



Attachment D

1. Cover Sheet
2. Table of Contents
3. Notes
4. Summary of Available Flood Types, Flood History, and Flood Hazard Exposure (58 Maps)
5. Summary of Available Flood Infrastructure Information (58 Maps)

Attachment D
 Summary of Exposure and Infrastructure
 Inventory by County



September 2013
**STATEWIDE FLOOD
 MANAGEMENT
 PLANNING PROGRAM**
 FloodSAFE
 CALIFORNIA

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County	#	County	#	County	#	County	#
Alameda County	D-1 D-2	Lake County	D-33 D-44	Riverside County	D-65 D-66	Sonoma County	D-97 D-98
Alpine County	D-3 D-4	Lassen County	D-35 D-36	Sacramento County	D-67 D-68	Stanislaus County	D-99 D-100
Amador County	D-5 D-6	Los Angeles County	D-37 D-38	San Benito County	D-69 D-70	Sutter	D-101 D-102
Butte County	D-7 D-8	Madera County	D-39 D-40	San Bernardino County	D-71 D-72	Tehama County	D-103 D-104
Calaveras County	D-9 D-10	Marin County	D-41 D-42	San Diego County	D-73 D-74	Trinity County	D-105 D-106
Colusa County	D-11 D-12	Mariposa County	D-43 D-44	San Francisco County	D-75 D-76	Tulare County	D-107 D-108
Contra Costa County	D-13 D-14	Mendocino County	D-45 D-46	San Joaquin County	D-77 D-78	Tuolumne County	D-109 D-110
Del Norte County	D-15 D-16	Merced County	D-47 D-48	San Luis Obispo County	D-79 D-80	Ventura County	D-111 D-112
El Dorado County	D-17 D-18	Modoc County	D-49 D-50	San Mateo County	D-81 D-82	Yolo County	D-113 D-114
Fresno County	D-19 D-20	Mono County	D-51 D-52	Santa Barbara County	D-83 D-84	Yuba County	D-115 D-116
Glenn County	D-21 D-22	Monterey County	D-53 D-54	Santa Clara County	D-85 D-86		
Humboldt County	D-23 D-24	Napa County	D-55 D-56	Santa Cruz County	D-87 D-88		
Imperial County	D-25 D-26	Nevada County	D-57 D-58	Shasta County	D-89 D-90		
Inyo County	D-27 D-28	Orange County	D-59 D-60	Sierra County	D-91 D-92		
Kern County	D-29 D-30	Placer County	D-61 D-62	Siskiyou County	D-93 D-94		
Kings County	D-31 D-32	Plumas County	D-63 D-64	Solano County	D-95 D-96		

Statewide GIS Data Legend

Statewide GIS Data:

- City
- Populated Place
- DWR Local Agency Dam
- DWR Other Dam
- NFHL Dam or Weir
- CLD Pump Station
- CLD Local Agency Levee
- CLD Other Levee
- NFHL Levee
- NFHL Flood Event Structure
- NFHL Channel
- NFHL Control Structure
- NFHL Dike
- NFHL Retaining Wall
- Highway
- Major River
- Major Water Body
- 100-yr Floodplain
- 500-yr Floodplain
- County

Attachment D - Table of Contents

Table of Contents

Attachment D
Summary of Exposure and Infrastructure
Inventory by County

September 2013



Map Contents & Sources of Information

1. Summary of Available Flood Types, Flood History, and Flood Hazard Exposure

100-year and 500-year Floodplains – The displayed floodplains were compiled for the SFMP from the following three sources (500-year floodplains were not available for some remote areas of the State):

1. The CVFPP floodplains, as defined by the CVFPP on October 4, 2011, for the Yolo, East Side, Upper Sacramento, Mariposa, Sutter, and Tisdale bypasses;
2. Floodplains defined (or refined) by USACE flood maps based on ER 1105-2-101 standards;
3. FEMA Flood Insurance Rate Maps (FIRMs).

History of Flooding by Event Year – This is a chronological list of floods of record affecting the county. When available, additional details include dates, flood name, and streams or regions affected. Sources include Agency Interviews, County Hazard Mitigation Plans, the California Water Plan 2009, Alluvial Fan Task Force Study Area Flood History, Taming Natural Disasters Appendix D, and various storm reports.

Types of Flooding – This is a list of common and possible types of flooding within the county.

Flood Hazard Exposure – This is a list of county statistics for land area, population, and structures based on the 2000 census. The quantity and percentage of area, population, structure and land values, and other important facilities exposed to the 100-year and 500-year flood events are also listed. Exposure numbers for acreage are rounded to the nearest 100 acres except where the number is smaller than 100. In such cases, they are rounded to the nearest 10 acres for values between 10 and 100, and to the nearest 1 acre for values between 1 and 10.

Notes: Based on the source information, no 100-year or 500-year floodplain exists in Alpine County. The San Francisco County floodplain delineation was still in progress at the time it was obtained in the Fall of 2011.

Floodplain delineation in the vicinity of water bodies varies by county. In some counties the floodplain covers the entire body of water, while others include only a buffer along the shoreline. For the purposes of the enclosed maps, lakes and coastal bay layers have been shown on top of the delineated floodplain. Floodplains may have discontinuities at county boundaries.

Disclaimers

1. Information displayed on the maps does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown.

2. The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

2. Summary of Available Flood Infrastructure Information

Summary of Available Flood Infrastructure Information – This is a graphic display of the entire county showing existing flood infrastructure that has been mapped and made available in a Geographic Information System (GIS) format. Note that some of the counties were oriented differently to maximize the size of the county on the map. The following additional information and a legend of corresponding symbols is also provided on the flood infrastructure maps:

1. **Flood Infrastructure GIS Data Received from Agencies** – Infrastructure data provided by local agencies in GIS compatible formats (shapefile and geodatabase) is shown on the maps for the respective counties and is listed with the corresponding map symbol.
2. **Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted** – Infrastructure data provided by local agencies is listed for informational purposes only. This data is not displayed graphically on the maps.
3. **Agencies Contacted as Part of SFMP** – This is a list of those agencies contacted by the information gathering teams.
4. **Statewide GIS Data** – A legend of available statewide GIS data is provided at the bottom of each map. Statewide GIS Data sources include:
 - Cities derived from California Department of Forestry and Fire Protection (CAL FIRE) Incorporated Cities polygons, 2010.
 - Populated Places from Geographic Names Information System (GNIS), US Board on Geographic Names, USGS, 2011.
 - Dams modified from DWR, Bulletin 17-00, 2000. Not all dams are necessarily flood infrastructure as that information is not provided specifically in the Bulletin.
 - Pump Stations and Levees from California Levee Database (CLD), v2.2 r2, 2010.
 - NFHL Dam or Weir, Levee, Flood Event Structure, Channel, Control Structure, Dike and Retaining Wall are from the National Flood Hazard Layer, FEMA, July 2011 or from preliminary countywide DFIRM databases.
 - Rivers and Lakes, modified from Department of Fish Game (DFG) in 2009, previously downloaded from CalAtlas, original publication date not available.
 - Counties and Hillshade from CalAtlas 2009.
 - Highways from TeleAtlas, 2004.

Planned Projects – The planned projects represent information gathered from local, State, and Federal agencies for Federal Fiscal Year 2012. A number of the identified projects do not have cost associated with them.

Definitions/Acronyms

California Levee Database (CLD): The CLD contains data about the centerline of an embankment for controlling rivers, coastal areas, or other water bodies. In creating the CLD, all structures that could hold back water were digitized for flood planning purposes. Some of these structures are not technically levees (such as railroad grades, irrigation canals, etc.). However the information necessary to distinguish these features from actual "levees" is not completely present in the CLD. DWR makes no warranties, representations or guarantees, either expressed or implied, as to the completeness, accuracy or correctness of the data, nor accepts or assumes any liability arising from or for any incorrect, incomplete or misleading data provided pursuant to this request.

National Flood Hazard Layer (NFHL): The NFHL is a computer database that contains the flood hazard map information from FEMA's Flood Map Modernization program. These map data are from Digital Flood Insurance Rate Map (DFIRM) databases and Letters of Map Revision (LOMRs). Relevant NFHL flood infrastructure that was not submitted by a local agency and is not included in the CLD or listed in DWR Bulletin 17-00, 2000, is displayed on the maps and legend.

DWR Local Agency Dam: Those dams listed in DWR Bulletin 17-00, 2000, where the maintaining agency listed is one of the agencies contacted during the SFMP information collection efforts.

DWR Other Dam: All other dams listed in DWR Bulletin 17-00, 2000, which are not maintained by one of the agencies contacted during the SFMP information collection efforts.

CLD Local Agency Levee: Those levees within the CLD where the "maintaining agency" attribute is one of the agencies contacted during the SFMP information collection efforts. Note: only approximately 23% of the CLD levee lines have a populated "maintaining agency" attribute.

CLD Other Levee: All other levees in the CLD that either do not have a maintaining agency listed, or the listed agency is not one of the agencies contacted during the SFMP information collection efforts.

County Maps:

1. Summary of Available Flood Types, Flood History, and Flood Hazard Exposure (58 Maps)

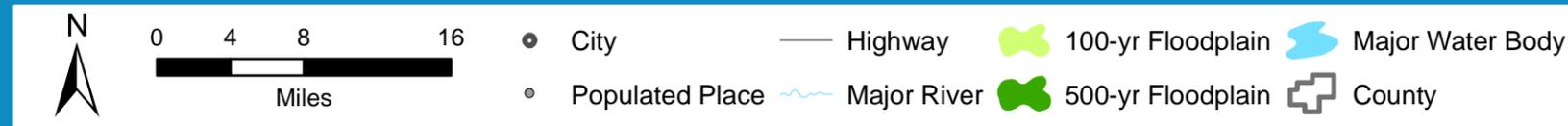
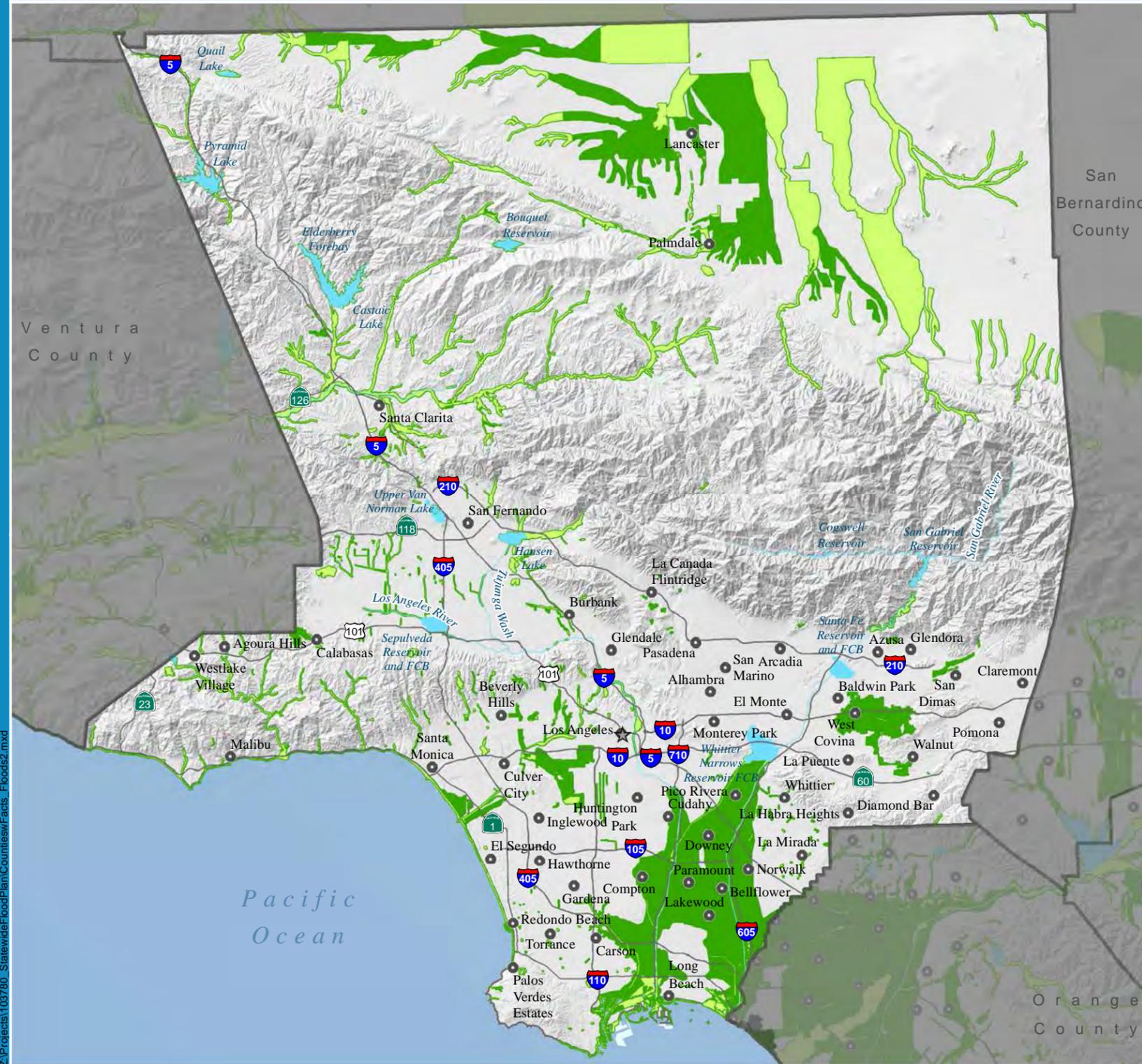
2. Summary of Available Flood Infrastructure Information (58 Maps)

Attachment D Summary of Exposure and Infrastructure Inventory by County

September 2013



100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1779-1780
- 1852-1853 February
- 1858 October 2, San Diego Hurricane
- 1861-1862 Winter, The Great Flood
- 1910-1911 Winter
- 1916 January, Great Flood of 1916
- 1937-1938 Winter, Great Flood
- 1962 February
- 1966-1967 Winter
- 1969 Winter 1969 Storms
- 1979 January 31
- 1980 Winter
- 1982 March 1983 Storms
- 1992 Late Winter Storms
- 1995 Severe Winter Storms
- 1997 Winter, January 1997 Floods
- 1998 Winter, El Niño Floods
- 2002 December, El Niño Floods
- 2007 September 23
- 2010-2011 December 2010 Winter Storm Event

Flood Hazard Exposure

County Statistics

Total Acreage:	2.6 million
Total Population:	9.5 million
Total Structures:	2.4 million
Total Depreciated Replacement Value of Structures and Contents:	\$614.1 billion
Total Crop Acreage:	209,600
Total Value of Crops:	\$299.0 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	112,900	268,700
Percent of Area Exposed:	4%	10%
Population Exposed:	79,100	1.4 million
Percent of Population Exposed:	1%	14%
Structures Exposed:	23,200	355,700
Depreciated Replacement Value of Structures and Contents Exposed:	\$6.3 billion	\$74.7 billion
Crops Exposed (acres):	23,400	51,500
Value of Crops Exposed:	\$27.1 million	\$64.7 million
Department of Defense Facilities Exposed:	3	3
Essential Facilities Exposed:	17	509
High Potential Loss Facilities Exposed:	50	391
Lifeline Utilities Exposed:	10	36
Transportation Facilities Exposed:	203	714
Transportation Segments Exposed (miles):	122	584
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	78	85
Total Sensitive Animal Species Exposed:	93	94

Los Angeles County

Types of Flooding

Likely:	Present:
Alluvial	Engineered Structure Failure
Coastal	Tsunami
Debris Flow	
Flash	
Slow Rise	
Stormwater	

Hydrologic Regions

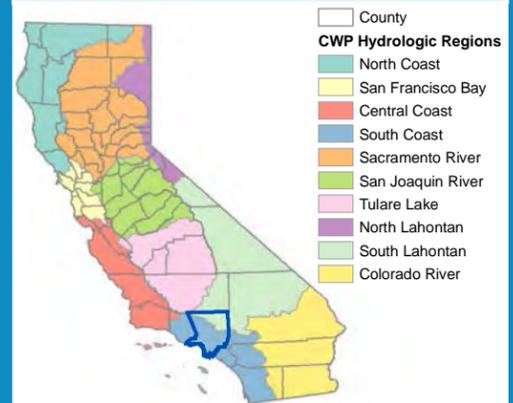


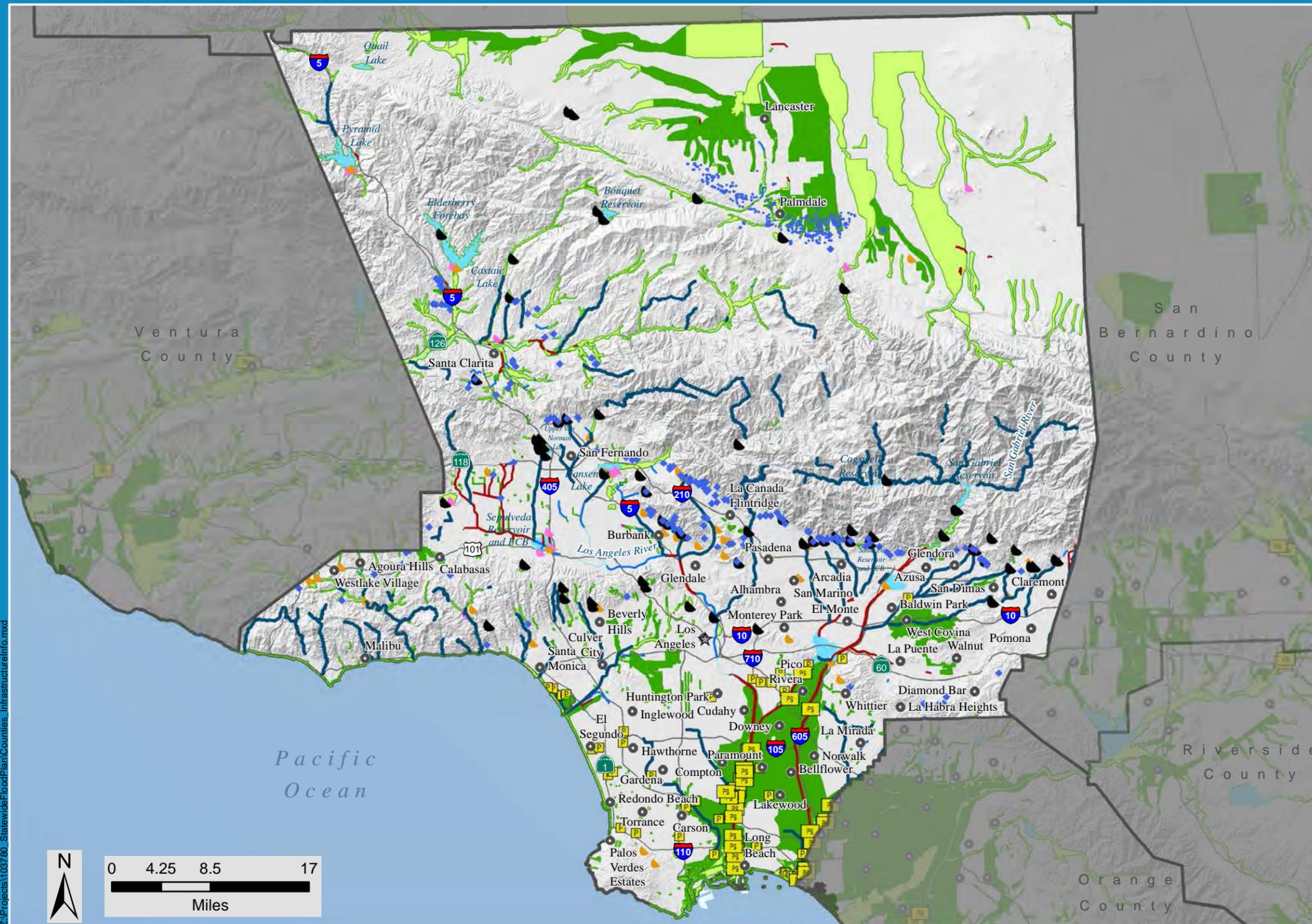
Figure D-37
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Los Angeles County.

September 2013

DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Summary of Available Flood Infrastructure Information

Los Angeles County



Flood Infrastructure GIS Data Received from Agencies Contacted:

- Pump Plant
- Major Dam
- Debris Basin
- Major Channel
- Palmdale Maintained Basin

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):

- Levee
- Channel
- Dam
- Debris Basin
- Detention Basin

Agencies Contacted as Part of SFMP:

- City of Lancaster
- City of Los Angeles
- City of Palmdale

Planned Projects:

Number of Local Projects:	90
Estimated Cost of Local Projects:	\$2.5 billion
Number of USACE Projects:	3
Estimated Cost of USACE Projects:	\$46 million

Statewide GIS Data Sources:

Cities derived from CAL FIRE incorporated city limit polygons, 2010. Populated Places from GNIS, 2011. Counties from CalAtlas, 2009. Dams modified from DWR, Bulletin 17-00, 2000. CLD layers are from California Levee Database, v2.2 r2, 2010. NFHL layers are from the National Flood Hazard Layer, FEMA, August 2011. Highways from TeleAtlas, 2004. Rivers and Lakes modified from DFG, N/A. Floodplains compiled for SFMP, 2011. All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

Statewide GIS Data:

- | | | | | | |
|----------------------|------------------|------------------------|----------------------------|---------------------|-------------------|
| DWR Local Agency Dam | CLD Pump Station | NFHL Levee | NFHL Control Structure | Highway | 100-yr Floodplain |
| City | DWR Other Dam | CLD Local Agency Levee | NFHL Flood Event Structure | NFHL Dike | 500-yr Floodplain |
| Populated Place | NFHL Dam or Weir | CLD Other Levee | NFHL Channel | NFHL Retaining Wall | County |
| | | | | Major River | Major Water Body |

Los Angeles County

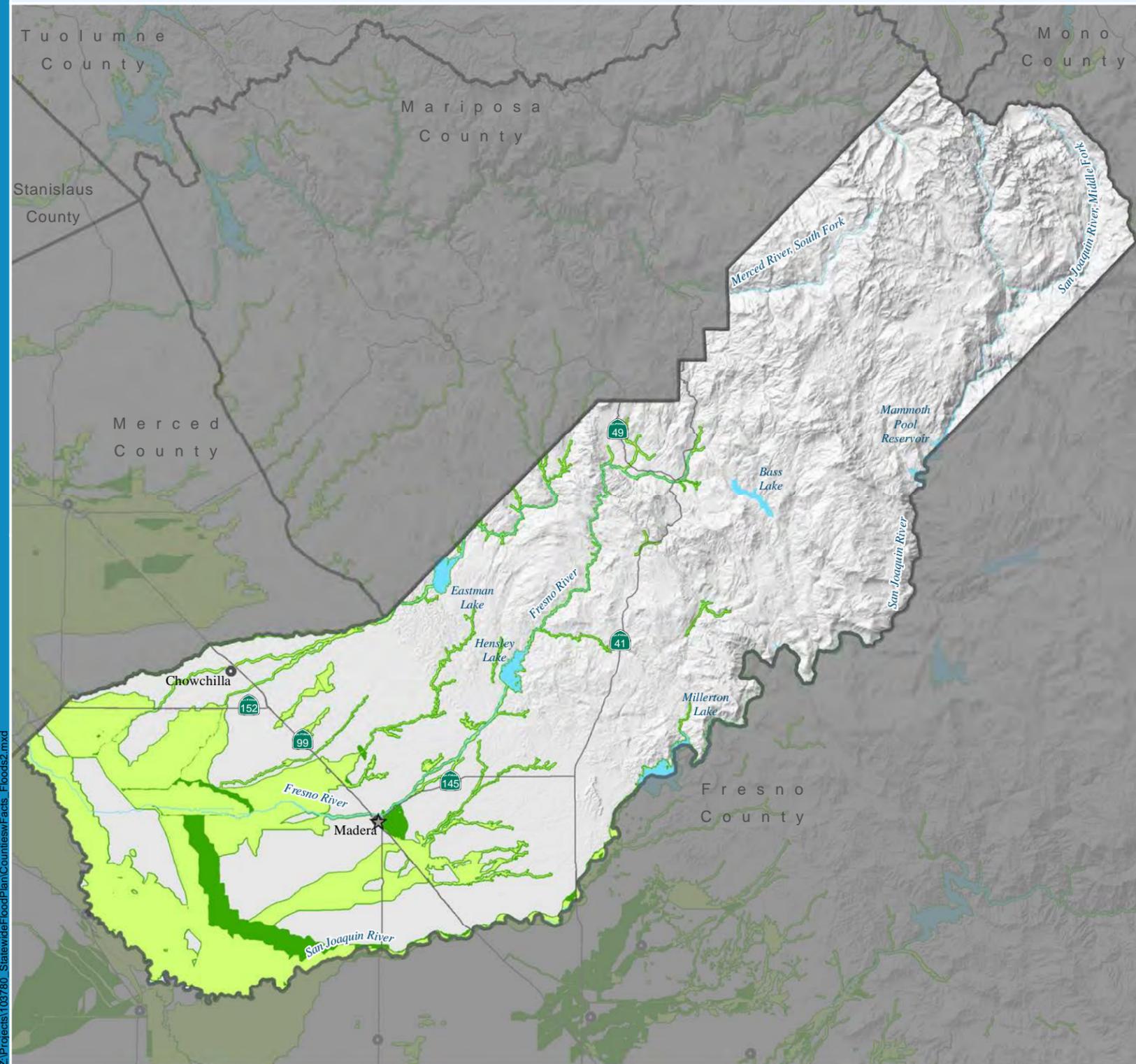
Figure D-38
Summary of Available Flood Infrastructure Information, Los Angeles County

September 2013



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100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1861-1862** Winter, The Great Flood
- 1867-1868** Winter
- 1911** January
- 1945**
- 1950** Winter
- 1955-1956** Winter, 1955 Christmas Flood
- 1958** Spring
- 1964-1965**
- 1966-1967** Winter
- 1967** Spring
- 1968-1969** Winter 1968-1969 Storms
- 1980** Winter
- 1982-1983** Winter/Spring, Winter Storms
- 1986** Winter, St. Valentine's Day Storm
- 1992-1993** Late Winter Storms
- 1995-1996** Winter/Spring, 1995 Christmas Floods
- 1996-1997** Winter, January 1997 Floods
- 1997-1998** Winter/Spring, El Niño Floods
- 2006** 2006 Spring Storms
- 2010-2011** December 2010 Winter Storm Event

Flood Hazard Exposure

County Statistics

Total Acreage:	1.4 million
Total Population:	123,100
Total Structures:	42,900
Total Depreciated Replacement Value of Structures and Contents:	\$9.7 billion
Total Crop Acreage:	356,500
Total Value of Crops:	\$583.8 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	188,600	208,000
Percent of Area Exposed:	14%	15%
Population Exposed:	12,200	22,800
Percent of Population Exposed:	10%	19%
Structures Exposed:	3,300	5,600
Depreciated Replacement Value of Structures and Contents Exposed:	\$638.2 million	\$1.1 billion
Crops Exposed (acres):	140,100	155,000
Value of Crops Exposed:	\$229.0 million	\$246.4 million
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	8	18
High Potential Loss Facilities Exposed:	10	10
Lifeline Utilities Exposed:	1	2
Transportation Facilities Exposed:	85	85
Transportation Segments Exposed (miles):	38	45
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	14	14
Total Sensitive Animal Species Exposed:	30	30

Madera County

Types of Flooding

Likely:	Present:
Flash Slow Rise Stormwater	Debris Flow Engineered Structure Failure

Hydrologic Regions



Figure D-39
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Madera County.

