

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

Mar 22, 2013



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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

Mar 22, 2013



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STATEWIDE FLOOD
MANAGEMENT
PLANNING PROGRAM



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 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

Mar 22, 2013



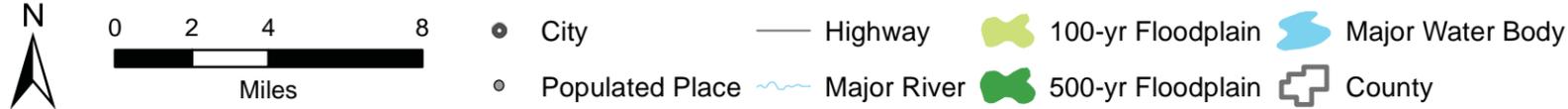
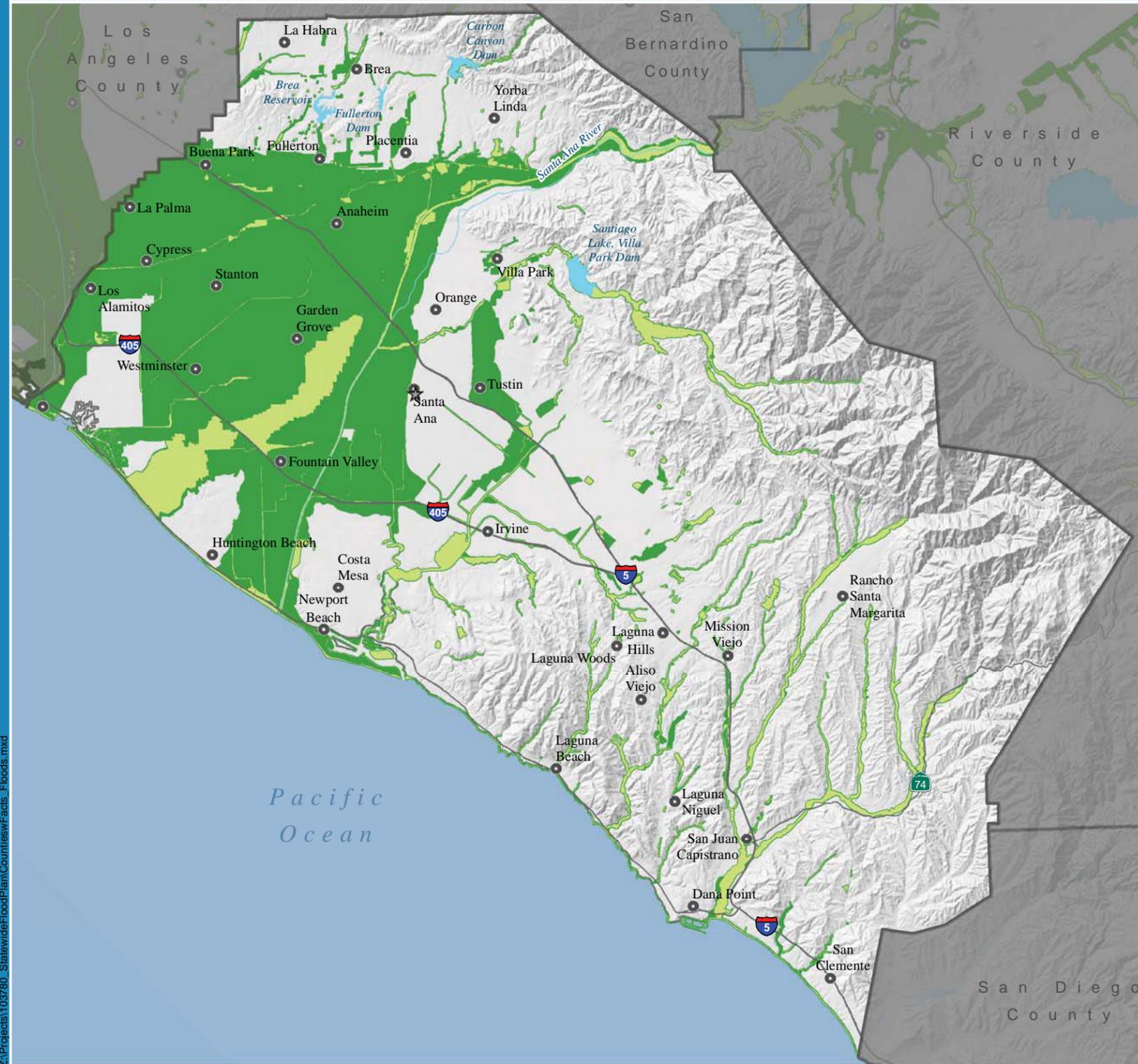
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STATEWIDE FLOOD
MANAGEMENT
PLANNING PROGRAM



100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1861-1862** Winter, The Great Flood, Santa Ana River
- 1884** February-March, Santiago Creek, Santa Ana River
- 1916** January, Great Flood of 1916, Santa Ana River, City of Santa Ana and Westminster
- 1925** Santa Ana River
- 1927** February, Santa Ana River
- 1938** March, Great Flood, Santa Ana River
- 1958** February-April, Countywide
- 1965** November-December, Regional
- 1969** November-February, Winter '69 Storms, Santa Ana Riv
- 1978** January-March, Countywide
- 1980** January-March, Countywide
- 1993** January-February, Great Flood of 1993, Laguna Canyon Channel
- 1995** January-March, Severe Winter Storms
- 1997** January, Santa Ana River
- 2004-2005** December-January
- 2010** February, Regional Coast Tsunami

Flood Hazard Exposure

County Statistics

Total Acreage:	509,718
Total Population:	2.8 million
Total Structures:	790,500
Total Value of Structures and Contents:	\$274.2 billion
Total Agricultural Acreage:	67,565
Total Value of Crops	\$125.8 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	24,357	122,438
Percent of Area Exposed:	5	24
Population Exposed:	142,298	1.4 million
Percent of Population Exposed:	5	48
Structures Exposed:	37,758	338,076
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$11.6 billion	\$101.4 billion
Exposed Crops (acres):	3,165	10,550
Value of Exposed Crops:	\$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: |
| Slow Rise | Tsunami |
| Flash | Engineered Structure Failure |
| Debris Flow | |
| Alluvial Fan | |
| Coastal | |
| Stormwater | |

Hydrologic Regions



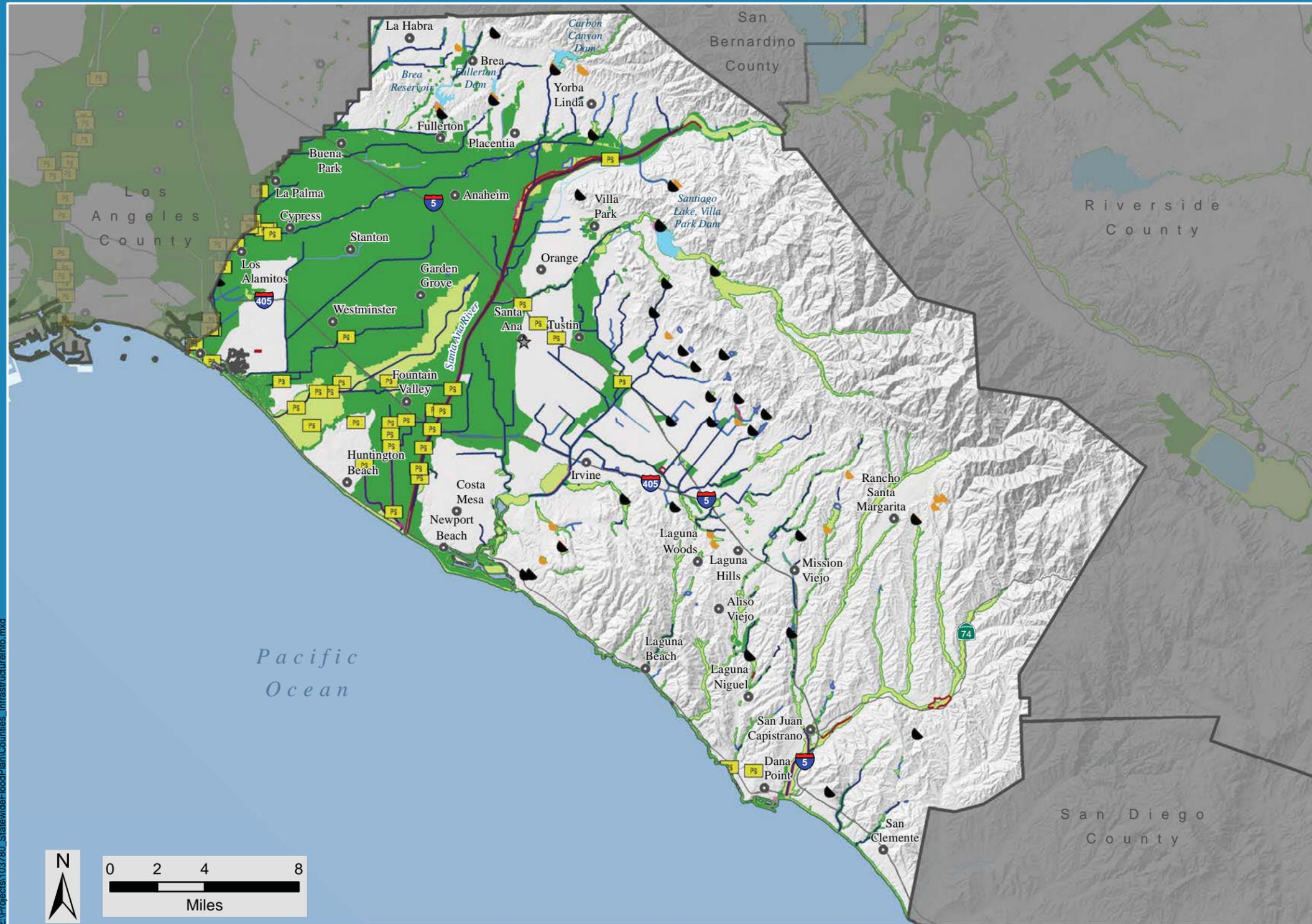
Figure D-59
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Orange County

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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

Orange County



- Flood Infrastructure GIS Data Received from Agencies Contacted:**
- Dam
 - Pump Station
 - Drainage Facility, Modified Channel
 - Basin

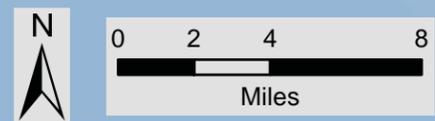
- Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):**
- Pump Station
 - Basin
 - Dam

- 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:	6
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 |

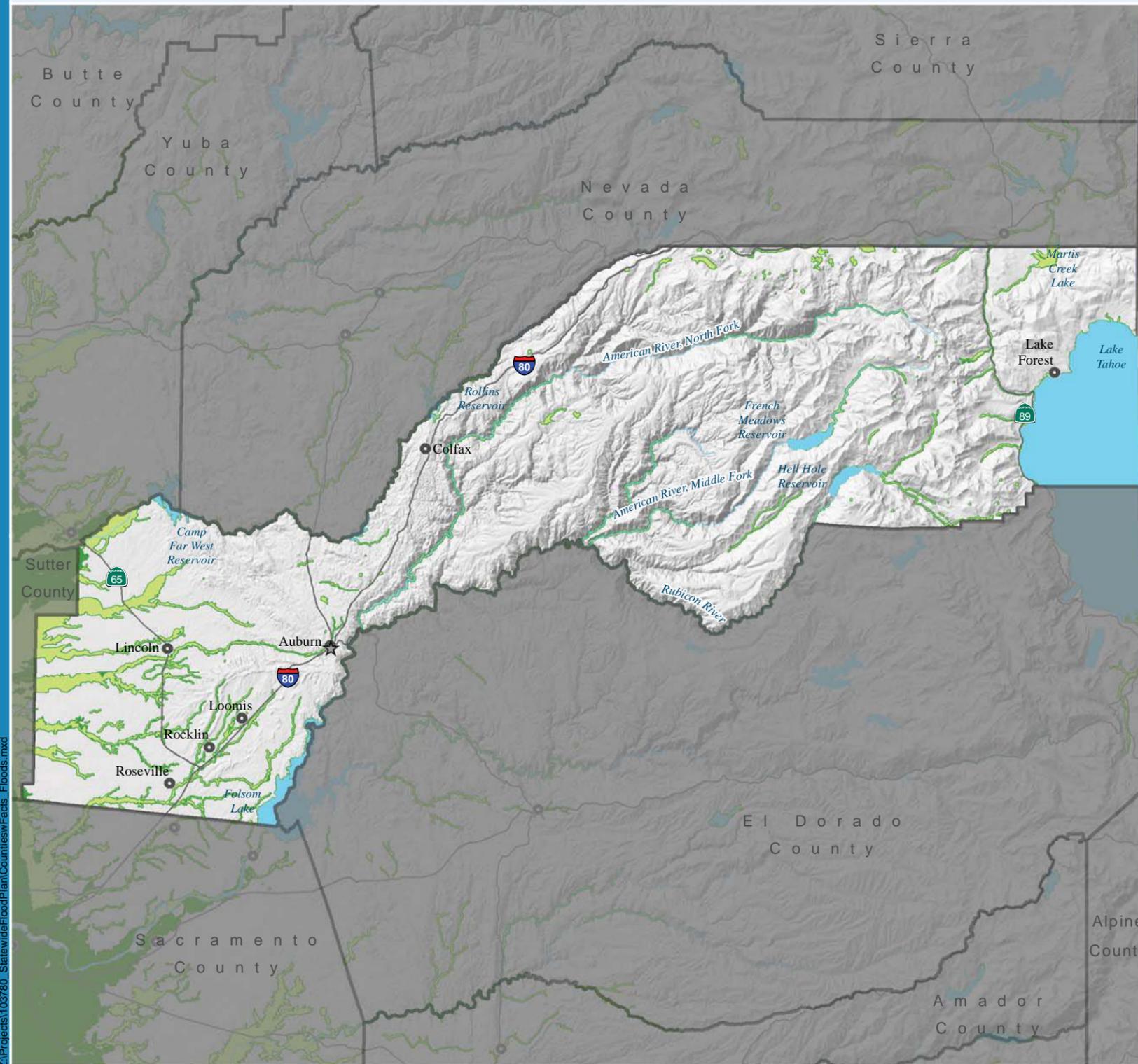
Figure D-60
 Summary of Available Flood Infrastructure Information, Orange County

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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.

Orange County

100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1861-1862** Winter, The Great Flood, Lincoln, Bear River, Auburn Ravine
- 1875** January, Bear River
- 1955-1956** December-January, 1955 Christmas Flood, Countywide
- 1962** October
- 1963** January-February
- 1964-1965** December-January, Northern California Christmas 1964 Disaster
- 1970** Winter, Northern California Flooding
- 1982-1983** December-March, Winter Storms, Linda and Cirby Creeks in Roseville, Dry Creek
- 1986** February, Dry Creek in Roseville, Rocklin and Loomis areas.
- 1995** January-March, Severe Winter Storms, Sacramento River Basin, Countywide
- 1996** South Placer County
- 2005** January, The Pineapple Express Winter Storm 1997 Floods
- 2006** March 29 - April 1, May 10, Spring Storms
- 2008** January 5-14, Winter Storms

Flood Hazard Exposure

County Statistics

Total Acreage:	960,039
Total Population:	248,254
Total Structures:	109,100
Total Value of Structures and Contents:	\$34.0 billion
Total Agricultural Acreage:	51,075
Total Value of Crops:	\$16.4 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	91,103	92,537
Percent of Area Exposed:	9	10
Population Exposed:	8,099	9,351
Percent of Population Exposed:	3	4
Structures Exposed:	3,939	4,502
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$1.3 billion	\$1.5 billion
Exposed Crops:	10,560	10,956
Value of Exposed Crops:	\$4.0 million	\$4.2 million
Department of Defense Facilities Exposure:	1	1
Essential Facilities Exposure:	2	2
High Potential Loss Facilities Exposure:	11	11
Lifeline Utilities Exposure:	0	0
Transportation Facilities Exposure:	47	48
Transportation Segments Exposure (miles):	24	26
Native American Tribal Land Exposure (acres):	0	0
Total Sensitive Plant Species Exposed:	24	24
Total Sensitive Animal Species Exposed:	39	39

Placer County

Types of Flooding

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

Hydrologic Regions



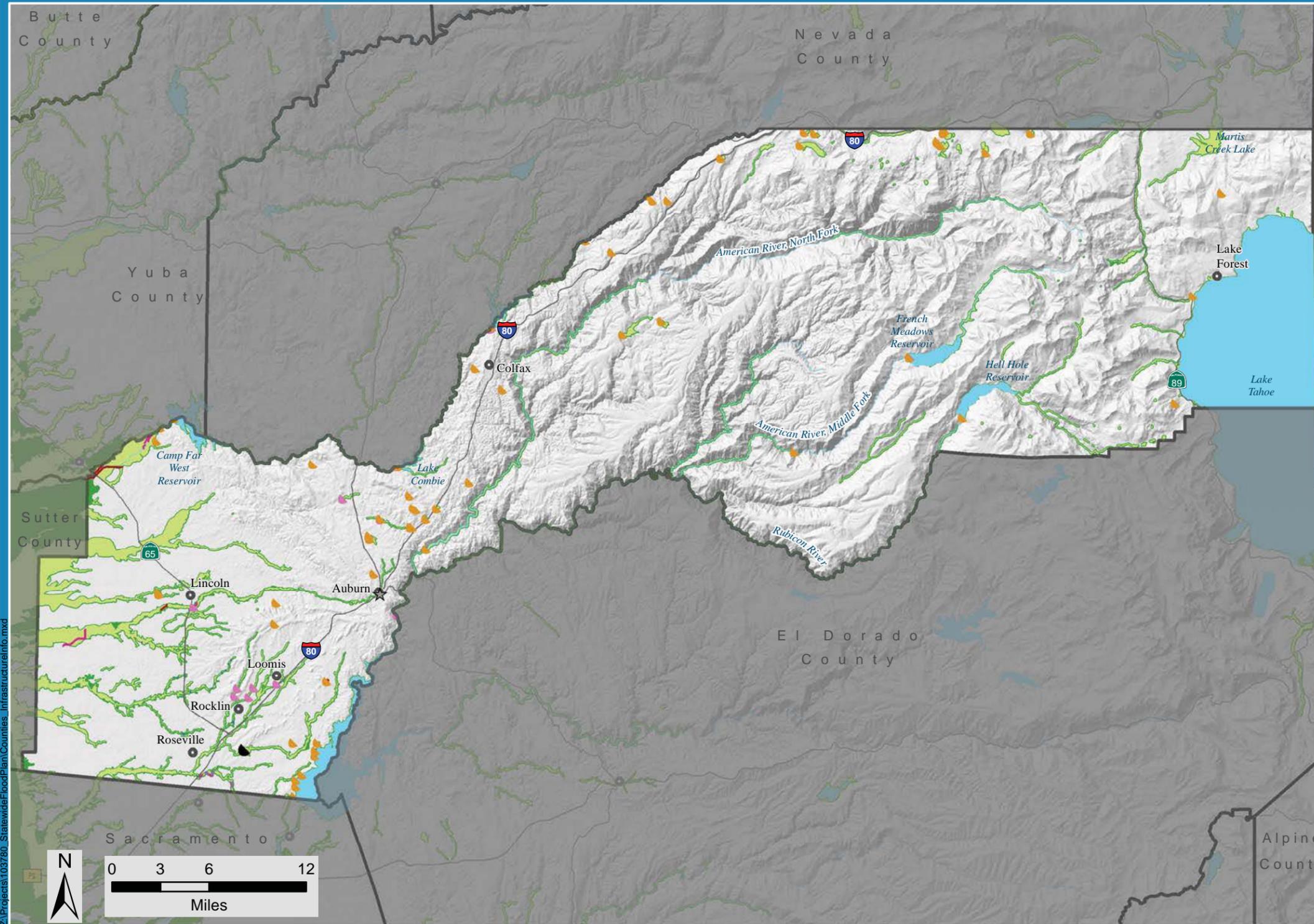
Figure D-61
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Placer County

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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

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

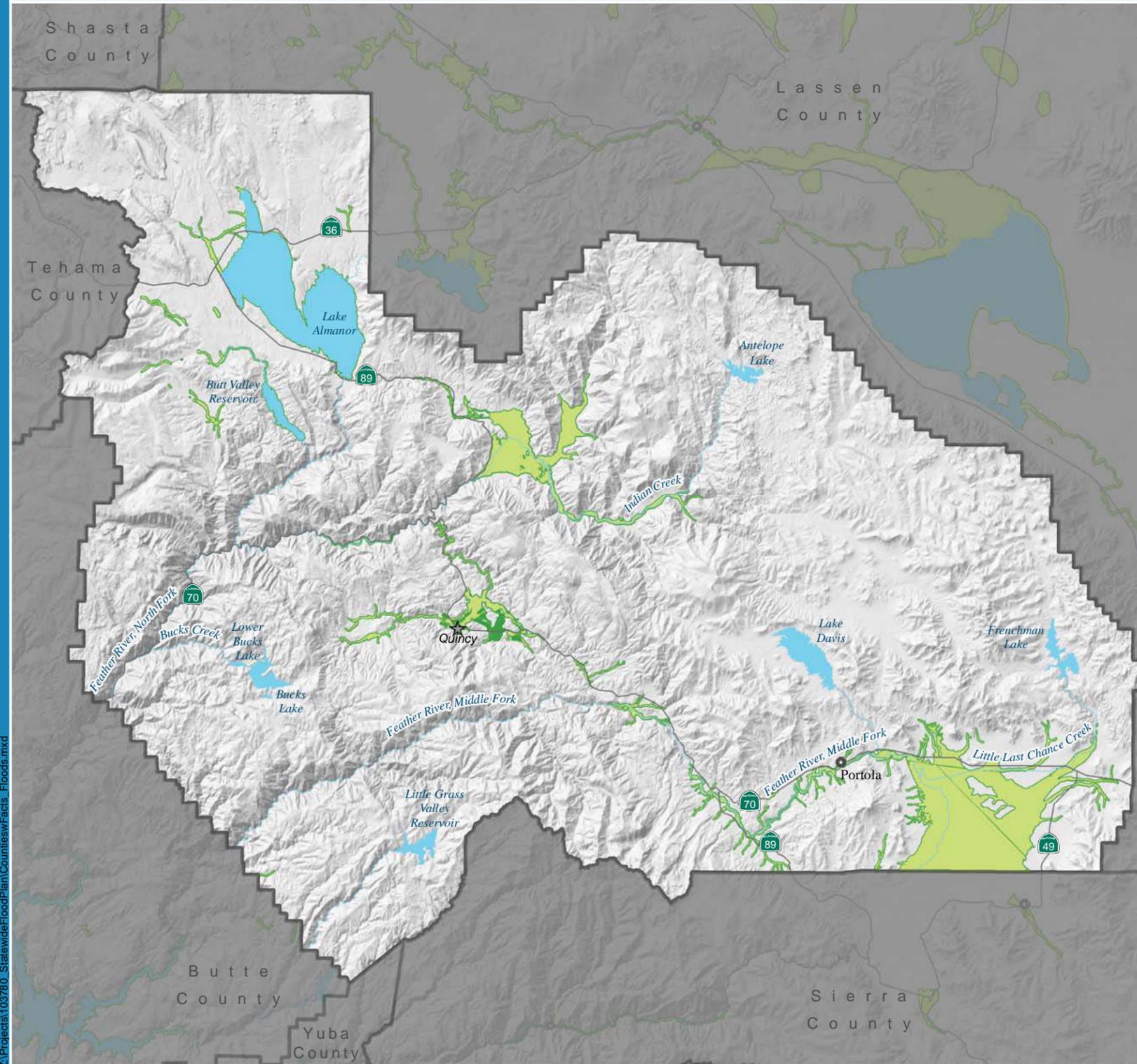
Figure D-62
Summary of Available Flood Infrastructure Information, Placer County

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- 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

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100-year and 500-year Floodplains



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Selected Flood Events by Event Year

- 1861-1862** Winter, The Great Flood
- 1937-1938** December-March, Countywide
- 1942** January-February, Countywide
- 1955-1956** December-January, 1955 Christmas Flood, Feather River
- 1963** January-February
- 1964-1965** December-January, Northern California Christmas 1964 Disaster
- 1969** January, Winter '69 Storms, Countywide
- 1971** Summer, Willow Creek
- 1986** February, St. Valentine's Day Storm
- 1993** January, Late Winter Storms
- 1995** January-March, Severe Winter Storms Sacramento River Basin
- 1996-1997** December-January, Countywide

Flood Hazard Exposure

County Statistics

Total Acreage:	1.7 million
Total Population:	20,828
Total Structures:	15,400
Total Value of Structures and Contents:	\$2.9 billion
Total Agricultural Acreage:	41,918
Total Value of Crops:	\$2.4 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	84,763	86,195
Percent of Area Exposed:	5	5
Population Exposed:	1,454	3,126
Percent of Population Exposed:	7	15
Structures Exposed:	1,118	1,950
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$231.4 million	\$386.2 million
Exposed Crops (acres):	23,115	23,804
Value of Exposed Crops:	\$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):	409	409
Total Sensitive Plant Species Exposed:	31	31
Total Sensitive Animal Species Exposed:	20	20

Plumas County

Types of Flooding

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

Hydrologic Regions



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

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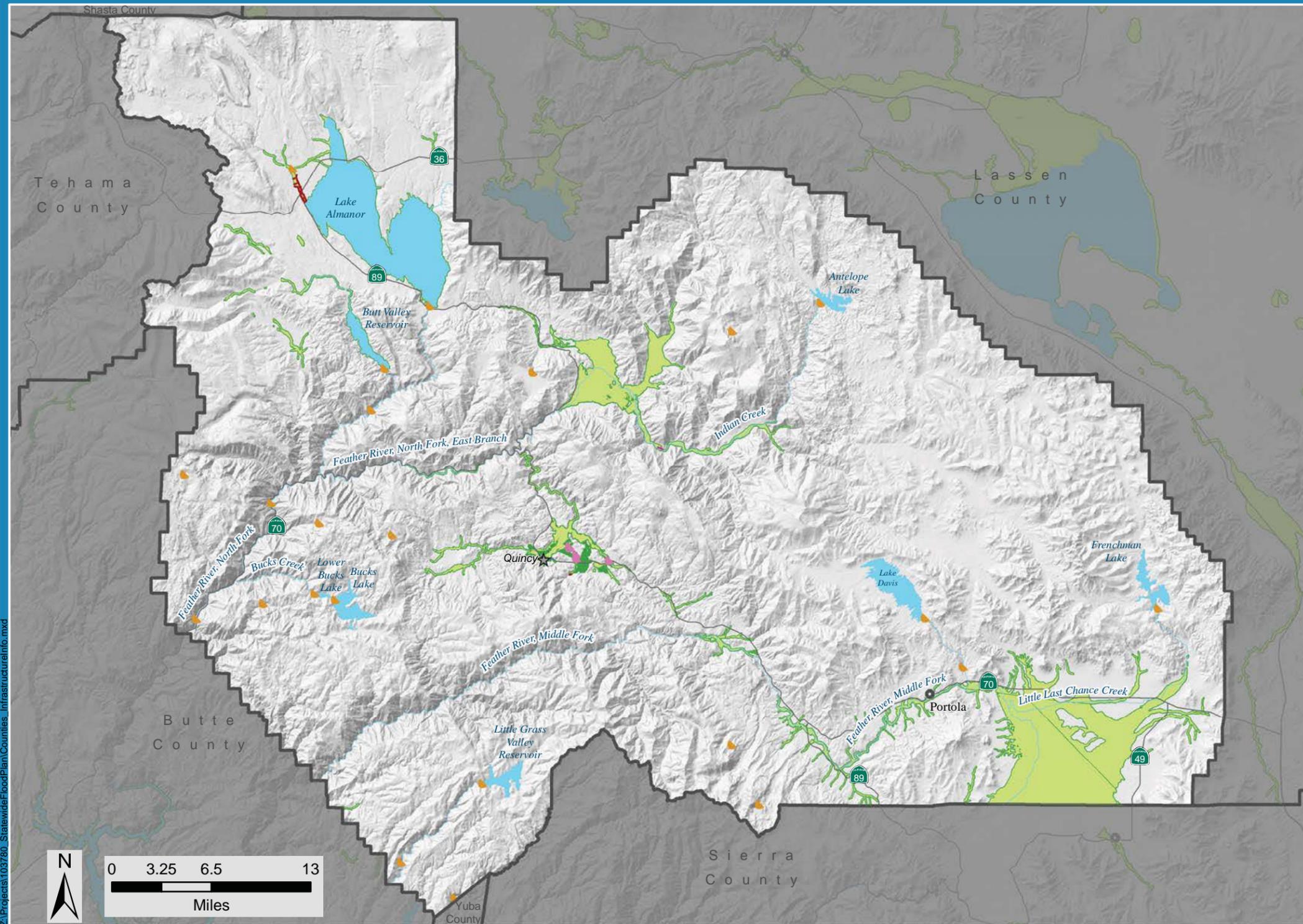
Mar 22, 2013



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:
Plumas County Public Works
Plumas County Flood Control and Water Conservation District
Feather River Coordinated Resource Management, Plumas Corporation

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

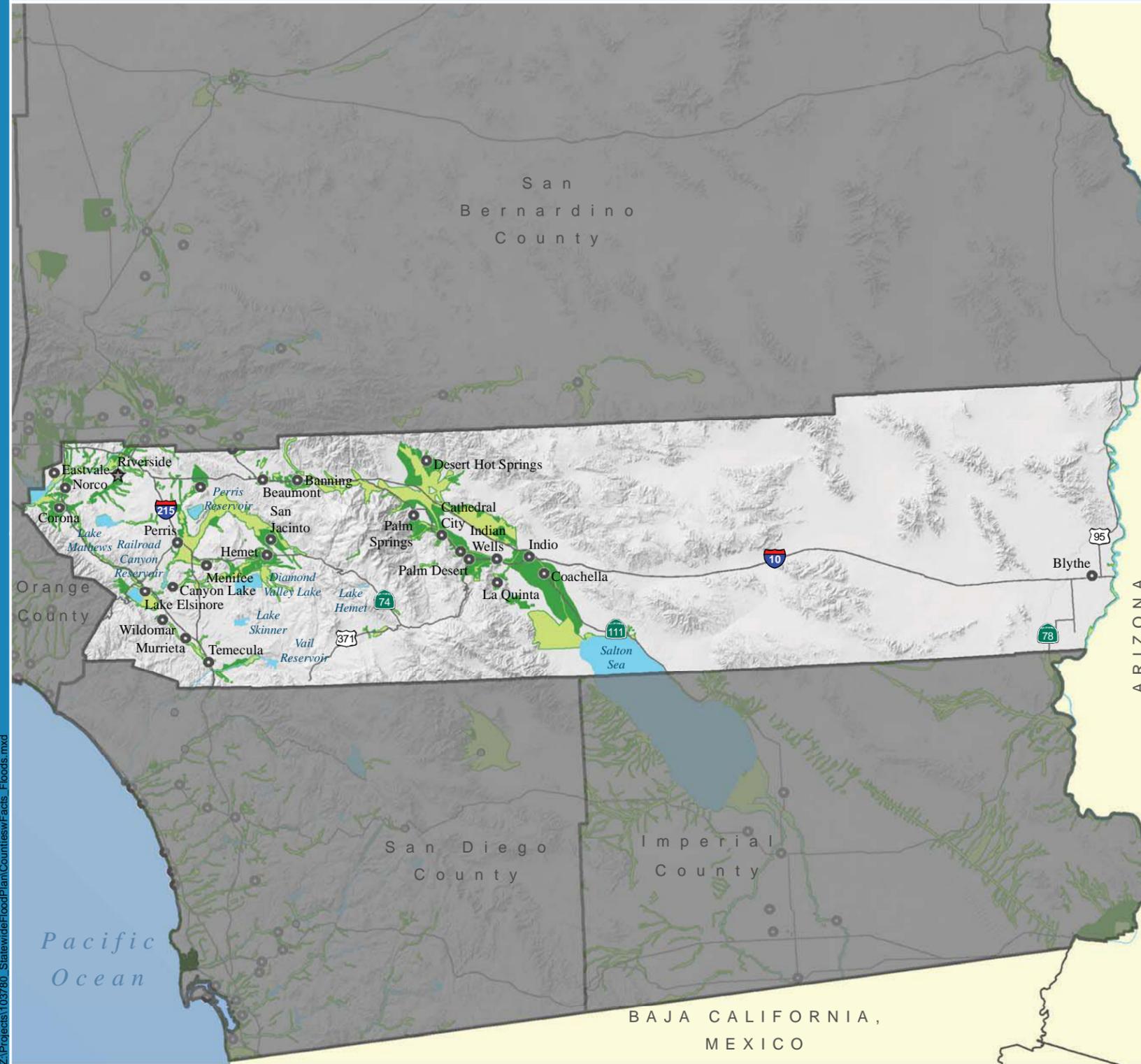
Figure D-64
Summary of Available Flood Infrastructure Information, Plumas County

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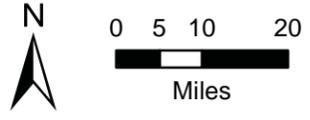
- Statewide GIS Data:**
- City
 - Populated Place
 - DWR Local Agency Dam
 - DWR Other Dam
 - NFHL Dam or Weir
 - CLD Pump Station
 - CLD Local Agency Levee
 - CLD Other Levee
 - NFHL Levee
 - NFHL Flood Event Structure
 - NFHL Channel
 - NFHL Control Structure
 - NFHL Dike
 - NFHL Retaining Wall
 -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

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100-year and 500-year Floodplains



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

Selected Flood Events by Event Year

- 1861-1862** Winter, The Great Flood
- 1916** January, Great Flood of 1916, Santa Ana River
- 1925** Santa Ana River
- 1927** February, San Jacinto River, Whitewater River
- 1938** March, Great Flood, Santa Ana River, City of Riverside, Whitewater River, Palm Springs
- 1965** November-December, Countywide, Cottonwood Creek near I-10
- 1969** January-February, Winter '69 Storms,
- 1976** September, Tropical Storm Kathleen, Whitewater River, Coachella, Imperial, and Palo Verde Valleys
- 1980** January-March, San Jacinto River, Western Riverside County
- 1982-1983** December-January, Winter Storms
- 1993** January-February, Great Flood of 1993, Western County, Murrieta Creek
- 1995** January-March, Severe Winter Storms
- 2005** January
- 2010** December, Winter Storms, Western County
- 2011** January

Flood Hazard Exposure

County Statistics

Total Acreage:	4.7 million
Total Population:	1.5 million
Total Structures:	560,500
Total Value of Structures and Contents:	\$134.7 billion
Total Agricultural Acreage:	221,540
Total Value of Crops:	\$520.0 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	159,192	272,444
Percent of Area Exposed:	3	6
Population Exposed:	49,486	377,503
Percent of Population Exposed:	3	24
Structures Exposed:	22,494	145,540
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$4.6 billion	\$32.9 billion
Exposed Crops (acres)	26,433	41,888
Value of Exposed Crops:	\$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	305
Native American Tribal Land Exposed (acres):	14,302	22,467
Total Sensitive Plant Species Exposed:	70	77
Total Sensitive Animal Species Exposed:	106	113

Types of Flooding

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

Hydrologic Regions

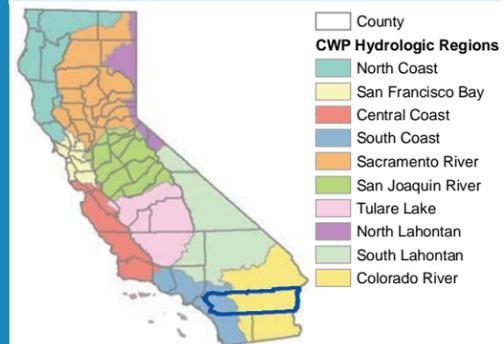


Figure D-65
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Riverside County

