FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 2 OF 4



SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

COMMUNITY NAME	COMMUNITY NUMBER
ARROYO GRANDE, CITY OF	060305
ATASCADERO, CITY OF	060700
EL PASO DE ROBLES, CITY OF	060308
GROVER BEACH, CITY OF	060306
MORRO BAY, CITY OF	060307
PISMO BEACH, CITY OF	060309
SAN LUIS OBISPO, CITY OF	060310
SAN LUIS OBISPO COUNTY, UNINCORPORATED AREAS	060304

FEMA

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JUNE 6, 2024

FLOOD INSURANCE STUDY NUMBER
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Flood Insurance Rate Map (FIRM)

Table 13: Roughness Coefficients

Flooding Source	Channel “n”	Overbank “n”
Arroyo Grande Creek	0.025 - 0.100	0.030 - 0.120
Atascadero Creek	0.030 - 0.060	0.030 - 0.070
Bradley Canyon	0.048	0.075
Canyon Creek No. 1	0.035	0.055
Canyon Creek No. 2	0.035	0.055
Carpenter Canyon Creek	0.025 - 0.100	0.030 - 0.120
Cayucos Creek	0.030 - 0.060	0.020 - 0.070
Chorro Creek	0.015 - 0.040	0.045 - 0.100
Corbett Canyon Creek	0.025 - 0.100	0.030 - 0.120
Davenport Creek	0.035	0.055
Davis Canyon Creek	0.035	0.055
Deleissigues Creek	0.030-0.070	0.100
Dry Creek	0.035	0.055
East Branch Huerhuero Creek	0.020 - 0.093	0.020 - 2.000
East Branch Huerhuero Creek	0.035	0.055
East Branch San Luis Obispo Creek	0.035	0.055
East Fork Meadow Creek	0.035	0.055
Froom Creek	0.035	0.055
Graves Creek	0.030 - 0.050	0.030 - 0.050
Harford Canyon Creek	0.035	0.055
Huerhuero Creek	0.035	0.055
Little Cayucos Creek	0.040 - 0.070	0.060 - 0.090
Little Morro Creek	0.020 - 0.090	0.100
Los Berros Creek	0.025 - 0.100	0.030 -0.120
Meadow Creek	0.030 - 0.100	0.020 - 2.000
Middle Branch Huerhuero Creek	0.020 - 0.093	0.020 - 2.000
Middle Branch Huerhuero Creek	0.035	0.055
Morro Creek	0.015 - 0.080	0.045 - 0.100
Mountain Springs Creek	0.030 - 0.050	0.030 - 0.040
Nipomo Creek	0.030 - 0.070	0.100
Noname Creek	0.015 - 0.040	0.045 - 0.100
North Fork Los Berros Creek	0.025 - 0.100	0.030 - 0.120
North Fork Paloma Creek	0.030 - 0.050	0.040 - 0.050
Paloma Creek	0.020 - 0.040	0.030 - 0.050
Peachy Canyon Creek	0.024 - 0.050	0.025 - 0.050
Pismo Creek	0.025 - 0.010	0.030 - 0.100
Pismo Creek	0.035	0.055
Pismo Lake Tributary	0.035	0.055
Prefumo Creek, Downstream of Laguna Lake	0.030 - 0.035	0.035 - 0.080
Prefumo Creek, Upstream of Laguna Lake	0.060	0.060 - 0.100
Salinas River	0.050 - 0.060	0.060 - 0.070

Table 13: Roughness Coefficients (continued)

Flooding Source	Channel "n"	Overbank "n"
Salinas River Reach 1	0.020 - 0.100	0.021 - 0.100
San Luis Obispo Creek	0.035 - 0.12	0.03 - 0.12
San Luis Obispo Creek South	0.030 - 0.065	0.035 - 0.065
San Marcos Creek	0.035	0.055
Santa Margarita Creek	0.030 - 0.050	0.030 - 0.080
Santa Rosa Creek	0.048	0.016 - 0.100
Santa Rosa Creek Split Flow	0.050	0.100 - 0.200
See Canyon Creek	0.040	0.020 - 0.050
See Canyon Creek (Lower Reach)	0.035	0.055
See Canyon Creek (Upper Reach)	0.035	0.055
South Branch Toad Creek	0.040	0.016 - 0.100
South Branch Unnamed Creek No. 1	0.015 - 0.050	0.030 - 0.050
Stenner Creek	0.065	0.040 - 0.070
Tank Farm Creek	0.035	0.055
Tefft Road Tributary	0.250	0.250
Tefft Road Tributary East Fork	0.070	0.100
Toad Creek (Main and North Branches)	0.020 - 0.050	0.030 - 0.060
Toro Creek	0.015 - 0.040	0.045 - 0.100
Unnamed Creek (Alva Paul Creek)	0.015 - 0.040	0.045 - 0.100
Unnamed Creek No. 1	0.015 - 0.050	0.030 - 0.050
Unnamed Stream HU-01	0.035	0.055
Unnamed Stream HU-02	0.035	0.055
Unnamed Stream HU-03	0.035	0.055
Unnamed Stream HU-04	0.035	0.055
Unnamed Stream HU-05	0.035	0.055
Unnamed Stream HU-06	0.035	0.055
Unnamed Stream SO-03	0.035	0.055
Upper Branch Huerhuero Creek	0.020 - 0.093	0.020 - 2.000
Vineyard Canyon Creek	0.035	0.055
Willow Creek	0.030 - 0.070	0.030 - 0.070
Yerba Buena Creek	0.030 - 0.050	0.020 - 0.080

5.3 Coastal Analyses

For the areas of San Luis Obispo County that are impacted by coastal flooding processes, coastal flood hazard analyses were performed to provide estimates of coastal BFEs. Coastal BFEs reflect the increase in water levels during a flood event due to extreme tides and storm surge as well as overland wave effects.

The following subsections provide summaries of how each coastal process was considered for this FIS Report. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation. Table 14 summarizes the methods and/or models used for the coastal analyses. Refer to Section 2.5.1 for descriptions of the terms used in this section.

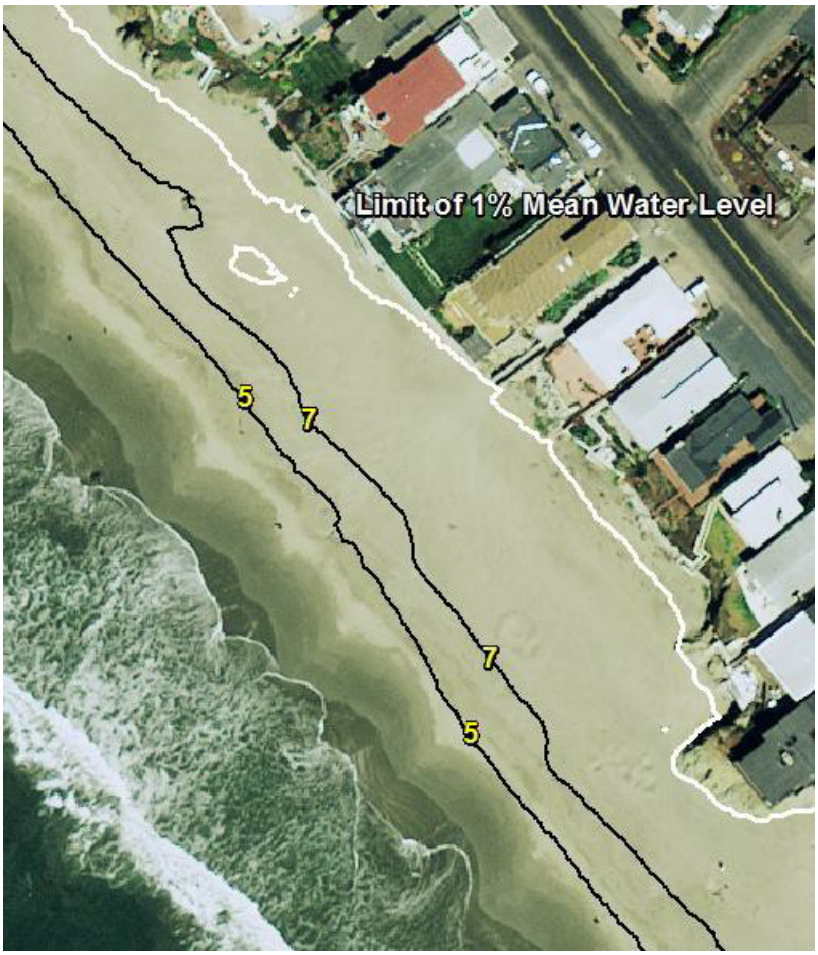
Table 14: Summary of Coastal Analyses

Flooding Source	Study Limits From	Study Limits To	Hazard Evaluated	Model or Method Used	Date Analysis was Completed
Pacific Ocean	Southern Monterey County Border	Northern Santa Barbara County Border	Runup WHAFIS	FEMA Pacific Guidelines (2005). Stockdon, DIM, and TAW used to evaluate Runup	12/30/2014

5.3.1 Total Stillwater Elevations

The total stillwater elevations (stillwater including storm surge plus wave setup) for the 1-percent-annual-chance flood were determined for areas subject to coastal flooding. The models and methods that were used to determine storm surge and wave setup are listed in Table 14. The stillwater elevation that was used for each transect in coastal analyses is shown in Table 16, “Coastal Transect Parameters.” Figure 8 shows the total stillwater elevations for the 1-percent-annual-chance flood that was determined for this coastal analysis.

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



Astronomical Tide

Astronomical tidal statistics were generated directly from local tidal constituents by sampling the predicted tide at random times throughout the tidal epoch.

Storm Surge Statistics

Storm surge is modeled based on characteristics of actual storms responsible for significant coastal flooding. The characteristics of these storms are typically determined by statistical study of the regional historical record of storms or by statistical study of tidal gages.

When historic records are used to calculate storm surge, characteristics such as the strength, size, track, etc., of storms are identified by site. Storm data was used in conjunction with numerical hydrodynamic models to determine the corresponding storm surge levels. An extreme value analysis was performed on the storm surge modeling results to determine a stillwater elevation for the 1-percent-annual-chance event.

Tidal gages can be used instead of historic records of storms when the available tidal gage record for the area represents both the astronomical tide component and the storm surge component. Table 15 provides the gage name, managing agency, gage type, gage identifier, start date, end date, and statistical methodology applied to each gage used to determine the stillwater elevations. For areas between gages, peak stillwater elevations for selected recurrence intervals were estimated by combining interpolation between gages and observed high water marks during major storms. A regionalized statistical approach was applied to the gage data so that stillwater elevations in areas between gages could be identified.

Table 15: Tide Gage Analysis Specifics

Gage Name	Managing Agency of Tide Gage Record	Gage Type	Start Date	End Date	Statistical Methodology
Port San Luis (9412110)	NOAA	Tide	05/31/1945	04/14/2011	GEV

Combined Riverine and Tidal Effects
This section is ot applicable to this Flood Risk Project.

Wave Setup Analysis

Wave setup was computed during the storm surge modeling through the methods and models listed in Table 14 and included in the frequency analysis for the determination of the total stillwater elevations.

5.3.2 Waves

An integral component of the transect-based TWL analysis is an accurate determination of the offshore and nearshore wave climate. A continuous 50-year hourly deep-water wave hindcast was developed by Oceanweather Inc using reanalysis of historical wind fields. Three nested model grid components of sequentially higher resolution were used to resolve wave conditions of varying spatial scales, including basin (global), regional (Northeast Pacific Ocean), and coastal (California) grids.

The deep-water dataset was further transformed to reflect nearshore conditions at the edge of the surf zone in approximately 33-49 feet water depth. The nearshore wave transformation component was carried out by the Scripps Institute of Oceanography (SIO) Coastal Data Information Program (CDIP) research group in collaboration with BakerAECOM using the SIO SHELF model. The output from this wave transformation model provides the input conditions for the 1-D transect-based coastal hazard analysis used to calculate BFEs.

5.3.3 Coastal Erosion

A single storm episode can cause extensive erosion in coastal areas. Storm-induced erosion was evaluated to determine the modification to existing topography that is expected to be associated with flooding events. Erosion was evaluated using the methods listed in Table 14. The post-event eroded profile was used for the subsequent transect-based onshore wave hazard analyses.

5.3.4 Wave Hazard Analyses

Overland wave hazards were evaluated to determine the combined effects of ground elevation, vegetation, and physical features on overland wave propagation and wave runup. These analyses were performed at representative transects along all shorelines for which waves were expected to be present during the floods of the selected recurrence intervals. The results of these analyses were used to determine elevations for the 1-percent-annual-chance flood.

Transect locations were chosen with consideration given to the physical land characteristics as well as development type and density so that they would closely represent conditions in their locality. Additional consideration was given to changes in the total stillwater elevation. Transects were spaced close together in areas of complex topography and dense development or where total stillwater elevations varied. In areas having more uniform characteristics, transects were spaced at larger intervals. Transects shown in Figure 9, “Transect Location Map,” are also depicted on the FIRM. Table 16 provides the location, stillwater elevations, and starting wave conditions for each transect evaluated for overland wave hazards. In this table, “starting” indicates the parameter value at the beginning of the transect.

Wave Height Analysis

Wave height analyses were performed to determine wave heights and corresponding wave crest elevations for the areas inundated by coastal flooding and subject to overland wave propagation hazards. Refer to Figure 6 for a schematic of a coastal transect evaluated for overland wave propagation hazards.

Wave heights and wave crest elevations were modeled using the methods and models listed in Table 14, “Summary of Coastal Analyses”. For the 0.2-percent-annual-chance event, wave profiles were created to indicate the results of the wave height analysis at each transect. Such wave profiles may show greater detail than the mapping product, due to limitations of the map scale and smoothing tolerances applied during boundary cleanup. Wave runup analysis for the 0.2-percent-annual-chance event was not performed for this study and is not included in the profiles.

Wave Runup Analysis

Wave runup analyses were performed to determine the height and extent of runup beyond the limit of stillwater inundation for the 1-percent-annual-chance flood. Wave runup elevations were modeled using the methods and models listed in Table 14.

