
Mojave River, near Barstow, 2005


La Conchita, 2005


Northern California Coast, 2008


San Joaquin, 1997

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

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STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM

FloodSAFE CALIFORNIA

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Statewide GIS Data Legend

Statewide GIS Data:

- City
- Populated Place
- DWR Local Agency Dam
- DWR Other Dam
- NFHL Dam or Weir
- CLD Pump Station (PS)
- 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

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STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM

FloodSAFE CALIFORNIA

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.

Attachment D - Notes

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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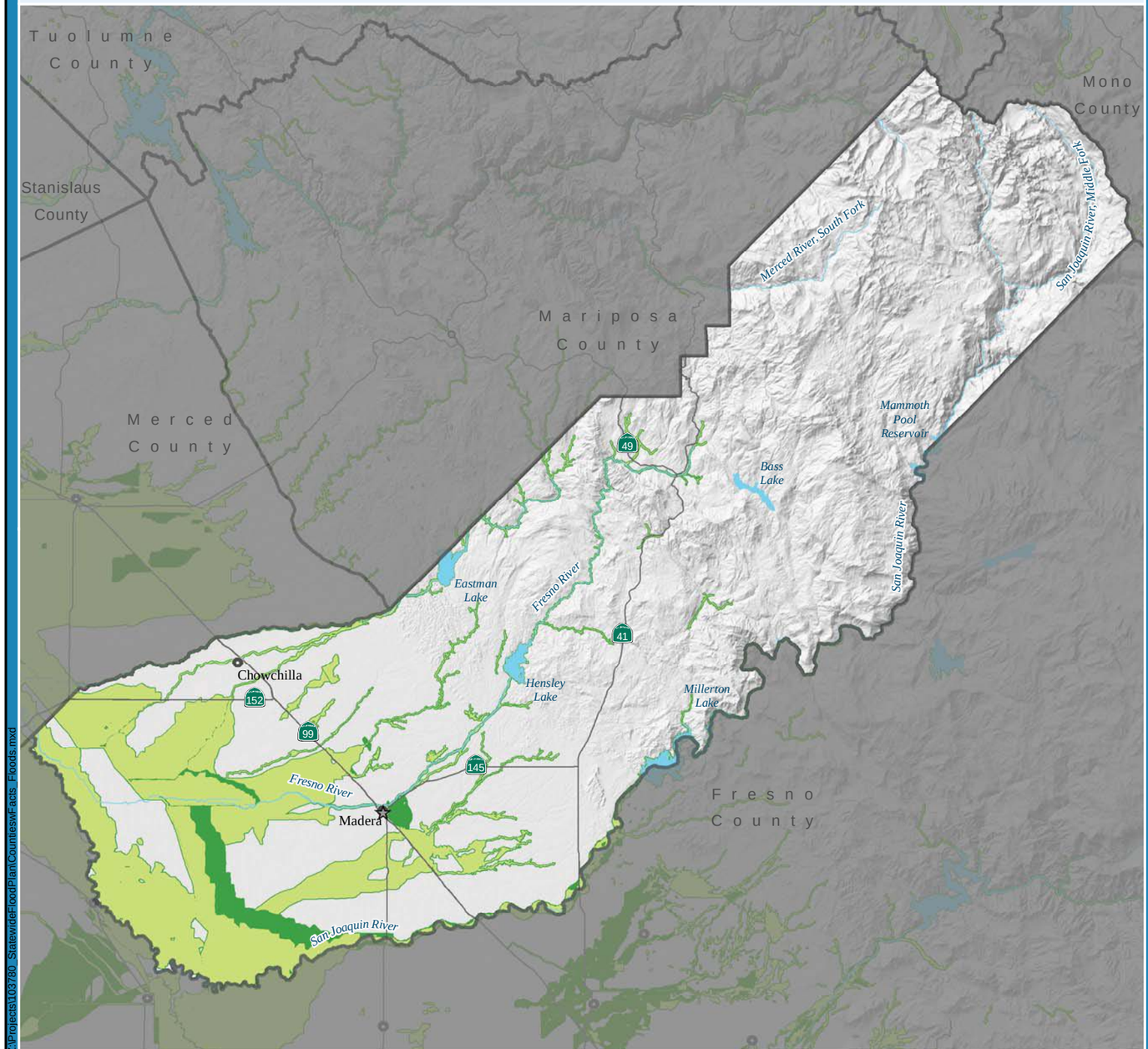
STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM

