

FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 3 OF 12



SAN DIEGO COUNTY, CALIFORNIA AND INCORPORATED AREAS

COMMUNITY NAME	NUMBER	COMMUNITY NAME	NUMBER
CARLSBAD, CITY OF	060285	NATIONAL CITY, CITY OF	060293
CHULA VISTA, CITY OF	065021	OCEANSIDE, CITY OF	060294
CORONADO, CITY OF	060287	POWAY, CITY OF	060702
DEL MAR, CITY OF	060288	SAN DIEGO, CITY OF	060295
EL CAJON, CITY OF	060289	SAN DIEGO COUNTY, UNINCORPORATED AREAS	060284
ENCINITAS, CITY OF	060726	SAN MARCOS, CITY OF	060296
ESCONDIDO, CITY OF	060290	SANTEE, CITY OF	060703
IMPERIAL BEACH, CITY OF	060291	SOLANA BEACH, CITY OF	060725
LA MESA, CITY OF	060292	VISTA, CITY OF	060297
LEMON GROVE, CITY OF	060723		

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FEMA

TABLE OF CONTENTS

Volume 1

	<u>Page</u>
SECTION 1.0 – INTRODUCTION	1
1.1 The National Flood Insurance Program	1
1.2 Purpose of this Flood Insurance Study Report	2
1.3 Jurisdictions Included in the Flood Insurance Study Project	2
1.4 Considerations for using this Flood Insurance Study Report	15
SECTION 2.0 – FLOODPLAIN MANAGEMENT APPLICATIONS	27
2.1 Floodplain Boundaries	27
2.2 Floodways	48
2.3 Base Flood Elevations	49
2.4 Non-Encroachment Zones	49
2.5 Coastal Flood Hazard Areas	49
2.5.1 Water Elevations and the Effects of Waves	49
2.5.2 Floodplain Boundaries and BFEs for Coastal Areas	51
2.5.3 Coastal High Hazard Areas	52
2.5.4 Limit of Moderate Wave Action	53
SECTION 3.0 – INSURANCE APPLICATIONS	53
3.1 National Flood Insurance Program Insurance Zones	53
3.2 Coastal Barrier Resources System	54
SECTION 4.0 – AREA STUDIED	54
4.1 Basin Description	54
4.2 Principal Flood Problems	55
4.3 Non-Levee Flood Protection Measures	65
4.4 Levees	75
<u>FIGURES</u>	
	<u>Page</u>
Figure 1: FIRM Panel Index	17
Figure 2: FIRM Notes to Users	20
Figure 3: Map Legend for FIRM	23
Figure 4: Floodway Schematic	48
Figure 5: Wave Runup Transect Schematic	51
Figure 6: Coastal Transect Schematic	53

Tables

	<u>Page</u>
Table 1: Listing of NFIP Jurisdictions	2
Table 2: Flooding Sources Included in this FIS Report	28
Table 3: Flood Zone Designations by Community	54
Table 4: Coastal Barrier Resources System Information	54
Table 5: Basin Characteristics	55
Table 6: Principal Flood Problems	56
Table 7: Historic Flooding Elevations	65
Table 8: Non-Levee Flood Protection Measures	65
Table 9: Levees	77

Volume 2

	<u>Page</u>
SECTION 5.0 – ENGINEERING METHODS	80
5.1 Hydrologic Analyses	80
5.2 Hydraulic Analyses	109
5.3 Coastal Analyses	141
5.3.1 Total Stillwater Elevations	142
5.3.2 Waves	143
5.3.3 Coastal Erosion	144
5.3.4 Wave Hazard Analyses	144

Figures

	<u>Page</u>
Figure 7: Frequency Discharge-Drainage Area Curves	106
Figure 8: 1% Annual Chance Total Stillwater Elevations for Coastal Areas	142

Tables

	<u>Page</u>
Table 10: Summary of Discharges	81
Table 11: Summary of Non-Coastal Stillwater Elevations	107
Table 12: Stream Gage Information used to Determine Discharges	108
Table 13: Summary of Hydrologic and Hydraulic Analyses	110
Table 14: Roughness Coefficients	138
Table 15: Summary of Coastal Analyses	141
Table 16: Tide Gage Analysis Specifics	143
Table 17: Coastal Transect Parameters	145

Volume 3

	<u>Page</u>
SECTION 5.0 – ENGINEERING METHODS (continued)	168
5.4 Alluvial Fan Analyses	174
SECTION 6.0 – MAPPING METHODS	177
6.1 Vertical and Horizontal Control	177
6.2 Base Map	178
6.3 Floodplain and Floodway Delineation	179

Figures

	<u>Page</u>
Figure 9: Transect Location Map	168

Tables

	<u>Page</u>
Table 18: Summary of Alluvial Fan Analyses	175
Table 19: Results of Alluvial Fan Analyses	176
Table 20: Countywide Vertical Datum Conversion	177
Table 21: Stream-Based Vertical Datum Conversion	177
Table 22: Base Map Sources	178
Table 23: Summary of Topographic Elevation Data used in Mapping	181
Table 24: Floodway Data	188

Volume 4

Tables

	<u>Page</u>
Table 24: Floodway Data (continued)	254

Volume 5

	<u>Page</u>
SECTION 6.0 – MAPPING METHODS (continued)	343
6.4 Coastal Flood Hazard Mapping	343
6.5 FIRM Revisions	350
6.5.1 Letters of Map Amendment	350
6.5.2 Letters of Map Revision Based on Fill	351

6.5.3	Letters of Map Revision	351
6.5.4	Physical Map Revisions	351
6.5.5	Contracted Restudies	352
6.5.6	Community Map History	352
SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION		355
7.1	Contracted Studies	355
7.2	Community Meetings	372
SECTION 8.0 – ADDITIONAL INFORMATION		375
SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES		377

Tables

	<u>Page</u>
Table 25: Flood Hazard and Non-Encroachment Data for Selected Streams	343
Table 26: Summary of Coastal Transect Mapping Considerations	344
Table 27: Incorporated Letters of Map Change	351
Table 28: Community Map History	353
Table 29: Summary of Contracted Studies Included in this FIS Report	356
Table 30: Community Meetings	373
Table 31: Map Repositories	375
Table 32: Additional Information	376
Table 33: Bibliography and References	378

Exhibits

Flood Profiles	<u>Panel</u>
Adobe Creek	01 P
Agua Hedionda Creek	02-03 P
Agua Hedionda Creek (at City of Carlsbad)	04-06 P
Agua Hedionda Creek (at City of Vista)	07-11 P
Alvarado Creek	12-34 P
Beaver Hollow Creek	35-39 P
Beeler Creek	40-46 P

Volume 6

Exhibits

Flood Profiles	<u>Panel</u>
Broadway Creek	47-49 P
Buena Creek	50-58 P
Buena Vista Creek	59-79 P
Buena Vista Creek Tributary 1	80-81 P

Buena Vista Creek Tributary 3	82-85 P
Calavera Creek	86 P
Carmel Valley Creek	88-90 P
Carroll Canyon Creek	91-101 P
Coleman Creek	102-108 P
County Ditch Creek	109-110 P
Deer Springs Creek	111 P
Descanso Creek	112-114 P
Encanto Branch	115-118 P
Escondido Creek (Above Lake Wohlford)	119 P
Escondido Creek (at Encinitas)	120-123 P
Escondido Creek (at Escondido)	124-128 P
Escondido Creek (Left Reach)	129 P
Eucalyptus Hills Creek (East Branch)	130 P
Eucalyptus Hills Creek (West Branch)	131-132 P
Florida Drive Branch	133 P

Volume 7
Exhibits

Flood Profiles	<u>Panel</u>
Forester Creek	134-146 P
Garrison Creek	147-150 P
Gonzales Canyon Creek	151 P
Gopher Canyon Creek	152-155 P
Green Valley Creek	156-158 P
Green Valley Creek Tributary	159 P
Harbison Canyon Creek	160-166 P
Hatfield Creek	167-168 P
Home Avenue Branch	169-171 P
Johnson Canyon Creek	172-177 P
Keys Canyon Creek	178-180 P
Keys Canyon Creek Tributary 1	181-184 P
Keys Canyon Creek Tributary 2	185-187 P
Kit Carson Park Creek	188-192 P
Lake San Marcos/San Marcos Creek	193-194 P
Las Chollas Creek	195-199 P
Las Posas Creek (Upper)	200 P
Las Puleta Creek	201-202 P
Lawson Valley Creek	203-208 P
Loma Alta Creek	209-214 P
Los Penasquitos Creek	215-223 P
Lusardi Creek	224 P

Volume 8

Exhibits

Flood Profiles	<u>Panel</u>
McGonigle Canyon Creek	225-226 P
McGonigle Canyon Creek Tributary A	227 P
Mexican Canyon Creek	228-231 P
Moosa Creek (North Branch)	232-234 P
Moosa Creek (South Branch)	235 P
Murphy Canyon Creek	236-238 P
Murray Canyon Creek	239-244 P
Nestor Creek	245-250 P
North Avenue Tributary	251 P
North Branch Poway Creek	252-253 P
North Tributary to Santa Maria Creek	254-255 P
Olive Creek	256-257 P
Otay River	258-281 P
Pala Mesa Creek	282-283 P
Paradise Creek	284-288 P
Paradise Creek Split Flow	289 P
Paradise Creek - Valley Road Branch	290 P
Pilgrim Creek	291-293 P
Poggi Canyon Creek	294-296 P
Pomerado Creek	297 P
Poway Creek	298-305 P
Rainbow Creek	306-307 P
Rainbow Creek (West Branch)	308 P

Volume 9

Exhibits

Flood Profiles	<u>Panel</u>
Rattlesnake Creek	309-316 P
Rattlesnake Creek Split Flow at Heritage Hills	317-318 P
Rattlesnake Creek Split Flow at Midland Road	319 P
Reidy Creek	320-324 P
Reidy Creek Split Flow	325 P
Rice Canyon Creek	326-329 P
Rincon Avenue Tributary	330 P
Rose Canyon Creek	331-337 P
Samagutuma Creek	338-340 P
San Clemente Canyon Creek	341-343 P
San Diego River	344-378 P
San Dieguito River	379-381 P
San Elijo Creek	382 P
San Luis Rey River (at Oceanside)	383-391 P
San Marcos Creek	392-395 P

San Marcos Creek (Below Lake San Marcos)	396-397 P
San Marcos Creek - Highway 78 Split Flow	398 P

Volume 10
Exhibits

Flood Profiles	<u>Panel</u>
San Vincente Creek	399-401 P
Santa Maria Creek (San Pasqual Valley Area)	402-405 P
Santa Maria Creek (Santa Maria Valley Area)	406-426 P
Santa Ysabel Creek	427-438 P
Slaughterhouse Creek	439-440 P
Soledad Canyon	441-445 P
South Branch Poway Creek	446-447 P
South Fork Moosa Canyon Creek	448-452 P
South Las Chollas Creek	453-457 P
South Tributary to Santa Maria Creek	458-459 P
Steele Canyon Creek	460-468 P
Stevenson Creek	469 P

Volume 11
Exhibits

Flood Profiles	<u>Panel</u>
Sweetwater River (Above Reservoir)	470-496 P
Sweetwater River (At National City)	497-501 P
Sweetwater River (Descanso Area)	502-505 P
Switzer Creek	506 P
Tecolote Creek	507-520 P
Telegraph Canyon Creek	521-540 P
Tijuana River	541-545 P
Tributary of South Tributary to Santa Maria Creek	546 P
Tributary to Forester Creek	547 P
Tributary to Forester Creek South Branch	548 P
Tributary to Sweetwater River	549-550 P

Volume 12
Exhibits

Flood Profiles	<u>Panel</u>
Twin Oaks Valley Creek	551-557 P
Unnamed Tributary to San Dieguito River	558 P
Wabash Branch	559 P

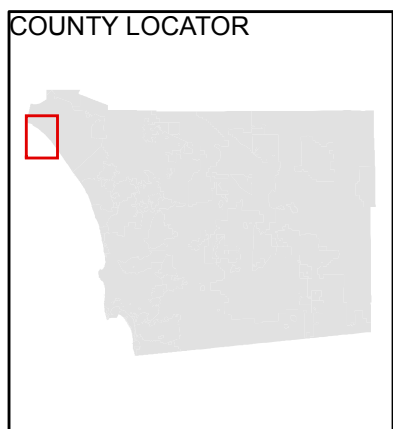
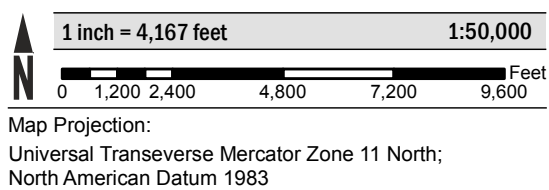
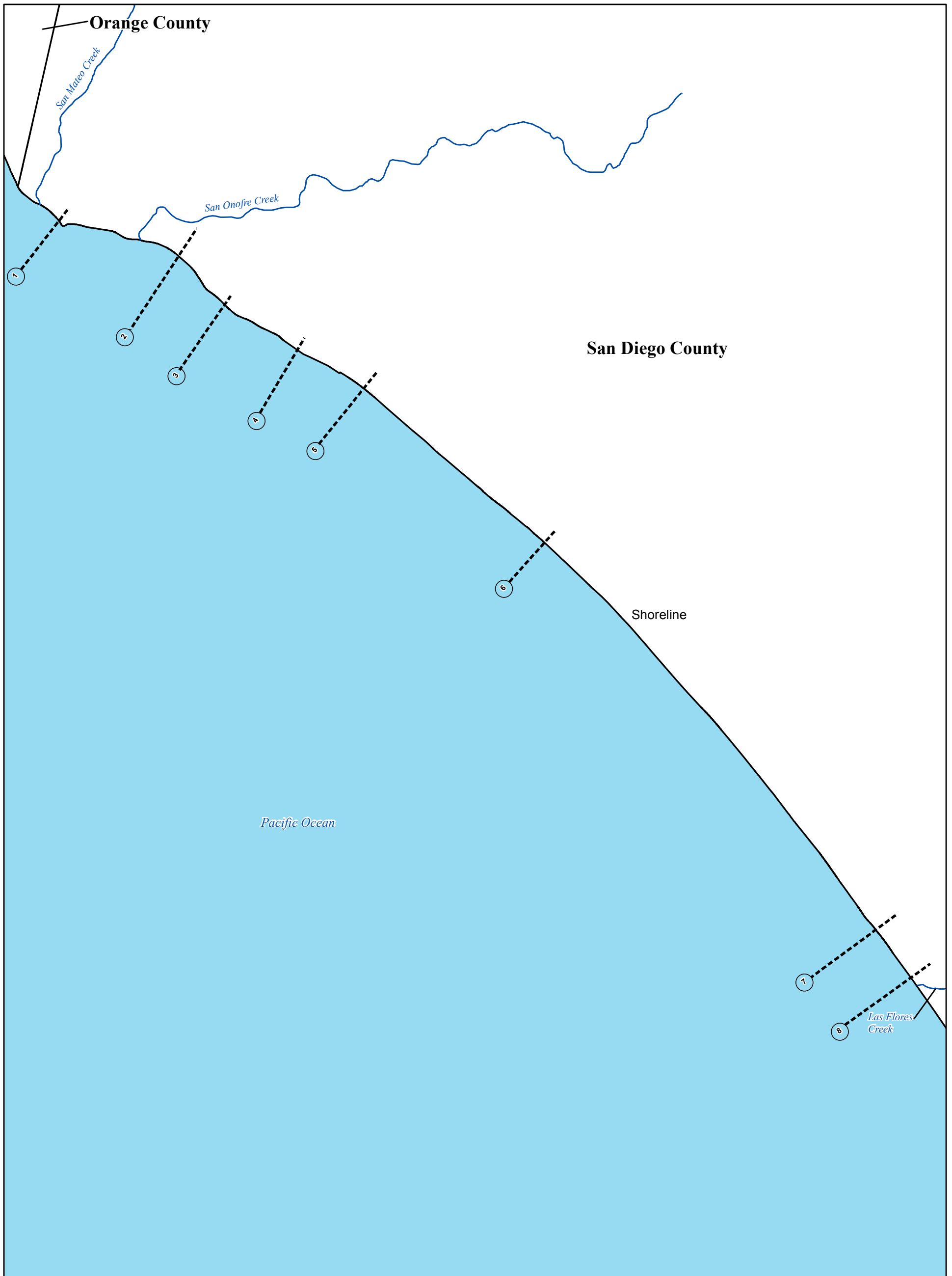
Witch Creek

560-562 P

Published Separately


Flood Insurance Rate Map (FIRM)

