point	11.4	14.2	16.8	*	*	*
At Beach, at Weymouth Avenue Extended	11.9	14.9	17.6	*	*	*
Along Dockweiler Beach, Approximately 1,000 feet Northwest of the Corporate Limits	11.4	14.1	16.7	*	*	*
Along Dockweiler Beach, Approximately 100 feet Northwest of the Corporate Limits	*	*	*	7.7	8.9	11.1

¹ Average elevations given; elevation may vary within the area cited

* Data not computed

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 and download the form “MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill”. Visit the “Flood Map-Related Fees” section to determine the cost, if any, of applying for a LOMA.

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

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

6.5.2 Letters of Map Revision Based on Fill

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

Information about obtaining an application for a LOMR-F can be obtained in the same manner as that for a LOMA, by visiting www.fema.gov/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.

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 <https://www.fema.gov/media-library/assets/documents/1343> and download the form “MT-2 Application Forms and Instructions for Conditional Letters of Map Revision and Letters of Map Revision”. Visit the “Flood Map-Related Fees” section to determine the cost of applying for a LOMR. For more information about

how to apply for a LOMR, call the FEMA Map Information eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627) to speak to a Map Specialist.

Previously issued mappable LOMCs (including LOMRs) that have been incorporated into the Los Angeles County FIRM are listed in Table 27. Please note that this table only includes LOMCs that have been issued on the FIRM panels updated by this map revision. For all other areas within this county, users should be aware that revisions to the FIS Report made by prior LOMRs may not be reflected herein and users will need to continue to use the previously issued LOMRs to obtain the most current data.

Table 27: Incorporated Letters of Map Change

Case Number	Effective Date	Flooding Source	FIRM Panel(s)
08-09-1598P	09-29-2008	Ballona Creek	06037C1613G
15-09-0550P	07-27-2015	Unnamed, Ponding Area	06037C1616G

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 and visit the “Flood Map Revision Processes” section.

6.5.5 Contracted Restudies

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

6.5.6 Community Map History

The current FIRM presents flooding information for the entire geographic area of Los Angeles County. Previously, separate FIRMs, Flood Hazard Boundary Maps (FHBMs) and/or Flood

Boundary and Floodway Maps (FBFMs) may have been prepared for the incorporated communities and the unincorporated areas in the county that had identified SFHAs. Current and historical data relating to the maps prepared for the project area are presented in Table 28, “Community Map History.” A description of each of the column headings and the source of the date is also listed below.

- *Community Name* includes communities falling within the geographic area shown on the FIRM, including those that fall on the boundary line, nonparticipating communities, and communities with maps that have been rescinded. Communities with No Special Flood Hazards are indicated by a footnote. If all maps (FHBM, FBFM, and FIRM) were rescinded for a community, it is not listed in this table unless SFHAs have been identified in this community.
- *Initial Identification Date (First NFIP Map Published)* is the date of the first NFIP map that identified flood hazards in the community. If the FHBM has been converted to a FIRM, the initial FHBM date is shown. If the community has never been mapped, the upcoming effective date or “pending” (for Preliminary FIS Reports) is shown. If the community is listed in Table 28 but not identified on the map, the community is treated as if it were unmapped.
- *Initial FHBM Effective Date* is the effective date of the first Flood Hazard Boundary Map (FHBM). This date may be the same date as the Initial NFIP Map Date.
- *FHBM Revision Date(s)* is the date(s) that the FHBM was revised, if applicable.
- *Initial FIRM Effective Date* is the date of the first effective FIRM for the community.
- *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 Los Angeles County FIRMs in countywide format was 09/26/2008.

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)
Agoura Hills, City of	03/04/1986	N/A	N/A	03/04/1986	04/04/2018 09/26/2008 08/03/1998 12/18/1986

Table 28: Community Map History, continued

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Alhambra, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Arcadia, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Artesia, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Avalon, City of	10/08/1976	10/08/1976	N/A	09/29/1978	09/26/2008 11/01/1985
Azusa, City of	09/26/2008	N/A	N/A	09/26/2008	N/A
Baldwin Park, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Bell, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Bell Gardens, City of	09/26/2008	N/A	N/A	09/26/2008	N/A
Bellflower, City of	07/06/1998	N/A	N/A	07/06/1998	09/26/2008
Beverly Hills, City of ¹	09/26/2008	N/A	N/A	09/26/2008	12/21/2018
Bradbury, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Burbank, City of	07/19/1974	09/26/1975	N/A	03/16/1981	09/26/2008 01/20/1999
Calabasas, City of (Los Angeles County)	12/02/1980 (Los Angeles County)	N/A	N/A	12/02/1980 (Los Angeles County)	12/21/2018 01/06/2016 09/26/2008
Carson, City of	07/06/1998	N/A	N/A	07/06/1998	09/26/2008
Cerritos, City of	09/26/2008	N/A	N/A	09/26/2008	N/A
Claremont, City of ¹	11/20/2000	N/A	N/A	11/20/2000	09/26/2008 07/02/2004
Commerce, City of	09/26/2008	N/A	N/A	09/26/2008	N/A
Compton, City of	07/06/1998	N/A	N/A	07/06/1998	09/26/2008
Covina, City of ¹	06/28/1974	06/28/1974	08/27/1976 11/07/1975	09/26/2008	N/A
Cudahy, City of	09/26/2008	N/A	N/A	09/26/2008	N/A
Culver City, City of	06/28/1974	06/28/1974	09/03/1976 10/31/1975	02/01/1980	12/21/2018 09/26/2008
Diamond Bar, City of (Los Angeles County)	12/02/1980 (Los Angeles County)	N/A	N/A	12/02/1980 (Los Angeles County)	09/26/2008
Downey, City of	07/06/1998	N/A	N/A	07/06/1998	09/26/2008
Duarte, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
El Monte, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
El Segundo, City of	09/26/2008	N/A	N/A	09/26/2008	N/A

Table 28: Community Map History, continued

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Gardena, City of	07/06/1998	N/A	N/A	07/06/1998	09/26/2008
Glendale, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Glendora, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Hawaiian Gardens, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Hawthorne, City of ¹	12/04/1979	N/A	N/A	12/04/1979	09/26/2008
Hermosa Beach, City of	09/26/2008	N/A	N/A	09/26/2008	N/A
Hidden Hills, City of	09/07/1984	N/A	N/A	09/07/1984	09/26/2008 01/19/2006 11/21/2001
Huntington Park, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Industry, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Inglewood, City of ¹	09/26/2008	N/A	N/A	09/26/2008	12/21/2018
Irwindale, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
La Canada Flintridge, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
La Habra Heights, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
La Mirada, City of	06/28/1974	06/28/1974	12/10/1976 10/10/1975	07/02/1980	09/26/2008
La Puente, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
La Verne, City of	09/26/2008	N/A	N/A	09/26/2008	N/A
Lakewood, City of	07/06/1998	N/A	N/A	07/06/1998	09/26/2008
Lancaster, City of	09/11/1979	09/11/1979	N/A	01/06/1982	09/26/2008
Lawndale, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Lomita, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Long Beach, City of	07/26/1974	07/26/1974	07/11/1978	09/15/1983	09/26/2008 07/06/1998
Los Angeles, City of	12/13/1977	12/13/1977	04/08/1980	12/02/1980	12/21/2018 01/06/2016 09/26/2008 05/04/1999 07/06/1998 02/04/1987