FloodSAFE CALIFORNIA

100-year and 500-year Floodplains



N

0 4 8 16

Miles

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

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

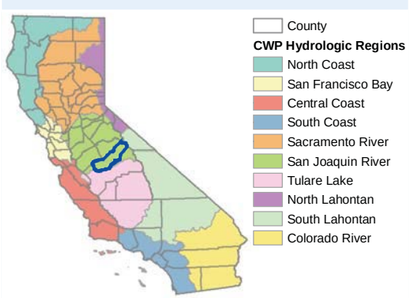
Selected Flood Events by Event Year

1861-1862 Winter, The Great Flood
1867 December, Fresno River
1911 Fresno River
1938 February-March, Fresno River
1945 Fresno River
1950 November-December, Fresno River
1955-1956 December-January, 1955 Christmas Flood, Fresno River
1958 February-April, Fresno River
1962-1963 December-February
1964-1965 December-January, Mokelumne River Flood, San Joaquin Basin
1968-1969 December-February, Winter '69 Storms, Fresno River
1982-1983 December-March, Winter Storms, Fresno River
1986 February-March, Fresno River
1992 January-February, Fresno River
1995 January-April, 1995 Christmas Flood
1997 January, Fresno River
2006 March 29 - April 1, May 10, Spring Storms
2007 October

Types of Flooding

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

Hydrologic Regions



Flood Hazard Exposure

County Statistics

Total Acreage:	1.4 million
Total Population:	123,106
Total Structures:	42,900
Total Value of Structures and Contents:	$9.7 billion
Total Agricultural Acreage:	356,548
Total Value of Crops:	$583.8 million

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	188,583	208,011
Percent of Area Exposed:	14	15
Population Exposed:	12,235	22,792
Percent of Population Exposed:	10	19
Structures Exposed:	3,292	5,617
Total Depreciated Replacement Value of Exposed Structures and Contents:	$638.2 million	$1.1 billion
Exposed Crops (acres):	140,092	155,017
Value of Exposed Crops:	$229.0 million	$246.4 million
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	8	18
High Potential Loss Facilities Exposed:	10	10
Lifeline Utilities Exposed:	1	2
Transportation Facilities Exposed:	85	85
Transportation Segments Exposed (miles):	38	45
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	14	14
Total Sensitive Animal Species Exposed:	30	30

Madera County

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

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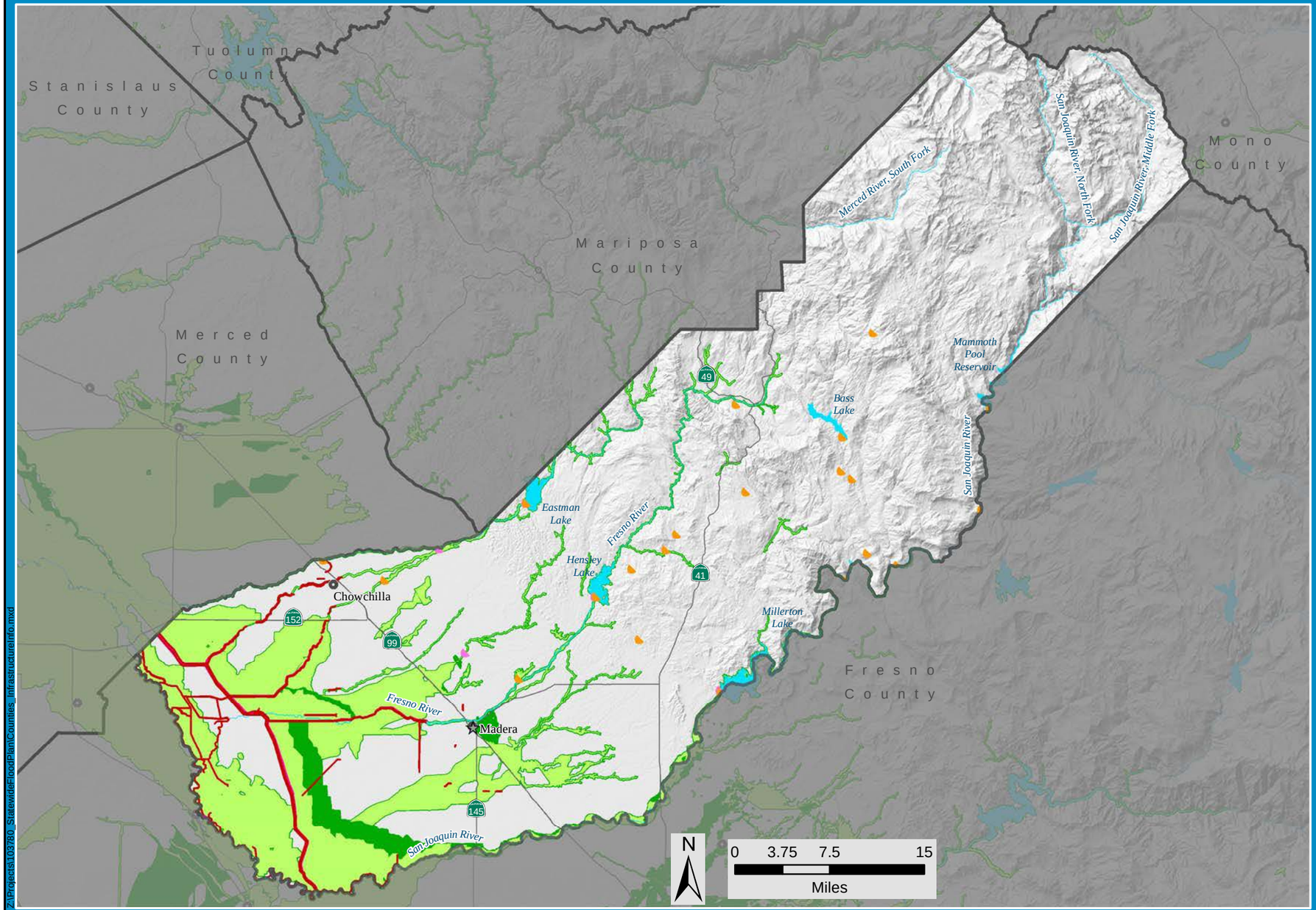
Mar 22, 2013