Figure 9: Transect Location Map



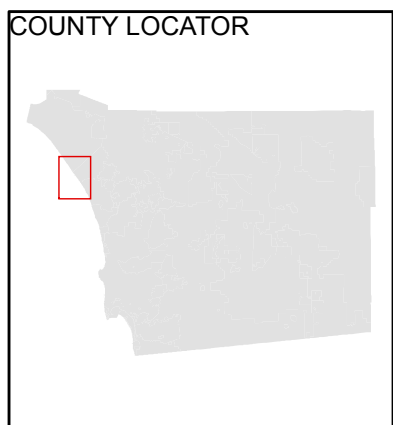
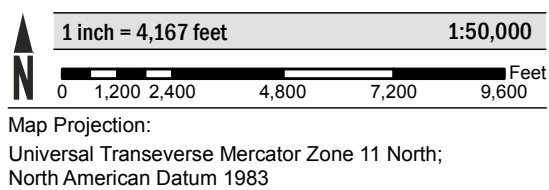
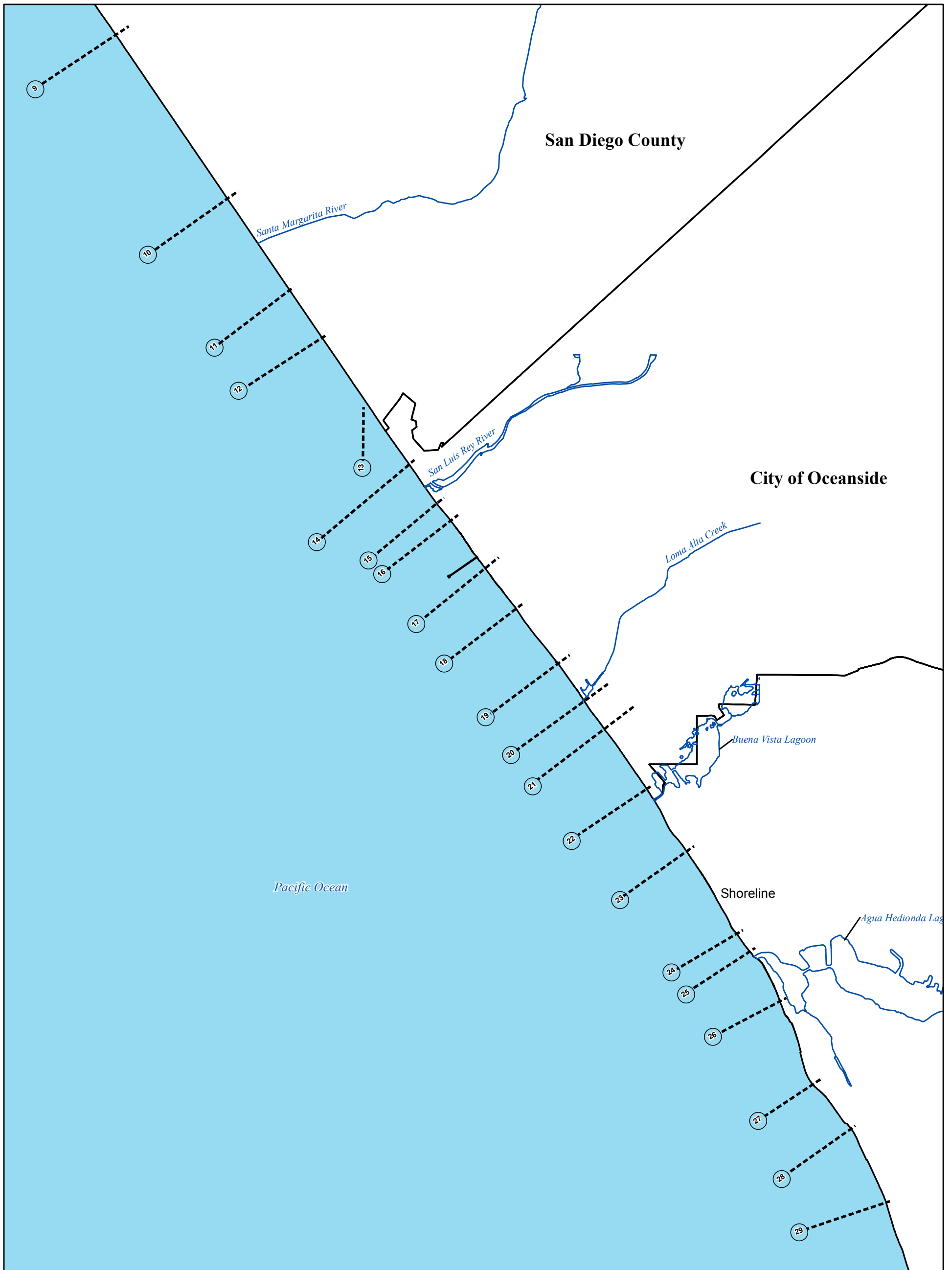
NATIONAL FLOOD INSURANCE PROGRAM
Transect Location Map

PANELS WITH TRANSECTS
0100, 0425, 0450




FEMA

Figure 9: Transect Location Map, continued



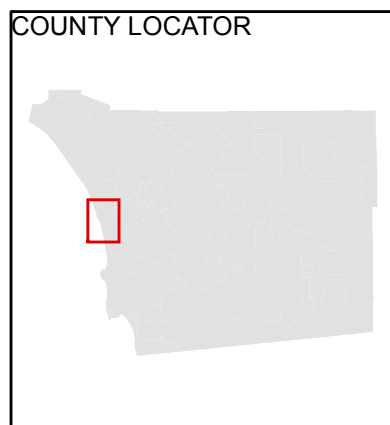
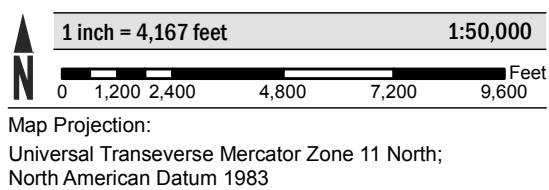
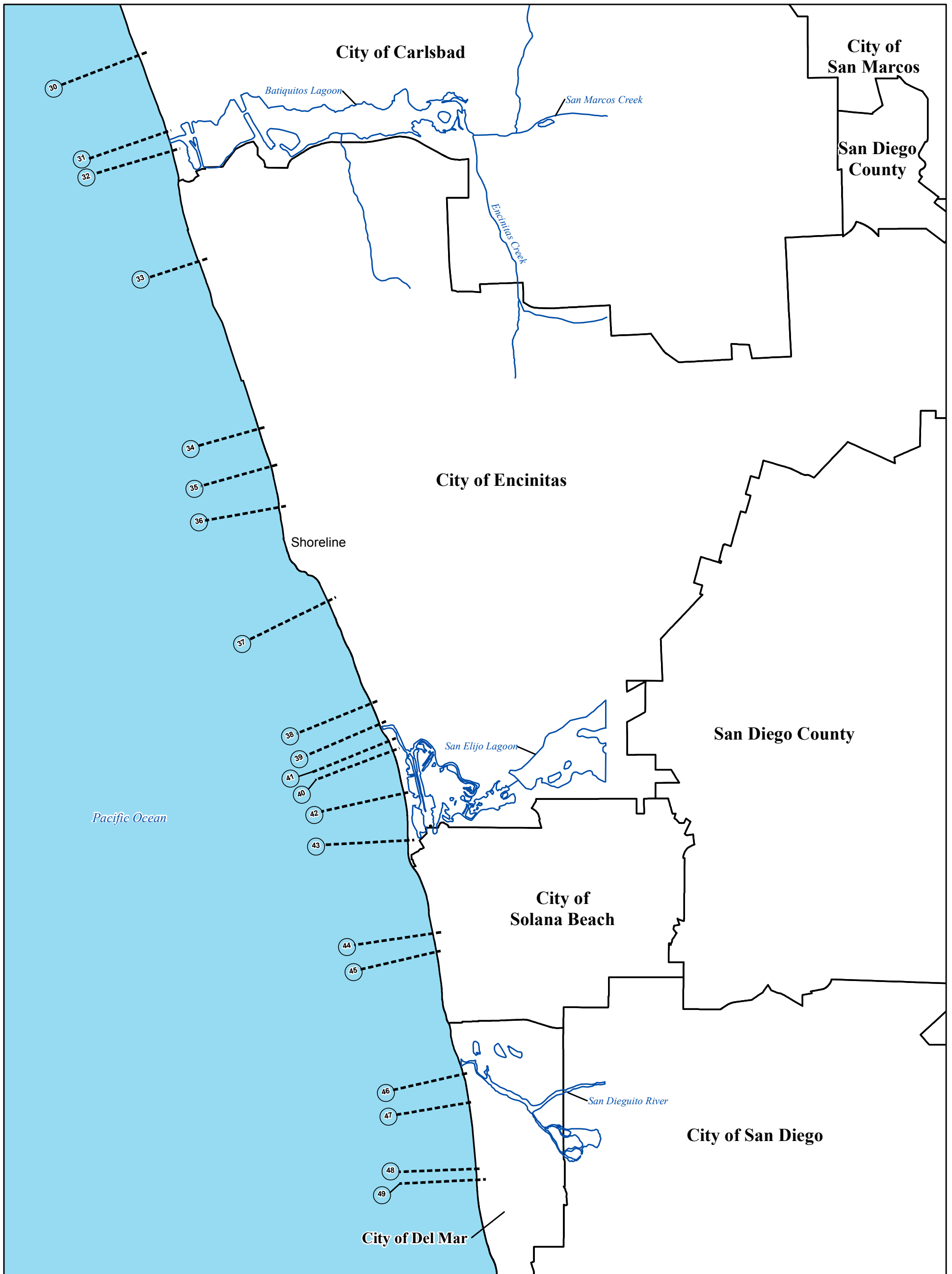
NATIONAL FLOOD INSURANCE PROGRAM
 Transect Location Map

PANELS WITH TRANSECTS
 0450, 0731, 0734, 0742, 0761, 0763, 0764, 1027



FEMA

Figure 9: Transect Location Map, continued



NATIONAL FLOOD INSURANCE PROGRAM

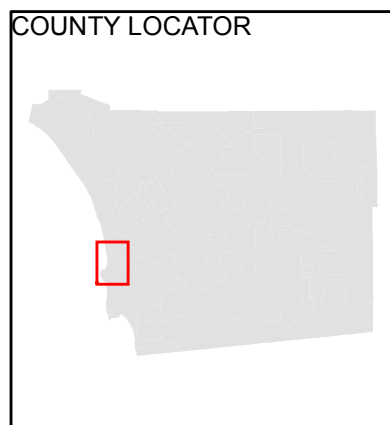
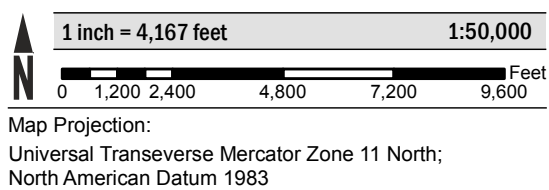
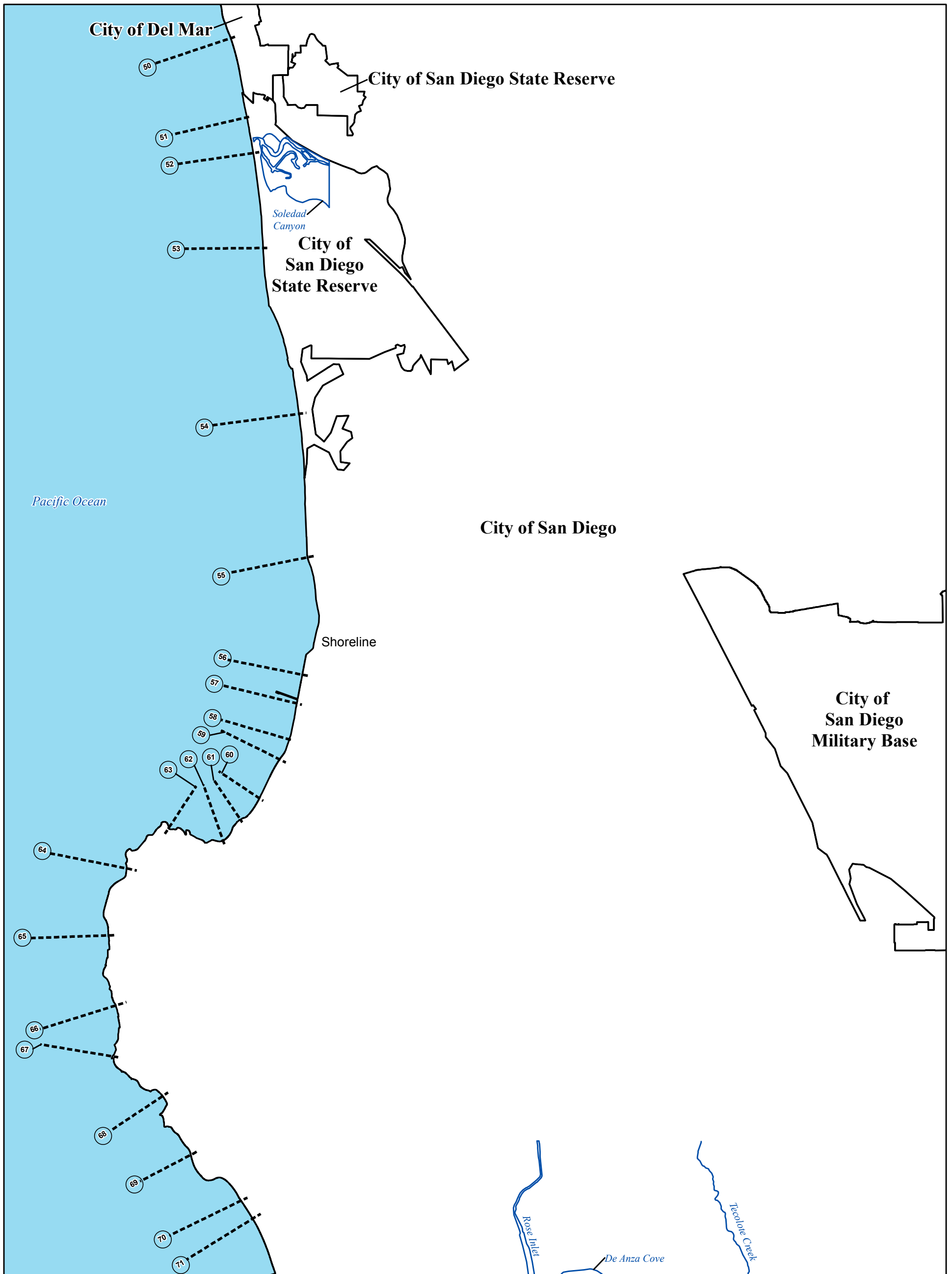
Transect Location Map

PANELS WITH TRANSECTS
1027, 1033, 1041, 1043, 1044, 1307, 1309



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Figure 9: Transect Location Map, continued



NATIONAL FLOOD INSURANCE PROGRAM

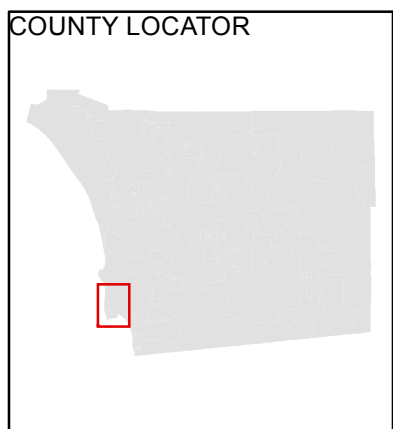
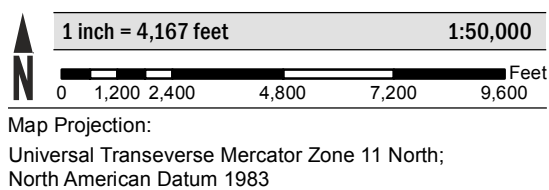
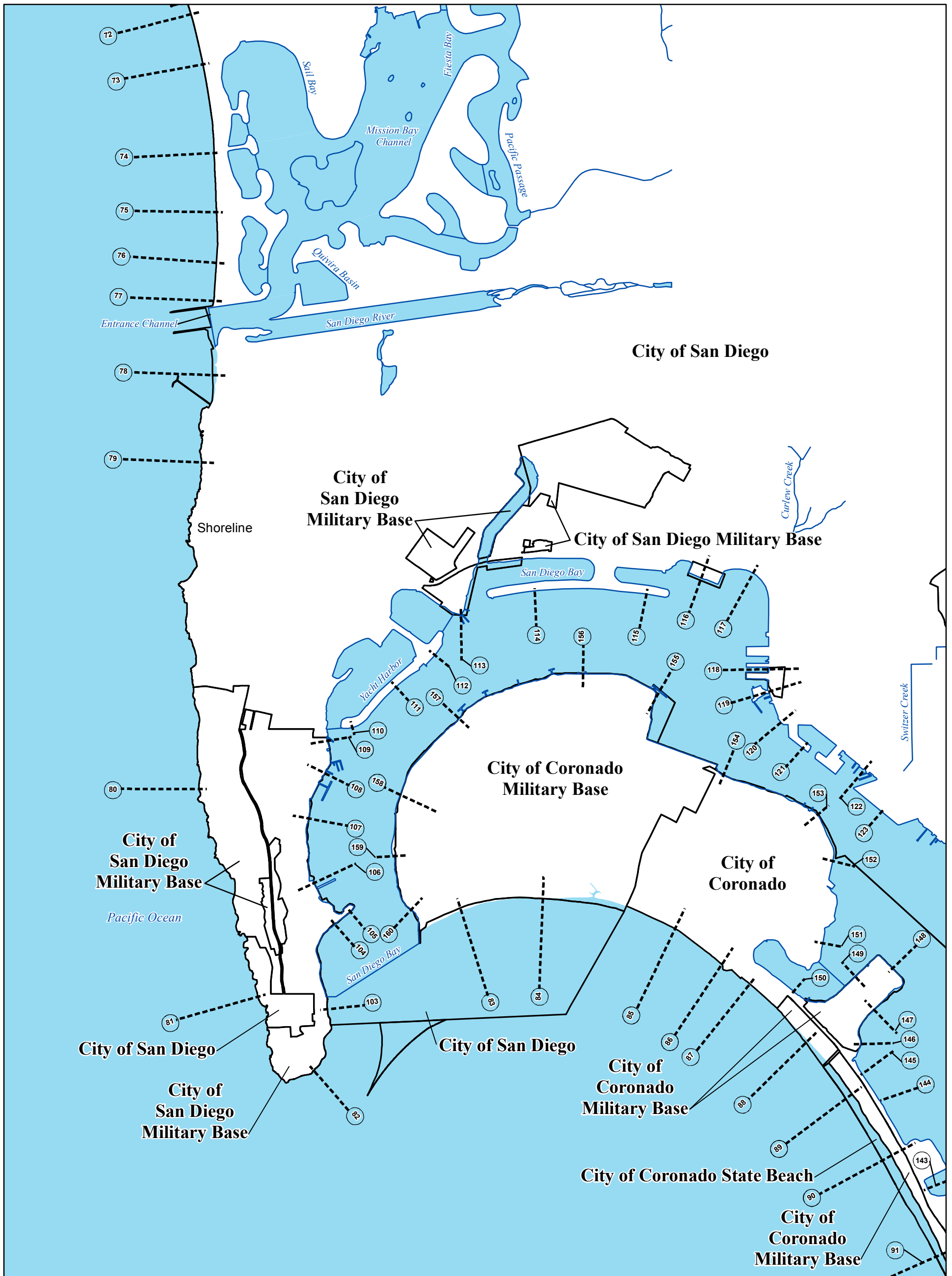
Transect Location Map