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Mar 22, 2013

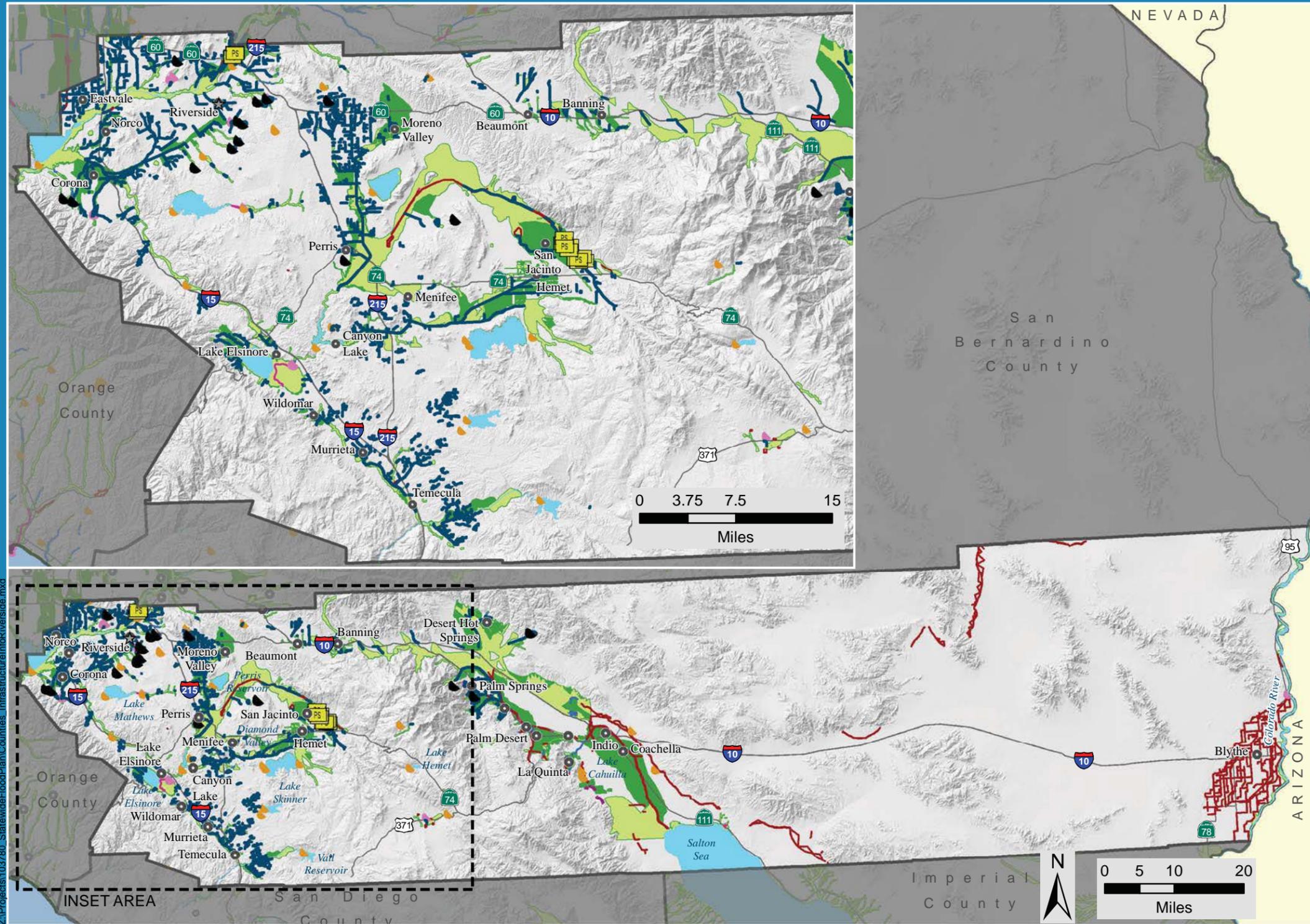


DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

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:

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

DRAFT Mar 22, 2013

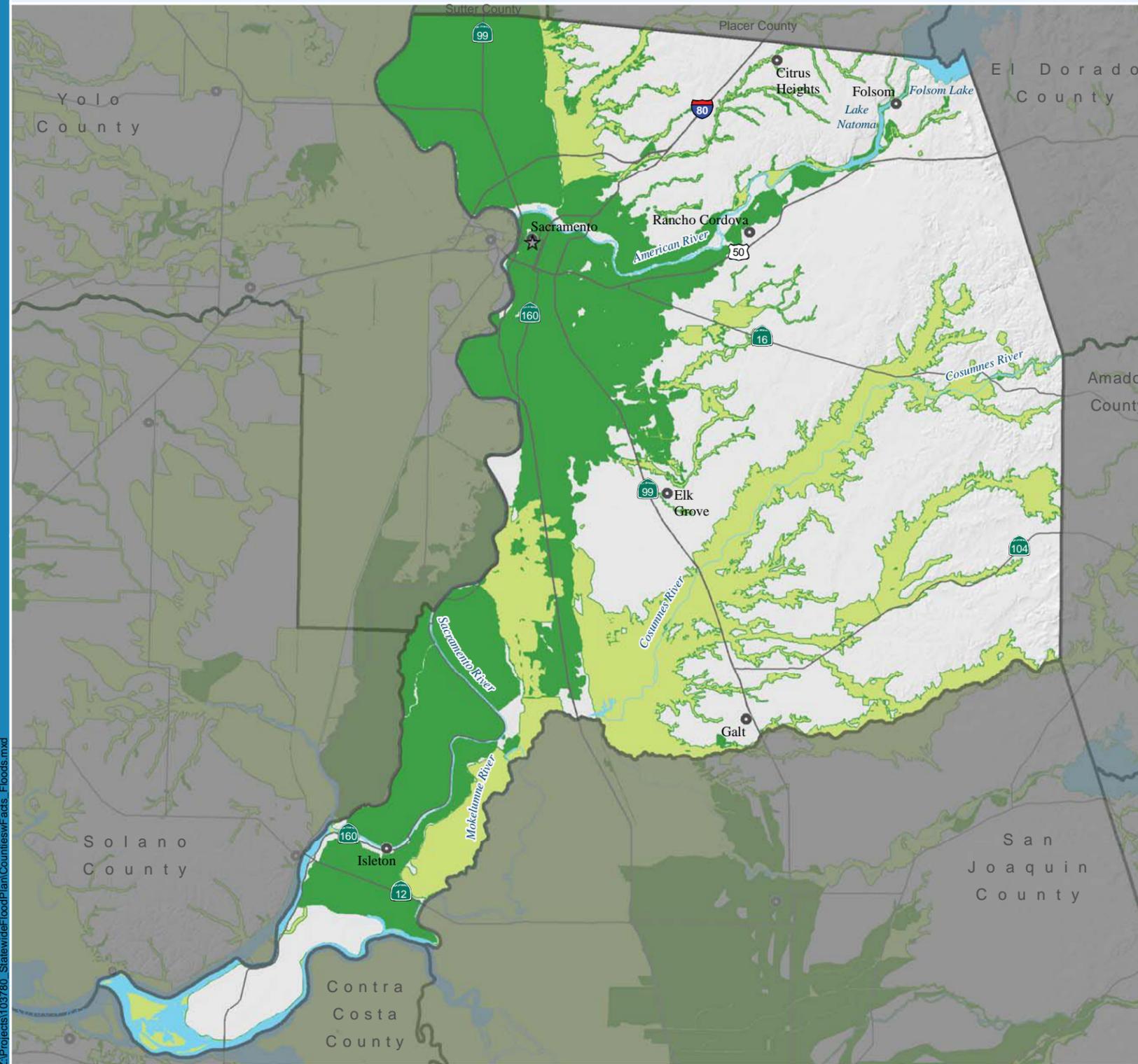
Statewide GIS Data:	DWR Local Agency Dam	CLD Pump Station	NFHL Levee	NFHL Control Structure	Highway	100-yr Floodplain
City	DWR Other Dam	CLD Local Agency Levee	NFHL Flood Event Structure	NFHL Dike	Major River	500-yr Floodplain
Populated Place	NFHL Dam or Weir	CLD Other Levee	NFHL Channel	NFHL Retaining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

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.

Riverside County

100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1861-1862** Winter, The Great Flood, Merced River, Stanislaus River, Sacramento and San Joaquin River Basins
- 1907** January-March
- 1955-1956** December-January, 1955 Christmas Flood, Sacramento River Basin, American River
- 1964-1965** December-January, Northern California Christmas 1964 Disaster, Feather, Yuba, American River Basins
- 1968-1969** December-February, Winter '69 Storms
- 1969-1970** December-March, Sacramento River
- 1972** Levee breach at Andrus Island
- 1974** January-April, Sacramento Valley
- 1982** January-February, Winter Storms
- 1986** February-March, St. Valentine's Day Storm
- 1995** January-April, 1995 Christmas Flood
- 1996-1997** December-January, Central Valley
- 1998** January-March, Sacramento Valley
- 2006** March 29-April 1, May 10, Sacramento and San Joaquin River Basins
- 2008** January 5-14, Winter Storms

Flood Hazard Exposure

County Statistics

Total Acreage:	636,078
Total Population:	1.2 million
Total Structures:	414,800
Total Value of Structures and Contents:	\$116.5 billion
Total Agricultural Acreage:	174,779
Total Value of Crops:	\$318.0 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	119,331	273,476
Percent of Area Exposed:	19	43
Population Exposed:	44,414	588,012
Percent of Population Exposed:	4	48
Structures Exposed:	13,847	189,975
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$3.3 billion	\$39.2 billion
Exposed Crops (acres):	50,598	115,028
Value of Exposed Crops:	\$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	391
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	24	24
Total Sensitive Animal Species Exposed:	38	43

Sacramento County

Types of Flooding

Likely:	Present:
Slow Rise	Engineered Structure Failure
Flash	
Stormwater	

Hydrologic Regions



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

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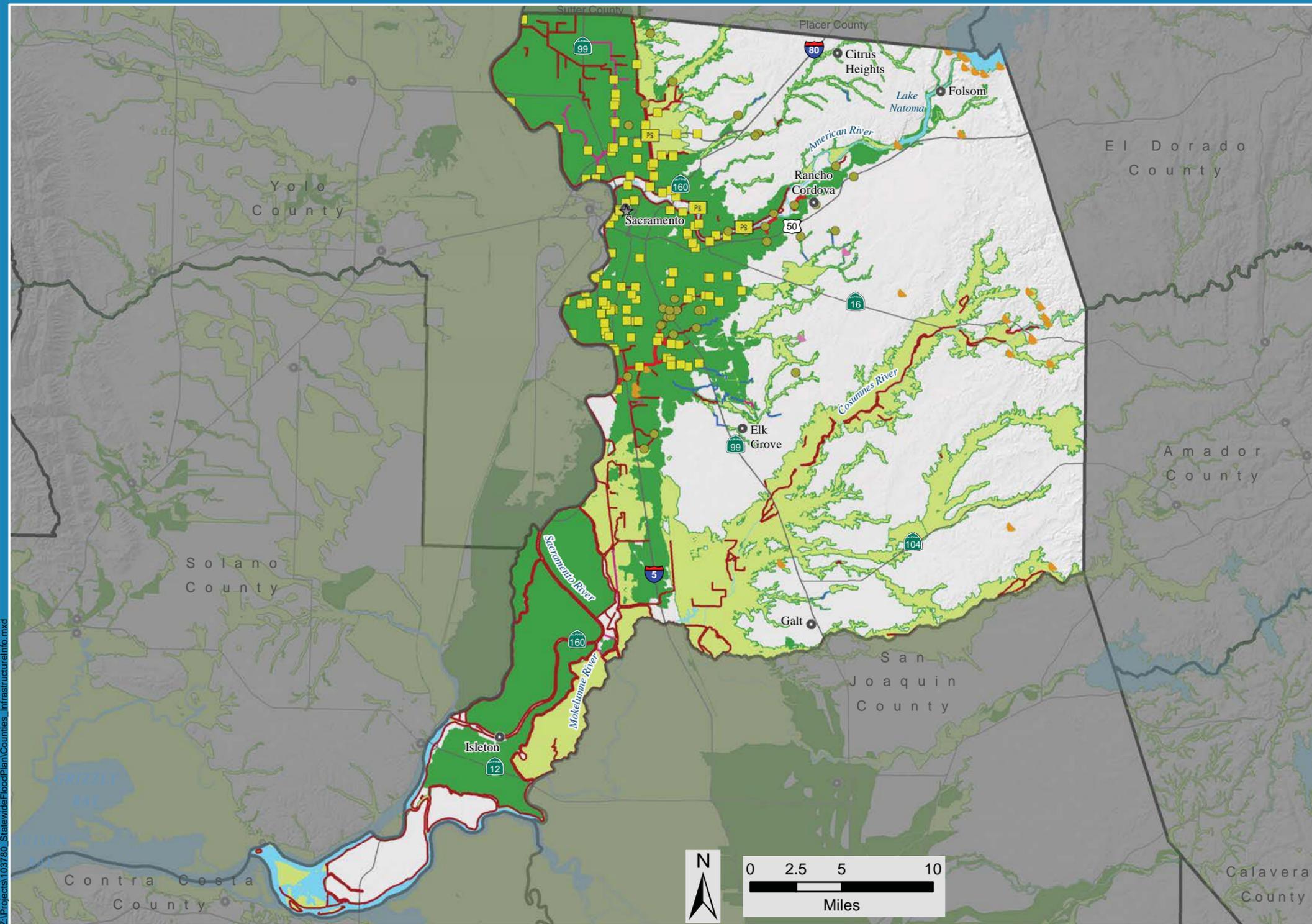
Mar 22, 2013



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:

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

Planned Projects:

Number of Local Projects:	22
Estimated Cost of Local Projects:	\$103.7 million
Number of USACE Projects:	2
Estimated Cost of USACE Projects:	\$202.0 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.

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

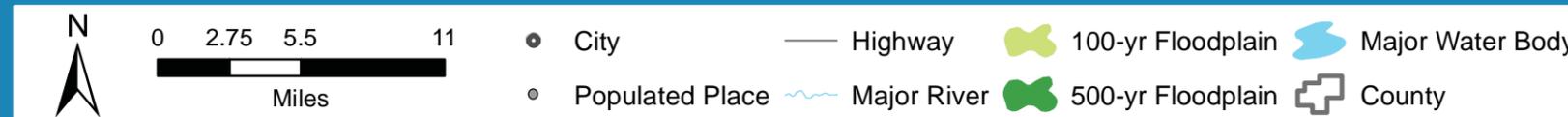
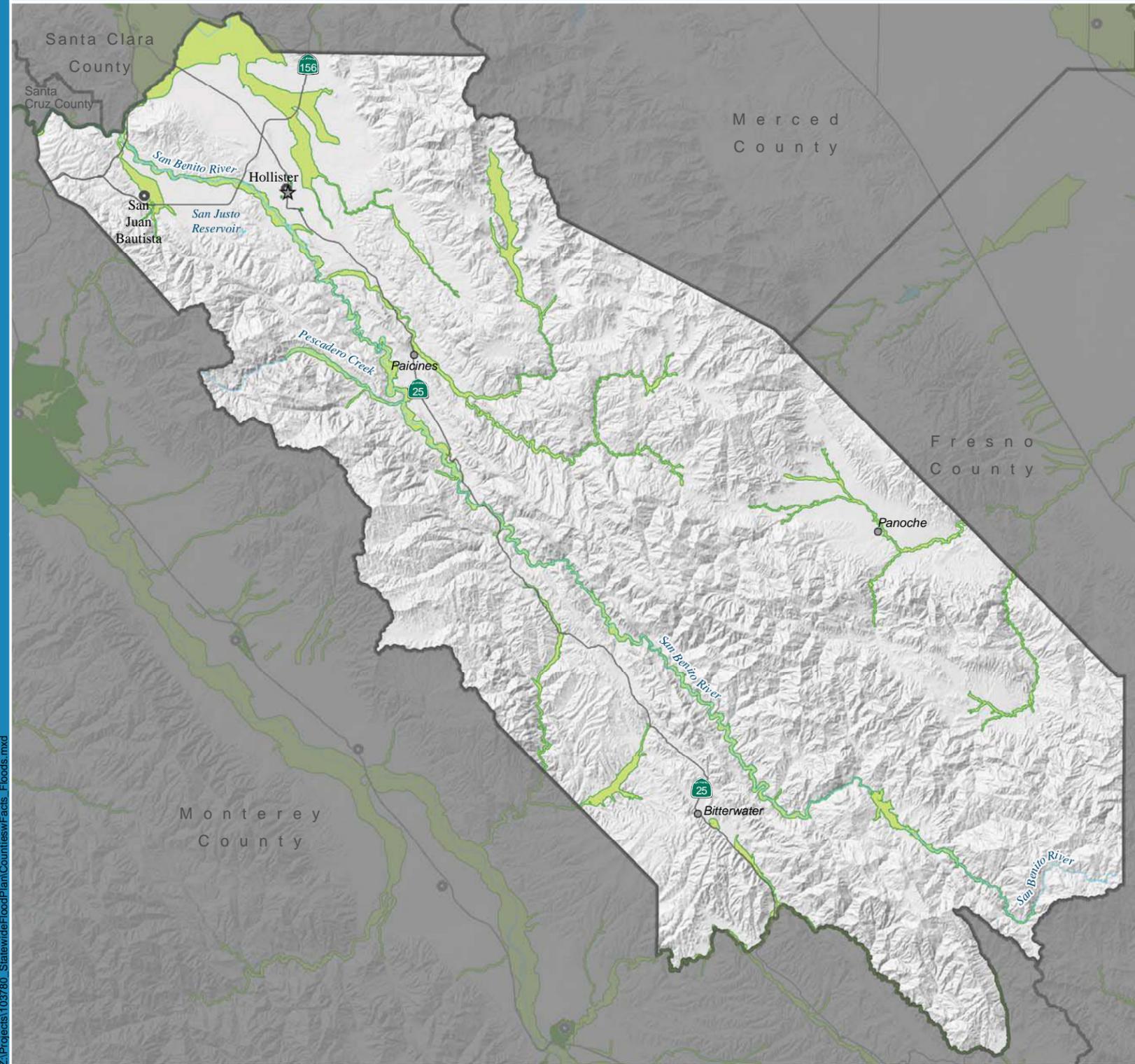
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Mar 22, 2013



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

- 1955-1956** December-January, 1955 Christmas Flood
- 1958** March-April
- 1966-1967** December-January
- 1969** January-February, Winter '69 Storms, Pajaro River, Salinas River, San Lorenzo River
- 1973** January-February
- 1978** January-March
- 1980** January-February
- 1986** February, St. Valentine's Day Storm
- 1995** January-March, 1995 Christmas Day Floods
- 2001** Countywide

Flood Hazard Exposure

County Statistics

Total Acreage:	889,408
Total Population:	53,194
Total Structures:	17,800
Total Value of Structures and Contents:	\$5.1 billion
Total Agricultural Acreage:	49,810
Total Value of Crops:	\$107.9 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	33,811	33,849
Percent of Area Exposed:	4	4
Population Exposed:	2,436	2,740
Percent of Population Exposed:	5	5
Structures Exposed:	899	1,003
Value of Exposed	\$266.2 million	\$291.5 million
Exposed Crops (acres)		
Land (acres):	13,834	13,841
Value of Exposed Crops: Agricultural Land:	\$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 | Debris Flow |
| Stormwater | Alluvial Fan |
| | Engineered Structure Failure |
| | Flash |

Hydrologic Regions



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

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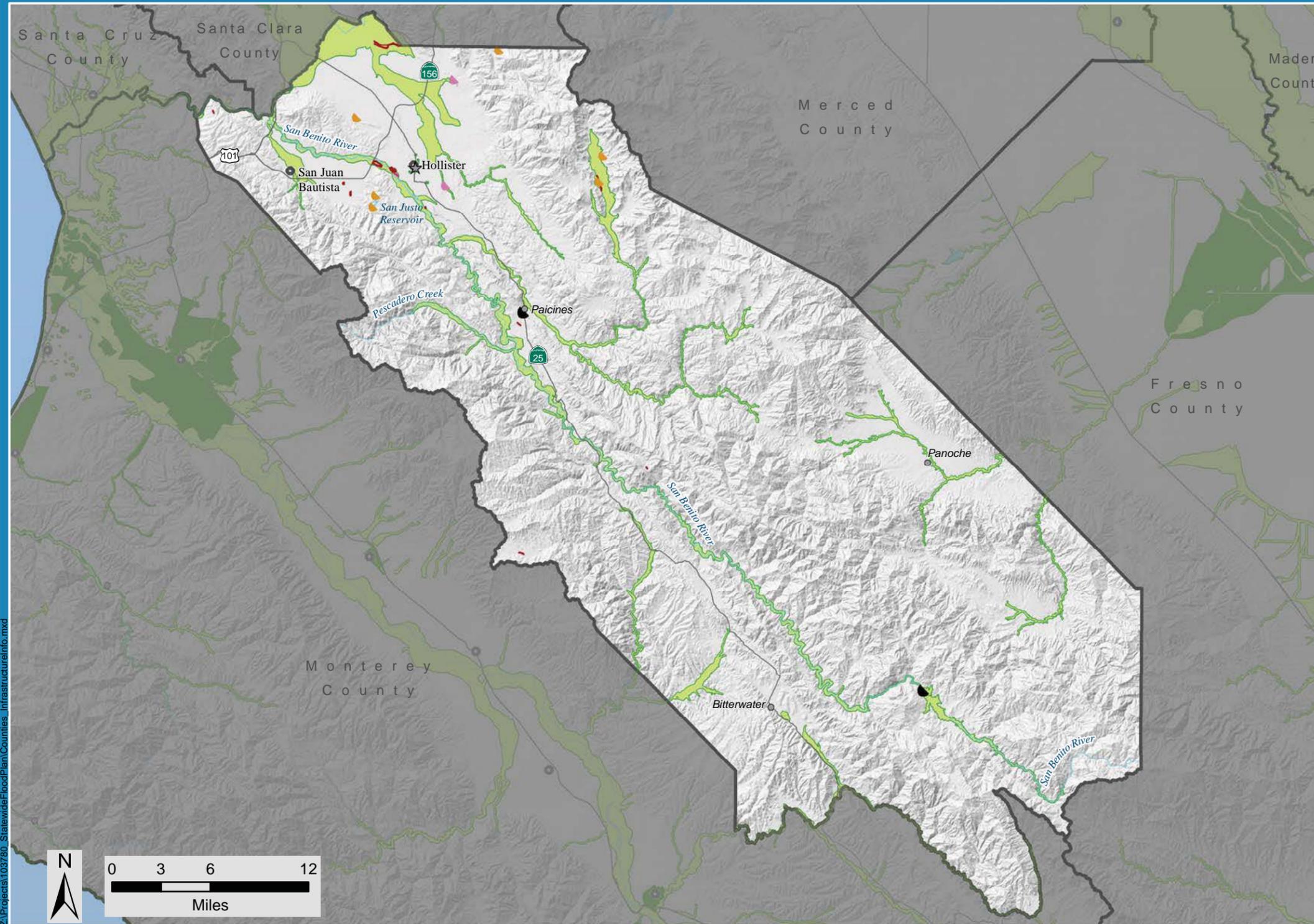
Mar 22, 2013



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:	n/a
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

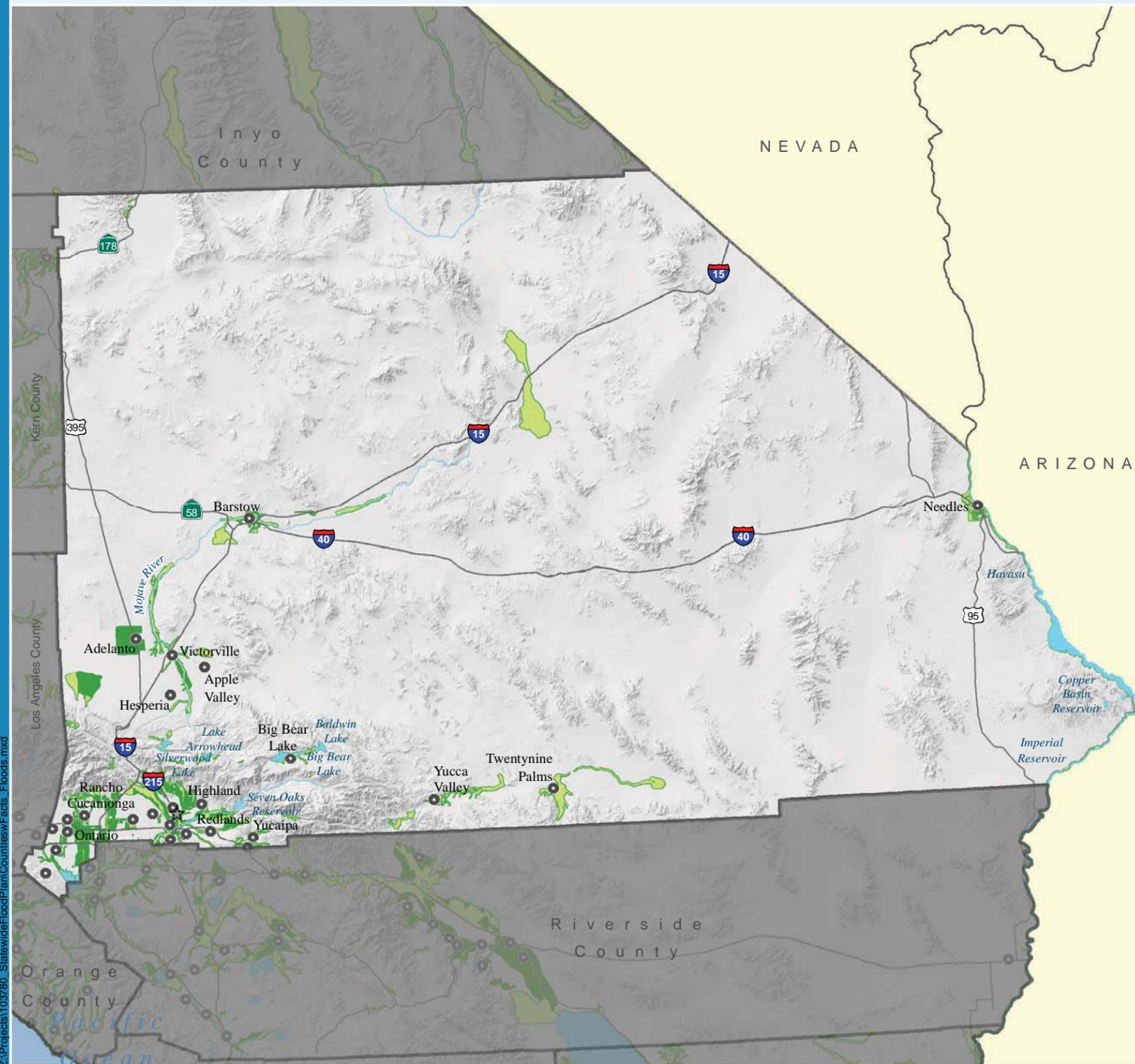
Figure D-70
Summary of Available Flood Infrastructure Information, San Benito County

DRAFT Mar 22, 2013

- Statewide GIS Data:**
- City
 - DWR Local Agency Dam
 - DWR Other Dam
 - Populated Place
 - 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

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



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

Selected Flood Events by Event Year

- 1861-1862** Winter, The Great Flood
- 1916** January, Great Flood of 1916
- 1925** Santa Ana River
- 1943** January, Mojave River Basin
- 1965** November - December
- 1966-1967** December-February, Santa Ana River - Redlands, Mission-Anaja Creek, Day Creek, Lytle Creek, Cucamonga Creek, San Antonio Creek, Etiwanda Creek
- 1969** January - February, Winter '69 Storms, Santa Ana River Basin, Mojave River drainage areas, Cucamonga area, statewide
- 1976** September, Regional
- 1978** January-March
- 1980** January-March, Small Canyon
- 1995** January - March, Severe Winter Storms
- 1998** February 6, El Niño Floods, Rialto Channel, Etiwanda Channel, San Timoteo Creek
- 2003** December, Christmas Day Storm, Little Creek, Manzanita Flats, City Creek
- 2004-2005** December-January, Mojave River

Flood Hazard Exposure

County Statistics

Total Acreage:	12.9 million
Total Population:	1.7 million
Total Structures:	578,200
Total Value of Structures and Contents:	\$126.7 billion
Total Agricultural Acreage:	67,081
Total Value of Crops:	\$65.9 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	120,270	197,556
Percent of Area Exposed:	1	2
Population Exposed:	41,024	254,304
Percent of Population Exposed:	2	15
Structures Exposed:	16,367	78,402
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$3.3 billion	\$18.9 billion
Exposed Crops (acres):	2,451	8,632
Value of Exposed Crops:	\$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):	95	258
Native American Tribal Land Exposed (acres):	7,118	7,118
Total Sensitive Plant Species Exposed:	95	95
Total Sensitive Animal Species Exposed:	103	103

Types of Flooding

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

Hydrologic Regions



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

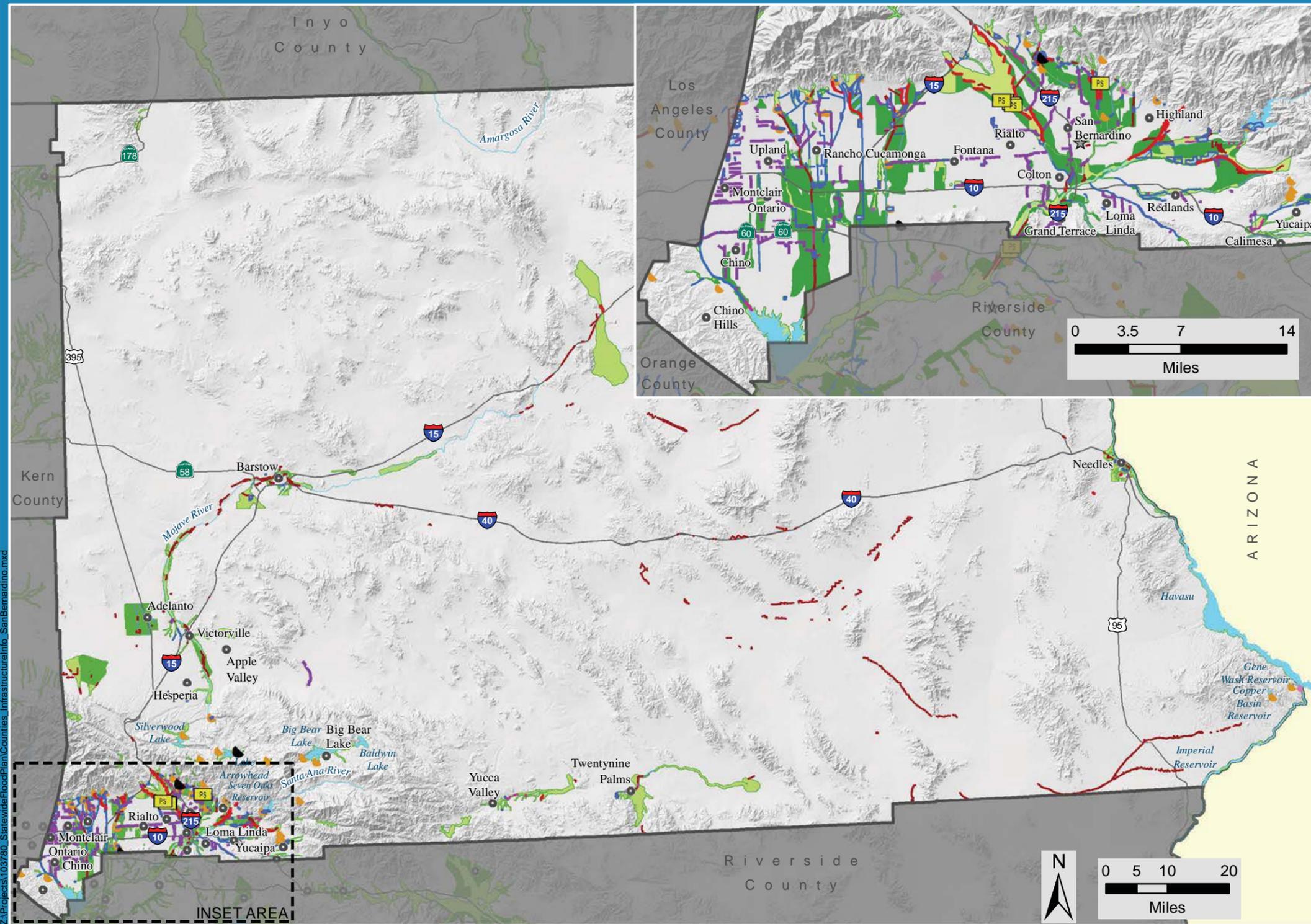
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Mar 22, 2013



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
 - 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

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

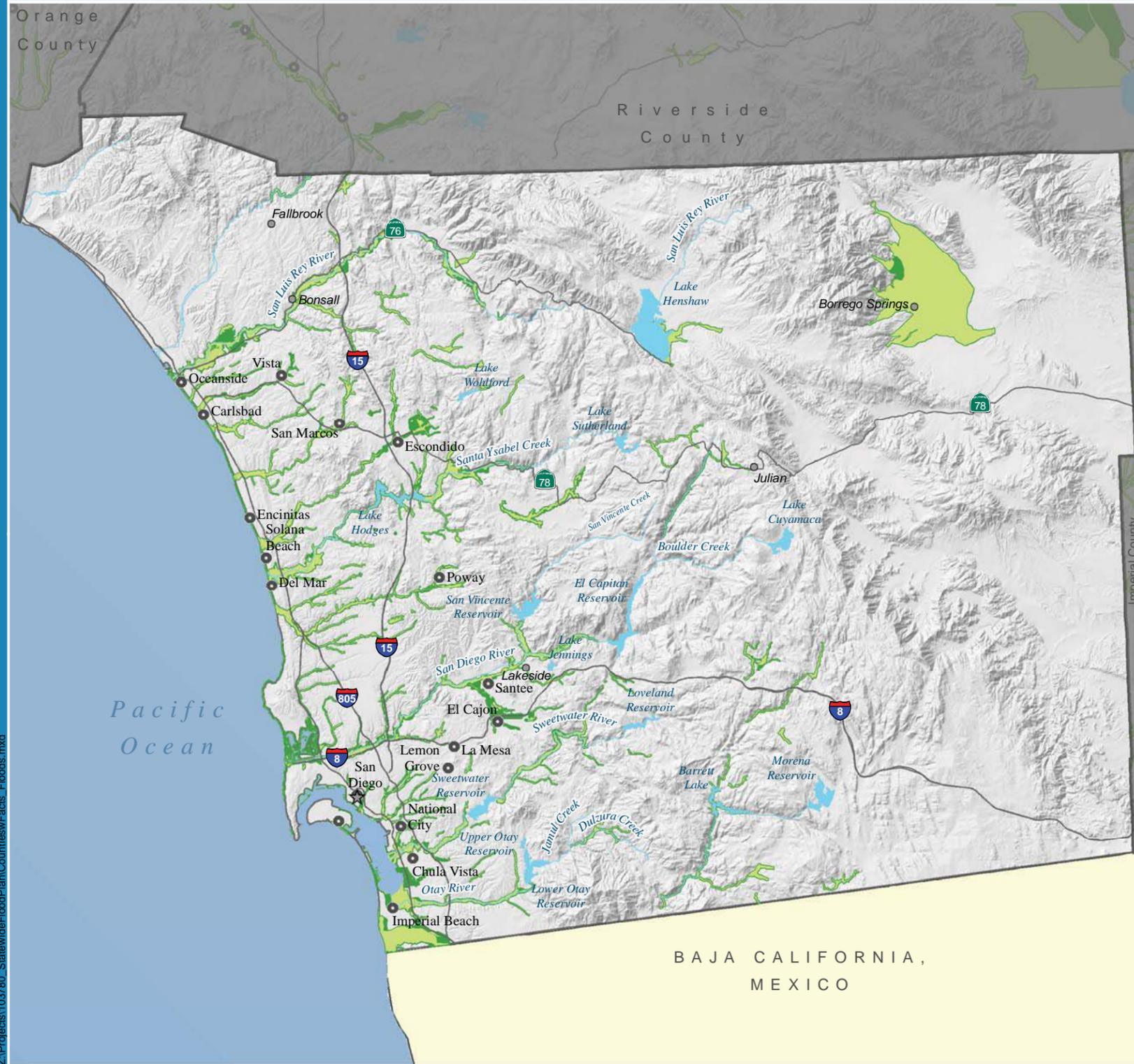
DRAFT Mar 22, 2013



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.