Table 28: Community Map History, continued

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Los Angeles County Unincorporated Areas	10/24/1978	10/24/1978	N/A	12/02/1980	12/21/2018 04/04/2018 01/06/2016 09/26/2008 07/06/1998 03/30/1998 11/15/1985
Lynwood, City of	06/28/1974	06/28/1974	11/21/1975	04/15/1980	09/26/2008 07/06/1998
Malibu, City of	09/26/2008	N/A	N/A	09/26/2008	12/21/2018
Manhattan Beach, City of	09/26/2008	N/A	N/A	09/26/2008	N/A
Maywood, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Monrovia, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Montebello, City of	06/28/1974	06/28/1974	12/19/1975	03/18/1980	09/26/2008
Monterey Park, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Norwalk, City of	09/26/2008	N/A	N/A	09/26/2008	N/A
Palmdale, City of	10/18/1974	10/18/1974	12/24/1976	01/06/1982	09/26/2008 03/30/1998 06/18/1987
Palos Verdes Estates, City of	09/07/1984	N/A	N/A	11/21/2001	01/06/2016 09/26/2008 07/02/2004 11/21/2001
Paramount, City of	07/06/1998	N/A	N/A	07/06/1998	09/26/2008
Pasadena, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Pico Rivera, City of	07/06/1998	N/A	N/A	07/06/1998	09/26/2008
Pomona, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Rancho Palos Verdes, City of	09/26/2008	N/A	N/A	09/26/2008	01/06/2016
Redondo Beach, City of	06/28/1974	06/28/1974	05/21/1976	09/15/1983	09/26/2008
Rolling Hills, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Rolling Hills Estates, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Rosemead, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A

Table 28: Community Map History, continued

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
San Dimas, City of	06/28/1974	06/28/1974	N/A	04/01/1977	09/26/2008 06/02/1978
San Fernando, City of ¹	02/11/1976	N/A	N/A	02/11/1976	09/26/2008
San Gabriel, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
San Marino, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Santa Clarita, City of	10/24/1978	10/24/1978	N/A	12/02/1980	09/26/2008 09/29/1989
Santa Fe Springs, City of	06/28/1974	06/28/1974	10/03/1975	04/15/1980	09/26/2008
Santa Monica, City of	09/26/2008	N/A	N/A	09/26/2008	N/A
Sierra Madre, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Signal Hill, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
South El Monte, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
South Gate, City of	07/06/1998	N/A	N/A	07/06/1998	09/26/2008
South Pasadena, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Temple City, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
Torrance, City of	08/02/1974	08/02/1974	12/05/1975	12/18/1979	01/06/2016 09/26/2008
Vernon, City of ¹	09/26/2008	N/A	N/A	09/26/2008	12/21/2018
Walnut, City of ¹	09/26/2008	N/A	N/A	09/26/2008	N/A
West Covina, City of	12/02/2004	N/A	N/A	12/02/2004	09/26/2008
West Hollywood, City of ¹	06/18/1987	N/A	N/A	06/18/1987	09/26/2008
Westlake Village, City of	09/26/2008	N/A	N/A	09/26/2008	04/04/2018
Whittier, City of	06/28/1974	06/28/1974	12/12/1975	01/16/1981	09/26/2008

¹ 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.