PANELS WITH TRANSECTS
1309, 1317, 1319, 1582, 1583, 1584, 1592




FEMA

Figure 9: Transect Location Map, continued



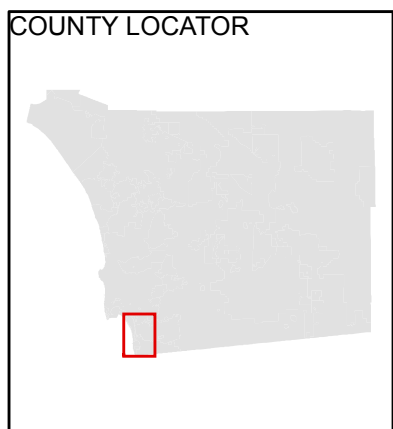
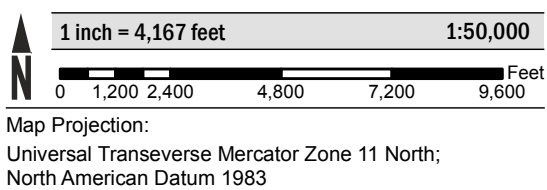
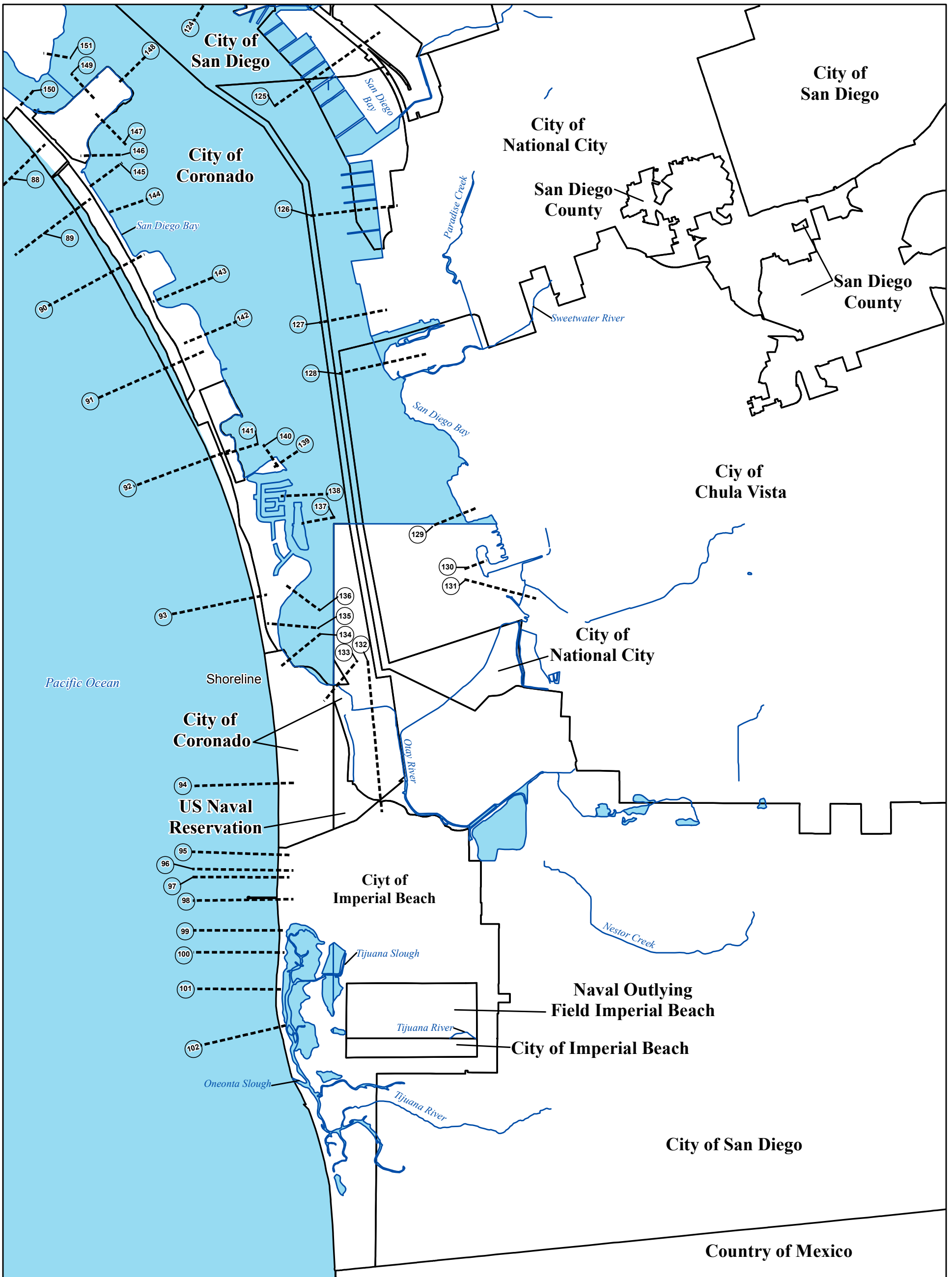
NATIONAL FLOOD INSURANCE PROGRAM
Transect Location Map

PANELS WITH TRANSECTS
1592, 1594, 1857, 1859, 1886, 1878, 1877, 1879, 1881, 1883, 1887, 1891, 1892, 1894.



FEMA

Figure 9: Transect Location Map, continued



NATIONAL FLOOD INSURANCE PROGRAM

Transect Location Map

PANELS WITH TRANSECTS

1891, 1892, 1894, 1911, 1913, 2132, 2151, 2134



FEMA

5.4 Alluvial Fan Analyses

Alluvial fan flooding can pose significant risk to communities due to uncertain flow paths and the potential for mud and debris flows. Alluvial fans and flooding on alluvial fans show great diversity because of variations in climate, fan history, rates and styles of tectonism, source area lithology, vegetation, and land use. Acknowledging this diversity, FEMA developed an approach that considers site-specific conditions in the identification and mapping of flood hazards on alluvial fans. The FEMA alluvial fan methodology was used to determine the flood depths and velocities on the alluvial fans described in Table 18.

A summary of the peak discharge at the fan apex and results for the 1% annual chance determinations for all the streams studied by alluvial fan analyses is shown in Table 19, “Results of Alluvial Fan Analyses.”

Table 18: Summary of Alluvial Fan Analyses

Flooding Source	Location From (apex)	Location To (toe)	Drainage Area above Apex (sq mi)	Model(s) Used	Date Analysis was Completed	Method Description
Borrego Palm Canyon	From apex of fan	Borrego Sink area	23.3	*	*	*
Box Canyon	From apex of fan	Borrego Sink area	5.9	*	*	*
Coyote Canyon	From apex of fan	Borrego Sink area	132.0	*	*	*
Culp-Tubb Canyon	From apex of fan	Borrego Sink area	13.0	*	*	*
Dry Canyon	From apex of fan	Borrego Sink area	1.9	*	*	*
Vado Canyon	From apex of fan	Borrego Sink area	3.5	*	*	*
Fire Canyon	From apex of fan	Borrego Sink area	0.8	*	*	*
Hellhole Canyon	From apex of fan	Borrego Sink area	4.8	*	*	*
Henderson Canyon	From apex of fan	Borrego Sink area	4.8	*	*	*
Unnamed Canyon	From apex of fan	Borrego Sink area	4.6	*	*	*

*Data not available

Table 19: Results of Alluvial Fan Analyses

Flooding Source	Location From (apex)	Location To (toe)	1% Annual Chance Peak Flow at Fan Apex (cfs)	Flood Zones and Depths (ft)	Minimum Velocity (fps)	Maximum Velocity (fps)
Borrego Palm Canyon	From apex of fan	Borrego Sink area	10,650	AO 2-4', A	6	9
Box Canyon	From apex of fan	Borrego Sink area	3,850	AO 2-3', AO 6'	7	11
Coyote Creek	From apex of fan	Borrego Sink area	24,000	AO 1-6', A	5	11
Culp-Tubb Canyon	From apex of fan	Borrego Sink area	8,500	AO 1-4'	5	9
Dry Canyon	From apex of fan	Borrego Sink area	1,700	AO 1-2'	3	7
El Vado Canyon	From apex of fan	Borrego Sink area	2,200	AO 1-2', A	4	7
Fire Canyon	From apex of fan	Borrego Sink area	900	AO 1-2'	4	7
Hellhole Canyon	From apex of fan	Borrego Sink area	6,450	AO 2-3'	7	9
Henderson Canyon	From apex of fan	Borrego Sink area	3,500	AO 1-3', A	4	8
Unnamed Canyon	From apex of fan	Borrego Sink area	2,900	AO 2-3', AO 6'	7	11

SECTION 6.0 – MAPPING METHODS

6.1 Vertical and Horizontal Control

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

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

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

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

To obtain current elevation, description, and/or location information for benchmarks in the area, please contact information services Branch of the NGS at (301) 713-3242, or visit their website at www.ngs.noaa.gov.

A countywide conversion factor of +2.20 feet was calculated for San Diego County.

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

Table 21: Stream-Based Vertical Datum Conversion
[Not Applicable to this Flood Risk Project]

6.2 Base Map

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

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

Table 22: Base Map Sources

Data Type	Data Provider	Data Date	Data Scale	Data Description
USGS 7.5-Minute Series Topographic Map	USGS	1989	1:24000	Spatial and attribute information for the index of USGS 7.5-Minute Series Topographic Map boundaries.
Digital Orthophoto Quadrangle	USGS	1989		Spatial and attribute information for the index of USGS DOQ boundaries.
Permanent Bench Mark Data Sheets	National Geodetic Survey	2002		Spatial and attribute information for permanent benchmarks.
Township and Range boundary lines	Cal-Atlas Geospatial Clearinghouse	1997		Spatial and attribute information for attribute information for Township and Range boundary lines.
USDA - NAIP 2009 Imagery	USDA-FSA Aerial Photography Field Office	2009		Spatial and attribute information for georectified aerial photographs.
Political Boundaries	ESRI	2004	1:12,000	Spatial and attribute information for various boundaries, cultural features, and other files.
Roads and Political Boundaries	San Diego County	2011		Spatial and attribute information for various data, including transportation and county and city boundaries.
Structures	San Diego Association of Governments (SANDAG)	2011	1:12,000	Spatial and attribute information for various data.

Table 22: Base Map Sources, continued

Data Type	Data Provider	Data Date	Data Scale	Data Description
Structures	San Diego Geographic Information Source	2011		Spatial and attribute information for Reservation, Drainpipes, and roads.
NHD streamlines and waterbodies	National Hydrography Dataset	2011	1:24,000	Spatial and attribute information for water features and water names.
Encinitas Roads	City of Encinitas	2011		Alleys and freeway ramps provided by City of Encinitas.
USDA - NAIP 2016 Imagery	USDA-FSA Aerial Photography Field Office	2016	1 meter GSD	National Agriculture Imagery Program (NAIP) mosaicked County Image for San Diego County, CA.
Watershed Boundary Dataset	USDA	2013	1:24,000	HUC-8 boundaries.
Transportation Features	U.S. Department of Commerce, U.S. Census Bureau	2014	1:24,000	U.S. Census seamless national transport line database.

*Data not available

6.3 Floodplain and Floodway Delineation

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

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

In cases where the 1% and 0.2% annual chance floodplain boundaries are close together, only the 1% annual chance floodplain boundary has been shown. Small areas within the floodplain

boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

Table 23: Summary of Topographic Elevation Data used in Mapping

Community	Flooding Source	Source for Topographic Elevation Data					
		Description	Scale	Contour Interval	RMSE _z	Accuracy _z	Citation
San Diego County, Unincorporated Areas	Pacific Ocean	LiDAR OPC/USGS 2009-2011 & BATHY NOAA	N/A	2 ft	N/A	N/A	USGS 2009-2011
San Diego, City of	Alvarado Creek	Topographic map	1:2,400	1 ft	N/A	N/A	City of San Diego 1992
Oceanside, City of	Pilgrim Creek	Topographic Map	1:400	5 ft	N/A	N/A	City of Oceanside 1990
Chula Vista, City of; Escondido, City of; Imperial Beach, City of; San Diego, City of; San Diego County, Unincorporated Areas	Keys Canyon Creek, Kit Carson Park Creek, Murphy Canyon Creek, Poggi Canyon Creek, Potrero Creek, Spring Valley Creek, Tecate Creek, Tijuana River	Topographic Maps	1:24,000	20 ft	N/A	N/A	USGS, 1967-1988
San Diego, City of	Nestor Creek	Topographic Maps	1:1,200	N/A	N/A	N/A	USACE, 1987
San Diego, City of	Carmel Valley Creek	Topographic Maps	1:2,400	5 ft	N/A	N/A	San-Lo Aerial Surveys, April 1985

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

Community	Flooding Source	Source for Topographic Elevation Data					
		Description	Scale	Contour Interval	RMSE _z	Accuracy _z	Citation
Chula Vista, City of; Del Mar, City of; Encinitas, City of; Escondido, City of; Imperial Beach, City of; Oceanside, City of; San Diego, City of; San Diego County, Unincorporated Areas; Solano Beach, City of; Vista, City of	Buena Creek, Buena Vista Creek, Buena Vista Creek Tributary 1, Buena Vista Creek Tributary 2, Buena Vista Creek Tributary 3, Buena Vista Creek Tributary 4, Escondido Creek, Garrison Creek, Otay River, Poggi Canyon Creek, Rice Canyon Creek, San Dieguito River, San Elijo Creek, San Luis Rey River, Santa Maria Creek (San Pasqual Valley Area), South Fork Moosa Canyon Creek, Spring Valley Creek, Sweetwater River, Telegraph Canyon Creek, Tijuana River	Aerial Photographs	1:6,300 1:12,000	N/A	N/A	N/A	Harl Pugh and Associates, 1983
Chula Vista, City of; Encinitas, City of; Escondido, City of; Imperial Beach, City of; Oceanside, City of; San Diego, City of; San Diego County, Unincorporated Areas; Vista, City of	Agua Hedionda Creek, Borrego Valley, Buena Creek, Buena Vista Creek, Buena Vista Creek Tributary 1, Buena Vista Creek Tributary 2, Buena Vista Creek Tributary 3, Buena Vista Creek Tributary 4, Carroll Canyon Creek, Encanto Branch, Escondido Creek, Florida Drive Branch, Garrison Creek, Home Avenue Branch, Las Chollas Creek, Las Puleta Creek, Nestor Creek, Otay River, Poggi Canyon Creek, Rice Canyon Creek, Rose Canyon Creek, San Clemente Canyon Creek, San Elijo Creek, San Luis Rey River,	Topographic Maps	1:2,400	5 ft	N/A	N/A	San Diego County, 1962-1983

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

Community	Flooding Source	Source for Topographic Elevation Data					
		Description	Scale	Contour Interval	RMSE _z	Accuracy _z	Citation
Chula Vista, City of; Encinitas, City of; Escondido, City of; Imperial Beach, City of; Oceanside, City of; San Diego, City of; San Diego County, Unincorporated Areas; Vista, City of (continued)	Santa Maria Creek (San Pasqual Valley Area), South Fork Moosa Canyon Creek, South Las Chollas Creek, Sweetwater River, Switzer Creek, Tecolote Creek, Telegraph Canyon Creek, Tijuana River, Wabash Branch	Topographic Maps	1:2,400	5 ft	N/A	N/A	San Diego County, 1962-1983
San Diego, City of; San Diego County, Unincorporated Areas	San Diego River	Topographic Maps	1:1,200	2 ft	N/A	N/A	USACE, 1979
San Diego, City of	Los Pensquito Creek	Aerial Photographs	1:1,200	N/A	N/A	N/A	Mission Aerial Photos, 1979
Oceanside, City of	Garrison Creek; Loma Alta Creek; Pilgrim Creek; San Luis Rey River	Aerial Photographs	1:4,800	N/A	N/A	N/A	Abrams Aerial Survey, Inc., August 1978
Chula Vista, City of; Escondido, City of; Imperial Beach, City of; National City, City of; San Diego, City of; San Diego County, Unincorporated Areas; Santee, City of	Borrego Valley, Carroll Canyon Creek, Encanto Branch, Florida Drive Branch, Home Avenue Branch, Kit Carson Park Creek, Las Chollas Creek, Las Puleta Creek, Los Pensquitos Creek, Murphy Canyon Creek, Murray Canyon Creek, Nestor Creek, Otay River, Paradise Creek, Rose Canyon Creek, San Clemente Canyon Creek, San Diego River, Santa Maria Creek, Santa Ysabel Creek,	Topographic Maps	1:2,400	5 ft	N/A	N/A	City of San Diego, 1976-1978

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

Community	Flooding Source	Source for Topographic Elevation Data					
		Description	Scale	Contour Interval	RMSE _z	Accuracy _z	Citation
Chula Vista, City of; Escondido, City of; Imperial Beach, City of; National City, City of; San Diego, City of; San Diego County, Unincorporated Areas; Santee, City of (continued)	Soledad Canyon, South Las Chollas Creek, Sweetwater River, Switzer Creek, Tecolote Creek, Telegraph Canyon Creek, Tijuana River, Wabash Branch	Topographic Maps	1:2,400	5 ft	N/A	N/A	City of San Diego, 1976-1978
Chula Vista, City of; Escondido, City of; Imperial Beach, City of; San Diego, City of; San Diego County, Unincorporated Areas; Santee, City of	Kit Carson Park Creek, Murphy Canyon Creek, Nestor Creek, Otay River, San Diego River, Santa Maria Creek, Santa Ysabel Creek, Soledad Canyon, Tijuana River	Aerial Photographs	1:2,400	N/A	N/A	N/A	San-Lo Aerial Surveyors, Inc., 1972-1978
Carlsbad, City of; Oceanside, City of	Buena Vista Creek	Aerial Surveys	1:2,400	2 ft	N/A	N/A	San Diego County, September 17, 1975
Chula Vista, City of; National City, City of; San Diego County, Unincorporated Areas	Paradise Creek, Sweetwater River	Topographic Maps	1:600	2 ft	N/A	N/A	California Department of Transportation, April 1975
Poway, City of; San Diego, City of	Beeler Creek, Green Valley Creek, Green Valley Creek Tributary, Los Pensacitos Creek, North Branch Poway Creek, Pomerado Creek, Poway Creek, Rattlesnake Creek, South Branch Poway Creek	Aerial Photographs	1:2,400	N/A	N/A	N/A	Western Aerial Surveys, 1973 and 1974

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

Community	Flooding Source	Source for Topographic Elevation Data					
		Description	Scale	Contour Interval	RMSE _z	Accuracy _z	Citation
San Diego County, Unincorporated Areas	Hatfield Creek, North Tributary to Santa Maria Creek, Santa Maria Creek (Santa Maria Valley Area), South Tributary to Santa Maria Creek, Tributary of South Tributary to Santa Maria Creek	Aerial Survey	1:2,400	N/A	N/A	N/A	Inland Aerial Surveys, November 1974
San Diego, City of	Los Pensaquitos Creek	Topographic Maps	1:2,400	5 ft	N/A	N/A	Teledyne Geotronics for San Diego County, 1973
Chula Vista, City of; National City, City of; San Diego County, Unincorporated Areas	Paradise Creek, Sweetwater River	Topographic Maps	1:2,400	5 ft	N/A	N/A	National City, March 1973
Chula Vista, City of; Escondido, City of; Imperial Beach, City of; San Diego, City of; San Diego County, Unincorporated Areas; Santee, City of	Casa de Oro Creek, Kit Carson Park Creek, Los Pensaquitos Creek, Murphy Canyon Creek, Nestor Creek, Otay River, San Diego River, Santa Maria Creek, Santa Ysabel Creek, Soledad Canyon, Spring Valley Creek, Tijuana River	Aerial Photographs	1:6,000	N/A	N/A	N/A	Aero Service Corporation, February 1973
San Diego, City of	Murphy Canyon Creek	Basic Design Plan for Interstate Highway 15	1:2,400	2 ft	N/A	N/A	State of California, May 1971

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

Community	Flooding Source	Source for Topographic Elevation Data					
		Description	Scale	Contour Interval	RMSE _z	Accuracy _z	Citation
Chula Vista, City of; Escondido, City of; San Diego, City of; San Diego County, Unincorporated Areas	Keys Canyon Creek, Kit Carson Park Creek , Poggi Canyon Creek, Potrero Creek, Tecate Creek	Topographic Maps	1:24,000	20 ft	N/A	N/A	USGS, 1960-1971
San Diego, City of	Murphy Canyon Creek	Map Manuscripts	1:1,200	2 ft	N/A	N/A	USACE, 1970
San Diego, City of	Murray Canyon Creek	Topographic Maps	1:1,200	2 ft	N/A	N/A	VTN, Inc., December 1970
San Diego, City of	Carmel Valley Creek	Topographic Maps	1:1,200	4 ft	N/A	N/A	State of California Department of Transportation, Topographic Maps, August 1969
El Cajon, City of; San Diego County, Unincorporated Areas	Broadway Creek, County Ditch Creek, Forester Creek	Topographic Maps	1:2,400	5 ft	N/A	N/A	American Aerial Surveys, Incorporated, 1958, 1959

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

BFEs shown at cross sections on the FIRM represent the 1% annual chance water surface elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report. Rounded whole-foot elevations may be shown on the FIRM in coastal areas, areas of ponding, and other areas with static base flood elevations.