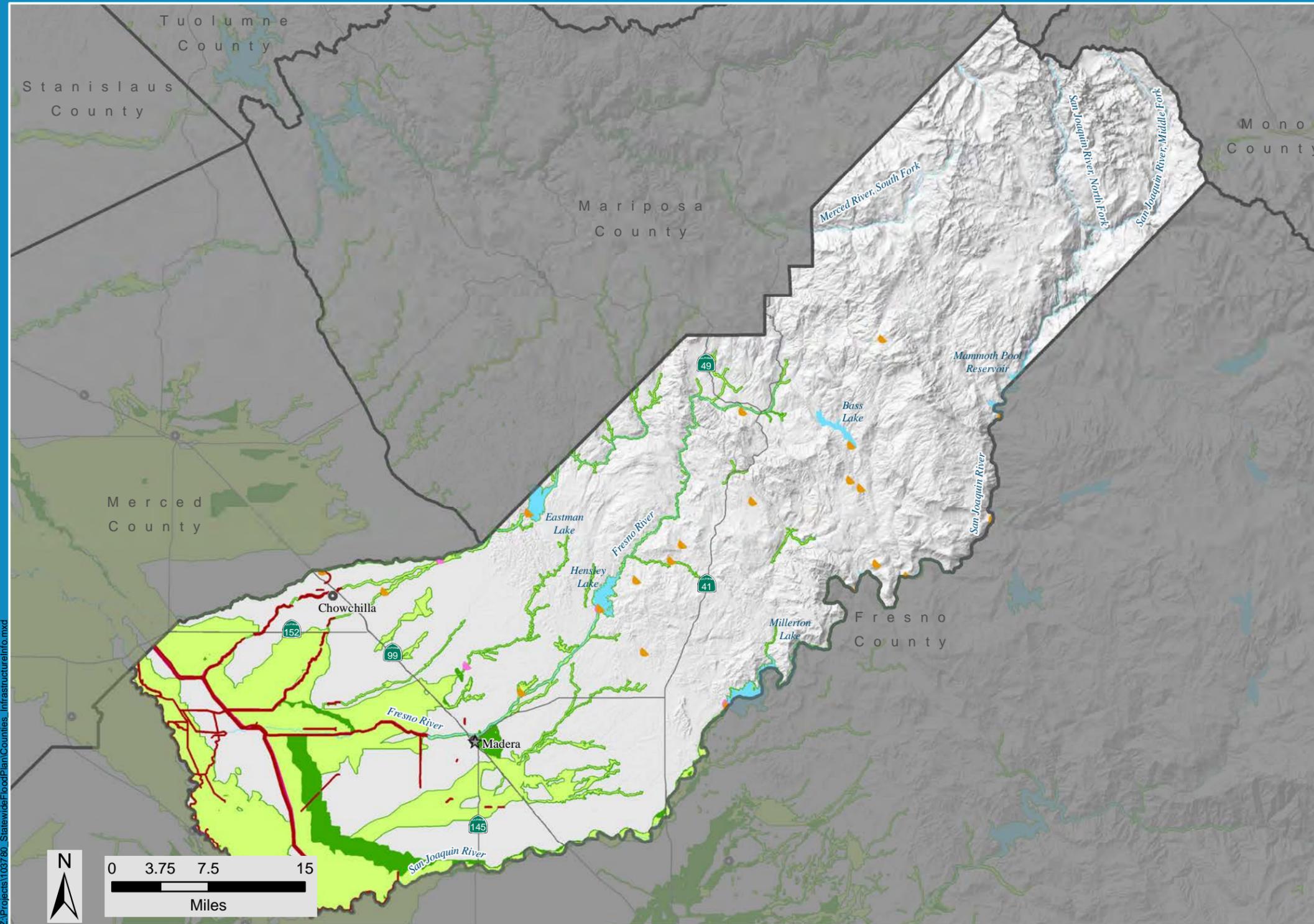
September 2013



DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Summary of Available Flood Infrastructure Information

Madera County



Flood Infrastructure GIS Data Received from Agencies Contacted:
No Flood Infrastructure GIS Data Received

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):

- Levee
- Channel
- Pump Station

Agencies Contacted as Part of SFMP:
Madera County Flood Control and Water Conservation District

Planned Projects:

Number of Local Projects:	5
Estimated Cost of Local Projects:	\$11.3 million
Number of USACE Projects:	1
Estimated Cost of USACE Projects:	\$8.3 million

Statewide GIS Data Sources:
Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bulletin 17-00, 2000. **CLD** layers are from California Levee Database, v2.2 r2, 2010. **NFHL** layers are from the National Flood Hazard Layer, FEMA, August 2011. **Highways** from TeleAtlas, 2004. **Rivers** and **Lakes** modified from DFG, N/A. **Floodplains** compiled for SFMP, 2011.
All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

Madera County

Statewide GIS Data:

City	DWR Local Agency Dam	CLD Pump Station	NFHL Levee	NFHL Control Structure	Highway	100-yr Floodplain
Populated Place	DWR Other Dam	CLD Local Agency Levee	NFHL Flood Event Structure	NFHL Dike	Major River	500-yr Floodplain
	NFHL Dam or Weir	CLD Other Levee	NFHL Channel	NFHL Retaining Wall	Major Water Body	County

Figure D-40
Summary of Available Flood Infrastructure Information, Madera County

September 2013

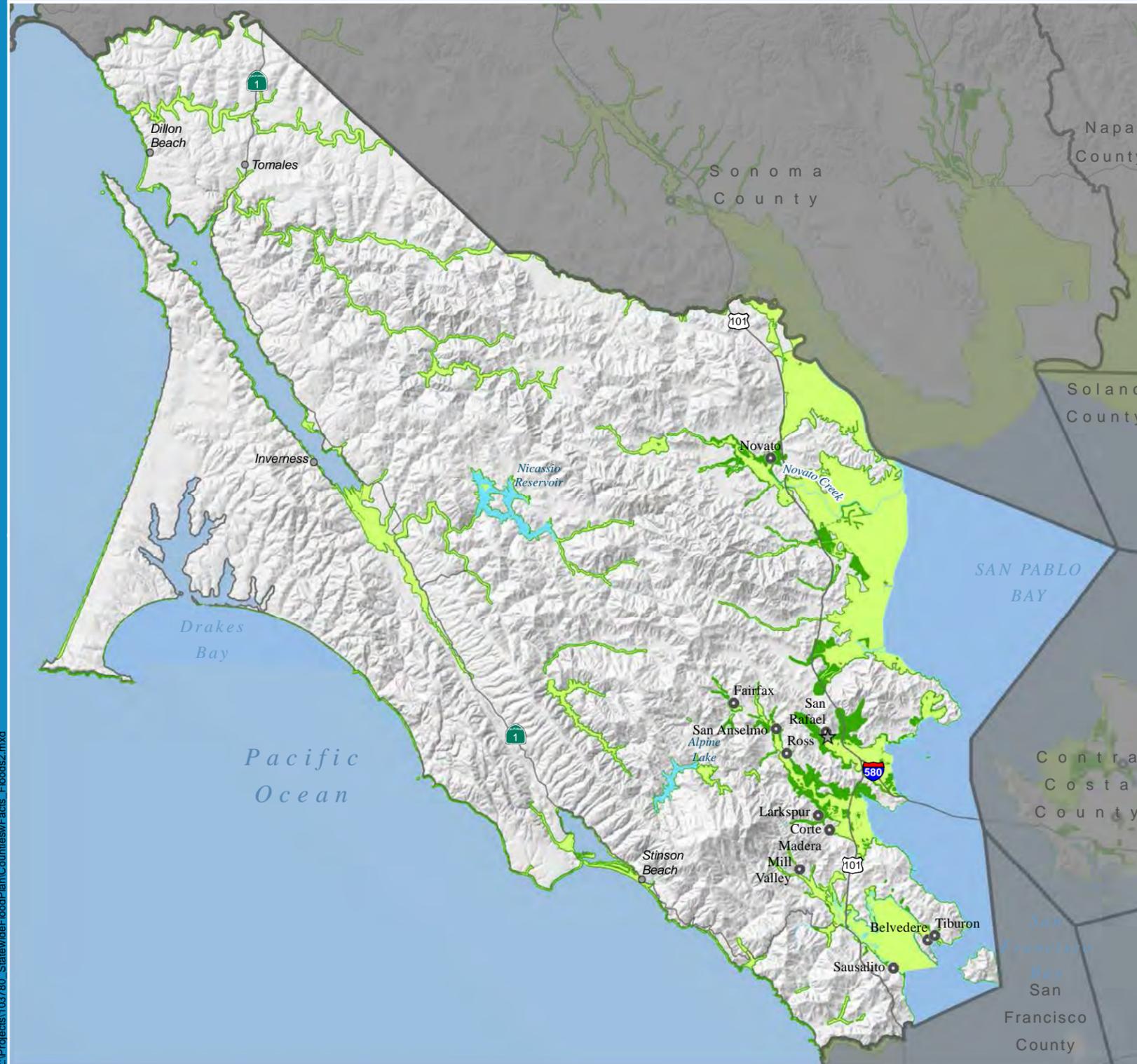
US Army Corps of Engineers

DEPARTMENT OF WATER RESOURCES
STATE OF CALIFORNIA

STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM

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100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1861-1862 Winter, The Great Flood
- 1913-1914 Winter
- 1942 Winter
- 1946 Spring
- 1955-1956 Winter, 1955 Christmas Flood
- 1958 Winter/Spring
- 1962-1963 Winter
- 1964-1965 Winter, Christmas 1964 Disaster
- 1968-1969 Winter 1968-1969 Storms
- 1969-1970 Winter/Spring, Northern California Flooding
- 1973 Winter
- 1981-1982 Winter/Spring Storms
- 1982-1983 Winter/Spring, Winter Storms
- 1986 Winter, St. Valentine's Day Storm
- 1995-1996 Winter/Spring, 1995 Christmas Floods
- 1998 Winter/Spring, El Niño Floods
- 2002 Winter, El Niño Floods
- 2005-2006 Winter Storms
- 2006 2006 Spring Storms
- 2011 March

Flood Hazard Exposure

County Statistics

Total Acreage:	378,700
Total Population:	247,200
Total Structures:	93,200
Total Depreciated Replacement Value of Structures and Contents:	\$31.8 billion
Total Crop Acreage:	6,700
Total Value of Crops:	\$1.6 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	34,600	38,400
Percent of Area Exposed:	9%	10%
Population Exposed:	39,700	63,400
Percent of Population Exposed:	16%	26%
Structures Exposed:	13,100	22,100
Depreciated Replacement Value of Structures and Contents Exposed:	\$5.6 billion	\$9.3 billion
Crops Exposed (acres):	4,000	4,000
Value of Crops Exposed:	\$677,400	\$679,100
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	23	45
High Potential Loss Facilities Exposed:	3	3
Lifeline Utilities Exposed:	4	6
Transportation Facilities Exposed:	76	94
Transportation Segments Exposed (miles):	28	39
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	70	70
Total Sensitive Animal Species Exposed:	49	51

Marin County

Types of Flooding

Likely:	Present:
Coastal Debris Flow	Engineered Structure Failure
Flash	Tsunami
Slow Rise	
Stormwater	

Hydrologic Regions



Figure D-41
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Marin County.

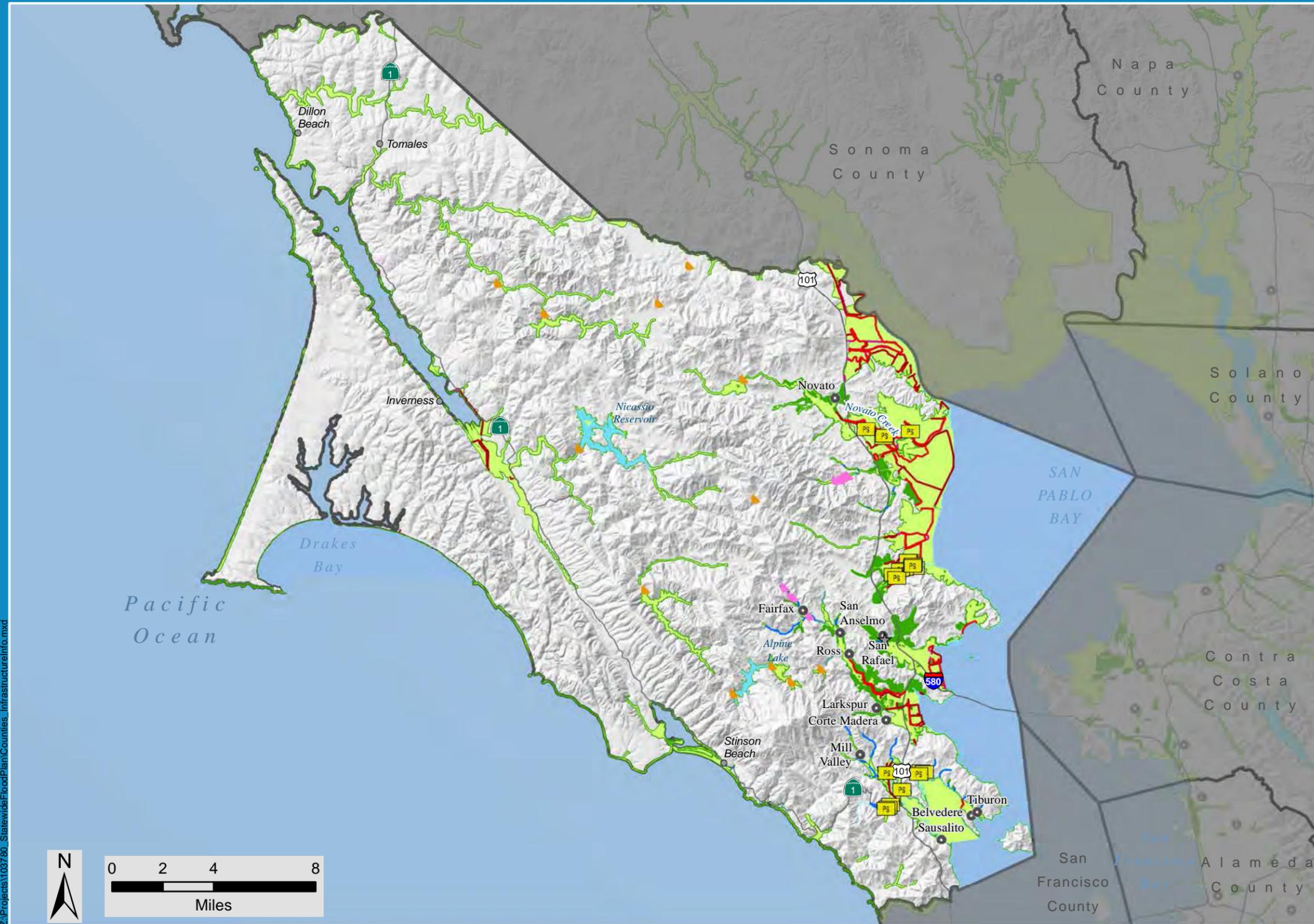
September 2013



DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Summary of Available Flood Infrastructure Information

Marin County



Flood Infrastructure GIS Data Received from Agencies Contacted:

- PS Pump Station
- Levee

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):

- Channel
- Dam
- Pump Station

Agencies Contacted as Part of SFMP:

- Marin County Flood Control and Water Conservation District
- City of Corte Madera
- City of Mill Valley
- City of Novato
- City of San Rafael
- City of Sausalito
- City of Tiburon

Planned Projects:

Number of Local Projects:	32
Estimated Cost of Local Projects:	\$217.7 million
Number of USACE Projects:	2
Estimated Cost of USACE Projects:	\$37.6 million

Statewide GIS Data Sources:

Cities derived from CAL FIRE incorporated city limit polygons, 2010. Populated Places from GNIS, 2011. Counties from CalAtlas, 2009. Dams modified from DWR, Bulletin 17-00, 2000. CLD layers are from California Levee Database, v2.2 r2, 2010. NFHL layers are from the National Flood Hazard Layer, FEMA, August 2011. Highways from TeleAtlas, 2004. Rivers and Lakes modified from DFG, N/A. Floodplains compiled for SFMP, 2011.

All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

- | | | | | | | |
|----------------------------|----------------------|------------------------|----------------------------|------------------------|------------------|-------------------|
| Statewide GIS Data: | DWR Local Agency Dam | CLD Pump Station | NFHL Levee | NFHL Control Structure | Highway | 100-yr Floodplain |
| City | DWR Other Dam | CLD Local Agency Levee | NFHL Flood Event Structure | NFHL Dike | Major River | 500-yr Floodplain |
| Populated Place | NFHL Dam or Weir | CLD Other Levee | NFHL Channel | NFHL Retaining Wall | Major Water Body | County |

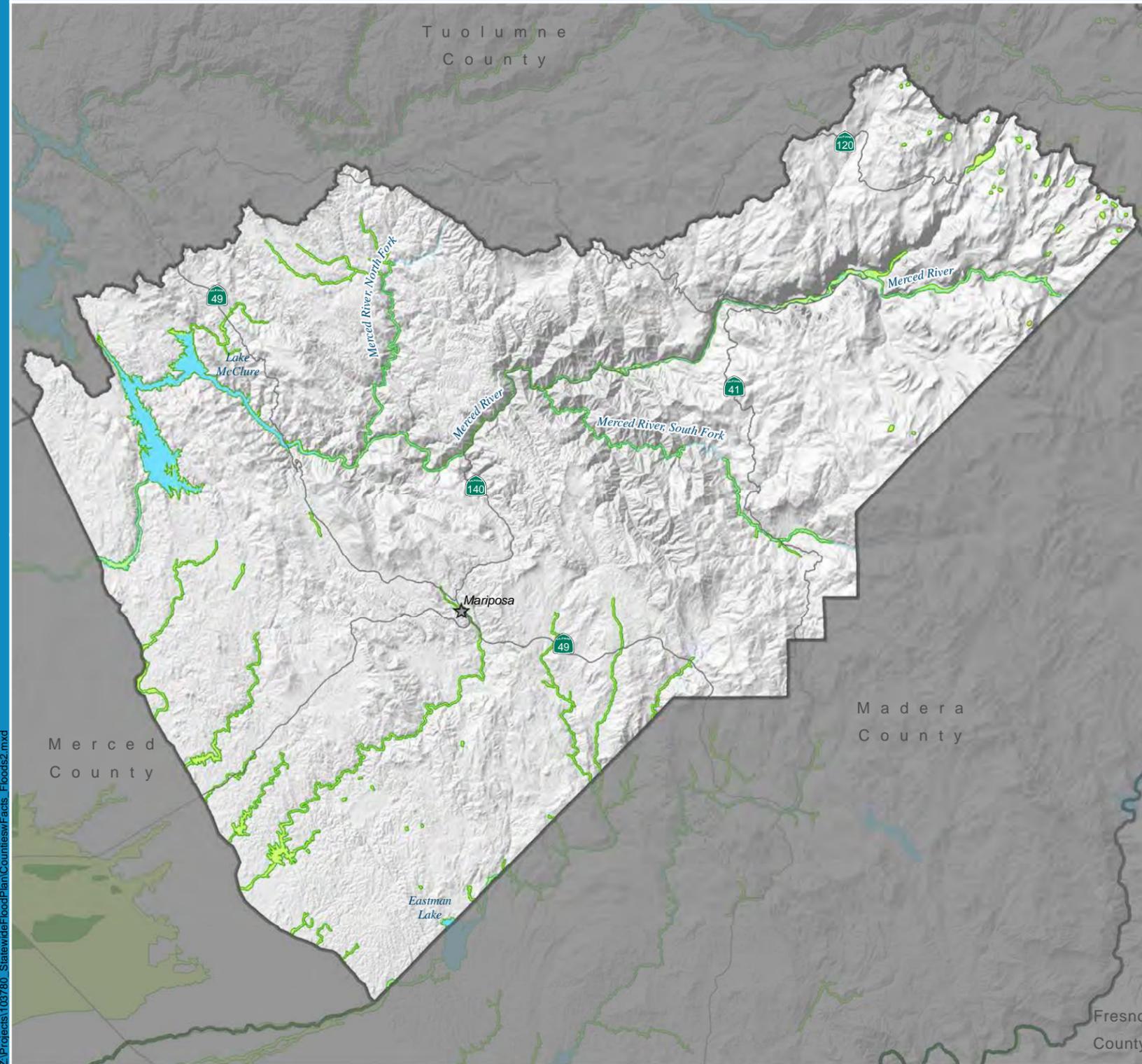
Figure D-42
Summary of Available Flood Infrastructure Information, Marin County

September 2013



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100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1861-1862 Winter, The Great Flood
- 1867-1868 Winter
- 1871-1872 Winter
- 1911 January
- 1937-1939 Winter, Great Flood
- 1955-1956 Winter, 1955 Christmas Flood
- 1958 Winter
- 1962-1963 Winter
- 1964-1965 Winter
- 1966-1967 Winter
- 1968-1969 Winter 1968-1969 Storms
- 1980 Winter
- 1982 March
- 1982-1983 Winter/Spring, Winter Storms
- 1986 Winter, St. Valentine's Day Storm
- 1995-1996 Winter/Spring, 1995 Christmas Floods
- 1996-1997 Winter, January 1997 Floods
- 2005 March
- 2010-2011 December 2010 Winter Storm Event
- 2011 March

Flood Hazard Exposure

County Statistics

Total Acreage:	935,600
Total Population:	17,100
Total Structures:	9,500
Total Depreciated Replacement Value of Structures and Contents:	\$1.8 billion
Total Crop Acreage:	3,600
Total Value of Crops:	\$758,900

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	17,400	17,400
Percent of Area Exposed:	2%	2%
Population Exposed:	200	200
Percent of Population Exposed:	1%	1%
Structures Exposed:	200	200
Depreciated Replacement Value of Structures and Contents Exposed:	\$46.0 million	\$46.0 million
Crops Exposed (acres):	100	100
Value of Crops Exposed:	n/a	n/a
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	0	0
High Potential Loss Facilities Exposed:	4	4
Lifeline Utilities Exposed:	0	0
Transportation Facilities Exposed:	7	7
Transportation Segments Exposed (miles):	14	14
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	35	35
Total Sensitive Animal Species Exposed:	39	39

Mariposa County

Types of Flooding

Likely:	Present:
Flash	Debris Flow
Slow Rise	Engineered Structure Failure
Stormwater	

Hydrologic Regions



Figure D-43
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Mariposa County.

September 2013

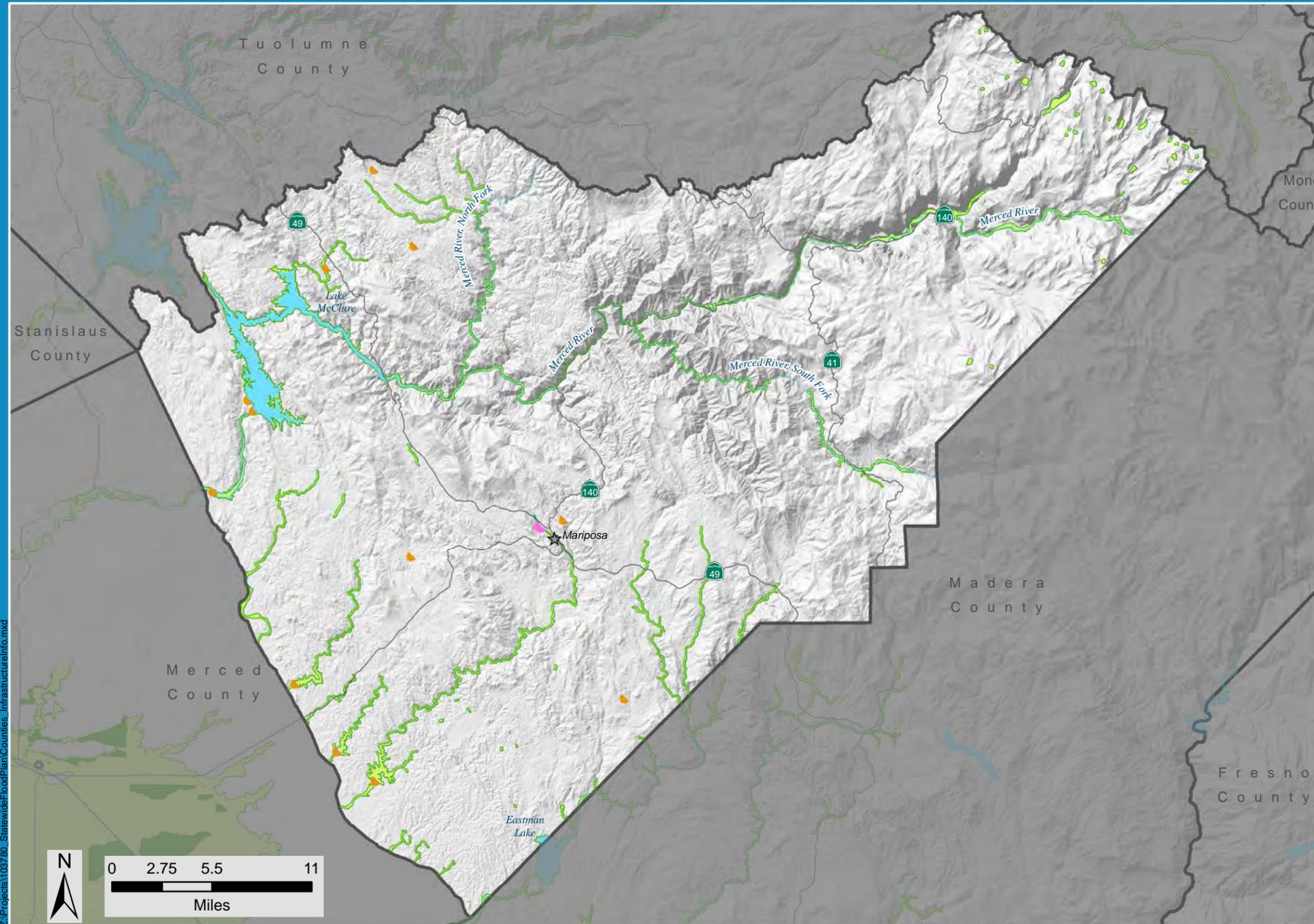


County
 City
 Populated Place
 Highway
 Major River
 Major Water Body
 100-yr Floodplain
 500-yr Floodplain
 County

DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Summary of Available Flood Infrastructure Information

Mariposa County



Flood Infrastructure GIS Data Received from Agencies Contacted:
No Flood Infrastructure GIS Data Received

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):
Channel
Dam

Agencies Contacted as Part of SFMP:
Mariposa County

Planned Projects:
Number of Local Projects: 0
Estimated Cost of Local Projects: none
Number of USACE Projects: 0
Estimated Cost of USACE Projects: none

Statewide GIS Data Sources:
Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bulletin 17-00, 2000. **CLD** layers are from California Levee Database, v2.2 r2, 2010. **NFHL** layers are from the National Flood Hazard Layer, FEMA, August 2011. **Highways** from TeleAtlas, 2004. **Rivers** and **Lakes** modified from DFG, N/A. **Floodplains** compiled for SFMP, 2011.
All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

Mariposa County

Figure D-44
Summary of Available Flood Infrastructure Information, Mariposa County

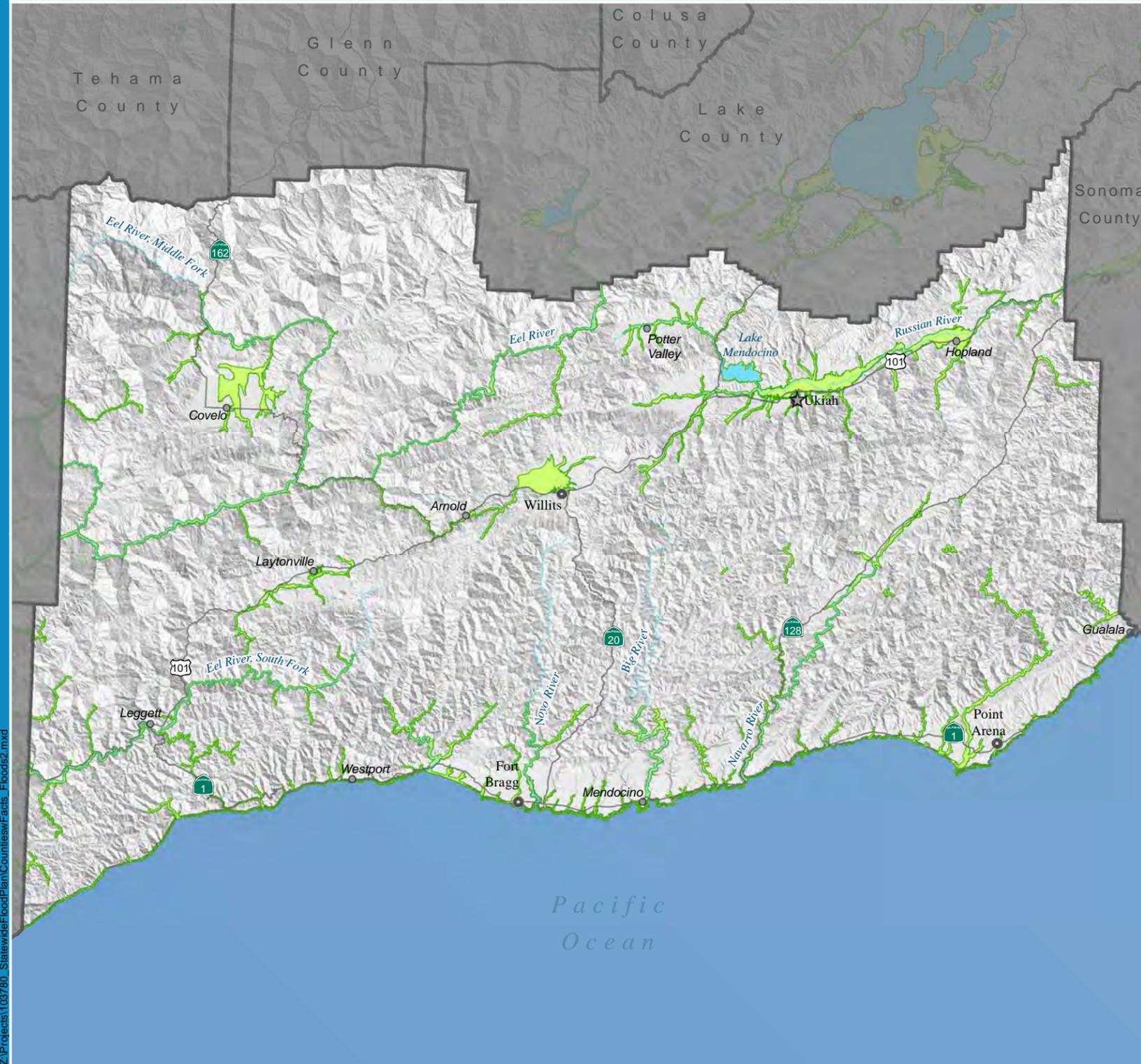
September 2013

Statewide GIS Data:

● City	● DWR Local Agency Dam	■ CLD Pump Station	— NFHL Levee	— NFHL Control Structure	— Highway	■ 100-yr Floodplain
○ Populated Place	● DWR Other Dam	— CLD Local Agency Levee	— NFHL Flood Event Structure	— NFHL Dike	— Major River	■ 500-yr Floodplain
	● NFHL Dam or Weir	— CLD Other Levee	— NFHL Channel	— NFHL Retaining Wall	■ Major Water Body	■ County

DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

100-year and 500-year Floodplains



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Selected Flood Events by Event Year

- 1861-1862 Winter, The Great Flood
- 1955-1956 Winter, 1955 Christmas Flood
- 1958 Winter
- 1962 October
- 1964-1965 Winter, Christmas 1964 Disaster
- 1968-1969 Winter 1968-1969 Storms
- 1969-1970 Winter/Spring, Northern California Flooding
- 1981 December 19
- 1982-1983 Winter/Spring, Winter Storms
- 1986 February, St. Valentine's Day Storm
- 1993 January 20, Late Winter Storms
- 1995 Winter, Severe Winter Storms
- 1996-1997 Winter, January 1997 Floods
- 1998 Spring, El Niño Floods
- 2001 June 23
- 2002 December, El Niño Floods
- 2005-2006 Winter, New Year's Eve Flood of 2006
- 2006 2006 Spring Storms
- 2008 January 5-14, 2008 Winter Storms
- 2011 March