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Acton Canyon and Zone A Tributaries	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Agua Amarge Canyon Creek	*	*	*	*	Palos Verdes Estates, City of
Agua Dulce Canyon Creek and Tributaries	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Aliso Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Aliso Creek	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Amargosa Creek	01/06/1982	LACFCD	H-3940	March 1979	Lancaster, City of; Los Angeles County, Unincorporated Areas
Amargosa Creek Tributary	01/06/1982	LACFCD	H-3940	March 1979	Lancaster, City of
Anaverde Creek	*	Ensign & Buckley	EMW-90-C-9133	*	Palmdale, City of
Arrastre Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Arroyo San Miguel	01/16/1980	LACFCD	H-3940	August 1978	Whittier, City of
Arroyo Sequit	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Avalon Canyon	11/01/1985	LACFCD	H-3940	1977	Avalon, City of
Back Channel	07/06/1998	Schaaf & Wheeler, Consulting Civil Engineers	EMW-86-C-2248	May 1991	Long Beach, City of
Ballona Creek	12/01/1980	LACFCD	H-3940	June 1978	Culver City, City of
Ballona Creek Watershed	12/21/2018	BakerAECOM	HSFEHQ-D-09-0368	2016	Culver City, City of; Inglewood, City of; Los Angeles, City of; Los Angeles County, Unincorporated Areas
Bar Creek	*	*	*	*	Diamond Bar, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Bee Canyon (North)	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Bee Canyon (Mid)	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Bee Canyon (South)	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Big Rock Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Big Rock Creek South Fork	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Big Rock Wash	01/06/1982	LACFCD	H-3940	May 1979, Revised November 1985	Palmdale, City of
Big Rock Wash	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Big Tujunga Wash	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Boulder Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Bouquet Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas; Santa Clarita, City of
Bouquet Reservoir	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Broad Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Browns Creek	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Bull Creek	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Canada De Los Alamos	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Castaic Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Castaic Lagoon	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Castaic Lake	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Channel No. 2	07/06/1998	Schaaf & Wheeler, Consulting Civil Engineers	EMW-86-C-2248	May 1991	Long Beach, City of
Channel No. 3	07/06/1998	Schaaf & Wheeler, Consulting Civil Engineers	EMW-86-C-2248	May 1991	Long Beach, City of
Charlie Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Chatsworth Reservoir	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Cherry Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Cheseboro Creek	08/03/1998	Ensign & Buckley	EMW-93-C-4151	*	Agoura Hills, City of; Los Angeles County, Unincorporated Areas
Cold Creek	12/21/2018	BakerAECOM	HSFEHQ-D-09-0368	2016	Los Angeles County, Unincorporated Areas
Colorado Lagoon	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Compton Creek	07/06/1998	Schaaf & Wheeler, Consulting Civil Engineers	EMW-86-C-2248	May 1991	Carson, City of; Compton, City of; Long Beach, City of; Los Angeles County, Unincorporated Areas
Consolidated Channel	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Coyote Canyon Creek	09/29/1989	LACFCD	H-3940	1984	Santa Clarita, City of
Dark Canyon	12/21/2018	BakerAECOM	HSFEHQ-D-09-0368	2016	Los Angeles County, Unincorporated Areas
Dark Canyon West Branch	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Dewitt Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Dominguez Channel	12/02/1980	LACFCD	H-3940	August 1978	Carson, City of; Gardena, City of; Los Angeles, City of
Dorr Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Dowd Canyon	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Dry Canyon	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Dry Canyon Creek	09/29/1989	LACFCD	H-3940	1984	Santa Clarita, City of
Dry Canyon Flood Control Channel	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
East Basin	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
East Channel	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Echo Park Lake	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Elizabeth Canyon	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Elizabeth Lake	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Elizabeth Lake Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Eller Slough	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Elsmere Canyon Creek	09/29/1989	LACFCD	H-3940	1984	Santa Clarita, City of
Encino Creek Channel	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Entrance Channel (Marina Del Ray)	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Escondido Canyon	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas ; Malibu, City of
Fish Harbor	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Flow Along Empire Avenue	01/20/1999	Ensign & Buckley	EMQ-90-C-9133	*	Burbank, City of
Flowline No. 1	04/15/1980	LACFCD	H-3940	October 1978	Santa Fe Springs, City of
Franklin Canyon Reservoir	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Freeman Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Garapito Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Gorman Canyon Creek	09/29/1989	LACFCD	H-3940	1984	Santa Clarita, City of
Gorman Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Graham Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Grandview Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Hacienda Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Harbor Lake	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Haskell Canyon	09/29/1989	LACFCD	H-3940	1984	Santa Clarita, City of
Haskell Channel	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Hasley Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Haynes Canyon Channel	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Holcomb Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Hollywood Reservoir	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Hughes Lake	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Iron Canyon	09/29/1989	LACFCD	H-3940	1984	Los Angeles County, Unincorporated Areas; Santa Clarita, City of
Jesus Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Kagel Canyon	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles County, Unincorporated Areas
Kentucky Springs Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
La Mirada Creek	07/02/1980	LACFCD	H-3940	January 1979	La Mirada, City of; Los Angeles County, Unincorporated Areas; Whittier, City of
Lake Lindero	08/03/1998	Ensign & Buckley	EMW-93-C-4151	*	Agoura Hills, City of; Westlake Village, City of
Lake Palmdale	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Lake Street Overflow	01/20/1999	Ensign & Buckley	EMQ-90-C-9133	*	Burbank, City of
Las Flores Canyon	12/02/1980	LACFCD	H-3940	December 1979	Malibu, City of; Los Angeles County, Unincorporated Areas
Las Virgenes Creek	01/06/2016	BakerAECOM	HSFEHQ-09-D-0368, Task Order HSFE09-10-J-0002	August 2010	Calabasas, City of; Los Angeles County, Unincorporated Areas
Leaming Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Lemontaine Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Liberty Canyon	12/02/1980	LACFCD	H-3940	December 1979	Agoura Hills, City of; Los Angeles County, Unincorporated Areas
Limekiln Creek	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Lindero Canyon Above Confluence with Medea Creek	08/03/1998	Ensign & Buckley	EMW-93-C-4151	*	Agoura Hills, City of
Lindero Canyon Above Lake Lindero	08/03/1998	Ensign & Buckley	EMW-93-C-4151	*	Agoura Hills, City of; Westlake Village, City of
Little Rock Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Little Rock Reservoir	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Little Rock Wash	01/06/1982	LACFCD	H-3940	May 1979, Revised November 1985	Lancaster, City of; Los Angeles County, Unincorporated Areas; Palmdale, City of
Little Rock Wash Profile A	01/06/1982	LACFCD	H-3940	May 1979, Revised November 1985	Los Angeles County, Unincorporated Areas; Palmdale, City of
Little Rock Wash Profile B	01/06/1982	LACFCD	H-3940	May 1979, Revised November 1985	Palmdale, City of
Little Rock Wash Profile C	01/06/1982	LACFCD	H-3940	May 1979, Revised November 1985	Palmdale, City of
Little Tujunga Wash	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of; Los Angeles County, Unincorporated Areas
Lobo Canyon	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Lockheed Drain Channel	01/20/1999	LACFCD	H-3940	July 1978	Burbank, City of; Los Angeles, City of
Lopez Canyon Channel	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Los Angeles County Flood Control Channel	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Los Angeles County Flood Control Channel to Aliso Creek	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Los Angeles County Storm Drain	12/02/1980	LACFCD	H-3940	December 1979	Carson, City of; Los Angeles County, Unincorporated Areas
Los Angeles County Storm Drain (2)	07/06/1998	Schaaf & Wheeler, Consulting Civil Engineers	EMW-86-C-2248	May 1991	Carson, City of
Los Angeles Harbor	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Los Angeles Reservoir	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Los Angeles River	07/06/1998	Schaaf & Wheeler, Consulting Civil Engineers	EMW-86-C-2248	May 1991	Compton, City of; Cudahy, City of; Long Beach, City of; Los Angeles County, Unincorporated Areas; Paramount, City of; South Gate, City of
Los Angeles River	12/02/1980	Schaaf & Wheeler, Consulting Civil Engineers	EMW-86-C-2248	May 1991	Los Angeles, City of
Los Angeles River Flood Control Channel	03/16/1981	LACFCD	H-3940	July 1978	Burbank, City of
Los Cerritos Channel	07/06/1998	Schaaf & Wheeler, Consulting Civil Engineers	EMW-86-C-2248	May 1991	Long Beach, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Lyon Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas; Santa Clarita, City of
Main Channel	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Malaga Canyon	*	*	*	*	Palos Verdes Estates, City of
Malibu Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas; Malibu, City of
Malibu Lake	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Maple Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Marina Del Ray	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles, City of; Los Angeles County, Unincorporated Areas
Marine Stadium	07/06/1998	Schaaf & Wheeler, Consulting Civil Engineers	EMW-86-C-2248	May 1991	Long Beach, City of
May Canyon Creek	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Medea Creek	08/03/1998	Ensign & Buckley	EMW-93-C-4151	*	Agoura Hills, City of; Los Angeles County, Unincorporated Areas
Medea Creek (Above Ventura Freeway)	08/03/1998	Ensign & Buckley	EMW-93-C-4151	*	Agoura Hills, City of
Middle Harbor	07/06/1998	Schaaf & Wheeler, Consulting Civil Engineers	EMW-86-C-2248	May 1991	Long Beach, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Mill Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Milton B. Arthur Lakes	07/06/1998	Schaaf & Wheeler, Consulting Civil Engineers	EMW-86-C-2248	May 1991	Long Beach, City of
Mint Canyon Creek	01/06/2016	HDR Engineering Inc.	EMF-2003-CO-0045, Task Order 33	July 2015	Los Angeles County, Unincorporated Areas; Santa Clarita, City of