Table 24: Floodway Data

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
ZV	2,835	1,020	2,206	4.5	12.5	12.5	12.6	0.1
ZW	3,310	980	2,595	3.8	14.6	14.6	14.7	0.1
ZX	3,760	955	2,144	4.6	15.9	15.9	15.9	0.0
ZY	4,640	770	2,069	4.8	22.2	22.2	22.2	0.0
ZZ	5,330	390	1,413	7.1	27.2	27.2	27.6	0.4

¹Feet above mouth

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: AGUA HEDIONDA CREEK (AT CITY OF CARLSBAD)

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	6,140	318	1,452	6.8	34.7	34.7	34.8	0.1
B	6,480	310	1,820	5.4	37.2	37.2	37.2	0.0
C	6,925	117	708	14.0	40.8	40.8	40.8	0.0
D	7,030	118	1,036	9.6	43.6	43.6	43.6	0.0
E	7,260	109	946	10.4	44.2	44.2	44.2	0.0
F	7,410	98	661	14.9	45.7	45.7	45.7	0.0
G	8,015	300	1,799	4.5	50.4	50.4	50.5	0.1
H	8,350	93	944	8.6	50.4	50.4	50.7	0.3
I	8,745	97	908	8.9	51.0	51.0	51.3	0.3
J	9,320	106	927	8.7	52.1	52.1	52.7	0.6
K	9,850	73	526	15.4	54.1	54.1	54.1	0.0
L	10,620	300	1,136	7.1	62.6	62.6	63.2	0.6
M	11,185	200	832	9.7	64.4	64.4	64.4	0.0
N	11,650	200	945	8.5	68.7	68.7	69.7	1.0
O	12,100	465	1,559	5.2	72.0	72.0	72.9	0.9
P	12,590	372	1,326	5.9	75.7	75.7	76.3	0.6
Q	12,910	222	812	9.6	78.1	78.1	78.1	0.0
R	13,340	147	1,177	6.6	81.4	81.4	82.0	0.6
S	13,740	129	1,166	6.7	83.1	83.1	84.0	0.9
T	14,040	205	831	9.4	86.4	86.4	86.4	0.0
U	14,430	200	948	8.2	90.1	90.1	90.8	0.7
V	14,900	140	832	9.4	94.0	94.0	94.7	0.7
W	15,360	130	836	9.3	99.5	99.5	99.5	0.0
X	15,560	153	673	11.6	104.6	104.6	105.3	0.7

¹Feet above mouth

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: AGUA HEDIONDA CREEK (AT CITY OF CARLSBAD)

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	-200	283	749	9.4	354.8	354.8	354.8	0.0
B	60	260	*	*	356.8	356.8	356.8	0.0
C	673	160	*	*	366.3	366.3	366.3	0.0
D	820	*	*	*	*	*	*	*
E	1,087	80	*	*	389.0	389.0	389.0	0.0
F	1,350	81	814	3.3	389.0	389.0	389.0	0.0
G	1,772	302	2,783	1.0	389.2	389.2	389.2	0.0
H	2,202	260	*	*	389.2	389.2	389.2	0.0
I	2,462	222	1,789	1.5	389.2	389.2	389.2	0.0
J	2,678	400	*	*	389.3	389.3	389.3	0.0
K	3,281	50	*	*	391.6	391.6	391.6	0.0
L	3,506	145	584	4.6	393.3	393.3	393.3	0.0
M	3,963	220	989	2.7	399.1	399.1	399.3	0.2
N	4,392	130	722	3.7	403.5	403.5	403.5	0.0
O	5,264	105	299	9.0	411.1	411.1	411.1	0.0
P	5,518	128	464	5.8	413.6	413.6	413.7	0.1
Q	5,770	75	255	10.6	416.1	416.1	416.2	0.1
R	6,118	214	1,104	2.5	422.9	422.9	423.6	0.7
S	6,748	117	301	9.0	433.6	433.6	433.6	0.0
T	7,091	85	371	5.7	440.9	440.9	441.0	0.1
U	7,534	125	277	7.6	443.7	443.7	443.7	0.0
V	7,911	120	325	6.5	450.4	450.4	450.4	0.0
W	8,301	83	221	9.5	457.5	457.5	457.5	0.0
X	8,670	72	211	10.0	465.7	465.7	465.7	0.0
Y	8,987	45	185	11.4	467.6	467.6	467.6	0.0
Z	9,446	40	175	12.0	477.8	477.8	478.0	0.2

¹Feet above confluence with Buena Creek

*Data not available

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: AGUA HEDIONDA CREEK (AT CITY OF VISTA)

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	9,946	25	150	14.0	486.7	486.7	487.0	0.3
AB	10,207	35	185	11.4	491.6	491.6	492.2	0.6
AC	10,610	200	951	2.2	528.9	528.9	529.9	1.0

¹Feet above confluence with Buena Creek

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: AGUA HEDIONDA CREEK (AT CITY OF VISTA)

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-P	*	*	*	*	*	*	*	*
Q	16,284	43	273	14.3	341.9	341.9	341.9	0.0
R	17,320	27	208	15.9	350.3	350.3	350.3	0.0
S	21,067	33	206	9.7	383.0	383.0	383.0	0.0
T	21,497	33	149	12.1	385.4	385.4	385.4	0.0
U	22,933	33	250	7.2	404.6	404.6	404.6	0.0
V	24,278	379	289	6.2	417.8	417.8	418.6	0.8
W	24,958	60	636	4.7	424.8	424.8	425.4	0.6
X	26,122	57	308	5.2	432.7	432.7	432.7	0.0
Y	26,425	27	144	11.1	441.6	441.6	441.6	0.0
Z	26,707	28	181	8.8	446.3	446.3	446.4	0.1
AA	26,898	32	202	7.9	448.9	448.9	449.4	0.5
AB	27,235	32	260	6.1	453.4	453.4	454.0	0.6
AC	27,408	34	270	5.9	455.4	455.4	456.3	0.9
AD	27,605	25	215	10.7	456.2	456.2	456.9	0.7

¹Feet above confluence with San Diego River

*Data not available

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: ALVARADO CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	2,700	62	414	9.7	1,077.9	1,077.9	1,078.9	1.0
B	3,150	58	361	11.1	1,089.0	1,089.0	1,089.1	0.1
C	3,520	56	361	11.1	1,094.6	1,094.6	1,094.6	0.0
D	3,767	85	399	10.0	1,099.9	1,099.9	1,100.1	0.2
E	3,912	89	633	6.3	1,102.2	1,102.2	1,102.7	0.5
F	3,932	95	604	6.6	1,104.1	1,104.1	1,104.1	0.0
G	4,092	69	363	11.0	1,106.7	1,106.7	1,106.9	0.2
H	4,372	51	310	12.9	1,114.1	1,114.1	1,114.1	0.0
I	4,712	66	353	11.3	1,124.9	1,124.9	1,125.1	0.2
J	5,132	57	339	11.8	1,130.0	1,130.0	1,130.6	0.6
K	5,482	77	380	10.5	1,135.9	1,135.9	1,136.1	0.2
L	5,814	97	416	9.6	1,148.4	1,148.4	1,149.0	0.6
M	6,294	62	362	11.0	1,169.8	1,169.8	1,169.8	0.0
N	6,524	94	616	6.5	1,172.8	1,172.8	1,173.1	0.3
O	6,954	91	405	9.9	1,177.3	1,177.3	1,177.6	0.3
P	7,354	55	322	12.4	1,186.3	1,186.3	1,186.3	0.0
Q	7,704	146	424	9.4	1,199.6	1,199.6	1,199.6	0.0
R	7,934	69	390	10.3	1,203.1	1,203.1	1,203.3	0.2
S	8,364	48	308	13.0	1,213.0	1,213.0	1,213.0	0.0
T	8,698	57	302	13.2	1,225.7	1,225.7	1,225.7	0.0
U	9,098	49	334	12.0	1,235.2	1,235.2	1,235.2	0.0
V	9,416	61	339	11.8	1,249.0	1,249.0	1,249.0	0.0
W	9,836	64	346	10.1	1,270.7	1,270.7	1,270.7	0.0
X	10,216	68	296	11.8	1,293.7	1,293.7	1,293.7	0.0
Y	10,536	46	256	13.7	1,306.6	1,306.6	1,306.6	0.0
Z	10,948	51	315	11.1	1,335.5	1,335.5	1,335.5	0.0

¹Feet above confluence with Sweetwater River

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: BEAVER HOLLOW 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	11,197	42	254	13.8	1,342.9	1,342.9	1,342.9	0.0
AB	11,597	44	293	12.0	1,359.0	1,359.0	1,359.0	0.0
AC	11,867	40	243	14.4	1,368.4	1,368.4	1,368.4	0.0
AD	12,217	45	248	14.1	1,375.4	1,375.4	1,375.5	0.1
AE	12,629	41	243	14.5	1,386.4	1,386.4	1,386.4	0.0
AF	12,799	106	375	9.3	1,397.7	1,397.7	1,397.8	0.1
AG	12,933	94	787	4.5	1,404.3	1,404.3	1,405.0	0.7
AH	13,183	50	275	12.8	1,405.1	1,405.1	1,405.1	0.0
AI	13,466	79	332	10.6	1,410.9	1,410.9	1,410.9	0.0
AJ	13,640	139	538	6.5	1,418.9	1,418.9	1,418.9	0.0
AK	13,650	134	518	6.8	1,418.9	1,418.9	1,418.9	0.0
AL	13,856	63	301	11.7	1,423.6	1,423.6	1,423.6	0.0
AM	14,025	38	284	12.4	1,424.7	1,424.7	1,424.7	0.0
AN	14,292	80	369	9.5	1,438.8	1,438.8	1,438.8	0.0
AO	14,530	37	271	13.0	1,449.1	1,449.1	1,449.1	0.0

¹Feet above confluence with Sweetwater River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BEAVER HOLLOW 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	440	201	916	3.9	426.3	426.3	426.7	0.4
B	1,025	106	609	5.9	429.5	429.5	429.8	0.3
C	1,450	87	322	11.2	432.3	432.3	432.4	0.1
D	2,175	117	390	9.2	439.0	439.0	439.0	0.0
E	2,680	178	705	5.1	446.6	446.6	446.6	0.0
F	3,680	275	495	7.3	460.3	460.3	460.3	0.0
G	4,390	160	618	10.3	469.7	469.7	469.7	0.0
H	5,285	235	567	10.3	480.0	480.0	480.2	0.2
I	6,200	200	913	3.9	491.2	491.2	491.5	0.3
J	7,305	300	1,607	2.2	500.6	500.6	500.6	0.0
K	8,120	230	702	5.1	507.1	507.1	507.1	0.0
L	8,780	247	503	7.2	516.6	516.6	516.7	0.1
M	9,755	125	369	9.8	529.3	529.3	529.3	0.0
N	10,835	97	357	10.1	544.3	544.1	544.5	0.4
O	11,735	148	264	7.2	552.5	552.5	552.5	0.0
P	12,770	233	343	5.5	567.6	567.6	567.6	0.0
Q	13,540	298	386	4.9	579.0	579.0	579.0	0.0
R	14,720	133	208	6.7	600.1	600.1	600.4	0.3
S	15,480	277	354	4.0	608.1	608.1	608.1	0.0
T	16,460	226	275	5.1	621.5	621.5	621.7	0.2
U	17,380	331	370	3.8	633.2	633.2	633.2	0.0
V	17,850	142	259	5.4	639.6	639.6	639.6	0.0

¹Feet above confluence with Poway Creek

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: BEELER 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	450	25	76	9.6	379.7	379.7	379.7	0.0
B	1,800	33	125	5.1	382.2	382.2	382.2	0.0
C	2,233	49	254	2.5	385.8	385.8	385.8	0.0
D	2,700	35	104	5.0	388.3	388.3	388.3	0.0
E	3,240	288	331	3.7	391.3	391.3	391.3	0.0
F	3,800	165	364	3.2	394.1	394.1	394.7	0.6
G	4,400	26	103	11.4	396.9	396.9	397.0	0.1
H	5,400	43	209	4.9	405.4	405.4	405.7	0.3
I	5,800	32	176	5.8	405.8	405.8	406.6	0.8
J	6,350	217	516	2.0	412.6	412.6	413.6	1.0
K	7,400	272	663	1.4	417.9	417.9	418.1	0.2
L	7,910	145	317	2.8	421.5	421.5	421.7	0.2
M	8,425	19	85	10.6	422.8	422.8	422.9	0.1
N	9,135	20	104	8.7	426.8	426.8	426.8	0.0
O	10,010	17	51	17.6	432.8	432.8	432.8	0.0
P	10,600	16	38	24.0	436.9	436.9	436.9	0.0
Q	12,615	20	60	12.5	460.8	460.8	461.6	0.8
R	13,915	20	50	15.9	470.7	470.7	470.9	0.2

¹Feet above confluence with Foster Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BROADWAY 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	729	*	*	*	362.3	362.3	362.3	0.0
B	978	*	*	*	365.3	365.3	365.3	0.0
C	1,220	*	*	*	369.0	369.0	369.0	0.0
D	1,471	*	*	*	369.1	369.1	369.1	0.0
E	1,660	*	*	*	369.3	369.3	369.3	0.0
F	1,890	*	*	*	369.5	369.5	369.5	0.0
G	2,113	165	569	7.2	369.8	369.8	370.1	0.3
H	2,209	*	*	*	370.3	370.3	370.3	0.0
I	2,400	184	1,091	3.8	371.3	371.3	372.3	1.0
J	2,671	90	732	5.6	373.2	373.2	374.1	0.9
K	2,871	130	846	4.9	374.8	374.8	375.5	0.7
L	3,171	148	1,258	3.3	376.6	376.6	377.1	0.5
M	3,471	155	1,226	3.3	378.7	378.7	379.2	0.5
N	3,771	284	859	4.8	379.1	379.1	379.1	0.0
O	3,971	180	829	4.9	383.0	383.0	384.0	1.0
P	4,178	90	656	6.3	384.6	384.6	385.1	0.5
Q	5,260	*	*	*	393.5	393.5	393.5	0.0
R	5,960	*	*	*	398.5	398.5	398.5	0.0
S	2	2	2	2	2	2	2	2
T	2	2	2	2	2	2	2	2
U	2	2	2	2	2	2	2	2
V	7,476	*	*	*	415.3	415.3	415.3	0.0
W	7,712	181	608	5.7	416.3	416.3	417.1	0.8

¹Feet above confluence with Agua Hedionda Creek

²1-percent annual chance flood contained in culvert

*Data not available

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: BUENA CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	7,967	*	823	4.2	418.6	418.6	418.7	0.1
Y	8,213	307	473	7.3	419.7	419.7	419.7	0.0
Z	8,455	291	544	6.4	422.6	422.6	422.6	0.0
AA	8,654	314	621	5.9	424.4	424.4	424.4	0.0
AB	8,702	290	493	7.5	425.1	425.1	425.2	0.1
AC	8,771	248	497	7.4	425.7	425.7	425.7	0.0
AD	8,811	210	479	7.7	426.4	426.4	426.4	0.0
AE	8,860	190	433	8.0	427.4	427.4	427.6	0.2
AF	9,199	173	724	4.8	433.7	433.7	433.8	0.1
AG	9,378	214	784	4.4	435.4	435.4	435.6	0.2
AH	9,630	224	1,089	3.2	443.8	443.8	443.9	0.1
AI	9,764	169	899	3.8	443.8	443.8	443.9	0.1
AJ	9,994	71	603	5.7	446.2	446.2	446.5	0.3
AK	10,431	130	671	5.2	451.3	451.3	452.0	0.7
AL	10,613	83	462	7.5	452.7	452.7	453.1	0.4
AM	10,862	73	301	11.5	456.1	456.1	456.1	0.0
AN	10,917	130	385	9.6	461.4	461.4	461.4	0.0
AO	11,182	87	376	9.8	463.6	463.6	464.1	0.5
AP	11,433	98	571	6.5	466.6	466.6	467.1	0.5
AQ	11,684	85	353	10.5	469.1	469.1	469.1	0.0
AR	11,895	110	425	8.7	472.2	472.2	472.5	0.3
AS	12,108	75	327	11.3	478.8	478.8	478.8	0.0

¹Feet above confluence with Agua Hedionda Creek

*Data not available

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: BUENA 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
AT	12,347	180	666	5.0	482.2	482.2	482.7	0.5
AU	12,782	371	905	3.6	490.8	490.8	490.8	0.0
AV	12,844	400	469	7.0	491.7	491.7	491.8	0.1
AW	13,067	372	680	3.7	493.4	493.4	493.7	0.3
AX	13,331	133	327	7.6	499.3	499.3	499.4	0.1
AY	13,578	142	301	8.3	504.3	504.3	504.3	0.0
AZ	13,835	67	251	10.0	510.5	510.5	510.5	0.0
BA	14,084	40	197	12.7	515.3	515.3	515.8	0.5
BB	14,335	108	297	8.4	524.3	524.3	524.3	0.0
BC	14,573	135	325	7.7	529.4	529.4	529.6	0.2
BD	14,823	100	272	9.2	535.4	535.4	535.8	0.4
BE	15,070	125	310	8.1	544.6	544.6	544.8	0.2
BF	15,313	63	254	9.8	547.9	547.9	548.3	0.4
BG	15,550	46	206	12.1	554.4	554.4	555.2	0.8
BH	15,791	84	280	8.9	560.7	560.7	560.9	0.2
BI	16,048	39	195	12.8	567.5	567.5	567.7	0.2
BJ	16,276	98	299	8.4	572.9	572.9	573.4	0.5
BK	16,528	80	247	10.1	579.4	579.4	579.4	0.0
BL	16,774	68	263	9.5	583.4	583.4	583.6	0.2
BM	17,016	49	210	11.9	587.5	587.5	587.5	0.0
BN	17,270	43	202	12.4	596.8	596.8	596.8	0.0
BO	17,510	53	216	11.6	602.4	602.4	602.4	0.0
BP	17,570	55	212	11.8	606.6	606.6	606.6	0.0