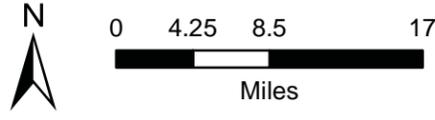
San Bernardino County

100-year and 500-year Floodplains



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



Selected Flood Events by Event Year

- 1861-1862** Winter, The Great Flood
- 1916** January, The Hatfield Flood, Sweetwater and Lower Otay Dams
- 1927** February, San Diego River
- 1937** February, San Luis Rey River
- 1965** November-December, Whitewater River, Spring Valley Creek in southeast San Diego, Sweetwater River.
- 1969** January-February, Winter '69 Storms
- 1976** September, Tropical Storm Kathleen
- 1978** January-March
- 1979** January, Cities of La Mesa, Lemon Grove, National City, San Marcos, and San Diego
- 1980** January-March, San Diego River
- 1982-1983** December-January, Winter Storms
- 1995** January-March, Severe Winter Storms
- 1998** February 6, El Niño Floods
- 2003** December, Borrego Springs
- 2004** September-October
- 2004-2005** December-January, Regional
- 2008** December
- 2011** March, Coastal Flooding

Flood Hazard Exposure

County Statistics

Total Acreage:	2.7 million
Total Population:	2.8 million
Total Structures:	821,400
Total Value of Structures and Contents:	\$252.6 billion
Total Agricultural Acreage:	92,386
Total Value of Crops:	\$359.3 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	83,991	98,636
Percent of Area Exposed:	3	4
Population Exposed:	75,704	182,429
Percent of Population Exposed:	3	6
Structures Exposed:	23,905	50,037
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$8.5 billion	\$17.0 billion
Exposed Crops (acres):	7,605	8,407
Value of Exposed Crops:	\$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):	138	141
Total Sensitive Plant Species Exposed:	122	122
Total Sensitive Animal Species Exposed:	89	89

Types of Flooding

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

Hydrologic Regions



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

Mar 22, 2013

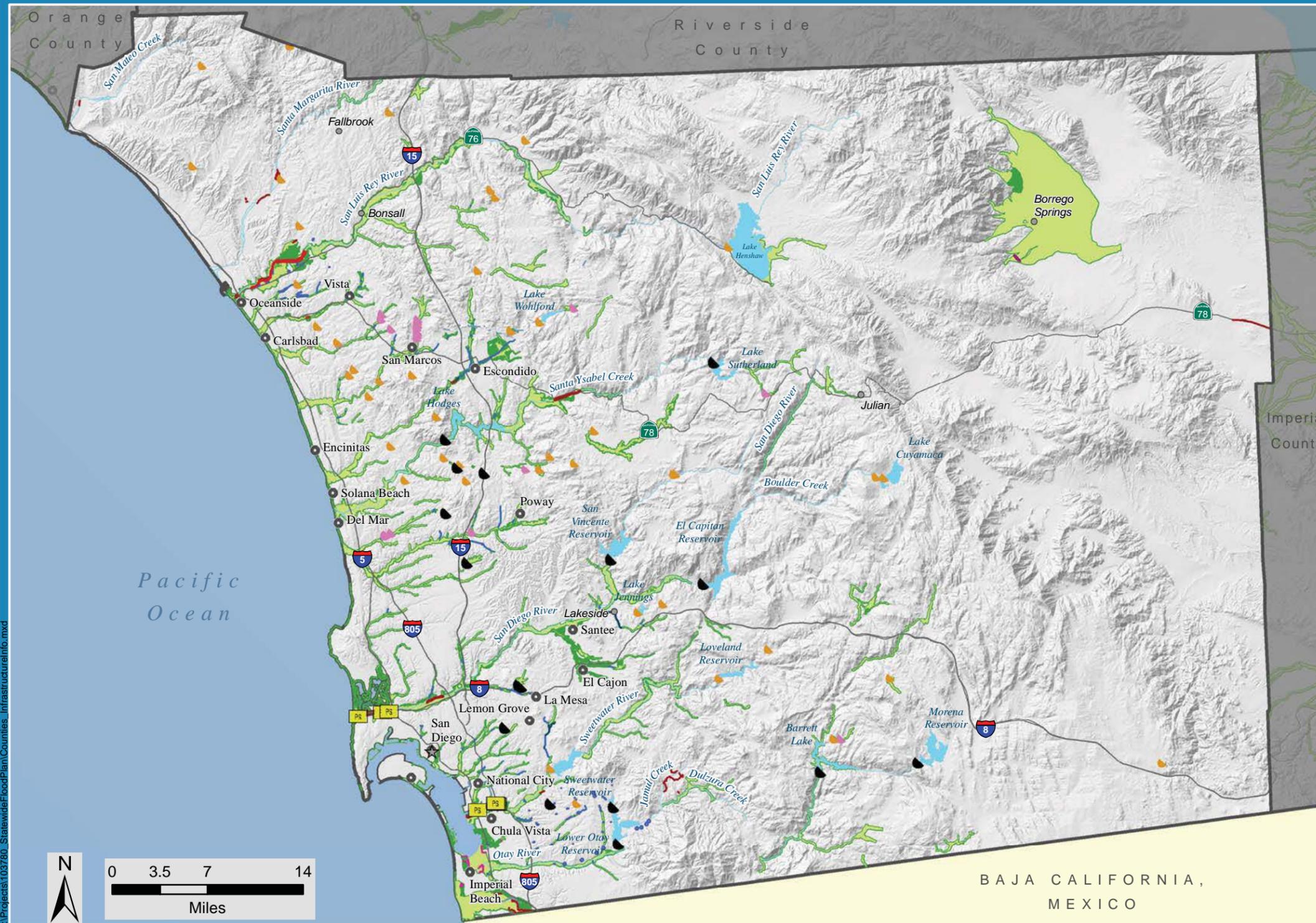
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DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

San Diego County

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:

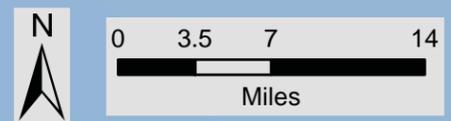
- San Diego County Flood Control District
- City of Chula Vista
- City of Coronado
- City of El Cajon
- City of Imperial Beach
- City of Oceanside
- City of San Diego
- City of San Diego Storm Water Division
- City of Vista

Planned Projects:

Number of Local Projects:	65
Estimated Cost of Local Projects:	\$458.8 million
Number of USACE Projects:	5
Estimated Cost of USACE Projects:	\$182.9 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 |

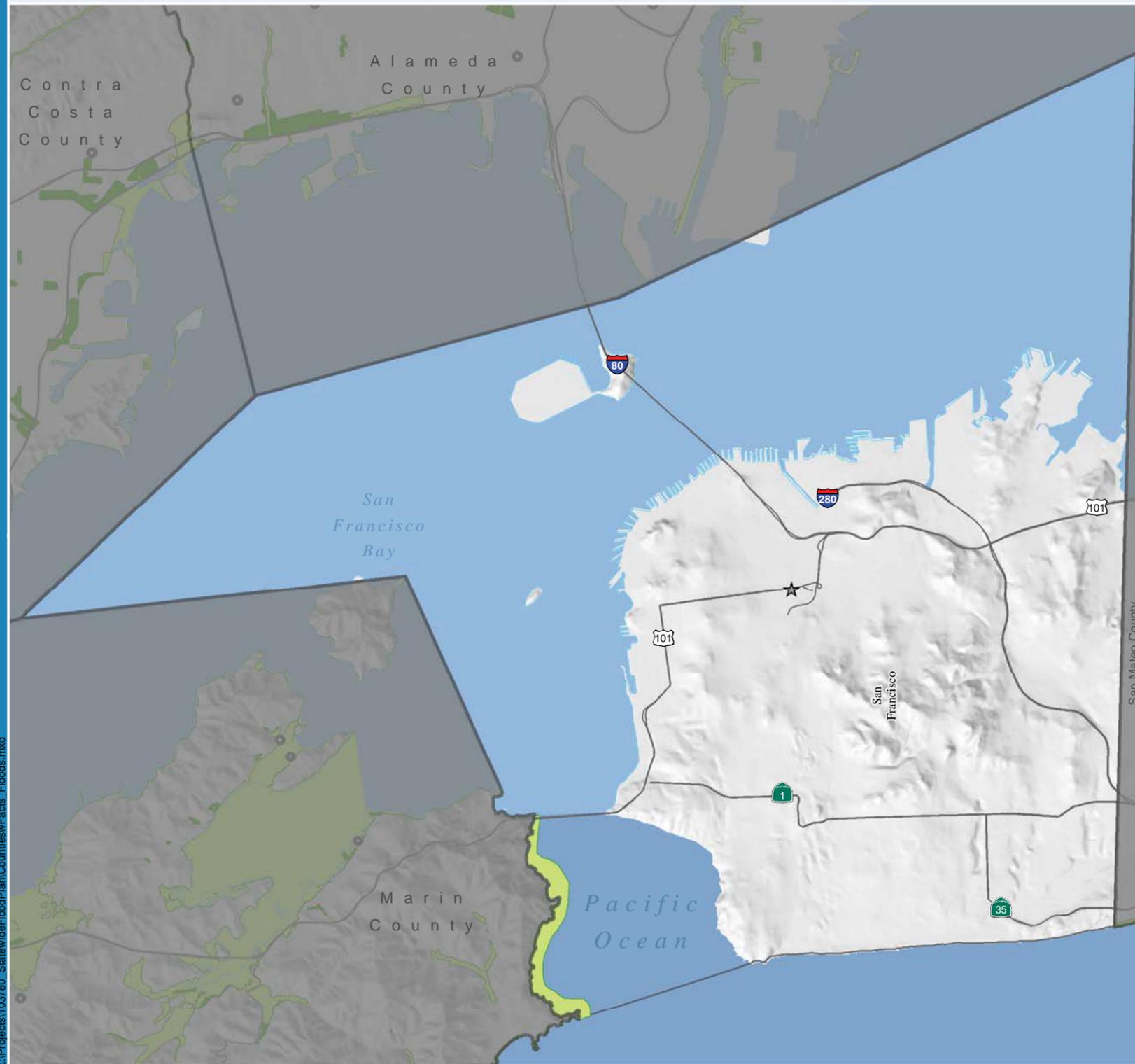
San Diego County

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

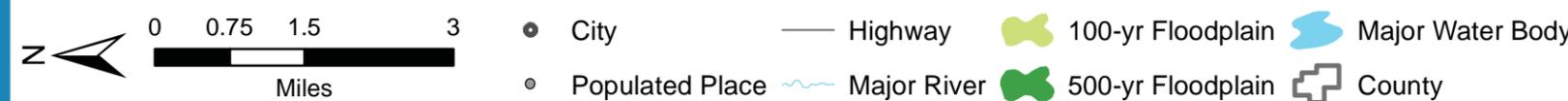
DRAFT Mar 22, 2013

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



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Selected Flood Events by Event Year

- 1861-1862** Winter, The Great Flood, Bay Area
- 1955-1956** December-January, 1955 Christmas Flood, Bay Area
- 1958** February-April
- 1995** January-March, 1995 Christmas Flood
- 1996-1997** December-January, January 1997 Flood
- 2004** February
- 2011** March, Tsunami

Flood Hazard Exposure

County Statistics

Total Acreage:	68,670
Total Population:	776,637
Total Structures:	180,200
Total Value of Structures and Contents:	\$59.3 billion
Total Agricultural Acreage:	0
Total Value of Crops:	\$0

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	409	409
Percent of Area Exposed:	1	1
Population Exposed:	0	0
Percent of Population Exposed:	0	0
Structures Exposed:	0	0
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$45,500	\$45,600
Exposed Crops:	0	0
Value of Exposed Crops:	\$0	\$0
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

San Francisco County

Types of Flooding

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

Hydrologic Regions



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

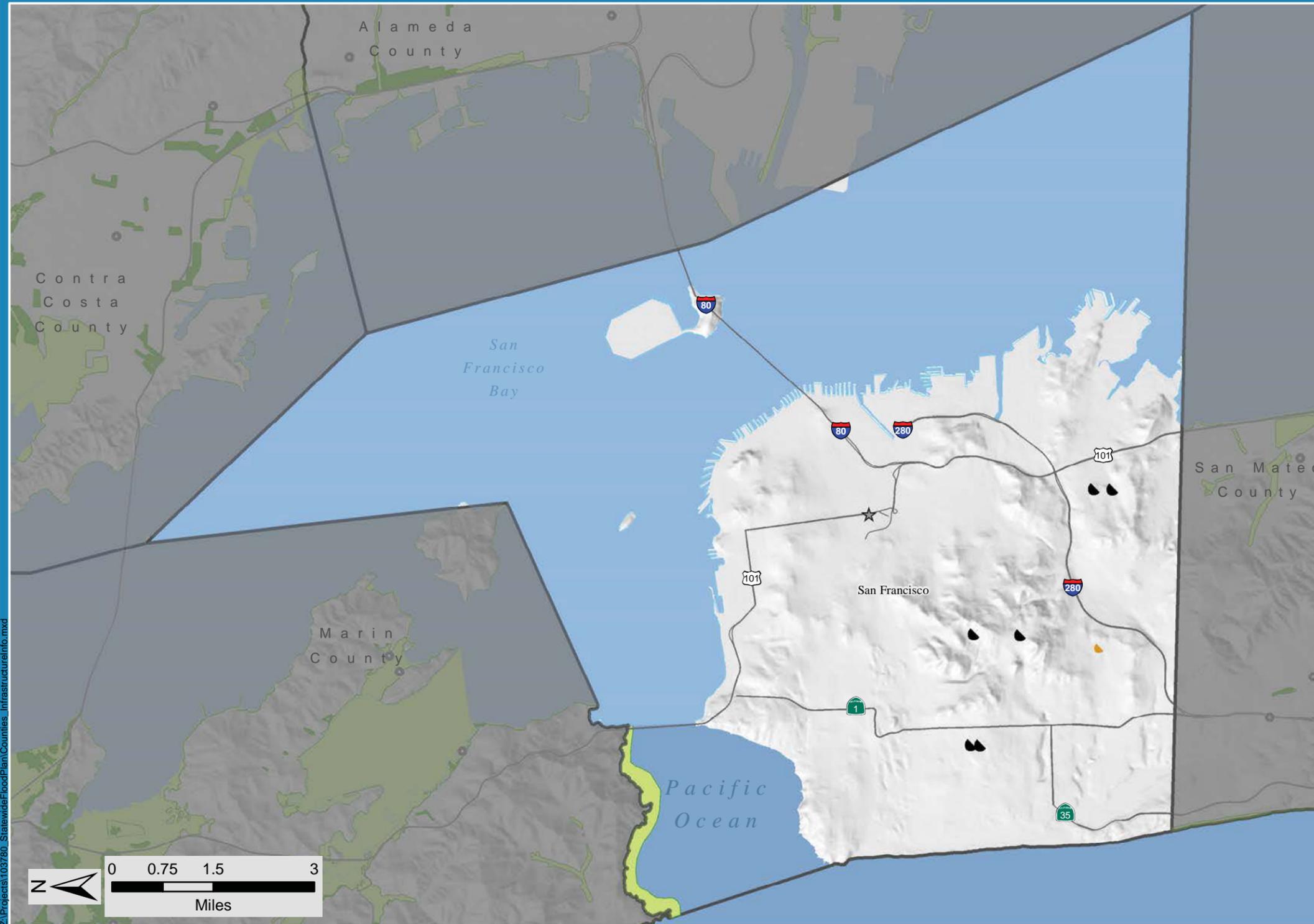
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Mar 22, 2013



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:
San Francisco City/County
San Francisco Department of Public Works

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

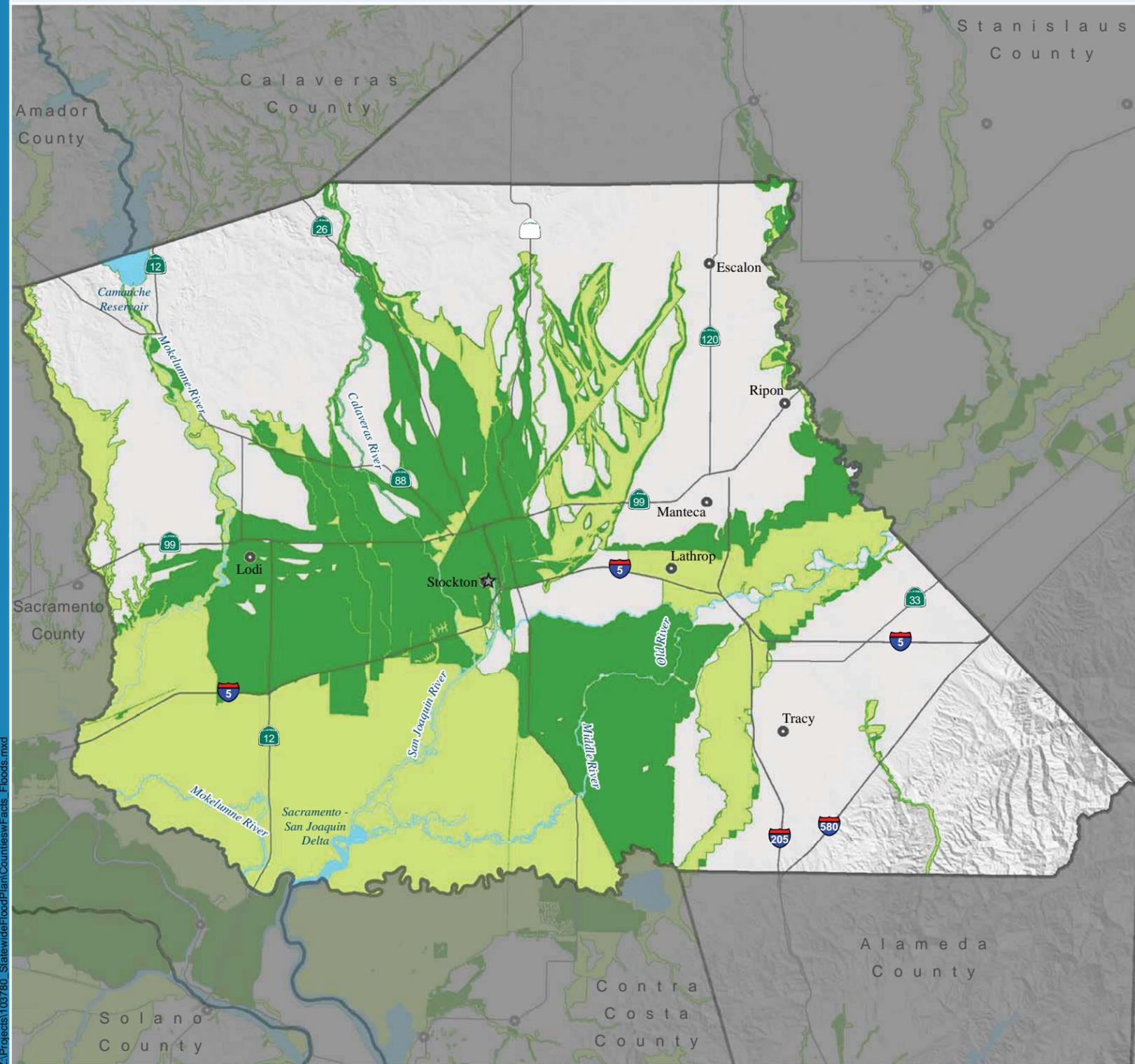
- Statewide GIS Data:**
- City
 - Populated Place
 - DWR Local Agency Dam
 - DWR Other Dam
 - NFHL Dam or Weir
 - CLD Pump Station
 - CLD Local Agency Levee
 - CLD Other Levee
 - NFHL Levee
 - NFHL Flood Event Structure
 - NFHL Channel
 - NFHL Control Structure
 - NFHL Dike
 - NFHL Retaining Wall
 -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

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

DRAFT Mar 22, 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



Z:\Projects\103789 - Statewide Floodplain Counties\Facts - Floods.mxd



Selected Flood Events by Event Year

- 1861-1862** Winter, The Great Flood, Stockton, Merced River - Snelling, Stanislaus River - Knights Ferry
- 1907** March, Tributaries to lower San Joaquin River, Great lone Flood
- 1909** San Joaquin River
- 1950** November-December, San Joaquin Valley
- 1955-1956** December-January, 1955 Christmas Flood, San Joaquin River
- 1958** April-July, Countywide
- 1962-1963** December-February
- 1964-1965** December-January, Countywide
- 1980** January-February, Delta Levee Break, Sacramento-San Joaquin Delta
- 1983** December
- 1986** February-March, St. Valentine's Day Storm
- 1995** January-April, 1995 Christmas Flood, San Joaquin Valley
- 1997** January, San Joaquin Valley
- 2004** June, Lower Jones Tract
- 2006** March 29-April 1, May 10, Spring Storms

Flood Hazard Exposure

County Statistics

Total Acreage:	912,596
Total Population:	563,610
Total Structures:	181,300
Total Value of Structures and Contents:	\$47.6 billion
Total Agricultural Acreage:	565,975
Total Value of Crops:	\$1.5 billion

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	242,854	435,189
Percent of Area Exposed:	27	48
Population Exposed:	42,392	371,248
Percent of Population Exposed:	8	66
Structures Exposed:	15,987	119,373
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$3.5 billion	\$27.9 billion
Exposed Crops (acres):	183,857	326,714
Value of Exposed Crops:	\$566.5 million	\$947.9 million
Department of Defense Facilities Exposed:	2	2
Essential Facilities Exposed:	18	188
High Potential Loss Facilities Exposed:	29	71
Lifeline Utilities Exposed:	1	17
Transportation Facilities Exposed:	187	416
Transportation Segments Exposed (miles):	129	380
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	28	28
Total Sensitive Animal Species Exposed:	40	40

San Joaquin County

Types of Flooding

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

Hydrologic Regions

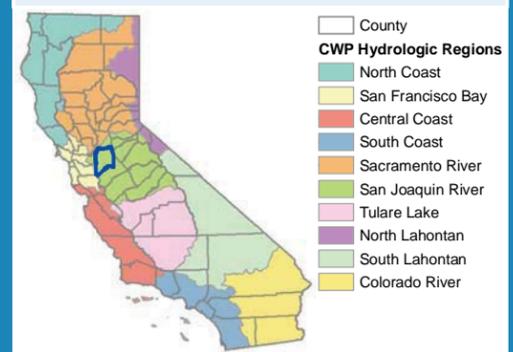


Figure D-77
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, San Joaquin County

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Mar 22, 2013

US Army Corps of Engineers

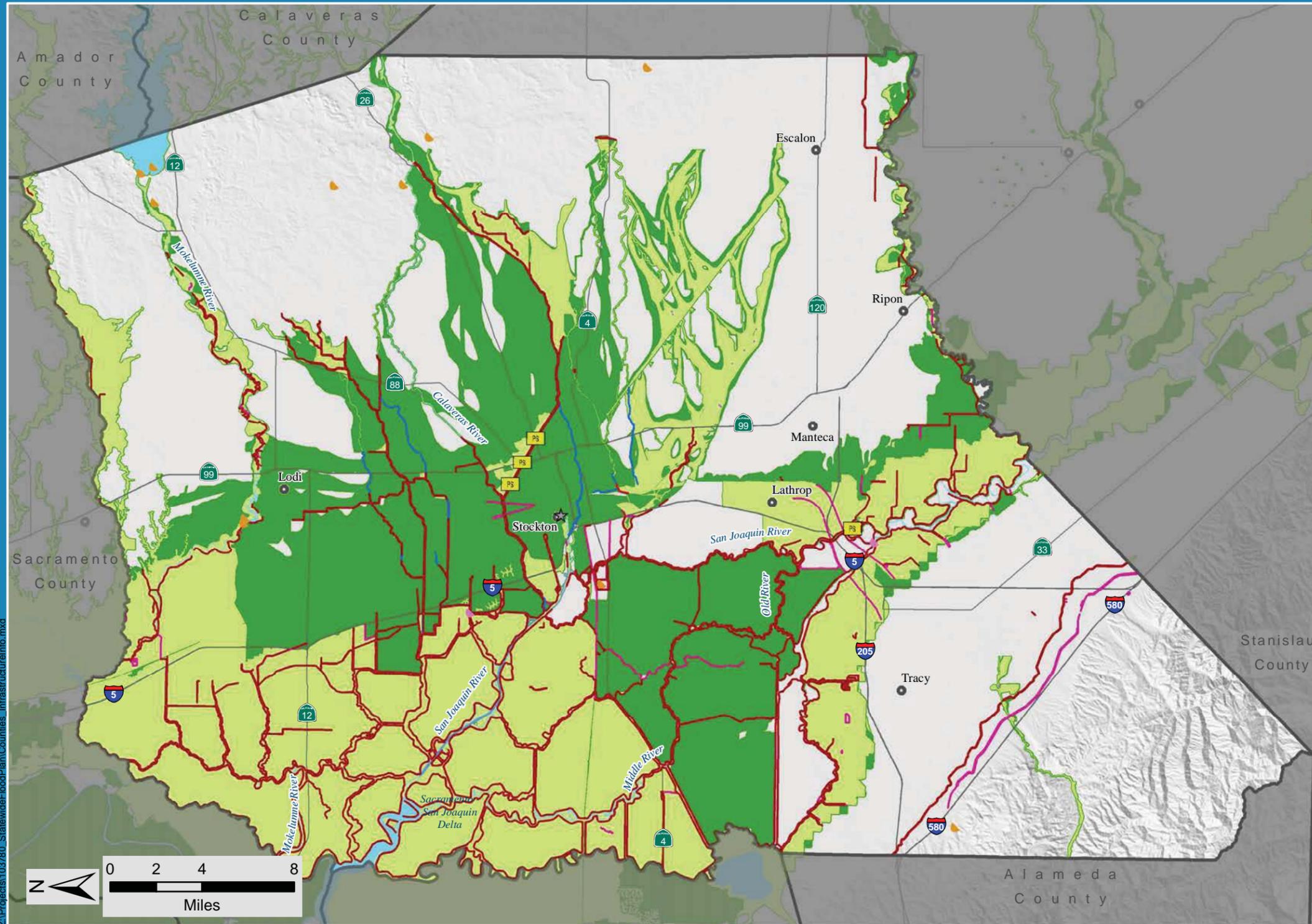
STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM

FloodSAFE CALIFORNIA

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

Summary of Available Flood Infrastructure Information

San Joaquin 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
 Dam
 Pump Station
 Reservoir

Agencies Contacted as Part of SFMP:
 San Joaquin County Flood Control and Water Conservation District
 San Joaquin Area Flood Control Agency
 Stockton-East Water District

Planned Projects:
 Number of Local Projects: 9
 Estimated Cost of Local Projects: \$491.6 million
 Number of USACE Projects: 3
 Estimated Cost of USACE Projects: \$235.5 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.

San Joaquin County

Statewide GIS Data:

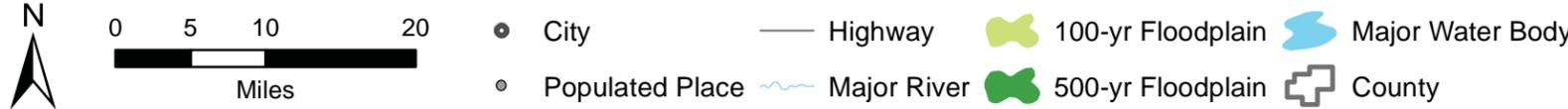
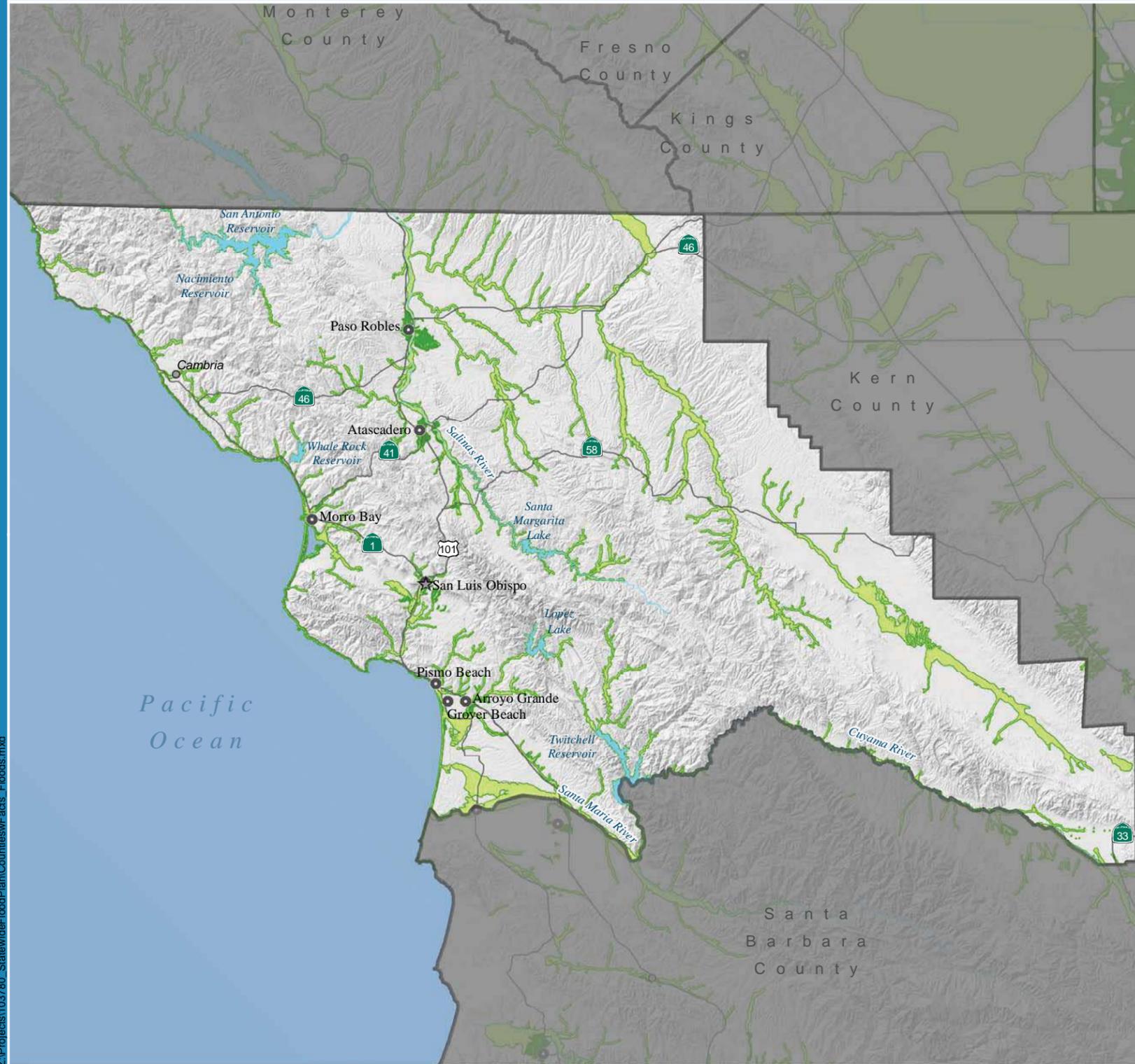
● City	● DWR Local Agency Dam	PS CLD Pump Station	~ NFHL Levee	~ NFHL Control Structure	— Highway	100-yr Floodplain
○ Populated Place	● DWR Other Dam	~ CLD Local Agency Levee	~ NFHL Flood Event Structure	~ NFHL Dike	~ Major River	500-yr Floodplain
	~ NFHL Dam or Weir	~ CLD Other Levee	~ NFHL Channel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

Figure D-78
 Summary of Available Flood Infrastructure Information, San Joaquin County

DRAFT Mar 22, 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
- 1938** February-March, Regional
- 1955-1956** December-January, Christmas Flood
- 1969** January-February, Winter '69 Storms, San Luis Obispo Creek in downtown City of San Luis Obispo
- 1973** January-February, Coastal Flooding, San Luis Obispo and Stenner Creeks in downtown City of San Luis Obispo
- 1982-1983** November-March, Winter Storms
- 1995** January-March, Severe Winter Storms, All Coastal and many inland streams.
- 1998** February, El Nino Floods
- 2011** March

Flood Hazard Exposure

County Statistics

Total Acreage:	2.1 million
Total Population:	246,652
Total Structures:	103,000
Total Value of Structures and Contents:	\$25.8 billion
Total Agricultural Acreage:	201,428
Total Value of Crops:	\$255.2 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	100,617	108,303
Percent of Area Exposed:	5	5
Population Exposed:	10,994	44,453
Percent of Population Exposed:	4	18
Structures Exposed:	5,850	19,552
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$1.4 billion	\$4.5 billion
Exposed Crops (acres):	20,144	21,137
Value of Exposed Crops:	\$62.0 million	\$64.5 million
Department of Defense Facilities Exposed:	1	1
Essential Facilities Exposed:	2	29
High Potential Loss Facilities Exposed:	4	7
Lifeline Utilities Exposed:	6	10
Transportation Facilities Exposed:	127	173
Transportation Segments Exposed (miles):	65	86
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	104	104
Total Sensitive Animal Species Exposed:	65	65

Types of Flooding

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

Hydrologic Regions

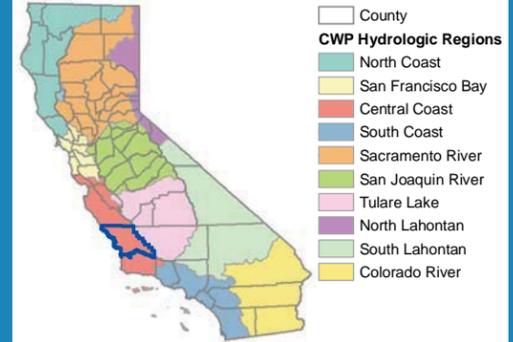


Figure D-79
 Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, San Luis Obispo County

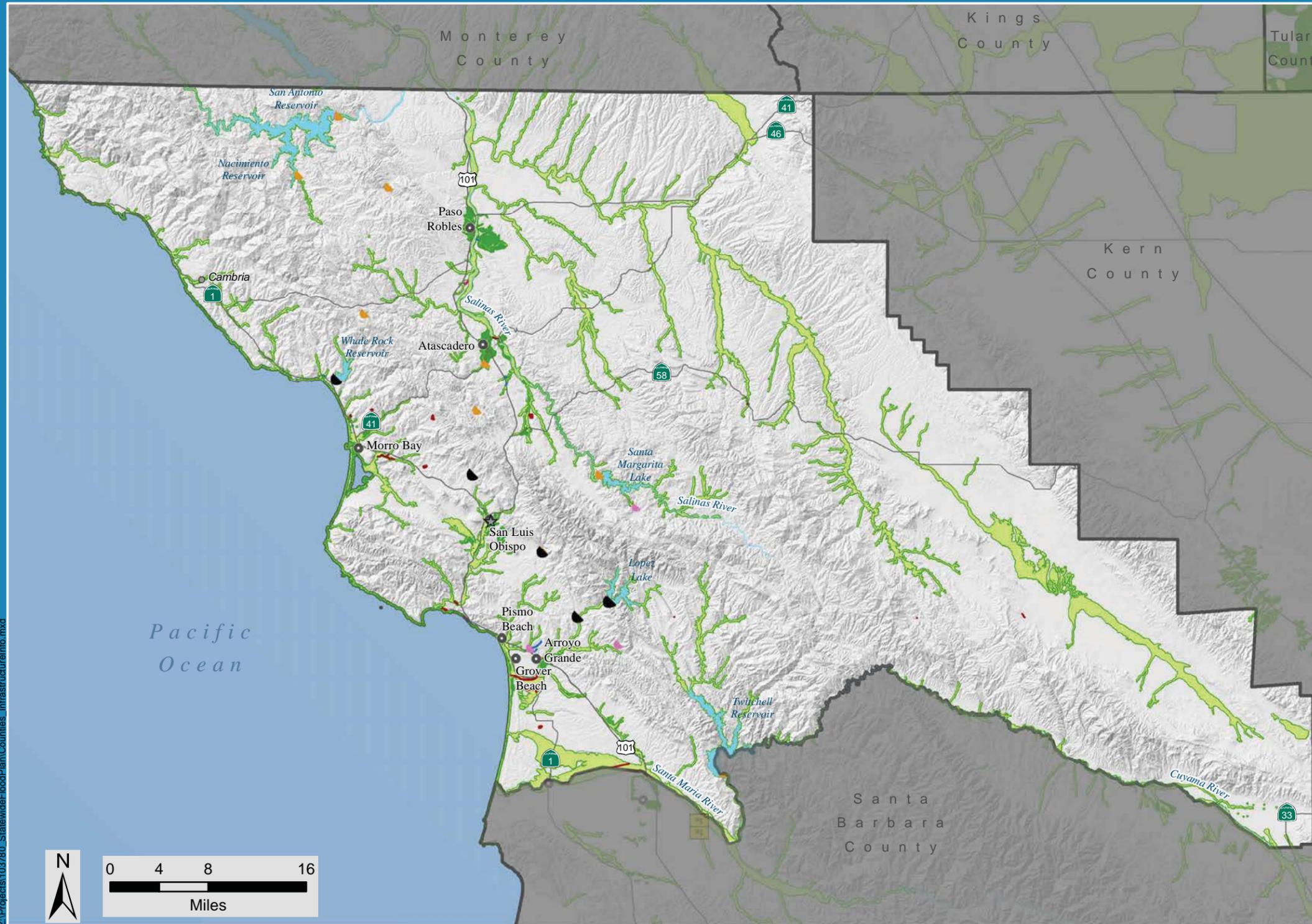
DRAFT Mar 22, 2013

San Luis Obispo County

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

Summary of Available Flood Infrastructure Information

San Luis Obispo County



Flood Infrastructure GIS Data Received from Agencies Contacted:

- Dam

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

- Levee
- Channel
- Dam

Agencies Contacted as Part of SFMP:

San Luis Obispo County Flood Control and Water Conservation District

Planned Projects:

Number of Local Projects:	5
Estimated Cost of Local Projects:	\$39.5 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.