Table 16: Coastal Transect Parameters

Transect	X,Y Coordinates (Meters, NAD83 UTM Zone 11N)		Total Water Level (feet NAVD88)[1]			
	X	Y	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
1	107597.70	3968584.17	17.9	20.7	22.0	25.4
2	108264.75	3966493.04	17.3	18.9	19.5	21.1
3	108481.74	3963784.35	19.3	21.6	22.7	25.8
4	108827.74	3961592.56	14.5	15.7	16.1	17.3
5	109157.62	3960146.10	14.0	15.9	16.7	18.8
6	110453.02	3957863.40	15.0	19.1	21.6	29.3
7	110618.10	3957701.94	29.6	35.4	37.7	42.9

Table 16: Coastal Transect Parameters (continued)

Transect	X,Y Coordinates (Meters, NAD83 UTM Zone 11N)		Total Water Level (feet NAVD88)[1]			
	X	Y	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
8	111406.39	3955775.11	19.4	20.8	21.4	22.6
9	115231.24	3953168.02	19.6	26.9	31.1	44.5
10	116581.38	3952280.83	14.7	18.0	19.8	25.2
11	117233.38	3951906.80	15.5	16.9	17.6	19.1
12	118845.89	3951282.83	30.9	35.2	37.0	41.2
13	120508.76	3950828.22	14.8	16.4	17.1	18.7
14	120671.59	3950799.03	15.1	16.5	17.0	18.2
15	121009.02	3950739.14	16.0	19.2	21.1	27.0

Table 16: Coastal Transect Parameters (continued)

Transect	X,Y Coordinates (Meters, NAD83 UTM Zone 11N)		Total Water Level (feet NAVD88)[1]			
	X	Y	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
16	121318.70	3950679.41	13.6	14.8	15.4	16.6
17	122784.66	3950045.32	28.1	34.3	37.2	44.2
18	123957.48	3948465.85	15.9	18.3	19.6	23.2
19	124800.76	3946727.87	15.3	20.8	24.5*	37.6
20	125012.87	3946288.26	16.2	18.0	18.8	20.8
21	125225.85	3945766.71	17.2	19.0	19.9	22.0
22	126018.27	3944135.05	16.0	17.6	18.4	20.4
23	126627.90	3943321.25	17.1	18.8	19.6	21.5

Table 16: Coastal Transect Parameters (continued)

Transect	X,Y Coordinates (Meters, NAD83 UTM Zone 11N)		Total Water Level (feet NAVD88)[1]			
	X	Y	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
24	127137.36	3942514.42	22.0	26.6	28.7	33.8
25	127632.44	3941567.44	16.0	21.1	24.4	36.2
26	128101.97	3940620.42	13.8	16.3	17.8	23.0
27	132469.61	3934923.28	19.6	22.0	23.2	26.3
28	137543.97	3930574.65	16.5	18.2	18.9	20.7
29	139854.02	3929349.37	20.0	25.4	28.7	39.4
30	142800.77	3928600.26	19.1	23.6	25.6	30.7
31	144824.25	3928722.73	18.5	22.2	24.1	29.2

Table 16: Coastal Transect Parameters (continued)

Transect	X,Y Coordinates (Meters, NAD83 UTM Zone 11N)		Total Water Level (feet NAVD88)[1]			
	X	Y	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
32	144876.60	3928703.00	13.1	14.1	14.6*	15.5
33	144899.47	3928693.56	13.1	14.3	14.8	16.1
34	145088.15	3928597.27	14.7	16.7	17.8*	20.8
35	145497.36	3928248.45	16.7	18.2	18.8	20.2
36	146164.73	3927113.48	14.0	16.2	17.3	20.5
37	146444.79	3926457.76	14.0	16.8	18.4	23.5
38	147026.60	3925417.45	14.8	16.3	16.9	18.5
39	147587.19	3924358.29	14.7	17.3	18.7	23.0

Table 16: Coastal Transect Parameters (continued)

Transect	X,Y Coordinates (Meters, NAD83 UTM Zone 11N)		Total Water Level (feet NAVD88)[1]			
	X	Y	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
40	147676.28	3924138.58	13.0	13.8	14.2	14.9
41	147895.86	3923422.60	12.7	14.1	14.8	16.7
42	148148.07	3921478.72	14.1	15.1	15.6	16.6
43	147857.59	3918184.81	19.4	20.9	21.5	22.9
44	147304.66	3915738.59	23.3	25.1	25.9	27.5
45	146632.36	3913939.98	20.2	21.8	22.6	24.2
46	146060.59	3912736.01	14.1	15.8	16.6	18.5
47	145330.40	3911011.16	23.3	25.5	26.5*	28.8

Table 16: Coastal Transect Parameters (continued)

Transect	X,Y Coordinates (Meters, NAD83 UTM Zone 11N)		Total Water Level (feet NAVD88)[1]			
	X	Y	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
48	144750.71	3908695.56	16.9	20.2	21.7	25.8
49	146617.25	3904707.98	18.7	21.5	22.9	26.9
50	148152.83	3903031.90	32.3	37.2	39.3	44.3
51	148857.97	3902488.58	18.0	21.4	22.4	23.8
52	153585.46	3898489.00	15.8	18.3	19.5*	22.4
53	158966.50	3897559.64	9.4	10.2	10.5*	11.2
54	159060.30	3897852.61	21.4	25.8	28.1	34.3
55	159111.16	3897880.68	11.9	13.1	13.7	15.3

Table 16: Coastal Transect Parameters (continued)

Transect	X,Y Coordinates (Meters, NAD83 UTM Zone 11N)		Total Water Level (feet NAVD88)[1]			
	X	Y	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
56	159122.75	3897881.35	15.9	20.1	22.4	28.9
57	159430.71	3897873.59	13.1	14.4	15.1	16.7
58	159640.30	3897850.56	14.3	15.8	16.5*	18.2
59	159782.25	3897826.63	14.0	16.0	17.0	19.7
60	160929.03	3897366.61	29.5	32.0	33.0	35.1
61	161666.90	3896876.01	22.4	24.2	25.0	26.5
62	162449.65	3896309.31	16.9	18.2	18.8	20.1
63	163543.69	3895431.75	13.1	16.1	17.9	23.4

Table 16: Coastal Transect Parameters (continued)

Transect	X,Y Coordinates (Meters, NAD83 UTM Zone 11N)		Total Water Level (feet NAVD88)[1]			
	X	Y	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
64	163772.33	3895256.99	12.9	15.4	16.9	21.2
65	165935.26	3894674.64	23.8	26.1	27.2	29.6
66	166054.02	3894597.46	18.3	20.5	21.4	23.3
67	166422.49	3894308.22	12.4	13.6	14.1	15.5
68	166618.01	3894122.24	12.2	13.1	13.5	14.6
69	166795.66	3893931.32	14.0	17.1	19.0	25.3
70	166914.14	3893790.86	12.9	14.1	14.7	16.1
71	166999.95	3893681.64	12.3	13.2	13.7	14.8

Table 16: Coastal Transect Parameters (continued)

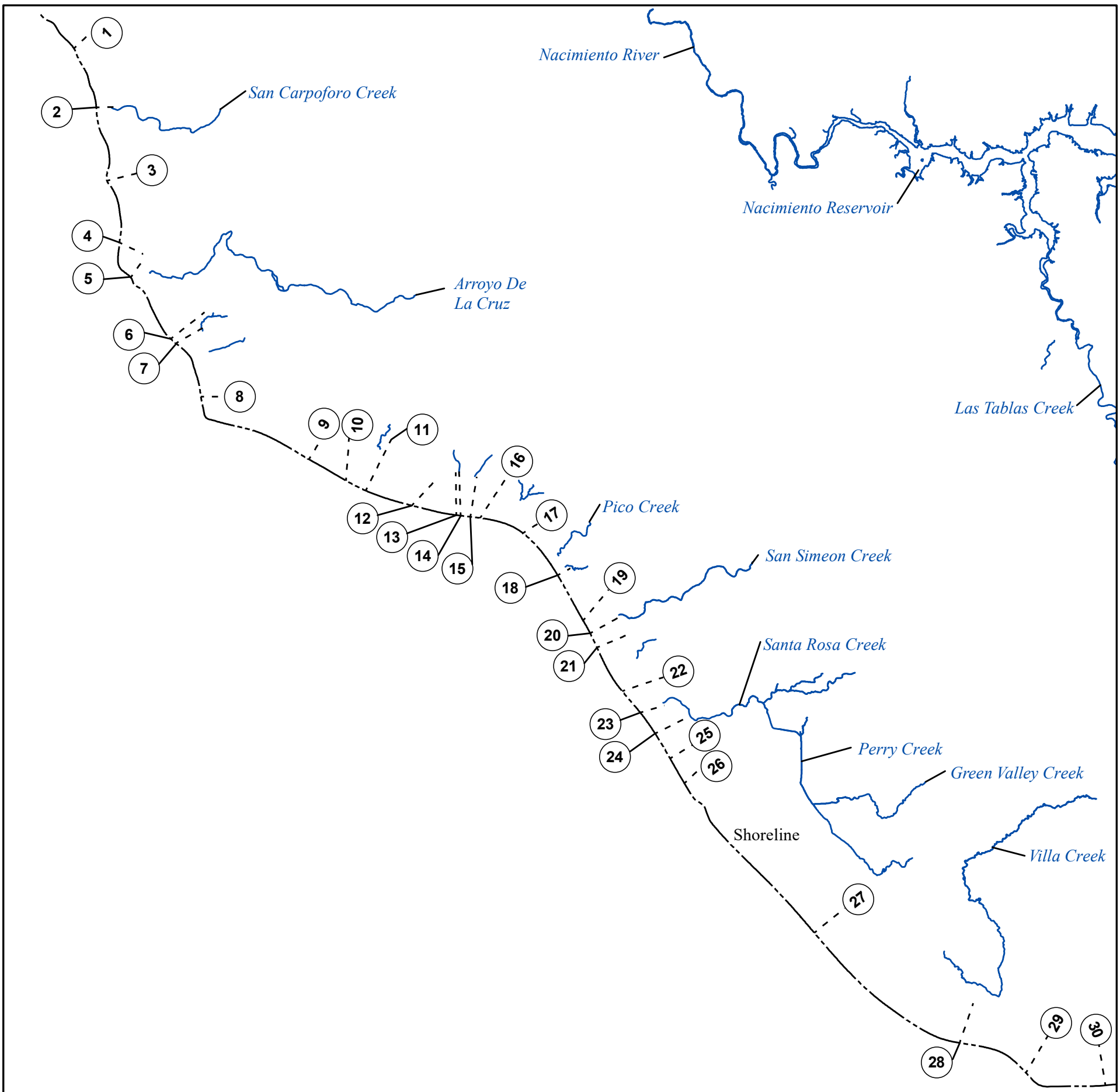
Transect	X,Y Coordinates (Meters, NAD83 UTM Zone 11N)		Total Water Level (feet NAVD88)[1]			
	X	Y	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
72	167572.10	3892597.22	13.5	14.7	15.2	16.5
73	167792.62	3891579.05	13.1	14.1	14.5*	15.4
74	167953.88	3890288.16	13.7	14.9	15.4	16.6
75	167951.18	3888905.74	14.3	15.4	15.9	17.1
76	167847.98	3886987.21	13.5	14.3	14.6	15.2
77	167546.01	3884353.76	22.3	24.5	25.5*	27.7
78	167385.20	3883333.58	20.8	22.7	23.5*	25.3
79	166352.97	3878838.95	17.4	19.1	19.8	21.5

Table 16: Coastal Transect Parameters (continued)

Transect	X,Y Coordinates (Meters, NAD83 UTM Zone 11N)		Total Water Level (feet NAVD88)[1]			
	X	Y	10% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
80	150416.84	3918291.35	--[1]	--[1]	12.2	--[1]
81[2,3]	151493.19	3917425.72	--[1]	--[1]	9.5	--[1]
82	150588.04	3916765.21	--[1]	--[1]	12.3	--[1]
83[2,4]	150340.83	3915525.93	--[1]	--[1]	9.8	--[1]

[1]North American Vertical Datum of 1988
*Value has been rounded to the nearest tenth of a foot – precision of results to the hundredths of a foot resulted in rounding the BFE on the FIRM down to the nearest whole foot due to the analysis precision.
[1]Data not calculated for this Flood Risk Project
[2]Transects were mapped using wave height analysis. Static Wave setup was less than half a foot and 1% SWEL is 7.8 feet.
[3]1% wave crest elevation of 9.5 feet.
[4]1% wave crest elevation of 9.8 feet.

Figure 9: Transect Location Map

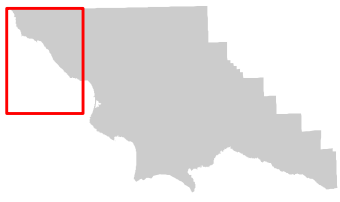


1 inch = 13,333 feet 1:160,000

0 6,500 13,000 26,000 feet

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

COUNTY LOCATOR



NATIONAL FLOOD INSURANCE PROGRAM

Transect Locator Map

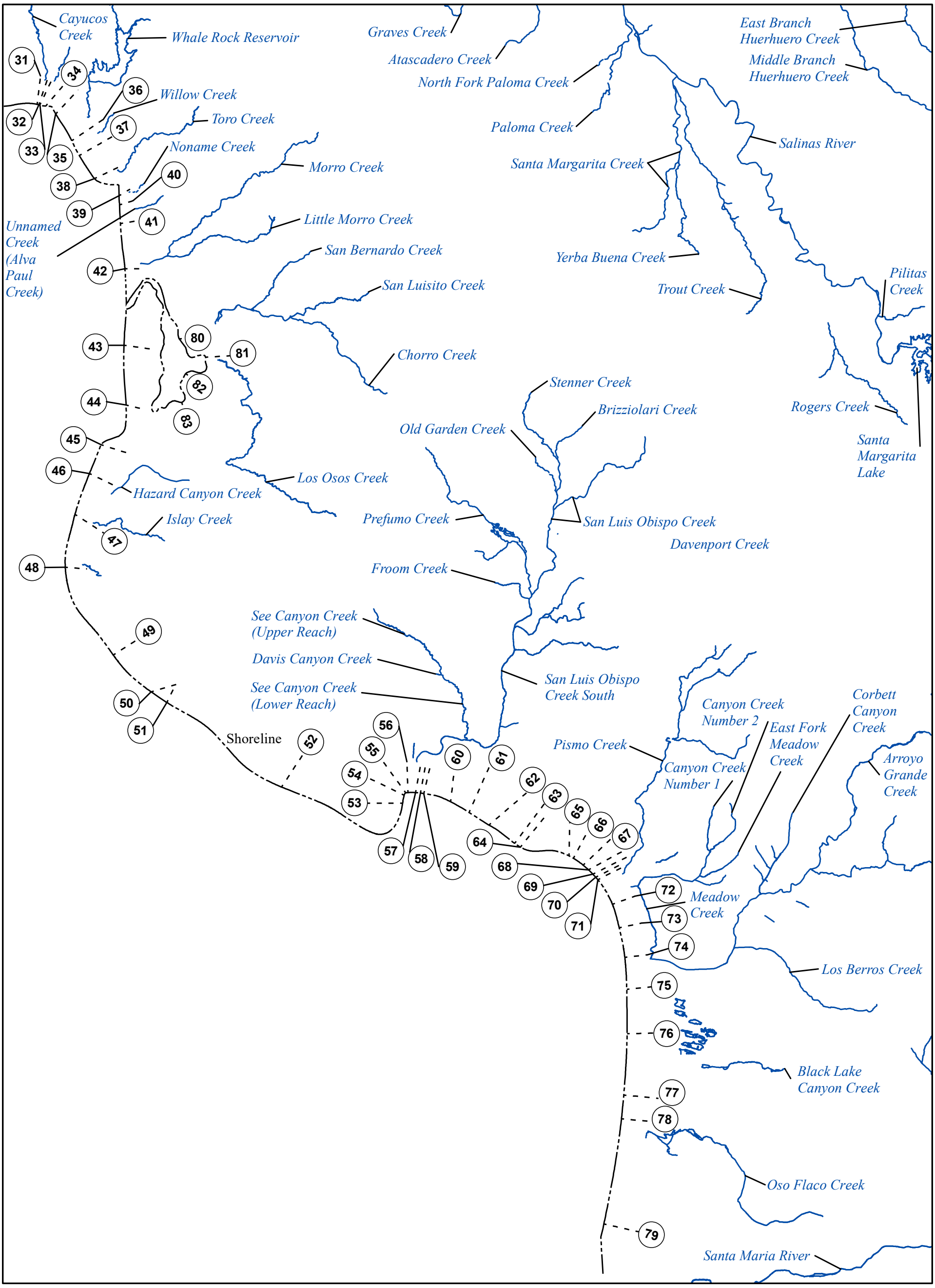
SAN LUIS OBISPO COUNTY, CALIFORNIA and Incorporated Areas

PANELS WITH TRANSECTS

0012, 0014, 0252, 0254, 0258, 0266, 0288, 0289, 0293, 0506, 0507, 0509, 0528, 0536, 0756, 0778, 0779, 0783, 0784, 0792, 0811, 0813, 1017, 1019, 1026, 1028, 1029, 1036, 1282, 1301, 1303, 1316, 1317, 1336, 1337, 1339, 1341, 1343, 1344, 1582, 1584, 1592, 1857

FEMA

Figure 9: Transect Location Map



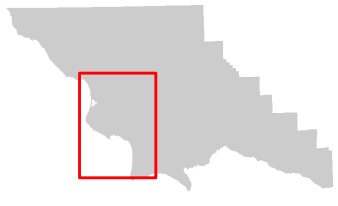
1 inch = 13,333 feet 1:160,000

N

0 6,500 13,000 26,000 feet

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

COUNTY LOCATOR



NATIONAL FLOOD INSURANCE PROGRAM

Transect Locator Map

SAN LUIS OBISPO COUNTY, CALIFORNIA and Incorporated Areas

PANELS WITH TRANSECTS

0012, 0014, 0252, 0254, 0258, 0266, 0288, 0289, 0293, 0506, 0507, 0509, 0528, 0536, 0756, 0778, 0779, 0783, 0784, 0792, 0811, 0813, 1017, 1019, 1026, 1028, 1029, 1036, 1282, 1301, 1303, 1316, 1317, 1336, 1337, 1339, 1341, 1343, 1344, 1582, 1584, 1592, 1857

FEMA

5.4 Alluvial Fan Analyses

This section is not applicable to this Flood Risk Project.