¹Feet above confluence with Agua Hedionda Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BUENA 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
BQ	17,715	53	223	11.2	611.7	611.7	611.7	0.0
BR	18,020	50	210	11.9	618.6	618.6	618.6	0.0
BS	18,267	35	222	11.3	622.6	622.6	622.7	0.1
BT	18,280	70	358	5.5	622.9	*	*	*
BU	18,360	49	442	4.5	624.6	624.6	625.5	0.9
BV	18,420	62	621	3.2	632.1	632.1	632.1	0.0
BW	18,670	56	200	5.5	632.2	632.2	632.2	0.0
BX	18,840	31	283	3.9	638.7	638.7	638.7	0.0
BY	18,945	20	249	4.4	644.5	644.5	644.5	0.0
BZ	18,975	31	219	5.0	644.6	644.6	644.6	0.0
CA	19,150	26	98	11.2	649.7	649.7	650.0	0.3
CB	19,260	32	108	10.2	653.6	653.6	653.9	0.3
CC	19,283	20	183	6.0	658.9	658.9	658.9	0.0
CD	19,503	53	185	5.9	659.3	659.3	659.3	0.0
CE	19,543	61	252	4.4	664.8	664.8	664.8	0.0
CF	19,708	57	282	3.9	665.1	665.1	665.1	0.0
CG	19,928	27	100	11.0	668.1	668.1	668.1	0.0
CH	20,148	31	105	10.5	676.5	676.5	676.5	0.0

¹Feet above confluence with Agua Hedionda Creek

*Data not available

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BUENA 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	8,678	133	1,267	6.7	31.4	31.4	31.5	0.1
B	9,469	140	1,173	7.2	33.6	33.6	33.6	0.0
C	10,054	74	542	15.5	35.0	35.0	35.0	0.0
D	10,348	226	2,940	2.9	42.0	42.0	42.4	0.4
E	10,884	468	3,904	2.2	42.1	42.1	42.6	0.5
F	11,550	434	3,137	2.6	42.2	42.2	43.0	0.8
G	12,248	449	1,860	4.3	43.0	43.0	43.8	0.8
H	12,788	356	1,502	5.3	45.4	45.4	46.1	0.7
I	13,541	313	1,286	6.2	51.9	51.9	52.3	0.4
J	14,543	341	1,074	7.4	59.2	59.2	60.1	0.9
K	15,287	215	887	9.0	69.0	69.0	69.2	0.2
L	16,002	280	1,234	6.5	75.7	75.7	76.6	0.9
M	16,150	385	2,121	3.8	80.4	80.4	81.3	0.9
N	17,040	189	1,016	7.9	91.5	91.5	92.0	0.5
O	17,526	260	717	11.2	103.9	103.9	104.0	0.1
P	17,910	68	918	8.7	148.7	148.7	148.7	0.0
Q	18,367	129	1,139	7.0	165.1	165.1	165.1	0.0
R	18,759	232	1,681	4.8	167.4	167.4	167.4	0.0
S	19,320	112	949	8.4	172.8	172.8	172.8	0.0
T	20,155	186	1,323	6.0	178.1	178.1	178.1	0.0
U	20,662	155	979	8.2	179.8	179.8	179.8	0.0
V	21,042	151	741	10.8	182.8	182.8	182.8	0.0
W	21,531	125	636	12.6	188.5	188.5	188.5	0.0
X	21,916	58	483	16.6	194.4	194.4	194.4	0.0
Y	22,284	136	687	11.6	197.2	197.2	197.2	0.0

¹Feet above mouth

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: BUENA VISTA 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
Z	22,784	136	714	11.2	200.1	200.1	200.1	0.0
AA	23,281	91	842	9.5	205.2	205.2	205.2	0.0
AB	23,528	112	1,006	8.0	207.0	207.0	207.0	0.0
AC	24,095	170	908	8.8	209.7	209.7	209.7	0.0
AD	24,650	59	621	12.9	213.8	213.8	213.8	0.0
AE	24,985	73	806	9.9	216.3	216.3	217.1	0.8
AF	25,784	96	664	12.0	223.2	223.2	223.7	0.5
AG	26,343	125	1,160	6.9	229.4	229.4	229.7	0.3
AH	26,607	110	726	11.0	230.5	230.5	230.7	0.2
AI	26,823	109	1,051	7.4	234.4	234.4	234.4	0.0
AJ	27,023	114	966	8.1	237.3	237.3	237.3	0.0
AK	27,476	128	1,083	7.2	239.6	239.6	239.6	0.0
AL	27,763	235	957	8.2	241.1	241.1	241.1	0.0
AM	28,012	339	1,325	5.9	244.3	244.3	244.3	0.0
AN	28,231	328	1,691	4.6	247.6	247.6	247.6	0.0
AO	28,516	170	880	8.9	248.0	248.0	248.0	0.0
AP	28,746	92	550	14.2	250.4	250.4	250.5	0.1
AQ	29,196	173	721	10.8	262.1	262.1	262.1	0.0
AR	30,223	94	565	13.8	273.8	273.8	273.8	0.0
AS	30,461	152	1,060	7.4	278.0	278.0	278.1	0.1
AT	30,683	119	747	10.4	283.2	283.2	283.4	0.2
AU	31,100	168	989	7.9	286.0	286.0	286.8	0.8
AV	31,250	118	781	10.0	287.4	287.4	287.4	0.0
AW	31,415	161	1,465	5.3	291.5	291.5	291.5	0.0

¹Feet above mouth

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: BUENA VISTA 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
AX	32,162	160	737	9.9	296.0	296.0	296.0	0.0
AY	32,711	240	1,620	5.8	300.9	300.9	301.0	0.1
AZ	33,184	180	1,395	4.5	301.3	301.3	301.6	0.3
BA	33,987	205	947	7.0	304.2	304.2	304.2	0.0
BB	35,154	91	808	11.0	307.1	307.1	307.1	0.0
BC	35,675	110	1,400	4.5	314.2	314.2	314.2	0.0
BD	35,832	64	752	8.4	314.2	314.2	314.2	0.0
BE	37,406	124	1,164	4.4	316.5	316.5	317.5	1.0
BF	38,045	34	187	19.9	317.9	317.9	317.9	0.0
BG	39,313	28	179	14.4	333.1	332.5	332.5	0.0
BH	41,360	166	427	4.0	350.2	350.2	351.0	0.8
BI	41,705	42	212	10.9	352.0	352.0	352.0	0.0
BJ	41,988	50	200	11.5	356.1	356.1	356.1	0.0
BK	42,268	40	184	12.5	360.1	360.1	360.1	0.0
BL	42,588	65	227	11.3	370.1	370.1	370.2	0.1
BM	42,689	30	169	13.6	371.5	371.5	371.5	0.0
BN	42,819	53	253	9.1	374.3	374.3	374.3	0.0
BO	43,048	35	178	13.0	375.7	375.7	375.7	0.0
BP	43,438	178	317	8.6	387.0	387.0	387.0	0.0

¹Feet above mouth

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BUENA VISTA 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	134	153	255	4.0	414.8	414.8	414.8	0.0
B	754	46	130	7.8	423.5	423.5	423.5	0.0
C	1,586	94	318	3.2	436.1	436.1	436.1	0.0
D	1,805	123	160	6.3	441.2	441.2	441.2	0.0
E	2,030	72	356	2.8	444.1	444.1	444.1	0.0
F	2,515	39	105	9.6	447.4	447.4	447.7	0.3
G	2,905	65	199	5.1	454.2	454.2	455.2	1.0
H	3,269	24	91	11.1	462.0	462.0	462.4	0.4
I	3,662	49	210	4.8	468.1	468.1	468.9	0.8
J	4,043	63	126	8.0	478.3	478.3	478.3	0.0

¹Feet above HEADWALL CULVERT AT Monte Vista Drive and South Santa Fe Avenue

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: BUENA VISTA CREEK TRIBUTARY 1

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	140	76	300	3.0	50.2	46.2 ²	46.9	0.7
B	430	43	193	4.7	50.2	46.9 ²	47.4	0.4
C	647	51	228	4.0	50.2	47.8 ²	48.0	0.3
D	1,083	44	210	4.3	50.2	49.0 ²	49.1	0.1
E	1,313	49	214	4.3	50.2	49.7 ²	49.8	0.1
F	1,583	38	168	5.4	50.7	50.7	50.7	0.0
G	1,933	41	174	5.2	52.4	52.4	52.4	0.0
H	2,533	44	193	4.7	57.7	57.7	57.7	0.0
I	2,811	46	186	4.9	58.7	58.7	58.7	0.0
J	3,101	45	204	4.5	59.6	59.6	59.6	0.0
K	3,530	50	101	6.2	61.1	61.1	61.1	0.0

¹Feet above confluence with Agua Hedionda Creek (At City of Carlsbad)

²Elevation computed without consideration of backwater effects from Agua Hedionda Creek (At City of Carlsbad)

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: CALAVERA 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	0	327	990	9.9	14.4	14.4	14.4	0.0
B	93	482	1,199	8.2	28.1	28.1	28.1	0.0
C	380	740	3,161	3.1	29.8	29.8	29.8	0.0
D	570	760	9,079	1.1	29.9	29.9	30.0	0.1
E	900	670	6,620	1.2	30.0	30.0	30.0	0.0
F	1,380	320	1,713	4.7	30.1	30.1	30.1	0.0
G	1,920	642	2,515	3.2	30.4	30.4	31.0	0.6
H	2,820	570	1,519	5.3	31.2	31.2	32.2	1.0
I	3,410	150	741	10.9	35.2	35.2	35.3	0.1
J	3,750	167	782	10.3	38.5	38.5	39.2	0.7
K	4,560	150	904	8.2	47.0	47.0	47.5	0.5
L	4,950	200	960	7.7	49.8	49.8	50.8	1.0
M	5,320	175	1,071	6.9	53.2	53.2	53.3	0.1
N	5,680	230	1,027	7.2	54.9	54.9	55.7	0.8
O	5,960	270	1,157	6.4	57.2	57.2	57.8	0.6
P	6,900	115	650	11.4	65.3	65.3	66.0	0.7
Q	7,340	160	1,267	5.9	70.3	70.3	70.9	0.6
R	7,840	130	735	10.1	72.0	72.0	72.9	0.9
S	8,380	175	935	6.7	76.4	76.4	77.1	0.7
T	8,930	155	682	9.2	79.6	79.6	79.8	0.2
U	9,290	230	1,292	4.9	81.4	81.4	82.3	0.9
V	10,025	230	799	7.9	84.6	84.6	84.8	0.2
W	10,736	80	581	9.1	86.7	86.7	87.3	0.6

¹Feet above cross section A (125 feet downstream from center of Sorrento Valley Road)

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY SAN DIEGO COUNTY, CALIFORNIA AND INCORPORATED AREAS	FLOODWAY DATA
		FLOODING SOURCE: CARMEL VALLEY CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	11,391	185	1,566	3.4	90.0	90.0	90.5	0.5
Y	11,942	164	1,196	4.4	90.3	90.3	90.7	0.4
Z	12,630	188	1,167	4.5	95.3	95.3	95.3	0.0
AA	13,349	188	1,358	3.9	100.1	100.1	100.1	0.0
AB	14,565	156	991	5.3	106.4	106.4	106.4	0.0
AC	15,453	249	1,781	3.0	108.2	108.2	108.2	0.0
AD	16,014	244	557	8.8	118.1	118.1	118.1	0.0
AE	16,178	250	713	6.9	121.0	121.0	121.0	0.0
AF	17,148	152	860	5.7	126.3	126.3	127.1	0.8
AG	17,778	395	1,249	3.9	128.4	128.4	129.4	1.0

¹Feet above cross section A (125 feet downstream from center of Sorrento Valley Road)

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: CARMEL VALLEY 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	0	147	614	10.9	67.1	67.1	67.1	0.0
B	20	150	906	7.4	67.9	67.9	68.9	1.0
C	330	204	969	6.9	70.6	70.6	70.6	0.0
D	850	304	1,208	5.5	74.1	74.1	74.2	0.1
E	1,050	155	1,000	6.7	74.7	74.7	74.8	0.1
F	1,220	98	512	13.1	74.7	74.7	74.7	0.0
G	1,490	270	874	7.7	80.1	80.1	80.3	0.2
H	1,630	263	1,533	4.4	81.6	81.6	81.6	0.0
I	1,770	259	1,674	4.0	81.8	81.8	81.8	0.0
J	1,825	220	1,370	4.9	81.8	81.8	81.8	0.0
K	1,945	195	1,091	6.1	81.9	81.9	82.0	0.1
L	1,995	210	1,092	6.1	82.0	82.0	82.2	0.2
M	2,165	370	1,654	4.1	82.7	82.7	83.0	0.3
N	2,305	121	595	11.3	84.7	84.7	85.1	0.4
O	2,333	126	702	9.5	86.8	86.8	87.3	0.5
P	2,360	175	1,111	6.0	88.1	88.1	88.6	0.5
Q	2,615	147	887	7.6	88.3	88.3	88.9	0.6
R	2,765	106	644	10.4	88.3	88.3	88.9	0.6
S	2,792	137	965	6.9	89.3	89.3	89.9	0.6
T	3,059	112	850	7.9	89.6	89.6	90.2	0.6
U	3,246	140	566	11.8	92.2	92.2	92.2	0.0
V	3,290	150	917	7.3	93.0	93.0	93.8	0.8
W	3,475	95	503	13.3	97.3	97.3	97.3	0.0

¹Feet above downstream face of Atchison, Topeka & Santa Fe Railway Bridge

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: CARROLL CANYON CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	3,718	124	963	7.0	99.0	99.0	100.0	1.0
Y	3,961	112	814	8.2	99.9	99.9	100.7	0.8
Z	4,192	118	943	5.9	101.4	101.4	101.8	0.4
AA	4,423	74	422	13.3	102.0	102.0	103.0	1.0
AB	4,907	235	919	6.1	107.8	107.8	108.8	1.0
AC	5,611	125	518	10.8	113.0	113.0	113.0	0.0
AD	6,282	266	795	7.0	119.4	119.4	120.0	0.6
AE	6,841	235	607	9.2	126.3	126.3	126.3	0.0
AF	7,721	251	850	6.6	133.2	133.2	134.1	0.9
AG	8,575	119	485	11.5	142.4	142.4	142.4	0.0
AH	8,865	107	599	9.4	144.8	144.8	145.1	0.3
AI	8,894	139	578	9.7	145.6	145.6	146.1	0.5
AJ	9,325	213	624	8.6	148.3	148.3	149.3	1.0
AK	9,560	239	629	8.9	151.7	151.7	152.0	0.3
AL	9,635	239	652	8.6	152.3	152.3	152.3	0.0
AM	10,305	101	451	10.0	158.9	158.9	159.9	1.0
AN	10,758	120	465	9.7	165.3	165.3	165.9	0.6
AO	11,338	72	356	12.6	171.3	171.3	171.3	0.0
AP	11,697	189	690	6.5	175.0	175.0	175.8	0.8
AQ	12,357	104	423	10.6	179.8	179.2	180.8	1.0
AR	12,753	160	684	6.6	183.8	183.8	184.8	1.0
AS	13,426	104	409	11.0	189.2	189.2	189.5	0.3
AT	14,119	265	792	5.6	194.7	194.7	195.7	1.0

¹Feet above downstream face of Atchison, Topeka & Santa Fe Railway Bridge

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: CARROLL CANYON 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
AU	14,399	200	533	9.5	199.9	199.9	199.9	0.0
AV	15,071	33	232	15.0	205.4	205.4	206.4	1.0
AW	15,650	100	578	6.9	211.4	211.4	212.3	0.9
AX	15,700	61	289	12.6	211.5	211.5	212.5	1.0
AY	16,080	52	283	14.0	215.3	215.3	215.5	0.2
AZ	16,738	68	307	13.2	222.2	222.2	222.8	0.6
BA	17,153	46	269	15.4	228.1	228.1	228.1	0.0
BB	17,403	39	245	14.3	230.9	230.9	231.2	0.3
BC	17,581	38	245	14.6	233.1	233.1	233.4	0.3
BD	17,820	46	300	12.4	235.5	235.5	236.2	0.7
BE	17,970	29	222	15.7	238.2	238.2	238.8	0.6
BF	18,062	100	891	6.2	251.1	251.1	251.1	0.0
BG	18,493	72	558	6.3	251.4	251.4	251.4	0.0
BH	18,885	160	759	4.8	252.4	252.4	252.5	0.1
BI	19,244	162	552	6.3	252.6	252.6	253.2	0.6
BJ	19,849	144	564	6.2	254.3	254.3	254.5	0.2
BK	20,029	229	1,064	3.3	255.2	255.2	255.3	0.1
BL	20,275	142	510	6.9	255.4	255.4	255.5	0.1
BM	20,440	248	453	7.7	258.7	258.7	258.7	0.0
BN	20,986	169	831	4.2	261.1	261.1	261.5	0.4
BO	21,389	125	359	9.7	263.2	263.2	263.6	0.4
BP	22,144	121	512	6.8	273.7	273.7	274.7	1.0
BQ	22,734	89	348	10.1	280.4	280.4	281.2	0.8