Flood Hazard Exposure

County Statistics

Total Acreage:	2.2 million
Total Population:	86,200
Total Structures:	41,100
Total Depreciated Replacement Value of Structures and Contents:	\$7.7 billion
Total Crop Acreage:	80,100
Total Value of Crops:	\$196.7 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	48,600	50,000
Percent of Area Exposed:	2%	2%
Population Exposed:	7,200	8,900
Percent of Population Exposed:	8%	10%
Structures Exposed:	3,200	3,800
Depreciated Replacement Value of Structures and Contents Exposed:	\$590.6 million	\$724.2 million
Crops Exposed (acres):	17,200	17,800
Value of Crops Exposed:	\$50.2 million	\$53.6 million
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	9	10
High Potential Loss Facilities Exposed:	11	11
Lifeline Utilities Exposed:	2	2
Transportation Facilities Exposed:	75	88
Transportation Segments Exposed (miles):	69	76
Native American Tribal Land Exposed (acres):	500	500
Total Sensitive Plant Species Exposed:	70	70
Total Sensitive Animal Species Exposed:	39	39

Mendocino County

Types of Flooding

Likely:	Present:
Coastal	Alluvial
Debris Flow	Engineered Structure Failure
Flash	Tsunami
Slow Rise	
Stormwater	

Hydrologic Regions

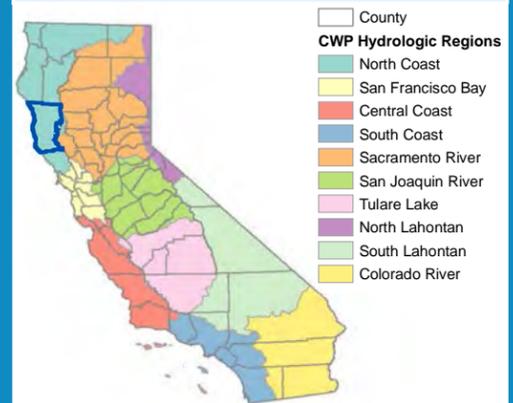


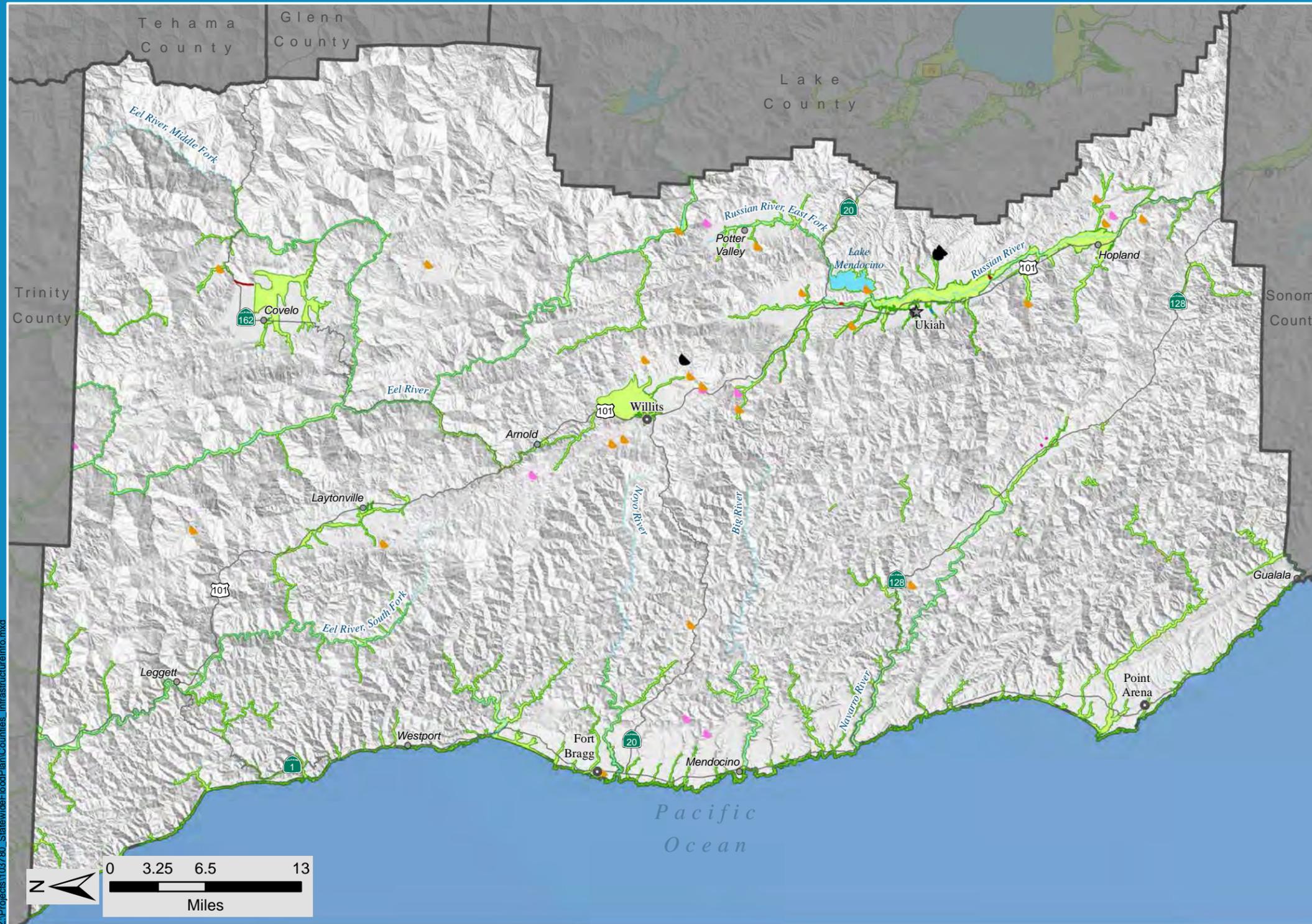
Figure D-45
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Mendocino County.

September 2013

DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Summary of Available Flood Infrastructure Information

Mendocino County



Flood Infrastructure GIS Data Received from Agencies Contacted:
No Flood Infrastructure GIS Data Received

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):
Channel
Dam

Agencies Contacted as Part of SFMP:
Mendocino County Water Agency

Planned Projects:
Number of Local Projects: 1
Estimated Cost of Local Projects: \$2.1 million
Number of USACE Projects: 1
Estimated Cost of USACE Projects: \$150 million

Statewide GIS Data Sources:
Cities derived from CAL FIRE incorporated city limit polygons, 2010. Populated Places from GNIS, 2011. Counties from CalAtlas, 2009. Dams modified from DWR, Bulletin 17-00, 2000. CLD layers are from California Levee Database, v2.2 r2, 2010. NFHL layers are from the National Flood Hazard Layer, FEMA, August 2011. Highways from TeleAtlas, 2004. Rivers and Lakes modified from DFG, N/A. Floodplains compiled for SFMP, 2011.
All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

Mendocino County

- | | | | | | | |
|----------------------------|----------------------|------------------------|----------------------------|------------------------|------------------|-------------------|
| Statewide GIS Data: | DWR Local Agency Dam | CLD Pump Station | NFHL Levee | NFHL Control Structure | Highway | 100-yr Floodplain |
| City | DWR Other Dam | CLD Local Agency Levee | NFHL Flood Event Structure | NFHL Dike | Major River | 500-yr Floodplain |
| Populated Place | NFHL Dam or Weir | CLD Other Levee | NFHL Channel | NFHL Retaining Wall | Major Water Body | County |

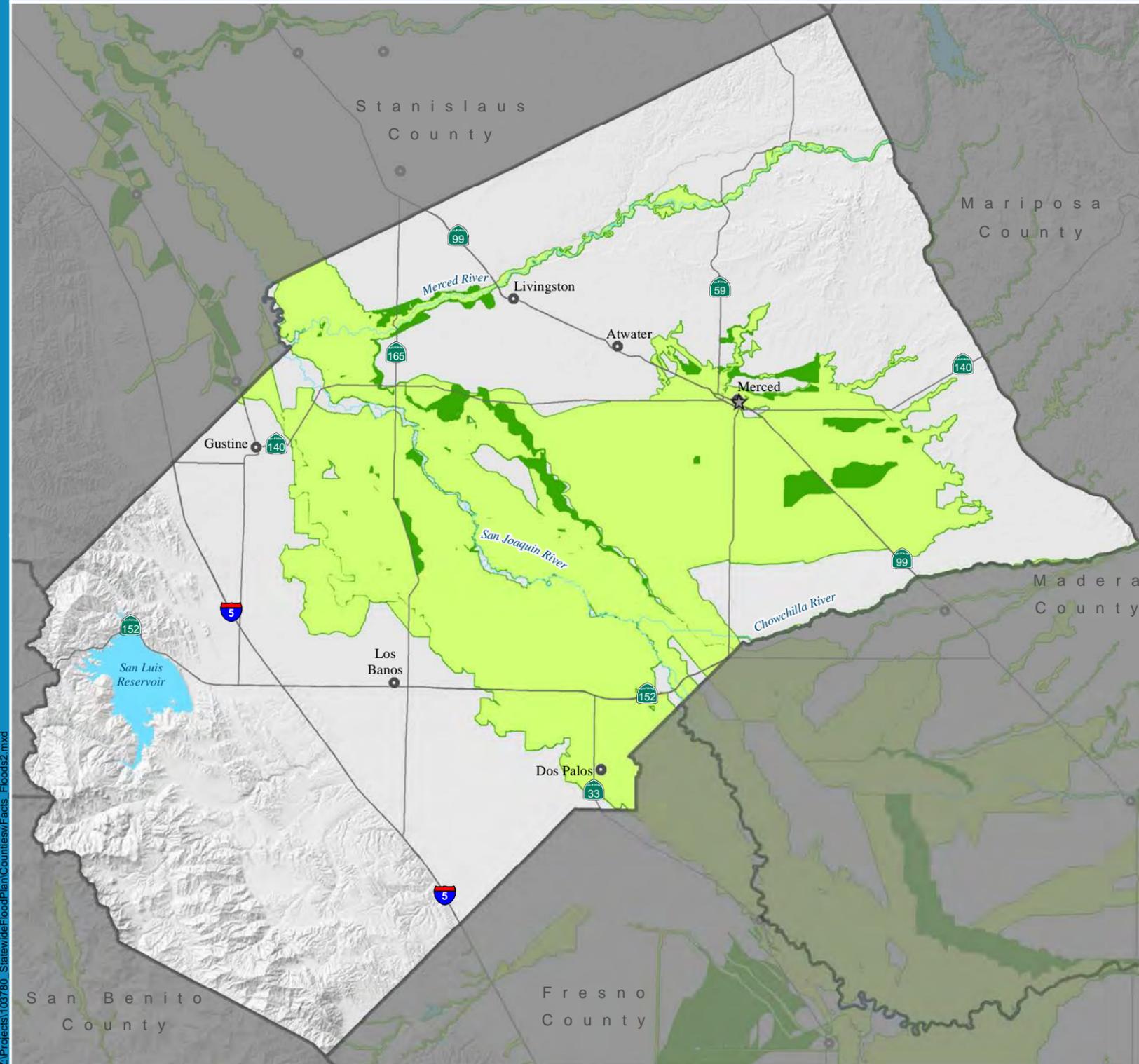
Figure D-46
Summary of Available Flood Infrastructure Information, Mendocino County

September 2013



DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1861-1862 Winter, The Great Flood
- 1950 Winter
- 1955-1956 Winter, 1955 Christmas Flood
- 1958 Spring
- 1959 Spring
- 1962-1963 Winter
- 1964-1965 Winter
- 1966-1967 Winter
- 1968-1969 Winter 1968-1969 Storms
- 1982-1983 Winter/Spring, Winter Storms
- 1986 Winter, St. Valentine's Day Storm
- 1995-1996 Winter/Spring, 1995 Christmas Floods
- 1996-1997 Winter, January 1997 Floods
- 1997-1998 Winter/Spring, El Niño Floods
- 2001 April 17-18
- 2002 December 13-17
- 2005 March
- 2006 2006 Spring Storms
- 2007 March
- 2010-2011 December 2010 Winter Storm Event

Flood Hazard Exposure

County Statistics

Total Acreage:	1.3 million
Total Population:	211,100
Total Structures:	69,800
Total Depreciated Replacement Value of Structures and Contents:	\$15.4 billion
Total Crop Acreage:	550,500
Total Value of Crops:	\$1.0 billion

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	371,100	391,700
Percent of Area Exposed:	29%	31%
Population Exposed:	61,900	70,100
Percent of Population Exposed:	29%	33%
Structures Exposed:	20,600	23,000
Depreciated Replacement Value of Structures and Contents Exposed:	\$3.4 billion	\$4.0 billion
Crops Exposed (acres):	225,700	237,800
Value of Crops Exposed:	\$370.4 million	\$391.0 million
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	44	49
High Potential Loss Facilities Exposed:	11	11
Lifeline Utilities Exposed:	9	9
Transportation Facilities Exposed:	187	190
Transportation Segments Exposed (miles):	140	152
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	25	26
Total Sensitive Animal Species Exposed:	38	38

Merced County

Types of Flooding

Likely:	Present:
Flash	Debris Flow
Slow Rise	Engineered Structure Failure
Stormwater	

Hydrologic Regions



Figure D-47
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Merced County.

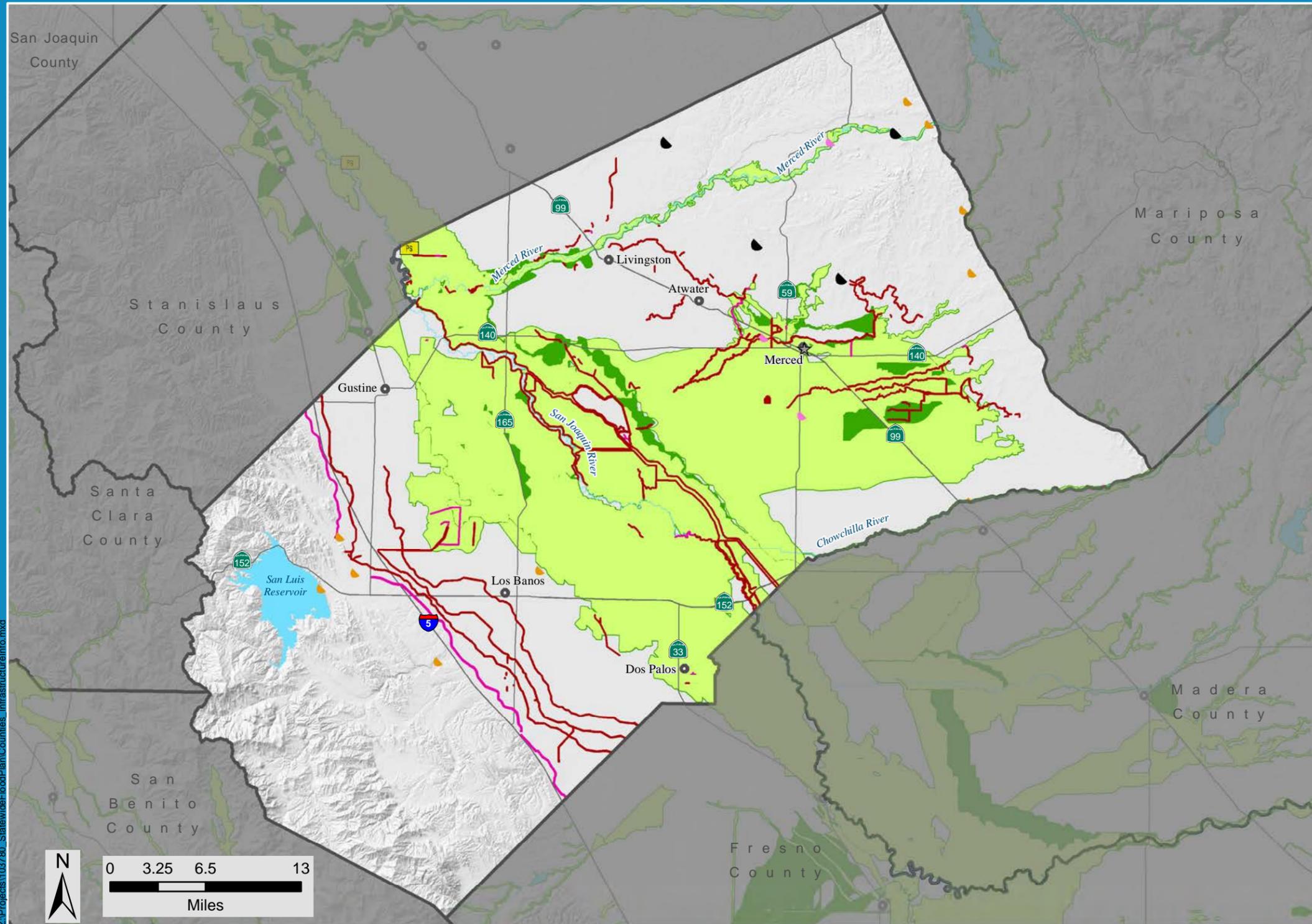
September 2013



DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Summary of Available Flood Infrastructure Information

Merced County



Flood Infrastructure GIS Data Received from Agencies Contacted:
 No Flood Infrastructure GIS Data Received

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):

- Channel
- Dam
- Debris Basin

Agencies Contacted as Part of SFMP:

- Merced County Public Works
- Merced Irrigation District
- Lower San Joaquin Levee District

Planned Projects:

Number of Local Projects:	1
Estimated Cost of Local Projects:	\$1.3 million
Number of USACE Projects:	1
Estimated Cost of USACE Projects:	\$2.5 million

Statewide GIS Data Sources:
 Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bulletin 17-00, 2000. **CLD** layers are from California Levee Database, v2.2 r2, 2010. **NFHL** layers are from the National Flood Hazard Layer, FEMA, August 2011. **Highways** from TeleAtlas, 2004. **Rivers** and **Lakes** modified from DFG, N/A. **Floodplains** compiled for SFMP, 2011.
 All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

Merced County

Statewide GIS Data:

● City	● DWR Local Agency Dam	PS CLD Pump Station	~ NFHL Levee	~ NFHL Control Structure	— Highway	100-yr Floodplain
○ Populated Place	● DWR Other Dam	~ CLD Local Agency Levee	~ NFHL Flood Event Structure	~ NFHL Dike	~ Major River	500-yr Floodplain
	● NFHL Dam or Weir	~ CLD Other Levee	~ NFHL Channel	~ NFHL Retaining Wall	~ Major Water Body	County

Figure D-48
 Summary of Available Flood Infrastructure Information, Merced County

September 2013

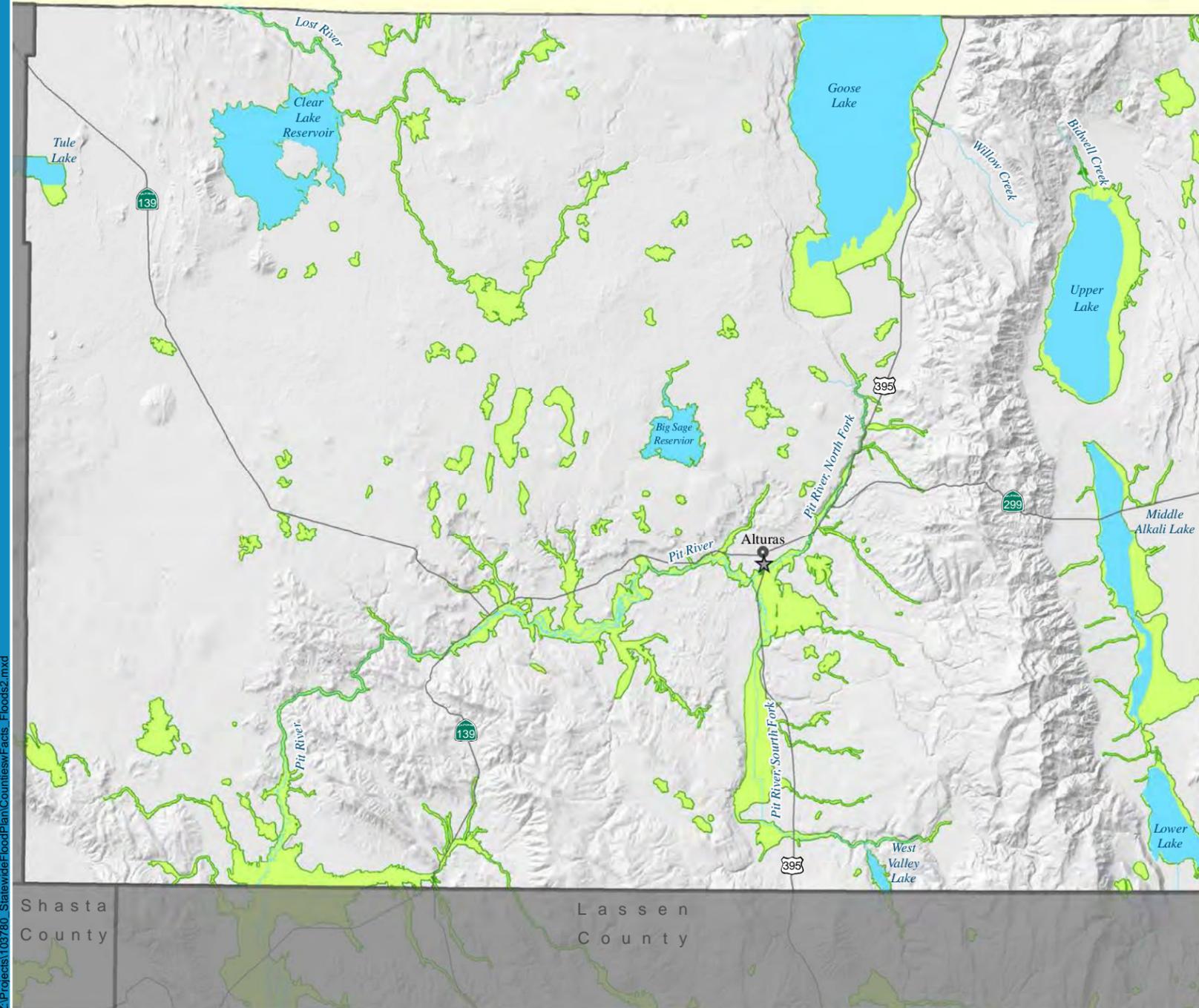
US Army Corps of Engineers

DEPARTMENT OF WATER RESOURCES
STATE OF CALIFORNIA

STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM

DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1861-1862 Winter, The Great Flood
- 1867-1868 Winter
- 1889-1890 Winter
- 1913-1914 Winter
- 1928 March
- 1937-1938 Winter, Great Flood
- 1955-1956 Winter, 1955 Christmas Flood
- 1958 Winter/Spring
- 1964-1965 Winter, Christmas 1964 Disaster
- 1966-1967 Winter/Spring
- 1968-1969 Winter 1968-1969 Storms
- 1969-1970 Winter/Spring, Northern California Flooding
- 1974 Winter/Spring, 1974 Flood
- 1986 February, St. Valentine's Day Storm
- 1993 February, Late Winter Storms
- 1995 Severe Winter Storms
- 1996-1997 Winter, January 1997 Floods
- 2002 December, El Niño Floods
- 2005-2006 Winter, New Year's Eve Flood of 2006
- 2011 March

Flood Hazard Exposure

County Statistics

Total Acreage:	2.7 million
Total Population:	9,400
Total Structures:	6,400
Total Depreciated Replacement Value of Structures and Contents:	\$704.1 million
Total Crop Acreage:	182,900
Total Value of Crops:	\$96.6 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	294,700	294,900
Percent of Area Exposed:	11%	11%
Population Exposed:	900	1,000
Percent of Population Exposed:	10%	11%
Structures Exposed:	600	700
Depreciated Replacement Value of Structures and Contents Exposed:	\$80.2 million	\$94.9 million
Crops Exposed (acres):	46,400	46,500
Value of Crops Exposed:	\$8.0 million	\$8.0 million
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	4	7
High Potential Loss Facilities Exposed:	24	24
Lifeline Utilities Exposed:	0	0
Transportation Facilities Exposed:	42	42
Transportation Segments Exposed (miles):	30	31
Native American Tribal Land Exposed (acres):	1,500	1,500
Total Sensitive Plant Species Exposed:	50	50
Total Sensitive Animal Species Exposed:	33	33

Modoc County

Types of Flooding

Likely:	Present:
Slow Rise	Alluvial Fan
Stormwater	Debris Flow
	Engineered Structure Failure
	Flash

Hydrologic Regions

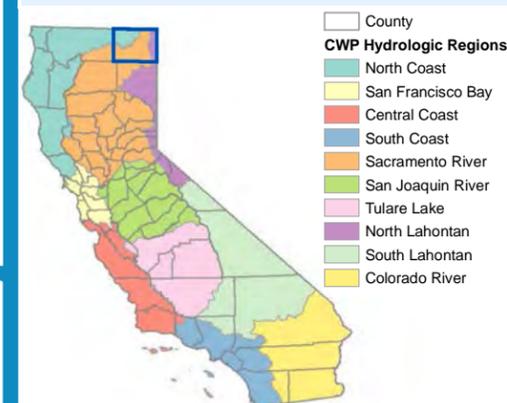


Figure D-49
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Modoc County.

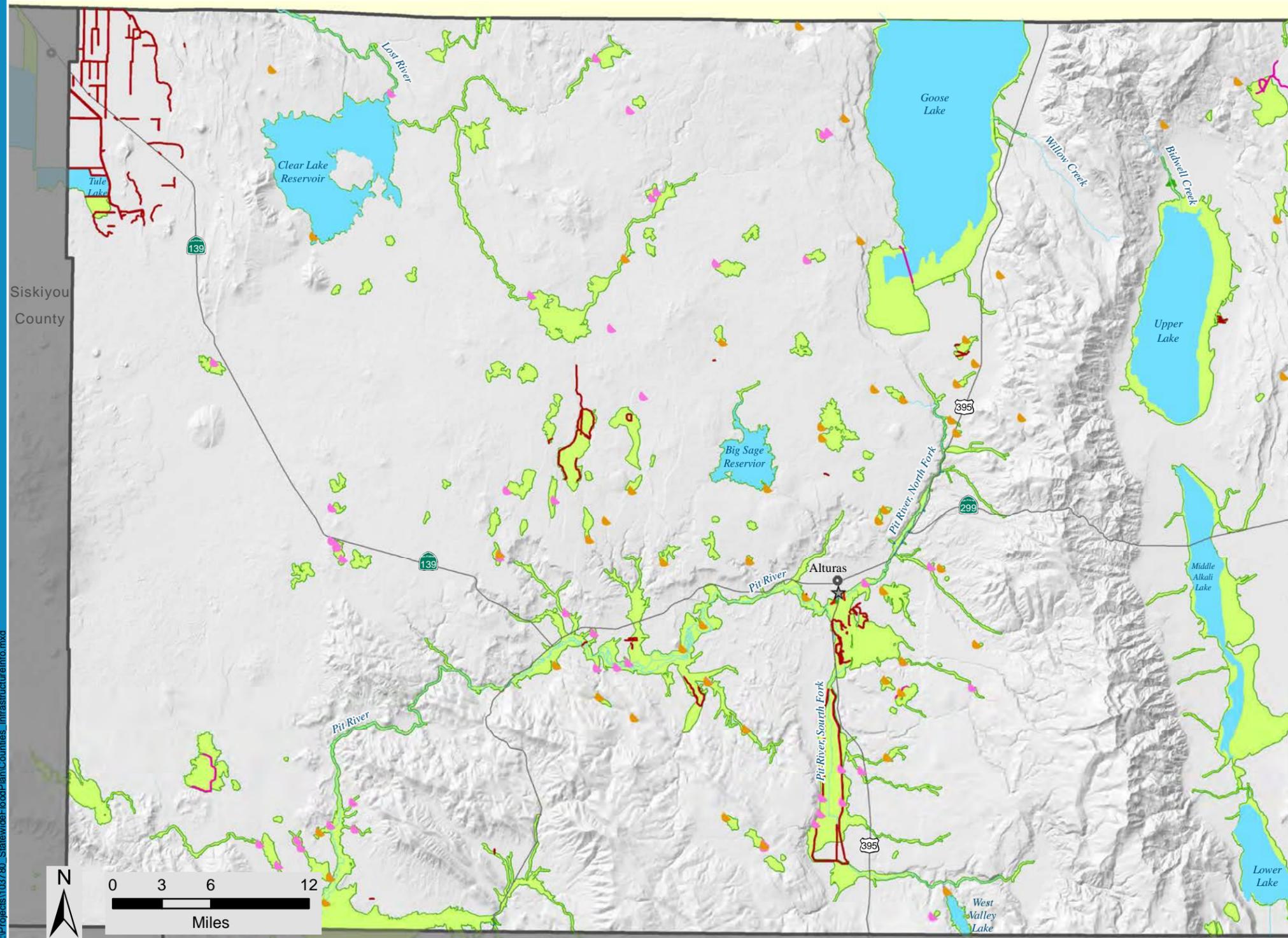
September 2013



DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Summary of Available Flood Infrastructure Information

Modoc County



Flood Infrastructure GIS Data Received from Agencies Contacted:
No Flood Infrastructure GIS Data Received

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):
Dam

Agencies Contacted as Part of SFMP:
Modoc County
City of Alturas
Central Modoc Resource Conservation District

Planned Projects:
Number of Local Projects: 10
Estimated Cost of Local Projects: \$1 million
Number of USACE Projects: 0
Estimated Cost of USACE Projects: none

Statewide GIS Data Sources:
Cities derived from CAL FIRE incorporated city limit polygons, 2010. Populated Places from GNIS, 2011. Counties from CalAtlas, 2009. Dams modified from DWR, Bulletin 17-00, 2000. CLD layers are from California Levee Database, v2.2 r2, 2010. NFHL layers are from the National Flood Hazard Layer, FEMA, August 2011. Highways from TeleAtlas, 2004. Rivers and Lakes modified from DFG, N/A. Floodplains compiled for SFMP, 2011.
All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