San Luis Obispo County

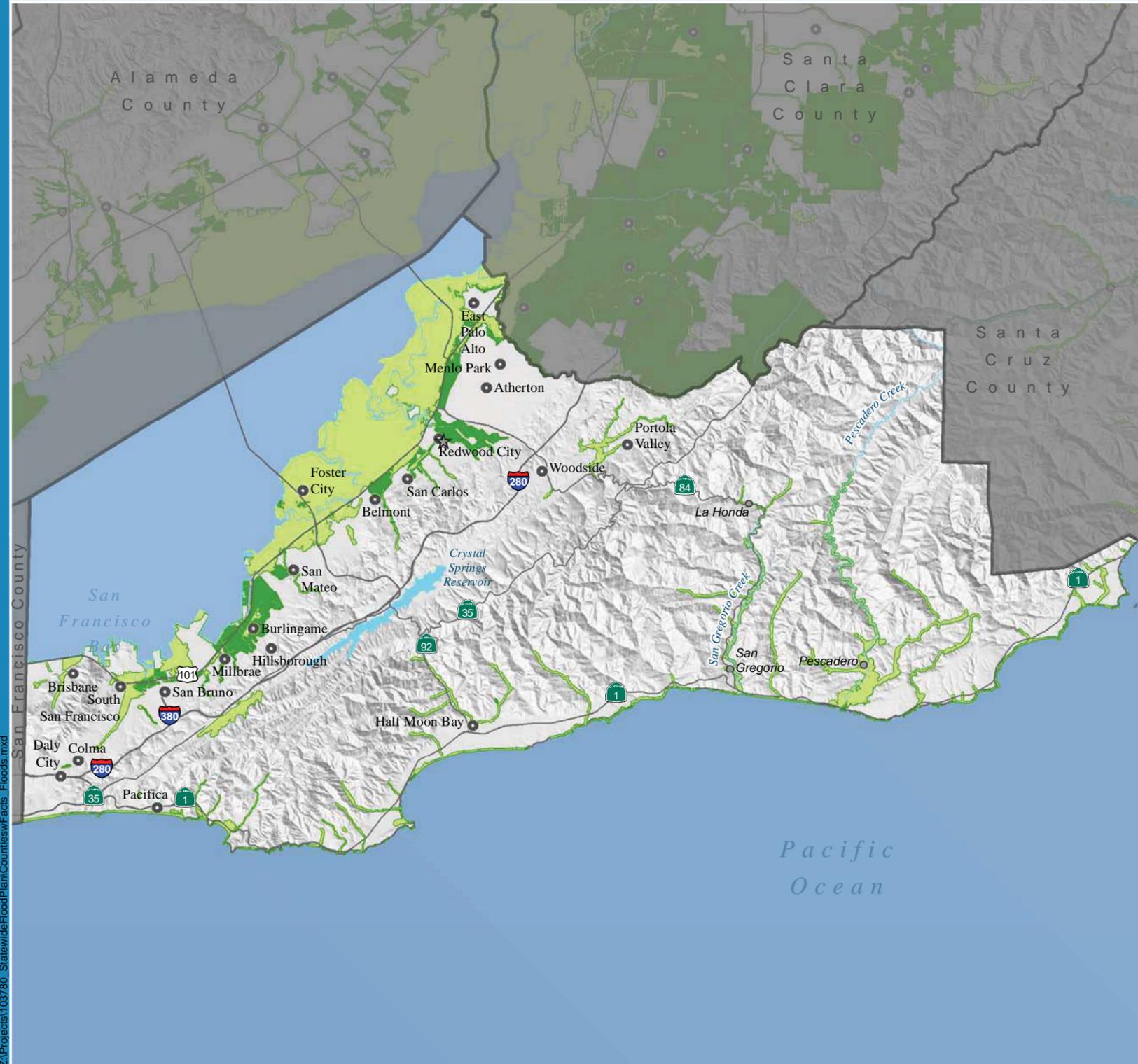
Figure D-80
Summary of Available Flood Infrastructure Information, San Luis Obispo County

DRAFT Mar 22, 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
- 1955-1956 December-January, 1955 Christmas Flood, Pescadero Creek, San Francisquito Creek
- 1958 December, San Francisquito Creek
- 1962 October, Countywide
- 1972 October-November, Countywide
- 1973 January-February, Coastal Flooding, Colma Creek, City of Pacifica
- 1981-1982 December-April,
- 1982-1983 November - March, Winter Storms, Countywide
- 1986 February, St. Valentine's Day Storm, Countywide
- 1988 February, San Francisquito Creek
- 1995 January-March, 1995 Christmas Flood
- 2006 February 3 - April 1, May 10, Spring Storms

Flood Hazard Exposure

County Statistics

Total Acreage:	353,452
Total Population:	706,815
Total Structures:	218,000
Total Value of Structures and Contents:	\$75.0 billion
Total Agricultural Acreage:	7,259
Total Value of Crops:	\$23.1 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	88,006	92,328
Percent of Area Exposed:	25	26
Population Exposed:	100,138	149,675
Percent of Population Exposed:	14	21
Structures Exposed:	30,285	44,665
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$13.8 billion	\$19.2 billion
Exposed Crops (acres):	643	643
Value of Exposed Crops:	\$3.0 million	\$3.0 million
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	31	58
High Potential Loss Facilities Exposed:	54	56
Lifeline Utilities Exposed:	9	9
Transportation Facilities Exposed:	82	105
Transportation Segments Exposed (miles):	34	56
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	43	46
Total Sensitive Animal Species Exposed:	39	40

Types of Flooding

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

Hydrologic Regions



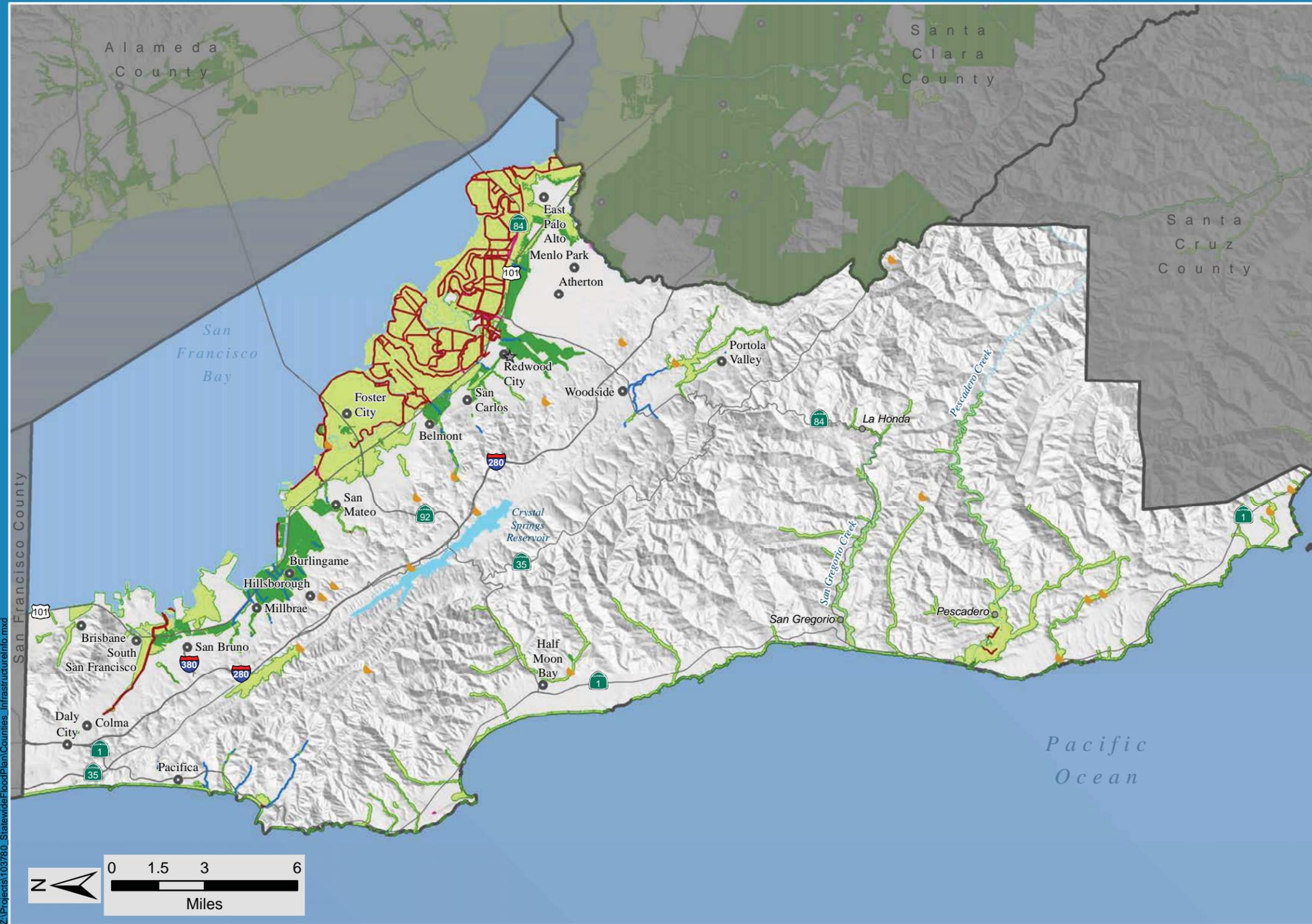
Figure D-81
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, San Mateo County

DRAFT Mar 22, 2013

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

Summary of Available Flood Infrastructure Information

San Mateo 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
 Flood Wall

Agencies Contacted as Part of SFMP:
 San Mateo County
 San Francisquito Creek Joint Powers Authority

Planned Projects:

Number of Local Projects:	4
Estimated Cost of Local Projects:	\$26 million
Number of USACE Projects:	1
Estimated Cost of USACE Projects:	\$53 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.

San Mateo County

Statewide GIS Data:

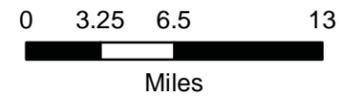
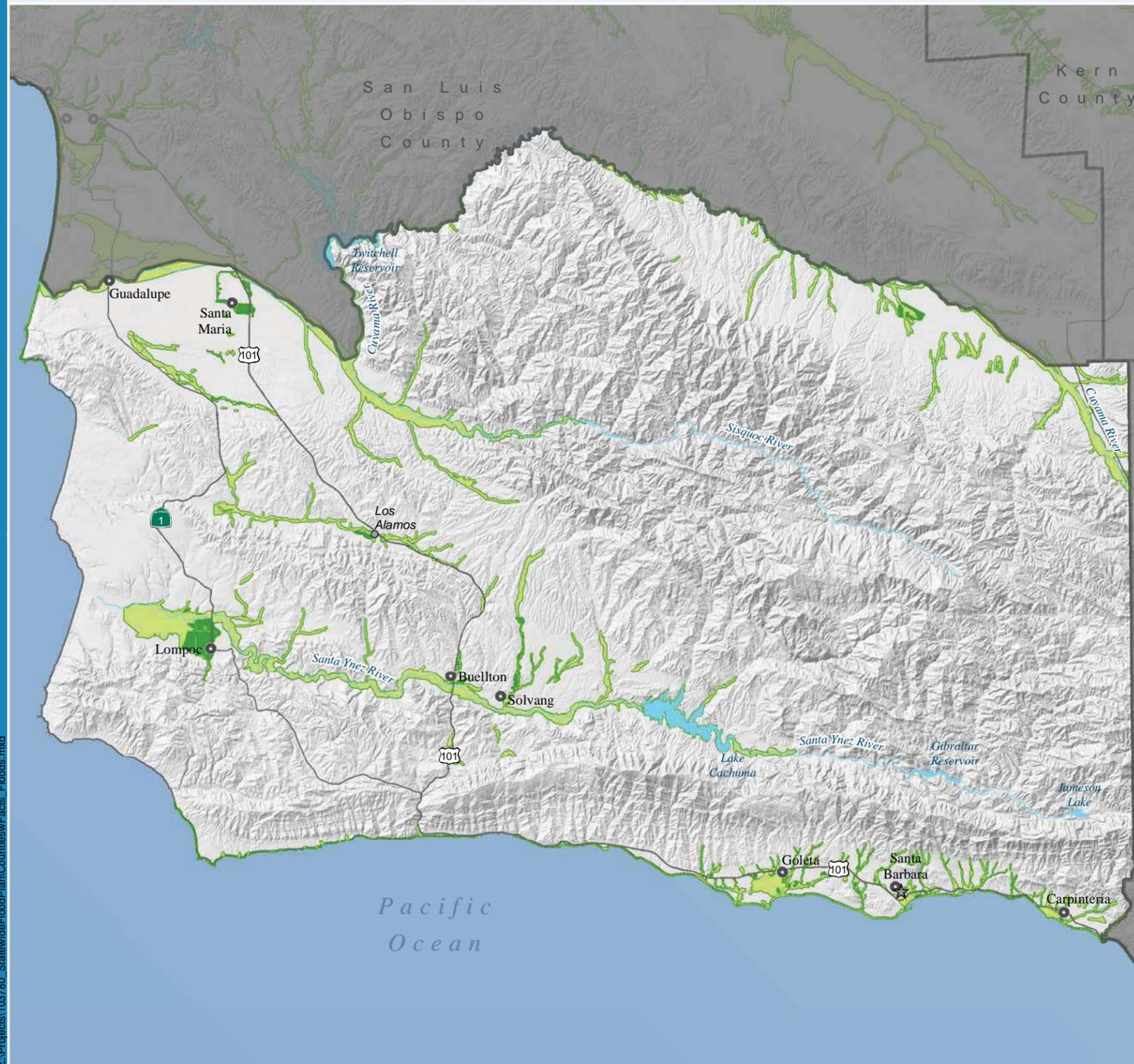
● City	● DWR Local Agency Dam	PS CLD Pump Station	~ NFHL Levee	~ NFHL Control Structure	— Highway	100-yr Floodplain
○ Populated Place	● DWR Other Dam	~ CLD Local Agency Levee	~ NFHL Flood Event Structure	~ NFHL Dike	~ Major River	500-yr Floodplain
	● NFHL Dam or Weir	~ CLD Other Levee	~ NFHL Channel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

Figure D-82
 Summary of Available Flood Infrastructure Information, San Mateo County

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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



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

Selected Flood Events by Event Year

- 1861-1862 Winter, The Great Flood
- 1938 February-March, Regional
- 1964 March, Montecito Streams
- 1969 January-February, Winter '69 Storms, Santa Ynez River
- 1970 January
- 1973 January-February, Coastal Flooding
- 1978 January-February, Countywide
- 1980 February 12-22
- 1982 January, Countywide
- 1982-1983 November-March, Winter Storms
- 1995 January-March, Severe Winter Storms, Most major channels in Goleta, Santa Barbara, Montecito, and Carpinteria
- 1998 February, El Niño Floods, Santa Maria River
- 2005 January

Flood Hazard Exposure

County Statistics

Total Acreage:	1.8 million
Total Population:	398,960
Total Structures:	128,000
Total Value of Structures and Contents:	\$33.0 billion
Total Agricultural Acreage:	109,900
Total Value of Agricultural Land:	\$577.4 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	51,772	56,823
Percent of Area Exposed:	3	3
Population Exposed:	26,228	60,317
Percent of Population Exposed:	7	15
Exposed Structures:	7,955	18,429
Value of Exposed Structures and Contents:	\$2.7 billion	\$5.2 billion
Exposed Agricultural Land (acres):	15,508	16,519
Value of Exposed Agricultural Land:	\$52.1 million	\$54.2 million
Department of Defense Facilities:	1	1
Essential Facilities:	17	32
High Potential Loss Facilities:	1	1
Lifeline Utilities:	6	8
Transportation Facilities:	125	152
Transportation Segments Exposed (miles):	51	67
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	55	55
Total Sensitive Animal Species Exposed:	54	54

Types of Flooding

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

Hydrologic Regions

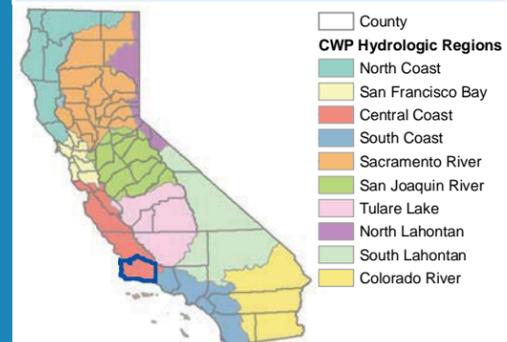


Figure D-83
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Santa Barbara County

DRAFT

Mar 22, 2013



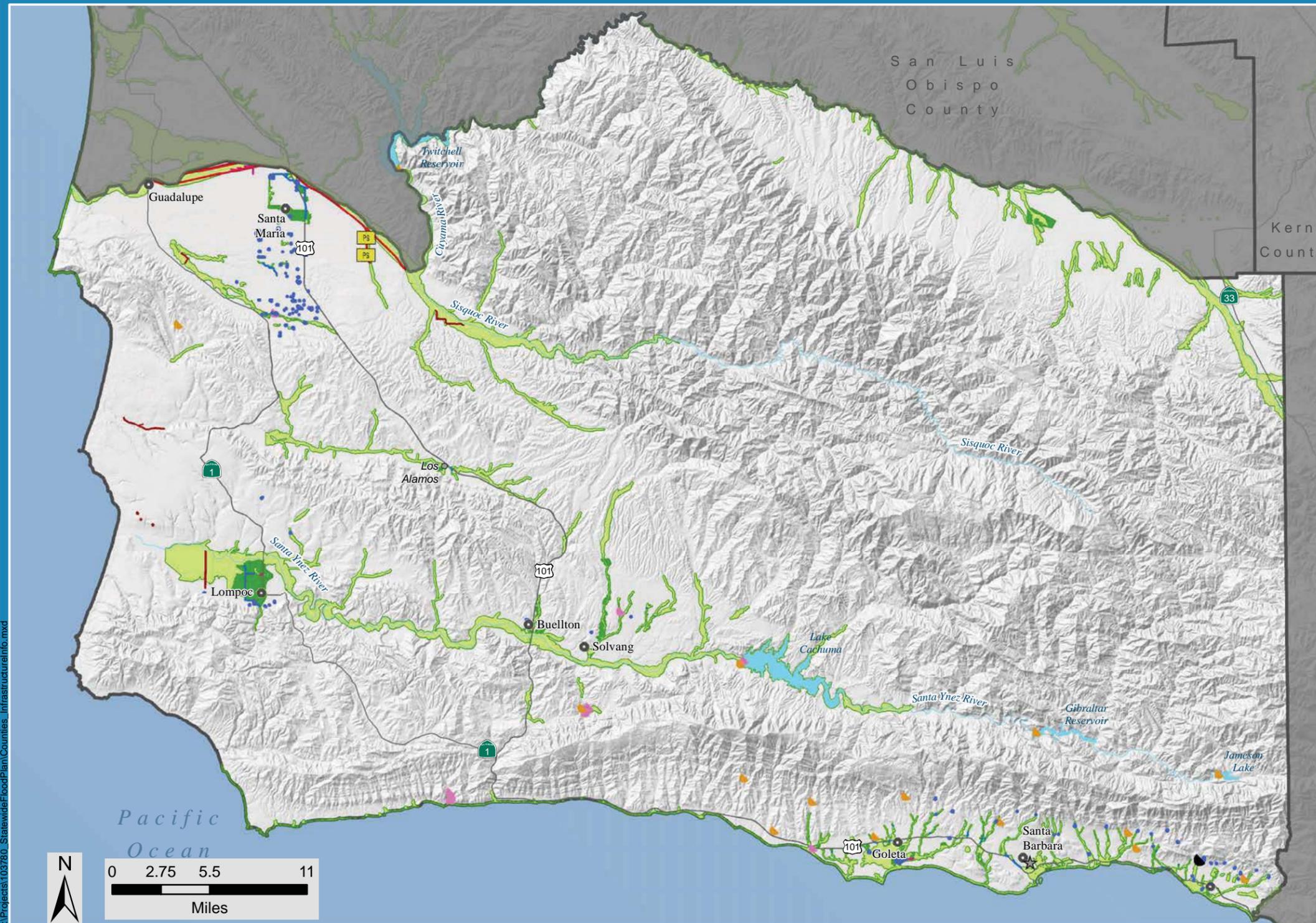
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Santa Barbara County

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

Summary of Available Flood Infrastructure Information

Santa Barbara County



Flood Infrastructure GIS Data Received from Agencies Contacted:

- Santa Maria River Levee
- Flood Control/Detention/Debris Basin

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

- Channel
- Floodwall

Agencies Contacted as Part of SFMP:

Santa Barbara Flood Control and Water Conservation District

Planned Projects:

Number of Local Projects:	3
Estimated Cost of Local Projects:	n/a
Number of USACE Projects:	6
Estimated Cost of USACE Projects:	\$296.3 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.**

Santa Barbara 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-84
Summary of Available Flood Infrastructure Information, Santa Barbara County

DRAFT Mar 22, 2013

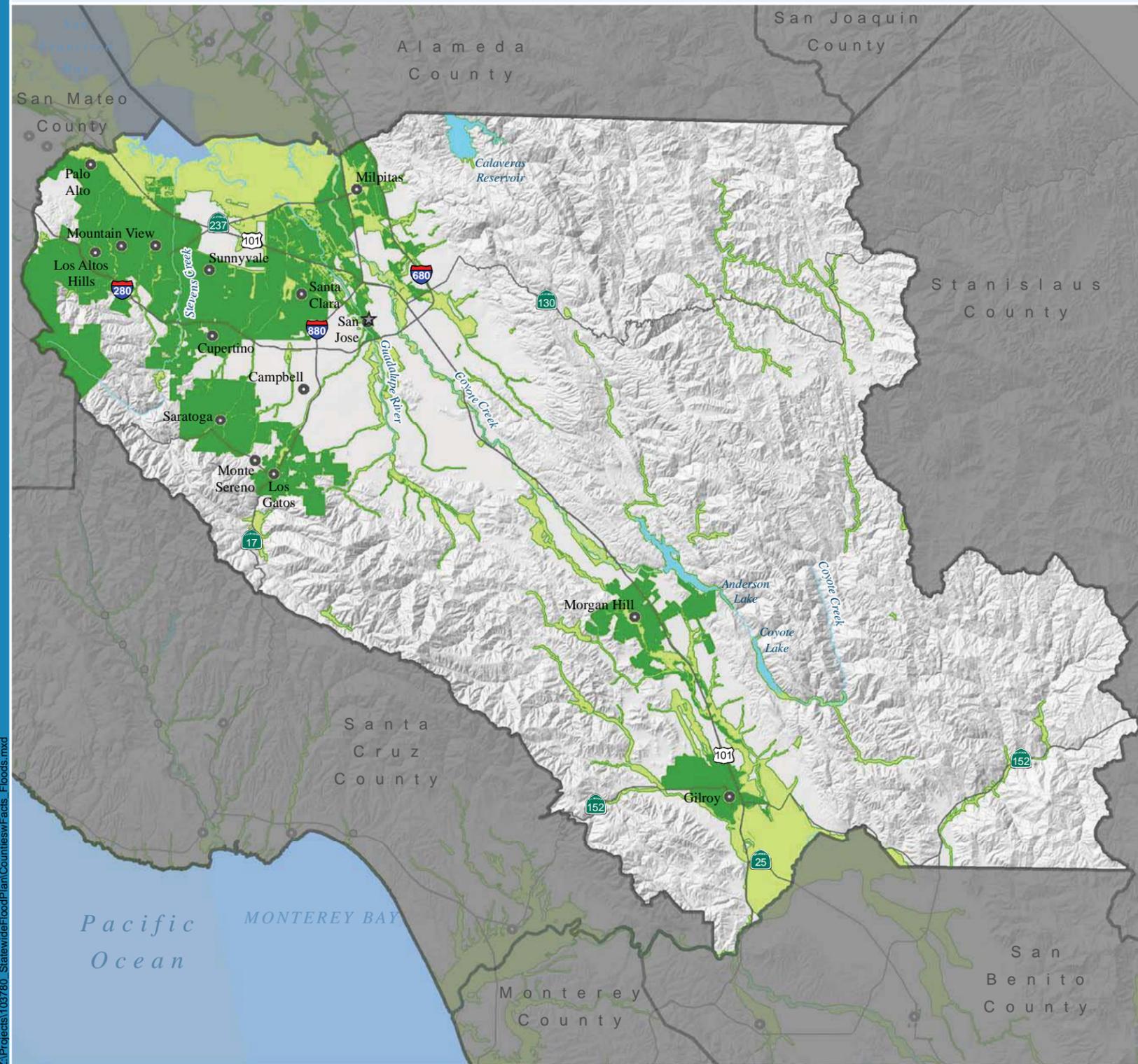
US Army Corps of Engineers

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

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, Guadalupe River
- 1955-1956** December-January, 1955 Christmas Flood, Coyote Creek, Stevens, Matadero, San Francisquito, Guadalupe River
- 1958** February-April, Penitencia, Guadalupe, San Tomas Aquinas, Stevens, Permanente, Matadero, San Francisquito
- 1962** October, Countywide
- 1968-1969** December-January, Winter '69 Storms, Salinas River, San Lorenzo River, Guadalupe River, Pajaro River
- 1982-1983** November-March, Winter Storms, Coyote Creek, Guadalupe River, Penitencia Creek, Calabazas Creek, Los Gatos Creek
- 1986** February 12-20, St. Valentine's Day Storm, Guadalupe River
- 1987** Coyote Creek
- 1988** February, Coyote Creek, San Francisquito Creek
- 1995** January-March, 1995 Christmas Flood, Guadalupe River, Los Gatos Creek, Llagas Creek, Upper Penitencia Creek, Coyote Creek, Pacheco Creek
- 1998** January-March, Calabazas Creek, Guadalupe River, Coyote Creek, Upper Penitencia Creek, Saratoga Creek, San Francisquito Creek, Matadero Creek
- 2000** Coyote Creek
- 2002** Guadalupe River
- 2005** December, Coyote Creek

Flood Hazard Exposure

County Statistics

Total Acreage:	835,231
Total Population:	1.7 million
Total Structures:	488,100
Total Value of Structures and Contents:	\$185.7 billion
Total Agricultural Acreage:	71,313
Total Value of Crops:	\$127.1 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	60,869	145,236
Percent of Area Exposed:	7	17
Population Exposed:	132,577	664,061
Percent of Population Exposed:	8	39
Structures Exposed:	37,069	201,571
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$15.2 billion	\$84.3 billion
Exposed Crops (acres):	20,072	32,232
Value of Exposed Crops:	\$50.5 million	\$68.4 million
Department of Defense Facilities Exposed:	1	1
Essential Facilities Exposed:	49	287
High Potential Loss Facilities Exposed:	42	139
Lifeline Utilities Exposed:	9	14
Transportation Facilities Exposed:	210	536
Transportation Segments Exposed (miles):	134	394
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	38	40
Total Sensitive Animal Species Exposed:	40	42

Santa Clara County

Types of Flooding

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

Hydrologic Regions



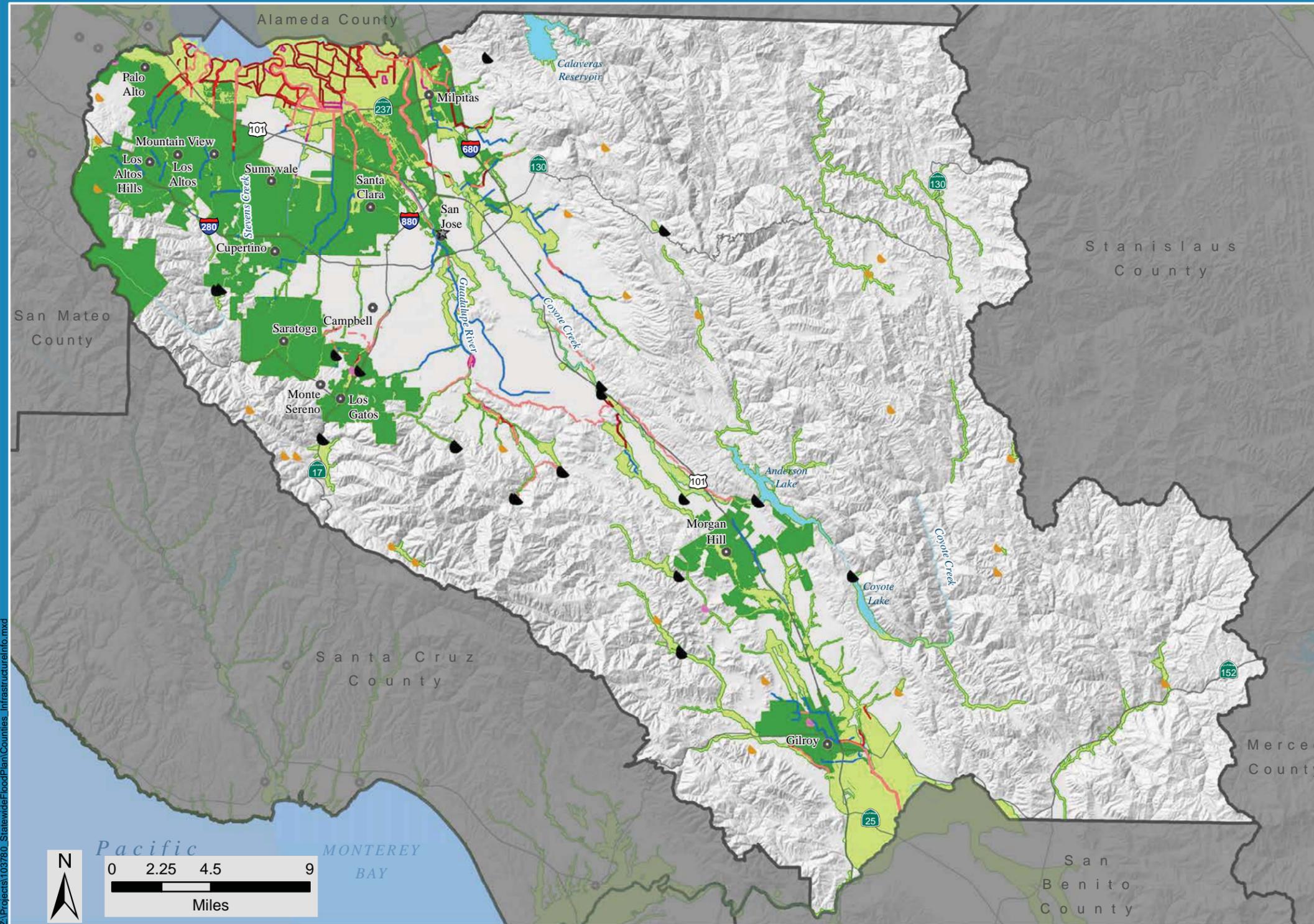
Figure D-85
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Santa Clara County

DRAFT Mar 22, 2013

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

Summary of Available Flood Infrastructure Information

Santa Clara County



Flood Infrastructure GIS Data Received from Agencies Contacted:

- Dam
- Levee or Maintenance Road

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:
 Santa Clara Valley Water District
 San Francisquito Creek Joint Powers Authority

Planned Projects:

Number of Local Projects:	23
Estimated Cost of Local Projects:	\$362.9 million
Number of USACE Projects:	6
Estimated Cost of USACE Projects:	\$1 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.

Santa Clara County

Figure D-86
 Summary of Available Flood Infrastructure Information, Santa Clara County

DRAFT Mar 22, 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 |

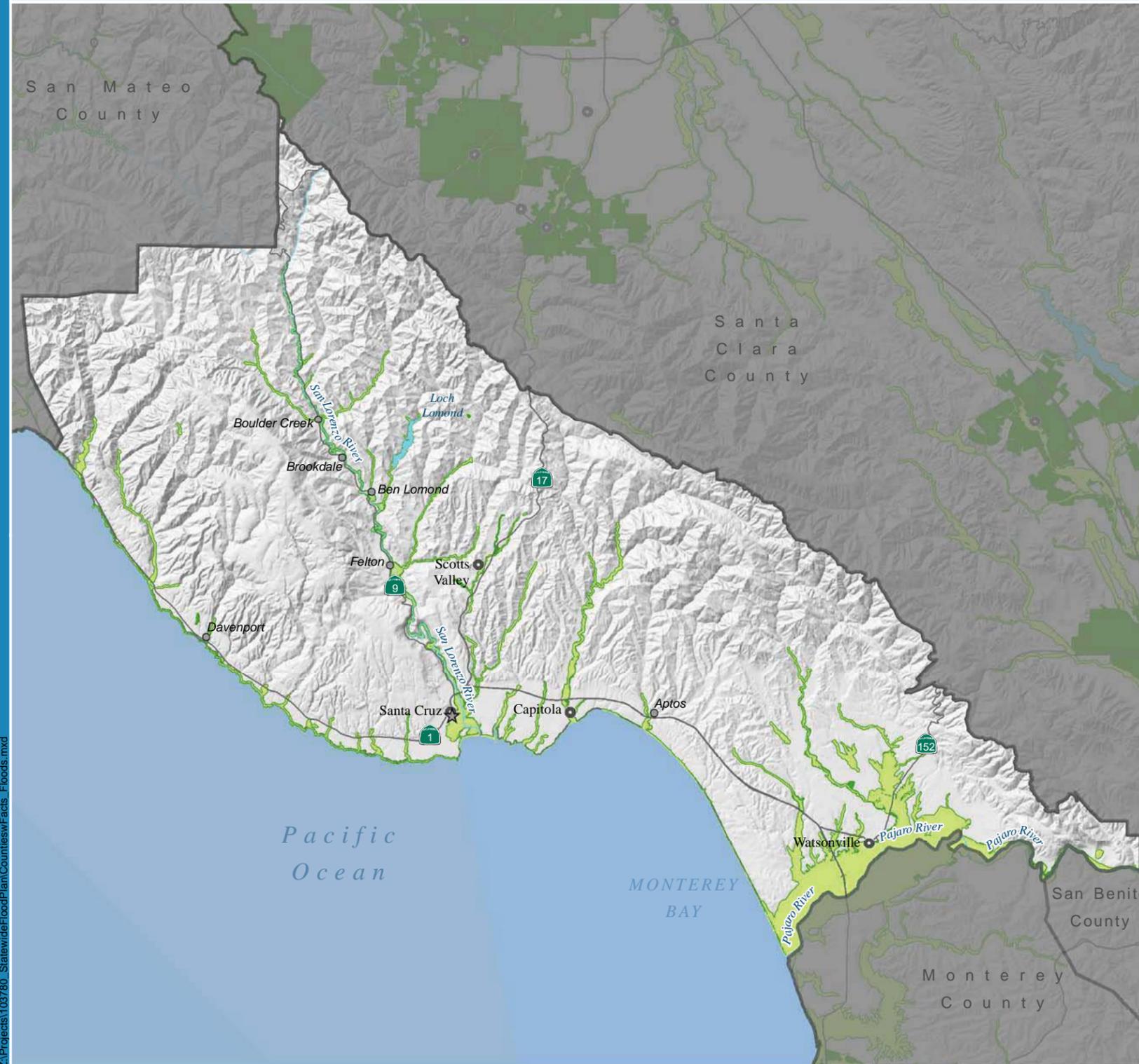
US Army Corps of Engineers

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM

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100-year and 500-year Floodplains



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

Selected Flood Events by Event Year

- 1938** February-March, Countywide
- 1952** November, Tsunami
- 1955-1956** December-January, 1955 Christmas Flood, San Lorenzo River, Pescadero, Pajaro
- 1958** March-April, San Lorenzo River, Pescadero, Pajaro
- 1963** January-February, Pajaro, Corralitos, Soquel, Aptos
- 1969** January-February, Winter '69 Storms, Pajaro River, Salinas River, San Lorenzo River
- 1970** January
- 1978** January-February, Countywide
- 1982** January, Winter Storms, San Lorenzo River
- 1982-1983** November-March, Winter Storms
- 1986** February, Pajaro River
- 1995** January-March, Severe Winter Storms, Pajaro River
- 1998** February
- 2006** March 29 - April 1, May 10, Spring Storms
- 2011** March 11, Tsunami

Flood Hazard Exposure

County Statistics

Total Acreage:	285,713
Total Population:	255,435
Total Structures:	96,800
Total Value of Structures and Contents:	\$28.4 billion
Total Agricultural Acreage:	22,547
Total Value of Crops:	\$263.5 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	12,517	13,242
Percent of Area Exposed:	4	5
Population Exposed:	27,135	30,072
Percent of Population Exposed:	11	12
Structures Exposed:	8,882	9,961
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$3.0 billion	\$3.3 billion
Exposed Crops (acres):	5,331	5,513
Value of Exposed Crops:	\$58.4 million	\$60.8 million
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	14	20
High Potential Loss Facilities Exposed:	8	8
Lifeline Utilities Exposed:	5	6
Transportation Facilities Exposed:	45	54
Transportation Segments Exposed (miles):	31	34
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	36	37
Total Sensitive Animal Species Exposed:	32	32

Santa Cruz County

Types of Flooding

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

Hydrologic Regions

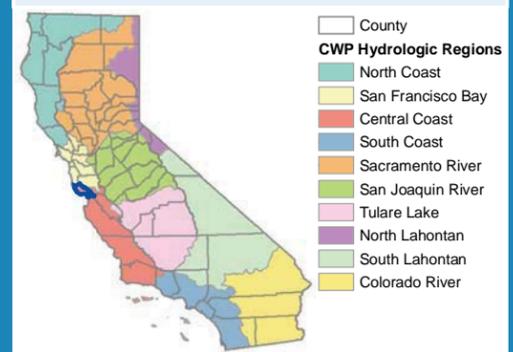


Figure D-87
 Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Santa Cruz County

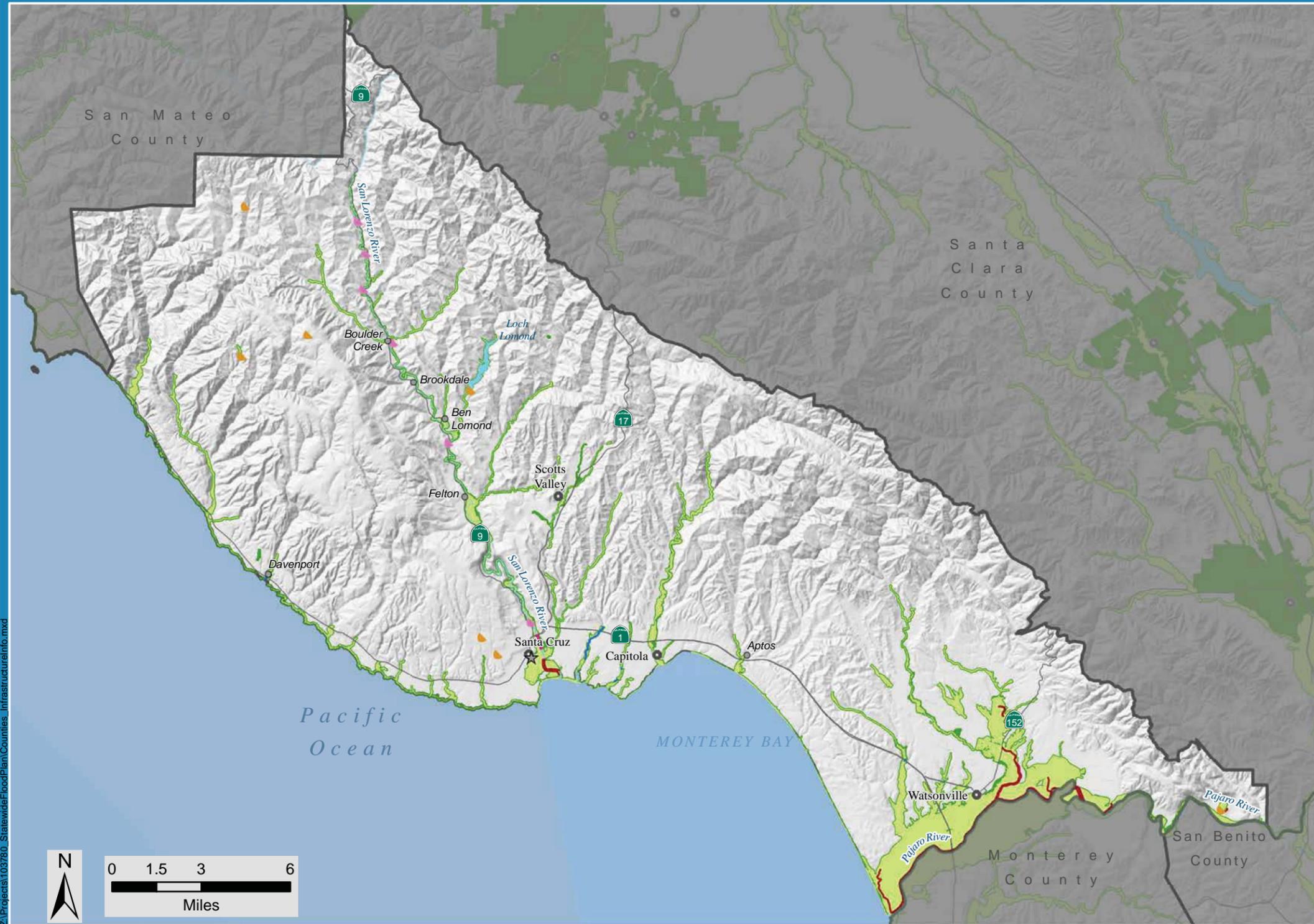
Mar 22, 2013

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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

Santa Cruz 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:
 Santa Cruz County Flood Control and Water Conservation District

Planned Projects:

Number of Local Projects:	16
Estimated Cost of Local Projects:	\$187.5 million
Number of USACE Projects:	2
Estimated Cost of USACE Projects:	\$245.6 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.