¹Feet above downstream face of Atchison, Topeka & Santa Fe Railway Bridge

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: CARROLL CANYON 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
BR	23,295	121	443	7.9	289.0	289.0	290.0	1.0
BS	24,012	62	305	11.5	306.3	306.3	306.3	0.0
BT	24,552	100	444	7.9	313.5	313.5	314.2	0.7
BU	25,002	69	490	7.1	323.3	323.3	324.3	1.0
BV	25,707	72	511	6.9	327.9	327.9	328.9	1.0
BW	26,142	42	272	12.9	332.9	332.9	332.9	0.0
BX	26,308	38	324	10.8	335.9	335.9	336.1	0.2
BY	26,628	35	521	6.8	345.5	345.5	345.5	0.0
BZ	26,936	236	1,123	3.1	345.7	345.7	346.4	0.7
CA	27,516	125	458	7.6	345.8	345.8	346.5	0.7
CB	28,084	210	490	7.2	349.6	349.6	349.7	0.1
CC	28,616	49	265	13.2	358.1	358.1	358.1	0.0
CD	29,080	137	483	7.2	362.7	362.7	362.7	0.0
CE	29,623	81	310	11.3	372.3	372.3	372.3	0.0
CF	29,978	328	621	5.6	381.6	381.6	382.6	1.0
CG	30,546	324	579	6.0	386.1	386.1	386.1	0.0
CH	30,872	335	651	5.4	390.4	390.4	390.4	0.0
CI	31,220	559	1,130	3.1	395.4	395.4	395.4	0.0
CJ	31,490	218	723	1.5	395.8	395.8	395.8	0.0
CK	31,690	29	103	10.7	396.4	396.4	396.4	0.0
CL	32,010	245	159	6.9	402.3	402.3	402.3	0.0
CM	32,080	28	101	10.9	402.7	402.7	402.7	0.0
CN	32,260	43	117	9.4	409.4	409.4	409.4	0.0

¹Feet above downstream face of Atchison, Topeka & Santa Fe Railway Bridge

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: CARROLL CANYON 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
CO	32,637	96	181	6.1	416.1	416.1	416.4	0.3
CP	32,924	16	96	11.4	421.5	421.5	421.5	0.0
CQ	33,509	36	137	8.1	426.3	426.3	426.4	0.1
CR	34,099	32	106	10.4	434.4	434.4	434.4	0.0
CS	34,709	17	86	12.9	443.9	443.9	444.9	1.0
CT	35,025	36	120	9.2	445.4	445.4	445.7	0.3
CU	35,698	56	479	2.4	463.7	463.7	463.7	0.0
CV	35,917	108	901	1.7	463.8	463.8	463.8	0.0
CW	36,193	91	353	3.8	463.8	463.8	463.8	0.0
CX	36,780	165	208	6.4	468.8	468.8	469.8	1.0
CY	37,430	84	308	4.4	478.8	478.8	479.8	1.0
CZ	37,862	157	358	3.7	484.0	484.0	484.9	0.9
DA	39,028	79	163	8.2	499.1	499.1	499.8	0.7
DB	39,821	93	197	6.8	509.8	509.8	510.0	0.2
DC	39,978	172	321	4.2	511.2	511.2	511.2	0.0
DD	40,693	89	169	7.9	522.2	522.2	523.0	0.8
DE	41,200	90	173	7.7	529.7	529.7	530.5	0.8
DF	41,525	40	131	10.2	534.3	534.3	534.9	0.6
DG	41,593	102	270	5.0	535.9	535.9	536.8	0.9
DH	42,090	79	162	8.3	541.4	541.4	541.5	0.1
DI	42,750	93	184	7.3	550.1	550.1	551.1	1.0
DJ	43,150	89	182	7.4	555.7	555.7	555.9	0.2
DK	43,350	134	195	6.9	561.0	561.0	561.0	0.0

¹Feet above downstream face of Atchison, Topeka & Santa Fe Railway Bridge

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: CARROLL CANYON 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
DL	43,980	209	297	4.5	567.5	567.5	567.5	0.0
DM	44,545	115	185	7.2	575.7	575.7	576.2	0.5
DN	45,388	182	235	5.7	588.0	588.0	588.4	0.4
DO	46,220	66	153	8.8	601.3	601.3	601.6	0.3
DP	46,810	60	153	8.8	612.3	612.3	613.2	0.9
DQ	47,315	49	141	9.5	621.8	621.8	622.4	0.6
DR	47,900	77	161	8.3	630.7	630.7	631.1	0.4
DS	48,500	81	165	8.1	642.9	642.9	642.9	0.0
DT	49,052	60	150	8.9	652.8	652.8	653.7	0.9
DU	49,218	37	129	10.4	657.2	657.2	657.9	0.7
DV	49,475	130	288	4.7	660.2	660.2	661.2	1.0
DW	49,700	139	197	6.8	667.5	667.5	667.5	0.0
DX	50,370	67	154	8.7	685.6	685.6	686.6	1.0
DY	50,985	100	176	7.6	701.4	701.4	701.4	0.0
DZ	51,640	51	141	9.5	717.7	717.7	717.7	0.0
EA	52,000	58	148	9.1	726.4	726.4	726.4	0.0
EB	52,350	55	145	9.2	735.5	735.5	735.5	0.0
EC	52,750	58	147	9.1	748.4	748.4	748.4	0.0

¹Feet above downstream face of Atchison, Topeka & Santa Fe Railway Bridge

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY SAN DIEGO COUNTY, CALIFORNIA AND INCORPORATED AREAS	FLOODWAY DATA
		FLOODING SOURCE: CARROLL CANYON 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	5,800	79	614	14.2	3,570.9	3,570.9	3,571.9	1.0
B	6,500	124	743	11.8	3,579.8	3,579.8	3,579.8	0.0
C	6,970	105	604	14.5	3,584.0	3,584.0	3,584.0	0.0
D	7,570	124	711	12.3	3,595.8	3,595.8	3,595.8	0.0
E	7,620	165	848	10.3	3,597.0	3,597.0	3,597.0	0.0
F	7,680	190	1,793	4.9	3,603.8	3,603.8	3,603.8	0.0
G	8,000	217	837	10.5	3,606.4	3,606.4	3,606.6	0.2
H	8,550	125	581	5.8	3,609.8	3,609.8	3,610.1	0.3
I	9,050	147	371	9.0	3,612.6	3,612.6	3,612.6	0.0
J	9,550	84	320	10.4	3,617.3	3,617.3	3,617.6	0.3
K	10,080	69	316	10.6	3,637.3	3,637.3	3,637.3	0.0
L	10,140	80	764	4.4	3,641.1	3,641.1	3,641.1	0.0
M	10,555	66	275	12.1	3,644.0	3,644.0	3,644.0	0.0
N	11,015	100	346	9.7	3,662.2	3,662.2	3,662.2	0.0
O	11,570	106	382	8.8	3,667.6	3,667.6	3,667.6	0.0
P	12,080	62	274	12.2	3,675.6	3,675.6	3,675.6	0.0
Q	12,595	89	303	11.0	3,710.7	3,710.7	3,710.7	0.0
R	13,095	83	313	10.7	3,755.0	3,755.0	3,755.0	0.0
S	13,545	116	351	9.5	3,781.4	3,781.4	3,781.4	0.0
T	14,025	90	322	10.4	3,790.8	3,790.8	3,790.8	0.0
U	14,505	74	290	11.5	3,834.9	3,834.9	3,834.9	0.0
V	15,010	78	296	11.3	3,872.1	3,872.1	3,872.1	0.0
W	15,560	58	260	12.9	3,892.3	3,892.3	3,892.3	0.0

¹Feet above confluence with San Diego River

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY SAN DIEGO COUNTY, CALIFORNIA AND INCORPORATED AREAS	FLOODWAY DATA
		FLOODING SOURCE: COLEMAN CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	16,160	95	316	10.6	3,908.1	3,908.1	3,908.1	0.0
Y	16,660	90	324	10.3	3,921.1	3,921.1	3,921.1	0.0
Z	17,150	109	345	9.7	3,929.2	3,929.2	3,929.6	0.4
AA	17,550	58	170	10.0	3,937.2	3,937.2	3,937.3	0.1
AB	18,010	69	180	9.5	3,951.8	3,951.8	3,951.8	0.0
AC	18,460	83	186	9.2	3,958.1	3,958.1	3,958.1	0.0
AD	18,970	79	164	10.4	3,965.1	3,965.1	3,965.1	0.0
AE	19,470	86	193	8.8	3,976.3	3,976.3	3,976.3	0.0
AF	19,870	91	206	8.3	3,981.0	3,981.0	3,981.0	0.0
AG	20,080	80	554	3.1	3,990.0	3,990.0	3,990.0	0.0
AH	20,630	133	232	7.4	3,997.4	3,997.4	3,997.4	0.0
AI	21,145	116	222	7.7	4,014.4	4,014.4	4,014.4	0.0
AJ	21,605	84	172	9.9	4,023.7	4,023.7	4,023.7	0.0
AK	22,105	90	194	8.8	4,035.7	4,035.7	4,035.7	0.0
AL	22,555	62	174	9.8	4,056.6	4,056.6	4,056.7	0.1
AM	23,055	51	158	10.8	4,124.8	4,124.8	4,124.8	0.0
AN	23,485	72	193	8.8	4,152.6	4,152.6	4,152.6	0.0
AO	23,643	101	1,219	1.4	4,166.8	4,166.8	4,166.8	0.0

¹Feet above confluence with San Diego River

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY SAN DIEGO COUNTY, CALIFORNIA AND INCORPORATED AREAS	FLOODWAY DATA
		FLOODING SOURCE: COLEMAN 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	660	170	800	2.3	416.9	416.9	417.9	1.0
B	1,415	40	230	7.8	417.0	417.0	418.0	1.0
C	3,070	40	200	8.0	421.2	421.2	422.2	1.0
D	4,610	30	150	9.7	429.2	429.2	430.0	0.8
E	6,415	10	50	16.0	431.9	431.9	432.9	1.0
F	7,850	10	60	13.3	447.1	447.1	447.8	0.7

¹Feet above confluence with Forester Creek

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: COUNTY DITCH 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	1,810	207	284	5.5	735.6	735.6	736.3	0.7
B	2,290	153	252	6.1	742.1	742.1	742.2	0.1
C	2,477	171	236	6.6	745.7	745.7	745.8	0.1
D	2,642	175	315	4.9	747.3	747.3	747.6	0.3
E	3,047	121	341	4.5	750.2	750.2	750.2	0.0
F	3,332	72	194	8.0	751.5	751.5	751.6	0.1
G	3,722	186	232	6.7	760.6	760.6	760.7	0.1
H	4,057	72	271	11.2	764.7	764.7	765.0	0.3
I	4,404	65	211	9.4	766.9	766.9	767.3	0.4
J	4,608	65	217	10.7	771.8	771.8	772.2	0.4
K	5,094	71	565	2.9	783.8	783.8	784.2	0.4

¹Feet above confluence with Twin Oaks Valley Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: DEER SPRINGS 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	450	65	134	8.2	3,398.5	3393.2 ²	3393.2 ²	0.0
B	1,045	80	144	7.6	3,401.3	3,401.3	3,401.3	0.0
C	1,245	74	143	7.7	3,407.2	3,407.2	3,407.2	0.0
D	1,565	41	118	9.3	3,411.8	3,411.8	3,411.8	0.0
E	1,605	34	117	9.4	3,412.3	3,412.3	3,412.3	0.0
F	1,775	80	136	8.1	3,415.2	3,415.2	3,415.2	0.0
G	2,145	35	109	10.1	3,424.4	3,424.4	3,424.4	0.0
H	2,565	39	113	9.7	3,450.6	3,450.6	3,450.6	0.0
I	2,785	29	102	10.8	3,459.9	3,459.9	3,459.9	0.0
J	3,130	37	111	9.9	3,481.3	3,481.3	3,481.3	0.0
K	3,200	18	87	12.7	3,488.2	3,488.2	3,488.2	0.0
L	3,220	40	132	8.4	3,489.8	3,489.8	3,489.8	0.0
M	3,400	42	140	7.8	3,491.6	3,491.6	3,491.6	0.0
N	3,585	33	106	10.3	3,498.2	3,498.2	3,498.2	0.0
O	3,745	37	110	10.0	3,500.5	3,500.5	3,500.5	0.0
P	4,175	76	235	4.7	3,504.1	3,504.1	3,504.1	0.0
Q	4,475	48	230	12.6	3,510.2	3,510.2	3,510.2	0.0
R	4,690	148	566	5.1	3,512.8	3,512.8	3,512.8	0.0
S	5,080	167	470	9.8	3,518.6	3,518.6	3,518.6	0.0
T	5,450	329	869	6.9	3,524.1	3,524.1	3,524.1	0.0
U	5,950	558	1,058	5.7	3,529.5	3,529.5	3,530.5	1.0
V	6,140	500	916	6.5	3,531.3	3,531.3	3,531.7	0.4
W	6,690	220	676	8.9	3,537.7	3,537.7	3,537.7	0.0

¹Feet above confluence with Sweetwater River (Descanso Area)

²Elevation computed without consideration of backwater effects from Sweetwater River (Descanso Area)

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY SAN DIEGO COUNTY, CALIFORNIA AND INCORPORATED AREAS	FLOODWAY DATA
		FLOODING SOURCE: DESCANSO CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	6,755	230	716	8.4	3,539.4	3,539.4	3,539.4	0.0
Y	7,290	141	922	6.5	3,541.3	3,541.3	3,541.4	0.1
Z	7,980	150	726	8.3	3,543.0	3,543.0	3,543.2	0.2
AA	8,505	263	891	6.7	3,548.1	3,548.1	3,549.0	0.9
AB	8,985	48	375	16.0	3,554.3	3,554.3	3,554.3	0.0
AC	9,485	102	484	12.4	3,569.0	3,569.0	3,569.0	0.0
AD	9,865	80	541	11.1	3,573.4	3,573.4	3,573.4	0.0
AE	10,175	60	404	14.8	3,581.2	3,581.2	3,581.2	0.0
AF	10,685	107	590	10.2	3,587.3	3,587.3	3,588.3	1.0
AG	11,120	110	508	11.8	3,596.1	3,596.1	3,596.8	0.7
AH	11,480	177	589	10.2	3,605.5	3,605.5	3,605.6	0.1
AI	11,830	114	710	8.4	3,609.7	3,609.7	3,610.1	0.4
AJ	12,120	99	478	12.6	3,619.2	3,619.2	3,619.2	0.0
AK	12,460	126	529	11.3	3,626.7	3,626.7	3,627.0	0.3
AL	12,780	123	724	8.3	3,631.5	3,631.5	3,631.9	0.4
AM	13,170	100	491	12.2	3,644.5	3,644.5	3,644.5	0.0

¹Feet above confluence with Sweetwater River (Descanso Area)

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY SAN DIEGO COUNTY, CALIFORNIA AND INCORPORATED AREAS	FLOODWAY DATA
		FLOODING SOURCE: DESCANSO 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	400	72	543	6.5	114.2	114.2	114.8	0.6
B	820	105	918	3.8	115.5	115.5	116.3	0.8
C	1,040	106	776	4.6	115.6	115.6	116.4	0.8
D	1,430	66	313	11.2	122.1	122.1	122.2	0.1
E	1,960	67	380	9.2	127.5	127.5	128.0	0.5
F	2,290	68	512	6.8	131.2	131.2	131.9	0.7
G	2,770	62	368	9.5	132.9	132.9	133.3	0.4
H	3,300	60	331	10.6	137.6	137.6	137.6	0.0
I	4,160	77	280	14.1	144.5	144.5	144.5	0.0

¹Feet above confluence with South Las Chollas Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ENCANTO BRANCH

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	11,200	300	1,003	2.7	1,494.6	1,494.6	1,495.6	1.0
B	11,650	90	641	3.1	1,494.9	1,494.9	1,495.9	1.0
C	11,790	60	337	5.9	1,495.0	1,495.0	1,495.9	0.9
D	11,935	60	337	5.9	1,495.0	1,495.0	1,495.9	0.9
E	12,510	24	142	13.9	1,504.1	1,504.1	1,504.1	0.0
F	12,985	60	203	9.7	1,514.5	1,514.5	1,514.5	0.0
G	13,485	74	237	8.3	1,520.5	1,520.5	1,520.9	0.4
H	13,990	110	315	8.6	1,527.1	1,527.1	1,527.3	0.2
I	14,470	70	260	10.4	1,533.6	1,533.6	1,534.0	0.4
J	14,845	47	215	12.6	1,544.1	1,544.1	1,544.1	0.0
K	15,285	55	243	11.1	1,566.3	1,566.3	1,566.4	0.1
L	15,670	110	656	4.1	1,568.2	1,568.2	1,568.9	0.7
M	16,180	130	368	7.3	1,570.5	1,570.5	1,571.1	0.6
N	16,615	80	265	10.2	1,578.3	1,578.3	1,578.8	0.5
O	17,120	56	260	10.4	1,582.9	1,582.9	1,583.1	0.2

¹Feet above Wohlford Dam

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

**FLOODING SOURCE: ESCONDIDO CREEK (ABOVE LAKE
WOHLFORD)**

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	11,025	668	3,065	6.9	15.4	15.4	15.4	0.0
B	12,569	1,290	8,331	2.5	17.3	17.3	17.3	0.0
C	14,054	1,230	6,299	3.3	17.8	17.8	17.8	0.0
D	14,887	1,202	4,902	4.3	18.3	18.3	18.4	0.1
E	16,040	1,265	2,664	7.9	20.8	20.8	20.9	0.1
F	17,729	312	1,750	12.0	30.7	30.7	30.7	0.0
G	18,531	1,211	10,475	2.0	34.1	34.1	34.3	0.2
H	19,456	1,125	8,004	2.6	34.2	34.2	34.4	0.2
I	20,627	400	2,925	7.2	35.4	35.4	35.4	0.0
J	20,672	400	2,942	7.1	35.7	35.7	35.8	0.1
K	21,927	795	4,633	4.5	39.4	39.4	39.6	0.2
L	23,639	548	3,152	6.7	42.6	42.6	42.9	0.3
M	25,313	580	3,569	5.9	47.5	47.5	47.7	0.2
N	25,771	550	2,393	8.8	48.0	48.0	48.3	0.3
O	26,606	977	2,069	10.2	53.7	53.7	53.7	0.0
P	27,378	1,005	5,392	3.9	57.9	57.9	58.0	0.1
Q	28,116	1,163	4,861	4.3	58.7	58.7	58.8	0.1
R	28,780	858	3,536	5.9	59.9	59.9	60.0	0.1
S	29,578	795	3,347	6.3	62.7	62.7	62.8	0.1
T	30,905	254	1,835	11.4	67.5	67.5	67.5	0.0
U	55,660	180	1,796	10.6	369.6	369.6	369.6	0.0
V	59,034	277	1,704	11.5	401.5	401.5	401.6	0.1
W	61,330	152	1,324	14.4	434.5	434.5	434.5	0.0

¹Feet above Pacific Ocean

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: ESCONDIDO CREEK (AT ENCINITAS)

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	63,130	198	1,420	13.4	466.4	466.4	466.4	0.0
Y	64,805	234	1,527	12.4	506.2	506.2	506.2	0.0
Z	67,980	194	1,685	11.3	547.0	547.0	547.0	0.0
AA	70,880	309	2,219	8.6	560.1	560.1	560.3	0.2
AB	72,700	410	2,886	6.6	569.1	569.1	569.2	0.1
AC	75,675	126	1,198	15.9	594.6	594.6	594.6	0.0
AD	79,280	236	3,511	5.1	614.2	614.2	614.5	0.3
AE	80,923	356	4,578	3.9	616.6	616.6	616.8	0.2