Table 17: Summary of Alluvial Fan Analyses

[Not Applicable to this Flood Risk Project]

Table 18: Results of Alluvial Fan Analyses

[Not Applicable to this Flood Risk Project]

SECTION 6.0 – MAPPING METHODS

6.1 Vertical and Horizontal Control

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

Flood elevations shown in this FIS Report and on the FIRMs are referenced to NAVD88, with the exception of 10 panels: 06079C1619F, 06079C1638F, 06079C1639F, 06079C1880F, 06079C1885F, 06079C1902F, 06079C1905F, 06079C1906F, 06079C1910F and 06079C1950F. These panels were not updated with the November 16, 2012 revision and are referenced to NGVD 29. Flooding sources on the non-updated FIRMS include Nipomo Creek and Santa Maria River. Profile 43P is a duplicate of profile 40P provided in NGVD 29 for use only with effective panels 06079C1639F, 06079C1902F, and 06079C1906F. Due to the fact that base flood elevations along Nipomo Creek are depicted on panel 06079C1643G in NAVD 88 and on panels 06079C1639F, 06079C1902F, and 06079C1906F in NGVD 29, differences in base flood elevations may result across panel edges.

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

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

To obtain current elevation, description, and/or location information for benchmarks in the

area, please visit the NGS website at www.ngs.noaa.gov.

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

Table 19: Countywide Vertical Datum Conversion

[Not Applicable to this Flood Risk Project]

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

Table 20: Stream-Based Vertical Datum Conversion

Flooding Source	Average Vertical Datum Conversion Factor (feet)
Arroyo Grande Creek	2.82
Atascadero Creek	3.15
Carpenter Canyon Creek	2.84
Cayucos Creek	2.76
Chorro Creek	2.79
Corbett Canyon Creek	2.84
Deleissigues Creek	2.77
Graves Creek	3.13
Little Cayucos Creek	2.76
Little Morro Creek	2.80
Los Berros Creek	2.82
Morro Creek	2.80
Mountain Springs Creek	3.13
Nipomo Creek	2.73
Noname Creek	2.78
North Fork Los Berros Creek	2.83
North Fork Paloma Creek	3.15
Old Garden Creek	2.86
Peachy Canyon Creek	3.16
Prefumo Canyon Creek	2.87
Prefumo Creek	2.87
Pismo Creek	2.86
Salinas River	3.15
San Luis Obispo Creek	2.89
Santa Margarita Creek	3.07
Santa Rosa Creek	2.73
Santa Rosa Creek Split Flow	2.71
See Canyon Creek	2.92
South Branch Toad Creek	3.12
South Branch Unnamed Creek No. 1	3.17
Stenner Creek	2.86
Tefft Road Tributary	2.77

Table 20: Stream-Based Vertical Datum Conversions (continued)

Flooding Source	Average Vertical Datum Conversion Factor (feet)
Tefft Road Tributary East Fork	2.78
Toad Creek	3.14
Toro Creek	2.77
Unnamed Creek (Alva Paul Creek)	2.78
Unnamed Creek No. 1	3.15
Willow Creek	2.78
Yerba Buena Creek	2.96
Static Elevation Along Arroyo Grande Creek	2.82
Static Elevation Along Paloma Creek	3.17
Static Elevation Along Salinas River	3.12
Static Elevation Along Santa Margarita Creek	3.05
Static Elevation Along Toad Creek	3.12
Static Elevation At Laguna Lake	2.86
Static Elevation At Morro Bay	2.86
Static Elevation At Pacific Ocean	2.80

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/media-library/resources-documents/collections/361.

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

Table 21: Base Map Sources

Data Type	Data Provider	Data Date	Data Scale	Data Description
Administrative Forest	USDA Forest Service	2020		National Forest Boundaries
BOE City Boundaries	County of San Luis Obispo GIS	2015		City Boundaries of San Luis Obispo CA
California State Parks System	California Department of Parks and Recreation	2018	1:24,000	State Park Boundaries

Table 21: Base Map Sources (continued)

Data Type	Data Provider	Data Date	Data Scale	Data Description
Coastal California Digital Imagery	Coastal Services Center	2011	1:24,000	Coastal California Digital Imagery
Coastal California LiDAR and Digital Imagery	Coastal Services Center	2011	1:24,000	Coastal California LiDAR and Digital Imagery
County Boundary	County of San Luis Obispo GIS	2020		County Boundary of San Luis Obispo CA
County of San Luis Obispo Transportation Lines	County of San Luis Obispo GIS	2017	1:24,000	Transportation Lines for San Luis Obispo County
National Agriculture Imagery Program	United States Department of Agriculture Farm Service Agency	2016	1:24,000	Basemap Imagery Index
National Agriculture Imagery Program	U.S. Department of Agriculture Farm Service Agency	2005	1:12,000	Location of roads, railroads, bridges, streams, general structures, and other physical features.
National Hydrography Dataset	United States Geological Survey	2018	1:24,000	National Hydrology used for Water Line feature
NOAA Tides and Currents	NOAA	2015	1:24,000	Coastal Gage Location
San Luis Obispo County PLSS data, State and Federal land boundaries	California Spatial Information Library	1993	1:100,000	Public Land Survey System (range, township, and sections)
TIGER/Line Files Transportation Layer	U.S. Department of Commerce, U.S. Census Bureau, Geography Division	2013	1:24,000	Spatial and attribute information for Transportation
USDA-FSA-APFO NAIP MrSID Mosaic	US Department of Agriculture Farm Service Agency Aerial Photography Field Office	2012	1:40,000	Countywide Digital Ortho Mosaic

6.3 Floodplain and Floodway Delineation

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

For riverine flooding sources, the mapped floodplain boundaries shown on the FIRM have

been delineated using the flood elevations determined at each cross section; between cross sections, the boundaries were interpolated using the topographic elevation data described in Table 22. For each coastal flooding source studied as part of this FIS Report, the mapped floodplain boundaries on the FIRM have been delineated using the flood and wave elevations determined at each transect; between transects, boundaries were delineated using land use and land cover data, the topographic elevation data described in Table 22, 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 22.

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

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

Certain flooding sources may have been studied that do not have published BFEs on the FIRMs, or for which there is a need to report the 1-percent-annual-chance flood elevations at selected cross sections because a published Flood Profile does not exist in this FIS Report. These streams may have also been studied using methods to determine non-encroachment zones rather than floodways. For these flooding sources, the 1-percent-annual-chance floodplain boundaries have been delineated using the flood elevations determined at each cross section; between cross sections, the boundaries were interpolated using the topographic elevation data described in Table 22. All topographic data used for modeling or mapping has been converted as necessary to NAVD88. The 1-percent-annual-chance elevations for selected cross sections along these flooding sources, along with their non-encroachment widths, if calculated, are shown in Table 23, “Flood Hazard and Non-Encroachment Data for Selected Streams.”

Table 22: Summary of Topographic Elevation Data used in Mapping

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Vertical Accuracy	Horizontal Accuracy	Citation
San Luis Obispo County	Pacific Ocean	Coastal California LiDAR and Digital Imagery	N/A	2 ft	N/A
San Luis Obispo County	Various Sources	U.S. Department of Agriculture Farm Service Agency	N/A	N/A	N/A

Table 22: Summary of Topographic Elevation Data used in Mapping (continued)

Community	Flooding Source	Source for Topographic Elevation Data			
		Description	Vertical Accuracy	Horizontal Accuracy	Citation
San Luis Obispo County	Cuyama River, Oso Flaco Creek, Santa Maria River, and Suey Creek	Digital Orthophoto Quadrangles	1:12,000	N/A	N/A

BFEs shown at cross sections on the FIRM represent the 1-percent-annual-chance water surface elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report. 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 23: 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-H*								
I	14,599	134	1,204	13.1	61.3	61.3	61.3	0.0
J	15,000	149	1,611	6.5	64.2	64.2	64.2	0.0
K	15,470	209	1,853	5.7	68.0	68.0	68.7	0.7
L	15,803	224	1,674	6.3	69.8	69.8	70.3	0.5
M	16,474	173	1,747	6.0	73.0	73.0	73.4	0.4
N	17,794	106	1,286	8.2	78.3	78.3	78.9	0.6
O	18,480	143	1,859	5.6	82.5	82.5	82.9	0.4
P	19,013	121	1,446	7.3	84.2	84.2	84.4	0.2
Q	19,800	128	1,183	8.9	89.3	89.3	89.3	0.0
R	20,830	177	2,128	4.9	93.6	93.6	93.6	0.0
S	24,204	102	1,286	8.2	115.3	115.3	115.3	0.0
T	24,816	78	854	12.3	119.9	119.9	119.9	0.0
U	26,083	93	1,490	7.0	128.8	128.8	129.4	0.6
V	27,657	120	1,358	7.7	133.7	133.7	134.6	0.9
W	29,325	71	883	11.9	145.6	145.6	145.6	0.0
X	30,371	138	1,623	6.5	149.0	149.0	149.6	0.6
Y	31,442	190	1,703	6.2	152.9	152.9	153.3	0.4
Z	33,026	276	1,590	6.6	160.5	160.5	160.7	0.2
AA	34,162	206	1,579	6.7	166.6	166.6	166.9	0.3
AB	35,772	269	2,173	4.8	173.4	173.4	173.7	0.3
AC	37,752	124	1,558	5.6	198.0	198.0	198.0	0.0

[1]Feet above Pacific Ocean

*Data not available

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ARROYO GRANDE CREEK

Table 23: Floodway Data (continued)

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	1,168	76	985	6.8	827.5	827.5	827.6	0.1
B	1,625	129	1,514	4.4	829.2	829.2	829.3	0.1
C	2,158	144	1,270	5.3	829.7	829.7	829.8	0.1
D	2,682	71	669	10.0	834.5	834.5	834.5	0.0
E	3,832	134	705	9.4	839.1	839.1	839.1	0.0
F	4,728	101	1,226	5.4	842.2	842.2	842.2	0.0
G	5,325	67	625	10.6	845.4	845.4	845.4	0.0
H	6,265	101	1,035	6.4	852.8	852.8	852.8	0.0
I	7,081	152	1,162	5.6	854.2	854.2	854.2	0.0
J	7,544	148	1,397	4.6	856.3	856.3	856.4	0.1
K	8,224	137	1,538	4.2	864.3	864.3	864.3	0.0
L	9,091	74	589	10.8	870.1	870.1	870.1	0.0
M	10,348	63	709	9.0	877.9	877.9	878.1	0.2
N	11,133	85	581	10.7	880.4	880.4	881.4	1.0
O	12,117	111	846	7.5	891.9	891.9	891.9	0.0
P	13,199	136	656	9.6	896.4	896.4	896.4	0.0
Q	14,384	153	891	7.1	902.8	902.8	903.0	0.2
R	15,213	140	911	6.8	907.3	907.3	907.3	0.0
S	16,214	223	1,645	3.7	908.3	908.3	909.1	0.8
T	17,124	188	1,238	4.9	909.3	909.3	909.9	0.6
U	18,023	128	1,363	4.3	916.1	916.1	916.1	0.0
V	19,067	110	1,433	4.1	916.4	916.4	916.4	0.0

[1]Feet above confluence with Salinas River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ATASCADERO CREEK

Table 23: Floodway Data (continued)

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	290	30	111	5.4	163.8	163.8	164.8	1.0
B	407	30	69	8.7	165.6	165.6	165.6	0.0
C	528	90	99	6.1	168.9	168.9	168.9	0.0

[1]Feet above confluence with Corbett Canyon Creek

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: CARPENTER CANYON CREEK

Table 23: Floodway Data (continued)

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	438	88	581	12.1	12.9	12.9	12.9	0.0
B	671	283	858	8.2	14.8	14.8	14.8	0.0
C	898	256	1,346	5.2	15.9	15.9	16.6	0.7
D	1,082	218	1,348	5.2	16.2	16.2	17.0	0.8
E	1,309	154	1,009	6.9	16.7	16.7	17.2	0.5
F	1,542	95	960	7.3	17.9	17.9	18.6	0.7
G	1,758	139	1,113	6.3	19.0	19.0	19.7	0.7
H	2,107	305	1,653	4.2	20.4	20.4	21.0	0.6
I	2,413	320	1,025	6.8	20.8	20.8	21.4	0.6
J	2,598	329	1,488	4.7	24.0	24.0	24.7	0.7
K	2,904	298	982	7.1	24.2	24.2	24.8	0.6

[1]Feet above Pacific Ocean

Table 23: Floodway Data (continued)

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	348	249	2,961	0.9	122.5	122.5	123.5	1.0
B	544	225	2,481	1.0	122.5	122.5	123.5	1.0
C	834	83	973	2.7	122.5	122.5	123.5	1.0
D	1,024	102	1,013	2.6	122.6	122.6	123.6	1.0
E	1,225	219	1,634	1.6	122.9	122.9	123.9	1.0
F	1,563	208	1,333	2.0	123.3	123.3	124.3	1.0
G	1,922	106	438	9.4	124.3	124.3	125.0	0.7
H	2,123	100	512	6.8	127.0	127.0	127.7	0.7
I	2,724	205	837	4.9	131.9	131.9	132.9	1.0
J	3,564	81	456	5.7	137.1	137.1	137.7	0.6
K	3,865	58	268	9.0	139.8	139.8	140.0	0.2
L	4,166	375	962	3.6	144.4	144.4	145.3	0.9
M	4,404	256	762	3.4	145.8	145.8	146.0	0.2
N	5,074	138	298	9.3	151.9	151.9	152.5	0.6
O	5,618	49	204	11.3	157.5	157.5	157.8	0.3
P	6,146	95	252	9.1	162.9	162.9	163.4	0.5
Q	6,574	92	271	8.5	169.3	169.3	170.3	0.9

[1]Feet above confluence with Arroyo Grande Creek

Table 23: Floodway Data (continued)

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	1,056	40	155	8.4	315.0	315.0	315.0	0.0
B	1,320	65	264	4.9	319.3	319.3	319.4	0.1
C	1,980	80	192	6.8	325.1	325.1	325.1	0.0
D	2,820	70	365	3.6	334.5	334.5	334.9	0.4
E	3,823	89	166	7.8	339.8	339.8	339.8	0.0
F	4,208	70	316	4.1	344.8	344.8	344.8	0.0
G	4,404	21	162	8.0	347.4	347.4	347.4	0.0
H	4,504	65	148	8.8	348.4	348.4	348.4	0.0
I	5,095	125	681	1.9	354.3	354.3	354.7	0.4

[1]Feet above confluence with Nipomo Creek

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: DELEISSIGUES CREEK

Table 23: Floodway Data (continued)