Santa Cruz County

- 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

Figure D-88
 Summary of Available Flood Infrastructure Information, Santa Cruz County

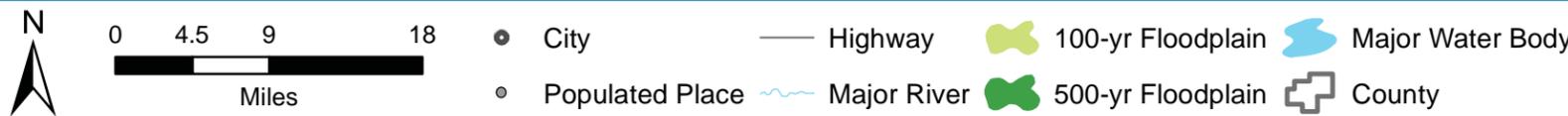
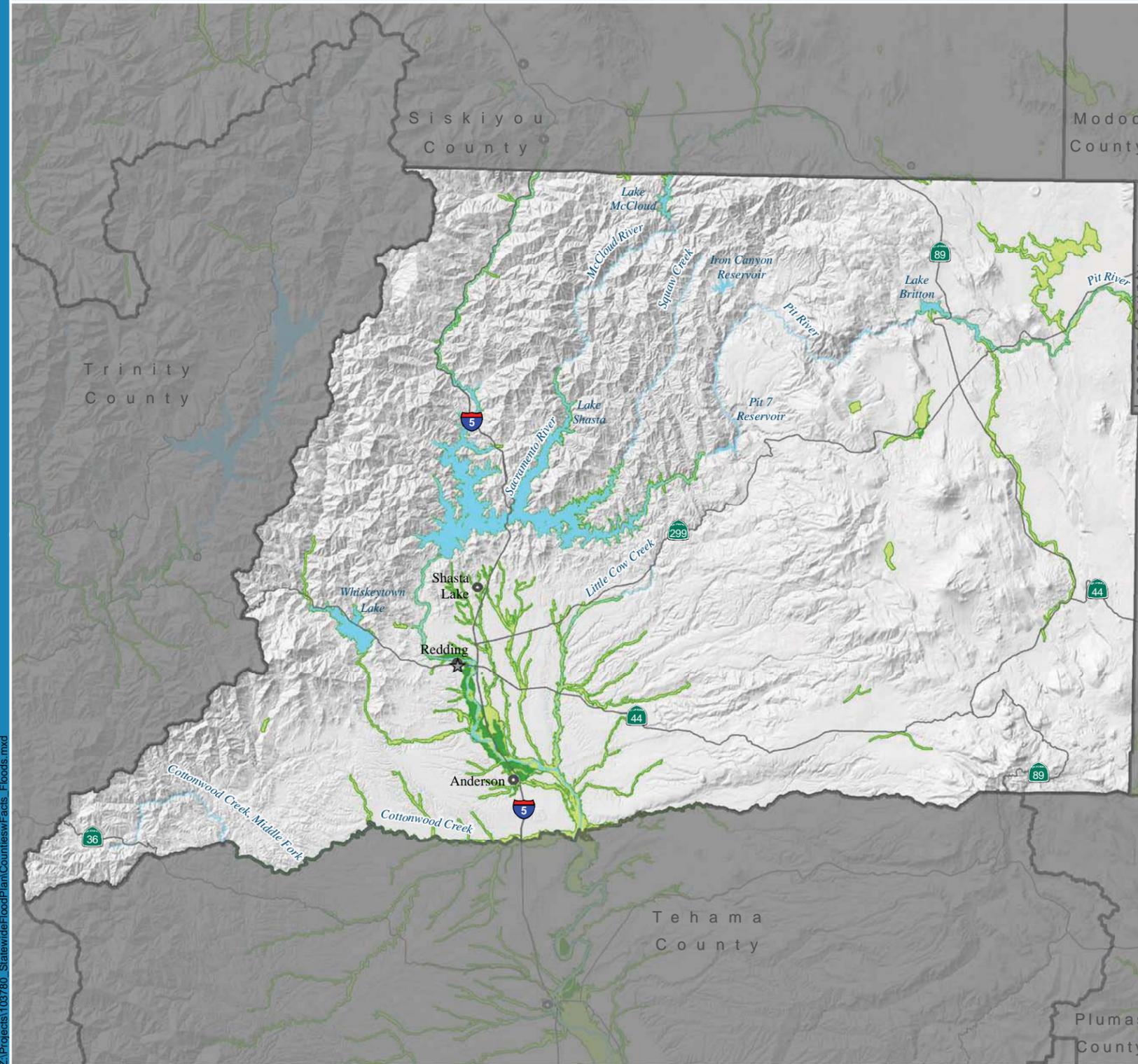
DRAFT Mar 22, 2013





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100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1861-1862** Winter, The Great Flood
- 1937-1938** December-March, Countywide
- 1955-1956** December-January, Christmas Flood
- 1964-1965** December-January, Northern California Christmas 1964 Disaster
- 1968-1969** December-January, Winter '69 Storms
- 1969-1970** December-March, Regional
- 1977** September
- 1982-1983** December-March, Winter Storms
- 1986** February, St. Valentine's Day Storm
- 1995** January-March, Severe Winter Storms, Sacramento River Basin
- 2006** March 29-April 1, May 10

Flood Hazard Exposure

County Statistics

Total Acreage:	2.5 million
Total Population:	163,241
Total Structures:	69,900
Total Value of Structures and Contents:	\$15.0 billion
Total Agricultural Acreage:	60,152
Total Value of Crops:	\$51.2 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	75,246	82,408
Percent of Area Exposed:	3	3
Population Exposed:	9,847	22,710
Percent of Population Exposed:	6	14
Structures Exposed:	4,378	9,864
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$848.6 million	\$1.9 billion
Exposed Crops (acres):	8,833	10,819
Value of Exposed Crops:	\$3.9 million	\$6.7 million
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	6	13
High Potential Loss Facilities Exposed:	7	7
Lifeline Utilities Exposed:	2	3
Transportation Facilities Exposed:	87	103
Transportation Segments Exposed (miles):	46	56
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	25	25
Total Sensitive Animal Species Exposed:	59	59

Shasta County

Types of Flooding

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

Hydrologic Regions

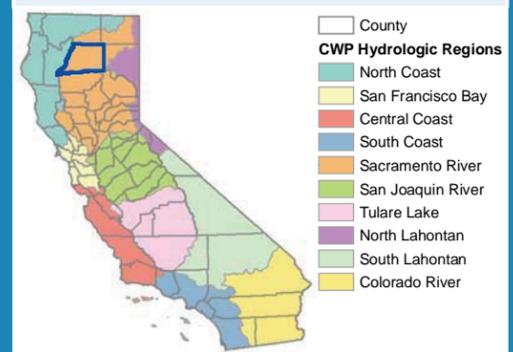


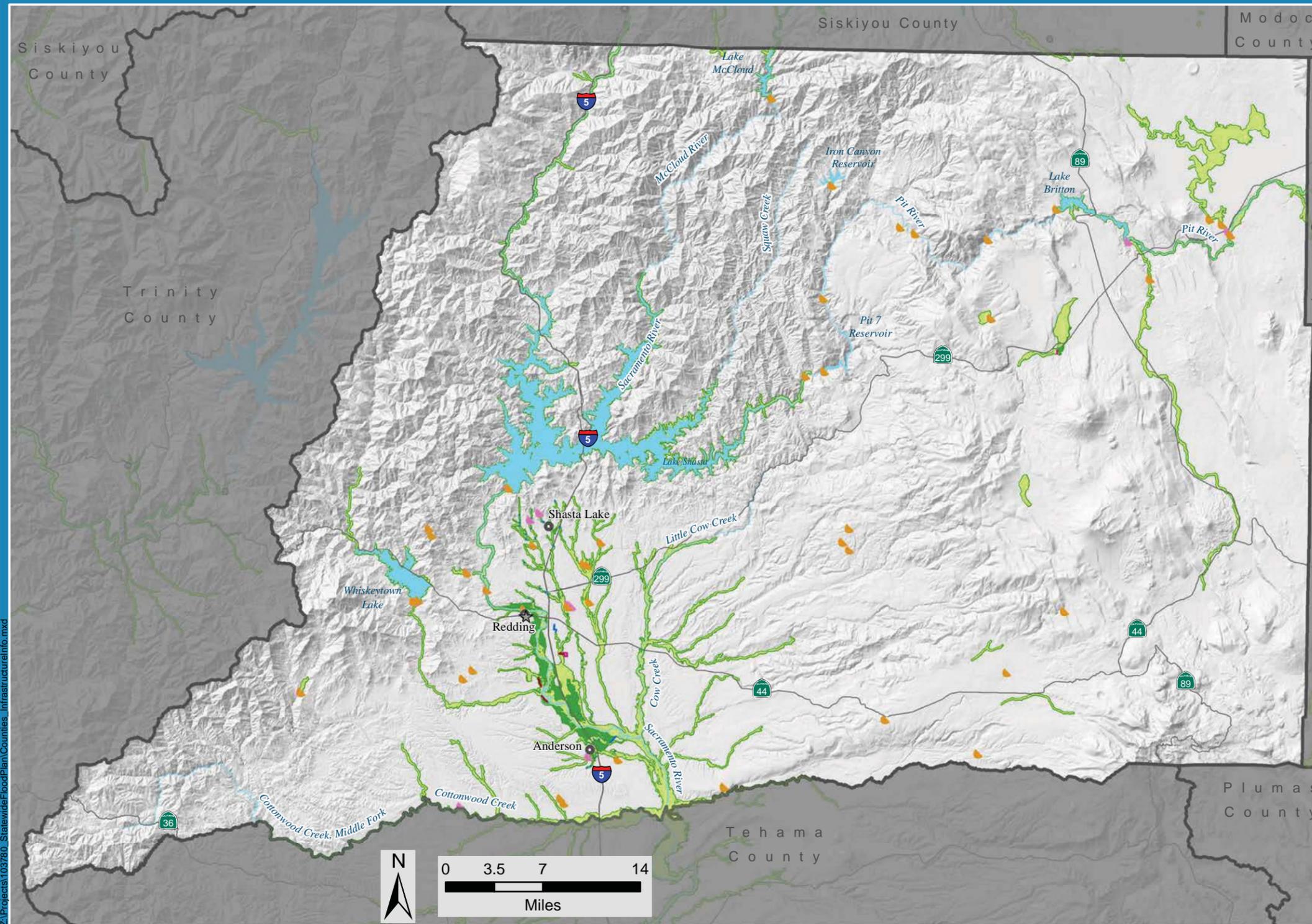
Figure D-89
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Shasta County

DRAFT Mar 22, 2013

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

Summary of Available Flood Infrastructure Information

Shasta 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
Dam

Agencies Contacted as Part of SFMP:
Shasta County Water Agency

Planned Projects:

Number of Local Projects:	3
Estimated Cost of Local Projects:	\$12.8 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.

Shasta County

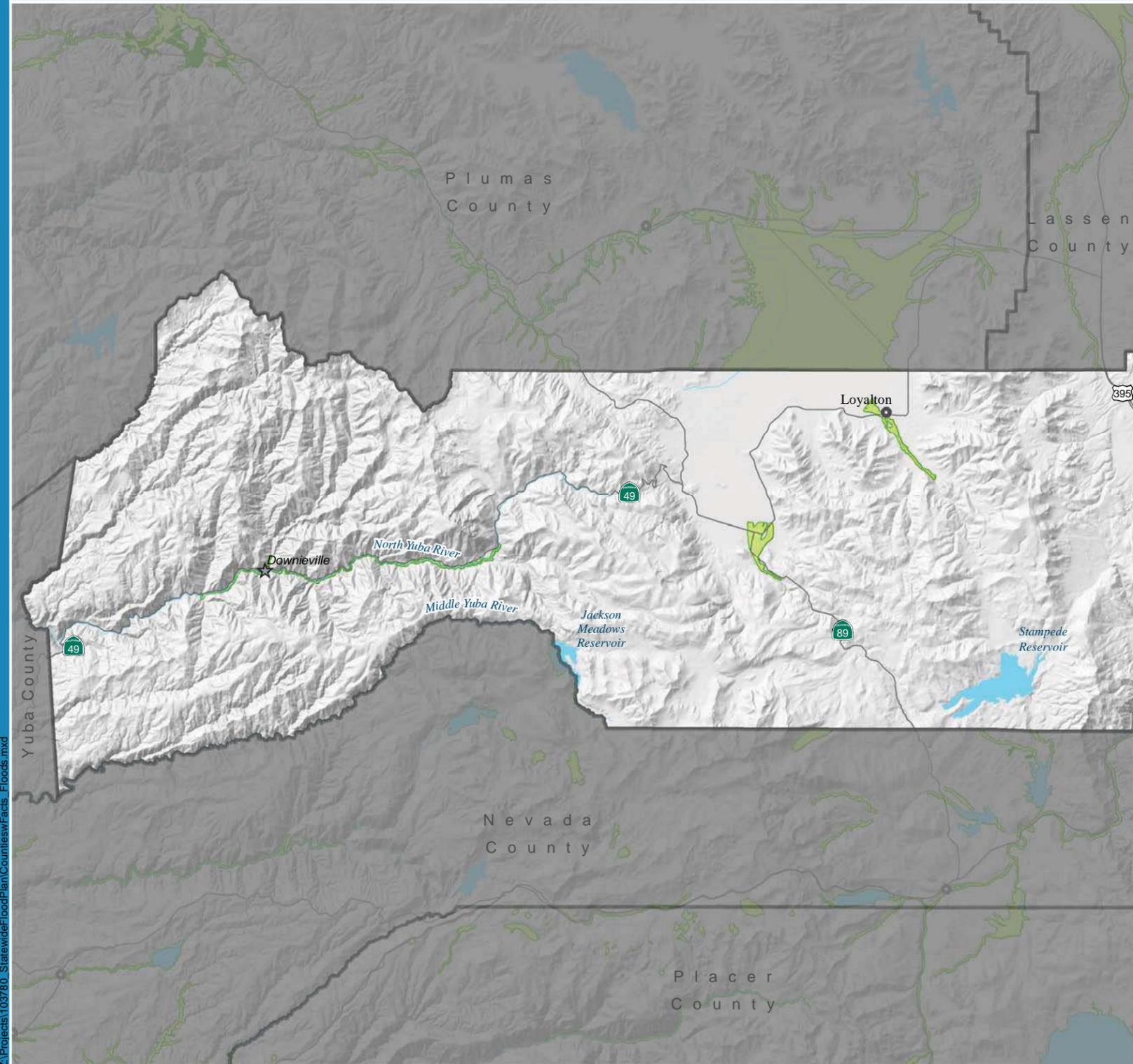
- Statewide GIS Data:**
- City
 - Populated Place
 - DWR Local Agency Dam
 - DWR Other Dam
 - NFHL Dam or Weir
 - CLD Pump Station
 - CLD Local Agency Levee
 - CLD Other Levee
 - NFHL Levee
 - NFHL Flood Event Structure
 - NFHL Channel
 - NFHL Control Structure
 - NFHL Dike
 - NFHL Retaining Wall
 -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

Figure D-90
Summary of Available Flood Infrastructure Information, Shasta County

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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
- 1942** January-February
- 1963** January-February
- 1964-1965** December-January, Northern California Christmas 1964 Disaster
- 1968-1969** December-January, Winter '69 Storms
- 1986** February, St. Valentine's Day Storm
- 1995** January-March, Severe Winter Storms, Sacramento River Basin
- 1996-1997** December-January
- 2006** March 29-April 1, May 10
- 2008** January 5-14, Winter Storms

Flood Hazard Exposure

County Statistics

Total Acreage:	615,317
Total Population:	3,556
Total Structures:	2,600
Total Value of Structures and Contents:	\$359.7 million
Total Agricultural Acreage:	19,257
Total Value of Crops:	\$1.1 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	2,002	2,002
Percent of Area Exposed:	0	0
Population Exposed:	373	373
Percent of Population Exposed:	10	10
Structures Exposed:	286	286
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$34.4 million	\$34.4 million
Exposed Crops (acres):	926	926
Value of Exposed Crops:	\$21,641	\$21,641
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	4	4
High Potential Loss Facilities Exposed:	0	0
Lifeline Utilities Exposed:	0	0
Transportation Facilities Exposed:	3	3
Transportation Segments Exposed (miles):	7	7
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	7	7
Total Sensitive Animal Species Exposed:	7	7

Sierra County

Types of Flooding

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

Hydrologic Regions



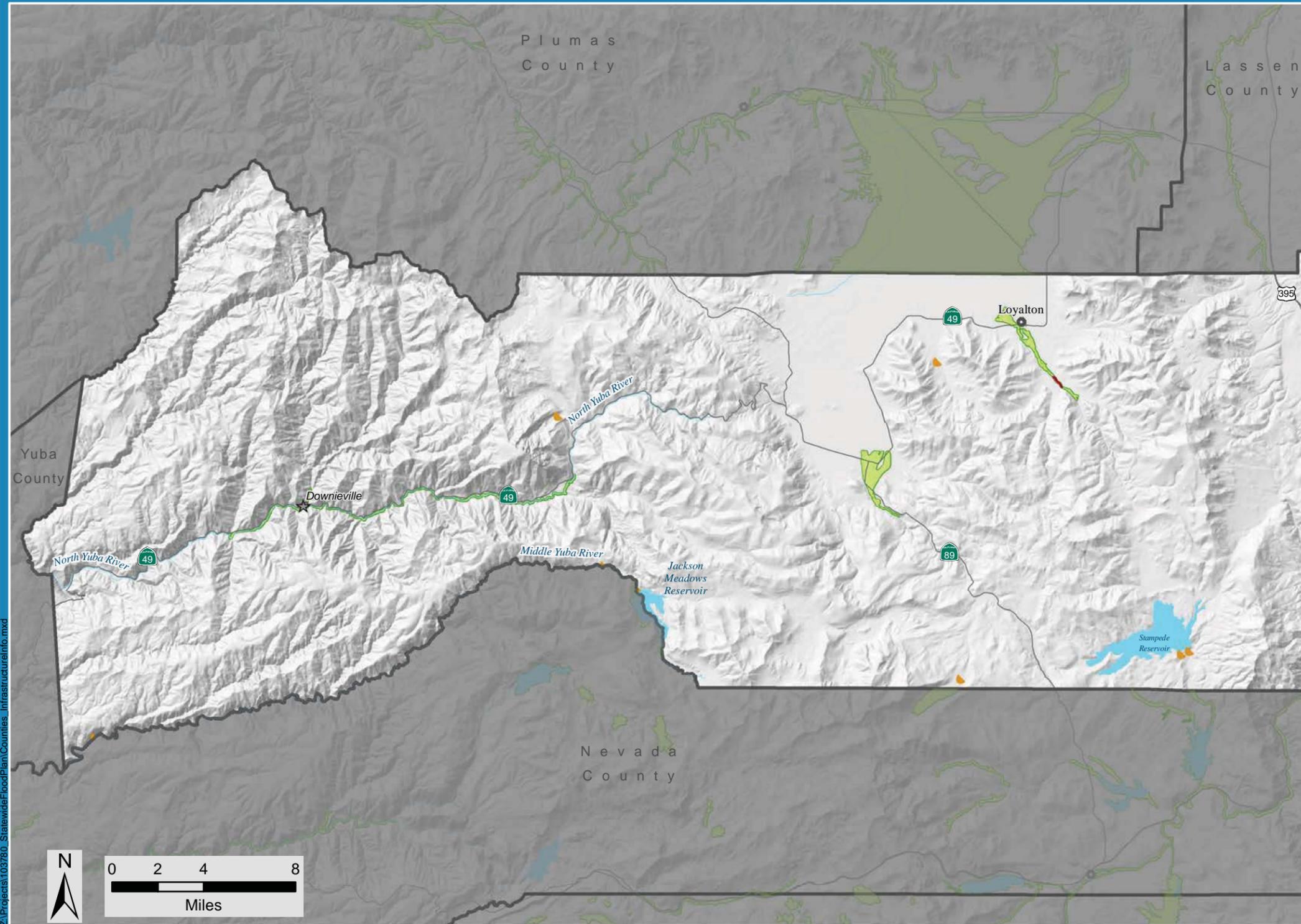
Figure D-91
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Sierra County

DRAFT Mar 22, 2013

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

Summary of Available Flood Infrastructure Information

Sierra 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:
Sierra 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.

Sierra County

Figure D-92
Summary of Available Flood Infrastructure Information, Sierra County

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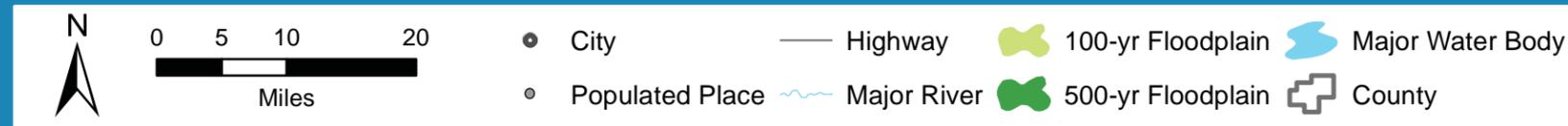
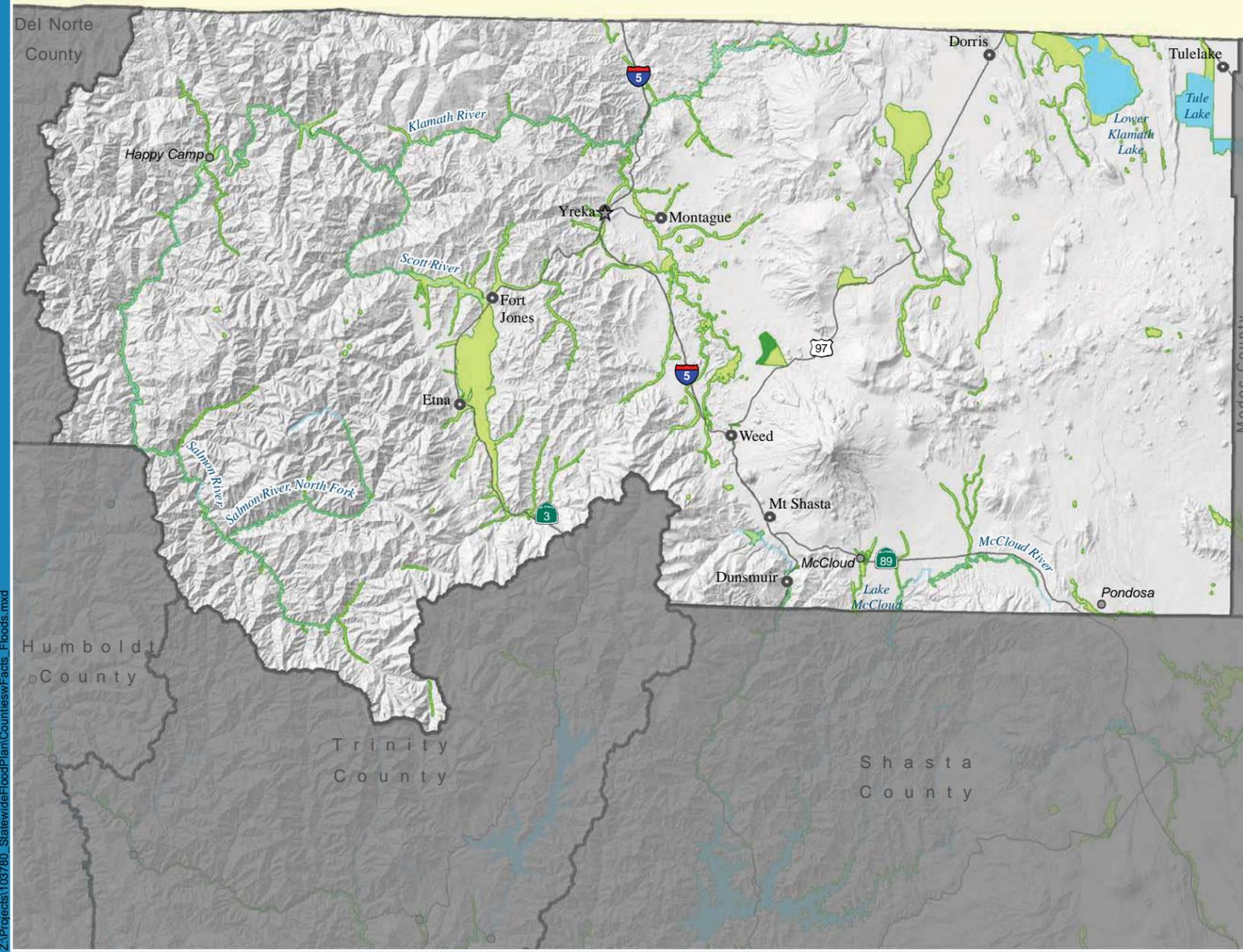
Mar 22, 2013

- 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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100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1861-1862 Winter, The Great Flood
- 1928 March
- 1955-1956 December-January, 1955 Christmas Flood, Klamath River
- 1962 October
- 1966 January, Countywide
- 1969-1970 December-March
- 1974 January-April,
- 1986 February, Klamath River
- 1993 January, Late Winter Storms
- 1995 January-March, Severe Winter Storms
- 1996-1997 December-January
- 2005-2006 December-January, New Year's Eve Flood of 2006

Flood Hazard Exposure

County Statistics

Total Acreage:	4.1 million
Total Population:	44,307
Total Structures:	28,100
Total Value of Structures and Contents:	\$3.4 billion
Total Agricultural Acreage:	177,899
Total Value of Crops:	\$174.9 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	135,198	138,319
Percent of Area Exposed:	3	3
Population Exposed:	3,877	5,797
Percent of Population Exposed:	9	13
Exposed Structures:	2,803	4,050
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$280.2 million	\$428.8 million
Exposed Crops (acres):	36,828	37,134
Value of Exposed Crops:	\$27.3 million	\$27.4 million
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	12	16
High Potential Loss Facilities Exposed:	7	7
Lifeline Utilities Exposed:	1	1
Transportation Facilities Exposed:	123	124
Transportation Segments Exposed (miles):	103	109
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	55	55
Total Sensitive Animal Species Exposed:	53	53

Types of Flooding

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

Hydrologic Regions



Figure D-93
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Siskiyou County

DRAFT Mar 22, 2013

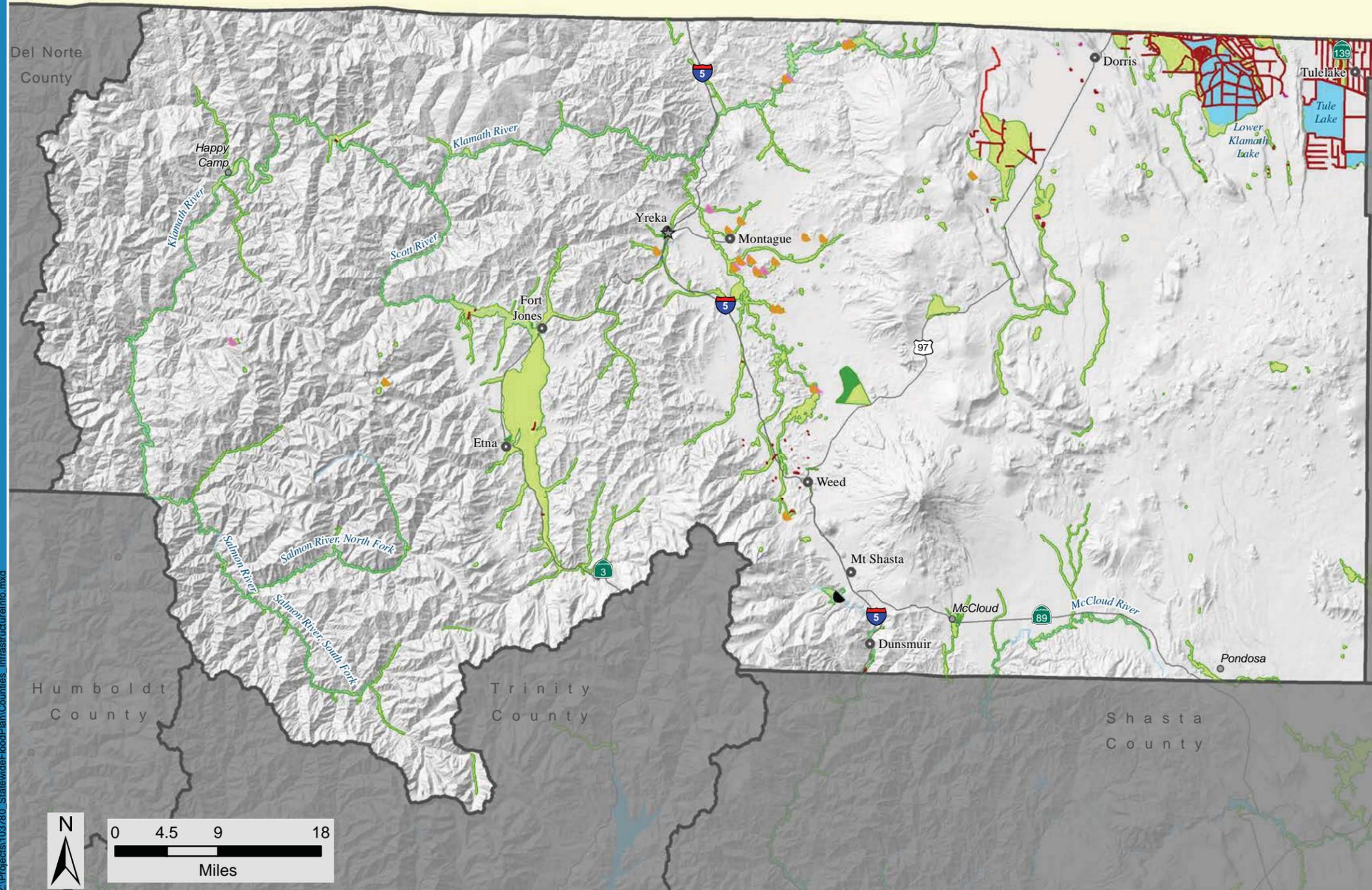
Siskiyou County

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

Summary of Available Flood Infrastructure Information

Siskiyou County

OREGON



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:
Siskiyou County
Town of McCloud

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.