Mint Canyon Creek Overflow	*	*	*	*	Santa Clarita, City of
Mint Canyon Spring	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Montebello Municipal Golf Course Pond	09/26/2008	Schaaf & Wheeler, Consulting Civil Engineers	EMW-86-C-2248	May 1991	Montebello, City of
Morris Reservoir	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Muscal Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Myrick Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Newhall Creek	09/29/1989	LACFCD	H-3940	1984	Santa Clarita, City of
Newhall Creek Left Overbank 2	*	*	*	*	Santa Clarita, City of
North Overflow	01/20/1999	LACFCD	H-3940	July 1978	Burbank, City of
North Overflow (B)	01/20/1999	LACFCD	H-3940	July 1978	Burbank, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Oak Springs Canyon	09/29/1989	LACFCD	H-3940	1984	Los Angeles County, Unincorporated Areas; Santa Clarita, City of
Oakgrove Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Old Topanga Canyon	12/21/2018	BakerAECOM	HSFEHQ-D-09-0368	2016	Los Angeles County, Unincorporated Areas
Oro Fino Canyon	09/29/1989	LACFCD	H-3940	1984	Santa Clarita, City of
Oso Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Overflow Area of Lockheed Drain Channel	12/02/1980	LACFCD	H-3940	July 1978	Los Angeles, City of
Overflow Area of Lockheed Storm Drain	12/02/1980	LACFCD	H-3940	July 1978	Los Angeles, City of
Pacific Ocean	12/02/1980	LACFCD	H-3940	December 1979	El Segundo, City of; Hermosa Beach, City of; Long Beach, City of; Los Angeles, City of; Los Angeles County, Unincorporated Areas; Malibu, City of; Manhattan Beach, City of; Palos Verdes Estates, City of; Rancho Palos Verdes, City of; Redondo Beach, City of; Santa Monica, City of; Torrance, City of
Pacific Terrace Harbor	07/06/1998	Schaaf & Wheeler, Consulting Civil Engineers	EMW-86-C-2248	May 1991	Long Beach, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Pacoima Channel	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Pacoima Wash	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Pallett Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Palo Comando Creek	08/03/1998	Ensign & Buckley	EMW-93-C-4151	*	Agoura Hills, City of; Los Angeles County, Unincorporated Areas
Pico Canyon	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas; Santa Clarita, City of
Pine Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Piru Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Placerita Creek	09/29/1989	LACFCD	H-3940	1984	Los Angeles County, Unincorporated Areas; Santa Clarita, City of
Plum Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Portal Ridge Wash	01/06/1982	LACFCD	H-3940	March 1979	Lancaster, City of
Puzzle Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Pyramid Lake	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Quail Lake	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Quartz Hill Basin Wash	01/06/1982	LACFCD	H-3940	March 1979	Lancaster, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Quartz Hill Basin Wash Tributary	01/06/1982	LACFCD	H-3940	March 1979	Lancaster, City of
Quartz Hill Wash	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Quigley Canyon Creek	09/29/1989	LACFCD	H-3940	1984	Santa Clarita, City of
Railroad Canyon	09/29/1989	LACFCD	H-3940	1984	Santa Clarita, City of
Ramirez Canyon	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas; Malibu, City of
Rice Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Rio Hondo Channel	07/06/1998	Schaaf & Wheeler, Consulting Civil Engineers	EMW-86-C-2248	May 1991	Bell Gardens, City of; Commerce, City of; Downey, City of; Los Angeles County, Unincorporated Areas; Montebello, City of; Pico Rivera, City of; South Gate, City of
Rivo Alto Canal	07/06/1998	Schaaf & Wheeler, Consulting Civil Engineers	EMW-86-C-2248	May 1991	Long Beach, City of
Roberts Canyon Creek	*	*	*	*	Azusa, City of
Rock Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Romero Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Rustic Canyon	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Salt Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
San Dimas Wash	*	*	*	*	La Verne, City of; San Dimas, City of
San Francisquito Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas; Santa Clarita, City of
San Gabriel Reservoir	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
San Gabriel River	12/02/1980	LACFCD	H-3940	October 1978	Azusa, City of; Bellflower, City of; Cerritos, City of; Downey, City of; Lakewood, City of; Long Beach, City of; Los Angeles County, Unincorporated Areas; Norwalk, City of; Pico Rivera, City of
San Martinez Chiquito Canyon	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
San Martinez Grande Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
San Pedro Bay	07/06/1998	Schaaf & Wheeler, Consulting Civil Engineers	EMW-86-C-2248	May 1991	Long Beach, City of
Sand Canyon	09/29/1989	LACFCD	H-3940	1984	Los Angeles County, Unincorporated Areas; Santa Clarita, City of
Sand Canyon Creek	09/29/1989	LACFCD	H-3940	1984	Santa Clarita, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Santa Clara River	09/29/1989	LACFCD	H-3940	1984	Los Angeles County, Unincorporated Areas; Santa Clarita, City of
Santa Clara River Overflow	*	*	*	*	*
Santa Maria Canyon	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Santa Susana Creek	12/02/1999	LACFCD	H-3940	August 1979	Los Angeles, City of
Santa Susana Pass Wash	12/02/1999	LACFCD	H-3940	August 1979	Los Angeles, City of
Santa Ynez Canyon Reservoir	12/02/1999	LACFCD	H-3940	August 1979	Los Angeles, City of
Savage Creek	01/16/1981	LACFCD	H-3940	August 1978	Whittier, City of
Sawtelle-Westwood Channel	12/02/1980	LACFCD	H-3940	June 1978	Los Angeles, City of
Sierra Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Silver Lake Reservoir	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Sloan Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Soledad Canyon	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
South Fork Santa Clara River	09/29/1989	LACFCD	H-3940	1984	Santa Clarita, City of
South Fork Santa Clara River Tributary	*	*	*	*	Santa Clarita, City of
South Portal Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Spade Spring Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Stokes Canyon	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Stone Canyon Reservoir	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Stone Canyon Road Tributary	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Sullivan Canyon	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Sunshine Canyon	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Tapia Canyon	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Texas Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Tonner Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Topanga Canyon	12/21/2018	BakerAECOM	HSFEHQ-D-09-0368	2016	Los Angeles County, Unincorporated Areas
Towsley Canyon Creek	09/29/1989	LACFCD	H-3940	1984	Los Angeles County, Unincorporated Areas; Santa Clarita, City of
Trancas Creek	09/26/2008	LACFCD	H-3940	December 1979	Malibu, City of
Triunfo Creek	04/04/2018	LACFCD	D-0368	2015	Los Angeles County, Unincorporated Areas; Westlake Village, City of
Turnbull Canyon Creek	01/16/1981	LACFCD	H-3940	August 1978	Whittier, City of
Unnamed Canyon (Serra Retreat Area)	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas; Malibu, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Unnamed Stream Main Reach	01/06/2016	HDR Engineering Inc.	EMF-2003-CO-0045, Task Order 15	February 2012	Palos Verdes Estates, City of
Unnamed Stream Tributary 1	01/06/2016	HDR Engineering Inc.	EMF-2003-CO-0045, Task Order 15	February 2012	Palos Verdes Estates, City of
Unnamed Stream Tributary 2	01/06/2016	HDR Engineering Inc.	EMF-2003-CO-0045, Task Order 15	February 2012	Palos Verdes Estates, City of
Upper Franklin Canyon Reservoir	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Upper Los Angeles River Left Overbank	12/02/1980	Schaaf & Wheeler, Consulting Civil Engineers	EMW-86-C-2248	May 1991	Los Angeles, City of
Upper Stone Canyon Reservoir	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Vasquez Canyon	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Villa Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Vine Creek	*	*	*	*	West Covina, City of
Violin Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Wayside Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Weldon Canyon	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
West Basin	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
West Channel	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Westlake Lake	04/04/2018	LACFCD	D-0368	2015	Westlake Village, City of
Whitney Canyon Creek	09/29/1989	LACFCD	H-3940	1984	Santa Clarita, City of
Wilbur Creek	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Wilbur Wash	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Wilbur Wash East	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Wiley Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Willow Springs Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Lancaster, City of; Los Angeles County, Unincorporated Areas
Wilson Canyon	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Woodley Creek	12/02/1980	LACFCD	H-3940	August 1979	Los Angeles, City of
Young Canyon Creek	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas
Zuma Canyon	12/02/1980	LACFCD	H-3940	December 1979	Los Angeles County, Unincorporated Areas; Malibu, City of
UNKNOWN 1 near W. 3rd Street	*	*	*	1980, 1985	Los Angeles, City of, West Hollywood, City of
UNKNOWN 2 near W. 3rd Street	*	*	*	1980, 1985	Los Angeles, City of
UNKNOWN 3 near W. 3rd Street	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near 4th Street	*	*	*	*	Los Angeles, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
UNKNOWN 1 near Aberdeen Avenue	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Alameda Street	*	*	*	*	Los Angeles, City of
UNKNOWN 2 near Alameda Street	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Alaska Avenue	*	*	*	1978	Torrance, City of
UNKNOWN 1 near Amsler Street	*	*	*	1978	Torrance, City of
UNKNOWN 1 to Anaverde Creek	*	*	*	1985	Palmdale, City of
UNKNOWN 1 near Anza Avenue	*	*	*	1978	Torrance, City of
UNKNOWN 1 to Arroyo Calabasas	*	*	*	*	Hidden Hills, City of
UNKNOWN 2 to Arroyo Calabasas	*	*	*	*	Calabasas, City of
UNKNOWN 1 near Baile Avenue	*	*	*	*	Los Angeles, City of
UNKNOWN 2 near Baile Avenue	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near S. Beverly Glen Boulevard	*	*	*	*	Los Angeles, City of
UNKNOWN 1 to Big Rock Wash	*	*	*	*	Los Angeles County
UNKNOWN 1-A to Big Rock Wash	*	*	*	*	Los Angeles County
UNKNOWN 2 to Big Rock Wash	*	*	*	*	Los Angeles County
UNKNOWN 1 near Blinn Avenue	*	*	*	*	Los Angeles, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
UNKNOWN 1 to Broad Canyon Creek	*	*	*	*	Los Angeles County
UNKNOWN 2 to Broad Canyon Creek	*	*	*	*	Los Angeles County
UNKNOWN 3 to Broad Canyon Creek	*	*	*	*	Los Angeles County
UNKNOWN 1 to California Aqueduct	*	*	*	*	Los Angeles County
UNKNOWN 2 to California Aqueduct	*	*	*	*	Los Angeles County
UNKNOWN 3 to California Aqueduct	*	*	*	*	Los Angeles County
UNKNOWN 4 to California Aqueduct	*	*	*	*	Los Angeles County
UNKNOWN 5 to California Aqueduct	*	*	*	*	Los Angeles County
UNKNOWN 1 near Camino Real Calle	*	*	*	1981	Redondo Beach, City of
UNKNOWN 1 near Chaparal Street	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Childs Court	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Club View Drive	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Denker Avenue	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Edwards AF Base	*	*	*	*	Los Angeles County
UNKNOWN 2 near Edwards AF Base	*	*	*	*	Los Angeles County