Figure D-50
Summary of Available Flood Infrastructure Information, Modoc County

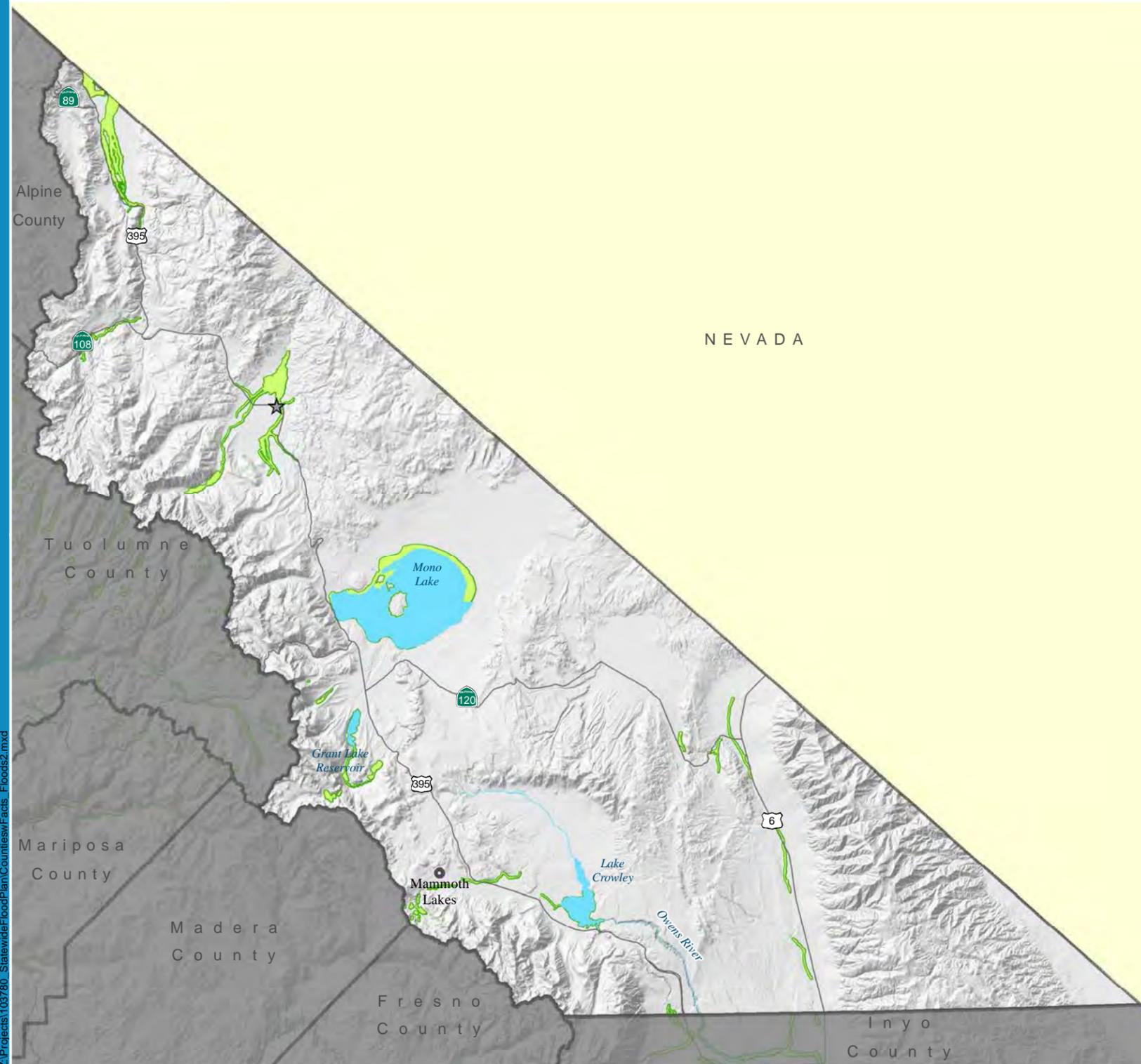
September 2013

Statewide GIS Data:

● City	● DWR Local Agency Dam	■ CLD Pump Station	~ NFHL Levee	~ NFHL Control Structure	— Highway	■ 100-yr Floodplain
○ Populated Place	● DWR Other Dam	~ CLD Local Agency Levee	~ NFHL Flood Event Structure	~ NFHL Dike	~ Major River	■ 500-yr Floodplain
	● NFHL Dam or Weir	~ CLD Other Levee	~ NFHL Channel	~ NFHL Retaining Wall	■ Major Water Body	■ County

DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1861-1862 Winter, The Great Flood
- 1907 March 18-19
- 1914 January
- 1938 Winter, Great Flood
- 1950 Winter
- 1955-1956 Winter, 1955 Christmas Flood
- 1958 April 4
- 1962-1963 Winter
- 1968-1969 Winter 1968-1969 Storms
- 1978 September
- 1981 September
- 1982 April 28
- 1984 July 19
- 1985 July 20
- 1986 February, St. Valentine's Day Storm
- 1989 August 9-10
- 1995 Severe Winter Storms
- 1997 Winter, January 1997 Floods
- 2001 January

Flood Hazard Exposure

County Statistics

Total Acreage:	2.0 million
Total Population:	12,900
Total Structures:	9,100
Total Depreciated Replacement Value of Structures and Contents:	\$2.2 billion
Total Crop Acreage:	37,100
Total Value of Crops:	\$2.8 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	65,900	66,300
Percent of Area Exposed:	3%	3%
Population Exposed:	300	400
Percent of Population Exposed:	2%	3%
Structures Exposed:	300	400
Depreciated Replacement Value of Structures and Contents Exposed:	\$53.4 million	\$62.6 million
Crops Exposed (acres):	5,200	5,400
Value of Crops Exposed:	\$468,800	\$469,700
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	2	2
High Potential Loss Facilities Exposed:	2	2
Lifeline Utilities Exposed:	1	1
Transportation Facilities Exposed:	6	6
Transportation Segments Exposed (miles):	17	18
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	23	23
Total Sensitive Animal Species Exposed:	28	28

Mono County

Types of Flooding

Likely:	Present:
Alluvial Fan	Engineered Structure Failure
Debris Flow	
Flash	
Slow Rise	
Stormwater	

Hydrologic Regions



Figure D-51
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Mono County.

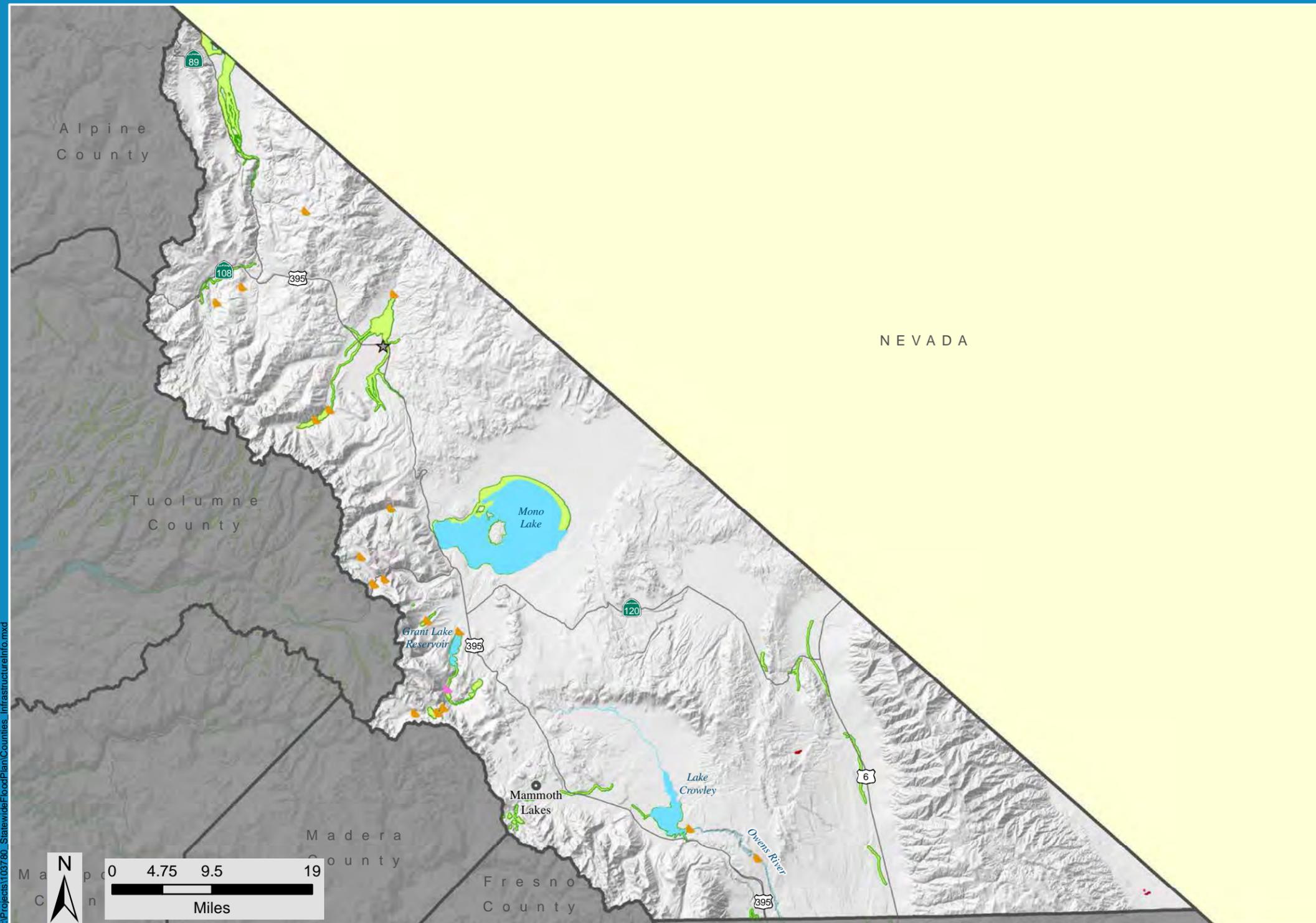
September 2013



DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Summary of Available Flood Infrastructure Information

Mono County



Flood Infrastructure GIS Data Received from Agencies Contacted:
No Flood Infrastructure GIS Data Received

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):
Channel

Agencies Contacted as Part of SFMP:
Mono County
Town of Mammoth Lakes

Planned Projects:
Number of Local Projects: 4
Estimated Cost of Local Projects: \$587,000
Number of USACE Projects: 0
Estimated Cost of USACE Projects: none

Statewide GIS Data Sources:
Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bulletin 17-00, 2000. **CLD** layers are from California Levee Database, v2.2 r2, 2010. **NFHL** layers are from the National Flood Hazard Layer, FEMA, August 2011. **Highways** from TeleAtlas, 2004. **Rivers** and **Lakes** modified from DFG, N/A. **Floodplains** compiled for SFMP, 2011.
All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

Mono County

Figure D-52
Summary of Available Flood Infrastructure Information, Mono County

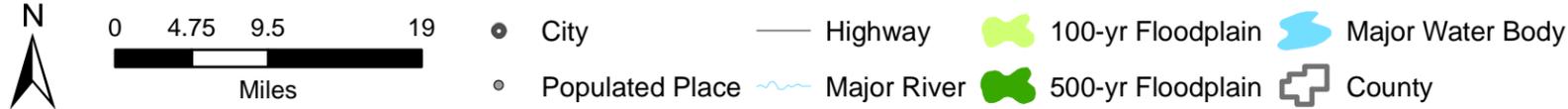
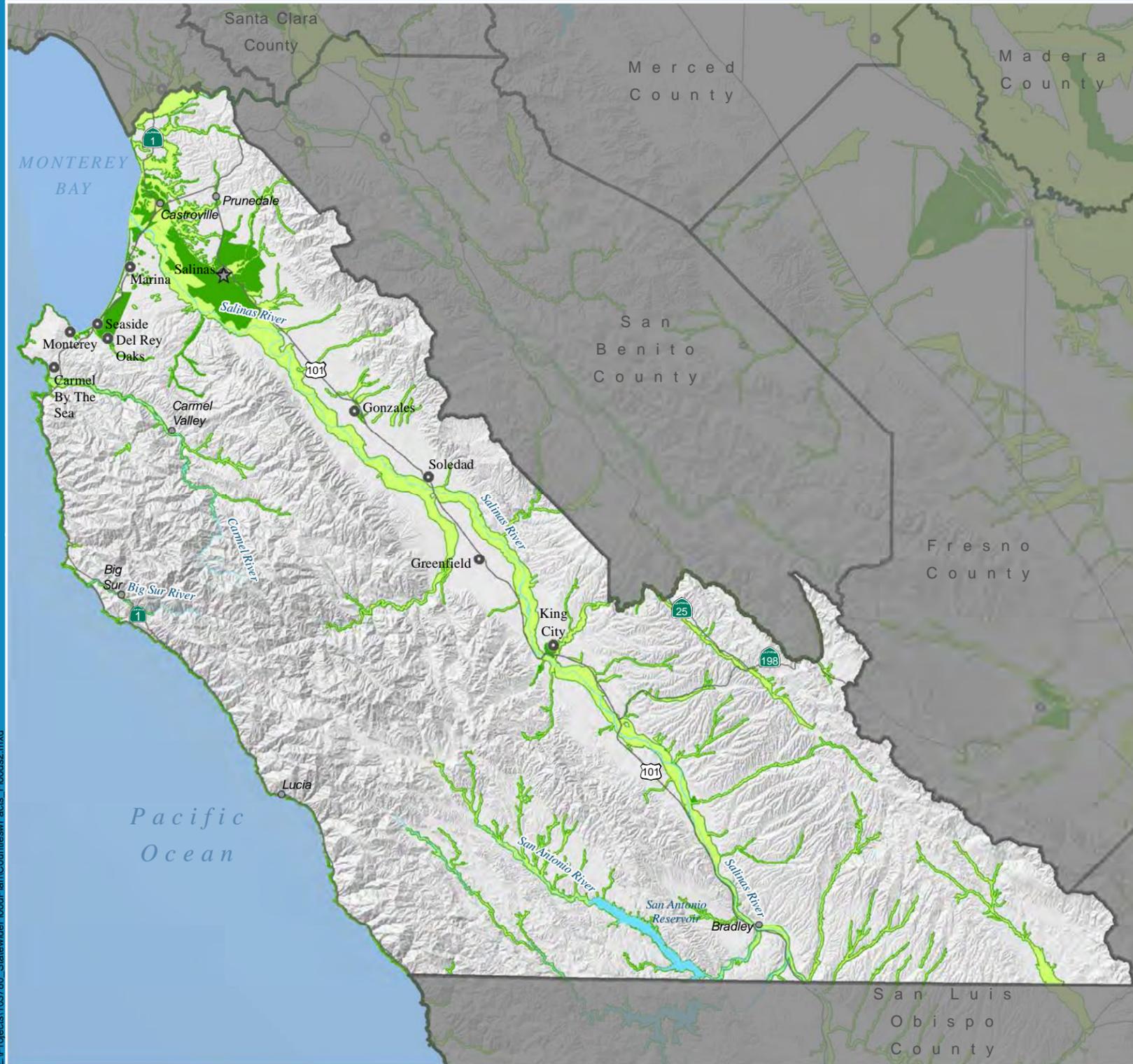
September 2013

Statewide GIS Data:

● City	● DWR Local Agency Dam	■ CLD Pump Station	~ NFHL Levee	~ NFHL Control Structure	— Highway	■ 100-yr Floodplain
○ Populated Place	● DWR Other Dam	~ CLD Local Agency Levee	~ NFHL Flood Event Structure	~ NFHL Dike	~ Major River	■ 500-yr Floodplain
	● NFHL Dam or Weir	~ CLD Other Levee	~ NFHL Channel	~ NFHL Retaining Wall	■ Major Water Body	■ County

DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1907 March
- 1914 January, Heavy Rain of 1914
- 1938 Winter, Great Flood
- 1955-1956 Winter, 1955 Christmas Flood
- 1962 February
- 1966-1967 Winter
- 1969 Winter 1969 Storms
- 1973 Winter, Coastal Flooding
- 1980 February 12-22, Winter Storms
- 1982-1983 Winter/Spring, Winter Storms
- 1986 February, St. Valentine's Day Storm
- 1995 February, Late Winter Storms
- 1996-1997 Winter, January 1997 Floods
- 1998 Spring, El Niño Floods
- 2002 December, El Niño Floods
- 2005-2006 Winter, New Year's Eve Flood of 2006
- 2006 May 10
- 2009 October 13
- 2010 February
- 2011 March

Flood Hazard Exposure

County Statistics

Total Acreage:	2.1 million
Total Population:	401,700
Total Structures:	123,700
Total Depreciated Replacement Value of Structures and Contents:	\$33.1 billion
Total Crop Acreage:	262,700
Total Value of Crops:	\$1.4 billion

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	121,400	154,000
Percent of Area Exposed:	6%	7%
Population Exposed:	18,200	216,500
Percent of Population Exposed:	5%	54%
Structures Exposed:	5,600	54,600
Depreciated Replacement Value of Structures and Contents Exposed:	\$1.9 billion	\$14.3 billion
Crops Exposed (acres):	54,400	69,300
Value of Crops Exposed:	\$311.0 million	\$411.2 million
Department of Defense Facilities Exposed:	4	4
Essential Facilities Exposed:	9	106
High Potential Loss Facilities Exposed:	6	8
Lifeline Utilities Exposed:	4	7
Transportation Facilities Exposed:	92	139
Transportation Segments Exposed (miles):	75	146
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	79	79
Total Sensitive Animal Species Exposed:	56	57

Monterey County

Types of Flooding

Likely:	Present:
Coastal	Alluvial Fan
Debris Flow	Engineered Structure Failure
Flash	Tsunami
Slow Rise	
Stormwater	

Hydrologic Regions



Figure D-53
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Monterey County.

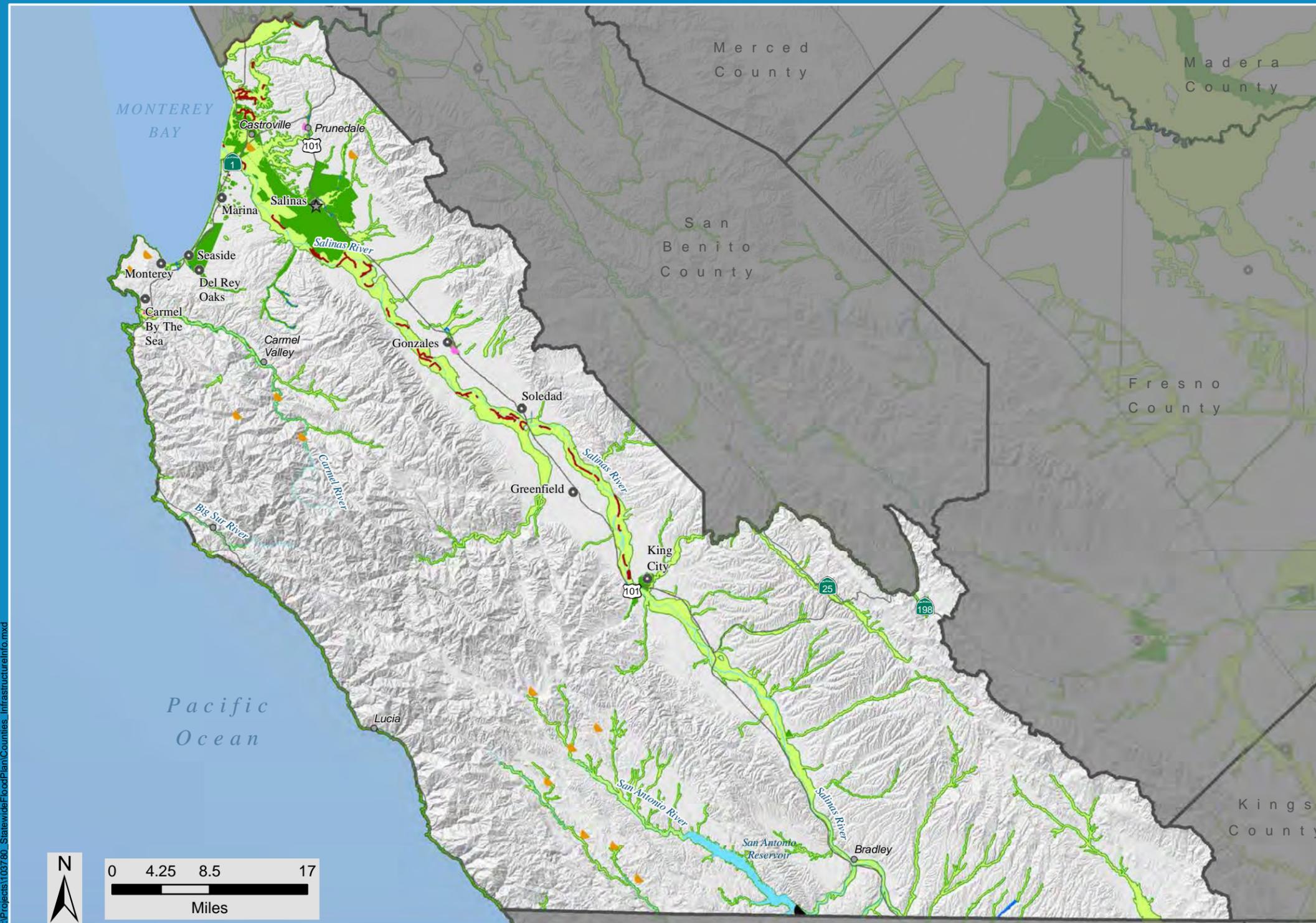
September 2013



DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Summary of Available Flood Infrastructure Information

Monterey County



Flood Infrastructure GIS Data Received from Agencies Contacted:
No Flood Infrastructure GIS Data Received

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):
Channel
Dam

Agencies Contacted as Part of SFMP:
Monterey County Water Resources Agency

Planned Projects:
Number of Local Projects: 13
Estimated Cost of Local Projects: \$26.5 million
Number of USACE Projects: 0
Estimated Cost of USACE Projects: none

Statewide GIS Data Sources:
Cities derived from CAL FIRE incorporated city limit polygons, 2010. Populated Places from GNIS, 2011. Counties from CalAtlas, 2009. Dams modified from DWR, Bulletin 17-00, 2000. CLD layers are from California Levee Database, v2.2 r2, 2010. NFHL layers are from the National Flood Hazard Layer, FEMA, August 2011. Highways from TeleAtlas, 2004. Rivers and Lakes modified from DFG, N/A. Floodplains compiled for SFMP, 2011.
All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

Figure D-54
Summary of Available Flood Infrastructure Information, Monterey County

September 2013

Statewide GIS Data:

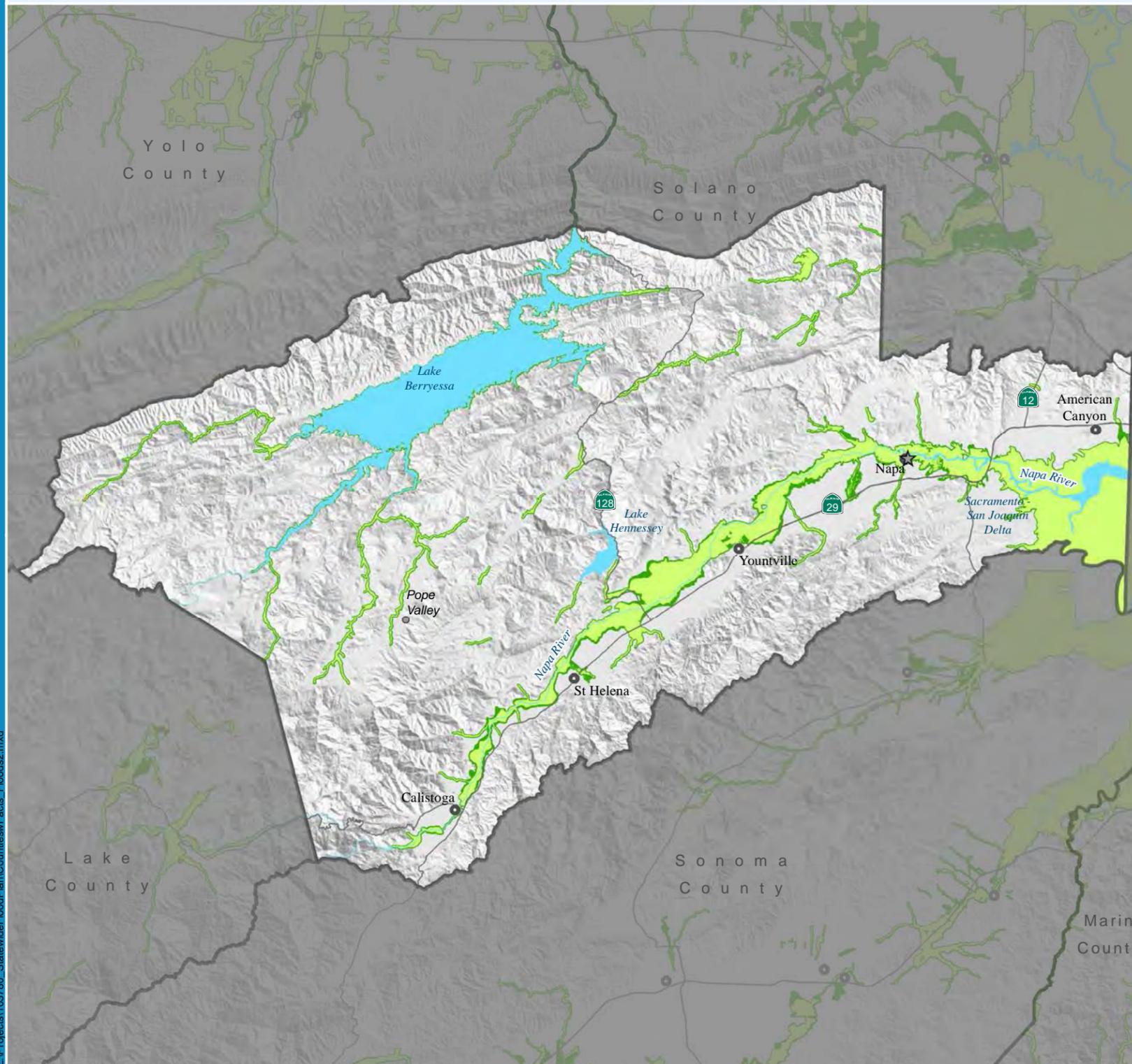
● City	● DWR Local Agency Dam	PS CLD Pump Station	~ NFHL Levee	~ NFHL Control Structure	— Highway	100-yr Floodplain
○ Populated Place	● DWR Other Dam	~ CLD Local Agency Levee	~ NFHL Flood Event Structure	~ NFHL Dike	~ Major River	500-yr Floodplain
	● NFHL Dam or Weir	~ CLD Other Levee	~ NFHL Channel	~ NFHL Retaining Wall	~ Major Water Body	County

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Monterey County

DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1798-1799 Winter
- 1849-1850
- 1861-1862 Winter, The Great Flood
- 1911 Winter
- 1937-1938 Winter, Great Flood
- 1951-1952 Winter
- 1955-1956 Winter, 1955 Christmas Flood
- 1962-1963 Winter
- 1964-1965 Winter, Christmas 1964 Disaster
- 1969-1970 Winter/Spring, Northern California Flooding
- 1981-1982 Winter/Spring Storms
- 1982-1983 Winter/Spring, Winter Storms
- 1986 Winter, St. Valentine's Day Storm
- 1992 Winter Storms
- 1995-1996 Winter/Spring
- 1996-1997 Winter, January 1997 Floods
- 1998 Spring, El Niño Floods
- 2005-2006 Winter, New Year's Eve Flood of 2006
- 2006 Spring Storms
- 2008 January 5-14, 2008 Winter Storms

Flood Hazard Exposure

County Statistics

Total Acreage:	505,900
Total Population:	124,200
Total Structures:	49,200
Total Depreciated Replacement Value of Structures and Contents:	\$14.2 billion
Total Crop Acreage:	48,600
Total Value of Crops:	\$1.7 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	51,400	53,800
Percent of Area Exposed:	10%	11%
Population Exposed:	13,600	17,300
Percent of Population Exposed:	11%	14%
Structures Exposed:	4,900	6,500
Depreciated Replacement Value of Structures and Contents Exposed:	\$1.5 billion	\$1.9 billion
Crops Exposed (acres):	8,800	10,000
Value of Crops Exposed:	\$336,900	\$342,200
Department of Defense Facilities Exposed:	1	1
Essential Facilities Exposed:	11	12
High Potential Loss Facilities Exposed:	1	1
Lifeline Utilities Exposed:	3	3
Transportation Facilities Exposed:	42	51
Transportation Segments Exposed (miles):	24	27
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	39	40
Total Sensitive Animal Species Exposed:	28	28

Napa County

Types of Flooding

Likely:	Present:
Debris Flow	Alluvial Fan
Flash	Engineered Structure Failure
Slow Rise	
Stormwater	

Hydrologic Regions

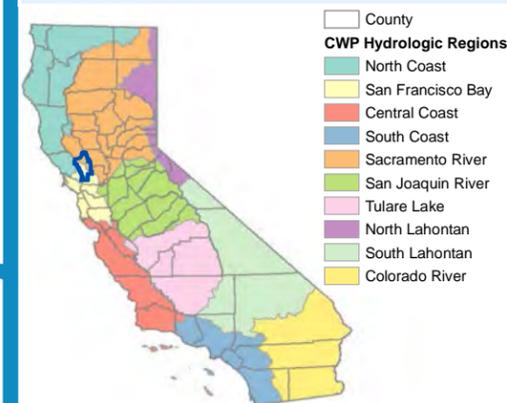


Figure D-55
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Napa County.