Siskiyou County

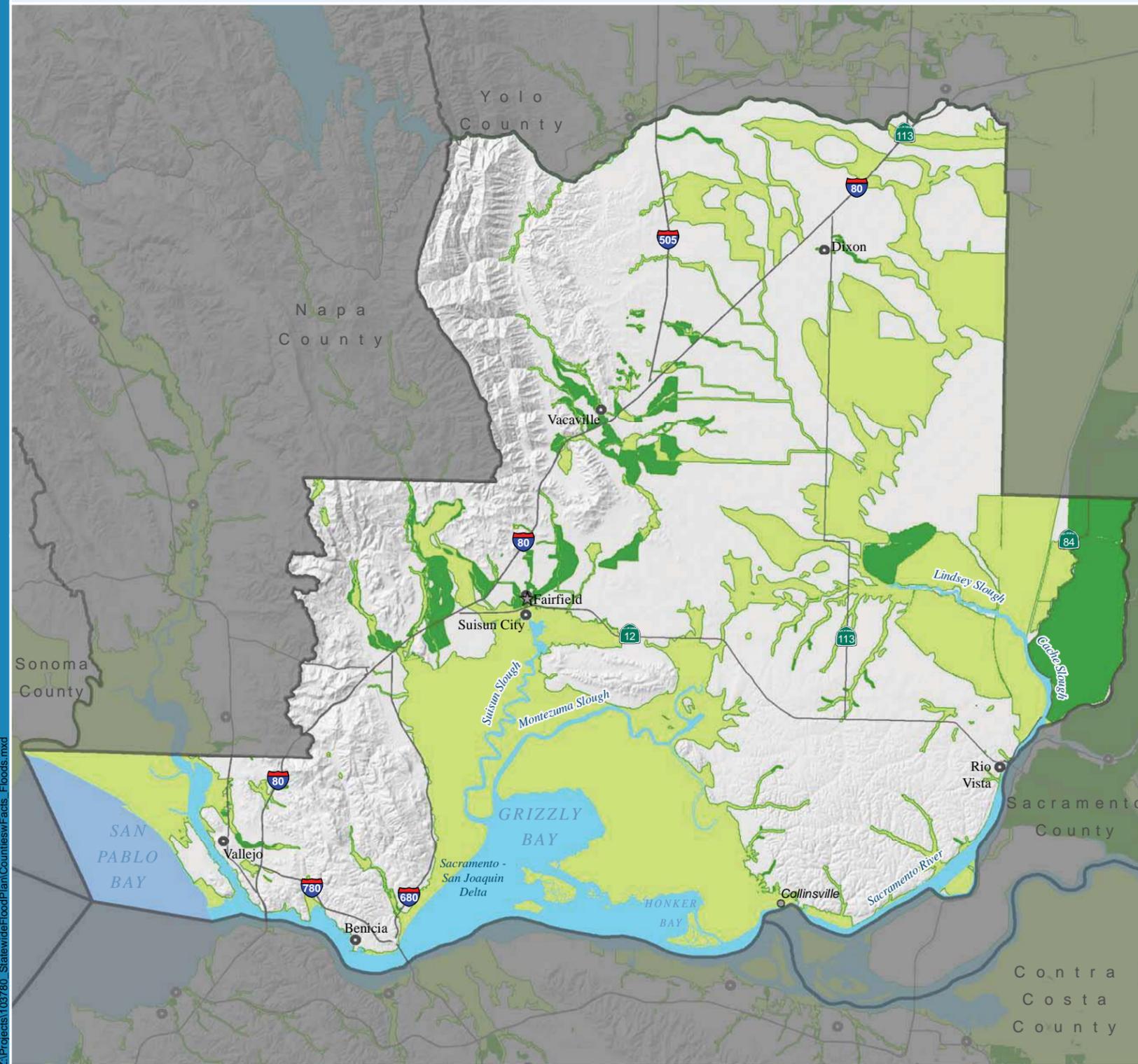
- Statewide GIS Data:**
- City
 - Populated Place
 - DWR Local Agency Dam
 - DWR Other Dam
 - NFHL Dam or Weir
 - CLD Pump Station
 - CLD Local Agency Levee
 - CLD Other Levee
 - NFHL Levee
 - NFHL Flood Event Structure
 - NFHL Channel
 - NFHL Control Structure
 - NFHL Dike
 - NFHL Retaining Wall
 -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

Figure D-94
Summary of Available Flood Infrastructure Information, Siskiyou County

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100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1861-1862 Winter, The Great Flood
- 1955-1956 December-January, 1955 Christmas Flood, Bay Area
- 1958 February-April, Bay Area
- 1962 October, Regional
- 1963 January-February, Northern and Central California (Sonoma to San Francisco)
- 1973 January-April, Coastal Flooding
- 1981-1982 November-April, Regional
- 1982-1983 December-March, Winter Storms, Countywide
- 1986 February, St. Valentine's Day Storm, The Floods of February 1986, San Pablo Bay
- 1995 January-March, Severe Winter Storms
- 2002 December, The Mills Lane Flood
- 2006 February-May, Spring Storm

Flood Hazard Exposure

County Statistics

Total Acreage:	582,369
Total Population:	395,264
Total Structures:	127,300
Total Value of Structures and Contents:	\$40.1 billion
Total Agricultural Acreage:	199,038
Total Value of Crops:	\$315.7 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	199,186	224,388
Percent of Area Exposed:	34	39
Population Exposed:	22,482	71,932
Percent of Population Exposed:	6	18
Structures Exposed:	7,156	23,094
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$2.5 billion	\$7.6 billion
Exposed Crops (acres):	53,418	71,989
Value of Exposed Crops:	\$95.4 million	\$133.9 million
Department of Defense Facilities Exposed:	2	2
Essential Facilities Exposed:	7	35
High Potential Loss Facilities Exposed:	2	4
Lifeline Utilities Exposed:	4	4
Transportation Facilities Exposed:	71	100
Transportation Segments Exposed (miles):	67	86
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	43	43
Total Sensitive Animal Species Exposed:	46	46

Solano County

Types of Flooding

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

Hydrologic Regions

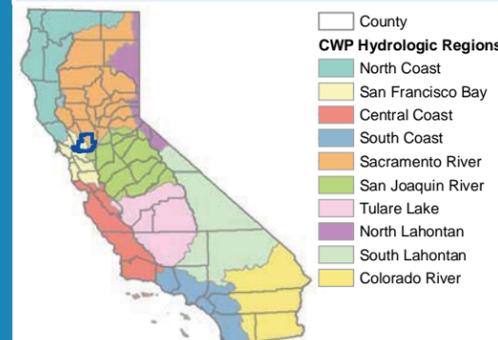


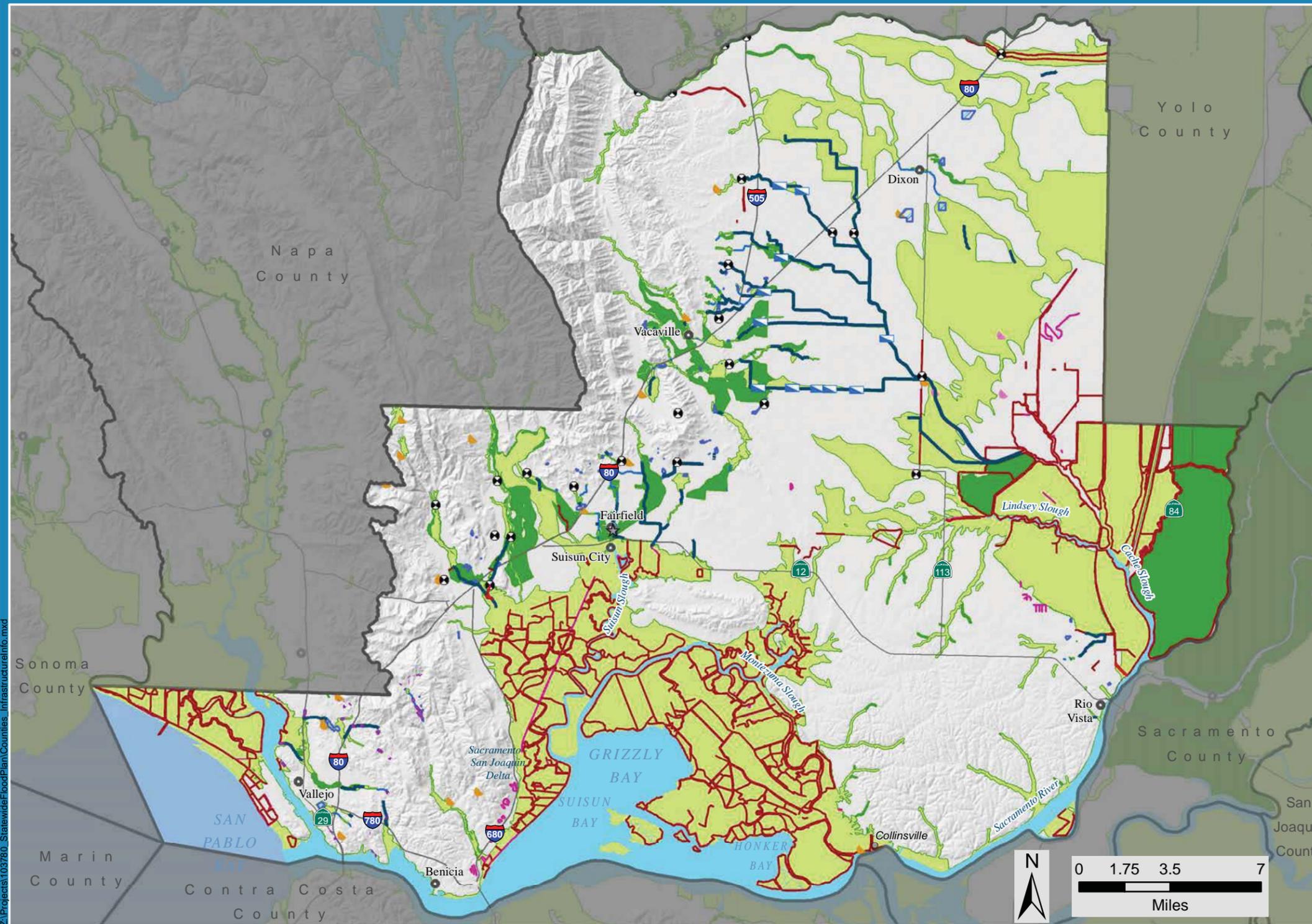
Figure D-95
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Solano County

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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

Solano County



Flood Infrastructure GIS Data Received from Agencies Contacted:

- Grade Control Point
- Telemetry Stations for Flood Control
- Mellin Levee
- Storm Drain
- Stream, Channelized for Flood Control
- Ulatis Flood Control Channel
- Stormwater Detention Basin

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:

Solano County Water Authority
Reclamation District 2068

Planned Projects:

Number of Local Projects:	4
Estimated Cost of Local Projects:	\$20.4 million
Number of USACE Projects:	3
Estimated Cost of USACE Projects:	\$211.8 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.

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Solano 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-96
Summary of Available Flood Infrastructure Information, Solano County

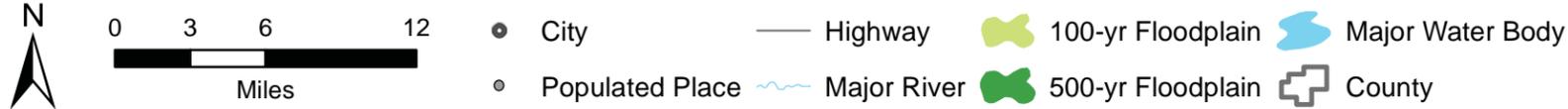
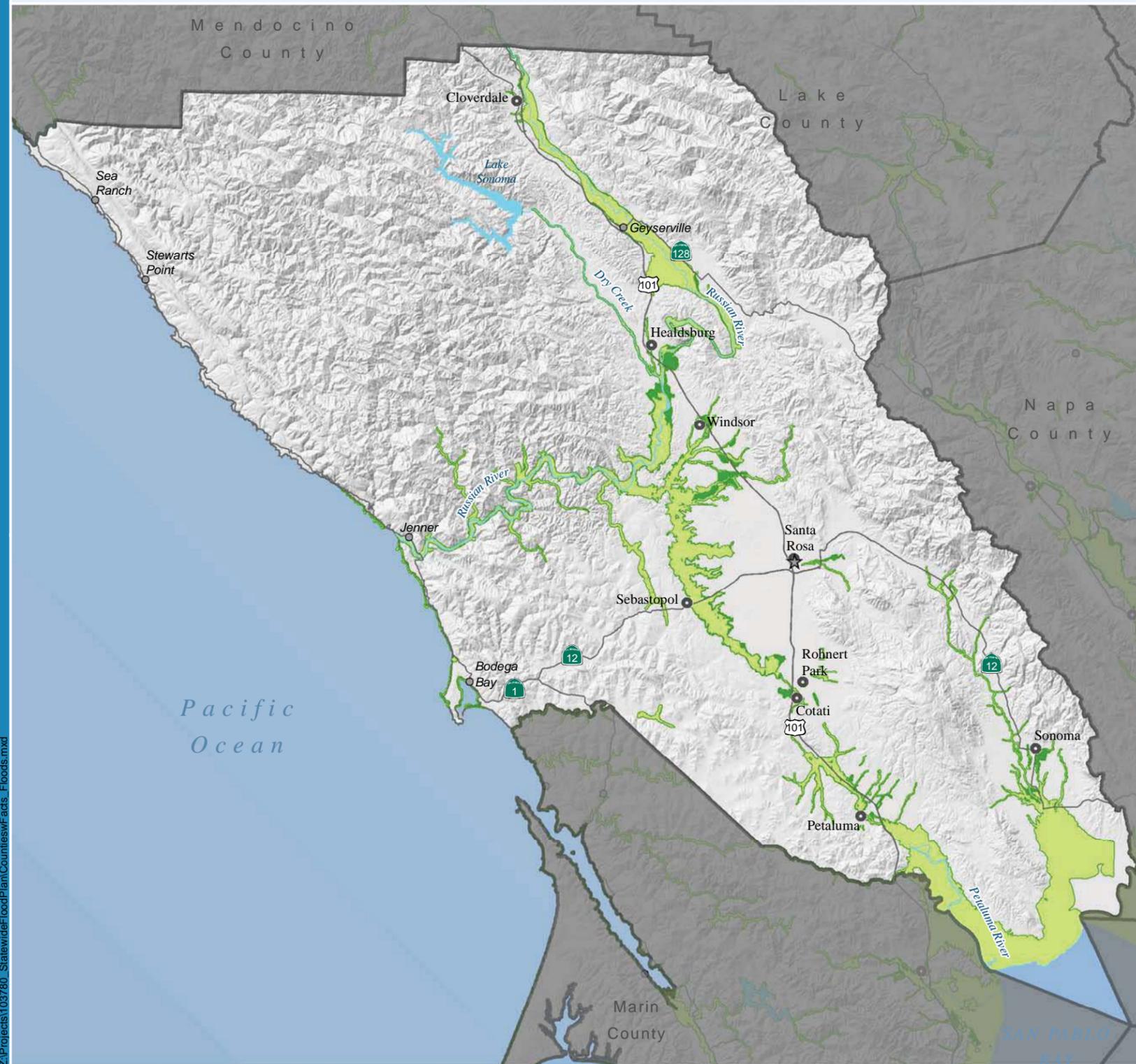
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Mar 22, 2013



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100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1861-1862** Winter, The Great Flood
- 1955-1956** December-January, 1955 Christmas Flood, Petaluma, Russian River
- 1958** February-April, Russian River
- 1963** January-February, Russian River
- 1964-1965** December-January, Northern California Christmas 1964 Disaster
- 1968-1969** December-February, Winter '69 Storms, Elk River, Gualala River
- 1974** March - April
- 1982** January-March, Petaluma River, San Francisco Bay Area
- 1982-1983** December-April, Winter Storms, Petaluma River, Countywide
- 1986** February, St. Valentine's Day Storm, Russian River Flood, Petaluma River, Russian River, Nathanson Creek, San Pablo Bay
- 1995** January-March, 1995 Christmas Flood, Petaluma River
- 2006** March 29 - April 1, May 10, Spring Storms

Flood Hazard Exposure

County Statistics

Total Acreage:	1.0 million
Total Population:	458,520
Total Structures:	183,400
Total Value of Structures and Contents:	\$55.7 billion
Total Agricultural Acreage:	93,700
Total Value of Crops:	\$28.8 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	58,498	63,726
Percent of Area Exposed:	6	6
Population Exposed:	15,037	22,425
Percent of Population Exposed:	3	5
Structures Exposed:	7,928	11,580
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$2.1 billion	\$3.3 billion
Exposed Crops (acres):	22,310	24,515
Value of Exposed Crops:	\$8.2 million	\$8.4 million
Department of Defense Facilities Exposed:	1	1
Essential Facilities Exposed:	8	14
High Potential Loss Facilities Exposed:	3	6
Lifeline Utilities Exposed:	1	3
Transportation Facilities Exposed:	114	130
Transportation Segments Exposed (miles):	64	73
Native American Tribal Land Exposed (acres):	9	9
Total Sensitive Plant Species Exposed:	62	62
Total Sensitive Animal Species Exposed:	38	38

Sonoma County

Types of Flooding

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

Hydrologic Regions

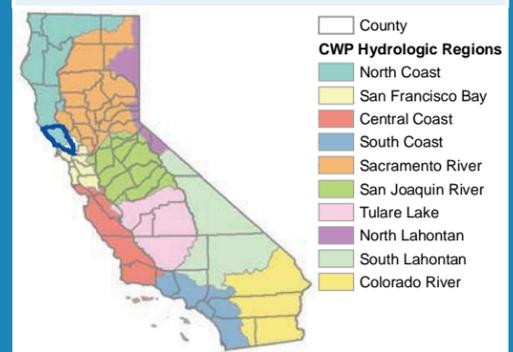


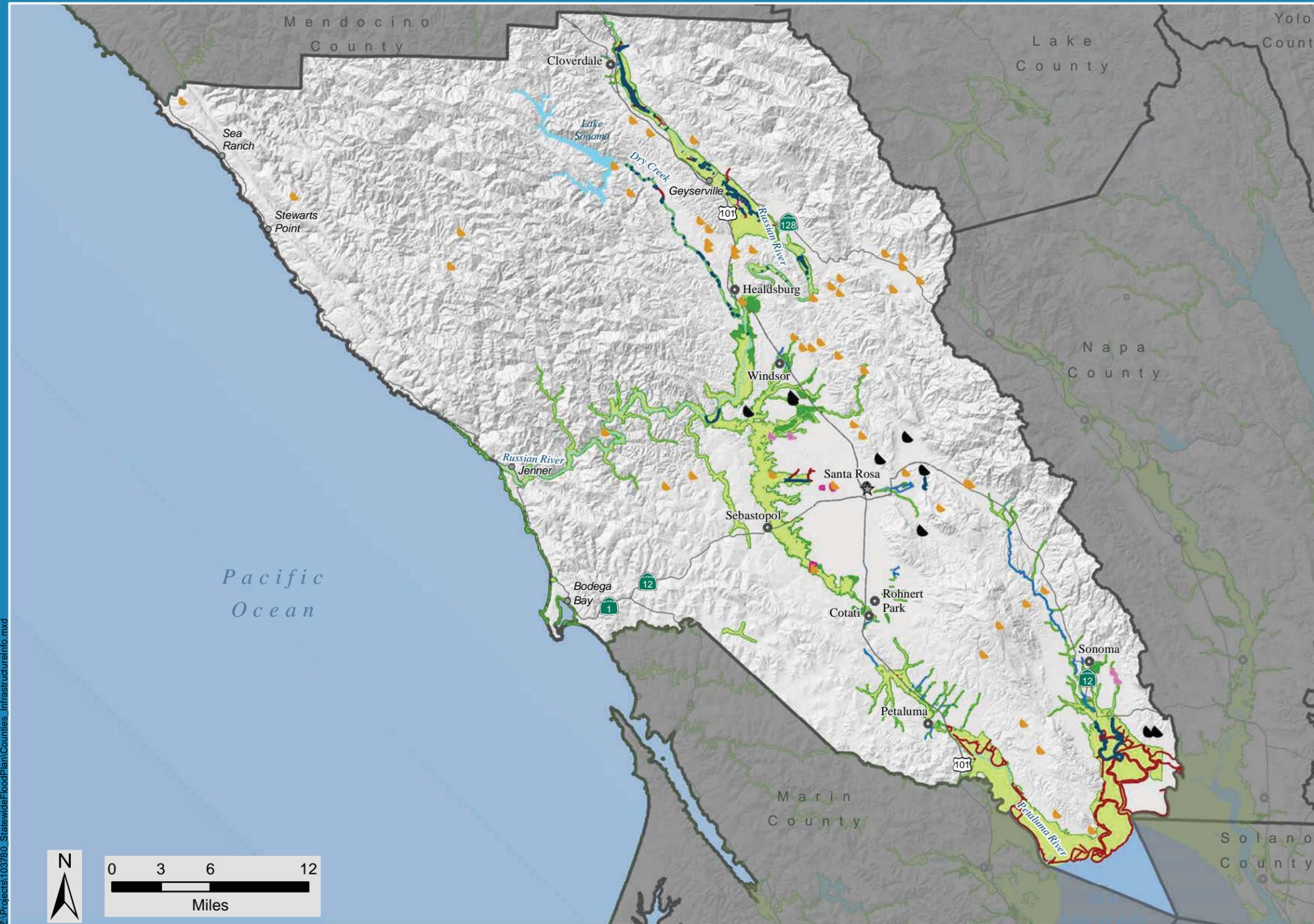
Figure D-97
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Sonoma County

DRAFT Mar 22, 2013

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

Summary of Available Flood Infrastructure Information

Sonoma County



Flood Infrastructure GIS Data Received from Agencies Contacted:

— Channel Improvement

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:
Sonoma County Water Agency

Planned Projects:

Number of Local Projects:	9
Estimated Cost of Local Projects:	\$83.8 million
Number of USACE Projects:	1
Estimated Cost of USACE Projects:	\$46.1 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.

Sonoma County

Statewide GIS Data:

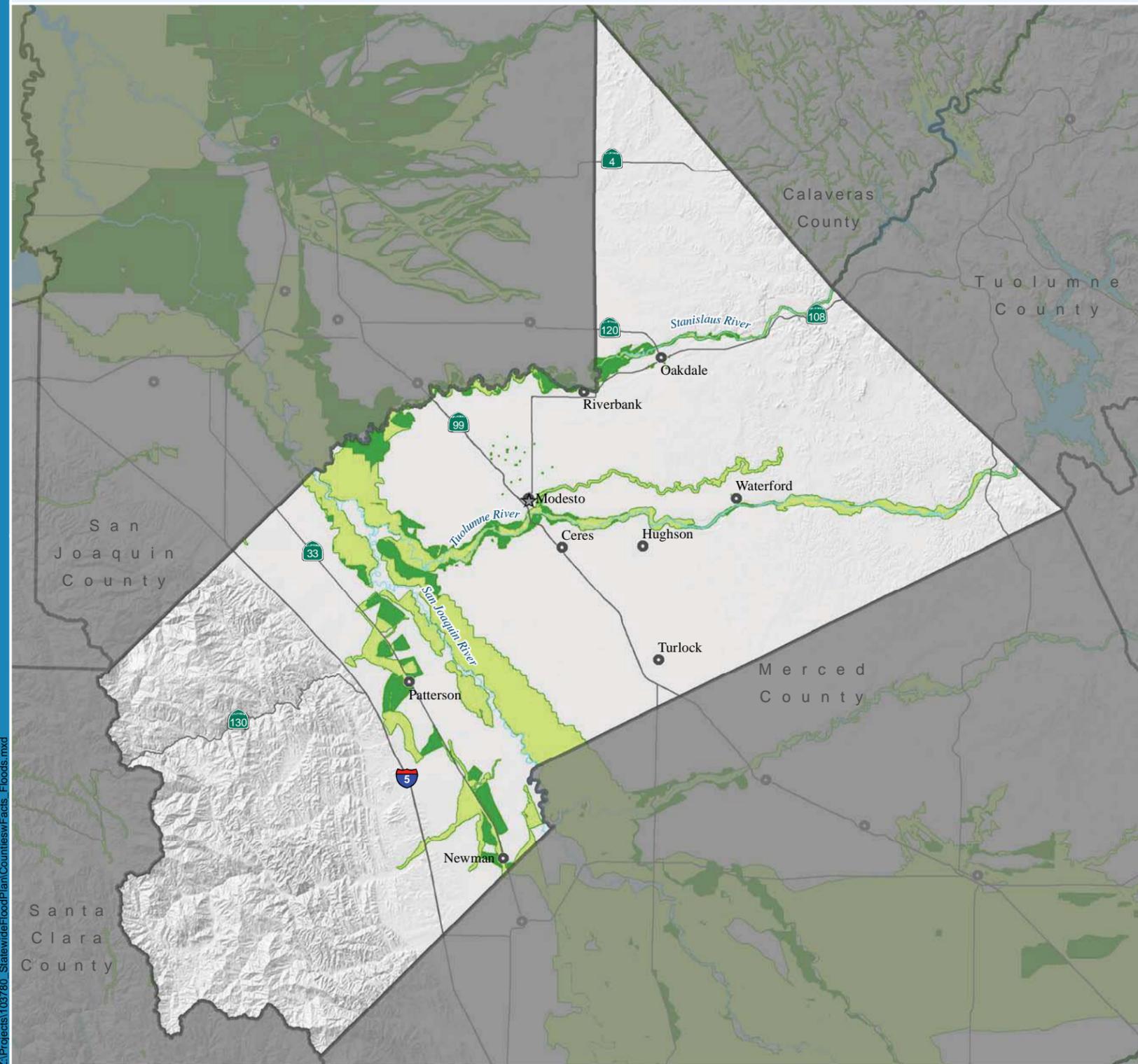
● City	● DWR Local Agency Dam	PS CLD Pump Station	~ NFHL Levee	~ NFHL Control Structure	— Highway	100-yr Floodplain
○ Populated Place	● DWR Other Dam	~ CLD Local Agency Levee	~ NFHL Flood Event Structure	~ NFHL Dike	~ Major River	500-yr Floodplain
	● NFHL Dam or Weir	~ CLD Other Levee	~ NFHL Channel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

Figure D-98
Summary of Available Flood Infrastructure Information, Sonoma County

DRAFT Mar 22, 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
- 1868** March
- 1909** San Joaquin River
- 1955-1956** December - January, 1955 Christmas Flood, Stanislaus River
- 1958** April-July
- 1962-1963** December-February
- 1964-1965** December-January, Northern California Christmas 1964 Disaster
- 1968-1969** December-February, Winter '69 Storms, Klamath River Basin
- 1980** January-February, Countywide
- 1995** January-April, 1995 Christmas Flood
- 1997** January, Countywide
- 2006** March 29 - April 1, May 10, Spring Storms

Flood Hazard Exposure

County Statistics

Total Acreage:	970,172
Total Population:	447,034
Total Structures:	151,500
Total Value of Structures and Contents:	\$38.8 billion
Total Agricultural Acreage:	376,858
Total Value of Crops:	\$857.3 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	61,984	81,320
Percent of Area Exposed:	6	8
Population Exposed:	14,544	36,621
Percent of Population Exposed:	3	8
Structures Exposed:	3,879	10,434
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$802.2 million	\$2.2 billion
Exposed Crops (acres):	40,331	54,493
Value of Exposed Crops	\$54.4 million	\$91.8 million
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	6	23
High Potential Loss Facilities Exposed:	1	1
Lifeline Utilities Exposed:	1	1
Transportation Facilities Exposed:	37	51
Transportation Segments Exposed (miles):	29	40
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	19	19
Total Sensitive Animal Species Exposed:	34	34

Stanislaus County

Types of Flooding

- | | |
|----------------|------------------------------|
| Likely: | Present: |
| Slow Rise | Engineered Structure Failure |
| Stormwater | |
| Flash | |

Hydrologic Regions



Figure D-99
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Stanislaus County

DRAFT

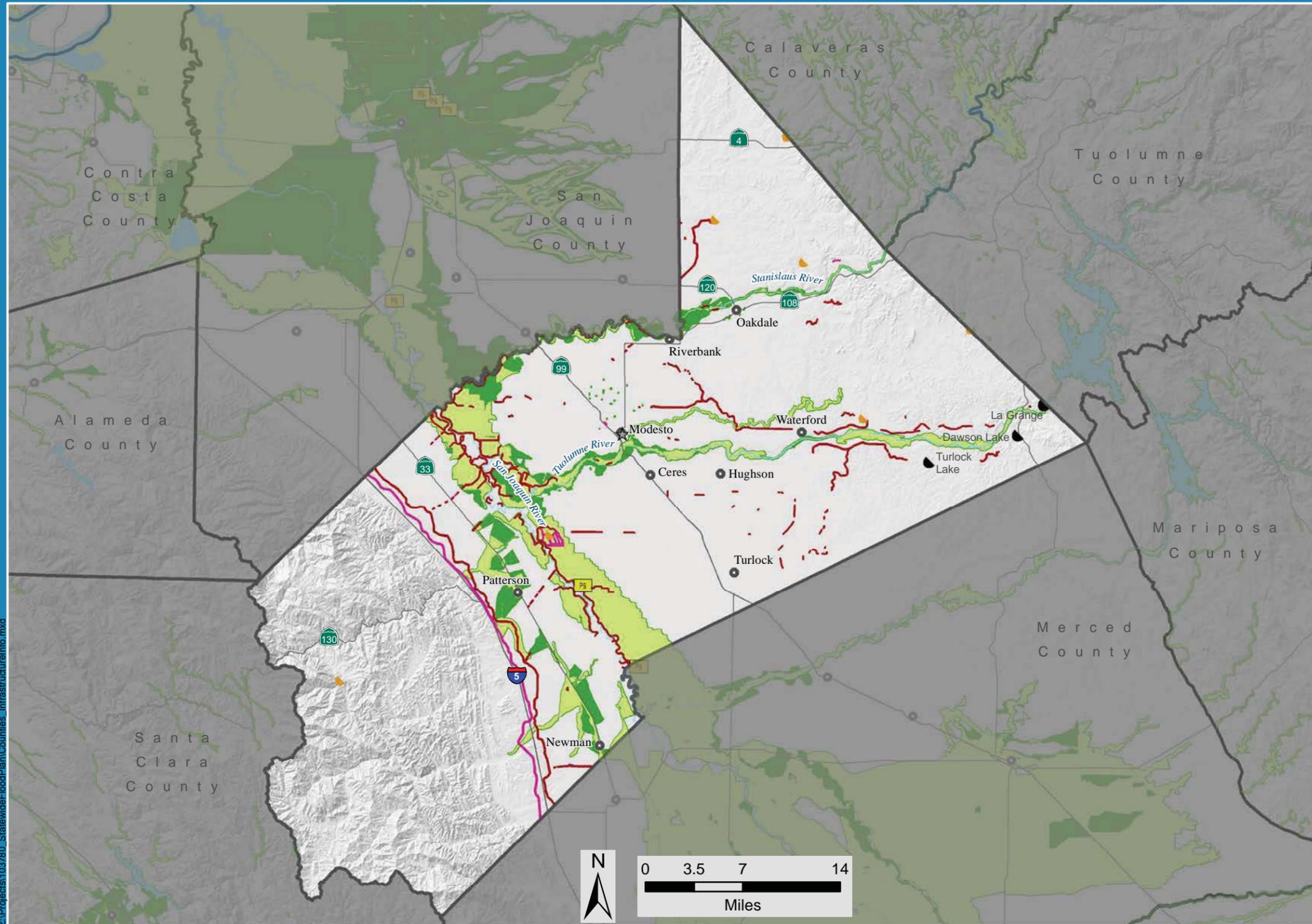
Mar 22, 2013



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

Summary of Available Flood Infrastructure Information

Stanislaus 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):
Canal
Channel

Agencies Contacted as Part of SFMP:
Stanislaus County Public Works
Turlock Irrigation District

Planned Projects:

Number of Local Projects:	6
Estimated Cost of Local Projects:	\$30.2 million
Number of USACE Projects:	1
Estimated Cost of USACE Projects:	\$3.7 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.

Stanislaus County

Statewide GIS Data:

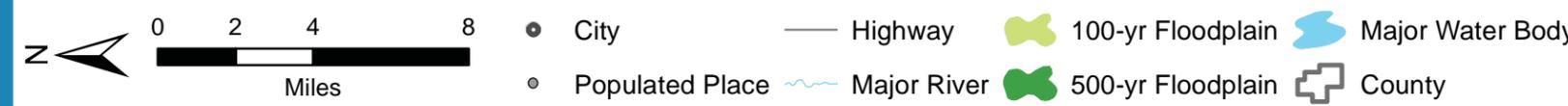
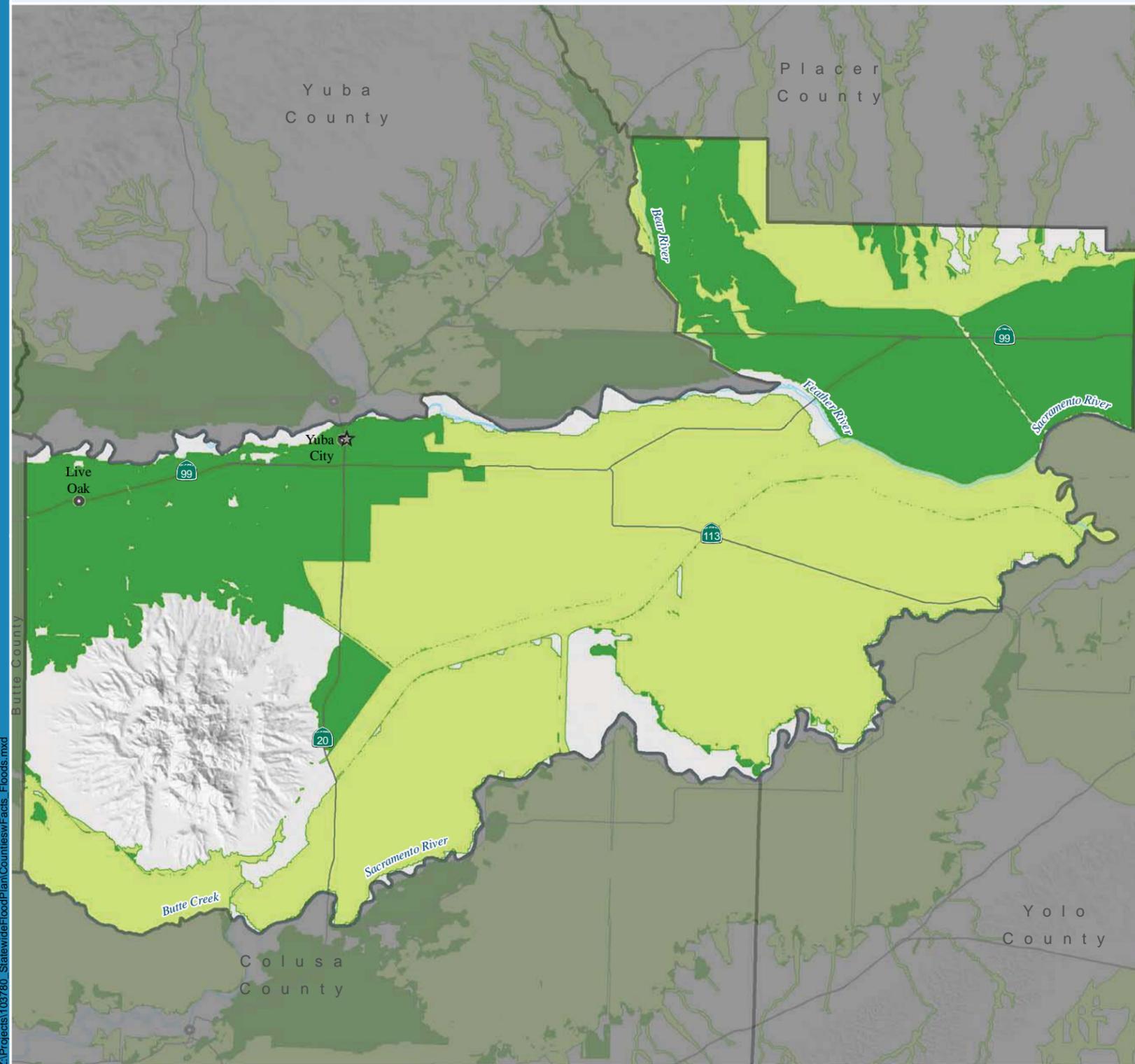
● City	● DWR Local Agency Dam	PS CLD Pump Station	~ NFHL Levee	~ NFHL Control Structure	— Highway	100-yr Floodplain
○ Populated Place	● DWR Other Dam	~ CLD Local Agency Levee	~ NFHL Flood Event Structure	~ NFHL Dike	~ Major River	500-yr Floodplain
	~ NFHL Dam or Weir	~ CLD Other Levee	~ NFHL Channel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

Figure D-100
Summary of Available Flood Infrastructure Information, Stanislaus County

DRAFT Mar 22, 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
- 1950-1951 November-January
- 1955-1956 1955 Christmas Flood
- 1958 February-April
- 1962 October
- 1962-1963 December-February
- 1964-1965 December-January, Northern California Christmas 1964 Disaster
- 1971 June-August
- 1973 January-April
- 1982-1983 December-March, Winter Storms
- 1986 February, Yuba River - Linda
- 1995 January-March, Severe Winter Storms Sacramento River Basin
- 1996-1997 December-January
- 2006 February 3
- 2008 January 5-14, Winter Storms

Flood Hazard Exposure

County Statistics

Total Acreage:	389,310
Total Population:	78,927
Total Structures:	28,500
Total Value of Structures and Contents:	\$7.3 billion
Total Agricultural Acreage:	282,471
Total Value of Crops:	\$394.2 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	194,962	308,438
Percent of Area Exposed:	50	79
Population Exposed:	6,173	74,432
Percent of Population Exposed:	8	94
Structures Exposed:	2,132	26,158
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$405.7 million	\$5.1 billion
Exposed Crops (acres):	164,273	256,273
Value of Exposed Crops:	\$218.8 million	\$343.2 million
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	8	56
High Potential Loss Facilities Exposed:	1	2
Lifeline Utilities Exposed:	3	7
Transportation Facilities Exposed:	51	98
Transportation Segments Exposed (miles):	57	127
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	6	9
Total Sensitive Animal Species Exposed:	18	21

Sutter County

Types of Flooding

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

Hydrologic Regions



Figure D-101
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Sutter County

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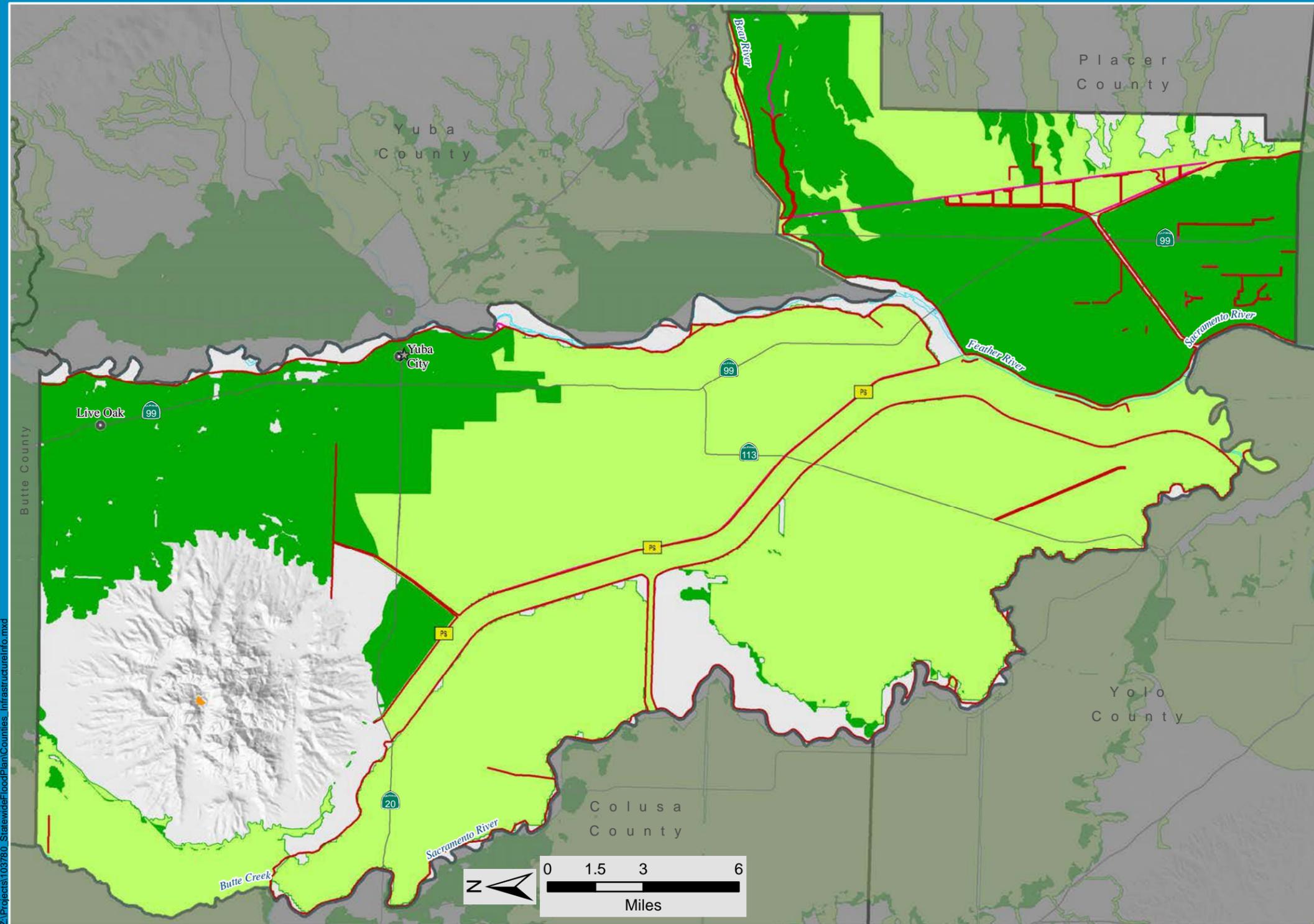
Mar 22, 2013



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

Summary of Available Flood Infrastructure Information

Sutter 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):
Levees
Channel
Pump Station
Detention Basin

Agencies Contacted as Part of SFMP:
Sutter County
Sutter Butte Flood Control Agency

Planned Projects:

Number of Local Projects:	9
Estimated Cost of Local Projects:	\$197.8 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.