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
UNKNOWN 2-A near Edwards AF Base	*	*	*	*	Los Angeles County
UNKNOWN 1 near Eubank Avenue	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Glade Avenue	*	*	*	*	Los Angeles, City of
UNKNOWN 2 near Glade Avenue	*	*	*	*	Los Angeles, City of
UNKNOWN 1 to Glenoaks Boulevard	*	*	*	*	Los Angeles, City of
UNKNOWN 2 to Glenoaks Boulevard	*	*	*	*	Los Angeles, City of
UNKNOWN 3 to Glenoaks Boulevard	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Gould Avenue	*	*	*	1981	Redondo Beach, City of
UNKNOWN 1 near Grenola Street	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near N. Hoover Street	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near S. La Cienega Boulevard	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Lake Palmdale	*	*	*	1985	Palmdale, City of
UNKNOWN 1 near Laurel Canyon Boulevard	*	*	*	*	Los Angeles, City of
UNKNOWN 1 to Little Rock Wash	*	*	*	*	Los Angeles County
UNKNOWN 2 to Little Rock Wash	*	*	*	*	Los Angeles County

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
UNKNOWN 3 to Little Rock Wash	*	*	*	*	Los Angeles County
UNKNOWN 1 near Long Beach Freeway	*	*	*	*	Lynwood, City of
UNKNOWN 1 near Louise Avenue	*	*	*	*	Lynwood, City of
UNKNOWN 1 near Lucerne Boulevard	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near S. Main Street	*	*	*	*	Burbank, City of
UNKNOWN 1 near Magnolia Avenue	*	*	*	*	Los Angeles, City of
UNKNOWN 1 to Malaga Canyon Creek	*	*	*	*	Palos Verdes Estates, City of
UNKNOWN 2 to Malaga Canyon Creek	*	*	*	*	Palos Verdes Estates, City of
UNKNOWN 2-A to Malaga Canyon Creek	*	*	*	*	Palos Verdes Estates, City of
UNKNOWN 1 near Marathon Street	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Melrose Avenue	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Mines Avenue	*	*	*	*	Montebello, City of
UNKNOWN 1 to Myrick Canyon Creek	*	*	*	*	Los Angeles County
UNKNOWN 1 near Overland Avenue	*	*	*	*	Los Angeles, City of
UNKNOWN 2 near Overland Avenue	*	*	*	*	Los Angeles, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
UNKNOWN 1 near W. Olympic Boulevard	*	*	*	*	Los Angeles, City of
UNKNOWN 1 to Pallett Creek	*	*	*	*	Los Angeles County
UNKNOWN 1-A to Pallett Creek	*	*	*	*	Los Angeles County
UNKNOWN 1-A-1 to Pallett Creek	*	*	*	*	Los Angeles County
UNKNOWN 1-A-2 to Pallett Creek	*	*	*	*	Los Angeles County
UNKNOWN 1-B to Pallett Creek	*	*	*	*	Los Angeles County
UNKNOWN 1-B-1 to Pallett Creek	*	*	*	*	Los Angeles County
UNKNOWN 1-C to Pallett Creek	*	*	*	*	Los Angeles County
UNKNOWN 1 to Paso Robles Avenue	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Pershing Drive	*	*	*	*	Los Angeles, City of
UNKNOWN 1 to Portal Ridge Wash	*	*	*	*	Los Angeles County
UNKNOWN 1-A to Portal Ridge Wash	*	*	*	*	Los Angeles County
UNKNOWN 1-B to Portal Ridge Wash	*	*	*	*	Los Angeles County
UNKNOWN 1-C to Portal Ridge Wash	*	*	*	*	Los Angeles County
UNKNOWN 1 near Rexbon Road	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Ripley Avenue	*	*	*	1981	Redondo Beach, City of
UNKNOWN 1 near Roscoe Boulevard	*	*	*	*	Los Angeles, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
UNKNOWN 1 near San Diego Freeway	*	*	*	*	Los Angeles, City of
UNKNOWN 1 to San Fernando Road	*	*	*	*	Los Angeles, City of
UNKNOWN 2 to San Fernando Road	*	*	*	*	Los Angeles, City of
UNKNOWN 1 to San Gabriel River	*	*	*	*	Long Beach, City of
UNKNOWN 1 to Santa Susana Creek	*	*	*	*	Los Angeles, City of
UNKNOWN 1-A to Santa Susana Creek	*	*	*	*	Los Angeles, City of
UNKNOWN 2 to Santa Susana Creek	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Sesnon Boulevard	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Sheldon Street	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near W. Slausson Avenue	*	*	*	*	Los Angeles County
UNKNOWN 2 near W. Slausson Avenue	*	*	*	*	Los Angeles County
UNKNOWN 1 near State Highway 110	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near W. Sunset Boulevard	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Sunset Canyon Drive	*	*	*	*	Burbank, City of
UNKNOWN 1 near Susanna Place	*	*	*	*	Los Angeles, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
UNKNOWN 1 near W. Temple Street	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Toledo Street	*	*	*	1978	Torrance, City of
UNKNOWN 2 near Toledo Street	*	*	*	1978	Torrance, City of
UNKNOWN 1 near UCLA	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Vail Avenue	*	*	*	*	Montebello, City of
UNKNOWN 1 near S. Van Ness Avenue	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Via Valmonte	*	*	*	1978	Torrance, City of
UNKNOWN 1 near Victory Boulevard	*	*	*	*	Los Angeles, City of
UNKNOWN 1 near Vincent Street	*	*	*	1981	Redondo Beach, City of
UNKNOWN 2 near Vincent Street	*	*	*	1981	Redondo Beach, City of
UNKNOWN 1 to Vine Creek	*	*	*	*	West Covina, City of
UNKNOWN 2 to Vine Creek	*	*	*	*	West Covina, City of
UNKNOWN 1 near Walker Avenue	*	*	*	*	Los Angeles, City of
UNKNOWN 1 to Weldon Canyon Creek	*	*	*	*	Los Angeles, City of
UNKNOWN 1-A to Weldon Canyon Creek	*	*	*	*	Los Angeles, City of
UNKNOWN WEST of Edwards AF Base	*	*	*	*	Los Angeles County