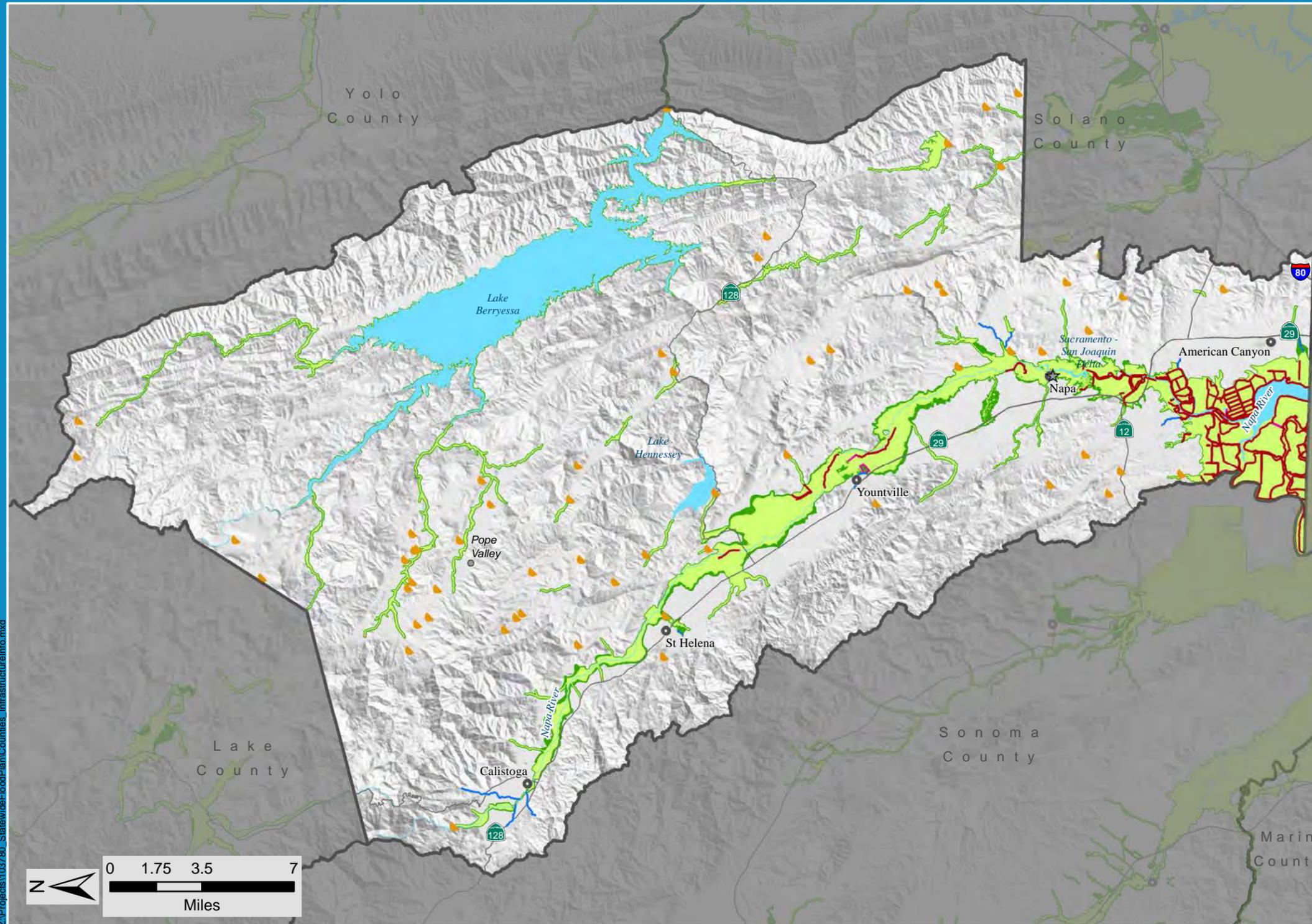
September 2013



DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Summary of Available Flood Infrastructure Information

Napa County



Flood Infrastructure GIS Data Received from Agencies Contacted:
 No Flood Infrastructure GIS Data Received

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):
 Levee
 Channel
 Floodwall

Agencies Contacted as Part of SFMP:
 Napa County Flood Control and Water Conservation District

Planned Projects:
 Number of Local Projects: 3
 Estimated Cost of Local Projects: \$19.8 million
 Number of USACE Projects: 2
 Estimated Cost of USACE Projects: \$313.1 million

Statewide GIS Data Sources:
 Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bulletin 17-00, 2000. **CLD** layers are from California Levee Database, v2.2 r2, 2010. **NFHL** layers are from the National Flood Hazard Layer, FEMA, August 2011. **Highways** from TeleAtlas, 2004. **Rivers** and **Lakes** modified from DFG, N/A. **Floodplains** compiled for SFMP, 2011.
 All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

Napa County

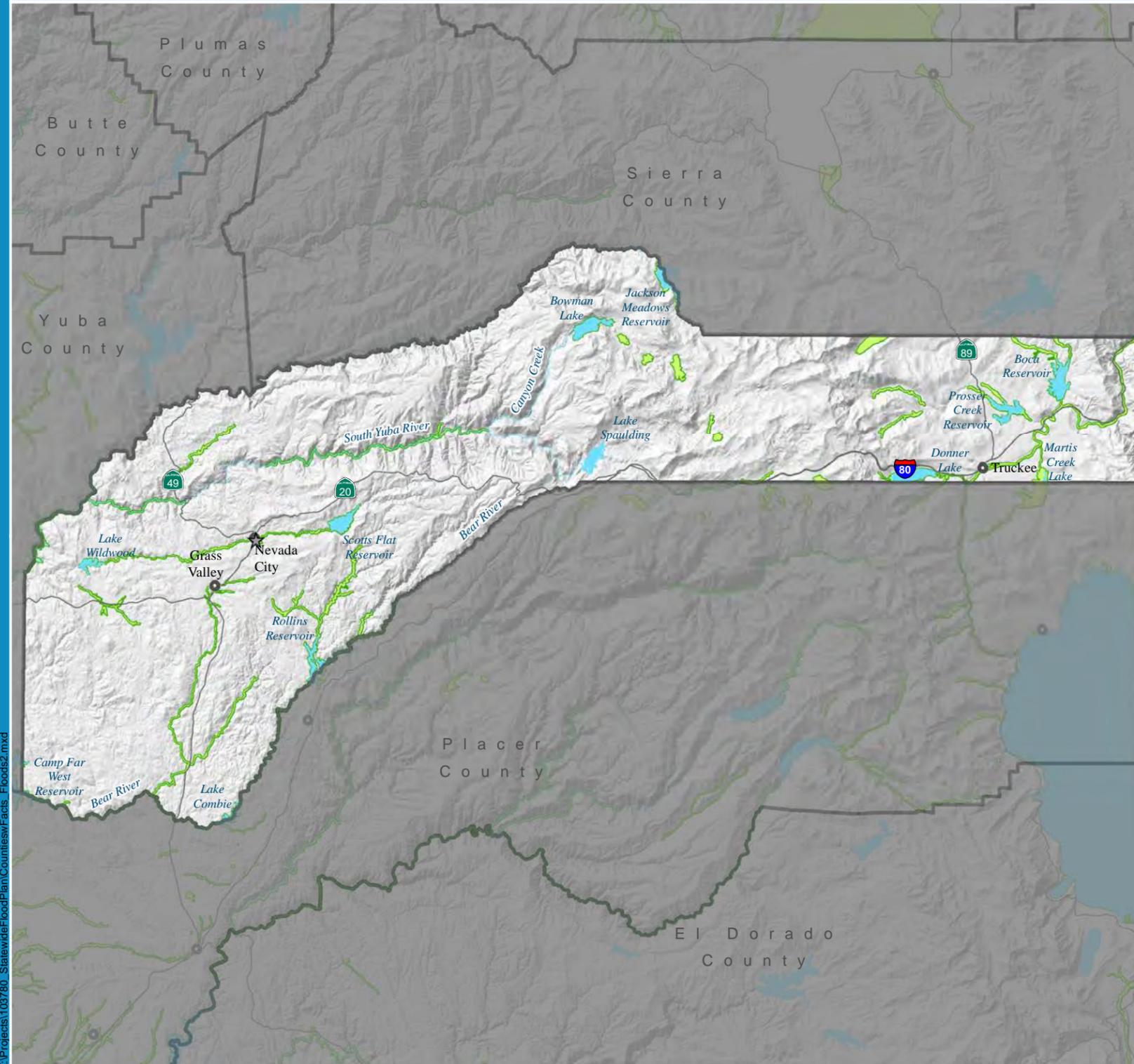
Figure D-56
 Summary of Available Flood Infrastructure Information, Napa County

September 2013

Statewide GIS Data:	DWR Local Agency Dam	CLD Pump Station	NFHL Levee	NFHL Control Structure	Highway	100-yr Floodplain
City	DWR Other Dam	CLD Local Agency Levee	NFHL Flood Event Structure	NFHL Dike	Major River	500-yr Floodplain
Populated Place	NFHL Dam or Weir	CLD Other Levee	NFHL Channel	NFHL Retaining Wall	Major Water Body	County

DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1861-1862 Winter, The Great Flood
- 1867-1868 Winter
- 1881 Winter
- 1892-1893 Winter
- 1913-1914 Winter
- 1937-1938 Winter, Great Flood
- 1955-1956 Winter, 1955 Christmas Flood
- 1958 February 26
- 1962-1963 Winter
- 1964-1965 Winter, Christmas 1964 Disaster
- 1968-1969 Winter 1968-1969 Storms
- 1969-1970 Winter/Spring, Northern California Flooding
- 1974 Winter/Spring, 1974 Flood
- 1982-1983 Winter/Spring, Winter Storms
- 1986 February, St. Valentine's Day Storm
- 1995 Severe Winter Storms
- 1996-1997 Winter, January 1997 Floods
- 2005-2006 Winter, New Year's Eve Flood of 2006
- 2006 Spring Storms
- 2008 January 5-14, 2008 Winter Storms

Types of Flooding

Likely:	Present:
Flash	Debris Flow
Slow Rise	Engineered Structure Failure
Stormwater	

Hydrologic Regions



Flood Hazard Exposure

County Statistics

Total Acreage:	623,900
Total Population:	92,100
Total Structures:	47,800
Total Depreciated Replacement Value of Structures and Contents:	\$11.6 billion
Total Crop Acreage:	6,400
Total Value of Crops:	\$1.0 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	14,200	14,400
Percent of Area Exposed:	2%	2%
Population Exposed:	1,300	1,700
Percent of Population Exposed:	1%	2%
Structures Exposed:	700	1,000
Depreciated Replacement Value of Structures and Contents Exposed:	\$156.3 million	\$206.9 million
Crops Exposed (acres):	60	60
Value of Crops Exposed:	\$58,400	\$60,200
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	0	0
High Potential Loss Facilities Exposed:	6	6
Lifeline Utilities Exposed:	0	0
Transportation Facilities Exposed:	14	17
Transportation Segments Exposed (miles):	11	12
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	15	15
Total Sensitive Animal Species Exposed:	18	18

Nevada County

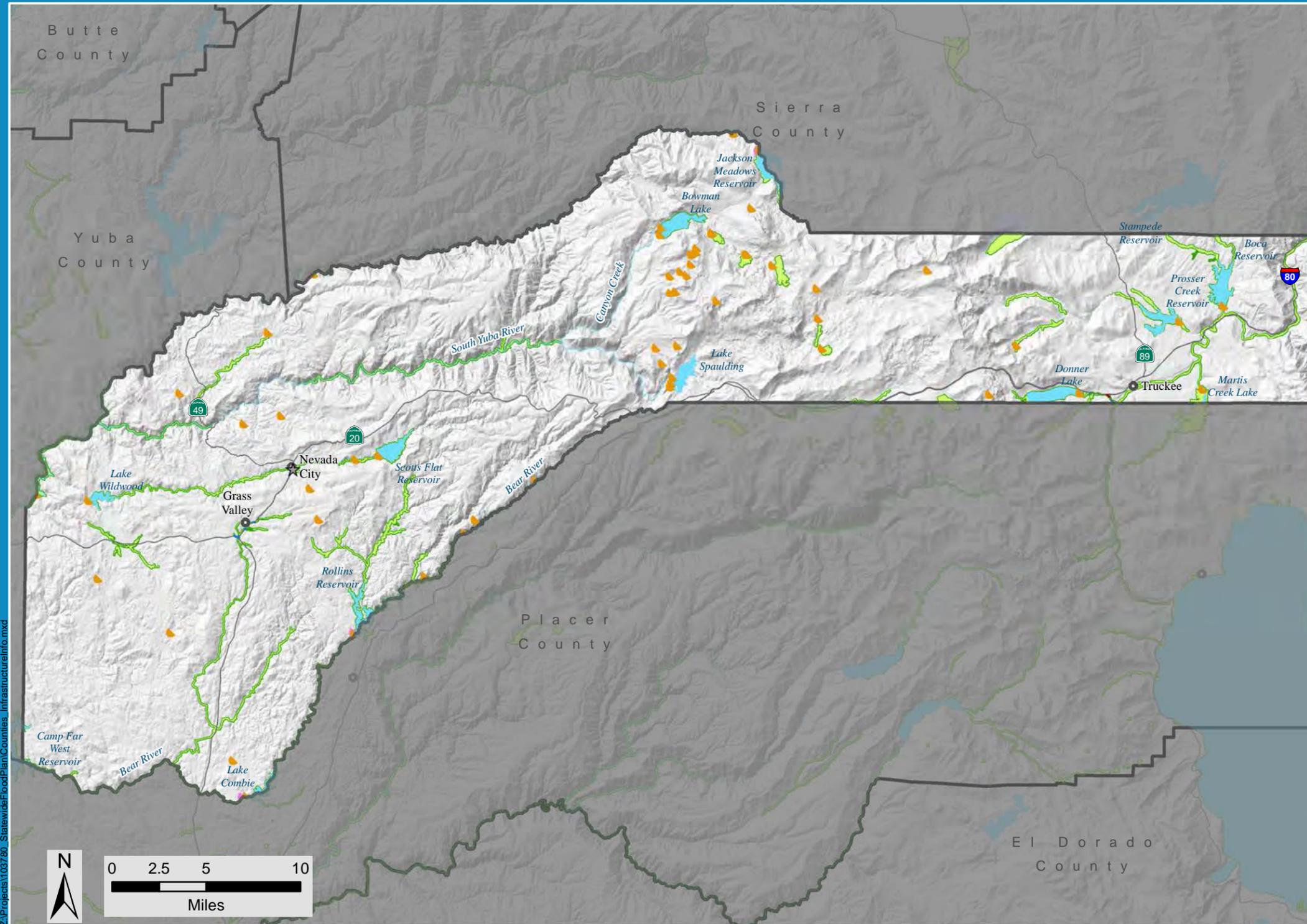
Figure D-57
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Nevada County.

September 2013

DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Summary of Available Flood Infrastructure Information

Nevada County



Flood Infrastructure GIS Data Received from Agencies Contacted:
No Flood Infrastructure GIS Data Received

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):
Dam

Agencies Contacted as Part of SFMP:
Nevada County

Planned Projects:
 Number of Local Projects: 5
 Estimated Cost of Local Projects: \$19.1 million
 Number of USACE Projects: 1
 Estimated Cost of USACE Projects: \$16.7 million

Statewide GIS Data Sources:
 Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bulletin 17-00, 2000. **CLD** layers are from California Levee Database, v2.2 r2, 2010. **NFHL** layers are from the National Flood Hazard Layer, FEMA, August 2011. **Highways** from TeleAtlas, 2004. **Rivers** and **Lakes** modified from DFG, N/A. **Floodplains** compiled for SFMP, 2011.
 All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

Figure D-58
Summary of Available Flood Infrastructure Information, Nevada County

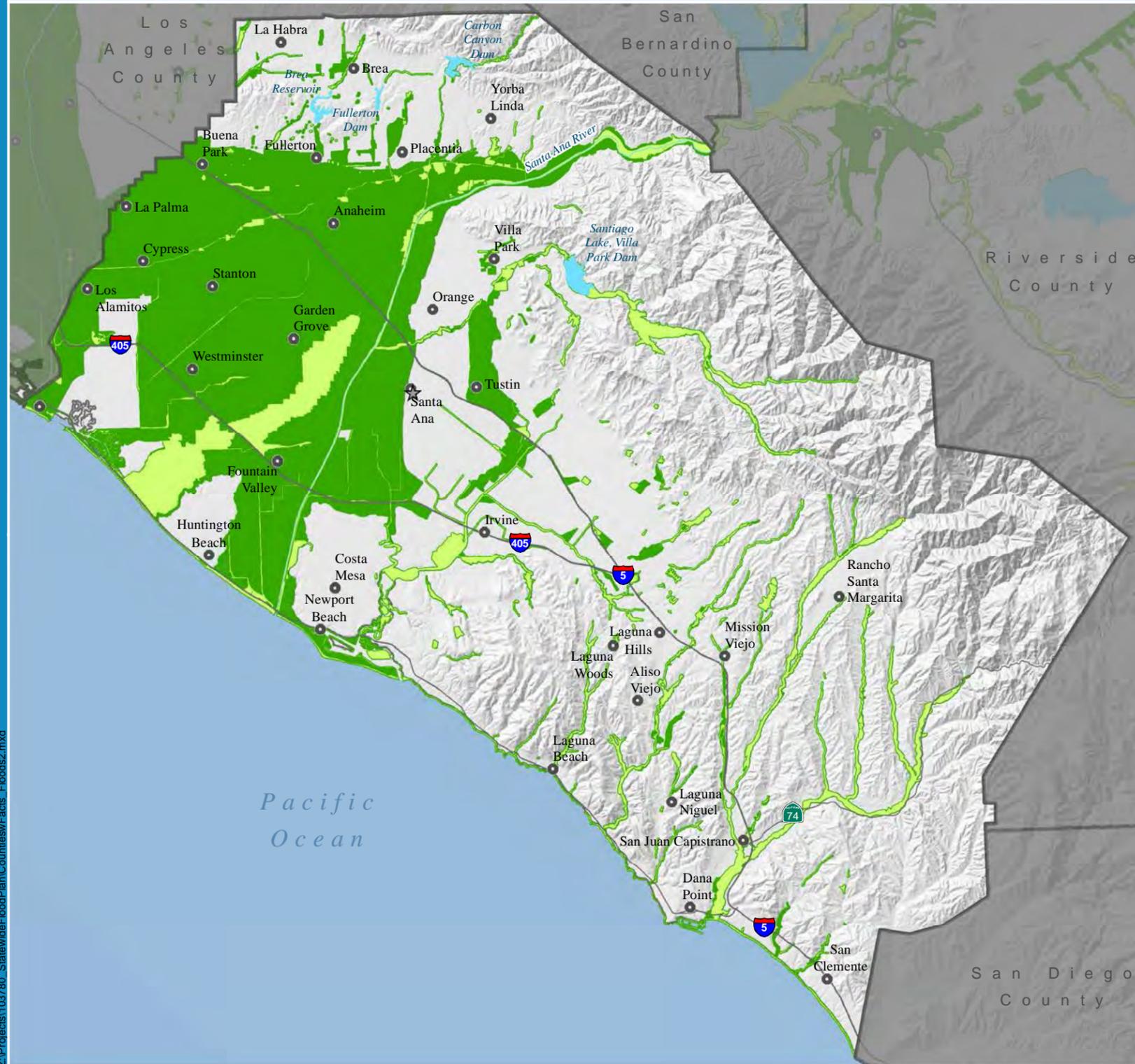
September 2013

Statewide GIS Data:	DWR Local Agency Dam	CLD Pump Station	NFHL Levee	NFHL Control Structure	Highway	100-yr Floodplain
City	DWR Other Dam	CLD Local Agency Levee	NFHL Flood Event Structure	NFHL Dike	Major River	500-yr Floodplain
Populated Place	NFHL Dam or Weir	CLD Other Levee	NFHL Channel	NFHL Retaining Wall	Major Water Body	County

DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Nevada County

100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1770-1771
- 1861-1862 Winter, The Great Flood
- 1916 January, Great Flood of 1916
- 1933-1934 Winter, New Year's Flood
- 1937-1938 Winter, Great Flood
- 1958 Spring
- 1965 Winter
- 1969 January 18-26, February 20-26, Winter 1969 Storms
- 1980 Winter
- 1982-1983 Winter/Spring, Winter Storms
- 1986 March 15-16
- 1992 Late Winter Storms
- 1995 Severe Winter Storms
- 1997 Winter, January 1997 Floods
- 1998 Winter, El Niño Floods
- 2002 December, El Niño Floods
- 2004-2005 Winter
- 2010 February
- 2010-2011 December 2010 Winter Storm Event
- 2011 March

Flood Hazard Exposure

County Statistics

Total Acreage:	509,700
Total Population:	2.8 million
Total Structures:	790,500
Total Depreciated Replacement Value of Structures and Contents:	\$274.2 billion
Total Crop Acreage:	67,600
Total Value of Crops:	\$125.8 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	24,400	122,400
Percent of Area Exposed:	5%	24%
Population Exposed:	142,300	1.4 million
Percent of Population Exposed:	5%	48%
Structures Exposed:	37,800	338,100
Depreciated Replacement Value of Structures and Contents Exposed:	\$11.6 billion	\$101.4 billion
Crops Exposed (acres):	3,200	10,600
Value of Crops Exposed:	\$4.4 million	\$10.6 million
Department of Defense Facilities Exposed:	4	4
Essential Facilities Exposed:	48	475
High Potential Loss Facilities Exposed:	17	254
Lifeline Utilities Exposed:	1	12
Transportation Facilities Exposed:	131	507
Transportation Segments Exposed (miles):	70	496
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	41	41
Total Sensitive Animal Species Exposed:	61	62

Orange County

Types of Flooding

Likely:	Present:
Alluvial Fan	Engineered Structure Failure
Coastal	Tsunami
Debris Flow	
Flash	
Slow Rise	
Stormwater	

Hydrologic Regions

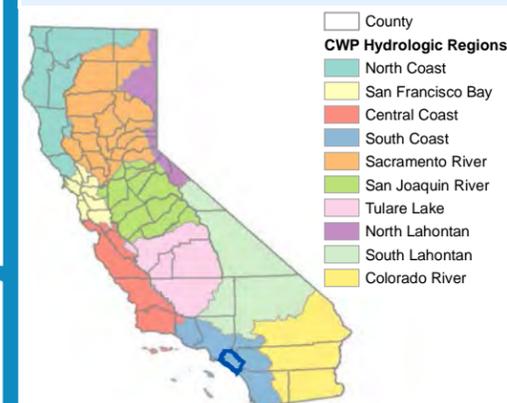


Figure D-59
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Orange County.

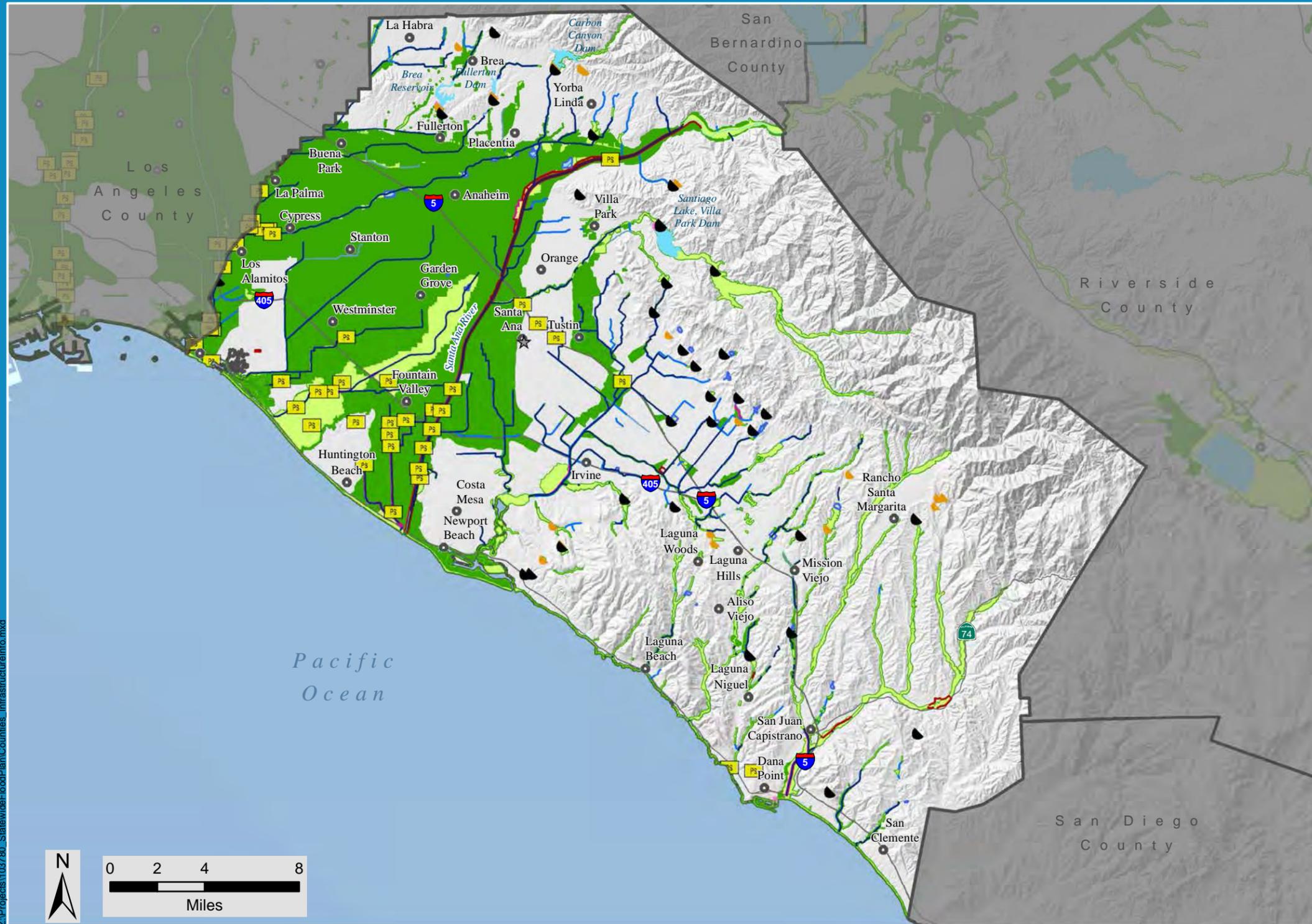
September 2013



DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Summary of Available Flood Infrastructure Information

Orange County



Flood Infrastructure GIS Data Received from Agencies Contacted:

- Dam
- Pump Station
- Drainage Facility, Modified Channel
- Basin

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):

- Pump Station
- Basin
- Dam

Agencies Contacted as Part of SFMP:

- Orange County Public Works
- Santa Ana River Flood Protection Agency

Planned Projects:

Number of Local Projects:	38
Estimated Cost of Local Projects:	\$658.5 million
Number of USACE Projects:	5
Estimated Cost of USACE Projects:	\$2.2 billion

Statewide GIS Data Sources:

Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bulletin 17-00, 2000. **CLD** layers are from California Levee Database, v2.2 r2, 2010. **NFHL** layers are from the National Flood Hazard Layer, FEMA, August 2011. **Highways** from TeleAtlas, 2004. **Rivers** and **Lakes** modified from DFG, N/A. **Floodplains** compiled for SFMP, 2011.

All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.