US Army Corps of Engineers.

STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM

FloodSAFE CALIFORNIA

Summary of Available Flood Infrastructure Information



Madera County

Flood Infrastructure GIS Data Received from Agencies Contacted:

No Flood Infrastructure GIS Data Received

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

Levee
Channel
Pump Station

Agencies Contacted as Part of SFMP:

Madera County Flood Control and Water Conservation District

Planned Projects:

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

Statewide GIS Data Sources:

Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bullletin 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-40
Summary of Available Flood Infrastructure Information, Madera County

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STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM
FloodSAFE CALIFORNIA

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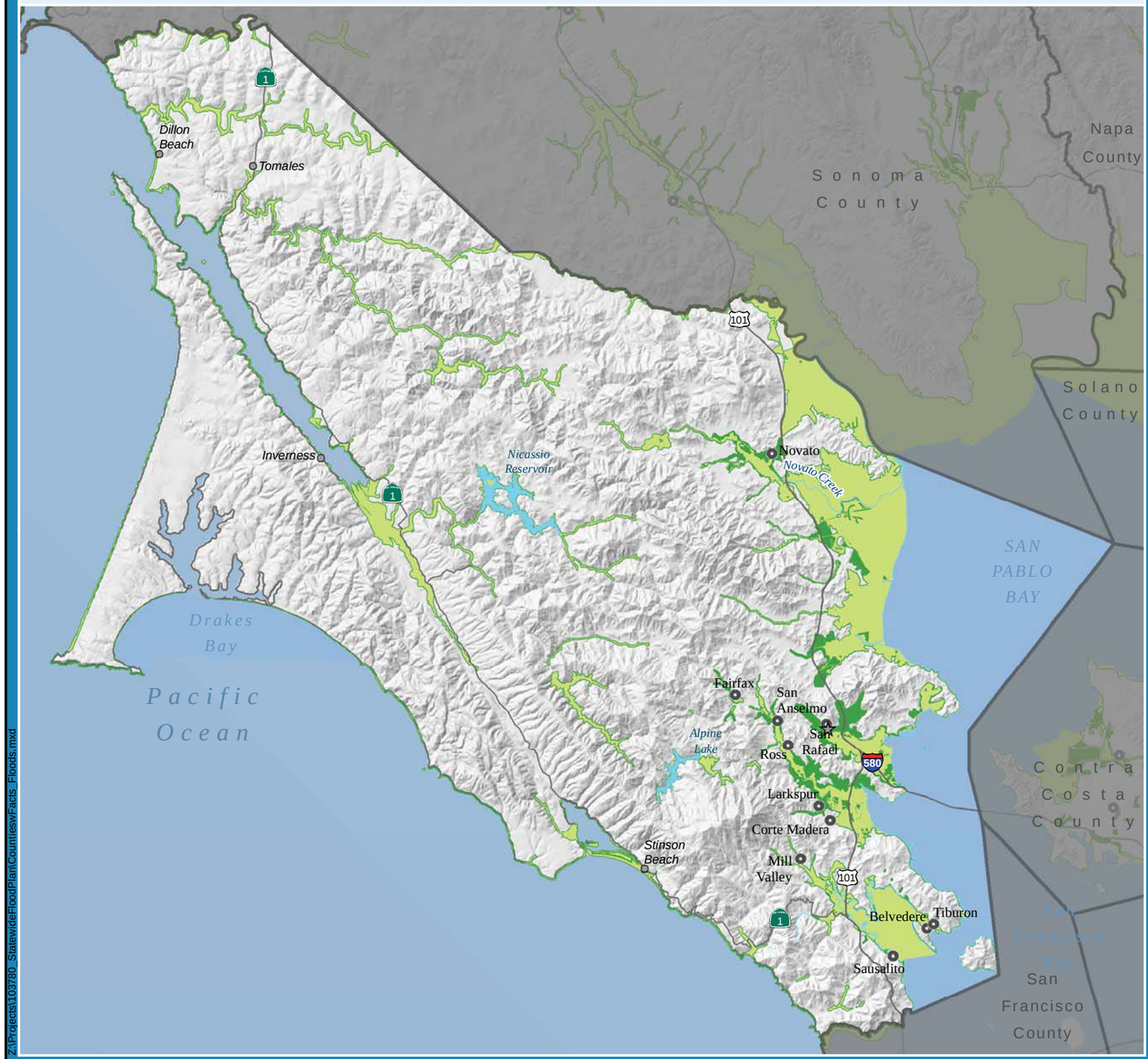
DISCLAIMER: *1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain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