¹Feet above Pacific Ocean

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: ESCONDIDO CREEK (AT ENCINITAS)

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	2	2	2	2	2	2	2
B	2	2	2	2	2	2	2	2
C	2	2	2	2	2	2	2	2
D-I ¹								
J	3,425 ³	205	455	1.9	390.1	390.1	391.1	1.0
K	3,795 ³	144	202	4.2	393.0	393.0	394.0	1.0
L	4,095 ³	52	113	7.6	397.4	397.4	397.9	0.5
M	4,480 ³	27	85	10.2	403.4	403.4	404.4	1.0
N	4,810 ³	24	106	8.1	408.3	408.3	409.2	0.9
O	5,123 ³	32	90	9.6	415.0	415.0	415.4	0.4
P	5,446 ³	40	108	8.0	420.3	420.3	421.2	0.9
Q	5,703 ³	19	16	11.3	424.9	424.9	425.2	0.3

¹Floodway not applicable

²1-percent annual chance flood contained in channel

³Feet above confluence with San Diego River

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: EUCALYPTUS HILLS CREEK (EAST BRANCH)

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	850	83	248	4.0	375.0	358.2 ³	359.2 ³	1.0
B	1,384	162	195	5.0	375.0	366.6 ³	366.8 ³	0.2
C	1,764	50	114	8.6	375.0	372.7 ³	372.7 ³	0.0
D-F ¹								
G	3,244	37	146	6.6	388.6	388.6	388.6	0.0
H	3,659	32	112	8.7	391.2	391.2	391.2	0.0
I	3,791	35	183	5.3	393.6	393.6	393.6	0.0
J	4,082	32	112	8.7	399.4	399.4	399.4	0.0
K	4,317	32	118	8.2	401.6	401.6	401.6	0.0
L	4,664	122	557	1.7	406.2	406.2	406.2	0.0
M	4,953	71	141	6.9	413.4	413.4	414.3	0.9
N	5,327	52	114	8.5	419.0	419.0	419.3	0.3
O	5,556	135	211	4.6	422.2	422.2	423.2	1.0
P	5,652	140	304	3.2	424.4	424.4	425.3	0.9
Q	5,831	92	167	5.8	428.1	428.1	428.6	0.5
R	5,944	82	160	6.0	429.9	429.9	430.5	0.6
S	6,187	69	134	7.3	435.3	435.3	436.1	0.8
T	6,487	71	189	5.1	441.7	441.7	442.0	0.3
U	6,587	89	270	3.6	450.1	450.1	450.7	0.6
V	6,927	32	118	8.2	452.8	452.8	453.7	0.9
W	6,987	50	113	8.6	457.5	457.5	457.6	0.1
X	7,221	65	182	5.3	467.1	467.1	467.4	0.3

¹Floodway not applicable

²Feet above confluence with San Diego River

³1-percent annual chance flood contained in channel

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: EUCALYPTUS HILLS CREEK (WEST BRANCH)

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
Y	7,288	75	214	4.5	468.5	468.5	469.2	0.7
Z	7,652	38	133	7.3	480.4	480.4	480.4	0.0
AA	8,082	41	131	7.4	498.3	498.3	498.8	0.5
AB	8,552	40	130	7.5	521.1	521.1	521.1	0.0

¹Feet above confluence with San Diego River

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY SAN DIEGO COUNTY, CALIFORNIA AND INCORPORATED AREAS	FLOODWAY DATA
		FLOODING SOURCE: EUCALYPTUS HILLS CREEK (WEST BRANCH)

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
C	1,720	52	246	5.7	110.1	110.1	111.1	1.0
D	2,280	83	462	2.9	122.9	122.9	123.6	0.7
E	2,940	36	134	10.5	129.8	129.8	130.6	0.8

¹Feet above confluence with Switzer Creek

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: FLORIDA DRIVE BRANCH

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	2	2	2	2	2	2	2
B	2	2	2	2	2	2	2	2
C	2	2	2	2	2	2	2	2
D	2	2	2	2	2	2	2	2
E	2	2	2	2	2	2	2	2
F	2	2	2	2	2	2	2	2
G	2	2	2	2	2	2	2	2
H	2	2	2	2	2	2	2	2
I	2	2	2	2	2	2	2	2
J	2	2	2	2	2	2	2	2
K	22,798	30	140	20.9	425.6	425.6	425.9	0.3
L	24,959	30	150	20.1	439.4	439.4	440.4	1.0
M	26,967	30	140	20.9	454.1	454.1	455.1	1.0
N	29,708	30	130	21.3	476.3	476.3	477.0	0.7
O	31,932	20	120	11.3	499.3	499.3	500.3	1.0
P	34,130	20	30	36.1	525.3	525.3	525.3	0.0
Q	35,250	21	71	13.9	543.4	543.4	543.4	0.0
R	35,705	19	64	15.5	550.5	550.5	550.5	0.0
S	36,177	91	154	6.8	561.6	561.6	561.6	0.0
T	36,572	59	191	5.4	567.3	567.3	567.4	0.1
U	37,112	61	150	6.9	575.6	575.6	575.6	0.0
V	37,567	79	187	5.6	583.4	583.4	583.6	0.2
W	38,047	80	145	7.2	591.2	591.2	591.4	0.2

¹Feet above confluence with San Diego River

²1-percent annual chance flood contained in channel

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: FORESTER 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
Y	38,887	71	168	5.5	609.0	609.0	609.4	0.4
Z	39,272	69	124	7.4	642.2	642.2	642.2	0.0
AB	39,750	72	337	2.7	661.2	661.2	661.2	0.0
AC	40,200	42	185	5.6	675.0	675.0	675.3	0.3
AD	40,815	51	95	7.8	686.9	686.9	686.9	0.0
AE	41,285	48	100	7.7	697.0	697.0	697.0	0.0
AF	41,655	25	79	9.4	708.3	708.3	708.5	0.2
AG	41,895	55	141	5.7	723.4	723.4	723.4	0.0
AH	42,080	38	106	7.0	725.5	725.5	725.8	0.3
AI	42,410	31	82	9.0	746.5	746.5	746.5	0.0
AJ	42,760	30	90	8.2	761.7	761.7	761.7	0.0
AK	43,020	33	83	8.9	774.6	774.6	774.6	0.0
AL	43,310	47	89	8.3	791.0	791.0	791.0	0.0
AM	43,665	40	89	8.3	834.4	834.4	834.4	0.0
AN	43,995	46	96	7.7	897.7	897.7	897.7	0.0
AO	44,305	36	87	8.5	913.2	913.2	913.2	0.0
AP	44,645	35	88	8.4	948.5	948.5	948.5	0.0
AQ	45,045	59	103	7.2	974.7	974.7	974.7	0.0
AR	45,435	35	85	8.7	1,007.2	1,007.2	1,007.2	0.0
AS	45,835	31	82	9.1	1,038.6	1,038.6	1,038.7	0.1
AT	46,285	29	78	9.5	1,078.7	1,078.7	1,078.7	0.0
AU	46,705	44	88	8.4	1,105.0	1,105.0	1,105.1	0.1
AV	47,075	41	91	8.1	1,129.3	1,129.3	1,129.9	0.6

¹Feet above confluence with San Diego River

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY SAN DIEGO COUNTY, CALIFORNIA AND INCORPORATED AREAS	FLOODWAY DATA
		FLOODING SOURCE: FORESTER 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
AW	47,435	41	102	7.2	1,139.8	1,139.8	1,139.9	0.1
AY	48,195	41	90	8.2	1,170.8	1,170.8	1,170.8	0.0
AZ	48,490	51	102	7.3	1,180.2	1,180.2	1,180.2	0.0
BA	49,320	50	94	7.9	1,210.4	1,210.4	1,210.4	0.0
BB	49,320	50	94	7.9	1,210.4	1,210.4	1,210.4	0.0
BC	49,715	76	171	4.3	1,219.1	1,219.1	1,219.1	0.0
BD	50,180	32	82	9.1	1,231.7	1,231.7	1,231.8	0.1
BE	50,480	60	120	6.2	1,240.5	1,240.5	1,240.5	0.0
BF	50,895	26	75	9.8	1,259.6	1,259.6	1,259.6	0.0
BG	51,190	50	99	7.5	1,282.3	1,282.3	1,282.3	0.0

¹Feet above confluence with San Diego River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: FORESTER 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	660	21	186	6.1	70.4	70.4	71.2	0.8
B	740	66	290	3.9	71.0	71.0	71.6	0.6
C	919	103	379	3.0	71.7	71.7	72.5	0.8
D	1,313	27	143	7.9	75.0	75.0	75.0	0.0
E	1,638	28	154	7.3	79.3	79.3	79.3	0.0
F	1,991	108	184	6.1	81.2	81.2	81.2	0.0
G	2,113	89	477	2.4	82.4	82.4	82.4	0.0
H	2,780	38	348	3.3	92.1	92.1	92.1	0.0
I	3,311	38	179	6.3	96.1	96.1	96.2	0.1
J	3,631	125	873	1.3	102.3	102.3	102.3	0.0
K	4,393	220	202	5.0	105.0	105.0	105.1	0.1
L	5,138	149	244	4.1	114.2	114.2	114.5	0.3
M	5,617	164	600	1.7	121.7	121.7	122.0	0.3
N	5,822	51	181	5.5	121.8	121.8	122.0	0.2
O	6,166	163	590	1.7	128.4	128.4	128.7	0.3
P	6,421	271	219	4.6	129.5	129.5	129.6	0.1
Q	6,876	99	148	6.8	135.1	135.1	135.2	0.1

¹Feet above mouth

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: GARRISON 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	204	106	423	3.8	41.1	41.1	41.1	0.0
B	443	34	200	8.0	46.0	46.0	46.0	0.0
C	787	33	192	8.4	48.8	48.8	48.8	0.0
D	1,026	61	275	5.8	51.0	51.0	51.9	0.9
E	1,416	37	155	10.3	54.2	54.2	54.9	0.7
F	1,581	80	315	5.1	57.9	57.9	58.9	1.0
G	1,846	43	173	9.3	60.5	60.5	60.5	0.0
H	2,185	83	187	8.6	65.7	65.7	66.0	0.3

¹Feet above Old El Camino Real

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: GONZALES CANYON 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	1,097	438	1,351	5.7	152.6	152.6	152.7	0.1
B	1,447	502	1,085	7.1	157.5	157.5	157.5	0.0
C	1,922	188	750	10.3	163.5	163.5	163.5	0.0
D	2,452	127	877	8.8	169.2	169.2	169.2	0.0
E	3,052	130	746	10.3	177.4	177.4	178.1	0.7
F	3,552	269	1,053	7.3	183.0	183.0	183.4	0.4
G	3,902	133	630	12.2	187.9	187.9	187.9	0.0
H	4,292	110	608	12.6	193.9	193.9	194.0	0.1
I	4,622	156	680	11.3	198.9	198.9	198.9	0.0
J	4,922	85	537	14.3	204.7	204.7	204.7	0.0
K	5,172	84	540	14.2	209.5	209.5	209.5	0.0
L	5,522	105	1,020	7.5	212.3	212.3	213.1	0.8
M	6,092	75	511	15.1	223.5	223.5	223.5	0.0
N	6,452	84	542	14.2	228.3	228.3	228.3	0.0
O	6,892	97	605	10.9	233.5	233.5	233.7	0.2
P	7,332	122	598	11.0	246.8	246.8	246.8	0.0
Q	7,652	175	1,151	5.7	248.7	248.7	249.7	1.0
R	7,862	140	782	6.5	254.1	254.1	254.1	0.0
S	7,889	142	900	5.6	255.2	255.2	255.2	0.0
T	8,289	58	362	14.0	255.3	255.3	255.3	0.0
U	8,659	85	618	8.2	258.5	258.5	259.1	0.6
V	9,099	82	403	12.6	261.4	261.4	261.4	0.0
W	9,479	148	494	10.3	269.9	269.9	270.0	0.1

¹Feet above confluence with San Luis Rey River

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY SAN DIEGO COUNTY, CALIFORNIA AND INCORPORATED AREAS	FLOODWAY DATA
		FLOODING SOURCE: GOPHER CANYON CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	9,769	147	535	9.5	277.1	277.1	277.2	0.1
Y	10,219	86	486	10.4	282.7	282.7	282.9	0.2
Z	10,669	127	459	11.0	294.5	294.5	294.5	0.0
AA	10,969	218	620	8.2	301.5	301.5	301.5	0.0
AB	11,144	199	543	4.4	304.3	304.3	304.8	0.5
AC	11,594	269	357	6.7	327.3	327.3	327.4	0.1
AD	11,994	155	969	2.5	328.4	328.4	328.7	0.3
AE	12,544	120	277	8.6	332.2	332.2	332.3	0.1
AF	13,004	142	290	8.2	342.4	342.4	342.4	0.0
AG	13,689	144	339	7.0	359.4	359.4	359.4	0.0
AH	14,339	204	342	7.0	395.1	395.1	395.1	0.0
AI	14,934	102	317	7.5	398.7	398.7	398.8	0.1
AJ	15,264	116	287	8.3	403.0	403.0	403.5	0.5
AK	15,584	119	439	5.4	407.4	407.4	407.9	0.5
AL	16,034	65	223	10.7	415.9	415.9	415.9	0.0
AM	16,464	118	655	3.6	424.3	424.3	424.5	0.2
AN	16,944	134	285	8.4	428.5	428.5	428.5	0.0
AO	17,394	116	310	7.7	438.7	438.7	438.7	0.0
AP	17,844	76	242	9.8	444.8	444.8	444.8	0.0
AQ	18,284	90	232	10.2	453.2	453.2	453.2	0.0
AR	18,434	103	1,119	1.5	455.4	455.4	455.4	0.0
AS	18,478	103	1,121	1.5	455.5	455.5	455.5	0.0
AT	18,998	213	257	6.7	471.1	471.1	471.1	0.0

¹Feet above confluence with San Luis Rey River

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: GOPHER CANYON 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
AU	19,508	93	374	4.6	478.5	478.5	479.4	0.9
AV	19,948	52	172	9.9	485.1	485.1	485.3	0.2
AW	20,208	76	287	6.0	488.3	488.3	489.1	0.8
AX	20,558	34	145	11.8	496.7	496.7	496.7	0.0
AZ	21,328	113	333	5.1	515.2	515.2	516.1	0.9
BA	21,638	144	197	8.7	523.4	523.4	523.8	0.4

¹Feet above confluence with San Luis Rey River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: GOPHER CANYON 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	0	68	291	11.7	501.4	501.4	502.4	1.0
B	375	41	244	13.9	514.6	514.6	514.6	0.0
C	653	46	254	13.4	518.2	518.2	518.2	0.0
D	888	50	250	13.6	523.2	523.2	523.2	0.0
E	1,176	72	277	12.3	526.8	526.8	526.8	0.0
F	1,454	79	313	8.6	532.0	532.0	532.4	0.4
G	2,346	124	366	7.4	538.4	538.4	538.4	0.0
H	3,081	65	623	3.7	546.1	546.1	546.7	0.6
I	4,005	62	310	7.4	551.7	551.7	552.4	0.7
J	4,745	43	191	12.0	565.9	565.9	565.9	0.0
K	5,652	45	311	5.9	580.7	580.7	580.7	0.0
L	6,240	50	368	5.0	588.4	588.4	589.1	0.7
M	6,816	100	254	6.3	595.6	595.6	596.0	0.4
N	7,704	60	240	6.7	607.7	607.7	608.1	0.4
O	8,317	66	350	3.4	619.3	619.3	620.3	1.0
P	9,046	45	143	8.4	629.2	629.2	629.2	0.0
Q	9,913	31	116	10.3	656.3	656.3	656.3	0.0
R	10,803	30	166	7.2	689.4	689.4	689.4	0.0
S	11,400	33	112	10.7	704.3	704.3	704.3	0.0

¹Feet above Limit of Detailed Study

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: GREEN VALLEY 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	357	135	268	1.1	592.0	592.0	593.0	1.0
B	891	64	89	3.4	597.6	597.6	597.7	0.1
C	1,908	50	124	1.6	617.1	617.1	618.0	0.9
D	2,618	41	32	4.7	637.9	637.9	637.9	0.0
E	3,180	41	26	3.8	651.3	651.3	651.3	0.0
F	3,817	41	23	4.4	660.7	660.7	660.7	0.0

¹Feet above confluence with Green Valley Creek

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: GREEN VALLEY CREEK TRIBUTARY

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	0	210	599	7.8	572.4	572.4	573.1	0.7
B	446	131	594	7.9	575.1	575.1	575.8	0.7
C	597	95	403	11.7	576.9	576.9	576.9	0.0
D	1,112	102	467	10.1	581.0	581.0	581.4	0.4
E	1,526	106	523	9.1	584.6	584.6	585.4	0.8
F	2,081	74	393	12.0	588.8	588.8	589.1	0.3
G	2,529	79	388	12.1	592.9	592.9	593.1	0.2
H	3,102	142	523	8.6	599.8	599.8	600.2	0.4
I	3,593	201	503	8.9	606.7	606.7	607.0	0.3
J	4,062	219	455	9.9	612.0	612.0	612.4	0.4
K	4,244	195	334	11.7	613.7	613.7	614.4	0.7
L	5,148	185	541	7.2	622.8	622.8	623.4	0.6
M	5,565	85	364	10.7	628.6	628.6	628.7	0.1
N	6,061	91	370	10.5	635.8	635.8	636.0	0.2
O	6,568	65	300	12.3	646.1	*	*	*
P	7,093	67	305	12.1	670.8	670.8	671.2	0.4
Q	7,637	60	274	13.5	699.1	699.1	699.1	0.0
R	8,160	54	283	13.1	725.8	725.8	725.8	0.0
S	8,794	73	370	10.0	751.2	751.2	751.9	0.7
T	9,395	57	255	13.7	776.9	776.9	776.9	0.0
U	9,909	54	259	13.5	789.2	789.2	789.2	0.0
V	10,578	45	262	12.2	809.0	809.0	809.4	0.4
W	10,965	23	200	16.0	814.7	814.7	814.8	0.1

¹Feet above Limit of Detailed Study

*Data not available

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: HARBISON CANYON CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	11,596	97	447	6.7	829.8	829.8	829.8	0.0
Y	12,611	68	294	10.2	859.2	859.2	859.2	0.0
Z	12,810	80	304	9.9	865.0	865.0	865.0	0.0
AA	13,079	62	242	12.4	873.2	873.2	873.2	0.0
AB	13,669	55	234	10.7	890.2	890.2	890.7	0.5
AC	14,295	29	179	14.0	908.8	908.8	909.6	0.8
AD	14,849	104	272	9.2	928.6	928.6	929.6	1.0
AE	15,446	21	176	11.9	949.7	949.7	949.7	0.0
AF	16,015	40	176	11.9	987.7	987.7	987.7	0.0
AG	16,584	78	233	9.0	1,040.3	1,040.3	1,040.3	0.0