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
UNKNOWN WEST of Edwards AF Base	*	*	*	*	Los Angeles County
UNKNOWN WEST of Edwards AF Base	*	*	*	*	Los Angeles County
UNKNOWN 1 to UNKNOWN WEST	*	*	*	*	Los Angeles County
UNKNOWN 1-A to UNKNOWN WEST	*	*	*	*	Los Angeles County
UNKNOWN 2 to UNKNOWN WEST	*	*	*	*	Los Angeles County
UNKNOWN 2-A to UNKNOWN WEST	*	*	*	*	Los Angeles County
UNKNOWN 3 to UNKNOWN WEST	*	*	*	*	Los Angeles County
UNKNOWN 3-A to UNKNOWN WEST	*	*	*	*	Los Angeles County
UNKNOWN 4 to UNKNOWN WEST	*	*	*	*	Los Angeles County
UNKNOWN 5 to UNKNOWN WEST	*	*	*	*	Los Angeles County
UNKNOWN 6 to UNKNOWN WEST	*	*	*	*	Los Angeles County
UNKNOWN 1 near Wilshire Boulevard	*	*	*	*	Los Angeles, City of
UNKNOWN 2 near Wilshire Boulevard	*	*	*	*	Los Angeles, City of
UNKNOWN 3 near Wilshire Boulevard	*	*	*	*	Los Angeles, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
UNKNOWN 1 near Woodman Place	*	*	*	*	Los Angeles, City of

*Data not available

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 30: Community Meetings

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Agoura Hills, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Alhambra, City of ¹	9/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Arcadia, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Artesia, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Avalon, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Azusa, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Baldwin Park, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Bell, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Bell Gardens, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor

Table 30: Community Meetings, continued

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Bellflower, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Beverly Hills, City of ¹	9/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Bradbury, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Burbank, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Calabasas, City of	01/06/2016	03/10/2011	Initial CCO	Representatives of the City, FEMA, LAFCD, FEMA Region IX, and BakerAECOM
		08/05/2014	Final CCO	Representatives of the City, FEMA, LAFCD, FEMA Region IX, and BakerAECOM
Carson, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Cerritos, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Claremont, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Commerce, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor

Table 30: Community Meetings, continued

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Compton, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Covina, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Cudahy, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Culver City, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Diamond Bar, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Downey, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Duarte, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
El Monte, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
El Segundo, City of	9/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor

Table 30: Community Meetings, continued

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Gardena, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Glendale, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Glendora, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Hawaiian Gardens, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Hawthorne, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Hermosa Beach, City of	9/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Hidden Hills, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Huntington Park, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Industry, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor

Table 30: Community Meetings, continued

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Inglewood, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Irwindale, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
La Canada Flintridge, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
La Habra Heights, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
La Mirada, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
La Puente, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
La Verne, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Lakewood, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor

Table 30: Community Meetings, continued

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Lancaster, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Lawndale, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Lomita, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Long Beach, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Los Angeles, City of	9/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Los Angeles County, Unincorporated Areas	12/21/2018	09/27/2012	Discovery	Representatives of FEMA, USACE, California Department of Water Resources, Los Angeles County, Cities of Calabasas, Los Angeles and Malibu and the study contractor
		04/28/2016	CCO Meeting	Representatives of FEMA, Los Angeles County Department of Public Works, California Department of Water Resources and the study contractor

Table 30: Community Meetings, continued

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Lynwood, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Malibu, City of	9/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Manhattan Beach, City of	9/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Maywood, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Monrovia, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Montebello, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Monterey Park, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Norwalk, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor

Table 30: Community Meetings, continued

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Palmdale, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Palos Verdes Estates, City of	9/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Paramount, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Pasadena, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Pico Rivera, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Pomona, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Rancho Palos Verdes, City of	9/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Redondo Beach, City of	9/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Rolling Hills, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor

Table 30: Community Meetings, continued

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Rolling Hills Estates, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Rosemead, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
San Dimas, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
San Fernando, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
San Gabriel, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
San Marino, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Santa Clarita, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Santa Fe Springs, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Santa Monica, City of	9/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor

Table 30: Community Meetings, continued

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Sierra Madre, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Signal Hill, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
South El Monte, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
South Gate, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
South Pasadena, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Temple City, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Torrance, City of	9/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Vernon, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Walnut, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor

Table 30: Community Meetings, continued

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
West Hollywood, City of ¹	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, the City, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, the City, and the study contractor
Westlake Village, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor
Whittier, City of	09/26/2008	05/12/2005	Initial CCO	Representatives of FEMA, and the study contractor
		11/16/2006	Final CCO	Representatives of FEMA, and the study contractor

¹No Special Flood Hazard Areas Identified

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.

The additional data that was used for this project includes the FIS Report and FIRM that were previously prepared for Los Angeles County and the Incorporated Areas, (FEMA 2008; FEMA 2016).

Table 31 is a list of the locations where FIRMs for Los Angeles 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
Agoura Hills, City of	Planning Department 30001 Ladyface Court	Agoura Hills	CA	91301
Alhambra, City of ¹	City Hall 111 South First Street	Alhambra	CA	91801
Arcadia, City of ¹	Planning Department 240 West Huntington Drive	Arcadia	CA	91066
Artesia, City of ¹	City Hall 18747 Clarkdale Avenue	Artesia	CA	90701
Avalon, City of	Planning and Building Department 410 Avalon Canyon Road	Avalon	CA	90704
Azusa, City of	Public Works Department 213 East Foothill Road	Azusa	CA	91702
Baldwin Park, City of ¹	Public Works Department 14403 East Pacific Avenue	Baldwin Park	CA	91706
Bell, City of ¹	City Hall 6330 Pine Avenue	Bell	CA	90201
Bell Gardens, City of	Public Works Department 8372 South Garfield Avenue	Bell Gardens	CA	90201
Bellflower, City of	Planning Department 16600 Civic Center Drive	Bellflower	CA	90706

Table 31: Map Repositories, continued

Community	Address	City	State	Zip Code
Beverly Hills, City of ¹	Community Development Planning Division 455 North Rexford Drive Suite 100	Beverly Hills	CA	90210
Bradbury, City of ¹	City Hall 600 Winston Avenue	Bradbury	CA	91008
Burbank, City of	Public Works Department 150 North Third Street	Burbank	CA	91502
Calabasas, City of	Public Works Department 100 Civic Center Way	Calabasas	CA	91302
Carson, City of	Public Works Department 701 East Carson Street	Carson	CA	90745
Cerritos, City of	City Hall 18125 Bloomfield Avenue	Cerritos	CA	90703
Claremont, City of ¹	City Hall 207 Harvard Avenue	Claremont	CA	91711
Commerce, City of	City Hall 2535 Commerce Way	Commerce	CA	90040
Compton, City of	City Hall 205 South Willowbrook Avenue	Compton	CA	90220
Covina, City of ¹	Public Works Department 534 North Barranca Avenue	Covina	CA	91723
Cudahy, City of	City Hall 5220 Santa Ana Street	Cudahy	CA	90201
Culver City, City of	City Hall Second Floor 9770 Culver Boulevard	Culver City	CA	90232
Diamond Bar, City of	City Hall 21810 Copley Drive	Diamond Bar	CA	91765
Downey, City of	Public Works Department 11111 Brookshire Avenue	Downey	CA	90241
Duarte, City of ¹	Public Works Department 1600 Huntington Drive	Duarte	CA	91010
El Monte, City of ¹	Public Works Department 11333 Valley Boulevard	El Monte	CA	91731
El Segundo, City of	City Hall 350 Main Street	El Segundo	CA	90245