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	626	104	714	8.6	774.1	774.1	774.2	0.1
B	936	101	747	8.3	776.4	776.4	776.4	0.0
C	1,351	73	727	8.5	777.5	777.5	777.5	0.0
D	1,482	65	539	11.2	777.8	777.8	777.8	0.0
E	2,198	120	1,027	5.9	781.1	781.1	781.1	0.0
F	2,315	97	786	7.7	781.1	781.1	781.1	0.0
G	3,020	107	811	7.2	782.6	782.6	782.6	0.0
H	3,515	78	439	13.5	783.5	783.5	783.5	0.0
I	4,527	95	700	8.5	794.2	794.2	794.2	0.0
J	4,835	96	857	6.9	795.3	795.3	795.3	0.0
K	5,954	84	548	10.5	798.5	798.5	798.5	0.0
L	6,554	82	591	9.6	806.5	806.5	806.5	0.0
M	7,490	106	745	7.3	809.9	809.9	809.9	0.0
N	7,667	117	1,058	5.2	814.4	814.4	814.4	0.0
O	8,634	72	602	9.0	815.7	815.7	815.7	0.0
P	9,242	67	382	13.4	819.1	819.1	819.1	0.0
Q	9,847	94	639	8.2	825.6	825.6	825.6	0.0
R	10,625	64	380	13.7	830.2	830.2	830.2	0.0
S	11,175	74	569	9.2	836.7	836.7	836.7	0.0
T	12,105	133	999	5.2	843.3	843.3	843.3	0.0
U	12,803	81	522	9.8	844.5	844.5	844.5	0.0
V	13,193	107	851	6.3	847.2	847.2	847.2	0.0
W	13,955	153	1,307	4.0	848.6	848.6	848.7	0.1
X	14,440	79	695	7.1	859.3	859.3	859.3	0.0
Y	14,915	109	679	6.9	860.9	860.9	861.3	0.4
Z	15,881	113	978	6.2	862.9	862.9	863.0	0.1

[1]Feet above confluence with Salinas River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: GRAVES CREEK

Table 23: Floodway Data (continued)

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
AA	16,893	130	540	8.6	867.1	867.1	867.1	0.0
AB	17,798	67	398	11.6	875.0	875.0	875.0	0.0
AC	18,228	125	624	7.4	880.2	880.2	880.2	0.0
AD	18,907	89	560	8.2	882.7	882.7	882.7	0.0
AE	19,286	79	416	10.9	885.1	885.1	885.1	0.0
AF	20,071	80	616	7.0	893.5	893.5	893.5	0.0
AG	21,051	77	542	7.39	897.7	897.7	897.7	0.0
AH	21,766	76	353	12.1	904.0	904.0	904.0	0.0
AI	22,098	70	398	10.9	909.4	909.4	909.4	0.0
AJ	22,753	64	316	12.5	915.7	915.7	915.7	0.0
AK	22,948	53	363	10.8	919.0	919.0	919.0	0.0
AL	23,974	104	511	7.8	925.3	925.3	925.3	0.0
AM	24,742	204	876	4.5	934.2	934.2	934.2	0.0
AN	25,742	98	458	8.7	939.3	939.3	939.3	0.0
AO	26,420	105	633	6.3	947.3	947.3	947.3	0.0
AP	27,477	107	374	10.5	951.1	951.1	951.1	0.0
AQ	27,848	95	730	5.1	959.4	959.4	959.4	0.0
AR	28,499	90	446	7.1	963.9	963.9	963.9	0.0
AS	29,202	190	530	5.0	967.3	967.3	967.3	0.0
AT	30,391	100	269	5.8	975.9	975.9	975.9	0.0
AU	31,515	85	444	6.9	987.7	987.7	987.7	0.0
AV	32,327	74	352	8.6	994.3	994.3	994.3	0.0
AW	33,052	62	310	10.0	1,001.5	1,001.5	1,001.5	0.0
AX	34,475	96	302	10.0	1,017.2	1,017.2	1,017.2	0.0

[1]Feet above confluence with Salinas River

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	269	47	158	7.3	12.7	12.7	12.7	0.0
B	401	70	553	2.1	20.6	20.6	21.6	1.0
C	634	28	223	5.1	20.6	20.6	21.6	1.0
D	792	47	183	6.3	22.0	22.0	22.2	0.2
E	1,088	47	233	4.9	25.2	25.2	25.2	0.0
F	1,373	51	204	5.6	27.1	27.1	27.2	0.0
G	1,742	61	267	4.3	30.1	30.1	30.2	0.1
H[2]								
I[2]								

[1]Feet above Pacific Ocean

[2]Data not available

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: LITTLE CAYUCOS CREEK

Table 23: Floodway Data (continued)

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	5,523	40	249	9.6	82.4	82.4	83.4	1.0
B	6,103	140	658	3.6	88.1	88.1	88.7	0.6
C	6,494	50	235	10.2	90.2	90.2	90.3	0.1
D	6,721	80	338	7.1	95.3	95.3	96.0	0.7
E	7,054	200	897	2.7	97.8	97.8	98.6	0.8
F	7,424	50	213	11.3	100.7	100.7	101.3	0.6
G	7,582	160	837	2.9	106.5	106.5	107.2	0.7
H	7,920	70	293	8.2	108.0	108.0	108.4	0.4
I	8,078	310	1,326	1.8	111.3	111.3	112.1	0.8
J	8,459	350	477	5.0	112.9	112.9	113.2	0.3
K	9,018	270	830	2.9	118.8	118.8	119.4	0.6
L	9,282	162	346	6.9	120.3	120.3	120.6	0.3
M	9,689	60	219	10.9	130.2	130.2	130.3	0.1
N	10,359	230	756	3.2	138.3	138.3	138.6	0.3

[1]Feet above confluence with Morro Creek

Table 23: Floodway Data (continued)

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	3,062	276	1,424	7.0	72.5	72.5	73.5	1.0
B	4,435	459	3,119	3.2	76.2	76.2	77.0	0.8
C	6,178	451	1,899	5.3	87.2	87.2	88.0	0.8
D	7,286	465	2,252	4.4	94.5	94.5	95.4	0.9
E	9,082	324	1,012	6.0	106.2	106.2	106.4	0.2
F	9,805	359	1,198	10.8	111.5	111.5	112.3	0.8
G	10,291	113	743	7.7	117.5	117.5	117.5	0.0
H	11,806	136	650	8.0	131.0	131.0	131.6	0.6
I	13,765	148	652	8.0	149.7	149.7	149.8	0.1
J	15,069	61	411	12.7	164.3	164.3	164.6	0.3
K[2]	16,753	*	*	*	185.0	*	*	*
L	18,142	56	565	9.2	195.5	195.5	195.9	0.4
M	20,096	153	886	5.7	209.6	209.6	210.0	0.4
N	20,418	67	571	8.8	212.0	212.0	212.3	0.3
O	21,410	149	1,047	4.8	221.5	221.5	221.9	0.4
P	22,139	83	904	5.5	225.9	225.9	226.9	1.0
Q	24,964	182	526	9.5	247.7	247.7	248.5	0.8
R[1]	25,603	*	*	*	258.5	*	*	*
S[1]	26,727	*	*	*	262.4	*	*	*

[1]Stream distance in feet above confluence with Arroyo Grande Creek
[2]Floodway not calculated
*Data not available

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: LOS BERROS CREEK

Table 23: Floodway Data (continued)

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	16,798	299	1,053	1.2	22.9	22.9	23.1	0.2
B	17,960	405	566	2.3	27.4	27.4	27.6	0.2
C	18,495	73	252	5.2	33.9	33.9	34.1	0.2
D	19,047	75	161	7.9	36.0	36.0	36.3	0.3
E	19,144	179	1,319	1.0	39.5	39.5	40.4	0.9
F	19,795	185	281	4.6	40.2	40.2	40.9	0.7
G	20,159	58	151	5.7	43.1	43.1	43.6	0.5
H	21,576	36	160	5.8	56.9	56.9	56.9	0.0
I	21,836	111	427	2.2	59.4	59.4	59.5	0.1
J	22,308	105	367	2.5	60.1	60.1	60.3	0.2
K	22,493	245	1,645	0.6	66.6	66.6	66.8	0.2
L	23,019	54	163	5.7	68.4	68.4	68.5	0.1
M	23,526	166	283	3.3	74.5	74.5	74.5	0.0
N	24,043	204	392	2.4	80.1	80.1	80.2	0.1
O	24,864	378	256	3.7	86.6	86.6	86.6	0.0
P	25,590	167	181	5.2	96.8	96.8	96.8	0.0

[1]Feet above confluence with Arroyo Grande Creek

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: MEADOW CREEK

Table 23: Floodway Data (continued)

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	*	*	*	*	-[2]	*	*	*
B-H	*	*	*	*	*	*	*	*
I	8,506	176	1,746	6.4	67.4	67.4	67.4	0.0
J	9,240	110	972	11.5	73.1	73.1	73.1	0.0
K	10,032	100	1,172	9.6	84.7	84.7	84.8	0.1
L	10,270	109	1,051	10.7	90.0	90.0	90.1	0.1
M	11,030	199	2,372	4.7	94.2	94.2	94.2	0.0
N	11,774	100	715	15.7	104.8	104.8	104.8	0.0
O	12,313	120	1,523	7.4	113.6	113.6	114.2	0.6
P	12,545	197	3,020	3.7	114.8	114.8	115.3	0.5
Q	12,883	110	1,661	6.7	116.2	116.2	116.5	0.3
R	13,364	118	1,109	10.1	118.2	118.2	119.1	0.9
S	14,235	179	2,156	5.2	124.8	124.8	124.9	0.1
T	14,847	125	1,266	8.8	127.1	127.1	127.1	0.0
U	15,682	121	1,341	8.4	134.6	134.6	134.6	0.0
V	16,368	104	1,332	8.4	139.6	139.6	139.6	0.0

*Data not available

[1]Feet above Pacific Ocean

[2]Controlled by coastal flooding – see Flood Insurance Rate Map for regulatory base flood elevation

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: MORRO CREEK

Table 23: Floodway Data (continued)

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	40	45	170	4.5	766.1	766.1	766.1	0.0
B	195	70	110	7.0	767.3	767.3	767.5	0.2
C	752	60	110	7.0	783.4	783.4	783.4	0.0
D	812	50	200	3.8	786.8	786.8	787.8	1.0
E	1,375	50	100	7.7	804.0	804.0	804.0	0.0
F	1,473	60	110	6.9	812.0	812.0	812.4	0.4
G	1,533	70	180	4.2	813.1	813.1	813.9	0.8

[1]Feet above center line of Vine Street

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: MOUNTAIN SPRINGS CREEK

Table 23: Floodway Data (continued)

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NGVD29)[2]			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	686	425	2,320	3.4	206.5	206.5	207.5	1.0
B	1,320	415	3,791	2.1	207.5	207.5	208.5	0.8
C	2,255	170	1,087	7.4	207.5	207.5	208.3	0.8
D	2,355	140	809	9.9	208.9	208.9	209.6	0.7
E	2,508	290	4,006	2.0	215.4	215.4	216.2	0.8
F	3,326	300	4,423	1.8	215.6	215.6	216.5	0.9
G	3,511	190	2,752	2.9	215.7	215.7	216.5	0.8
H	3,775	61	681	11.8	215.8	215.8	216.5	0.7
I	4,066	110	1,279	6.3	218.3	218.3	218.6	0.3
J	4,462	230	2,871	2.8	219.1	219.1	219.7	0.6
K	4,963	310	3,534	2.0	220.0	220.0	220.7	0.7
L	5,217	340	4,125	1.7	220.1	220.1	220.8	0.7
M	5,333	280	1,965	3.7	220.1	220.1	220.8	0.7
N	5,887	300	3,003	2.4	220.9	220.9	221.8	0.9
O	6,468	440	4,348	1.7	221.2	221.2	222.1	0.9
P	6,917	720	8,497	0.8	221.3	221.3	222.2	0.9
Q	7,471	690	7,273	0.9	221.4	221.4	222.3	0.9
R	8,026	810	6,488	1.0	221.5	221.5	222.4	0.9
S	8,501	580	3,970	1.7	221.6	221.6	222.5	0.9
T	9,187	820	5,201	1.3	221.9	221.9	222.9	1.0

[1]Feet above confluence with Santa Maria River

[2]This table is provided in NGVD 29 for use with the following FIRM panels: 06079C1639F, 06079C1902F, and 06079C1906F.

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: NIPOMO CREEK

Table 23: Floodway Data (continued)

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	686	425	2,320	3.4	209.2	209.2	210.2	1.0
B	1,320	415	3,791	2.1	210.2	210.2	211.0	0.8
C	2,255	170	1,087	7.4	210.2	210.2	211.0	0.8
D	2,355	140	809	9.9	211.6	211.6	212.3	0.7
E	2,508	290	4,006	2.0	218.1	218.1	218.9	0.8
F	3,326	300	4,423	1.8	218.3	218.3	219.2	0.9
G	3,511	190	2,752	2.9	218.4	218.4	219.2	0.8
H	3,775	61	681	11.8	218.5	218.5	219.2	0.7
I	4,066	110	1,279	6.3	221.0	221.0	221.3	0.3
J	4,462	230	2,871	2.8	221.8	221.8	222.4	0.6
K	4,963	310	3,534	2.0	222.7	222.7	223.4	0.7
L	5,217	340	4,125	1.7	222.8	222.8	223.5	0.7
M	5,333	280	1,965	3.7	222.8	222.8	223.5	0.7
N	5,887	300	3,003	2.4	223.6	223.6	224.5	0.9
O	6,468	440	4,348	1.7	223.9	223.9	224.8	0.9
P	6,917	720	8,497	0.8	224.0	224.0	224.9	0.9
Q	7,471	690	7,273	0.9	224.1	224.1	225.0	0.9
R	8,026	810	6,488	1.0	224.2	224.2	225.1	0.9
S	8,501	580	3,970	1.7	224.3	224.3	225.2	0.9
T	9,187	820	5,201	1.3	224.6	224.6	225.6	1.0
U	23,971	120	1,021	5.8	290.0	290.0	291.0	1.0
V	24,367	75	435	13.6	292.5	292.5	292.6	0.1
W	24,816	95	849	7.0	298.5	298.5	298.5	0.0

[1]Feet above confluence with Santa Maria River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: NIPOMO CREEK

Table 23: Floodway Data (continued)

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	25,302	81	554	10.7	301.6	301.6	301.6	0.0
Y	25,529	55	513	11.5	305.9	305.9	306.2	0.3
Z	25,819	120	1,007	5.9	309.5	309.5	310.1	0.6
AA	26,136	95	972	6.1	310.8	310.8	311.2	0.4
AB	26,252	95	934	6.3	311.1	311.1	311.7	0.6
AC	26,690	163	1,579	3.7	314.1	314.1	315.0	0.9
AD	27,034	140	1,329	4.7	314.8	314.8	315.6	0.8
AE	27,245	230	2,730	1.1	315.3	315.3	316.2	0.9
AF	27,984	528	3,936	0.5	315.3	315.3	316.3	1.0
AG	28,380	230	1,489	1.3	315.3	315.3	316.3	1.0
AH	29,251	125	533	3.6	316.6	316.6	317.3	0.7
AI	30,360	200	581	3.3	321.8	321.8	321.8	0.0
AJ	30,994	190	668	2.8	324.1	324.1	324.2	0.1

[1]Feet above confluence with Santa Maria River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: NIPOMO CREEK

Table 23: Floodway Data (continued)

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	895	90	187	3.7	884.8	884.8	885.8	1.0
B	1,708	58	143	4.7	888.6	888.6	889.3	0.7
C	2,400	75	196	3.5	895.4	895.4	896.3	0.9
D	2,949	285	1,720	0.4	901.2	901.2	901.7	0.5
E	3,446	42	138	4.8	901.4	901.4	901.9	0.5
F	4,062	58	277	2.5	908.1	908.1	908.2	0.1
G	4,510	63	224	3.0	908.1	908.1	908.5	0.4
H	5,053	74	164	4.1	908.5	908.5	909.5	1.0