Statewide GIS Data:

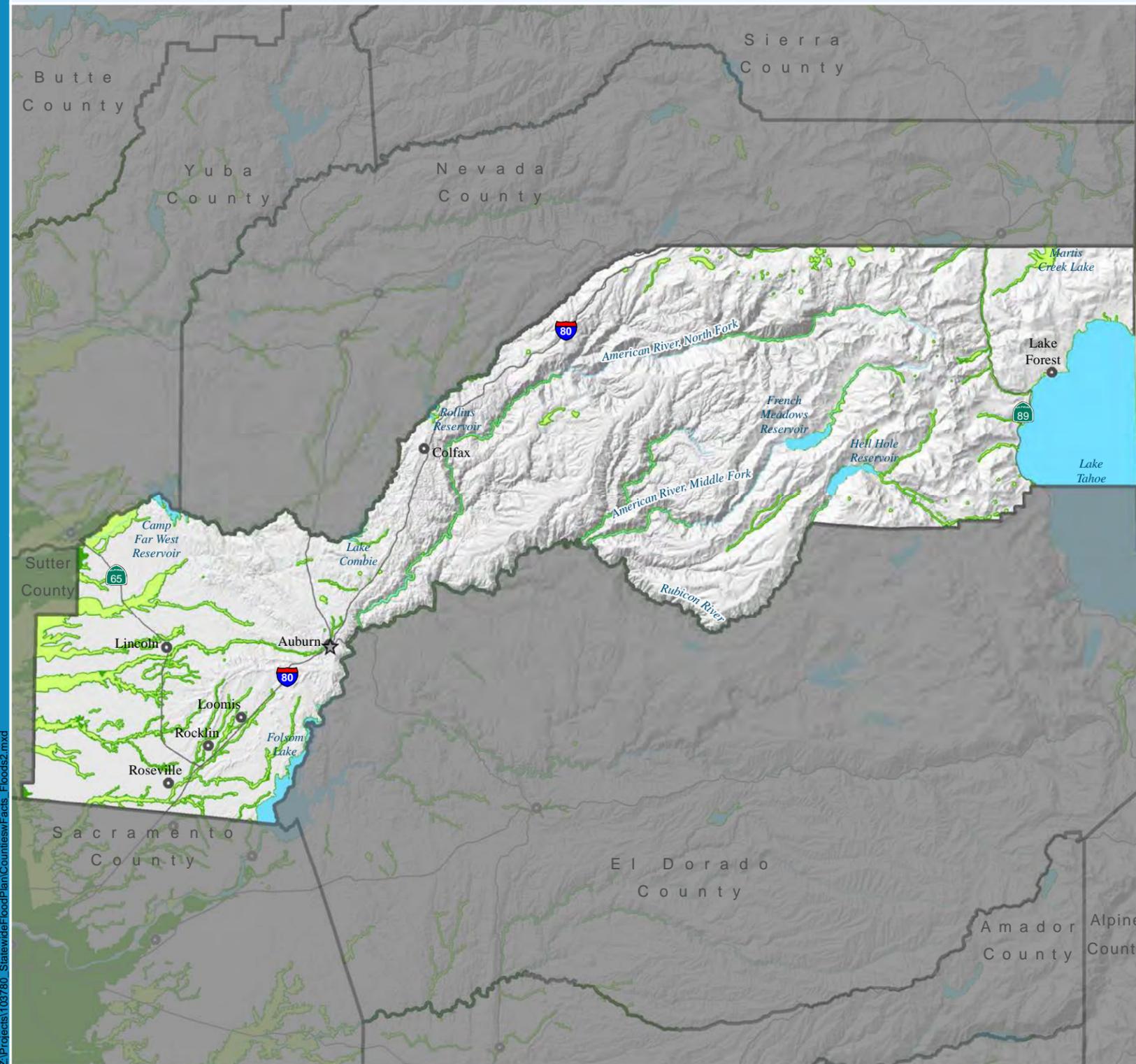
City	DWR Local Agency Dam	CLD Pump Station	NFHL Levee	NFHL Control Structure	Highway	100-yr Floodplain
Populated Place	DWR Other Dam	CLD Local Agency Levee	NFHL Flood Event Structure	NFHL Dike	Major River	500-yr Floodplain
	NFHL Dam or Weir	CLD Other Levee	NFHL Channel	NFHL Retaining Wall	Major Water Body	County

Figure D-60
Summary of Available Flood Infrastructure Information, Orange County

September 2013

DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1805**
- 1852-1853** Winter
- 1861-1862** Winter, The Great Flood
- 1892-1893** Winter
- 1909** Winter
- 1937-1938** Winter, Great Flood
- 1955-1956** Winter, 1955 Christmas Flood
- 1958** February 26
- 1964-1965** Winter, Christmas 1964 Disaster
- 1968-1969** Winter 1968-1969 Storms
- 1969-1970** Winter/Spring, Northern California Flooding
- 1974** Winter/Spring, 1974 Flood
- 1982-1983** Winter/Spring, Winter Storms
- 1986** February, St. Valentine's Day Storm
- 1995** Severe Winter Storms
- 1996-1997** Winter, January 1997 Floods
- 2005-2006** Winter, New Year's Eve Flood of 2006
- 2006** Spring Storms
- 2008** Winter Storms

Flood Hazard Exposure

County Statistics

Total Acreage:	960,000
Total Population:	248,300
Total Structures:	109,100
Total Depreciated Replacement Value of Structures and Contents:	\$34.0 billion
Total Crop Acreage:	51,100
Total Value of Crops:	\$16.4 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	91,100	92,500
Percent of Area Exposed:	9%	10%
Population Exposed:	8,100	9,400
Percent of Population Exposed:	3%	4%
Structures Exposed:	3,900	4,500
Depreciated Replacement Value of Structures and Contents Exposed:	\$1.3 billion	\$1.5 billion
Crops Exposed (acres):	10,600	11,000
Value of Crops Exposed:	\$4.0 million	\$4.2 million
Department of Defense Facilities Exposed:	1	1
Essential Facilities Exposed:	2	2
High Potential Loss Facilities Exposed:	11	11
Lifeline Utilities Exposed:	0	0
Transportation Facilities Exposed:	47	48
Transportation Segments Exposed (miles):	25	26
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	24	24
Total Sensitive Animal Species Exposed:	39	39

Placer County

Types of Flooding

Likely:	Present:
Debris Flow	Engineered Structure Failure
Flash	
Slow Rise	
Stormwater	

Hydrologic Regions



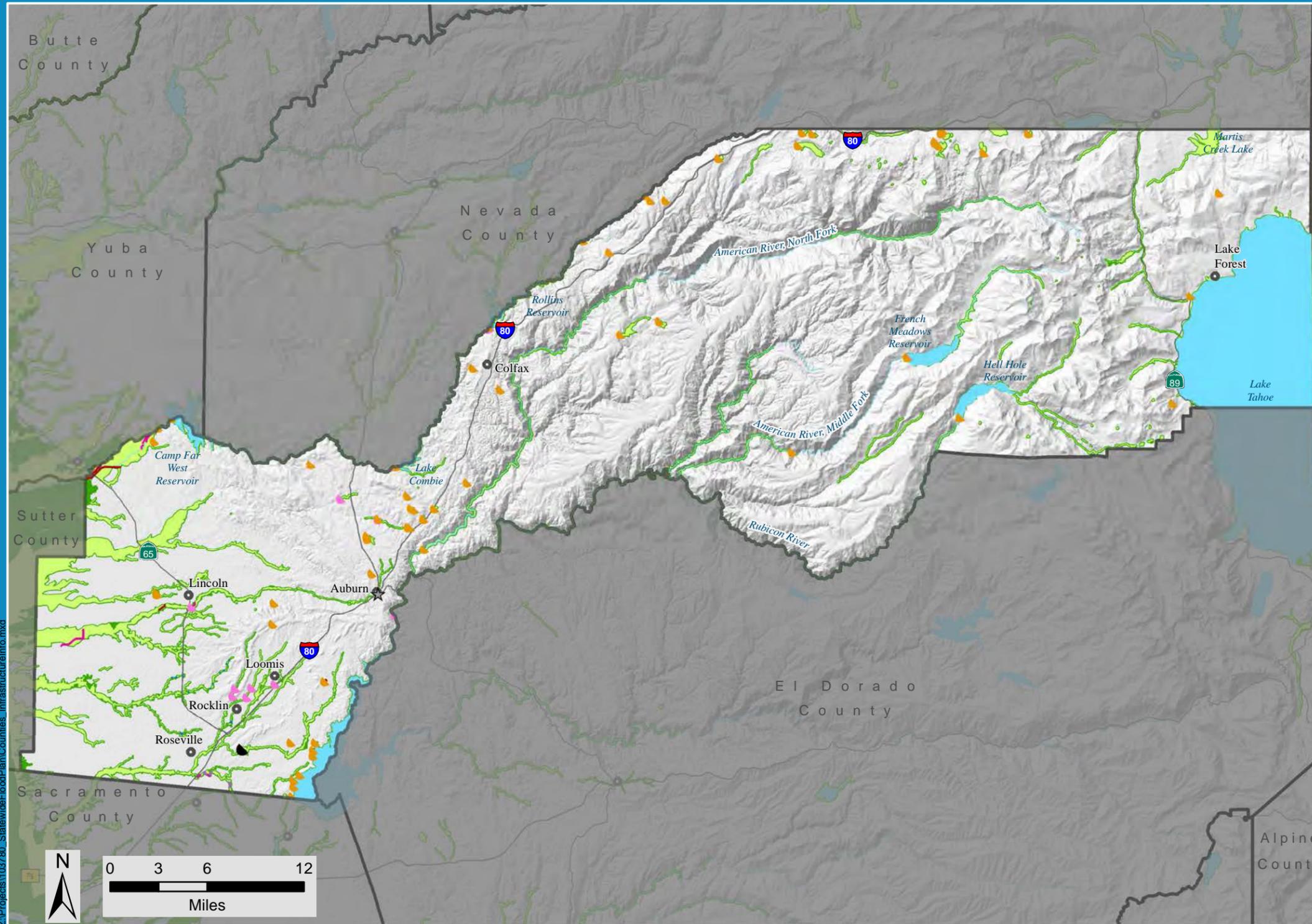
Figure D-61
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Placer County.

September 2013

DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Summary of Available Flood Infrastructure Information

Placer County



Flood Infrastructure GIS Data Received from Agencies Contacted:
No Flood Infrastructure GIS Data Received

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):
Levee
Channel

Agencies Contacted as Part of SFMP:
Placer County Flood Control and Water Conservation District

Planned Projects:
Number of Local Projects: 6
Estimated Cost of Local Projects: \$20.7 million
Number of USACE Projects: 0
Estimated Cost of USACE Projects: none

Statewide GIS Data Sources:
Cities derived from CAL FIRE incorporated city limit polygons, 2010. Populated Places from GNIS, 2011. Counties from CalAtlas, 2009. Dams modified from DWR, Bulletin 17-00, 2000. CLD layers are from California Levee Database, v2.2 r2, 2010. NFHL layers are from the National Flood Hazard Layer, FEMA, August 2011. Highways from TeleAtlas, 2004. Rivers and Lakes modified from DFG, N/A. Floodplains compiled for SFMP, 2011.
All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

Placer County

Figure D-62
Summary of Available Flood Infrastructure Information, Placer County

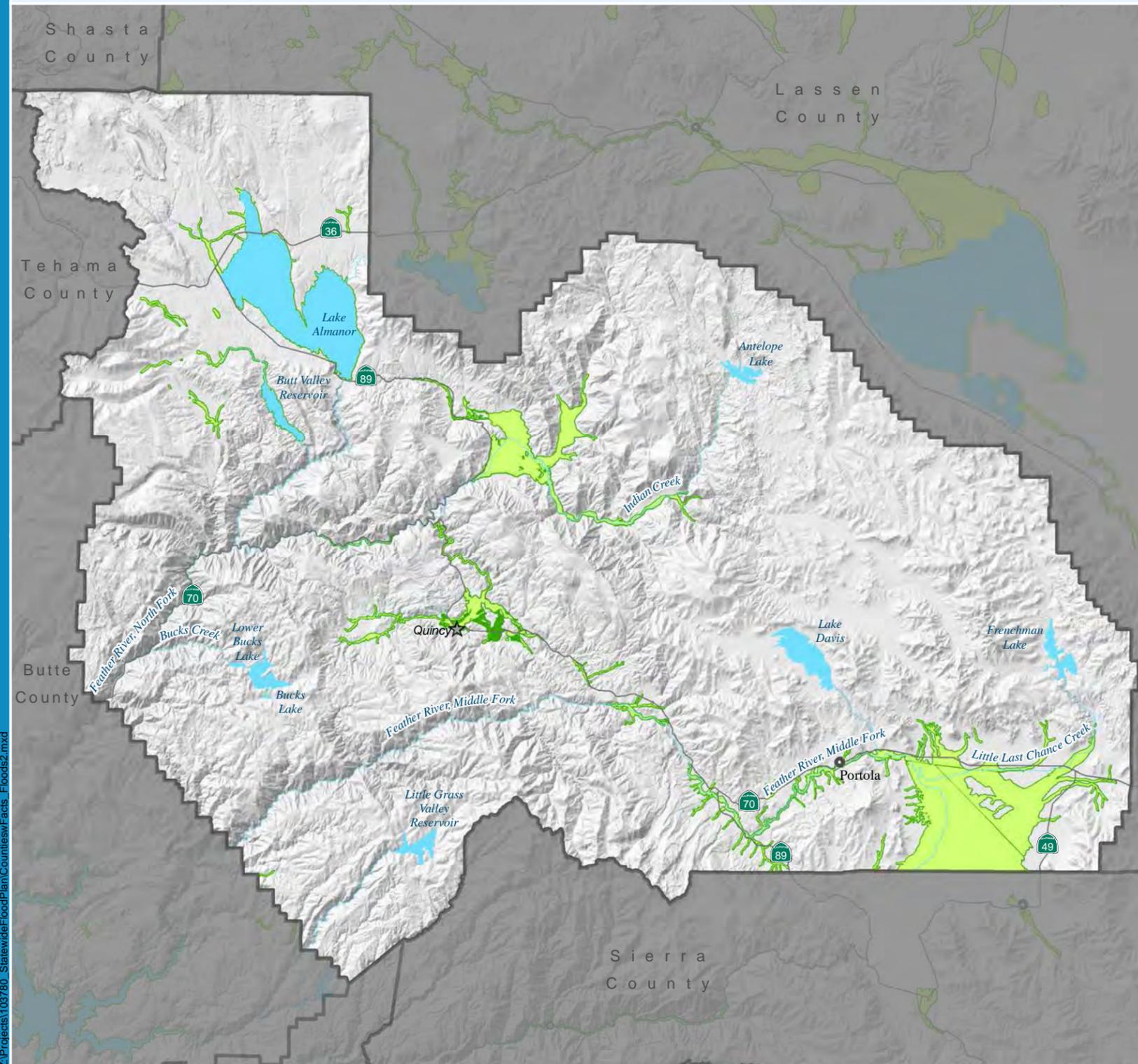
September 2013

- | | | | | | | |
|----------------------------|----------------------|------------------------|----------------------------|------------------------|------------------|-------------------|
| Statewide GIS Data: | DWR Local Agency Dam | CLD Pump Station | NFHL Levee | NFHL Control Structure | Highway | 100-yr Floodplain |
| City | DWR Other Dam | CLD Local Agency Levee | NFHL Flood Event Structure | NFHL Dike | Major River | 500-yr Floodplain |
| Populated Place | NFHL Dam or Weir | CLD Other Levee | NFHL Channel | NFHL Retaining Wall | Major Water Body | County |



DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1852-1853 Winter
- 1861-1862 Winter, The Great Flood
- 1889-1890 Winter
- 1904 Winter
- 1907 Winter
- 1913-1914 Winter
- 1937-1938 Winter, Great Flood
- 1942 Winter
- 1962-1963 Winter
- 1964-1965 Winter, Christmas 1964 Disaster
- 1966-1967 Winter/Spring
- 1969 Winter 1969 Storms
- 1969-1970 Winter/Spring, Northern California Flooding
- 1974 Winter/Spring, 1974 Flood
- 1986 February, St. Valentine's Day Storm
- 1992 Winter Storms
- 1995 Severe Winter Storms
- 1996-1997 Winter, January 1997 Floods
- 2005-2006 Winter Storms
- 2006 May 10

Flood Hazard Exposure

County Statistics

Total Acreage:	1.7 million
Total Population:	20,800
Total Structures:	15,400
Total Depreciated Replacement Value of Structures and Contents:	\$2.9 billion
Total Crop Acreage:	41,900
Total Value of Crops:	\$2.4 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	84,800	86,200
Percent of Area Exposed:	5%	5%
Population Exposed:	1,500	3,100
Percent of Population Exposed:	7%	15%
Structures Exposed:	1,100	2,000
Depreciated Replacement Value of Structures and Contents Exposed:	\$231.4 million	\$386.2 million
Crops Exposed (acres):	23,100	23,800
Value of Crops Exposed:	\$1.1 million	\$1.1 million
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	2	6
High Potential Loss Facilities Exposed:	14	14
Lifeline Utilities Exposed:	0	0
Transportation Facilities Exposed:	45	48
Transportation Segments Exposed (miles):	28	32
Native American Tribal Land Exposed (acres):	400	400
Total Sensitive Plant Species Exposed:	31	31
Total Sensitive Animal Species Exposed:	20	20

Plumas County

Types of Flooding

Likely:	Present:
Debris Flow	Alluvial Fan
Flash	Engineered Structure Failure
Slow Rise	
Stormwater	

Hydrologic Regions

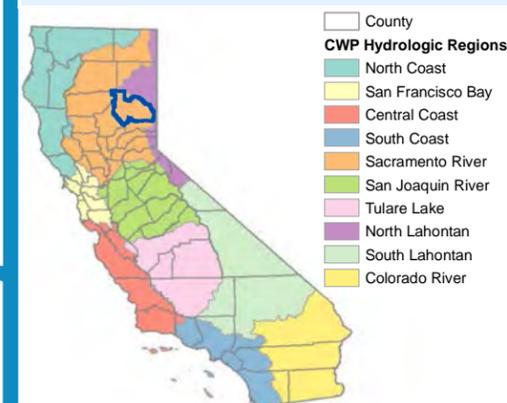


Figure D-63
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Plumas County.

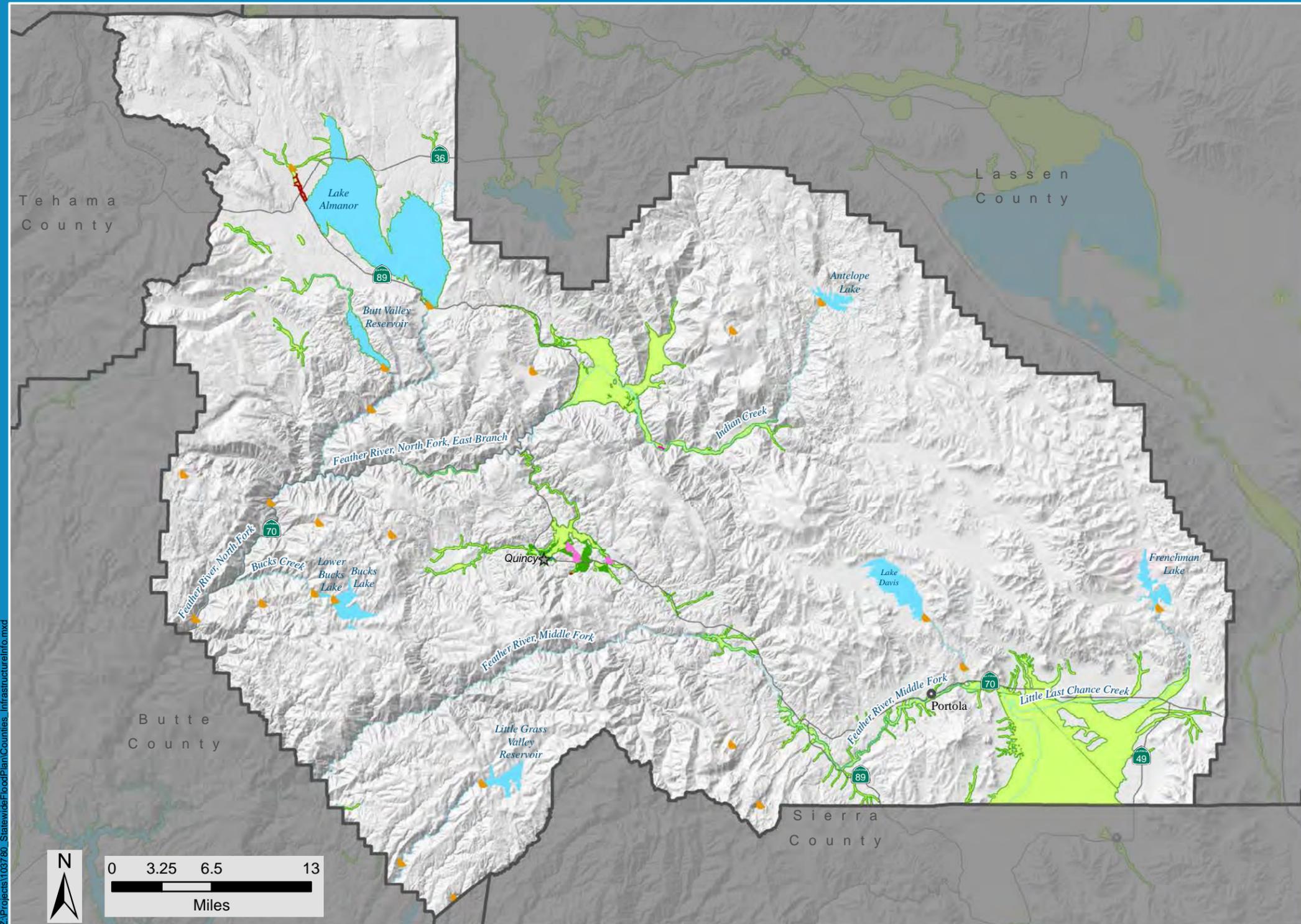
September 2013



DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Summary of Available Flood Infrastructure Information

Plumas County



Flood Infrastructure GIS Data Received from Agencies Contacted:
 No Flood Infrastructure GIS Data Received

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):
 No PDF/Hard Copy Data Received

Agencies Contacted as Part of SFMP:
 Feather River Coordinated Resource Management
 Plumas County Flood Control and Water Conservation District
 Plumas County Public Works

Planned Projects:

Number of Local Projects:	10
Estimated Cost of Local Projects:	\$4.7 million
Number of USACE Projects:	0
Estimated Cost of USACE Projects:	none

Statewide GIS Data Sources:
 Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bulletin 17-00, 2000. **CLD** layers are from California Levee Database, v2.2 r2, 2010. **NFHL** layers are from the National Flood Hazard Layer, FEMA, August 2011. **Highways** from TeleAtlas, 2004. **Rivers** and **Lakes** modified from DFG, N/A. **Floodplains** compiled for SFMP, 2011.
 All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

Plumas County

Figure D-64
 Summary of Available Flood Infrastructure Information, Plumas County

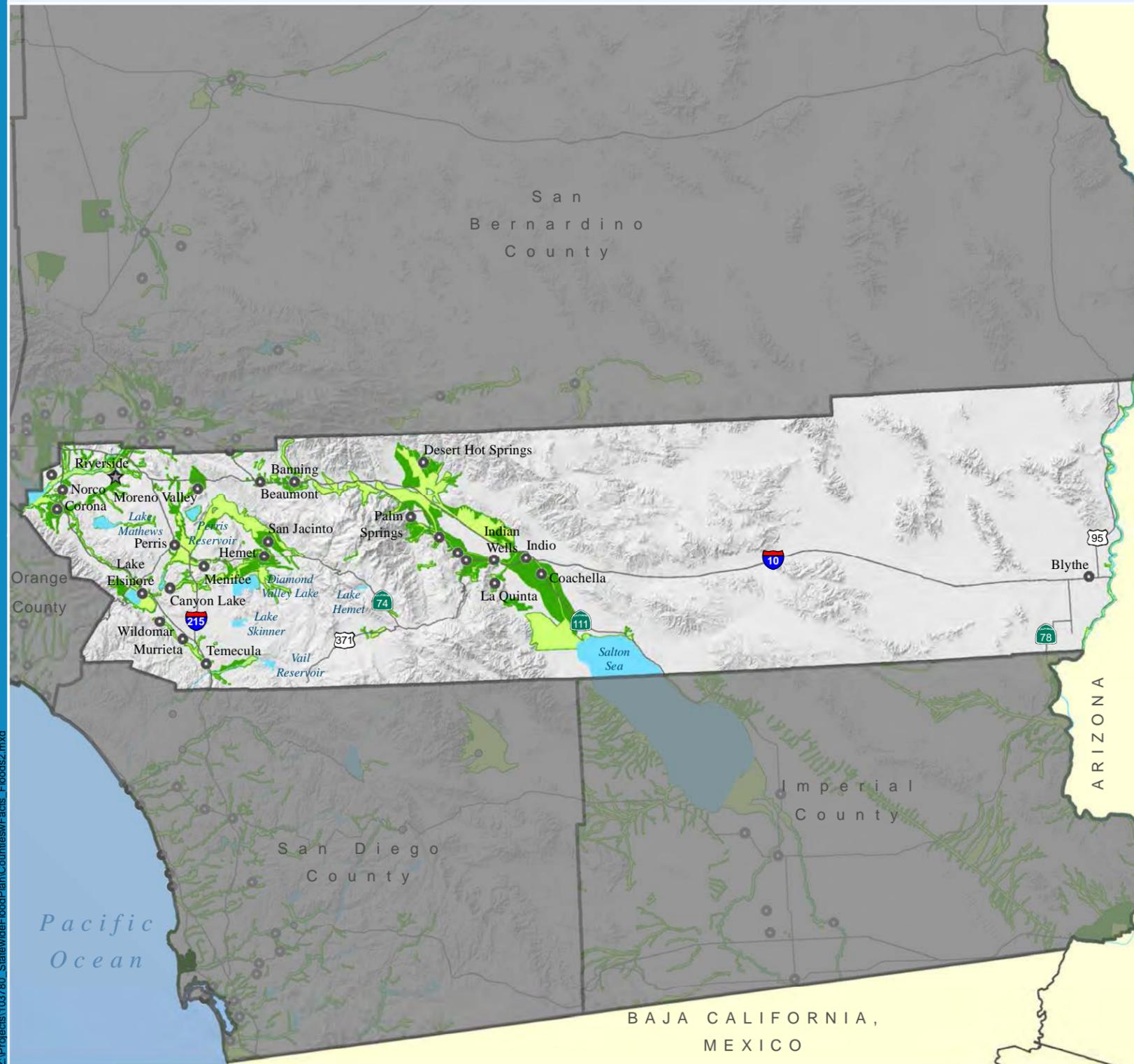
September 2013

Statewide GIS Data:

● City	● DWR Local Agency Dam	■ CLD Pump Station	— NFHL Levee	— NFHL Control Structure	— Highway	■ 100-yr Floodplain
○ Populated Place	● DWR Other Dam	— CLD Local Agency Levee	— NFHL Flood Event Structure	— NFHL Dike	— Major River	■ 500-yr Floodplain
	— NFHL Dam or Weir	— CLD Other Levee	— NFHL Channel	— NFHL Retaining Wall	■ Major Water Body	□ County

DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1771-1772
- 1861-1862 Winter, The Great Flood
- 1910-1911 Winter
- 1916 January, Great Flood of 1916
- 1937-1938 Winter, Great Flood
- 1958 Spring
- 1963 January 18-26, February 20-26
- 1965 Winter
- 1969 Winter 1969 Storms
- 1976 September, Tropical Storm Kathleen
- 1977 August 15-17, Tropical Storm Doreen
- 1978 Winter
- 1983 August 13-17, Tropical Storm Ishmael
- 1992 Late Winter Storms
- 1995 Severe Winter Storms
- 1998 Winter, El Niño Floods
- 2002 December, El Niño Floods
- 2004-2005 Winter
- 2010-2011 December 2010 Winter Storm Event
- 2013 August 25, Tropical Storm Ivo

Flood Hazard Exposure

County Statistics

Total Acreage:	4.7 million
Total Population:	1.5 million
Total Structures:	560,500
Total Depreciated Replacement Value of Structures and Contents:	\$134.7 billion
Total Crop Acreage:	221,500
Total Value of Crops:	\$520.0 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	159,200	272,400
Percent of Area Exposed:	3%	6%
Population Exposed:	49,500	377,500
Percent of Population Exposed:	3%	24%
Structures Exposed:	22,500	145,500
Depreciated Replacement Value of Structures and Contents Exposed:	\$4.6 billion	\$32.9 billion
Crops Exposed (acres):	26,400	41,900
Value of Crops Exposed:	\$57.1 million	\$107.2 million
Department of Defense Facilities Exposed:	1	1
Essential Facilities Exposed:	27	192
High Potential Loss Facilities Exposed:	8	24
Lifeline Utilities Exposed:	7	25
Transportation Facilities Exposed:	113	248
Transportation Segments Exposed (miles):	104	304
Native American Tribal Land Exposed (acres):	14,300	22,500
Total Sensitive Plant Species Exposed:	70	77
Total Sensitive Animal Species Exposed:	106	113

Types of Flooding

Likely:	Present:
Alluvial Fan	Engineered Structure Failure
Debris Flow	
Flash	
Slow Rise	
Stormwater	

Hydrologic Regions

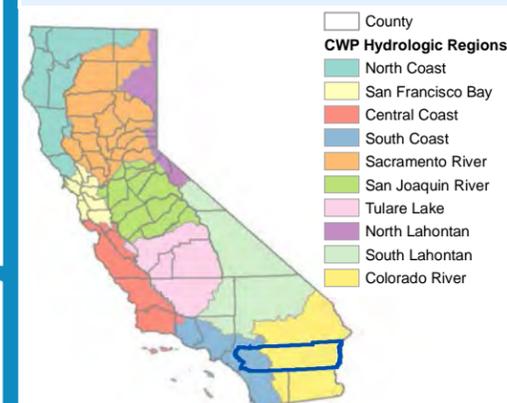
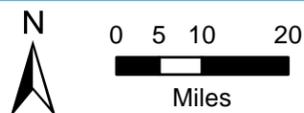


Figure D-65
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Riverside County.