Table 31: Map Repositories, continued

Community	Address	City	State	Zip Code
Gardena, City of	Public Works Department 1717 West 162 nd Street	Gardena	CA	90247
Glendale, City of ¹	City Hall 613 East Broadway Room 200	Glendale	CA	91206
Glendora, City of ¹	City Hall 116 East Foothill Boulevard	Glendora	CA	91741
Hawaiian Gardens, City of ¹	City Hall 21815 Pioneer Boulevard	Hawaiian Gardens	CA	90716
Hawthorne, City of ¹	City Hall 4455 West 126th Street	Hawthorne	CA	90250
Hermosa Beach, City of	City Hall 1315 Valley Drive	Hermosa Beach	CA	90254
Hidden Hills, City of	City Hall 6165 Spring Valley Road	Hidden Hills	CA	91302
Huntington Park, City of ¹	City Hall 6550 Miles Avenue	Huntington Park	CA	90255
Industry, City of ¹	City Hall 15625 East Stafford Street	City of Industry	CA	91744
Inglewood, City of ¹	City Hall One Manchester Boulevard	Inglewood	CA	90301
Irwindale, City of ¹	City Hall 5050 North Irwindale Avenue	Irwindale	CA	91706
La Canada Flintridge, City of ¹	City Hall 1327 Foothill Boulevard	La Canada Flintridge	CA	91011
La Habra Heights, City of ¹	City Hall 1245 North Hacienda Road	La Habra Heights	CA	90631
La Mirada, City of	Public Works Department 15515 Phoebe Avenue	La Mirada	CA	90638
La Puente, City of ¹	City Hall 15900 East Main Street	La Puente	CA	91744
La Verne, City of	City Hall 3660 D Street	La Verne	CA	91750
Lakewood, City of	City Hall 5050 Clark Avenue	Lakewood	CA	90712
Lancaster, City of	City Hall 44933 North Fern Avenue	Lancaster	CA	93534

Table 31: Map Repositories, continued

Community	Address	City	State	Zip Code
Lawndale, City of ¹	City Hall 14717 Burin Avenue	Lawndale	CA	90260
Lomita, City of ¹	City Hall 24300 Narbonne Avenue	Lomita	CA	90717
Long Beach, City of	City Hall 333 West Ocean Boulevard 9 th Floor	Long Beach	CA	90802
Los Angeles, City of	Department of Public Works – Bureau of Engineering Street Improvement and Stormwater Division 1149 South Broadway Suite 810	Los Angeles	CA	90015
Los Angeles County, Unincorporated Areas	Public Works Headquarters Watershed Management Division 900 South Fremont Avenue	Alhambra	CA	91803
Lynwood, City of	City Hall 11330 Bullis Road	Lynwood	CA	90262
Malibu, City of	City Hall 23825 Stuart Ranch Road	Malibu	CA	90265
Manhattan Beach, City of	City Hall 1400 Highland Avenue	Manhattan Beach	CA	90266
Maywood, City of ¹	City Hall 4319 East Slauson Avenue	Maywood	CA	90270
Monrovia, City of ¹	City Hall 415 South Ivy Avenue	Monrovia	CA	91016
Montebello, City of	City Hall 1600 West Beverly Boulevard	Montebello	CA	90640
Monterey Park, City of ¹	City Hall 320 West Newmark Avenue	Monterey Park	CA	91754
Norwalk, City of	Engineering Department 12700 Norwalk Blvd	Norwalk	CA	90651
Palmdale, City of	Development Services Building 38250 North Sierra Highway	Palmdale	CA	93550
Palos Verdes Estates, City of	City Hall 340 Palos Verdes Drive West	Palos Verdes Estates	CA	90274

Table 31: Map Repositories, continued

Community	Address	City	State	Zip Code
Paramount, City of	Public Works Department 15300 Downey Avenue	Paramount	CA	90723
Pasadena, City of	City Hall 175 North Garfield Avenue	Pasadena	CA	91101
Pico Rivera, City of	Department of Public Works 6615 Passons Boulevard	Pico Rivera	CA	90660
Pomona, City of ¹	City Hall 505 South Garey Avenue	Pomona	CA	91766
Rancho Palos Verdes, City of	City Hall 30940 Hawthorne Boulevard	Rancho Palos Verdes	CA	90275
Redondo Beach, City of	Planning Division 415 Diamond Street	Redondo Beach	CA	90277
Rolling Hills, City of ¹	Planning Department Two Portugese Bend Road	Rolling Hills	CA	90274
Rolling Hills Estates, City of ¹	Planning Department 4045 Palos Verdes Drive North	Rolling Hills Estates	CA	90274
Rosemead, City of ¹	City Hall 8838 East Valley Boulevard	Rosemead	CA	91770
San Dimas, City of	Public Works Department 245 East Bonita Avenue	San Dimas	CA	91773
San Fernando, City of ¹	Public Works Department 117 North Macneil Street	San Fernando	CA	91340
San Gabriel, City of ¹	City Hall 425 South Mission Drive	San Gabriel	CA	91776
San Marino, City of ¹	City Hall 2200 Huntington Drive	San Marino	CA	91108
Santa Clarita, City of	Public Works Department 23920 Valencia Boulevard Suite 300	Santa Clarita	CA	91355
Santa Fe Springs, City of	Department of Public Works 11710 East Telegraph Road	Santa Fe Springs	CA	90670
Santa Monica, City of	Department of Public Works 1685 Main Street	Santa Monica	CA	90401
Sierra Madre, City of ¹	City Hall 232 West Sierra Madre Boulevard	Sierra Madre	CA	91024

Table 31: Map Repositories, continued

Community	Address	City	State	Zip Code
Signal Hill, City of ¹	Engineering Department 2175 Cherry Avenue	Signal Hill	CA	90755
South El Monte, City of ¹	Engineering Division 1415 Santa Anita Avenue	South El Monte	CA	91733
South Gate, City of	City Hall 8650 California Avenue	South Gate	CA	90280
South Pasadena, City of ¹	Public Works – Engineering 1414 Mission Street	South Pasadena	CA	91030
Temple City, City of ¹	Engineering Department 9701 Las Tunas Drive	Temple City	CA	91780
Torrance, City of	Community Development 3031 Torrance Boulevard	Torrance	CA	90503
Vernon, City of ¹	Public Works Department 4305 South Santa Fe Avenue	Vernon	CA	90058
Walnut, City of ¹	Department of Public Works 398 Lemon Creek Drive Suite E	Walnut	CA	91789
West Covina, City of	Public Works Department 1444 West Garvey Avenue	West Covina	CA	91790
West Hollywood, City of ¹	Public Works Department 8300 Santa Monica Boulevard	West Hollywood	CA	90069
Westlake Village, City of	Engineering Department 31200 Oak Crest Drive	Westlake Village	CA	91361
Whittier, City of	Public Works Department 13230 Penn Street	Whittier	CA	90602