[1]Feet above confluence with Paloma Creek

Table 23: Floodway Data (continued)

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	100	90	354	6.4	872.0	869.6[2]	869.6	0.0
B	719	36	284	7.9	873.5	873.5	873.5	0.0
C	965	50	454	5.0	881.7	881.7	881.7	0.0
D	1,859	185	678	3.4	881.7	881.7	882.1	0.4
E	2,660	60	330	6.9	883.7	883.7	883.9	0.2
F	3,276	40	194	7.8	885.2	885.2	885.8	0.6
G	3,838	42	190	8.2	888.4	888.4	888.5	0.1
H	4,402	37	152	9.7	891.3	891.3	891.4	0.1
I	5,068	38	204	7.4	896.8	896.8	897.0	0.2
J	5,389	47	219	7.0	898.3	898.3	898.6	0.3
K	5,671	76	368	4.2	899.5	899.5	899.7	0.2
L	5,935	106	583	2.7	904.3	904.3	904.4	0.1
M	6,706	125	588	2.6	904.6	905.4	905.7	0.3
N	7,256	50	178	8.7	905.4	905.4	905.7	0.3
O	8,507	69	342	4.5	910.0	910.0	910.9	0.9
P	9,660	46	391	3.9	918.2	918.2	918.3	0.1
Q	10,435	61	371	4.2	918.1	918.1	918.6	0.5
R	10,989	37	85	8.4	918.9	918.9	919.0	0.1
S	11,275	70	233	3.2	921.6	921.6	921.8	0.2
T	12,067	56	136	5.4	926.5	926.5	927.0	0.5
U	12,791	126	124	4.4	931.7	931.7	931.7	0.0
V	13,588	76	95	5.7	939.4	939.4	939.7	0.3
W	14,353	30	67	8.1	950.2	950.2	950.2	0.0
X	15,200	37	72	7.1	959.9	959.9	959.9	0.0

[1]Feet above confluence with Salinas River

[2]Elevation computed without consideration of backwater effects from Salinas River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: PALOMA 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	60	35	90	4.4	750.9	750.9	750.9	0.0
B	144	30	120	3.3	751.0	751.0	751.0	0.0
C	598	70	90	4.4	756.8	756.8	757.0	0.2
D	723	50	70	5.7	760.0	760.0	760.0	0.0
E	899	75	1,140	0.4	783.5	783.5	783.5	0.0
F	1,185	35	500	0.8	783.5	783.5	783.5	0.0

[1]Feet above center line of Spring Street

Table 23: Floodway Data (continued)

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	2,772	506	8,066	1.8	33.9	33.9	34.5	0.6
B	3,432	432	6,836	2.2	33.9	33.9	34.5	0.6
C	4,250	144	2,401	6.1	34.8	34.8	35.5	0.7
D	4,731	748	8,592	1.7	35.9	35.9	36.5	0.6
E	5,755	566	5,499	2.7	36.2	36.2	36.8	0.6
F	6,547	504	3,780	3.9	37.1	37.1	37.8	0.7
G	7,339	364	2,191	6.7	39.6	39.6	40.5	0.9

[1]Feet above Pacific Ocean

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: PISMO CREEK

Table 23: Floodway Data (continued)

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	634,853	575	5,622	7.6	675.7	675.7	676.1	0.5
B	635,864	464	5,841	7.4	678.0	678.0	678.7	0.3
C	636,894	428	5,264	8.2	680.1	680.1	681.0	0.9
D	637,915	486	5,887	7.3	682.8	682.8	683.7	0.9
E	637,915	486	5,887	7.3	682.8	682.8	683.7	0.9
F	640,022	612	7,162	6.0	686.1	686.1	686.9	0.8
G	641,032	691	9,310	4.6	687.9	687.9	688.4	0.5
H	642,121	679	8,165	5.3	689.2	689.2	689.9	0.7
I	643,287	542	6,796	6.3	691.1	691.1	691.3	0.2
J	644,867	463	6,656	6.6	694.1	694.1	694.2	0.1
K	646,192	488	7,187	5.8	696.8	696.8	697.5	0.7
L	647,232	909	11,493	3.7	698.1	698.1	698.8	0.7
M	648,377	868	8,578	4.9	699.1	699.1	699.7	0.6
N	649,465	782	7,416	5.7	700.7	700.7	701.6	0.9
O	650,707	765	7,944	5.3	703.1	703.1	704.0	0.9
P	652,714	605	6,973	6.0	707.3	707.3	708.2	0.9
Q	654,878	628	6,889	6.1	711.2	711.2	711.7	0.5
R	657,043	1,401	9,514	4.4	715.3	715.3	715.9	0.6
S	658,997	1,360	8,196	5.1	717.9	717.9	718.6	0.7
T	661,214	1,417	11,694	3.6	721.4	721.4	722.2	0.8
U	663,326	1,129	9,090	4.6	724.1	724.1	725.0	0.9
V	665,544	739	6,517	6.4	729.6	729.6	729.8	0.2
W	668,131	1,069	8,111	5.2	735.0	735.0	735.8	0.8
X	670,138	1,063	9,666	4.3	738.4	738.4	739.3	0.9
Y	672,197	761	6,214	6.8	741.3	741.3	742.1	0.8
Z	673,147	773	7,917	5.3	743.7	743.7	744.5	0.8

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SALINAS RIVER

Table 23: Floodway Data (continued)

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
AA	675,206	1,044	10,595	4.0	746.8	746.8	747.2	0.4
AB	677,477	956	8,871	4.7	750.7	750.7	750.9	0.2
AC	679,536	677	6,314	6.6	755.8	755.8	756.1	0.3
AD	681,437	565	7,228	5.8	759.6	759.6	760.3	0.7
AE	682,334	499	5,627	7.5	761.3	761.3	761.9	0.6
AF	684,288	588	7,265	5.8	766.8	766.8	767.3	0.5
AG	686,347	760	8,918	4.7	770.1	770.1	771.1	1.0
AH	688,090	779	8,499	4.9	773.1	773.1	773.7	0.6
AI	689,832	685	5,727	5.9	776.0	776.0	776.4	0.4
AJ	691,944	923	6,900	4.9	780.9	780.9	781.2	0.3
AK	694,056	612	5,182	6.4	787.7	787.7	787.9	0.2
AL	696,432	1,325	9,468	3.4	792.9	792.9	793.0	0.1
AM	698,597	1,408	8,305	3.7	797.1	797.1	797.2	0.1
AN	700,498	1,107	6,762	4.5	801.1	801.1	802.0	0.9
AO	702,451	946	6,472	4.7	808.0	808.0	808.9	0.9
AP	704,299	852	6,310	4.7	814.1	814.1	814.4	0.3
AQ	705,989	664	5,661	5.2	817.7	817.7	818.2	0.5
AR	708,048	932	5,965	4.9	821.0	821.0	821.4	0.4
AS	709,685	590	4,521	6.2	826.4	826.4	826.4	0.0
AT	712,114	358	4,118	6.8	834.2	834.2	834.5	0.3
AU	713,856	224	2,910	9.6	841.3	841.3	841.6	0.3
AV	716,179	505	4,940	5.4	845.7	845.7	846.1	0.4
AW	718,661	1,810	8,443	3.1	849.9	849.9	850.0	0.1
AX	721,776	390	3,932	5.9	861.7	861.7	861.7	0.0
AY	724,099	1,267	7,793	3.0	865.6	865.6	865.6	0.0
AZ	726,211	1,356	7,241	3.1	869.0	869.0	869.0	0.0

[1]Feet above confluence with Pacific Ocean

Table 23: Floodway Data (continued)

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
BA	728,534	764	4,959	4.5	874.1	874.1	874.1	0.0
BB	730,805	783	4,775	4.4	880.4	880.4	880.5	0.1
BC	733,286	806	5,583	3.8	885.6	885.6	885.8	0.2
BD	736,190	639	4,775	4.4	892.7	892.7	892.8	0.1
BE	738,197	490	4,289	4.9	898.0	898.0	898.0	0.0

[1]Feet above confluence with Pacific Ocean

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SALINAS RIVER

Table 23: Floodway Data (continued)

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 – U[2]	*	*	*	*	*	*	*	*
V	140,472	1,521	14,642	6.5	583.6	583.6	584.4	0.8
W	147,033	892	13,902	6.3	599.3	599.3	599.8	0.5
X	148,750	1,117	18,143	4.8	600.5	600.5	601.1	0.6
Y	153,733	1,267	14,433	6.1	604.4	604.4	604.8	0.4
Z	156,346	891	12,738	6.9	608.8	608.8	609.2	0.4
AA	167,589	1,045	7,260	7.5	624.5	624.5	625.1	0.6
AB	171,754	804	7,891	6.9	631.3	631.3	631.7	0.4
AC	178,057	1,655	9,761	5.6	639.8	639.8	640.5	0.7
AD	180,250	2,073	17,342	3.2	645.0	645.0	645.2	0.2
AE	188,764	848	8,187	4.9	661.5	661.5	662.4	0.9

[1] Distances are measure in feet approximately 4.5 miles downstream of Cattleman Road
[2] XS A – U are located in Monterey County, CA. For more information, reference the Monterey County, CA FIS Report

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SALINAS RIVER REACH 1

Table 23: Floodway Data (continued)

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	143	426	3,148	7	13.4	13.4	14.4	1.0
B	2,154	295	3,690	6	15.5	15.5	16.2	0.7
C	2,640	363	3,946	5.6	16.0	16.0	16.0	0.0
D	3,890	606	5,995	3.7	17.6	17.6	18.1	0.5
E	5,240	348	3,757	5.9	18.7	18.7	19.3	0.6
F	8,904	553	6,410	3.5	30.2	30.2	30.7	0.5
G	11,853	778	11,330	2	32.7	32.7	33.3	0.6
H	13,216	680	8,074	2.7	33.2	33.2	33.8	0.6
I	13,847	886	5,300	4.2	34.2	34.2	34.7	0.5
J	14,484	703	7,831	2.8	37.4	37.4	37.9	0.5
K	15,322	1,014	11,032	2.5	39.2	39.2	39.9	0.7
L	17,368	1,314	7,653	3.1	39.9	39.9	40.5	0.6
M	18,759	*	*	*	42.4	*	*	*
N	19,488	*	*	*	47.6	*	*	*
O	23,407	*	*	*	56.3	*	*	*
P	25,770	*	*	*	63.9	*	*	*
Q	27,317	*	*	*	71.0	*	*	*
R	31,129	*	*	*	76.9	*	*	*
S	33,822	*	*	*	88.8	*	*	*
T	34,978	*	*	*	91.7	*	*	*
U	36,694	*	*	*	95.0	*	*	*
V	37,625	*	*	*	97.2	*	*	*

[1]Feet above Pacific Ocean

*Floodway data not calculated for this cross section

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SAN LUIS OBISPO CREEK SOUTH

Table 23: Floodway Data (continued)

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
D	38,016	241	3,231	4.1	101.7	101.7	102.5	0.8
E	38,886	144	1,492	9.0	104.3	104.3	104.6	0.3
F	40,128	206	2,020	6.6	111.9	111.9	112.0	0.1
G	41,184	183	1,740	7.7	114.9	114.9	114.9	0.0
H	42,082	163	1,564	8.6	118.5	118.5	118.5	0.0
I	42,768	192	1,923	7.0	121.3	121.3	121.3	0.0
J	43,718	80	804	16.7	126.8	126.8	126.9	0.1
K – AO*								

[1]Feet above mouth
*Data not available

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SAN LUIS OBISPO CREEK

Table 23: Floodway Data (continued)

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	545	142	1,227	11.2	896.6	896.3[2]	896.7	0.4
B	1,745	195	1,541	9.0	902.0	902.0	902.0	0.0
C	3,503	119	1,552	8.8	911.8	911.8	912.3	0.5
D	4,030	189	2,344	4.1	913.8	913.8	914.2	0.4
E	5,458	88	751	12.4	921.9	921.9	921.9	0.0
F	6,545	133	919	10.2	930.8	930.8	930.8	0.0
G	7,717	148	1,535	6.1	939.7	939.7	939.7	0.0
H	9,021	108	1,027	9.1	943.6	943.6	943.7	0.1
I	10,083	91	783	11.8	947.6	947.6	947.6	0.0
J	11,333	141	1,320	5.4	953.9	953.9	954.8	0.9
K	12,469	104	703	10.0	956.5	956.5	956.8	0.3
L	13,459	136	1,333	5.5	965.4	965.4	965.4	0.0
M	21,799	224	733	7.5	1,003.8	1,003.8	1,004.1	0.3
N	22,195	267	792	6.9	1,005.2	1,005.2	1,005.3	0.1
O	22,818	143	650	8.4	1,005.4	1,005.4	1,006.3	0.9
P	24,091	101	526	10.2	1,011.0	1,011.0	1,011.2	0.2
Q	24,973	117	624	8.6	1,015.3	1,015.3	1,015.3	0.0

[1]Feet above confluence with Salinas River

[2] Elevation computed without consideration of backwater effects from Salinas River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SANTA MARGARITA CREEK

Table 23: Floodway Data (continued)

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	1,536	300	1,512	11.9	14.1	14.1	14.1	0.0
B	2,191	350	2,737	6.6	16.9	16.9	17.9	1.0
C	2,666	201	1,357	13.3	18.1	18.1	18.1	0.0
D	3,168	265	1,587	11.3	21.3	21.3	21.3	0.0
E	3,353	338	2,532	6.0	24.3	24.3	24.3	0.0
F	3,865	250	1,999	7.7	25.6	25.6	25.6	0.0
G	4,467	237	1,622	9.4	27.9	27.9	27.9	0.0
H	4,974	236	1,845	8.3	31.1	31.1	31.1	0.0
I	5,449	245	2,082	7.3	33.4	33.4	33.4	0.0
J	5,940	512	3,433	3.8	34.7	34.7	34.7	0.0
K	6,574	389	2,355	5.5	35.5	35.5	35.5	0.0
L	7,080	220	1,596	8.1	36.5	36.5	36.5	0.0
M	7,593	400	4,069	4.4	40.7	40.7	41.4	0.7
N	7,968	505	3,634	5.0	41.2	41.2	42.1	0.9
O	8,564	340	3,493	5.2	42.4	42.4	43.4	1.0
P	9,071	201	1,231	14.6	43.9	43.9	43.9	0.0
Q	9,504	350	3,092	5.8	47.8	47.8	48.8	1.0
R	9,926	160	1,934	9.3	49.2	49.2	50.1	0.9
S	10,307	175	2,453	7.3	50.6	50.6	51.6	1.0
T	10,676	124	1,683	10.7	51.2	51.2	52.1	0.9
U	11,088	115	1,540	11.7	53.3	53.3	54.0	0.7
V	11,906	90	1,564	11.5	59.3	59.3	59.3	0.0
W	12,302	145	2,049	8.8	60.7	60.7	61.3	0.6
X	12,672	155	2,064	8.7	61.5	61.5	62.5	1.0
Y	13,174	275	3,060	5.9	63.9	63.9	64.8	0.9
Z	13,781	224	2,246	8.0	65.3	65.3	65.9	0.6