Sutter County

- 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

Figure D-102
Summary of Available Flood Infrastructure Information, Sutter County

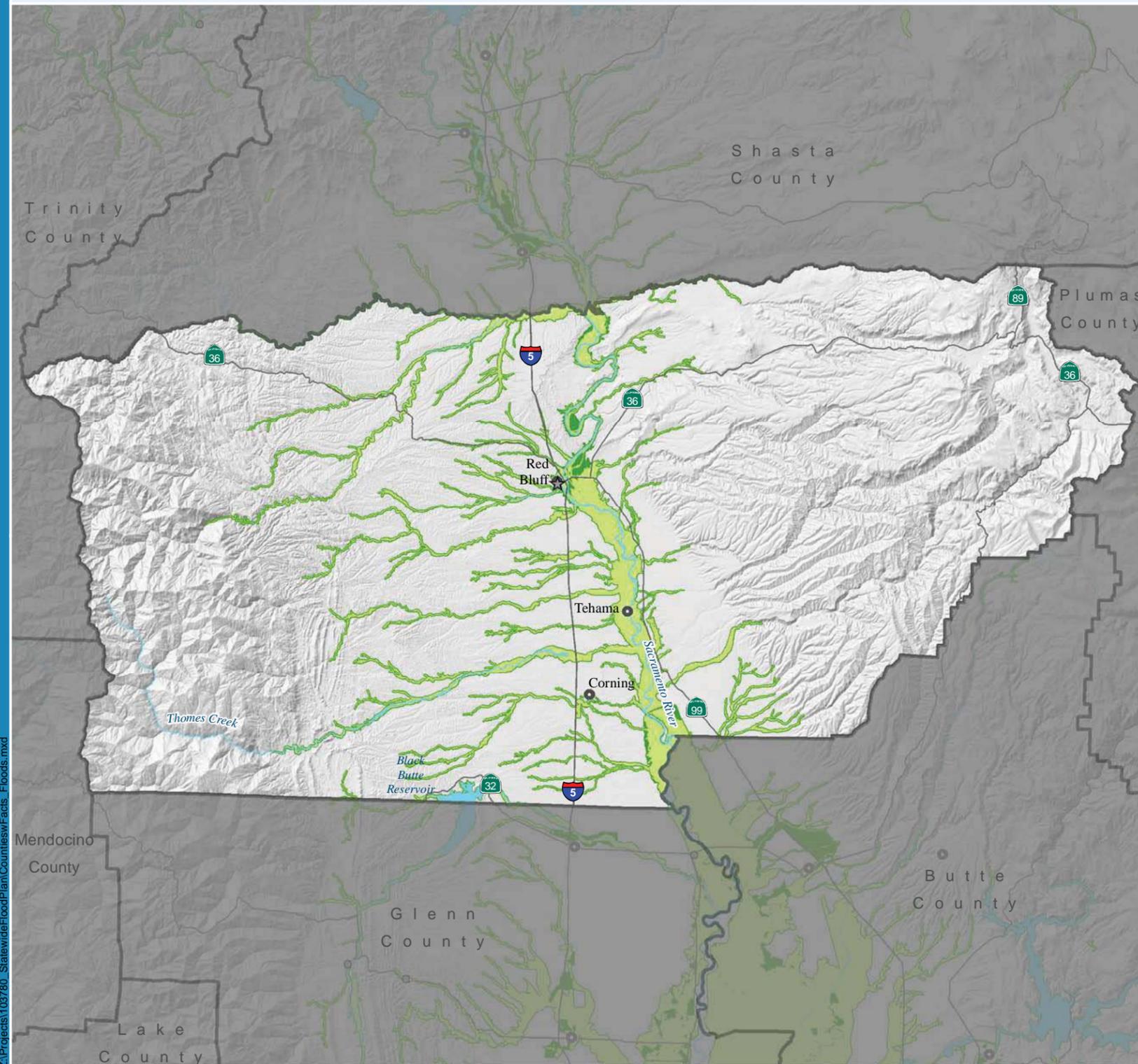
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Mar 22, 2013



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



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

Selected Flood Events by Event Year

- 1861-1862** Winter, The Great Flood
- 1955-1956** 1955 Christmas Flood
- 1962-1963** December-February
- 1964-1965** December-January, Northern California Christmas 1964 Disaster, Sacramento River Basin
- 1969-1970** December-March, Winter '69 Storms, Sacramento River Basin
- 1982-1983** December-March, Winter Storms, Sacramento River Basin
- 1986** February, St. Valentine's Day Storm
- 1995** January-March, Severe Winter Storms, Sacramento River Basin
- 1996-1997** December-January

Flood Hazard Exposure

County Statistics

Total Acreage:	1.9 million
Total Population:	56,050
Total Structures:	25,500
Total Value of Structures and Contents:	\$4.1 billion
Total Agricultural Acreage:	112,353
Total Value of Crops:	\$166.9 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	86,788	90,325
Percent of Area Exposed:	5	5
Population Exposed:	8,094	11,317
Percent of Population Exposed:	14	20
Structures Exposed:	3,829	5,325
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$625.0 million	\$887.7 million
Exposed Crops (acres):	24,274	25,859
Value of Exposed Crops:	\$62.3 million	\$66.2 million
Department of Defense Facilities Exposed:	1	1
Essential Facilities Exposed:	5	6
High Potential Loss Facilities Exposed:	4	4
Lifeline Utilities Exposed:	2	2
Transportation Facilities Exposed:	130	135
Transportation Segments Exposed (miles):	32	35
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	20	20
Total Sensitive Animal Species Exposed:	35	35

Tehama County

Types of Flooding

- | | |
|----------------|------------------------------|
| Likely: | Present: |
| Slow Rise | Alluvial Fan |
| Flash | Engineered Structure Failure |
| Stormwater | |

Hydrologic Regions



Figure D-103
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Tehama County

DRAFT

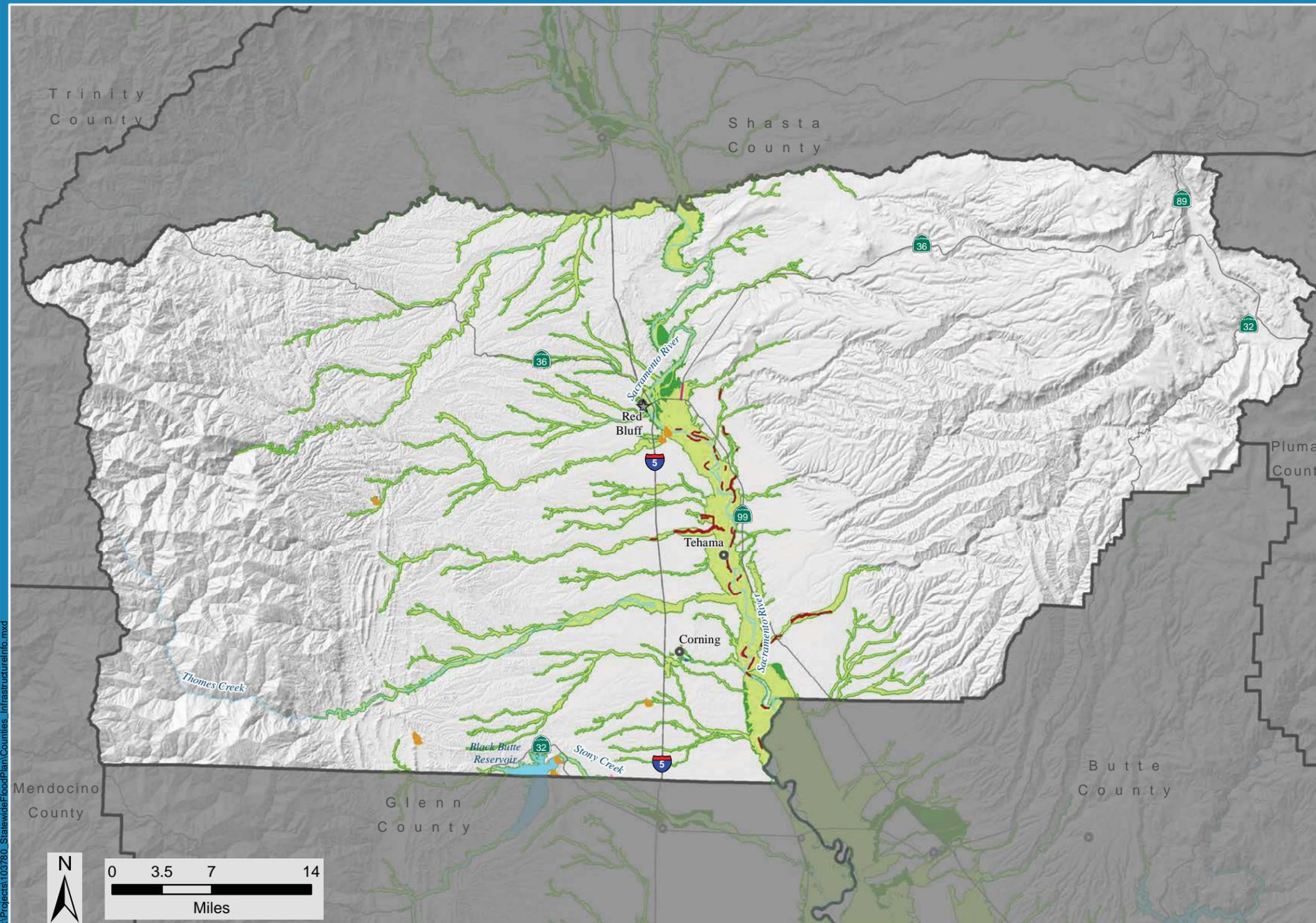
Mar 22, 2013



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

Summary of Available Flood Infrastructure Information

Tehama 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:
Tehama County Flood Control and Water Conservation District
City of Corning
City of Red Bluff
Gerber Las Flores Community Services District

Planned Projects:
Number of Local Projects: 6
Estimated Cost of Local Projects: \$6.8 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.

Tehama County

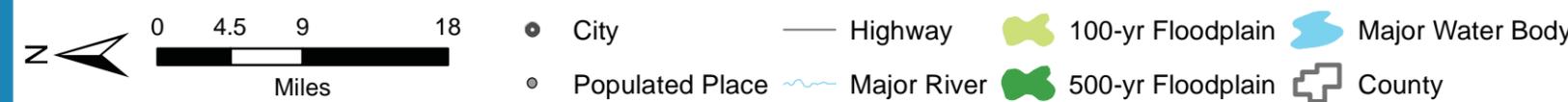
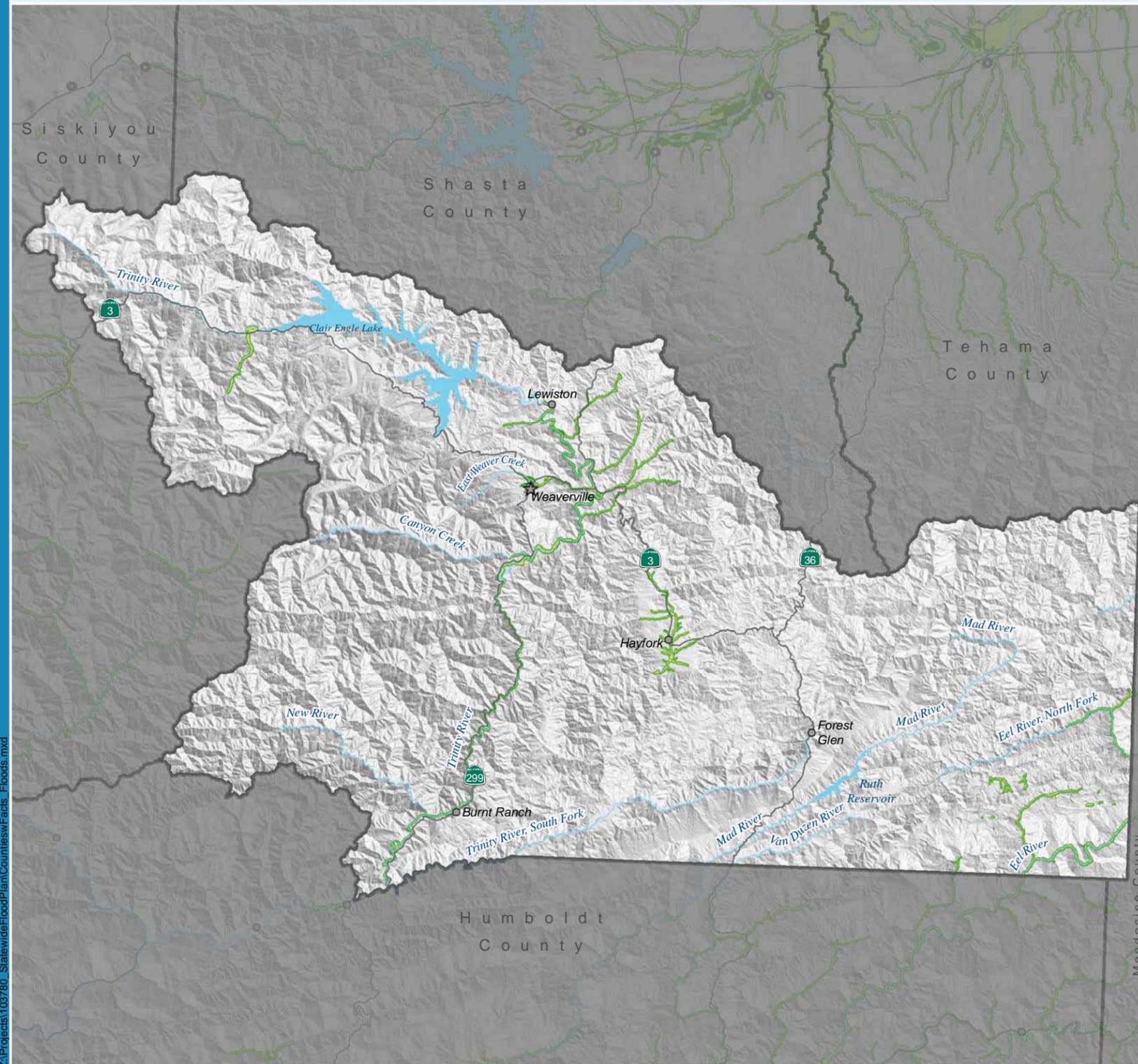
Figure D-104
Summary of Available Flood Infrastructure Information, Tehama County

DRAFT Mar 22, 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
- 1953 January, Mad River
- 1955-1956 December-January, 1955 Christmas Flood, Mad River, Trinity River
- 1962 October
- 1964 January
- 1964 December-January, Northern California Christmas 1964 Disaster, Mad River
- 1969-1970 December-March, Countywide
- 1974 January
- 1982-1983 December-April, Winter Storms
- 1986 February, Trinity River
- 1995 January-March, Severe Winter Storms
- 1996-1997 December-January
- 2005-2006 December-January, New Year's Eve Flood of 2006
- 2006 March 29-April 1, May 10

Flood Hazard Exposure

County Statistics

Total Acreage:	2.1 million
Total Population:	13,021
Total Structures:	8,500
Total Value of Structures and Contents:	\$1.1 billion
Total Agricultural Acreage:	2,751
Total Value of Crops:	\$1.1 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	10,285	10,862
Percent of Area Exposed:	1	1
Population Exposed:	967	1,149
Percent of Population Exposed:	7	9
Structures Exposed:	610	725
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$81.7 million	\$98.8 million
Exposed Crops (acres):	217	264
Value of Exposed Crops:	\$17,877	\$18,969
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	8	9
High Potential Loss Facilities Exposed:	1	1
Lifeline Utilities Exposed:	0	0
Transportation Facilities Exposed:	13	17
Transportation Segments Exposed (miles):	21	21
Native American Tribal Land Exposed (acres):	27	27
Total Sensitive Plant Species Exposed:	11	11
Total Sensitive Animal Species Exposed:	19	19

Trinity County

Types of Flooding

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

Hydrologic Regions



Figure D-105
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Trinity County

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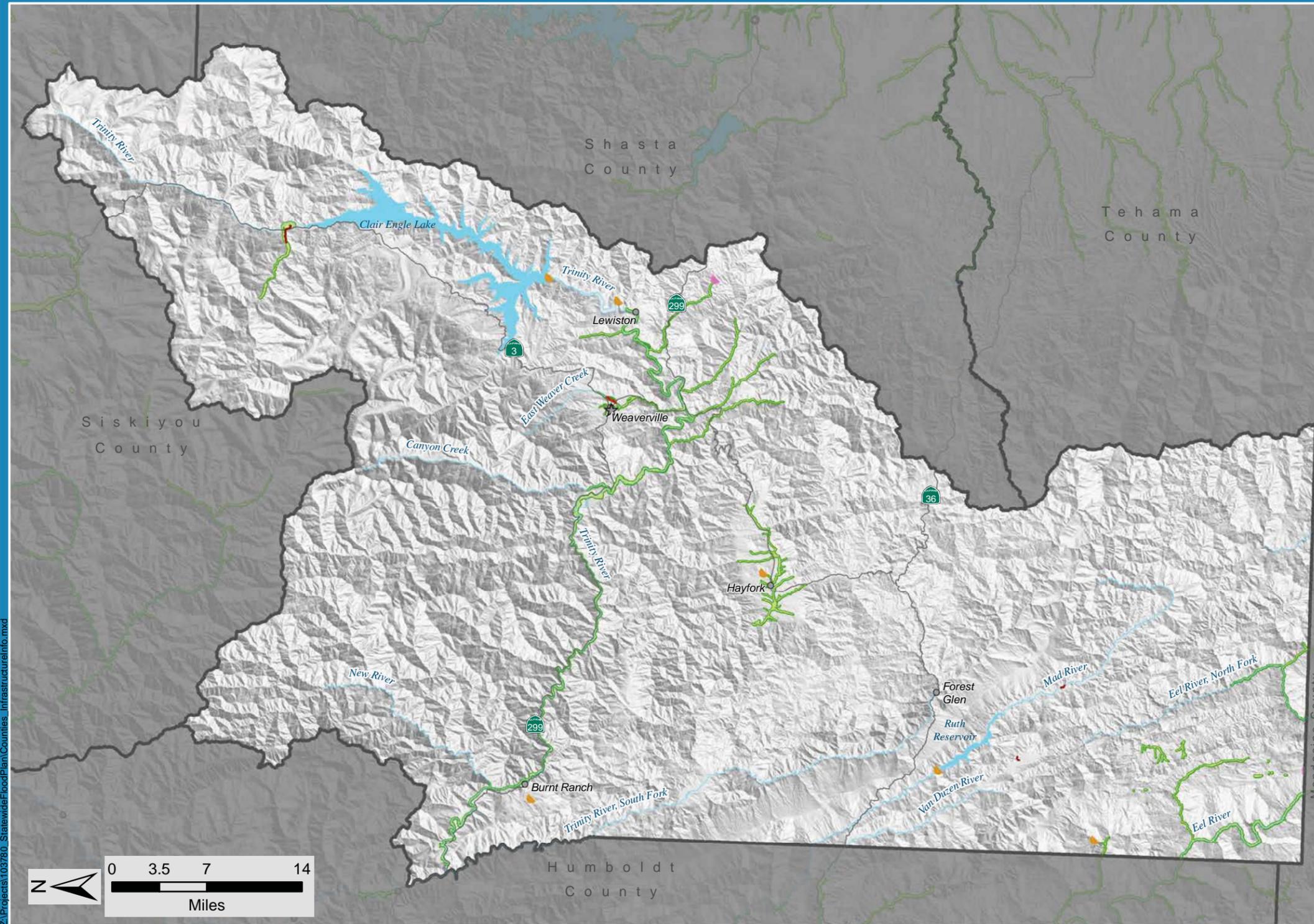
Mar 22, 2013



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

Summary of Available Flood Infrastructure Information

Trinity 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:
Trinity County Planning Department
Trinity County Department of Transportation
Trinity River Restoration Program

Planned Projects:

Number of Local Projects:	2
Estimated Cost of Local Projects:	n/a
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-106
Summary of Available Flood Infrastructure Information, Trinity County

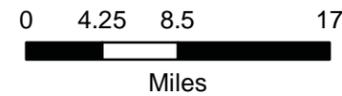
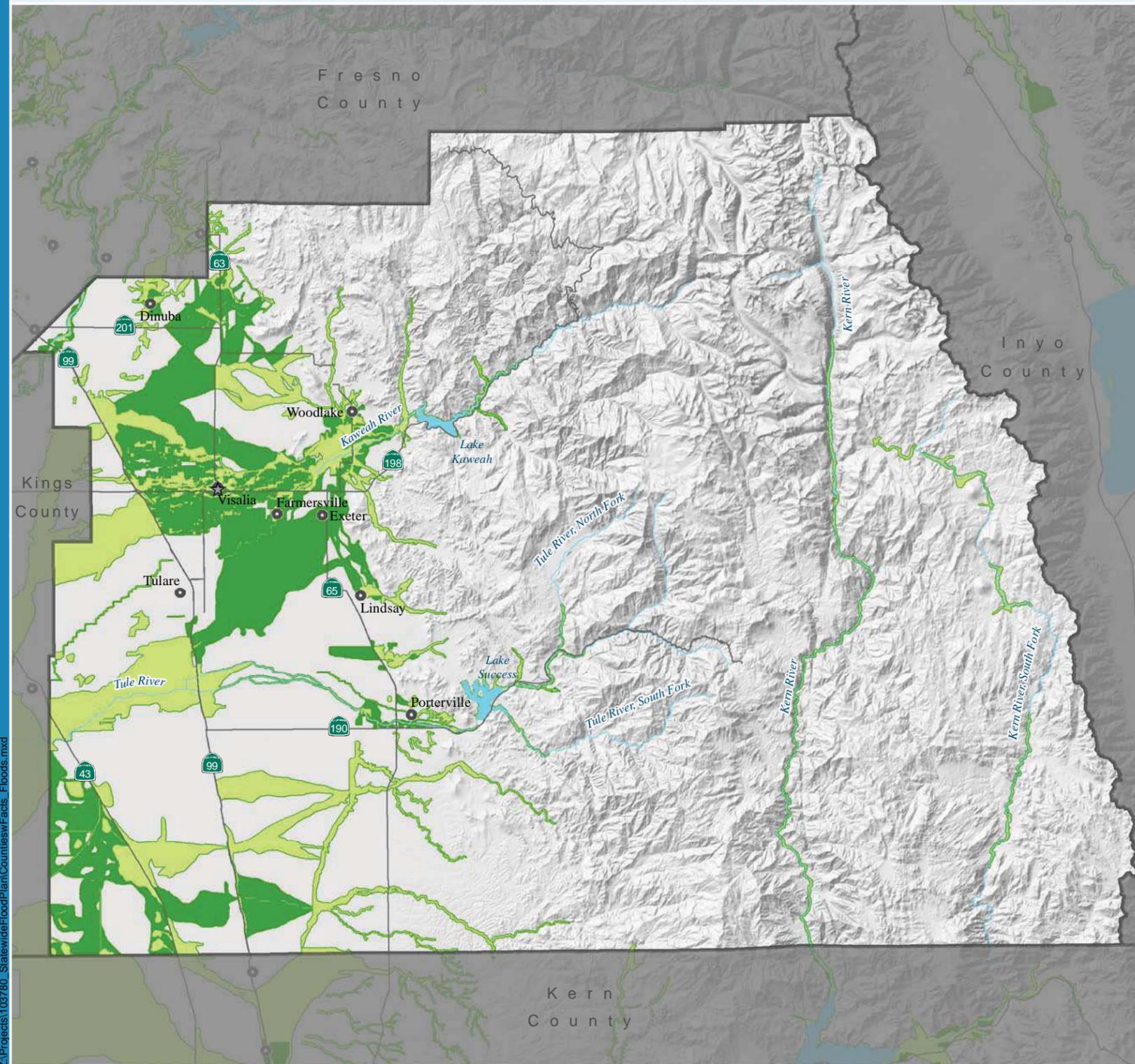
DRAFT Mar 22, 2013

- 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

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.

Trinity County

100-year and 500-year Floodplains



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

Selected Flood Events by Event Year

- 1955-1956** December-January, 1955
Christmas Flood, Tulare Lake
- 1966-1967** December-January, Tulare Lake Basin
- 1969-1970** December-January, Winter '69 Storms
Sand Creek, Cottonwood Creek, Yokohl Creek,
Lewis Creek, Frazier Creek, Deer Creek,
White River
- 1995** January-March, Severe Winter Storms
- 1997** January, Countywide
- 1998** January-June, Tule River, White River
- 2006** May 10
- 2010** December
- 2011** January

Flood Hazard Exposure

County Statistics

Total Acreage:	3.1 million
Total Population:	368,064
Total Structures:	128,000
Total Value of Structures and Contents:	\$25.2 billion
Total Agricultural Acreage:	753,785
Total Value of Crops:	\$2.3 billion

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	176,123	366,339
Percent of Area Exposed:	6	12
Population Exposed:	62,135	191,873
Percent of Population Exposed:	17	52
Structures Exposed:	20,447	64,835
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$4.5 billion	\$14.1 billion
Exposed Crops (acres):	112,898	254,318
Value of Exposed Crops:	\$326.4 million	\$721.3 million
Department of Defense Facilities Exposed:	2	2
Essential Facilities Exposed:	33	110
High Potential Loss Facilities Exposed:	12	15
Lifeline Utilities Exposed:	3	11
Transportation Facilities Exposed:	199	334
Transportation Segments Exposed (miles):	128	259
Native American Tribal Land Exposed (acres):	4	4
Total Sensitive Plant Species Exposed:	38	39
Total Sensitive Animal Species Exposed:	48	50

Tulare County

Types of Flooding

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

Hydrologic Regions



Figure D-107

Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Tulare County

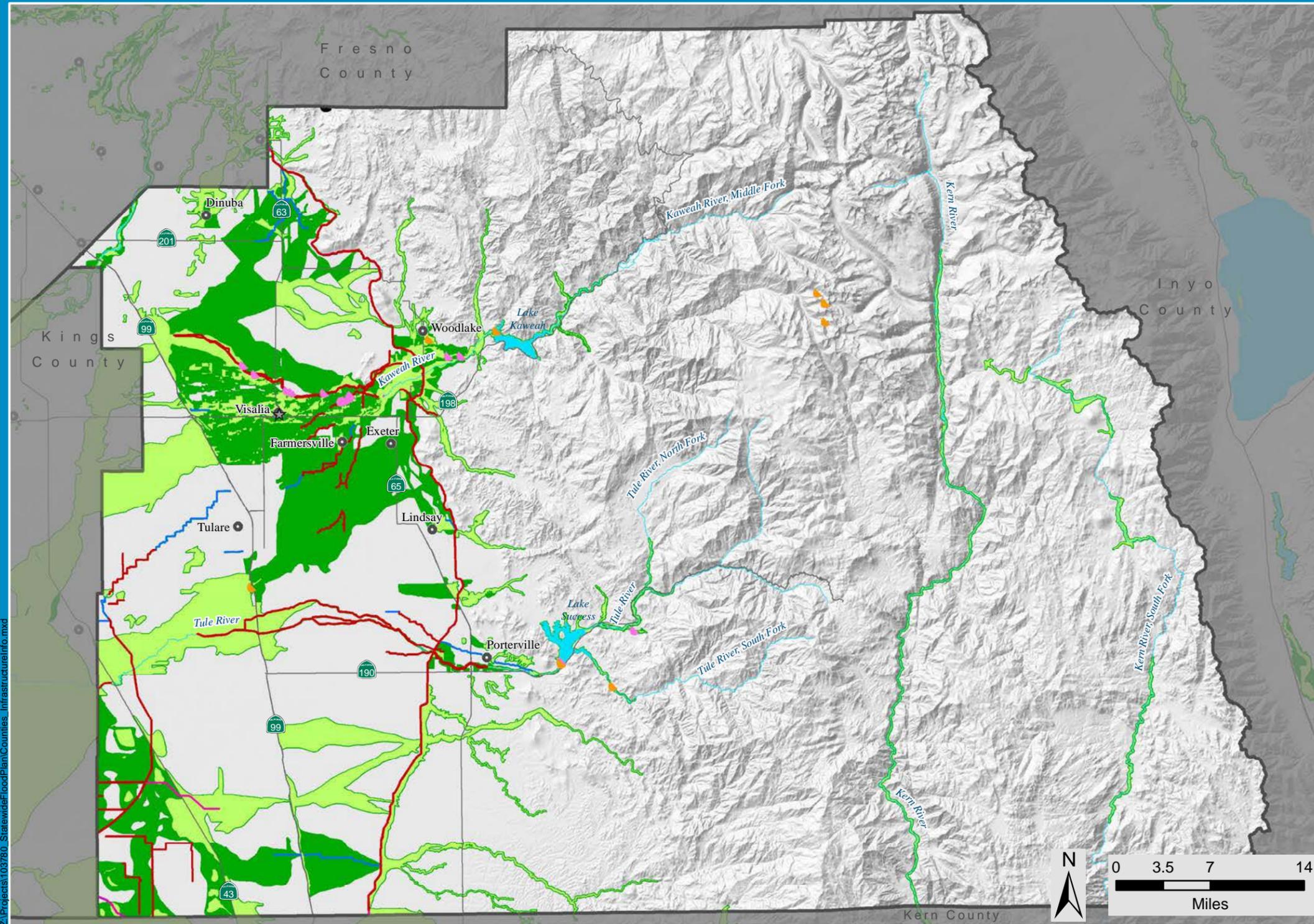
DRAFT

Mar 22, 2013



Summary of Available Flood Infrastructure Information

Tulare 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:
 Tulare County Flood Control District

Planned Projects:

Number of Local Projects:	2
Estimated Cost of Local Projects:	\$64.4 million
Number of USACE Projects:	5
Estimated Cost of USACE Projects:	\$529.4 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-108
 Summary of Available Flood Infrastructure Information, Tulare County

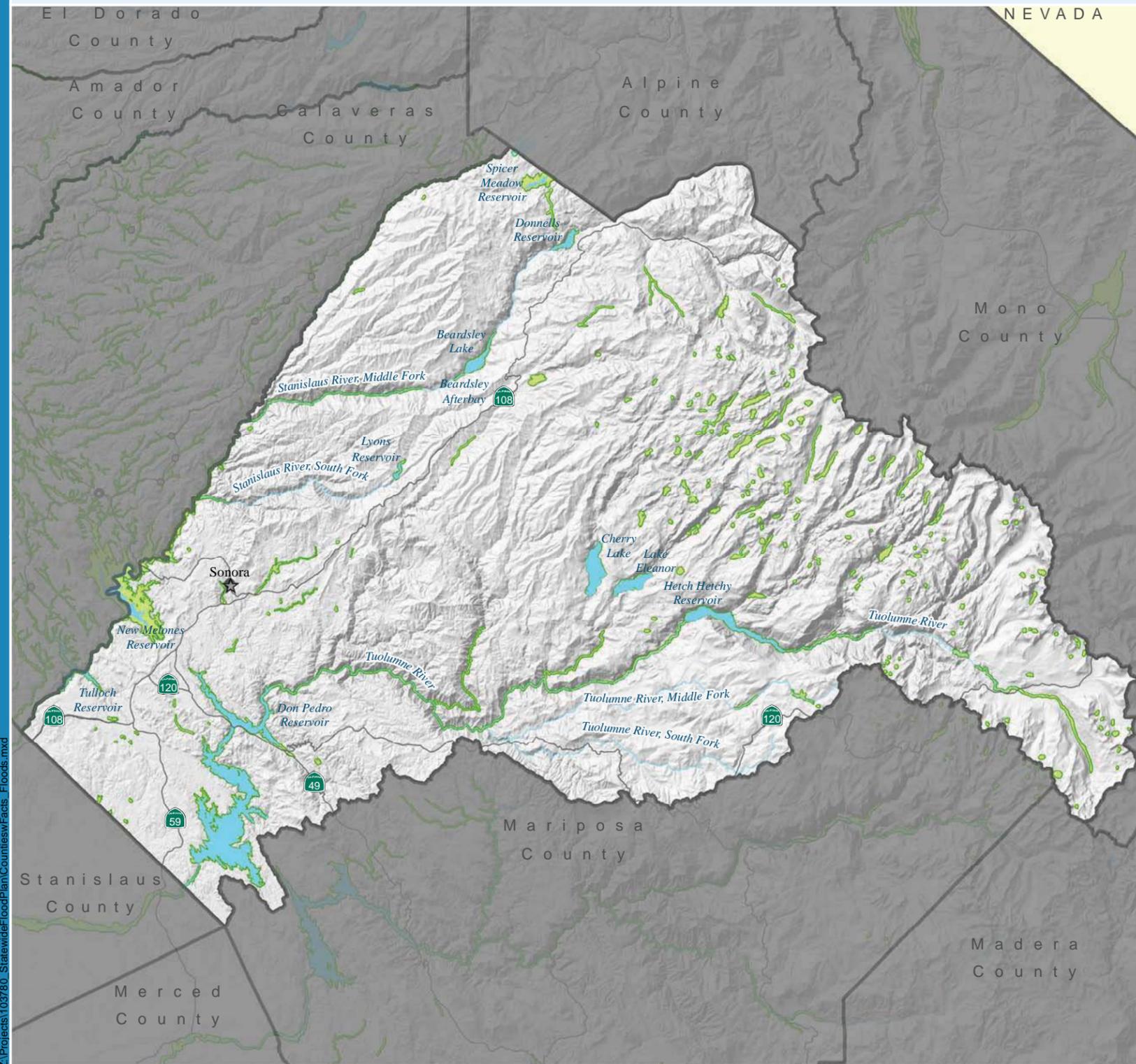
DRAFT Mar 22, 2013

- 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

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.