¹ No Special Flood Hazard Areas Identified

The National Flood Hazard Layer (NFHL) dataset is a compilation of effective FIRM databases and LOMCs. Together they create a GIS data layer for a State or Territory. The NFHL is updated as studies become effective and extracts are made available to the public monthly. NFHL data can be viewed or ordered from the website shown in Table 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	www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/engineering-library
NFIP website	www.fema.gov/national-flood-insurance-program
NFHL Dataset	msc.fema.gov
FEMA Region IX	Federal Emergency Management Agency, 1111 Broadway, Suite 1200, Oakland, CA 94607-4052 (510) 627-7006
Other Federal Agencies	
USGS website	www.usgs.gov
Hydraulic Engineering Center website	www.hec.usace.army.mil
State Agencies and Organizations	
State NFIP Coordinator	James Eto California Department of Water Resources 3464 El Camino Avenue, Suite 200 Sacramento, CA 95821 916-574-1409 jeto@water.ca.gov
State GIS Coordinator	David Harris, Agency Information Coordinator California Resources Agency 1416 Ninth Street, Room 1311 Sacramento, CA 95814 Phone: 916-445-5088 david.harris@resources.ca.gov

SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES

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

Table 33: Bibliography and References

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
Abrams Aerial Survey Corporation, 1978	Abrams Aerial Survey Corporations	<i>Aerial Photographs and Topographic Maps, Hermosa Beach, Redondo Beach, and King harbor, Los Angeles County, California, Scale 1:4,800, Contour Interval 2 feet</i>		Lansing Michigan	October 1978	
Analytical Surveys, Inc., May 1988	Analytical Surveys, Inc.	<i>City of Burbank Topographic Mapping, Scale 1" = 100', Contour Interval 2 feet</i>			May 1988	
California DWR 1990	California Department of Water Resources	<i>Topographic Maps, Scale 1:400, Contour Interval 4 feet</i>			1990	
City of Avalon 1962	City of Avalon	<i>Topographic Maps, Scale 1:2,400, Contour Interval 2 and 5 feet</i>			1962	
City of Avalon, undated	City of Avalon	<i>Topographic Maps, Scale 1:6,000, Contour Interval 10 feet</i>			Undated	
City of La Mirada, 1977	City of La Mirada	<i>Topographic map, Scale 1:1,200, Contour Interval 2 feet: La Mirada Creek Flood Plain</i>			1977	
City of Los Angeles, 1977	City of Los Angeles	<i>Drainage Maps, Los Angeles California, Scale 1:12,000</i>			1977	

Table 33: Bibliography and References, continued

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
City of Los Angeles, undated	City of Los Angeles	<i>Drainage Maps, Scale 1:4,800, contour Intervals 5 and 25 feet, updated periodically</i>			Undated	
City of Los Angeles, 1935	City of Los Angeles	<i>Plans and Profile, Weldon Canyon, Scale 1:480 (Horizontal) and 1:48 (Vertical)</i>			October 1935	
City of Montebello, 1958	City of Montebello	<i>Aerial Topographic Maps, Scale 1:1,200 Contour Interval 2 feet</i>		Montebello, California	1958	
County of Los Angeles, County Engineer, 1957	County of Los Angeles, County Engineer	<i>Topographic Map of Carbon Canyon and Las Flores Canyon, Escondido Canyon, Romero Canyon, and Zuma Canyon, Scale 1:1,200, Contour Interval 5 feet</i>			1957	
LACAD 1990	U.S. Department of the Army Corps of Engineers	<i>Los Angeles County Drainage Area Review Draft Feasibility Report Appendix A hydrology, February 1990 and Hydraulic Appendix, July 1989</i>		Los Angeles, California	February 1990	
Los Angeles County Flood Control District, 1961	Los Angeles County Flood Control District	<i>Kagel Canyon, Topographic Map, Scale 1:480, Contour Interval 2 feet, April 1961 and June 1961</i>			April 1961 June 1961	

Table 33: Bibliography and References, continued

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
Los Angeles County Flood Control District, 1978	Los Angeles County Flood Control District	<i>Mill Creek, Topographic Map, Scale 1:1,200, contour Interval 2 feet</i>			1978	
Los Angeles County Flood Control District, October 1963	Los Angeles County Flood Control District	<i>Rustic Canyon, Topographic Map, Scale 1:480, contour Interval 2 feet</i>			October 1963	
Los Angeles County Flood Control District, 1968	Los Angeles County Flood Control District	<i>Lindero Canyon and Medea Creek, Topographic Mapping, Scale 1:480, Contour Interval 2 feet</i>			1968	
Los Angeles Region Imagery Acquisition Consortium (LAR-IAC) 2006	Los Angeles Region Imagery Acquisition Consortium	<i>LiDAR</i>			2006	
Rick Engineering Company, February 1985	Rick Engineering Company	<i>Topographic Map of Little Rock Wash, Scale 1"=400', Contour Interval 4 feet</i>			February 1985	
State of California, Division of Highways, 1969	State of California Division of Highways	<i>Aerial Survey Contract No. 695, 07-LA-1, Las Virgenes Creek, Scale 1:1,200, Contour Interval 5 feet</i>			1969	

Table 33: Bibliography and References, continued

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
State of California, Division of Highways, 1966	State of California Division of Highways	<i>Aerial Survey Contract No. 821, 07-LA-1, Downstream Malibu Creek, Scale 1:1,200, Contour Interval 5 feet</i>			1966	
USACE 1981	U.S. Department of the Army Corps of Engineers, Hydrologic Engineering Center	<i>HEC-1 Flood Hydrograph Package, generalized Computer Program, User's Manual</i>		Davis, California	1981	
USACE 1976	U.S. Department of the Army Corps of Engineers, Hydrologic Engineering Center	<i>Computer Program HEC-2 Water Surface Profiles, Generalized Computer Program</i>		Davis, California	November 1976, Updated May 1984	
USACE 1982	U.S. Department of the Army Corps of Engineers, Hydrologic Engineering Center	<i>HEC-5 Simulation of Flood Control and Conservation Systems, User's Manual</i>		Davis, California	1982	
USACE 1990	U.S. Department of the Army Corps of Engineers, Hydrologic Engineering Center	<i>HEC-1 Flood Hydrograph Package, Generalized Computer Program</i>			September 1990	

Table 33: Bibliography and References, continued

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USGS 1981	U.S. Department of the Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 20 feet</i>		Thousand Oaks, California	1981	
USGS 1972	U.S. Department of the Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 5 feet</i>		Whittier, California	1972	
USGS 1972 (b)	U.S. Department of the Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 5 feet</i>		Beverly Hills, California	1972	
USGS 1972 (c)	U.S. Department of the Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 20 feet: El Monte, California (1972); La Habra, California (1972); Whittier, California (1972)</i>		Various	1972	
USGS 1972 (d)	U.S. Department of the Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 20 feet</i>		La Habra, California	1972	
USGS 1967	U.S. Department of the Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 25 feet</i>		Calabasas, California	1967	

Table 33: Bibliography and References, continued

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USGS 1966	U.S. Department of the Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 40 feet</i>		Burbank, California	1966, Photorevised 1972	
USGS 1964	U.S. Department of the Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 5 feet</i>		Inglewood, California	1964, Photorevised 1972	
USGS 1963	U.S. Department of the Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 20 feet: Redondo Beach, California (1963), Photorevised (1972); Torrance, California (1964), Photorevised (1972)</i>		Various	1963	
USGS 1946	U.S. Department of the Interior, Geological Survey	<i>7.5-Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 5 feet, Los Angeles, California; South Gate, California; Los Alamitos, California; Long Beach, California</i>		Various	1946	