[1]Feet above Pacific Ocean

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SANTA ROSA 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
AA	14,177	218	2,590	6.9	66.9	66.9	67.3	0.4
AB	14,516	80	1,416	12.7	67.3	67.3	67.3	0.0
AC	14,942	215	3,825	4.7	72.0	72.0	73.0	1.0
AD	15,418	274	4,073	4.4	72.5	72.5	73.5	1.0
AE	15,956	255	2,973	6.1	72.9	72.9	73.9	1.0
AF	16,400	228	3,391	5.3	73.7	73.7	74.5	0.8
AG	16,658	229	3,448	5.2	74.0	74.0	74.8	0.8
AH	17,350	229	3,448	5.2	74.0	74.0	74.8	0.8
AI	17,905	128	1,241	14.5	77.8	77.8	78.8	1.0
AJ	18,464	172	1,804	10.0	85.3	85.3	85.3	0.0
AK	18,929	184	2,318	7.8	87.5	87.5	87.5	0.0
AL	19,209	115	1,951	9.2	87.8	87.8	87.9	0.1
AM	19,483	111	1,036	17.4	92.1	92.1	92.1	0.0
AN	20,117	162	1,824	9.9	100.7	100.7	100.7	0.0

[1]Feet above Pacific Ocean

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SANTA ROSA CREEK

Table 23: Floodway Data (continued)

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	927	42	90	3.6	799.5	799.5	799.5	0.0
B	1,536	40	82	3.9	811.1	811.1	811.1	0.0

[1]Feet above confluence with Toad Creek

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SOUTH BRANCH TOAD CREEK

Table 23: Floodway Data (continued)

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	350	35	60	5.3	773.8	773.8	774.1	0.3
B	1,040	45	120	2.7	778.6	778.6	779.3	0.7
C	1,040	45	120	2.7	778.6	778.6	779.3	0.7
D	2,850	15	30	7.7	789.6	789.6	789.6	0.0

[1]Feet above confluence with Unnamed Creek No. 1

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: SOUTH BRANCH UNNAMED CREEK NO. 1

Table 23: Floodway Data (continued)

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	100	54	190	10.1	740.7	735.1[2]	735.0	0.0
B	655	50	180	10.6	740.7	739.1[2]	739.0	0.1
C	1,705	77	296	6.5	784.1	784.1	784.6	0.5
D	2,276	95	408	6.4	753.1	753.1	753.1	0.0
E	*	*	*	*	*	*	*	*
F	*	*	*	*	*	*	*	*
G	5,217	122	210	3.1	761.1	761.1	761.4	0.3
H	6,104	86	150	4.4	766.1	766.1	766.1	0.0
I	7,048	60	150	4.4	770.6	770.6	770.8	0.2
J	7,773	59	300	2.2	777.6	777.6	777.8	0.2
K	8,509	30	130	5.1	779.1	779.1	779.8	0.7
L	9,206	53	160	4.1	784.6	784.6	784.9	0.3
M	10,181	52	230	2.9	792.5	792.5	792.6	0.1
N	10,381	73	320	2.1	792.7	792.7	792.9	0.2
O	11,097	19	41	8.4	796.1	796.1	796.1	0.0

[1]Feet above confluence with Salinas River

[2]Elevation computed without consideration of backwater effects from Salinas River

*Data not available

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: TOAD CREEK (MAIN AND NORTH BRANCH)

Table 23: Floodway Data (continued)

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	1,850	37	206	4.6	724.8	724.8	725.8	1.0
B	2,205	46	255	3.7	725.9	725.9	726.5	0.6
C	3,285	30	100	9.6	740.8	740.8	740.8	0.0
D	4,375	50	190	5.1	751.0	751.0	751.0	0.0
E	5,334	40	230	4.2	756.0	756.0	756.1	0.1
F	6,401	35	130	7.4	758.9	758.9	759.8	0.9
G	7,418	45	160	6.0	763.1	763.1	763.9	0.8
H	8,308	50	170	5.6	767.3	767.3	767.8	0.5
I	9,048	65	190	5.1	771.1	771.1	771.2	0.1
J	10,038	30	150	4.5	775.5	775.5	775.7	0.2
K	10,968	65	230	2.9	779.7	779.7	779.7	0.0
L	11,728	50	170	3.9	785.6	785.6	785.6	0.0
M	12,753	35	80	8.4	791.1	791.1	791.1	0.0
N	13,198	30	130	5.2	796.2	796.2	796.5	0.3
O	13,353	85	260	2.5	801.1	801.1	801.8	0.7
P	14,190	75	230	2.3	801.2	801.2	802.1	0.9
Q	15,005	75	140	3.7	804.2	804.2	804.3	0.1
R	15,725	40	140	3.7	807.0	807.0	807.1	0.1
S	16,370	80	310	1.7	808.0	808.0	808.2	0.2
T	16,700	60	270	1.8	811.0	811.0	811.3	0.3
U	17,736	50	210	2.3	811.2	811.2	811.5	0.3
V	18,750	20	80	5.8	815.9	815.9	816.8	0.9
W	19,445	30	120	3.9	820.0	820.0	820.4	0.4
X	20,641	30	80	5.8	823.7	823.7	823.9	0.2
Y	21,466	86	90	4.9	828.4	828.4	828.4	0.0
Z	22,271	101	85	5.2	831.1	831.1	831.1	0.0

[1]Feet above confluence with Salinas River

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: UNNAMED CREEK NO. 1

Table 23: Floodway Data (continued)

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	792	111	1,049	2.1	38.6	38.6	39.4	0.8
B	950	75	538	4.1	38.7	38.7	39.4	0.7
C	1,109	70	526	4.2	39.0	39.0	39.8	0.8
D	1,320	39	179	12.3	40.4	40.4	40.4	0.0
E	1,573	66	453	4.9	45.0	45.0	45.0	0.0

[1]Feet above confluence with Pacific Ocean

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: WILLOW CREEK

Table 23: Floodway Data (continued)

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	6,241	170	364	6.9	993.8	993.8	994.0	0.2
B	6,923	155	582	4.4	997.2	997.2	997.8	0.6
C	7,083	152	1,298	2.0	1,000.9	1,000.9	1,001.6	0.7
D	*	*	*	*	*	*	*	*
E	*	*	*	*	*	*	*	*
F	9,608	49	197	10.3	1,010.1	1,010.1	1,010.1	0.0
G	10,536	59	222	8.9	1,014.6	1,014.6	1,014.6	0.0
H	11,626	77	301	6.8	1,021.3	1,021.3	1,021.3	0.0
I	12,076	63	266	7.6	1,022.9	1,022.9	1,023.0	0.1
A	6,241	170	364	6.9	993.8	993.8	994.0	0.2
B	6,923	155	582	4.4	997.2	997.2	997.8	0.6
C	7,083	152	1,298	2.0	1,000.9	1,000.9	1,001.6	0.7

[1]Feet above confluence with Santa Margarita Creek

*Data not available

TABLE 23

FEDERAL EMERGENCY MANAGEMENT AGENCY

SAN LUIS OBISPO COUNTY, CALIFORNIA

AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: YERBA BUENA CREEK

Table 24: 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 on each transect based on the results from the onshore wave hazard analyses. Between transects, elevations were interpolated using topographic maps, land-use and land-cover data, and knowledge of coastal flood processes to determine the aerial extent of flooding. Sources for topographic data are shown in Table 22.

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-percent-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 2-percent wave runup elevation.

- The *wave overtopping splash zone* is the area landward of the crest of an overtopped barrier, in cases where the potential 2-percent wave runup exceeds the barrier crest elevation by 3.0 feet or more.

- 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 ft^3/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 25 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 25: Summary of Coastal Transect Mapping Considerations

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD 88)	Zone Designation and BFE (ft NAVD 88)		
1		VE 22	N/A	Runup	Runup
2		VE 20	N/A	Overtopping	Overtopping
3		VE 23	N/A	Runup	Runup
4		VE 16	N/A	Runup	Runup
5		VE 17	N/A	Runup	Runup
6		VE 22	N/A	Runup	Runup
7		VE 38	N/A	Overtopping	Overtopping
8		VE 21	N/A	Runup	Runup
9		VE 31	N/A	Overtopping	Overtopping
10		VE 20	N/A	Overtopping	Overtopping
11		VE 18	N/A	Runup	Runup
12		VE 37	N/A	Runup	Runup
13		VE 17	N/A	Runup	Runup
14		VE 17	N/A	Overtopping	Overtopping
15		VE 21	N/A	Runup	Runup
16		VE 15	N/A	Runup	Runup
17		VE 37	N/A	Overtopping	Overtopping
18		VE 20	N/A	Runup	Runup
19		VE 24	N/A	Overtopping	Overtopping
20		VE 19	N/A	Runup	Runup
21		VE 20	N/A	Runup	Runup
22		VE 18	N/A	Runup	Runup
23		VE 20	N/A	Runup	Runup
24		VE 29	N/A	Overtopping	Overtopping
25		VE 24	N/A	Overtopping	Overtopping
26		VE 18	N/A	Runup	Runup
27		VE 23	N/A	Runup	Runup
28		VE 19	N/A	Runup	Runup
29		VE 29	N/A	Overtopping	Overtopping
30		VE 26	N/A	Overtopping	Overtopping

Table 25: Summary of Coastal Transect Mapping Considerations (continued)

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis: Zone Designation and BFE (ft NAVD88)	Wave Height Analysis: Zone Designation and BFE (ft NAVD88)	Zone VE Limit	SFHA Boundary
31		VE 24	N/A	Runup	Runup
32		VE 15	N/A	Overtopping	Overtopping
33		VE 15	N/A	Overtopping	Overtopping
34		VE 17	N/A	Runup	Runup
35		VE 19	N/A	Runup	Runup
36		VE 17	N/A	Runup	Runup
37		VE 18	N/A	Runup	Runup
38		VE 17	N/A	Runup	Runup
39		VE 19	N/A	Runup	Runup
40	✓	VE 14	N/A	PFD	PFD
41	✓	VE 15	N/A	PFD	PFD
42	✓	VE 16	N/A	PFD	PFD
43	✓	VE 22	N/A	PFD	PFD
44	✓	VE 26	N/A	PFD	PFD
45	✓	VE 23	N/A	PFD	PFD
46		VE 17	N/A	Runup	Runup
47		VE 26	N/A	Runup	Runup
48		VE 22	N/A	Runup	Runup
49		VE 23	N/A	Runup	Runup
50		VE 39	N/A	Runup	Runup
51		VE 22	N/A	Overtopping	Overtopping
52		VE 19	N/A	Runup	Runup
53		VE 10	N/A	Runup	Runup
54		VE 28	N/A	Overtopping	Overtopping
55		VE 14	N/A	Runup	Runup
56		VE 22	N/A	Runup	Runup
57		VE 15	N/A	Overtopping	Overtopping
58		VE 16	N/A	Runup	Runup
59		VE 17	N/A	Runup	Runup

Table 25: Summary of Coastal Transect Mapping Considerations (continued)

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD 88)	Zone Designation and BFE (ft NAVD 88)		
60		VE 33	N/A	Runup	Runup
61		VE 25	N/A	Runup	Runup
62		VE 19	N/A	Runup	Runup
63		VE 18	N/A	Overtopping	Overtopping
64		VE 17	N/A	Runup	Runup
65		VE 27	N/A	Runup	Runup
66		VE 21	N/A	Runup	Runup
67		VE 14	N/A	Runup	Runup
68		VE 14	N/A	Runup	Runup
69		VE 19	N/A	Overtopping	Overtopping
70		VE 15	N/A	Runup	Runup
71		VE 14	N/A	Runup	Runup
72	✓	VE 15	N/A	PFD	PFD
73	✓	VE 14	N/A	PFD	PFD
74	✓	VE 15	N/A	PFD	PFD
75	✓	VE 16	N/A	PFD	PFD
76		VE 15	N/A	Runup	Runup
77		VE 25	N/A	Overtopping	Overtopping
78		VE 23	N/A	Runup	Runup
79		VE 20	N/A	Runup	Runup
80		VE 12	N/A	Runup	Runup
81		N/A	AE 9-10	WHAFIS	WHAFIS
82		VE 12	N/A	Runup	Runup
83		N/A	AE 9-10	WHAFIS	WHAFIS

6.5 FIRM Revisions

This FIS Report and the FIRM are based on the most up-to-date information available to FEMA at the time of its publication; however, flood hazard conditions change over time. Communities or private parties may request flood map revisions at any time. Certain types of requests require submission of supporting data. FEMA may also initiate a revision. Revisions may take several forms, including Letters of Map Amendment (LOMAs), Letters of Map Revision Based on Fill (LOMR-Fs), Letters of Map Revision (LOMRs) (referred to collectively as Letters of Map Change (LOMCs)), Physical Map Revisions (PMRs), and FEMA-contracted restudies. These types of revisions are further described below. Some

of these types of revisions do not result in the republishing of the FIS Report. To assure that any user is aware of all revisions, it is advisable to contact the community repository of flood-hazard data (shown in Table 30, "Map Repositories").

6.5.1 Letters of Map Amendment

A LOMA is an official revision by letter to an effective NFIP map. A LOMA results from an administrative process that involves the review of scientific or technical data submitted by the owner or lessee of property who believes the property has incorrectly been included in a designated SFHA. A LOMA amends the currently effective FEMA map and establishes that a specific property is not located in a SFHA**.** A LOMA cannot be issued for properties located on the PFD (primary frontal dune).

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

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

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

6.5.2 Letters of Map Revision Based on Fill

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

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

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

6.5.3 Letters of Map Revision

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

To obtain an application for a LOMR, visit www.fema.gov/media-library/assets/documents/1343 and download the form "MT-2 Application Forms and Instructions for Conditional Letters of Map Revision and Letters of Map Revision". Visit the "Flood Map-Related Fees" section to determine the cost of applying for a LOMR. For more information

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

Previously issued mappable LOMCs (including LOMRs) that have been incorporated into the San Luis Obispo County FIRM are listed in Table 26. 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 26: Incorporated Letters of Map Change

Case Number	Effective Date	Flooding Source	FIRM Panel(s)
22-09-1729P	10/2/2023	Highway 101 Tributary Creek	06079C1363J 06079C1364G[1]

[1] Although a portion of LOMR 22-09-1729P falls within the scope of this map revision, panel 06079C1364G was not revised. Therefore, users must continue to refer to the annotated FIRM attachment for this LOMR for FIRM panel 06079C1364G.

6.5.4 Physical Map Revisions

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

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

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

6.5.5 Contracted Restudies

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

6.5.6 Community Map History

The current FIRM presents flooding information for the entire geographic area of San Luis Obispo 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 27, "Community Map History." A description of each of the column headings and the source of the date is also listed below.

- *Community Name* includes communities falling within the geographic area shown on the FIRM, including those that fall on the boundary line, nonparticipating communities, and communities with maps that have been rescinded. Communities with No Special Flood Hazards are indicated by a footnote. If all maps (FHBM, FBFM, and FIRM) were rescinded for a community, it is not listed in this table unless SFHAs have been identified in this community.

- *Initial Identification Date (First NFIP Map Published)* is the date of the first NFIP map that identified flood hazards in the community. If the FHBM has been converted to a FIRM, the initial FHBM date is shown. If the community has never been mapped, the upcoming effective date or "pending" (for Preliminary FIS Reports) is shown. If the community is listed in Table 27 but not identified on the map, the community is treated as if it were unmapped.

- *Initial FHBM Effective Date* is the effective date of the first FHBM. This date may be the same date as the Initial NFIP Map Date.

- *FHBM Revision Date(s)* is the date(s) that the FHBM was revised, if applicable.

- *Initial FIRM Effective Date* is the date of the first effective FIRM for the community.

- *FIRM Revision Date(s)* is the date(s) the FIRM was revised, if applicable. This is the revised date that is shown on the FIRM panel, if applicable. As countywide studies are completed or revised, each community listed should have its FIRM dates updated accordingly to reflect the date of the countywide study. Once the FIRMs exist in countywide format, as PMRs of FIRM panels within the county are completed, the FIRM Revision Dates in the table for each community affected by the PMR are updated with the date of the PMR, even if the PMR did not revise all the panels within that community.