Tulare County

100-year and 500-year Floodplains



Selected Flood Events by Event Year

- 1861-1862** Winter, The Great Flood
- 1955-1956** December-January, 1955 Christmas Flood
- 1958** February-April
- 1964-1965** December-January, Countywide
- 1968-1969** December-February, Winter '69 Storms, Klamath River Basin
- 1983** March, Regional
- 1986** February-March, St. Valentine's Day Storm
- 1995** January-April, 1995 Christmas Flood
- 1997** January
- 2006** March 29 - April 1, May 10, Spring Storms

Flood Hazard Exposure

County Statistics

Total Acreage:	1.5 million
Total Population:	54,508
Total Structures:	29,900
Total Value of Structures and Contents:	\$6.0 billion
Total Agricultural Acreage:	1,431
Total Value of Crops:	\$2.3 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	41,249	41,249
Percent of Area Exposed:	3	3
Population Exposed:	515	515
Percent of Population Exposed:	1	1
Structures Exposed:	229	229
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$45.1 million	\$45.1 million
Exposed Crops (acres):	6	6
Value of Exposed Crops:	\$27,278	\$27,278
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	3	3
High Potential Loss Facilities Exposed:	10	10
Lifeline Utilities Exposed:	0	0
Transportation Facilities Exposed:	6	6
Transportation Segments Exposed (miles):	2	2
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	30	30
Total Sensitive Animal Species Exposed:	44	44

Tuolumne County

Types of Flooding

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

Hydrologic Regions



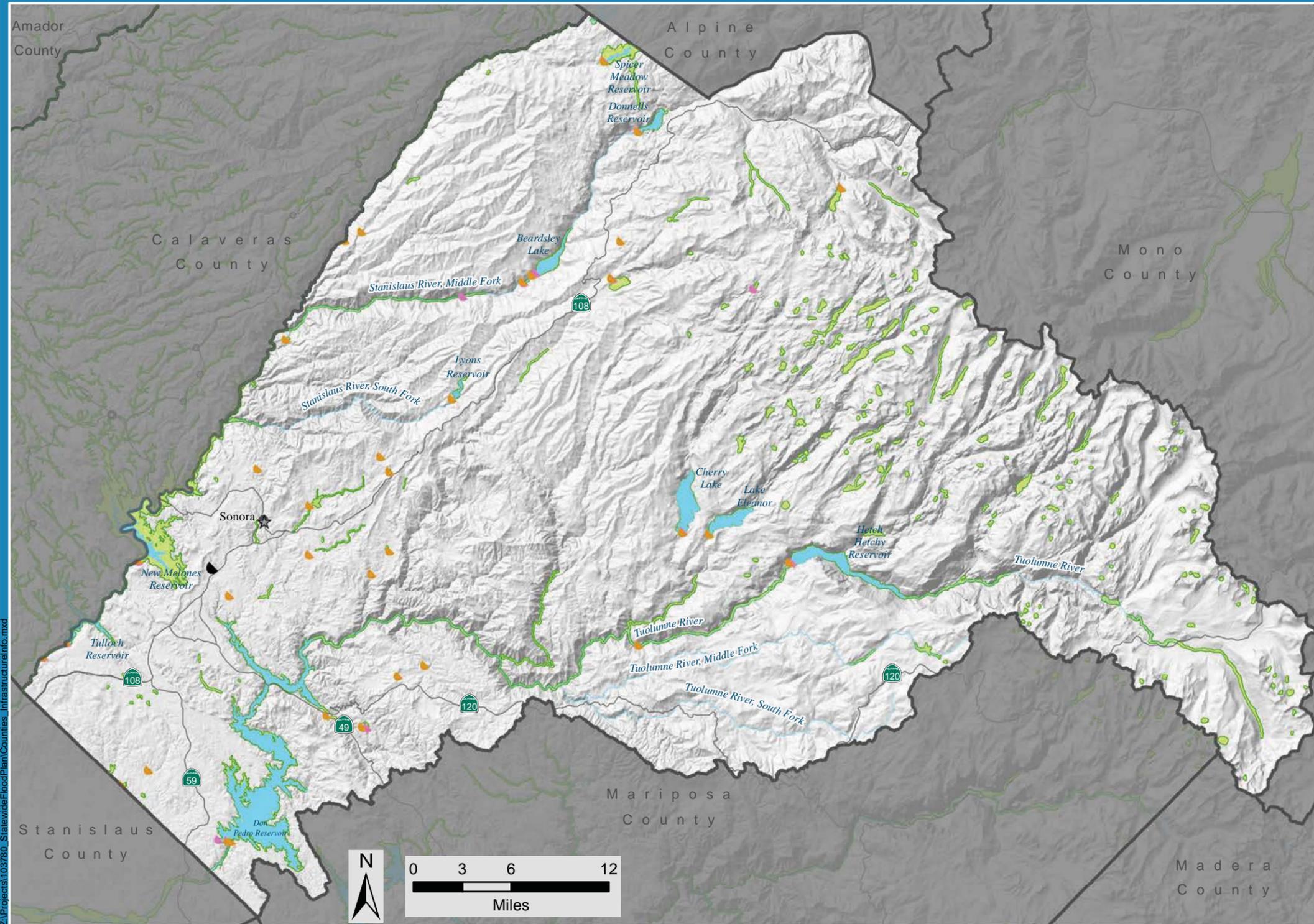
Figure D-109
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Tuolumne County

DRAFT Mar 22, 2013

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

Summary of Available Flood Infrastructure Information

Tuolumne 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:
 Tuolumne County

Planned Projects:

Number of Local Projects:	1
Estimated Cost of Local Projects:	n/a
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.

Tuolumne County

Statewide GIS Data:

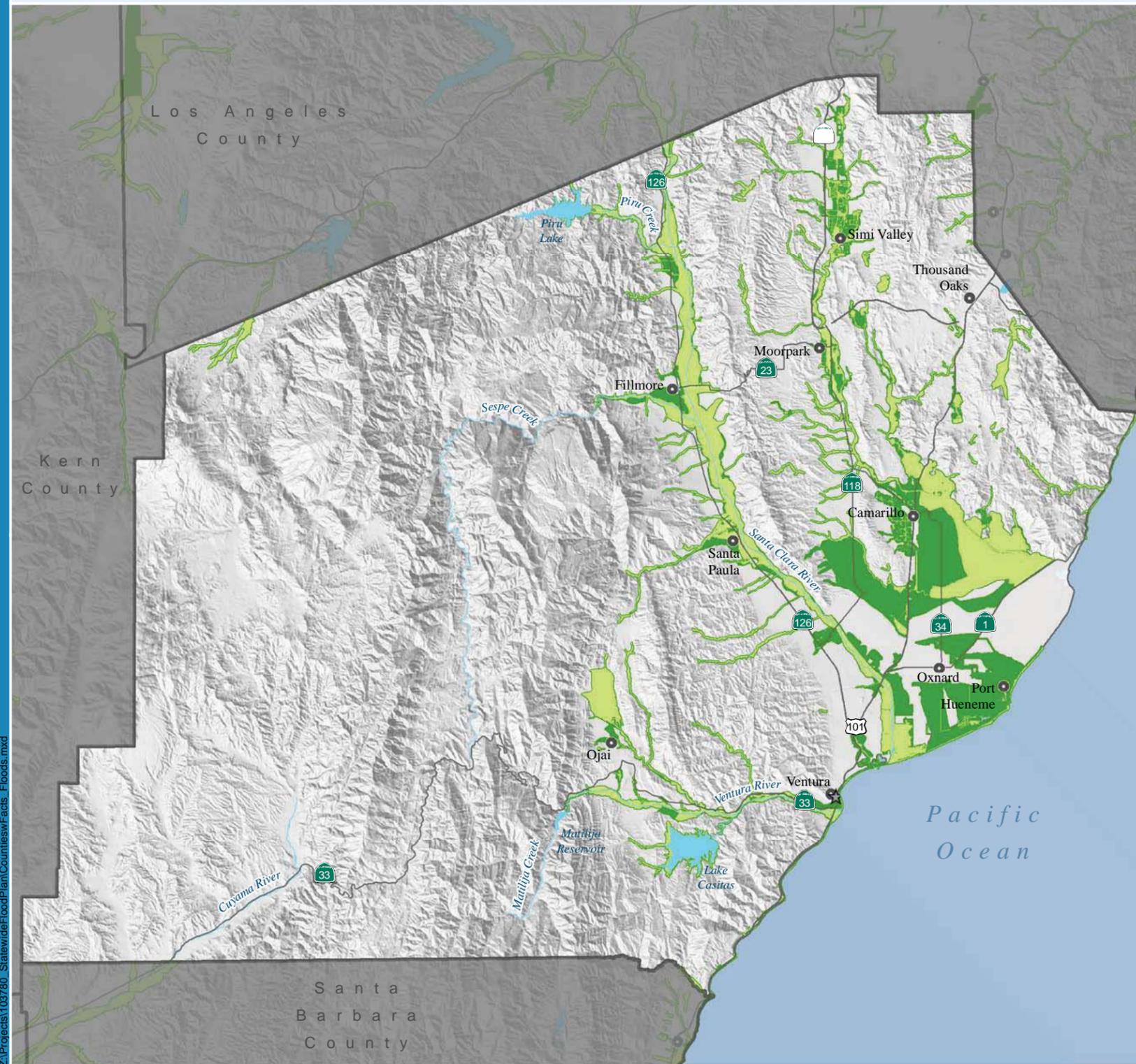
City	DWR Local Agency Dam	CLD Pump Station	NFHL Levee	NFHL Control Structure	Highway	100-yr Floodplain
Populated Place	DWR Other Dam	CLD Local Agency Levee	NFHL Flood Event Structure	NFHL Dike	Major River	500-yr Floodplain
	NFHL Dam or Weir	CLD Other Levee	NFHL Channel	NFHL Retaining Wall	Major Water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

Figure D-110
 Summary of Available Flood Infrastructure Information, Tuolumne County

DRAFT Mar 22, 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
- 1938 March, Great Flood
- 1955-1956 December-January, Christmas Flood
- 1958 February-April, Santa Clara River
- 1965 November-December, Santa Clara River
- 1967 November-December, Santa Clara River
- 1969 January-February, Winter '69 Storms, Santa Clara River
- 1970 January
- 1973 January-February, Coastal Flooding, Santa Clara River
- 1978 January-March, Santa Clara River
- 1980 January-March, Santa Clara River
- 1995 January-March, Severe Winter Storms
- 1998 February 6, Santa Clara River
- 2002 December
- 2010 February
- 2011 March

Flood Hazard Exposure

County Statistics

Total Acreage:	1.2 million
Total Population:	753,402
Total Structures:	240,400
Total Value of Structures and Contents:	\$71.7 billion
Total Agricultural Acreage:	110,478
Total Value of Crops:	\$896.4 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	52,208	87,712
Percent of Area Exposed:	4	7
Population Exposed:	49,560	203,378
Percent of Population Exposed:	7	27
Structures Exposed:	16,395	58,603
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$5.1 billion	\$16.8 billion
Exposed Crops (acres):	21,701	38,683
Value of Exposed Crops:	\$192.8 million	\$379.4 million
Department of Defense Facilities Exposed:	2	2
Essential Facilities Exposed:	30	81
High Potential Loss Facilities Exposed:	1	19
Lifeline Utilities Exposed:	4	12
Transportation Facilities Exposed:	111	189
Transportation Segments Exposed (miles):	74	198
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	31	31
Total Sensitive Animal Species Exposed:	51	52

Ventura County

Types of Flooding

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

Hydrologic Regions



Figure D-111
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Ventura County

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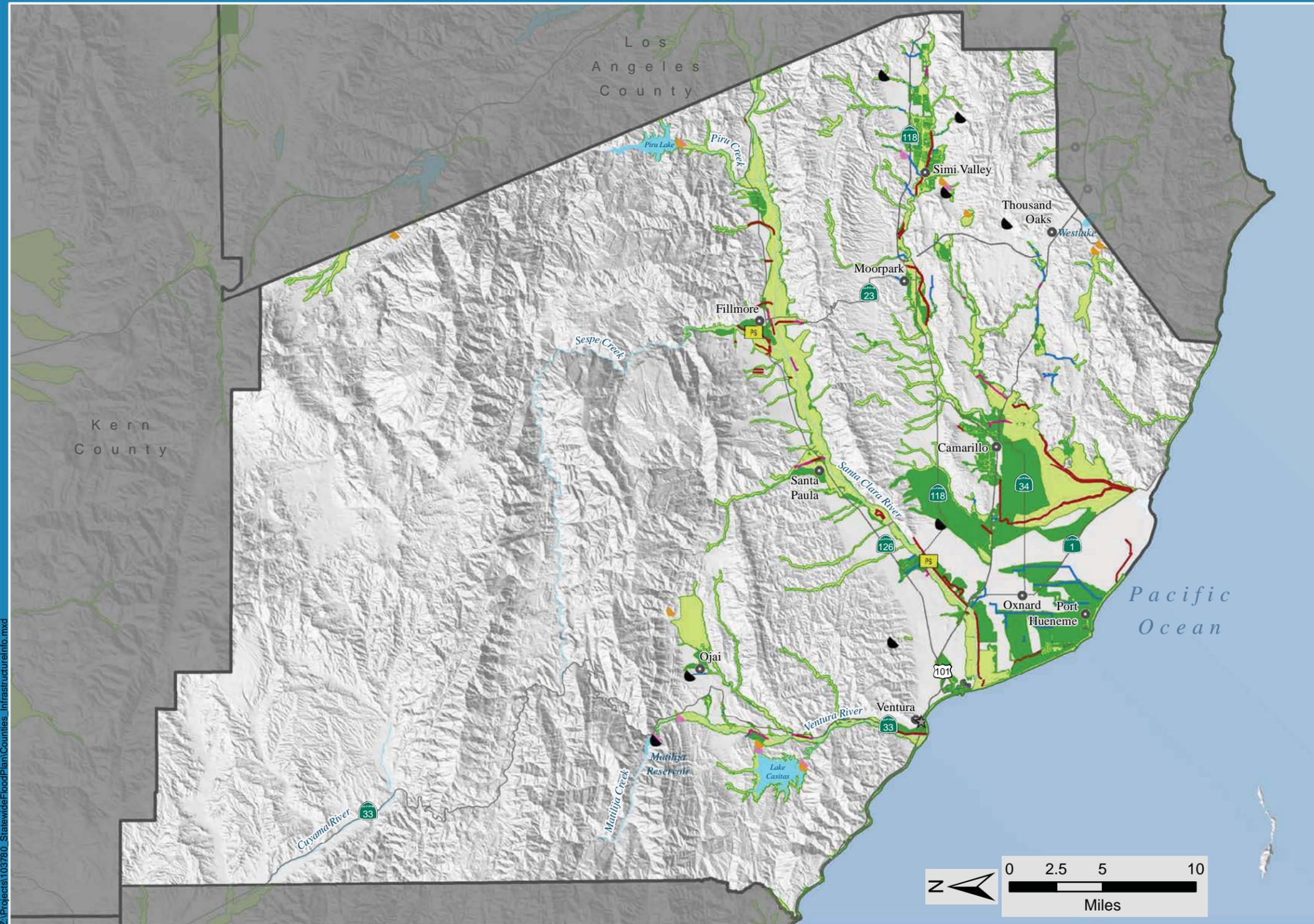
Mar 22, 2013



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

Summary of Available Flood Infrastructure Information

Ventura 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
 Detention Basin

Agencies Contacted as Part of SFMP:
 Ventura County Watershed Protection District
 Ventura County Public Works

Planned Projects:
 Number of Local Projects: 27
 Estimated Cost of Local Projects: \$1.4 billion
 Number of USACE Projects: 3
 Estimated Cost of USACE Projects: \$142.9 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-112
 Summary of Available Flood Infrastructure Information, Ventura County

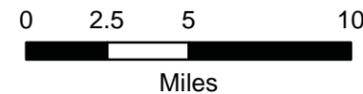
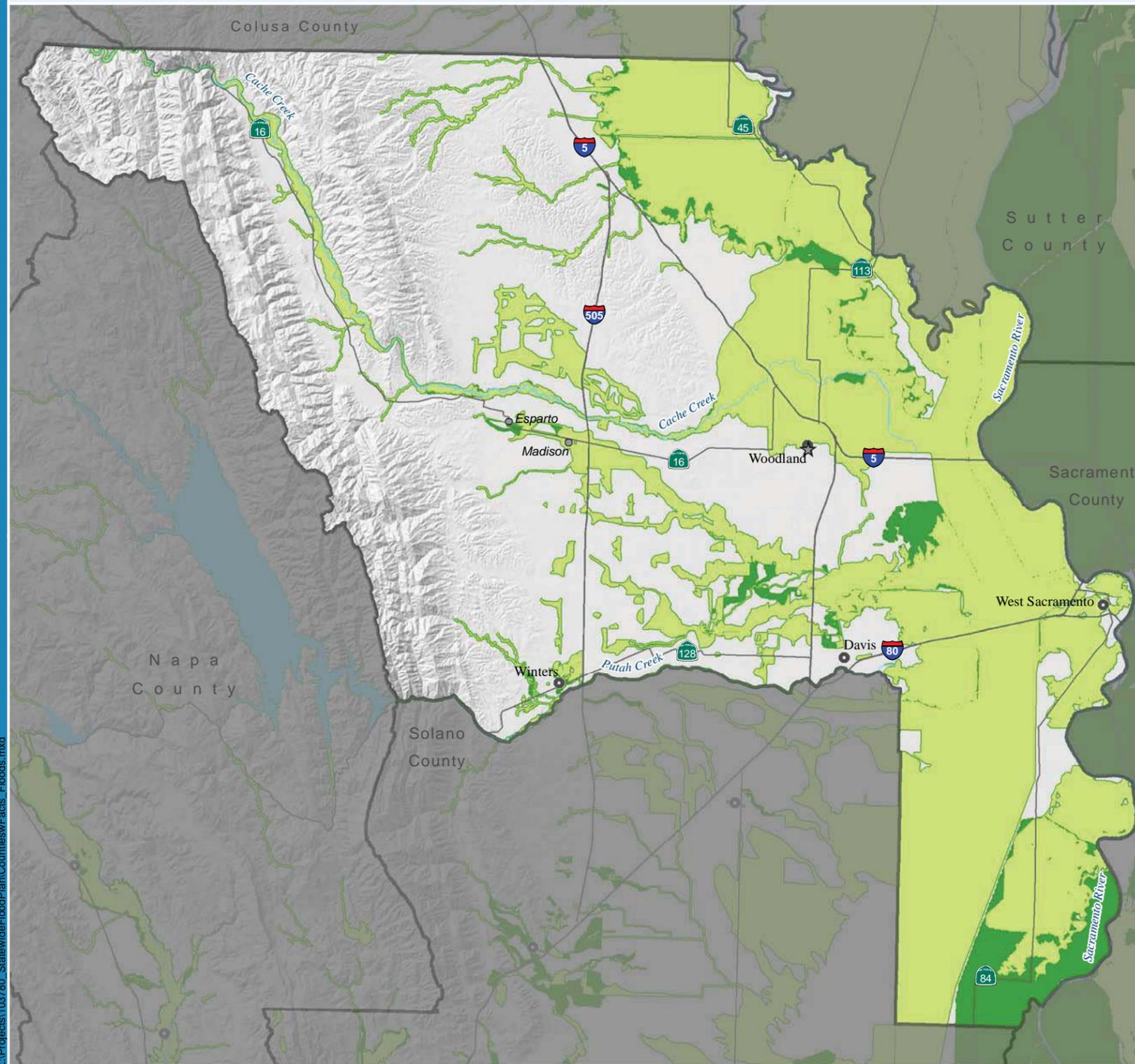
DRAFT Mar 22, 2013

- 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

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.

Ventura County

100-year and 500-year Floodplains



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

Selected Flood Events by Event Year

- 1861-1862** Winter, The Great Flood
- 1955-1956** December-January, Christmas Flood
- 1958** February-April
- 1963** January-February
- 1964-1965** December-January, Northern California Christmas 1964 Disaster
- 1969-1970** December-March, Regional
- 1974** January-April, Upper Sacramento River Area
- 1982-1983** December-March, Winter Storms
- 1986** February, St. Valentine's Day Storm
- 1995** January-March, Severe Winter Storms, Sacramento River Basin
- 1998** El Niño Floods
- 2006** March 29-April 1, May 10
- 2008** January 5 -14, Winter Storms

Flood Hazard Exposure

County Statistics

Total Acreage:	653,450
Total Population:	168,013
Total Structures:	53,500
Total Value of Structures and Contents:	\$15.5 billion
Total Agricultural Acreage:	348,037
Total Value of Crops:	\$631.8 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	239,867	260,585
Percent of Area Exposed:	37	40
Population Exposed:	56,822	59,783
Percent of Population Exposed:	34	36
Exposed Structures:	19,505	20,530
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$5.8 billion	\$6.1 billion
Exposed Crops (acres):	180,459	199,809
Value of Exposed Crops:	\$330.7 million	\$360.7 million
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	37	39
High Potential Loss Facilities Exposed:	9	9
Lifeline Utilities Exposed:	4	4
Transportation Facilities Exposed:	116	120
Transportation Segments Exposed (miles):	153	166
Native American Tribal Land Exposed (acres):	282	282
Total Sensitive Plant Species Exposed:	18	19
Total Sensitive Animal Species Exposed:	41	41

Types of Flooding

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

Hydrologic Regions



Figure D-113
Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Yolo County

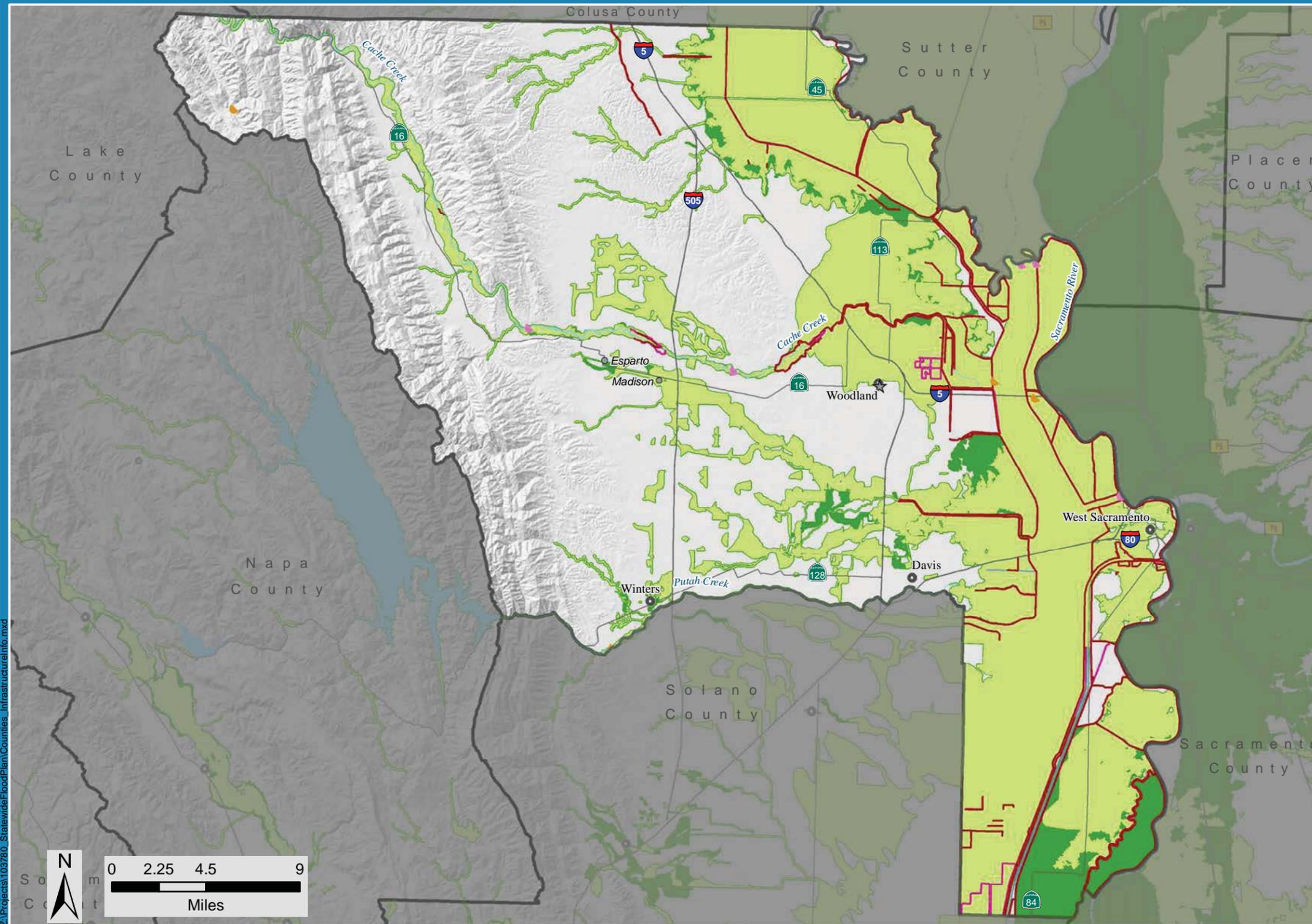
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Mar 22, 2013



Summary of Available Flood Infrastructure Information

Yolo 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
 Settling Basin

Agencies Contacted as Part of SFMP:
 Yolo County Flood Control and Water Conservation District
 Yolo County
 Knights Landing Ridge Drainage District
 City of West Sacramento
 West Sacramento Flood Control Agency
 City of Woodland
 Yolo County Service Area 6

Planned Projects:

Number of Local Projects:	52
Estimated Cost of Local Projects:	\$750.3 million
Number of USACE Projects:	2
Estimated Cost of USACE Projects:	\$202.0 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.

Yolo County

Statewide GIS Data:

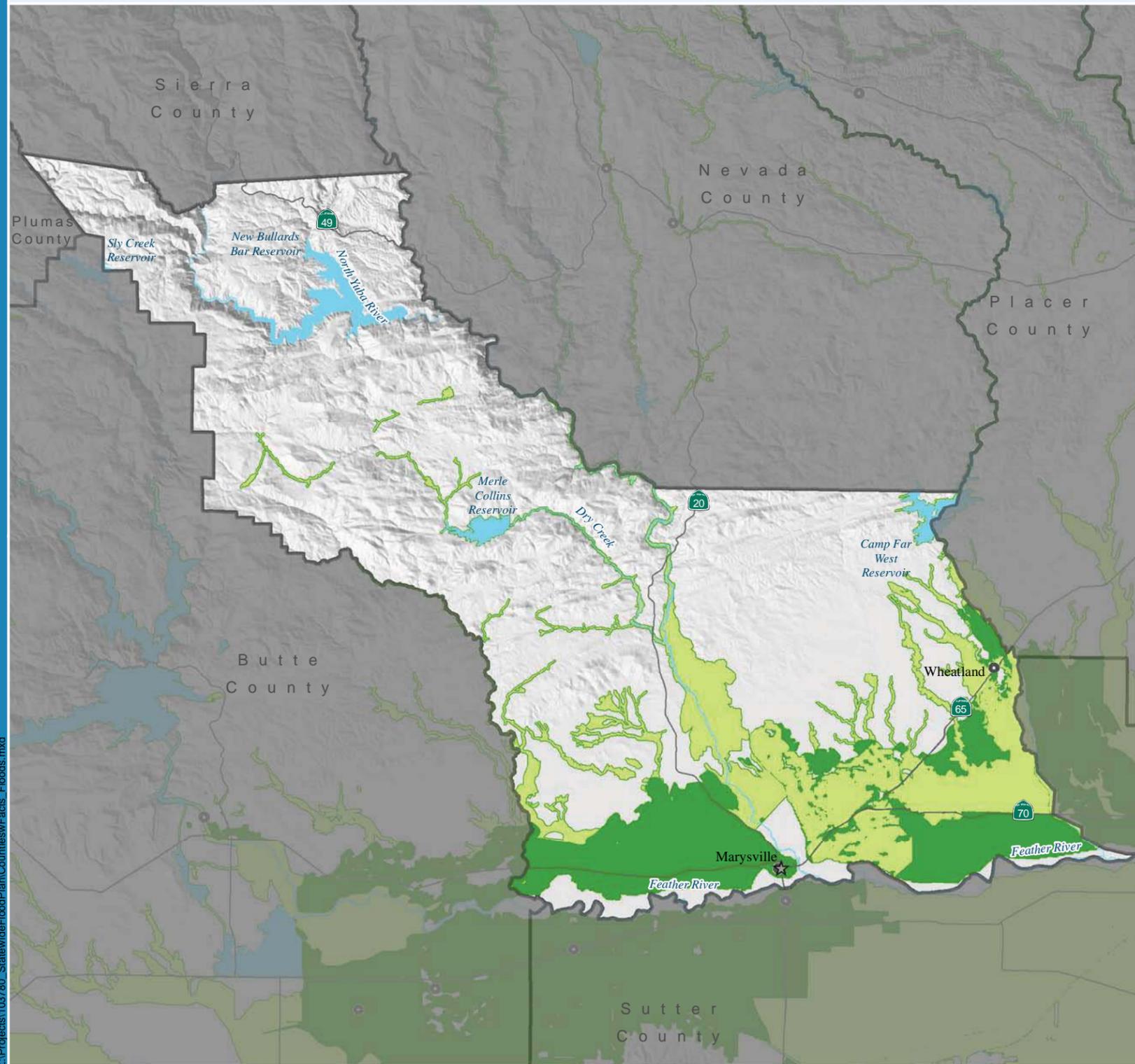
City	DWR Local Agency Dam	CLD Pump Station	NFHL Levee	NFHL Control Structure	Highway	100-yr Floodplain
Populated Place	DWR Other Dam	CLD Local Agency Levee	NFHL Flood Event Structure	NFHL Dike	Major River	500-yr Floodplain
	NFHL Dam or Weir	CLD Other Levee	NFHL Channel	NFHL Retaining Wall	Major Water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

Figure D-114
 Summary of Available Flood Infrastructure Information, Yolo County

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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
- 1937-1938** December-March
- 1955-1956** December-January, 1955 Christmas Flood
- 1962** October
- 1964-1965** December-January, Northern California Christmas 1964 Disaster
- 1969-1970** December-March, Winter Storms
- 1973** January-April
- 1986** February, St. Valentine's Day Storm
- 1995** January-March, Severe Winter Storm, Sacramento River Basin
- 1996-1997** December-January, 1997 South Yuba County Flood, Feather River
- 1998** January-March, El Niño Floods
- 2005-2006** December-January, New Year's Eve Flood of 2006
- 2006** March 29-April 1, May 10
- 2008** January 5-14, Winter Storms

Flood Hazard Exposure

County Statistics

Total Acreage:	412,018
Total Population:	60,223
Total Structures:	23,300
Total Value of Structures and Contents:	\$3.9 billion
Total Agricultural Acreage:	92,602
Total Value of Crops:	\$158.7 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	51,827	95,439
Percent of Area Exposed:	13	23
Population Exposed:	20,833	41,372
Percent of Population Exposed:	35	69
Structures Exposed:	7,372	16,676
Total Depreciated Replacement Value of Exposed Structures and Contents:	\$1.1 billion	\$2.5 billion
Exposed Crops (acres):	22,279	55,029
Value of Exposed Crops:	\$34.5 million	\$110.2 million
Department of Defense Facilities Exposed:	1	1
Essential Facilities Exposed:	14	34
High Potential Loss Facilities Exposed:	4	4
Lifeline Utilities Exposed:	0	1
Transportation Facilities Exposed:	42	66
Transportation Segments Exposed (miles):	38	84
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	5	7
Total Sensitive Animal Species Exposed:	14	14

Yuba County

Types of Flooding

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

Hydrologic Regions



Figure D-115

Summary of Available Flood Types, Flood History, and Flood Hazard Exposure, Yuba County

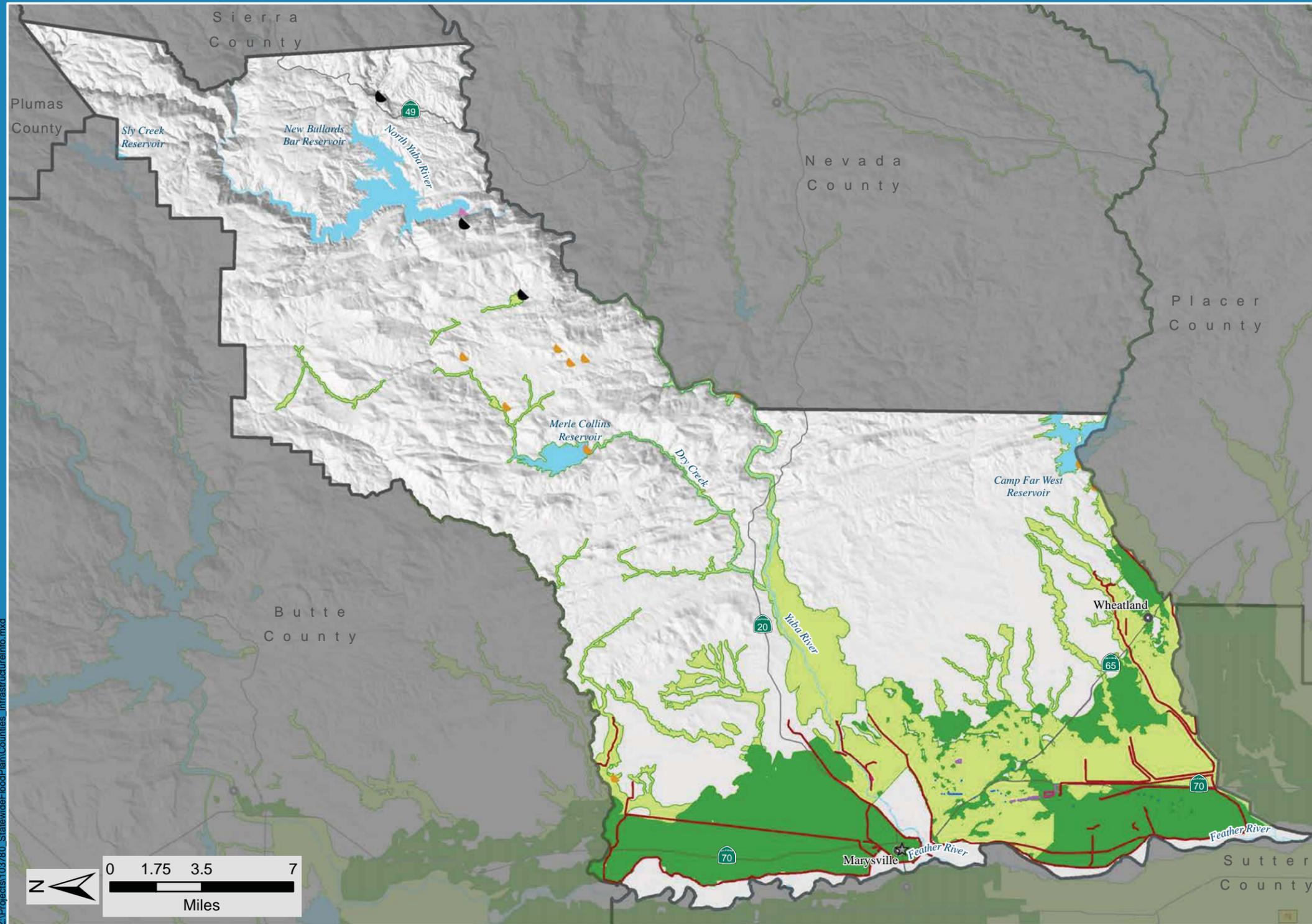
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Mar 22, 2013



Summary of Available Flood Infrastructure Information

Yuba 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
 Dam

Agencies Contacted as Part of SFMP:
 Yuba County Water Agency
 Three Rivers Levee Improvement Authority
 Yuba County Public Works

Planned Projects:

Number of Local Projects:	11
Estimated Cost of Local Projects:	\$923.7 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.



- 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

Figure D-116
 Summary of Available Flood Infrastructure Information, Yuba County

DRAFT Mar 22, 2013

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Yuba County