September 2013



- City
- Highway
- 100-yr Floodplain
- Major Water Body
- Populated Place
- ~ Major River
- 500-yr Floodplain
- County

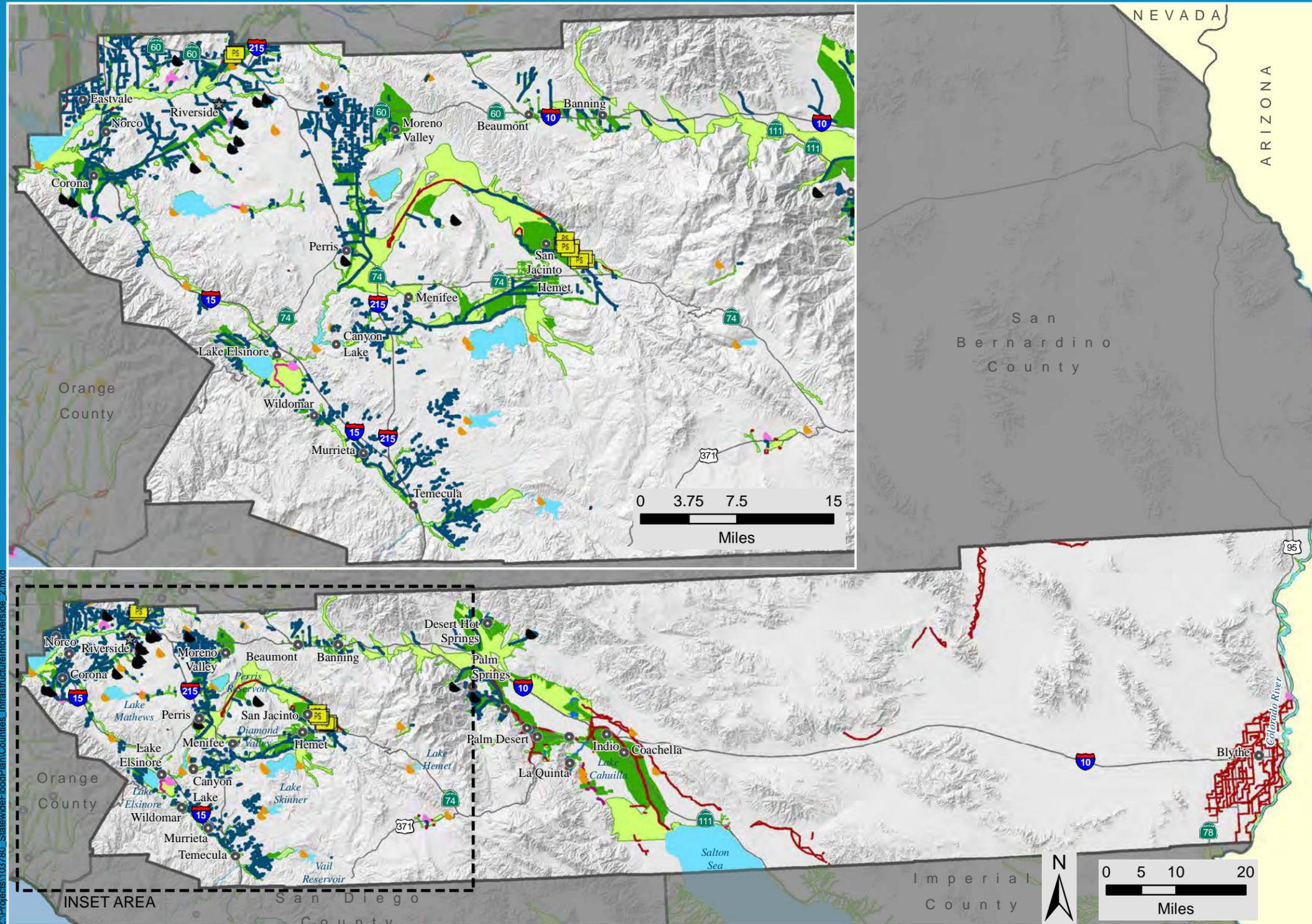
ZIP Projects 103780 - Statewide Floodplain Counties Facts - Floods2.mxd

DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Riverside County

Summary of Available Flood Infrastructure Information

Riverside County



Flood Infrastructure GIS Data Received from Agencies Contacted:

— Flood Control Facility

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):

- Levee
- Channel
- Dam
- Debris Basin
- Dike
- Storm Drains

Agencies Contacted as Part of SFMP:

- Coachella Valley Water District
- Riverside County Flood Control and Water Conservation District

Planned Projects:

Number of Local Projects:	116
Estimated Cost of Local Projects:	\$563.8 million
Number of USACE Projects:	4
Estimated Cost of USACE Projects:	\$138.8 million

Statewide GIS Data Sources:

Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bulletin 17-00, 2000. **CLD** layers are from California Levee Database, v2.2 r2, 2010. **NFHL** layers are from the National Flood Hazard Layer, FEMA, August 2011. **Highways** from TeleAtlas, 2004. **Rivers** and **Lakes** modified from DFG, N/A. **Floodplains** compiled for SFMP, 2011. **All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.**

Figure D-66
Summary of Available Flood Infrastructure Information, Riverside County

September 2013

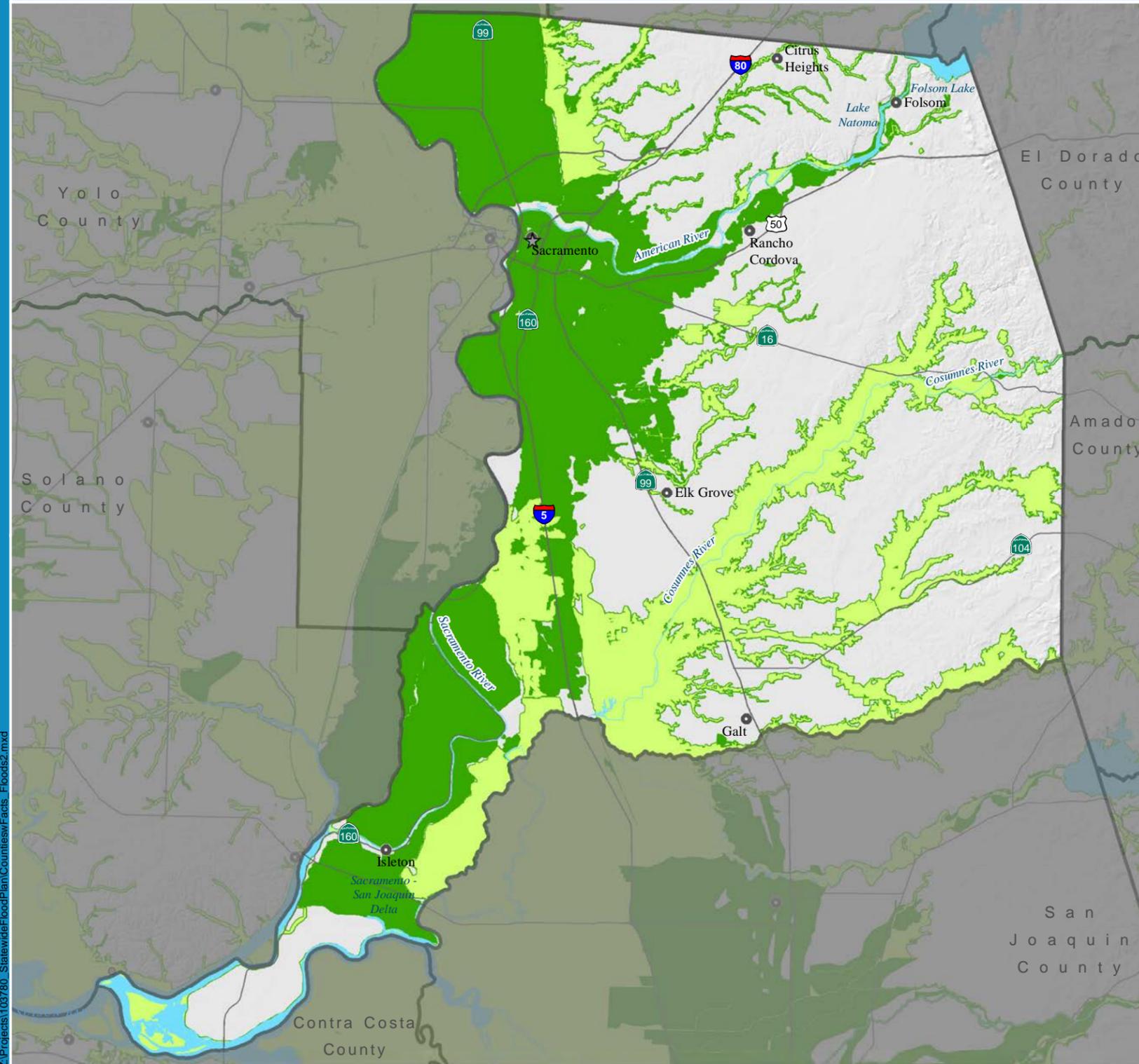
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|----------------------------|------------------------|--------------------------|------------------------------|--------------------------|--------------------|-------------------|
| Statewide GIS Data: | ● DWR Local Agency Dam | PS CLD Pump Station | ~ NFHL Levee | ~ NFHL Control Structure | — Highway | 100-yr Floodplain |
| ● City | ● DWR Other Dam | ~ CLD Local Agency Levee | ~ NFHL Flood Event Structure | ~ NFHL Dike | ~ Major River | 500-yr Floodplain |
| ○ Populated Place | ~ NFHL Dam or Weir | ~ CLD Other Levee | ~ NFHL Channel | ~ NFHL Retaining Wall | ~ Major Water Body | County |



DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Riverside County

100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1805**
- 1852-1853** Winter
- 1861-1862** Winter, The Great Flood
- 1878** Winter
- 1907** March, The Great Lone Flood
- 1913-1914** Winter
- 1937-1938** Winter, Great Flood
- 1955-1956** Winter, 1955 Christmas Flood
- 1958** Winter/Spring
- 1964-1965** Winter, Christmas 1964 Disaster
- 1968-1969** Winter 1968-1969 Storms
- 1969-1970** Winter/Spring, Northern California Flooding
- 1974** Winter/Spring, 1974 Flood
- 1986** Winter, St. Valentine's Day Storm
- 1995-1996** Winter/Spring
- 1996-1997** Winter, January 1997 Floods
- 1997-1998** Winter/Spring, El Niño Floods
- 2005-2006** Winter Storms
- 2006** March - May, 2006 Spring Storms
- 2008** January 5-14, 2008 Winter Storms

Flood Hazard Exposure

County Statistics

Total Acreage:	636,100
Total Population:	1.2 million
Total Structures:	414,800
Total Depreciated Replacement Value of Structures and Contents:	\$116.5 billion
Total Crop Acreage:	174,800
Total Value of Crops:	\$318.0 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	119,300	273,500
Percent of Area Exposed:	19%	43%
Population Exposed:	44,400	588,000
Percent of Population Exposed:	4%	48%
Structures Exposed:	13,800	190,000
Depreciated Replacement Value of Structures and Contents Exposed:	\$3.3 billion	\$39.2 billion
Crops Exposed (acres):	50,600	115,000
Value of Crops Exposed:	\$91.6 million	\$248.1 million
Department of Defense Facilities Exposed:	2	3
Essential Facilities Exposed:	13	249
High Potential Loss Facilities Exposed:	12	47
Lifeline Utilities Exposed:	8	28
Transportation Facilities Exposed:	124	437
Transportation Segments Exposed (miles):	62	390
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	24	24
Total Sensitive Animal Species Exposed:	38	43

Types of Flooding

Likely:	Present:
Flash	Engineered Structure Failure
Slow Rise	
Stormwater	

Hydrologic Regions

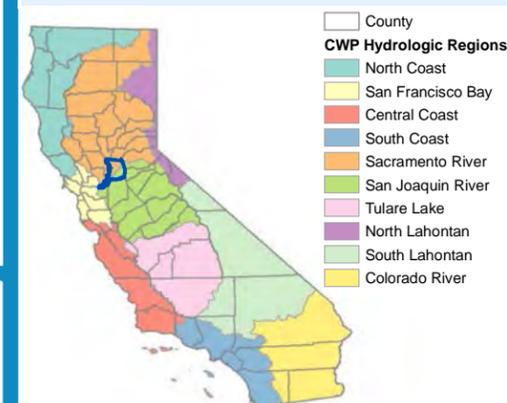


Figure D-67
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Sacramento County.

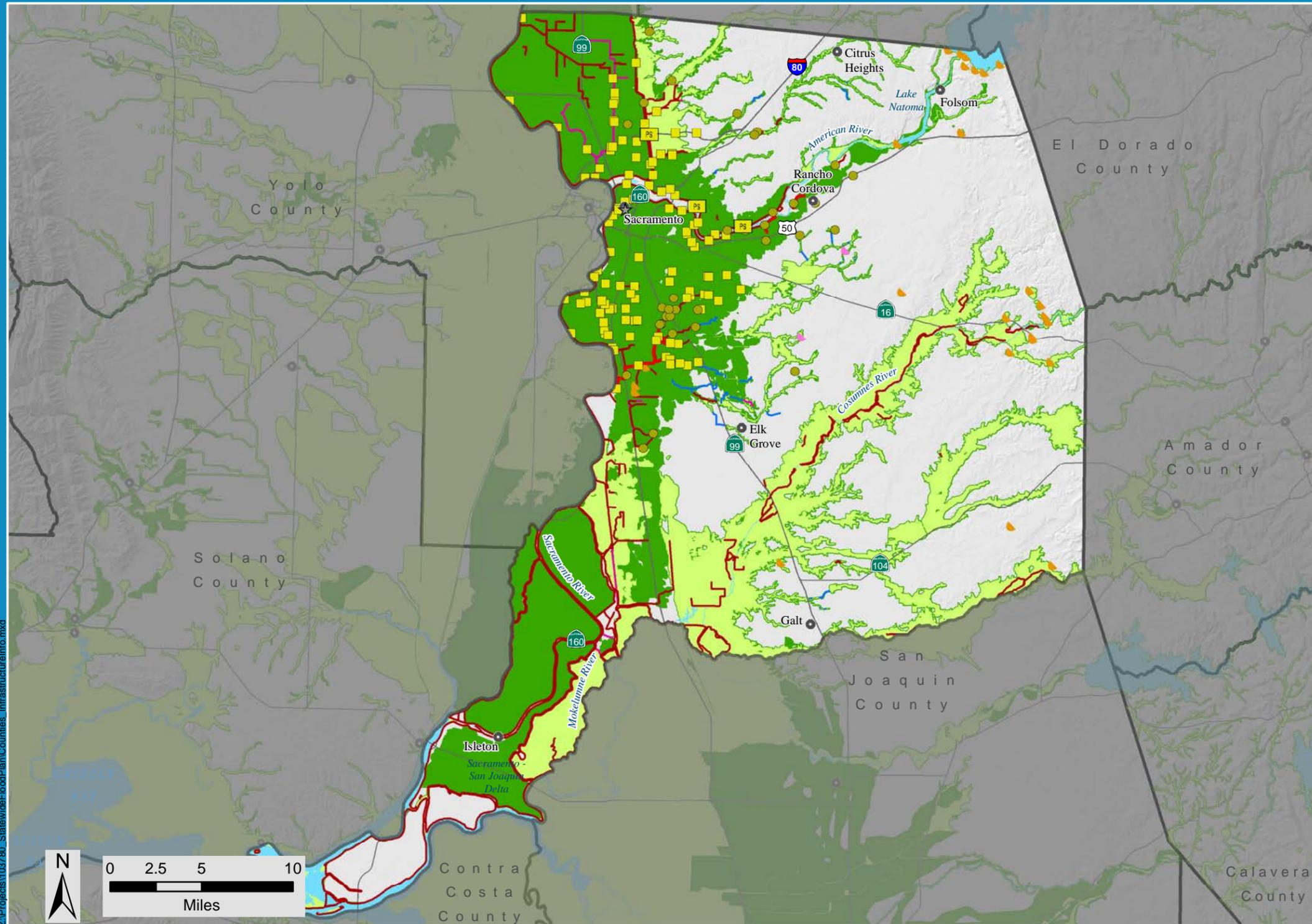
September 2013



DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Summary of Available Flood Infrastructure Information

Sacramento County



Flood Infrastructure GIS Data Received from Agencies Contacted:

- Drainage Pumping Station
- Pump

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):

- Levee
- Channel
- Dam
- Pump Station

Agencies Contacted as Part of SFMP:

- American River Flood Control District
- City of Sacramento
- Sacramento Area Flood Control Agency
- Sacramento County Department of Water Resources

Planned Projects:

Number of Local Projects:	22
Estimated Cost of Local Projects:	\$103.7 million
Number of USACE Projects:	0
Estimated Cost of USACE Projects:	none

Statewide GIS Data Sources:

Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bulletin 17-00, 2000. **CLD** layers are from California Levee Database, v2.2 r2, 2010. **NFHL** layers are from the National Flood Hazard Layer, FEMA, August 2011. **Highways** from TeleAtlas, 2004. **Rivers** and **Lakes** modified from DFG, N/A. **Floodplains** compiled for SFMP, 2011.

All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

Sacramento County

- | | | | | | | |
|--|---|---|--|--|--|--|
| Statewide GIS Data: | ● DWR Local Agency Dam | PS CLD Pump Station | — NFHL Levee | — NFHL Control Structure | — Highway | ■ 100-yr Floodplain |
| ● City | ● DWR Other Dam | — CLD Local Agency Levee | — NFHL Flood Event Structure | — NFHL Dike | — Major River | ■ 500-yr Floodplain |
| ○ Populated Place | — NFHL Dam or Weir | — CLD Other Levee | — NFHL Channel | — NFHL Retaining Wall | ■ Major Water Body | □ County |

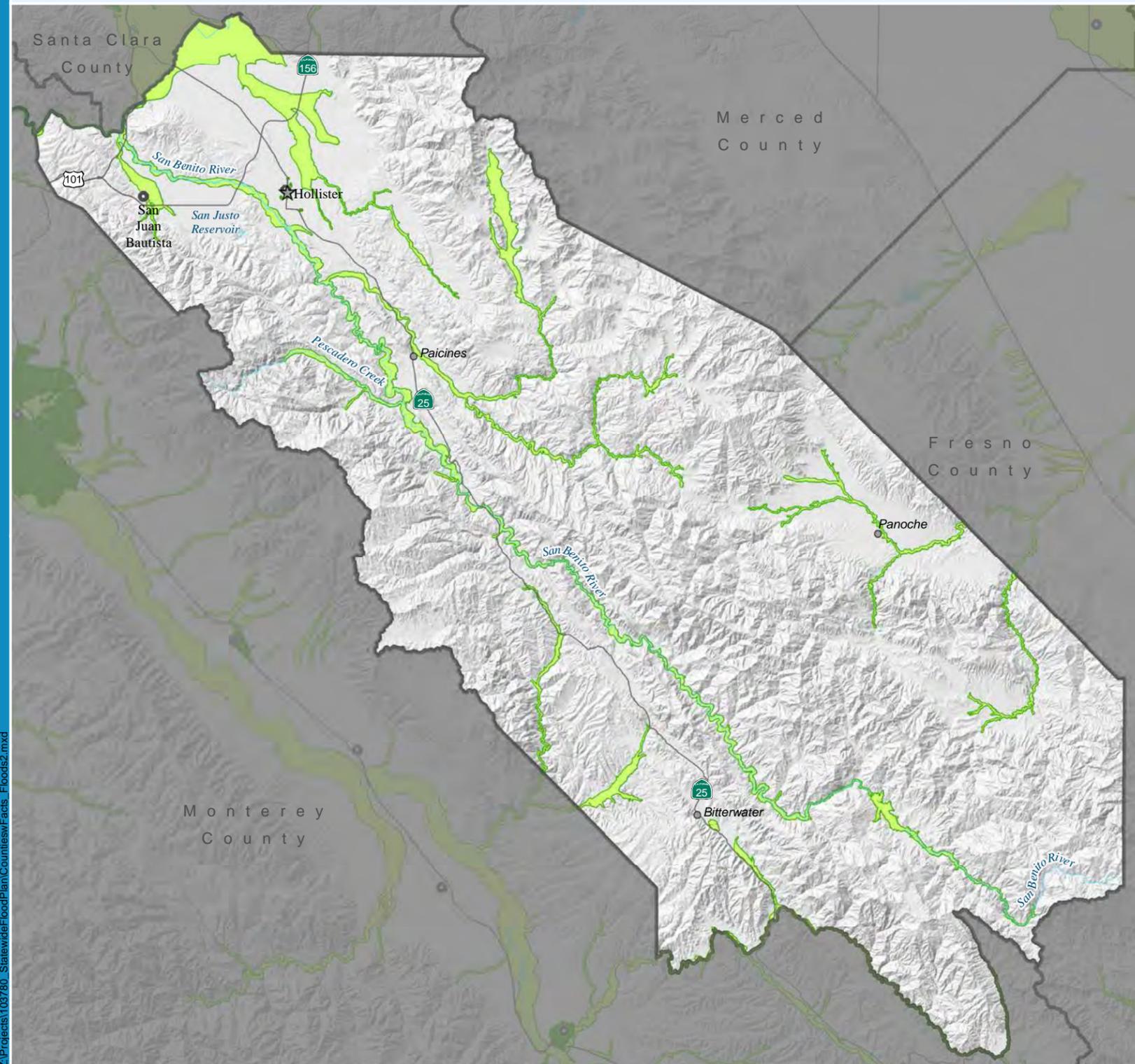
Figure D-68
Summary of Available Flood Infrastructure Information, Sacramento County

September 2013



DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1805
- 1907 March
- 1938 Winter, Great Flood
- 1950 Winter
- 1955-1956 Winter, 1955 Christmas Flood
- 1958 Spring
- 1966-1967 Winter
- 1969 Winter 1969 Storms
- 1969-1970 Winter/Spring, Storms
- 1973 Winter
- 1974 January
- 1978 Winter
- 1980 Winter
- 1982-1983 Winter/Spring, Winter Storms
- 1986 February, St. Valentine's Day Storm
- 1995-1996 Winter, 1995 Christmas Floods
- 1996-1997 Winter, January 1997 Floods
- 1998 Winter/Spring, El Niño Floods
- 2002 December, El Niño Floods
- 2005 January

Flood Hazard Exposure

County Statistics

Total Acreage:	889,400
Total Population:	53,200
Total Structures:	17,800
Total Depreciated Replacement Value of Structures and Contents:	\$5.1 billion
Total Crop Acreage:	49,800
Total Value of Crops:	\$107.9 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	33,800	33,800
Percent of Area Exposed:	4%	4%
Population Exposed:	2,400	2,700
Percent of Population Exposed:	5%	5%
Structures Exposed:	900	1,000
Depreciated Replacement Value of Structures and Contents Exposed:	\$266.2 million	\$291.5 million
Crops Exposed (acres):	13,800	13,800
Value of Crops Exposed:	\$30.2 million	\$30.2 million
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	2	2
High Potential Loss Facilities Exposed:	2	2
Lifeline Utilities Exposed:	2	2
Transportation Facilities Exposed:	37	37
Transportation Segments Exposed (miles):	21	21
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	20	20
Total Sensitive Animal Species Exposed:	38	38

San Benito County

Types of Flooding

Likely:	Present:
Slow Rise Stormwater	Alluvial Fan Debris Flow Engineered Structure Failure Flash

Hydrologic Regions



Figure D-69
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, San Benito County.

September 2013

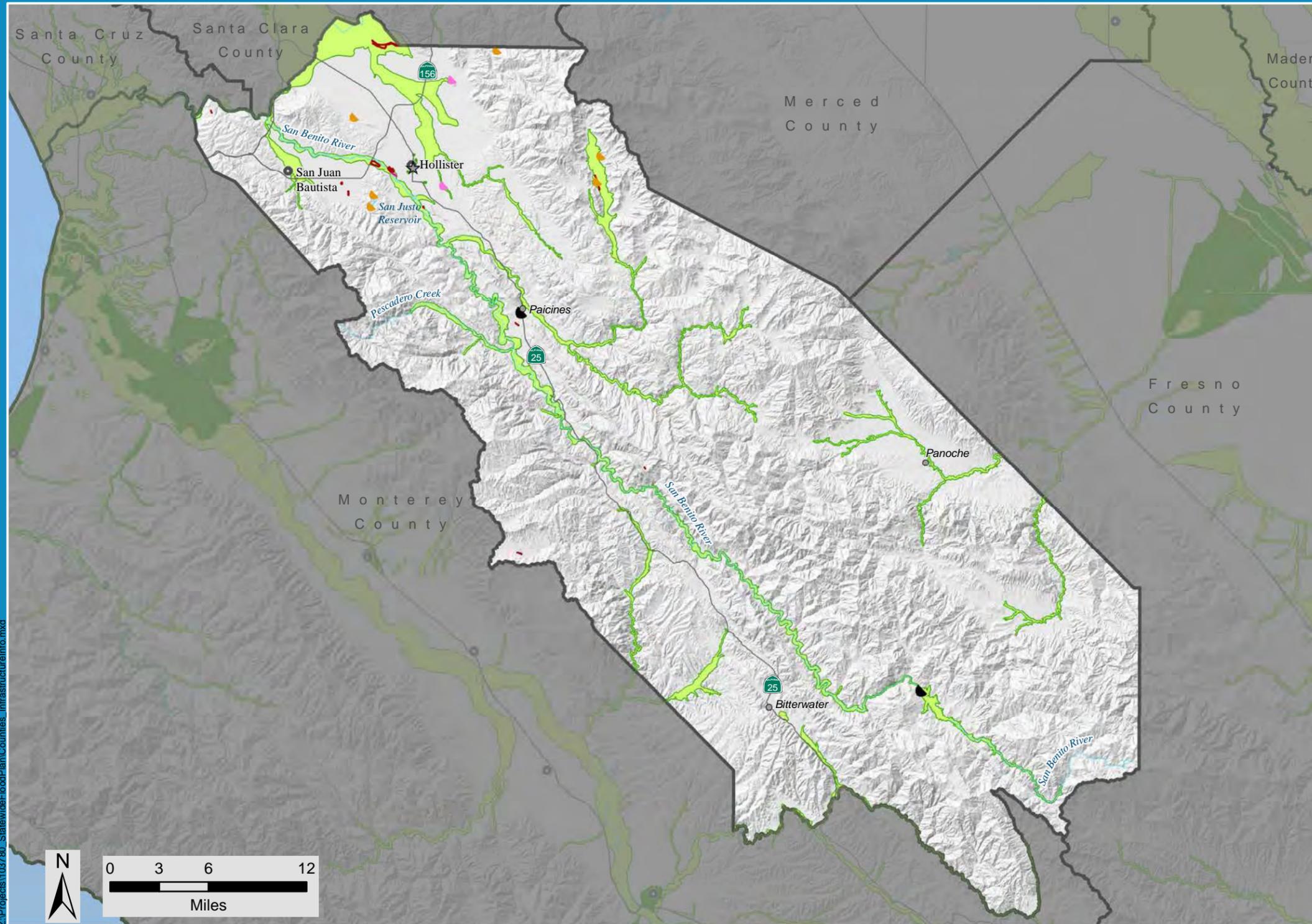


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DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Summary of Available Flood Infrastructure Information

San Benito County



Flood Infrastructure GIS Data Received from Agencies Contacted:
No Flood Infrastructure GIS Data Received

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):
No PDF/Hard Copy Data Received

Agencies Contacted as Part of SFMP:
San Benito Water District

Planned Projects:

Number of Local Projects:	1
Estimated Cost of Local Projects:	none
Number of USACE Projects:	0
Estimated Cost of USACE Projects:	none

Statewide GIS Data Sources:
Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bulletin 17-00, 2000. **CLD** layers are from California Levee Database, v2.2 r2, 2010. **NFHL** layers are from the National Flood Hazard Layer, FEMA, August 2011. **Highways** from TeleAtlas, 2004. **Rivers** and **Lakes** modified from DFG, N/A. **Floodplains** compiled for SFMP, 2011.
All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

San Benito County

Figure D-70
Summary of Available Flood Infrastructure Information, San Benito County

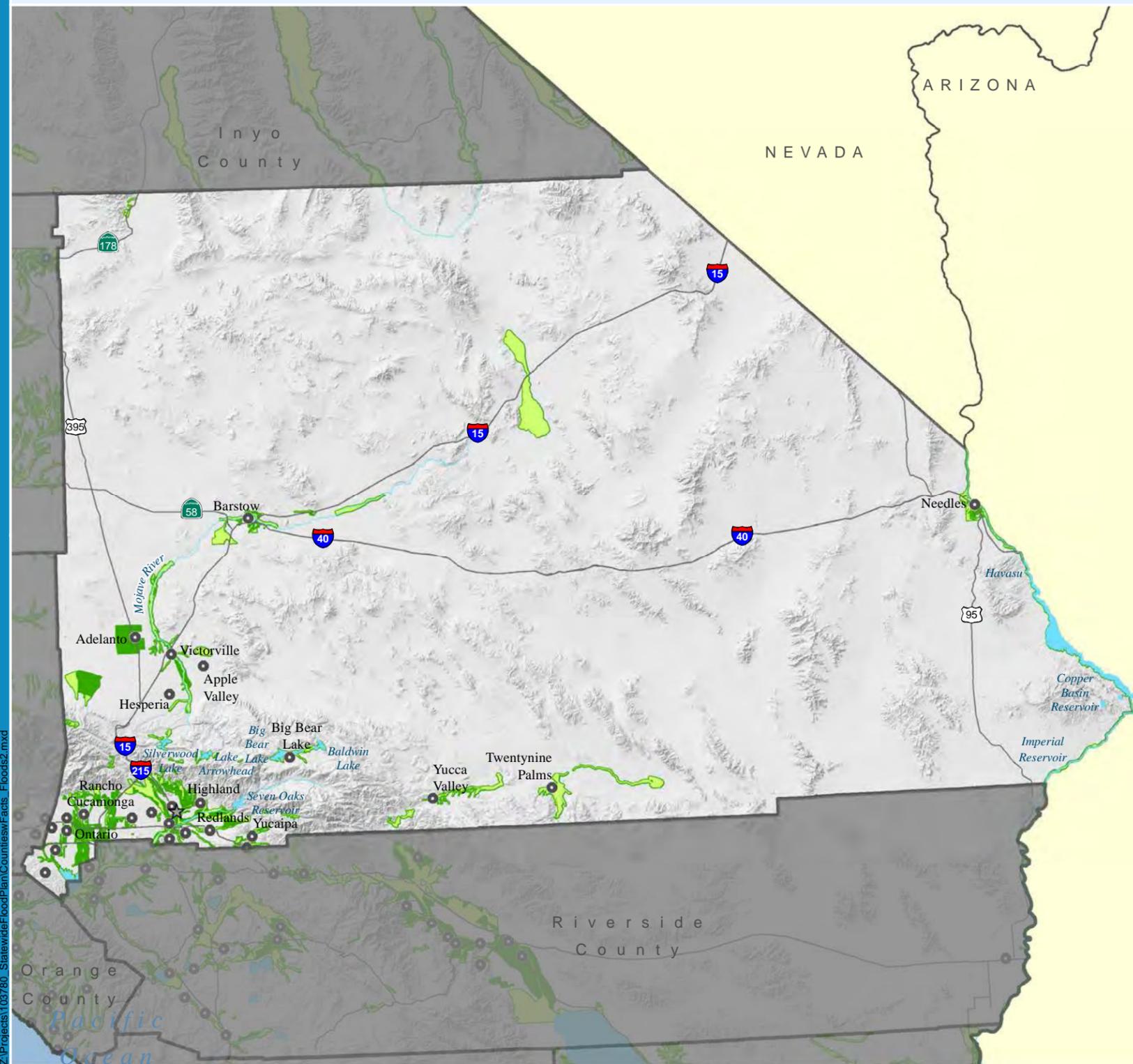
September 2013

- | | | | | | | |
|----------------------------|----------------------|------------------------|----------------------------|------------------------|------------------|-------------------|
| Statewide GIS Data: | DWR Local Agency Dam | CLD Pump Station | NFHL Levee | NFHL Control Structure | Highway | 100-yr Floodplain |
| City | DWR Other Dam | CLD Local Agency Levee | NFHL Flood Event Structure | NFHL Dike | Major River | 500-yr Floodplain |
| Populated Place | NFHL Dam or Weir | CLD Other Levee | NFHL Channel | NFHL Retaining Wall | Major Water Body | County |



DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1771-1772
- 1861-1862 Winter, The Great Flood
- 1910-1911 Winter
- 1916 January, Great Flood of 1916
- 1937-1938 Winter, Great Flood
- 1958 Spring
- 1966-1967 Winter
- 1969 Winter 1969 Storms or Great Flood of 1969
- 1976 September, Tropical Storm Kathleen
- 1978 Winter
- 1980 Winter
- 1982-1983 Winter/Spring, Winter Storms
- 1992 Late Winter Storms
- 1995 Severe Winter Storms
- 1998 Winter, El Niño Floods
- 2003 December 25-26, Christmas Day Storm
- 2004-2005 Winter
- 2008 Summer
- 2010 January 17-21, January 2010 Winter Storms
- 2010-2011 December 2010 Winter Storm Event

Flood Hazard Exposure

County Statistics

Total Acreage:	12.9 million
Total Population:	1.7 million
Total Structures:	578,200
Total Depreciated Replacement Value of Structures and Contents:	\$126.7 billion
Total Crop Acreage:	67,100
Total Value of Crops:	\$65.9 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	120,300	197,600
Percent of Area Exposed:	1%	2%
Population Exposed:	41,000	254,300
Percent of Population Exposed:	2%	15%
Structures Exposed:	16,400	78,400
Depreciated Replacement Value of Structures and Contents Exposed:	\$3.3 billion	\$18.9 billion
Crops Exposed (acres):	2,500	8,600
Value of Crops Exposed:	\$2.2 million	\$7.9 million
Department of Defense Facilities Exposed:	5	5
Essential Facilities Exposed:	30	130
High Potential Loss Facilities Exposed:	16	65
Lifeline Utilities Exposed:	3	15
Transportation Facilities Exposed:	128	296
Transportation Segments Exposed (miles):	94	258
Native American Tribal Land Exposed (acres):	7,100	7,100
Total Sensitive Plant Species Exposed:	95	95
Total Sensitive Animal Species Exposed:	103	103

Types of Flooding

Likely:	Present:
Alluvial Fan	Engineered Structure Failure
Debris Flow	
Flash	
Slow Rise	
Stormwater	

Hydrologic Regions

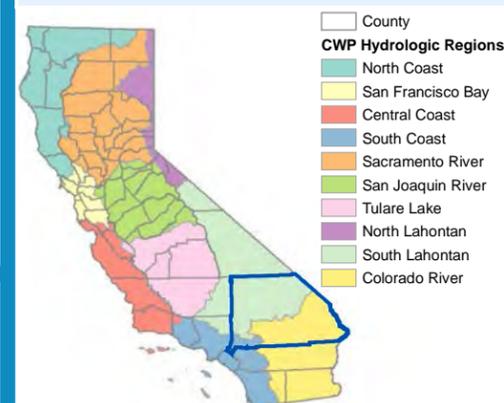


Figure D-71
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, San Bernardino County.