The initial effective date for the San Luis Obispo County FIRMs in countywide format was 08/28/2008.

Table 27: Community Map History

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Arroyo Grande, City of	06/07/1974	06/07/1974	02/06/1979 10/10/1975	09/19/1984	06/06/2024 05/16/2017 11/16/2012 08/28/2008
Atascadero, City of	09/16/1980	09/16/1980	N/A	01/20/1982	11/16/2012 08/28/2008
El Paso de Robles, City of	02/15/1974	02/15/1974	07/23/1976	09/16/1981	06/06/2024 11/16/2012 08/28/2008
Grover Beach, City of	06/21/1974	06/21/1974	09/26/1975	08/01/1984	06/06/2024 05/16/2017 11/16/2012 08/28/2008 11/05/1997
Morro Bay, City of	05/31/1974	05/31/1974	12/05/1975	12/18/1979	05/16/2017 11/16/2012 8/28/2008 11/01/1985
Pismo Beach, City of	03/26/1976	03/26/1976	N/A	08/01/1984	06/06/2024 05/16/2017 11/16/2012 08/28/2008 11/05/1997
San Luis Obispo, City of	10/26/1973	10/26/1973	05/21/1976	04/16/1979	06/06/2024 05/16/2017 11/16/2012 08/28/2008 07/07/1981
San Luis Obispo County, Unincorporated Areas	01/03/1975	01/03/1975	11/22/1977	07/05/1982	06/06/2024 05/16/2017 11/16/2012 08/28/2008 02/04/2004 06/03/1991 07/18/1985

SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION

7.1 Contracted Studies

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

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Alamo Creek	07/05/1982	George S. Nolte and Associates for FEMA	H-4722	December 1979	San Luis Obispo County, Unincorporated Areas
Anderson Canyon Creek	07/05/1982	George S. Nolte and Associates for FEMA	H-4722	December 1979	San Luis Obispo County, Unincorporated Areas
Arroyo Grande Creek	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	Arroyo Grande, City of; San Luis Obispo County, Unincorporated Areas
Atascadero Creek	07/20/1981	George S. Nolte and Associates	H-4722	December 1979	Atascadero, City of
Brizziolari Creek	10/1978	USACE, LosAngeles District, California	IAA-H-74 and IAA-H- 16-75, Project Order No.s 13 and 22	June 1977	San Luis Obispo, City of; San Luis Obispo County, Unincorporated Areas
Canyon Creek No. 1	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	Arroyo Grande, City of; San Luis Obispo County, Unincorporated Areas
Canyon Creek No. 1	03/19/1984	USACE	IAA-H-10- 77	January 1983	Arroyo Grande, City of; San Luis Obispo County, Unincorporated Areas
Canyon Creek No. 2	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	Arroyo Grande, City of; San Luis Obispo County, Unincorporated Areas
Canyon Creek No. 2	03/19/1984	USACE	IAA-H-10- 77	January 1983	Arroyo Grande, City of; San Luis Obispo County, Unincorporated Areas
Carpenter Canyon Creek	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	Arroyo Grande, City of; San Luis Obispo County, Unincorporated Areas

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Cayucos Creek	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	San Luis Obispo County, Unincorporated Areas
Chorro Creek	12/18/1979	U.S.Geological Survey	IAA-H-17-75 and IAA- H-8-76, Project Order No.s 8 and 13	June 1977	Morro Bay, City of; San Luis Obispo County, Unincorporated Areas
Corbett Canyon Creek	03/19/1984	USACE	IAA-H-10- 77	January 1983	Arroyo Grande, City of; San Luis Obispo County, Unincorporated Areas
Corbett Canyon Creek	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	Arroyo Grande, City of; San Luis Obispo County, Unincorporated Areas
Davenport Creek	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas
Davis Canyon Creek	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas
Deleissigues Creek	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	San Luis Obispo County, Unincorporated Areas
Dry Creek	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	El Paso De Robles, City of; San Luis Obispo County, Unincorporated Areas
Dry Creek	07/05/1982	George S. Nolte and Associates	H-4722	December 1979	El Paso de Robles, City of; San Luis Obispo County, Unincorporated Areas
East Branch Huerhuero Creek	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
East Branch San Luis Obispo Creek	06/06/2024	Schaaf & Wheeler	HSFE60-15-D-0005	March 2023	San Luis Obispo County, Unincorporated Areas
East Branch San Luis Obispo Creek	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas
East Fork Meadow Creek	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	Arroyo Grande, City of
East Fork Meadow Creek	03/19/1984	USACE	IAA-H-10- 77	January 1983	Arroyo Grande, City of
Froom Creek	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas
Graves Creek	07/20/1981	George S. Nolte and Associates	H-4722	December 1979	Atascadero, City of; San Luis Obispo County, Unincorporated Areas
Harford Canyon Creek	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas
Highway 101 Tributary Creek	03/19/1984	USACE	IAA-H-10- 77	January 1983	Arroyo Grande, City of
Huerhuero Creek	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	El Paso De Robles, City of; San Luis Obispo County
Huerhuero Creek	07/05/1982	George S. Nolte and Associates	H-4722	December 1979	El Paso de Robles, City of; San Luis Obispo County, Unincorporated Areas

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Little Cayucos Creek	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	San Luis Obispo County, Unincorporated Areas
Little Morro Creek	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	San Luis Obispo County, Unincorporated Areas
Los Berros Creek	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	Arroyo Grande, City of; San Luis Obispo County, Unincorporated Areas
Los Berros Creek	02/04/2004	California Department of Water Resources, San Joaquin District, in collaboration with the San Luis Obispo County Department of Engineering	NA	June 2001	San Luis Obispo County, Unincorporated Areas
Meadow Creek	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	February 2020	Arroyo Grande, City of; Grover Beach, City of; Pismo Beach, City of; San Luis Obispo County
Middle Branch Huerhuero Creek	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	May 2020	San Luis Obispo County, Unincorporated Areas
Middle Branch Huerhuero Creek	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas
Morro Bay	12/18/1979	U.S. Geological Survey	IAA-H-17-75 and IAA- H-8-76, Project Order No.s 8 and 13	June 1977	Morro Bay, City of; San Luis Obispo County, Unincorporated Areas

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Morro Creek	12/18/1979	U.S. Geological Survey	IAA-H-17-75 and IAA- H-8-76, Project Order No.s 8 and 13	June 1977	Morro Bay, City of
Morro Creek	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	San Luis Obispo County, Unincorporated Areas
Mountain Springs Creek	03/16/1981	George S. Nolte and Associates	H-4722	December 1979	El Paso de Robles, City of
Newsome Creek	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	San Luis Obispo County, Unincorporated Areas
Nipomo Creek	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	San Luis Obispo County, Unincorporated Areas
Noname Creek	12/18/1979	U.S.Geologic al Survey	IAA-H-17-75 and IAA- H-8-76, Project Order No.s 8 and 13	June 1977	Morro Bay, City of; San Luis Obispo County, Unincorporated Areas
North Fork Los Berros Creek	03/19/1984	USACE	IAA-H-10- 77	January 1983	Arroyo Grande, City of
North Fork Paloma Creek	07/20/1981	George S. Nolte and Associates	H-4722	December 1979	Atascadero, City of
Old Garden Creek	10/1978	USACE, Los Angeles District, California	IAA-H-74and IAA-H- 16-75, Project Order No.s 13 and 22	June 1977	San Luis Obispo, City of
Pacific Ocean	05/16/2017	Baker AECOM	HSFEHQ- 09-D-0368	07/20/2015	Grover Beach, City of; Morro Bay, City of; Pismo Beach, City of; San Luis Obispo, City of; San Luis Obispo County, Unincorporated Areas

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Paloma Creek	07/20/1981	George S. Nolte and Associates	H-4722	December 1979	Atascadero, City of; San Luis Obispo County, Unincorporated Areas
Peachy Canyon Creek	03/16/1981	George S. Nolte and Associates	H-4722	December 1979	El Paso de Robles, City of; San Luis Obispo County, Unincorporated Areas
Pismo Creek	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas
Pismo Creek	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	San Luis Obispo County, Unincorporated Areas
Pismo Creek	02/01/1984	USACE and Tetra Tech	IAA-H-10- 77	January 1983	Pismo Beach, City of
Pismo Lake Tributary	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	Pismo Beach, City of; San Luis Obispo County, Unincorporated Areas
Poorman Creek	03/19/1984	USACE	IAA-H-10- 77	January 1983	Arroyo Grande, City of; San Luis Obispo County, Unincorporated Areas
Prefumo Canyon Creek	10/1978	USACE, Los Angeles District, California	IAA-H-74 and IAA-H- 16-75, Project Order No.s 13 and 22	June 1977	San Luis Obispo, City of
Prefumo Creek	10/1978	USACE, Los Angeles District, California	IAA-H-74 and IAA-H- 16-75, Project Order No.s 13 and 22	June 1977	San Luis Obispo, City of; San Luis Obispo County, Unincorporated Areas
Salinas River	07/20/1981	George S. Nolte and Associates	H-4722	December 1979	Atascadero, City of

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Salinas River	03/16/1981	George S. Nolte and Associates	H-4722	December 1979	El Paso de Robles, City of
Salinas River Reach 1	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	March 2020	El Paso De Robles, City of; San Luis Obispo County, Unincorporated Areas
San Luis Obispo Creek	10/1978	USACE, Los Angeles District, California	IAA-H-74 and IAA-H- 16-75, Project Order No.s 13 and 22	June 1977	San Luis Obispo, City of
San Luis Obispo Creek	07/05/1982	George S. Nolte and Associates	H-4722	December 1979	San Luis Obispo County, Unincorporated Areas
San Luis Obispo Creek South	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	December 2023	San Luis Obispo County; San Luis Obispo, City of
San Luis Obispo Creek South	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	San Luis Obispo County, Unincorporated Areas
San Marcos Creek	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas
Santa Margarita Creek	07/05/1982	George S. Nolte and Associates for FEMA	H-4722	December 1979	San Luis Obispo County, Unincorporated Areas
Santa Rosa Creek	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	San Luis Obispo County, Unincorporated Areas
Santa Rosa Creek Split Flow	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	San Luis Obispo County, Unincorporated Areas

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
See Canyon Creek	07/05/1982	George S. Nolte and Associates for FEMA	H-4722	December 1979	San Luis Obispo County, Unincorporated Areas
See Canyon Creek (Lower Reach)	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas
See Canyon Creek (Upper Reach)	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas
South Branch Toad Creek	07/05/1982	George S. Nolte and Associates for FEMA	H-4722	December 1979	San Luis Obispo County, Unincorporated Areas
South Branch Unnamed Creek No. 1	03/16/1981	George S. Nolte and Associates	H-4722	December 1979	El Paso de Robles, City of
South Branch Unnamed Creek No. 2	03/16/1981	George S. Nolte and Associates	H-4722	December 1979	El Paso de Robles, City of
South Fork Paloma Creek	07/20/1981	George S. Nolte and Associates	H-4722	December 1979	Atascadero, City of
Stenner Creek	10/1978	USACE, Los Angeles District, California	IAA-H-74 and IAA-H- 16-75, Project Order No.s 13 and 22	June 1977	San Luis Obispo, City of; San Luis Obispo County, Unincorporated Areas
Tank Farm Creek	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County; San Luis Obispo, City of
Tar Spring Creek	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	San Luis Obispo County, Unincorporated Areas
Tefft Road Tributary	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	San Luis Obispo County, Unincorporated Areas

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Teft Road Tributary East Fork	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	San Luis Obispo County, Unincorporated Areas
Toad Creek (Main and North Branches)	07/05/1982	George S. Nolte and Associates for FEMA	H-4722	December 1979	San Luis Obispo County, Unincorporated Areas
Toro Creek	12/18/1979	U.S. Geological Survey	IAA-H-17-75 and IAA- H-8-76, Project Order No.s 8 and 13	June 1977	Morro Bay, City of; San Luis Obispo County, Unincorporated Areas
Trout Creek	07/05/1982	George S. Nolte and Associates for FEMA	H-4722	December 1979	San Luis Obispo County, Unincorporated Areas
Unnamed Creek (Alva Paul Creek)	12/18/1979	U.S.Geologic al Survey	IAA-H-17-75 and IAA- H-8-76, Project Order No.s 8 and 13	June 1977	Morro Bay, City of; San Luis Obispo County, Unincorporated Areas
Unnamed Creek No. 1	03/16/1981	George S. Nolte and Associates	H-4722	December 1979	El Paso de Robles, City of
Unnamed Creek No. 2	03/16/1981	George S. Nolte and Associates	H-4722	December 1979	El Paso de Robles, City of
Unnamed Creek No. 3	03/16/1981	George S. Nolte and Associates	H-4722	December 1979	El Paso de Robles, City of
Unnamed Creek No. 4	03/16/1981	George S. Nolte and Associates	H-4722	December 1979	El Paso de Robles, City of
Unnamed Creek No. 5	03/16/1981	George S. Nolte and Associates	H-4722	December 1979	El Paso de Robles, City of
Unnamed Creek No. 6	03/16/1981	George S. Nolte and Associates	H-4722	December 1979	El Paso de Robles, City of
Unnamed Stream	07/05/1982	George S. Nolte and Associates for FEMA	H-4722	December 1979	San Luis Obispo County, Unincorporated Areas

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Unnamed Stream HU-01	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas
Unnamed Stream HU-02	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas
Unnamed Stream HU-03	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas
Unnamed Stream HU-04	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas
Unnamed Stream HU-05	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas
Unnamed Stream HU-06	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas
Unnamed Stream SO-03	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas
Upper Branch Huerhuero Creek	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	May 2020	San Luis Obispo County, Unincorporated Areas
Vineyard Canyon Creek	06/06/2024	Strategic Alliance for Risk Reduction (STARR II)	HSFE60-15-D-0005	October 2020	San Luis Obispo County, Unincorporated Areas

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

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Willow Creek	06/03/1991	USACE, Los Angeles District for FEMA	EMW-89-E-2994, Project Order 8	December 1989	San Luis Obispo County, Unincorporated Areas
Yerba Buena Creek	07/05/1982	George S. Nolte and Associates for FEMA	H-4722	December 1979	San Luis Obispo County, Unincorporated Areas

* 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 29. These meetings may have previously been referred to by a variety of names (Community Coordination Officer (CCO), Scoping, Discovery, etc.), but all meetings represent opportunities for FEMA, community officials, study contractors, and other invited guests to discuss the planning for and results of the project.