¹Feet above Limit of Detailed Study

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: HARBISON CANYON 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	615	450	2,174	6.3	1,461.5	1,641.5	1,461.7	0.2
B	1,414	370	1,708	8.0	1,463.2	1,463.2	1,464.1	0.9
C	1,793	500	1,876	7.3	1,465.0	1,465.0	1,465.8	0.8
D	2,556	390	1,827	7.5	1,467.5	1,467.5	1,468.3	0.8
E	3,124	450	1,550	8.8	1,470.2	1,470.2	1,470.6	0.4
F	3,577	370	1,437	9.5	1,473.8	1,473.8	1,474.0	0.2
G	4,066	570	1,842	7.4	1,476.7	1,476.7	1,477.4	0.7
H	4,461	410	8,177	9.6	1,478.6	1,478.6	1,478.8	0.2
I	4,921	299	1,305	10.5	1,482.1	1,482.1	1,482.1	0.0
J	5,046	255	1,884	7.3	1,483.9	1,483.9	1,483.9	0.0

¹Feet above confluence with Santa Maria Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: HATFIELD 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
C	1,190	27	123	9.8	96.3	96.3	97.1	0.8
D	1,390	24	113	10.6	98.3	98.3	99.1	0.8
E	2,000	37	211	5.7	105.9	105.9	106.7	0.8
F	3,040	24	119	10.1	122.6	122.6	123.5	0.9
I	4,770	30	148	8.1	148.3	148.3	149.1	0.8
J	6,010	32	102	11.7	162.3	162.3	163.0	0.7
K	7,590	12	61	11.8	185.3	185.3	186.1	0.8
R	12,850	13	47	9.7	266.8	266.8	267.5	0.7

¹Feet above confluence with Las Chollas Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: HOME AVENUE BRANCH

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	922	122	290	4.0	231.4	231.4	232.4	1.0
B	2,146	51	126	9.1	256.2	256.2	256.2	0.0
C	4,499	49	112	10.3	309.0	309.0	309.0	0.0
D	6,356	54	133	8.4	350.9	350.9	350.9	0.0
E	8,667	63	106	7.9	406.1	406.1	406.1	0.0
F	11,441	156	114	5.7	467.1	467.1	467.1	0.0
G	14,027	34	56	8.2	513.6	513.6	513.6	0.0

¹Feet above confluence with Otay River

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: JOHNSON CANYON CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ²	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	11,700	1,358	26,678	0.2	328.0	328.0	328.0	0.0
B	12,680	422	2,973	1.5	328.0	328.0	328.0	0.0
C	13,370	62	617	7.1	330.2	330.2	330.6	0.4
D-F ¹								
G	15,890	405	3,130	1.2	357.4	357.4	358.4	1.0
H	16,710	212	440	8.2	366.6	366.6	367.0	0.4
I	17,350	250	873	4.1	373.4	373.4	373.7	0.3
J	18,000	253	465	7.7	380.2	380.2	380.2	0.0
K	18,690	246	799	4.5	388.4	388.4	388.8	0.4
L	18,930	462	715	5.0	391.0	391.0	391.2	0.2
M	19,340	648	1,006	3.6	397.1	397.1	397.1	0.0
N	20,220	529	945	3.8	406.8	406.8	407.0	0.2
O	20,610	191	474	7.6	413.8	413.8	413.8	0.0
P	20,690	191	783	4.6	419.3	419.3	419.3	0.0
Q	21,390	223	847	4.3	421.3	421.3	422.3	1.0
R	22,170	70	258	10.9	431.6	431.6	431.6	0.0
S	23,090	80	483	5.8	443.1	443.1	443.6	0.5

¹Data not available

²Feet above Lake Hodges Dam

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: KIT CARSON PARK 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
ZU	1,440	220	4,212	3.8	503.3	503.3	503.3	0.0
ZV	3,710	320	4,183	4.0	503.5	503.5	503.5	0.0
ZW	5,270	388	5,060	3.5	503.7	503.7	503.7	0.0
ZX	6,840	275	4,162	4.2	505.4	505.4	505.5	0.1
ZY	7,730	400	2,399	5.8	510.9	510.9	510.9	0.0
ZZ	8,400	450	1,793	8.6	513.1	513.1	513.2	0.1

¹Feet above San Marcos Dam

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: LAKE SAN MARCOS/SAN MARCOS CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	2,720	*	*	*	18.4 ²	*	*	*
B	3,130	*	*	*	20.1 ²	*	*	*
C	3,410	*	*	*	20.7 ²	*	*	*
D	3,810	485	4,637	1.7	21.7	21.7	21.8	0.1
E	4,470	*	*	*	22.0 ²	*	*	*
F	5,360	*	*	*	22.2 ²	*	*	*
G	6,200	*	*	*	22.1 ²	*	*	*
H	6,740	*	*	*	24.6 ²	*	*	*
I	7,720	*	*	*	29.0 ²	*	*	*
J	8,720	*	*	*	38.6 ²	*	*	*
K	9,490	*	*	*	45.1 ²	*	*	*
L	10,190	*	*	*	47.6 ²	*	*	*
M	11,260	81	730	9.7	57.6	57.6	58.2	0.6
N	12,500	65	568	8.3	66.9	66.9	67.0	0.1
O	13,070	*	*	*	72.7 ²	*	*	*
P	13,350	*	*	*	73.2 ²	*	*	*
Q	14,370	*	*	*	82.7 ²	*	*	*
R	14,840	*	*	*	84.3 ²	*	*	*
S	15,580	*	*	*	93.7 ²	*	*	*
T	16,780	*	*	*	102.6 ²	*	*	*
U	17,870	*	*	*	111.6 ²	*	*	*

¹Feet above mouth

²Value measured using 1% annual chance flood profile

*Data not available

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: LAS CHOLLAS 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
V	18,030	*	*	*	116.4 ²	*	*	*
W	18,640	101	447	7.8	121.4	121.4	122.3	0.9
X	19,160	156	480	7.3	124.8	124.8	125.5	0.7
Y	19,910	111	696	5.0	134.5	134.5	135.4	0.9
Z	20,400	123	700	5.0	137.7	137.7	138.6	0.9
AA	20,930	190	770	4.5	149.0	149.0	149.1	0.1
AB	21,980	40	247	14.2	159.2	159.2	159.2	0.0
AC	22,550	77	388	7.7	165.5	165.5	165.6	0.1
AD	22,900	66	264	11.4	168.6	168.6	168.6	0.0
AE	23,510	119	376	8.0	174.2	174.2	174.2	0.0
AF	24,060	94	304	9.9	182.4	182.4	183.1	0.7
AG	24,610	271	788	3.8	189.9	189.9	190.7	0.8
AH	25,010	270	1,146	2.6	201.1	201.1	201.1	0.0
AI	25,560	48	292	10.3	205.3	205.3	205.9	0.6
AJ	26,120	86	284	10.6	209.8	209.8	210.1	0.3
AK	26,460	70	360	8.3	213.6	213.6	214.5	0.9
AL	27,290	147	354	8.5	228.6	228.6	228.6	0.0
AM	27,840	83	389	7.7	235.8	235.8	236.6	0.8
AN	28,350	46	274	10.9	241.4	241.4	241.5	0.1
AO	28,660	35	213	14.1	248.0	248.0	248.0	0.0
AP	29,030	104	859	3.5	258.9	258.9	259.1	0.2
AQ	29,410	76	384	7.8	259.9	259.9	260.0	0.1
AR	29,960	106	396	7.6	266.5	266.5	266.5	0.0
AS	30,400	42	226	13.2	272.2	272.2	272.2	0.0

¹Feet above mouth

²Value measured using 1% annual chance flood profile

*Data not available

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: LAS CHOLLAS CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	2,325	230	244	6.5	541.7	541.7	541.7	0.0
B	2,535	45	97	9.4	542.3	542.3	543.1	0.8
C	3,175	35	160	5.8	551.4	551.4	551.4	0.0
D	3,785	160	204	7.0	553.0	553.0	554.0	1.0
E	4,400	70	163	8.7	559.1	559.1	559.1	0.0
F	5,325	37	160	8.9	567.8	567.8	567.9	0.1
G	5,975	20	109	13.0	571.7	571.7	572.1	0.4

¹Feet above Linda Vista Drive

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
 AND INCORPORATED AREAS

FLOODWAY DATA

FLOODING SOURCE: LAS POSAS CREEK (UPPER)

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	7,200	101	782	11.5	1,574.6	1,574.6	1,575.6	1.0
B	8,050	78	591	15.2	1,585.3	1,585.3	1,585.3	0.0
C	8,330	98	649	13.9	1,590.8	1,590.8	1,590.8	0.0
D	8,385	98	1,032	8.7	1,595.2	1,595.2	1,595.2	0.0
E	9,125	85	618	14.6	1,608.7	1,608.7	1,608.7	0.0
F	9,525	70	561	16.0	1,616.1	1,616.1	1,616.1	0.0
G	10,254	89	610	14.8	1,628.9	1,628.9	1,629.0	0.1
H	10,631	130	994	9.1	1,636.9	1,636.9	1,636.9	0.0
I	10,696	142	1,225	7.3	1,639.1	1,639.1	1,639.1	0.0
J	10,951	195	1,170	7.7	1,642.4	1,642.4	1,642.4	0.0
K	10,986	141	1,313	6.9	1,644.1	1,644.1	1,644.1	0.0
L	11,444	159	794	11.3	1,647.8	1,647.8	1,647.8	0.0
M	11,814	87	621	14.5	1,650.9	1,650.9	1,650.9	0.0
N	12,184	91	951	9.5	1,663.2	1,663.2	1,663.2	0.0
O	12,289	87	1,157	7.8	1,663.9	1,663.9	1,663.9	0.0
P	12,699	143	799	11.3	1,665.3	1,665.3	1,665.3	0.0
Q	13,443	85	648	13.9	1,689.3	1,689.3	1,689.3	0.0
R	14,264	81	889	10.1	1,750.0	1,750.0	1,750.0	0.0
S	14,308	84	1,067	8.4	1,755.0	1,755.0	1,755.0	0.0
T	15,144	82	529	13.6	1,766.5	1,766.5	1,766.5	0.0
U	15,894	60	466	15.4	1,774.1	1,774.1	1,774.1	0.0
V	16,304	70	502	14.3	1,784.9	1,784.9	1,784.9	0.0
W	17,077	78	525	13.6	1,820.7	1,820.7	1,820.7	0.0

¹Feet above confluence with Sweetwater River

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY SAN DIEGO COUNTY, CALIFORNIA AND INCORPORATED AREAS	FLOODWAY DATA
		FLOODING SOURCE: LAWSON VALLEY CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	17,878	85	539	13.3	1,863.5	1,863.5	1,863.5	0.0
Y	18,602	101	594	12.1	1,916.5	1,916.5	1,916.5	0.0
Z	18,962	102	597	12.0	1,924.2	1,924.2	1,924.2	0.0
AA	19,278	258	951	7.5	1,942.8	1,942.8	1,942.9	0.1
AB	19,351	254	1,019	7.0	1,945.9	1,945.9	1,945.9	0.0
AC	19,959	236	1,079	6.6	1,951.2	1,951.2	1,952.0	0.8
AD	20,849	317	907	7.9	1,961.9	1,961.9	1,962.1	0.2

¹Feet above confluence with Sweetwater River

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: LAWSON VALLEY 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	0	300	1,297	2.9	14.3	14.3	15.3	1.0
B	440	400	2,605	1.5	14.8	14.8	15.7	0.9
C	520	350	2,174	1.7	14.8	14.8	15.7	0.9
D	1,260	300	1,794	2.1	14.9	14.9	15.9	1.0
E	1,370	300	1,917	2.0	15.1	15.1	16.0	0.9
F	1,930	130	634	6.0	15.1	15.1	16.0	0.9
G	2,300	222	639	5.9	15.6	15.6	16.2	0.6
H	3,155	334	922	4.1	18.0	18.0	18.4	0.4
I	3,200	341	1,073	3.5	18.3	18.3	18.6	0.3
J	3,865	337	946	4.0	18.9	18.9	19.1	0.2
K	4,150	565	1,380	2.8	19.3	19.3	19.5	0.2
L	4,595	696	1,009	3.8	22.2	22.2	22.2	0.0
M	4,610	696	1,353	2.8	22.8	22.8	22.8	0.0
N	4,845	675	908	4.2	23.4	23.4	23.4	0.0
O	5,160	708	3,109	1.2	24.3	24.3	24.3	0.0
P	5,420	755 ²	648	5.9	25.0	25.0	25.0	0.0
Q	5,537	770 ²	566	6.7	25.6	25.6	25.6	0.0
R	6,275	800	1,562	2.4	28.1	28.1	28.5	0.4
S	6,325	800	1,040	3.7	28.2	28.2	28.6	0.4
T	6,730	475	1,429	2.7	29.4	29.4	29.7	0.3
U	7,518	150	497	7.7	33.0	33.0	33.5	0.5
V	8,107	130	526	7.2	36.6	36.6	36.8	0.2
W	8,151	125	821	4.6	37.5	37.5	37.6	0.1

¹Feet above Pacific Street

²Width includes islands

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: LOMA ALTA CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
X	8,200	111	378	10.0	37.5	37.5	37.6	0.1
Y	8,522	141	834	4.6	40.6	40.6	41.0	0.4
Z	8,630	200	1,066	3.6	40.8	40.8	41.1	0.3
AA	8,829	170	629	6.0	41.0	41.0	41.4	0.4
AB	9,443	414	1,195	3.2	43.0	43.0	43.7	0.7
AC	10,160	314	1,194	3.2	48.5	48.5	48.5	0.0
AD	10,960	140	540	7.0	51.1	51.1	51.2	0.1
AE	11,465	112	457	8.3	54.0	54.0	54.4	0.4
AF	11,970	288	747	5.1	57.8	57.8	58.2	0.4
AG	12,500	319	832	4.3	59.9	59.9	60.2	0.3
AH	12,810	285	546	7.0	61.7	61.7	62.5	0.8
AI	13,300	277	939	4.0	64.8	64.8	65.6	0.8
AJ	13,830	224	827	2.7	66.2	66.2	66.7	0.5
AK	14,460	60	213	10.3	68.8	68.8	69.1	0.3
AL	15,120	246	578	3.8	74.8	74.8	75.3	0.5
AM	15,510	110	255	8.6	78.0	78.0	78.5	0.5
AN	15,690	279	528	4.2	81.9	81.9	82.4	0.5
AO	16,050	84	265	8.3	84.6	84.6	84.6	0.0
AP	16,742	68	230	9.6	92.2	92.2	92.8	0.6
AQ	17,175	54	221	10.0	97.6	97.6	98.6	1.0
AR	17,740	268 ²	378	5.8	104.9	104.9	105.2	0.3
AS	17,780	327 ²	338	6.5	107.0	107.0	107.1	0.1
AT	17,835	267	957	2.3	107.8	107.8	107.8	0.0

¹Feet above Pacific Street

²Width includes islands

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: LOMA ALTA 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
AU	17,995	140 ²	700	3.2	110.5	110.5	110.5	0.0
AV	18,075	138 ²	699	3.1	113.0	113.0	113.0	0.0
AW	18,540	84	231	9.5	113.3	113.3	113.3	0.0
AX	18,610	49	194	11.4	114.6	114.6	114.7	0.1
AY	18,780	161 ²	473	4.7	117.0	117.0	118.0	1.0
AZ	18,960	172 ²	291	7.6	118.7	118.7	118.8	0.1
BA	19,345	74	230	9.6	122.6	122.6	123.0	0.4
BB	19,438	68	213	10.3	123.4	123.4	124.1	0.7
BC	19,577	55	202	10.9	125.8	125.8	126.5	0.7
BD	19,635	62	218	10.1	128.2	128.2	129.0	0.8
BE	20,140	127	402	5.5	132.9	132.9	133.5	0.6
BF	20,202	89	235	9.4	133.4	133.4	133.5	0.1
BG	20,445	96	299	7.4	136.7	136.7	136.7	0.0
BH	21,090	62	239	9.2	142.1	142.1	142.8	0.7
BI	21,680	77	253	8.7	147.4	147.4	147.6	0.2
BJ	22,000	297	730	2.3	149.0	149.0	149.8	0.8
BK	22,660	210	263	6.5	152.2	152.2	152.2	0.0
BL	23,440	131	314	5.4	159.4	159.4	160.2	0.8
BM	24,140	211	300	5.7	166.3	166.3	166.3	0.0
BN	24,590	96	303	5.6	169.5	169.5	169.9	0.4
BO	24,840	200	314	5.4	171.5	171.5	171.8	0.3
BP	25,370	259	333	5.1	178.1	178.1	178.1	0.0
BQ	25,510	85	196	8.7	179.8	179.8	180.4	0.6

¹Feet above Pacific Street

²Width includes islands

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: LOMA ALTA 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
BR	25,910	108	312	5.5	183.8	183.8	184.8	1.0
BS	26,642	79	190	8.9	193.3	193.3	193.3	0.0
BT	27,280	66	209	8.1	201.6	201.6	202.1	0.5
BU	27,370	146	303	5.6	202.9	202.9	203.3	0.4
BV	28,020	100	199	8.5	210.2	210.2	210.7	0.5
BW	28,990	209	328	5.2	220.2	220.2	221.2	1.0
BX	29,525	80	196	8.7	226.9	226.9	227.7	0.8
BY	29,955	52	228	8.6	231.3	231.3	231.3	0.0
BZ	30,580	84	285	4.5	239.8	239.8	239.8	0.0
CA	31,180	72	275	5.2	248.4	248.4	248.4	0.0
CB	31,580	84	182	7.2	249.7	249.7	250.5	0.2
CC	32,025	168	178	7.3	254.3	254.3	254.6	0.3
CD	32,433	56	131	5.4	261.5	261.5	261.5	0.0
CE	32,715	36	92	7.7	266.0	266.0	266.0	0.0
CF	33,359	25	72	9.8	271.4	271.4	271.4	0.0
CG	34,123	33	99	7.2	285.8	285.8	285.8	0.0
CH	34,585	27	77	9.3	291.1	291.1	291.1	0.0
CI	35,117	36	97	7.3	302.0	302.0	302.0	0.0
CJ	35,747	40	98	7.3	313.2	313.2	313.2	0.0

¹Feet above Pacific Street

²Width includes islands

TABLE 24

**FEDERAL EMERGENCY MANAGEMENT AGENCY
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS**

FLOODWAY DATA

FLOODING SOURCE: LOMA ALTA CREEK