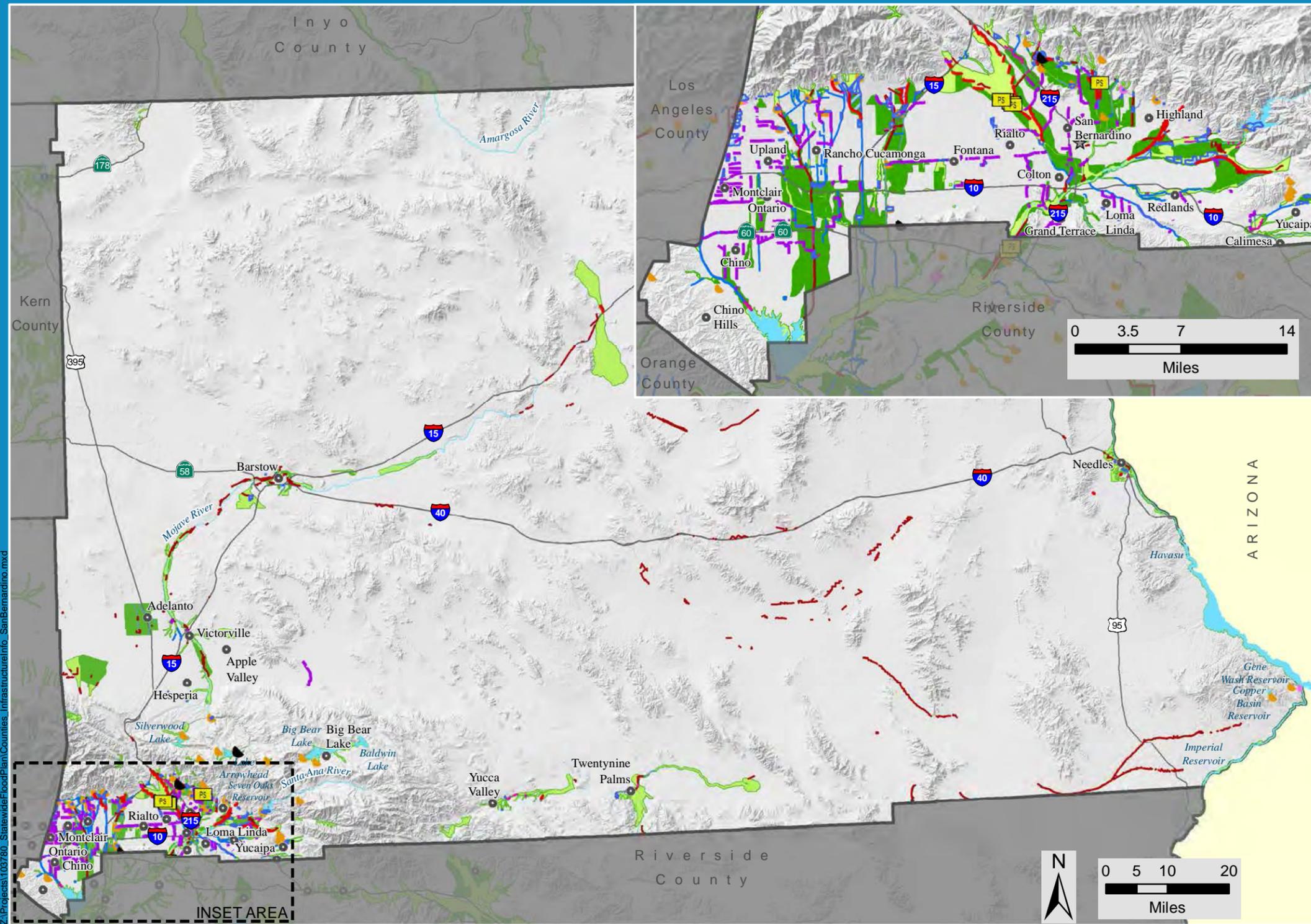
September 2013



DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Summary of Available Flood Infrastructure Information

San Bernardino County



Flood Infrastructure GIS Data Received from Agencies Contacted:

- Levee
- Storm Drain
- Basins

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):

- Channel
- Dam
- Basin
- Levee
- Storm Drain

Agencies Contacted as Part of SFMP:

San Bernardino County Department of Public Works

Planned Projects:

Number of Local Projects:	43
Estimated Cost of Local Projects:	\$324.3 million
Number of USACE Projects:	0
Estimated Cost of USACE Projects:	none

Statewide GIS Data Sources:

Cities derived from CAL FIRE incorporated city limit polygons, 2010. Populated Places from GNIS, 2011. Counties from CalAtlas, 2009. Dams modified from DWR, Bulletin 17-00, 2000. CLD layers are from California Levee Database, v2.2 r2, 2010. NFHL layers are from the National Flood Hazard Layer, FEMA, August 2011. Highways from TeleAtlas, 2004. Rivers and Lakes modified from DFG, N/A. Floodplains compiled for SFMP, 2011. All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

Statewide GIS Data:

- | | | | | | | |
|-----------------|----------------------|------------------------|----------------------------|------------------------|------------------|-------------------|
| City | DWR Local Agency Dam | CLD Pump Station | NFHL Levee | NFHL Control Structure | Highway | 100-yr Floodplain |
| Populated Place | DWR Other Dam | CLD Local Agency Levee | NFHL Flood Event Structure | NFHL Dike | Major River | 500-yr Floodplain |
| | NFHL Dam or Weir | CLD Other Levee | NFHL Channel | NFHL Retaining Wall | Major Water Body | County |

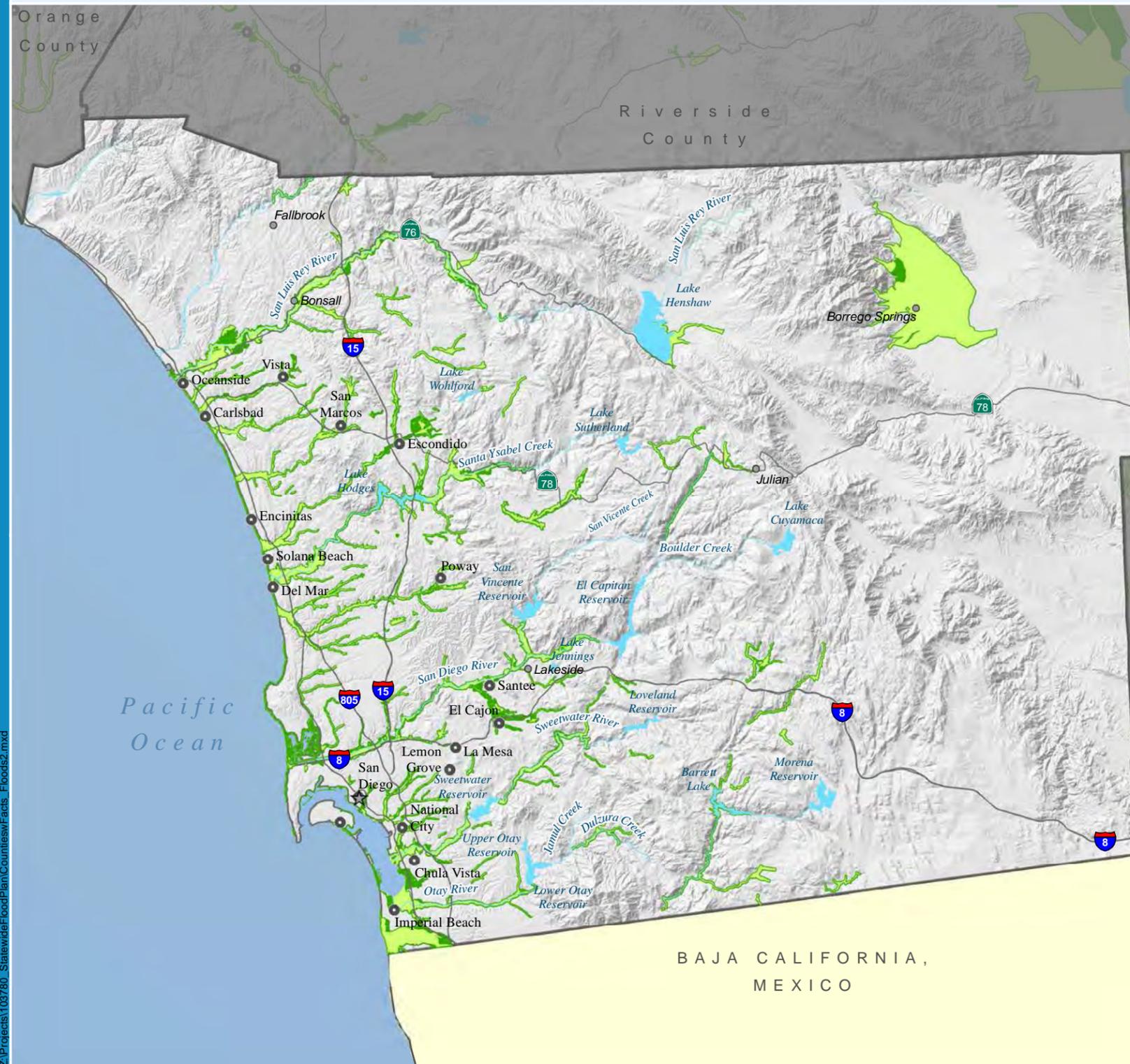
Figure D-72
Summary of Available Flood Infrastructure Information, San Bernardino County

September 2013



DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1760**
- 1861-1862** Winter, The Great Flood
- 1916** January, Great Flood of 1916
- 1937-1938** Winter, Great Flood
- 1958** Spring
- 1965** Winter
- 1969** Winter 1969 Storms
- 1976** September, Tropical Storm Kathleen
- 1977** August 15-17, Tropical Storm Doreen
- 1978** Winter
- 1982-1983** Winter/Spring, Winter Storms
- 1983** March 1983 Storms
- 1992** Late Winter Storms
- 1995** January 4-24, Severe Winter Storms
- 1998** Winter, El Niño Floods
- 2002** December, El Niño Floods
- 2004-2005** Winter
- 2010-2011** December 2010 Winter Storm Event
- 2011** March
- 2013** August 25, Tropical Storm Ivo

Flood Hazard Exposure

County Statistics

Total Acreage:	2.7 million
Total Population:	2.8 million
Total Structures:	821,400
Total Depreciated Replacement Value of Structures and Contents:	\$252.6 billion
Total Crop Acreage:	92,400
Total Value of Crops:	\$359.3 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	84,000	98,600
Percent of Area Exposed:	3%	4%
Population Exposed:	75,700	182,400
Percent of Population Exposed:	3%	6%
Structures Exposed:	23,900	50,000
Depreciated Replacement Value of Structures and Contents Exposed:	\$8.5 billion	\$17.0 billion
Crops Exposed (acres):	7,600	8,400
Value of Crops Exposed:	\$27.6 million	\$29.7 million
Department of Defense Facilities Exposed:	9	9
Essential Facilities Exposed:	46	78
High Potential Loss Facilities Exposed:	23	40
Lifeline Utilities Exposed:	5	12
Transportation Facilities Exposed:	221	310
Transportation Segments Exposed (miles):	98	143
Native American Tribal Land Exposed (acres):	100	100
Total Sensitive Plant Species Exposed:	122	122
Total Sensitive Animal Species Exposed:	89	89

San Diego County

Types of Flooding

Likely:	Present:
Alluvial Fan	Engineered Structure Failure
Coastal	Tsunami
Debris Flow	
Flash	
Slow Rise	
Stormwater	

Hydrologic Regions

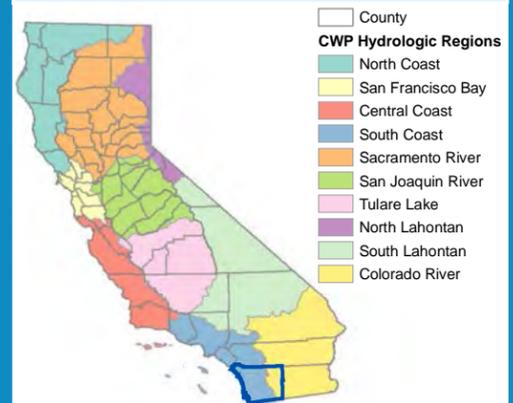


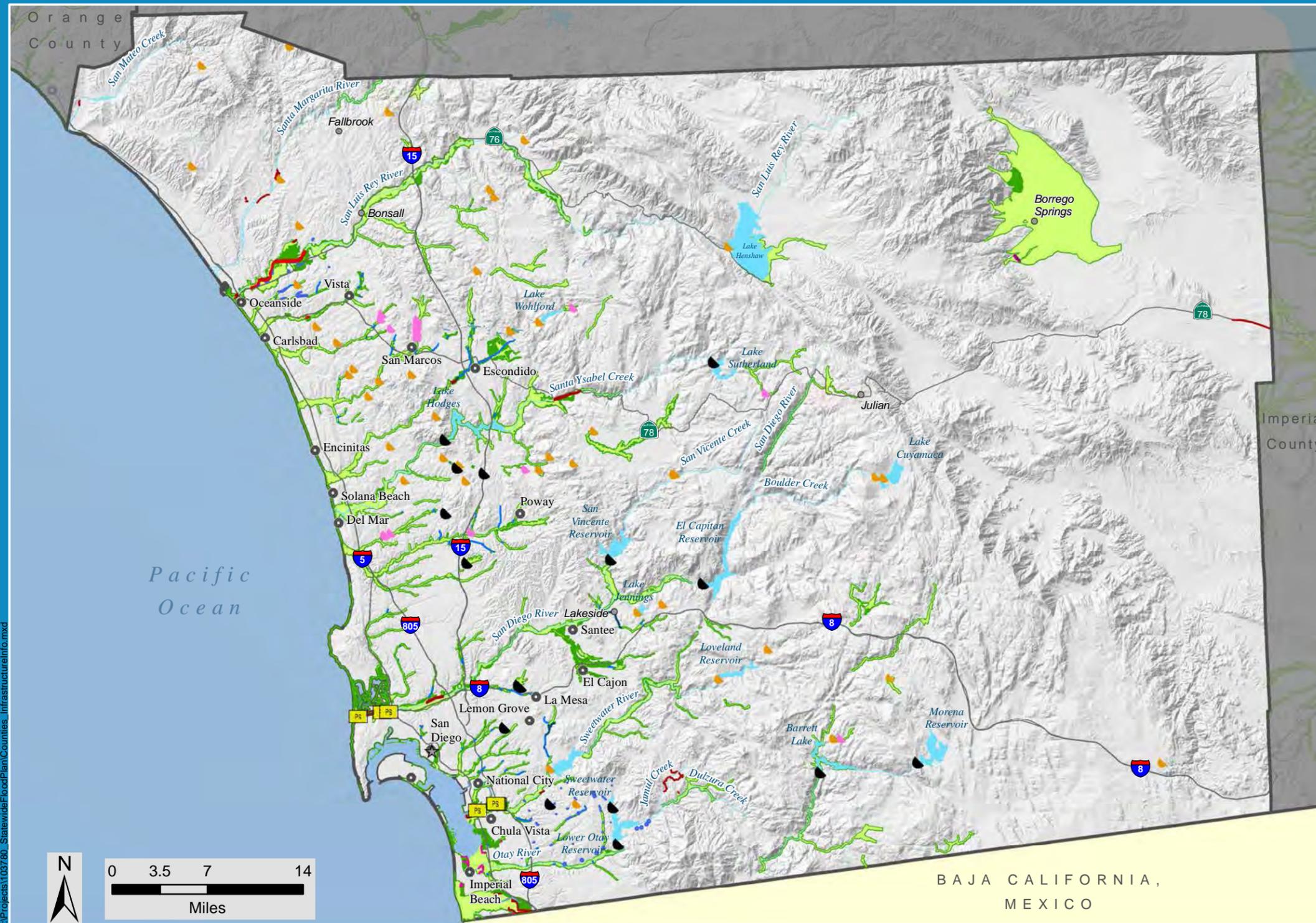
Figure D-73
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, San Diego County.

September 2013

DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

Summary of Available Flood Infrastructure Information

San Diego County



Flood Infrastructure GIS Data Received from Agencies Contacted:

- Levee
- Flood Control Channel
- Basin/Detention Basin

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):

Channel

Agencies Contacted as Part of SFMP:

- City of Chula Vista
- City of Coronado
- City of El Cajon
- City of Imperial Beach
- City of Oceanside
- City of San Diego
- City of San Diego Storm Water Division
- City of Vista
- Los Angeles County Department of Public Works
- San Diego County Flood Control District

Planned Projects:

Number of Local Projects:	65
Estimated Cost of Local Projects:	\$458.8 million
Number of USACE Projects:	4
Estimated Cost of USACE Projects:	\$175.8 million

Statewide GIS Data Sources:

Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bulletin 17-00, 2000. **CLD** layers are from California Levee Database, v2.2 r2, 2010. **NFHL** layers are from the National Flood Hazard Layer, FEMA, August 2011. **Highways** from TeleAtlas, 2004. **Rivers** and **Lakes** modified from DFG, N/A. **Floodplains** compiled for SFMP, 2011.

All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

Figure D-74
Summary of Available Flood Infrastructure Information, San Diego County

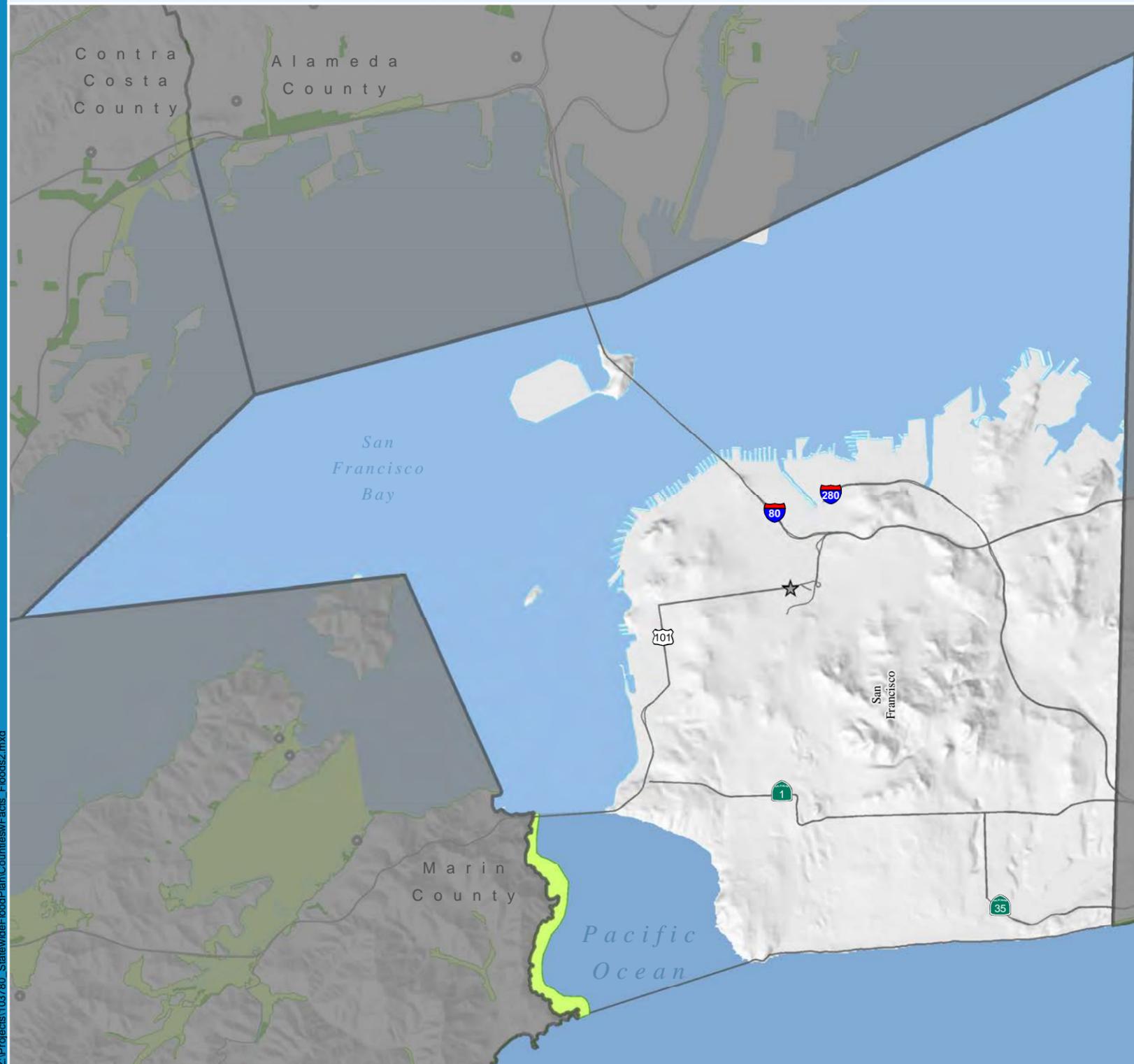
September 2013

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|----------------------------|----------------------|------------------------|----------------------------|------------------------|------------------|-------------------|
| Statewide GIS Data: | DWR Local Agency Dam | CLD Pump Station | NFHL Levee | NFHL Control Structure | Highway | 100-yr Floodplain |
| City | DWR Other Dam | CLD Local Agency Levee | NFHL Flood Event Structure | NFHL Dike | Major River | 500-yr Floodplain |
| Populated Place | NFHL Dam or Weir | CLD Other Levee | NFHL Channel | NFHL Retaining Wall | Major Water Body | County |



DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1798-1799 Winter
- 1819 Winter
- 1861-1862 Winter, The Great Flood
- 1955-1956 Winter, 1955 Christmas Flood
- 1958 Winter/Spring
- 1960 May
- 1962 October
- 1964 Winter/Spring
- 1969-1970 Winter/Spring, Northern California Flooding
- 1973 Winter, Coastal Flooding
- 1974 February
- 1995-1996 Winter, 1995 Christmas Floods
- 1996-1997 Winter, January 1997 Floods
- 2000 February 13-14
- 2004 Winter, Flash Flood of February 2004
- 2008 Winter Storms
- 2009 October
- 2010 Winter Storms
- 2011 March

Flood Hazard Exposure

County Statistics

Total Acreage:	68,700
Total Population:	776,600
Total Structures:	180,200
Total Depreciated Replacement Value of Structures and Contents:	\$59.3 billion
Total Crop Acreage:	0
Total Value of Crops:	\$0

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Area Exposed (acres):	400	400
Percent of Area Exposed:	1%	1%
Population Exposed:	0	0
Percent of Population Exposed:	0%	0%
Structures Exposed:	0	0
Depreciated Replacement Value of Structures and Contents Exposed:	\$45,500	\$45,600
Crops Exposed (acres):	0	0
Value of Crops Exposed:	n/a	n/a
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	0	0
High Potential Loss Facilities Exposed:	0	0
Lifeline Utilities Exposed:	0	0
Transportation Facilities Exposed:	0	0
Transportation Segments Exposed (miles):	0	0
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	6	6
Total Sensitive Animal Species Exposed:	9	9

Types of Flooding

Likely:

- Coastal
- Debris Flow
- Flash
- Slow Rise
- Stormwater

Present:

- Engineered Structure Failure
- Tsunami

Hydrologic Regions



Figure D-75
Summary of Available Flood Types, Flood History and Flood Hazard Exposure, San Francisco County.

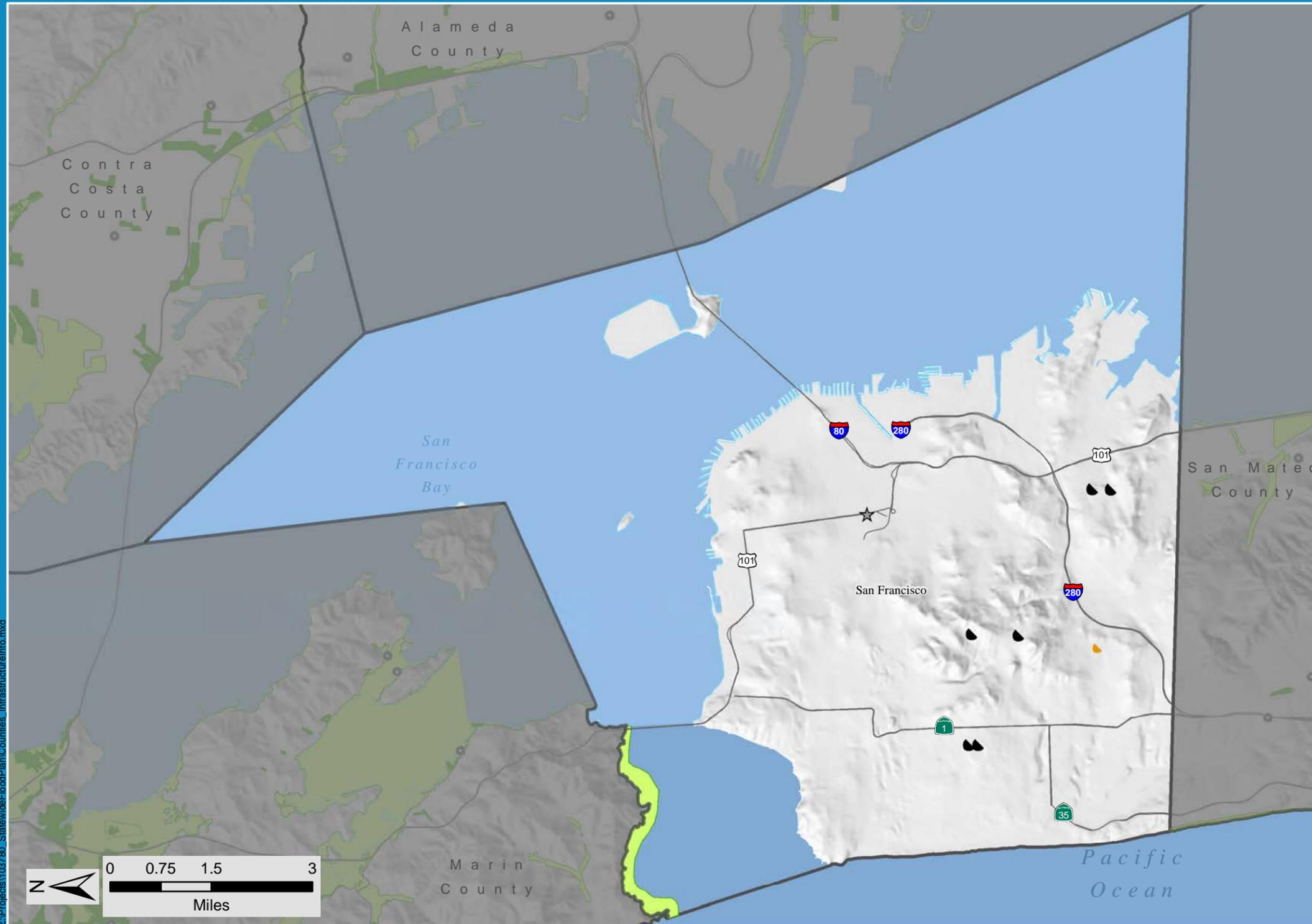
September 2013



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Summary of Available Flood Infrastructure Information

San Francisco County



Flood Infrastructure GIS Data Received from Agencies Contacted:
No Flood Infrastructure GIS Data Received

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):
No PDF/Hard Copy Data Received

Agencies Contacted as Part of SFMP:
City and County of San Francisco
San Francisco Department of Public Works

NOTE: San Francisco County floodplain delineation is in progress.

Planned Projects:
 Number of Local Projects: 6
 Estimated Cost of Local Projects: \$110.6 million
 Number of USACE Projects: 0
 Estimated Cost of USACE Projects: none

Statewide GIS Data Sources:
Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bulletin 17-00, 2000. **CLD** layers are from California Levee Database, v2.2 r2, 2010. **NFHL** layers are from the National Flood Hazard Layer, FEMA, August 2011. **Highways** from TeleAtlas, 2004. **Rivers** and **Lakes** modified from DFG, N/A. **Floodplains** compiled for SFMP, 2011.
All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

San Francisco County

Figure D-76
Summary of Available Flood Infrastructure Information, San Francisco County

September 2013

- | | | | | | | |
|----------------------------|----------------------|------------------------|----------------------------|------------------------|------------------|-------------------|
| Statewide GIS Data: | DWR Local Agency Dam | CLD Pump Station | NFHL Levee | NFHL Control Structure | Highway | 100-yr Floodplain |
| City | DWR Other Dam | CLD Local Agency Levee | NFHL Flood Event Structure | NFHL Dike | Major River | 500-yr Floodplain |
| Populated Place | NFHL Dam or Weir | CLD Other Levee | NFHL Channel | NFHL Retaining Wall | Major Water Body | County |



DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.