Table 29: Community Meetings

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Arroyo Grande, City of	06/06/2024	9/28/2018	Kick Off Meeting	Representatives of Arroyo Grande, CA DWR, Caltrans District V, City of Grover Beach, City of Paso Robles, City of Pismo Beach, City of San Luis Obispo, FEMA, San Luis Obispo County, STARR II, USACE
		11/16/2021	Final CCO	Representatives of CA DWR, City of Arroyo Grande, City of Paso Robles, City of Pismo Beach, City of San Luis Obispo, FEMA, San Luis Obispo County, STARR II
Atascadero, City of	07/20/1981	04/1978	Initial CCO	FEMA, this community and the study contractor
		01/26/1981	Final CCO	FEMA, this community and the study contractor
El Paso De Robles, City of	06/06/2024	9/28/2018	Kick Off Meeting	Representatives of Arroyo Grande, CA DWR, Caltrans District V, City of Grover Beach, City of Paso Robles, City of Pismo Beach, City of San Luis Obispo, FEMA, San Luis Obispo County, STARR II, USACE
		11/16/2021	Final CCO	Representatives of CA DWR, City of Arroyo Grande, City of Paso Robles, City of Pismo Beach, City of San Luis Obispo, FEMA, San Luis Obispo County, STARR II
Grover Beach, City of	06/06/2024	9/28/2018	Kick Off Meeting	Representatives of Arroyo Grande, CA DWR, Caltrans District V, City of Grover Beach, City of Paso Robles, City of Pismo Beach, City of San Luis Obispo, FEMA, San Luis Obispo County, STARR II, USACE
		11/16/2021	Final CCO	Representatives of CA DWR, City of Arroyo Grande, City of Paso Robles, City of Pismo Beach, City of San Luis Obispo, FEMA, San Luis Obispo County, STARR II
Morro Bay, City of	05/16/2017	12/02/2014	FRR Meeting	FEMA, City of Grover Beach, City of Morro Bay, City of Pismo Beach, San Luis Obispo County, and BakerAECOM
		12/07/2015	Final CCO	FEMA, City of Grover Beach, City of Morro Bay, City of Pismo Beach, San Luis Obispo County, and BakerAECOM

Table 29: Community Meetings (continued)

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Pismo Beach, City of	06/06/2024	9/28/2018	Kick Off Meeting	Representatives of Arroyo Grande, CA DWR, Caltrans District V, City of Grover Beach, City of Paso Robles, City of Pismo Beach, City of San Luis Obispo, FEMA, San Luis Obispo County, STARR II, USACE
		6/24/2020	Flood Risk Review	Representatives of CA DWR, City of Pismo Beach, City of San Luis Obispo, FEMA, San Luis Obispo County, STARR II
		11/16/2021	Final CCO	Representatives of CA DWR, City of Arroyo Grande, City of Paso Robles, City of Pismo Beach, City of San Luis Obispo, FEMA, San Luis Obispo County, STARR II
San Luis Obispo, City of	06/06/2024	9/28/2018	Kick Off Meeting	Representatives of Arroyo Grande, CA DWR, Caltrans District V, City of Grover Beach, City of Paso Robles, City of Pismo Beach, City of San Luis Obispo, FEMA, San Luis Obispo County, STARR II, USACE
		6/24/2020	Flood Risk Review	Representatives of CA DWR, City of Pismo Beach, City of San Luis Obispo, FEMA, San Luis Obispo County, STARR II
		11/16/2021	Final CCO	Representatives of CA DWR, City of Arroyo Grande, City of Paso Robles, City of Pismo Beach, City of San Luis Obispo, FEMA, San Luis Obispo County, STARR II
San Luis Obispo County, Unincorporated Areas	06/06/2024	9/28/2018	Kick Off Meeting	Representatives of Arroyo Grande, CA DWR, Caltrans District V, City of Grover Beach, City of Paso Robles, City of Pismo Beach, City of San Luis Obispo, FEMA, San Luis Obispo County, STARR II, USACE
		6/24/2020	Flood Risk Review	Representatives of CA DWR, City of Pismo Beach, City of San Luis Obispo, FEMA, San Luis Obispo County, STARR II
		11/16/2021	Final CCO	Representatives of CA DWR, City of Arroyo Grande, City of Paso Robles, City of Pismo Beach, City of San Luis Obispo, FEMA, San Luis Obispo County, STARR II

SECTION 8.0 – ADDITIONAL INFORMATION

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

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

Table 30: Map Repositories

Community	Address	City	State	Zip Code
Arroyo Grande, City of	City Hall 300 East Branch Street	Arroyo Grande	CA	93420
Atascadero, City of	City Hall 6500 Palma Avenue	Atascadero	CA	93422
El Paso de Robles, City of	City Hall 1000 Spring Street	Paso Robles	CA	93446
Grover Beach, City of	City Hall 154 South Eighth Street	Grover Beach	CA	93433
Morro Bay, City of	City Hall 595 Harbor Street	Morro Bay	CA	93442
Pismo Beach, City of	City Hall 760 Mattie Road	Pismo Beach	CA	93449
San Luis Obispo, City of	City Hall 990 Palm Street	San Luis Obispo	CA	93401
San Luis Obispo, Unincorporated Areas	County Government Center 1055 Monterey Street Room D-430	San Luis Obispo	CA	93408

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

Table 31 contains useful contact information regarding the FIS Report, the FIRM, and other relevant flood hazard and GIS data. In addition, information about the State NFIP Coordinator and GIS Coordinator is shown in this table. At the request of FEMA, each Governor has designated an agency of State or territorial government to coordinate that State's or territory's NFIP activities. These agencies often assist communities in developing and adopting necessary floodplain management measures. State GIS Coordinators are knowledgeable about the availability and location of State and local GIS data in their state.

Table 31: Additional Information

FEMA and the NFIP	
FEMA and FEMA Engineering Library website	www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/engineering-library
NFIP website	www.fema.gov/national-flood-insurance-program
NFHL Dataset	msc.fema.gov
FEMA Region IX	FEMA Regional Center IX 1111 Broadway, Suite 1200 Oakland, CA 94607 510-627-7181
Other Federal Agencies	
USGS website	www.usgs.gov
Hydraulic Engineering Center website	www.hec.usace.army.mil
State Agencies and Organizations	
State NFIP Coordinator	Kelly Soule State NFIP Coordinator Chief, Community Assistance & Risk Awareness Branch Office of Floodplain Management Division of Flood Management CA Department of Water Resources 3464 El Camino Ave, Suite 200 Sacramento, California 95821
State Floodplain Manager	Mike Mierzwa State Floodplain Manager CA Department of Water Resources 3464 El Camino Ave, Suite 200 Sacramento, California 95821
State GIS Coordinator	David Harris Agency Information Officer California Natural Resources Agency 1416 Ninth Street, Room 1311 Sacramento, CA 95814 916-445-5088 david.harris@resources.ca.gov

SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES

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

Table 32: Bibliography and References

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
Avila, 2022	Federal Emergency Management Agency	Floodplain Delineation Study of San Luis Obispo Creek	Avila and Associates		12/13/2022	
CASBOE, 2015	County of San Luis Obispo GIS	BOE City Boundaries	California State Board of Equalization	San Luis Obispo, CA	3/6/2015	https://opendata.slocounty.ca.gov/
CDPR, 2018	California Department of Parks and Recreation	California State Parks System	California Department of Parks and Recreation	Sacramento, CA	2018	https://www.parks.ca.gov/?page_id=862/
CSC, 2011	Coastal Services Center	Coastal California Digital Imagery	NOAA	Oakland, CA	February 2011	https://coast.noaa.gov/htdata/raster1/imagery/CoastalCA_2009_1168/
CSC, 2011	Coastal Services Center	Coastal California LiDAR and Digital Imagery	COASTAL SERVICES CENTER	Oakland, CA	5/16/2011	
CSMP, 2011		*Hydrographic survey data bathymetry; 2 – 10 DEM*	Fugro EarthData, Inc.		2005-2011	https://seafloor.csumb.edu/csmp/csmp.html
Divoky, D., 2007		*Supplementary WHAFIS Documentation: WHAFIS 4.0, A Revision of FEMA's WHAFIS 3.0 Program*	Divoky, D.	Atlanta, GA	2007	
FEMA, 1988	Federal Emergency Management Agency	*Wave Height Analysis for Flood Insurance Studies (Technical Documentation for WHAFIS Program Version 3.0)*		Washington, D.C.	1988	https://www.fema.gov/media-library/assets/documents/11563/

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
FEMA, 2005	Federal Emergency Management Agency	*Final Draft Guidelines for Coastal Flood Hazard Analysis and Mapping for the Pacific Coast of the United States*			2005	
FEMA, 2008	Federal Emergency Management Agency	San Luis Obispo County, California Effective Digital Flood Insurance Rate Map	Federal Emergency Management Agency	Washington, D.C.	8/28/2008	
FEMA, 2008a	Federal Emergency Management Agency	San Luis Obispo County, California Digital Flood Insurance Rate Map	Federal Emergency Management Agency	Washington, D.C.	11/10/2008	
FEMA, 2008b	Federal Emergency Management Agency	San Luis Obispo County, California Digital Flood Insurance Rate Map	Federal Emergency Management Agency	Washington, D.C.	11/10/2008	
FEMA, 2008c	Federal Emergency Management Agency	MAPIX Task Order 29 Santa Maria River Restudy	Federal Emergency Management Agency	Washington, D.C.	11/10/2008	
FEMA, 2011	Federal Emergency Management Agency	Letter of Map Revision, Case number 10-09-3119P, San Luis Obispo County Unincorporated Areas, California	Federal Emergency Management Agency	Washington, D.C.	12/21/2011	https://msc.fema.gov/
FEMA, 2012	Federal Emergency Management Agency	*Flood Insurance Study, San Luis Obispo County and Incorporated Areas*			November 2012	https://msc.fema.gov/

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
FEMA, 2017	Federal Emergency Management Agency	San Luis Obispo County, California Coastal Analysis and Mapping Project/Open Pacific Coast Study	Federal Emergency Management Agency	Washington, D.C.	5/16/2017	https://msc.fema.gov/
FEMA, 2018	Federal Emergency Management Agency	LOMR Study Area	Federal Emergency Management Agency	Washington, D.C.	8/28/2018	https://msc.fema.gov/
FEMA, 2019	Federal Emergency Management Agency	LOMR Study Area	Federal Emergency Management Agency	Washington, D.C.	8/28/2018	https://msc.fema.gov/
FEMA, 2019a	Federal Emergency Management Agency	LOMR Study Area	Federal Emergency Management Agency	Washington, D.C.	7/3/2019	https://msc.fema.gov/
FEMA, 2021	Federal Emergency Management Agency	LOMR Study Area	Federal Emergency Management Agency	Washington, D.C.	10/7/2020	https://msc.fema.gov/
FEMA, 2021a	Federal Emergency Management Agency	LOMR Study Area	Federal Emergency Management Agency	Washington, D.C.	5/21/2021	https://msc.fema.gov/
FEMA, 2023	Federal Emergency Management Agency	Five Cities Center Flood Assessment LOMR	Federal Emergency Management Agency		10/4/2023	https://msc.fema.gov/

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
NGDC/ NOAA	National Geophysical Data Center	*Tsunami Inundation Bathymetry; 10 – 30 DEM*	National Oceanic and Atmospheric Administration			https://www.ngdc.noaa.gov/mgg/inundation/tsunami/inundation.html
NOAA, 2015	NOAA	NOAA Tides and Currents	NOAA	Washington, D.C.	9/16/2015	https://tidesandcurrents.noaa.gov/
Penfield & Smith, 2007		*Survey Report of Stream Surveying in Support of Santa Maria River Restudy W.O. 10358.02*	Penfield & Smith		2007	
Schaaf & Wheeler, 2023	Federal Emergency Management Agency	East Fork Flood Analysis	Schaaf & Wheeler	San Francisco, CA	March 2023	
SLO, 2017	County of San Luis Obispo GIS	County of San Luis Obispo Transportation Lines	County of San Luis Obispo GIS	San Luis Obispo, CA	12/27/2017	https://opendata.slocounty.ca.gov/
SLO, 2020	County of San Luis Obispo GIS	County Boundary	County of San Luis Obispo GIS	San Luis Obispo, CA	8/27/2020	https://opendata.slocounty.ca.gov/
STARRII, 2024a	Federal Emergency Management Agency	San Luis Obispo County PMR Areas: Huerhuero Creek, Meadow Creek, Salinas River and San Luis Obispo Creek	STARRII	Austin, TX	6/6/2024	https://hazards.fema.gov/femaportal/wps/myportal/
STARRII, 2024b	Federal Emergency Management Agency	Central Coastal Watershed and Salinas Watershed, California Base Level Engineering	STARRII		6/6/2024	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USACE, 1992	U.S. Army Corps of Engineers	*Automated Coastal Engineering System, version 1.07, Coastal Engineering Research Center, Department of the Army, Waterways Experiment Station*	Leenknecht, David, Andre Szuwalski, and Ann R. Sherlock		1992	
USACE, 1984	U.S. Army Corps of Engineers	*Shore Protection Manual, Volumes 1-3, 532 pp.*		Washington, D.C.	1984	
USACE, 1973	U.S. Army Corps of Engineers, Hydrologic Engineering Center	*Computer Program HEC-2, Water Surface Profiles*		Davis, California	October 1973	
USACE, January 1973	U.S. Army Corps of Engineers	*HEC-1 Flood Hydrograph Package*		Davis, California	January 1973	
USACE, 1971	U.S. Army Corps of Engineers, South Pacific Division	*National Shoreline Study: California Regional Inventory*			August 1971	
USDA, 2005	U.S. Department of Agriculture Farm Service Agency	National Agriculture Imagery Program	U.S. Department of Agriculture Farm Service Agency	Washington, D.C.	2005	
USDA, 2012	US Department of Agriculture Farm Service Agency Aerial Photography Field Office	USDA-FSA-APFO NAIP MrSID Mosaic	USDA/FSA - Aerial Photography Field Office	Salt Lake City, Utah	2/21/2012	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USDA, 2016	United States Department of Agriculture Farm Service Agency	National Agriculture Imagery Program	United States Department of Agriculture Farm Service Agency	Washington, D.C.	10/4/2016	https://www.fsa.usda.gov/
USDA, 2020	USDA Forest Service	Administrative Forest	USDA Forest Service Automated Lands Program (ALP)	Salt Lake City, UT	8/24/2020	https://data.fs.usda.gov/geodata/edw/datasets.php
USDC, 2013	U.S. Department of Commerce, U.S. Census Bureau, Geography Division	TIGER/Line Files Transportation Layer	U.S. Department of Commerce	Washington, D.C.	2013	
U.S. Department of the Interior, 1976	U.S. Department of the Interior, Geological Survey	*Open-File Report 76-499, User's Manual for Computer Program E-431: Computer Applications for Step-Backwater and Floodway Analysis*	J.O. Sherman		1976	
U.S. Department of the Interior, 1977	U.S. Department of the Interior, Geological Survey	*Water Resources Investigation 77-21, Magnitude and Frequency of Floods in California*			June 1977	
U.S. Department of the Interior, 1977 (a)	U.S. Department of the Interior, Geological Survey	*Water Resources Investigation 77-21, Magnitude and Frequency of Floods in California: Menlo Park, California*	A.O. Waananen and J. R. Crippen		June 1977	
U.S. Department of the Interior, 1978	U.S. Department of the Interior, Geological Survey	*Unpublished Records*			October 25, 1978	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
USGS, 1993	California Spatial Information Library	San Luis Obispo County PLSS data, State and Federal land boundaries	U.S. Gelogical Survey	Reston, VA	November 1993	
USGS, 1994	U. S. Geological Survey	Digital Orthophoto Quadrangles, contour scale 1:12,000, photography dated 1994 or later	NP		1994	
USGS, 2006	U. S. Geological Survey	2001 California Hydrologic Data Report– 11140000 Sisquoc River near Garey, CA.			Downloaded October 2006	https://ca.water.usgs/archive/waterdata/2001/11140000.html
USGS, 2010	United States Geological Survey	*Airborne Topographic LiDAR data, California Open Pacific Coast, Southern portion of the City and County of San Francisco*	Fugro EarthData, Inc.		2009-2011	
USGS, 2018	United States Geological Survey	National Hydrography Dataset	United States Geological Survey	Washington, D.C.	8/21/2018	https://www.usgs.gov/
U.S. Water Resources Council, 1976	U.S. Water Resources Council, Hydrology Committee	*Bulletin 17A "Guidelines for Determining Flood Flow Frequency"*			March 1976	
Van der Meer, J.W., 2002		*Wave Run-up and Overtopping at Dikes. Technical Report, Technical Advisory Committee for Water Retaining Structures (TAW)*		Delft, the Netherlands	2002	

Table 32: Bibliography and References (continued)

Citation in this FIS	Publisher/ Issuer	*Publication Title,* "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
Wesbter, 2021	Steven B. Webster	*Avila Ranch Tract 3089 - Phase 1 Certified Topographical Map*	Steven B. Webster		6/24/2021	