100-year and 500-year Floodplains



N

0 1.75 3.5 7

Miles

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

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Selected Flood Events by Event Year

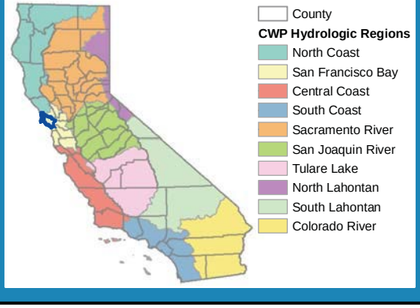
1861-1862 Winter, The Great Flood
1914 Corte Madera Creek
1925 San Anselmo
1951 Corte Madera Creek
1955-1956 December-January, 1955 Christmas Flood, Novato Creek, Corte Madera, Petaluma , San Rafael, Fairfax
1958 February-April, Corte Madera Creek
1962 October, Corte Madera Creek
1962-1963 December-February
1968-1969 December-April, Corte Madera Creek
1970 December, Northern California Flooding
1973 Januar-February
1986 February, St. Valentine's Day Storm, Corte Madera Creek, Fairfax, San Pablo Bay
1995 January-March
1998 El Niño Floods
2005-2006 December-January, New Year's Eve Flood of 2006, Corte Madera Creek,
2006 March 29 - April 1, May 10, Spring Storms

Types of Flooding

Likely:
Slow Rise
Flash
Debris Flow
Coastal
Stormwater

Present:
Tsunami
Engineered Structure Failure

Hydrologic Regions



Flood Hazard Exposure

County Statistics

Total Acreage:	378,665
Total Population:	247,239
Total Structures:	93,200
Total Value of Structures and Contents:	$31.8 billion
Total Agricultural Acreage:	6,664
Total Value of Crops:	$1.6 million

Summary of Exposure to Flood Hazard Reported by County	100-yr Event	500-yr Event
Exposed Area (acres):	34,604	38,374
Percent of Area Exposed:	9	10
Population Exposed:	39,739	63,380
Percent of Population Exposed:	16	26
Structures Exposed:	13,141	22,147
Value of Exposed Structures and Contents:	$5.6 billion	$9.3 billion
Exposed Agricultural Land (acres):	3,963	3,964
Value of Exposed Agricultural Land:	$677,437	$679,111
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	23	45
High Potential Loss Facilities Exposed:	3	3
Lifeline Utilities Exposed:	4	6
Transportation Facilities Exposed:	76	94
Transportation Segments Exposed (miles):	28	39
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	70	70
Total Sensitive Animal Species Exposed:	49	51

Marin County

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

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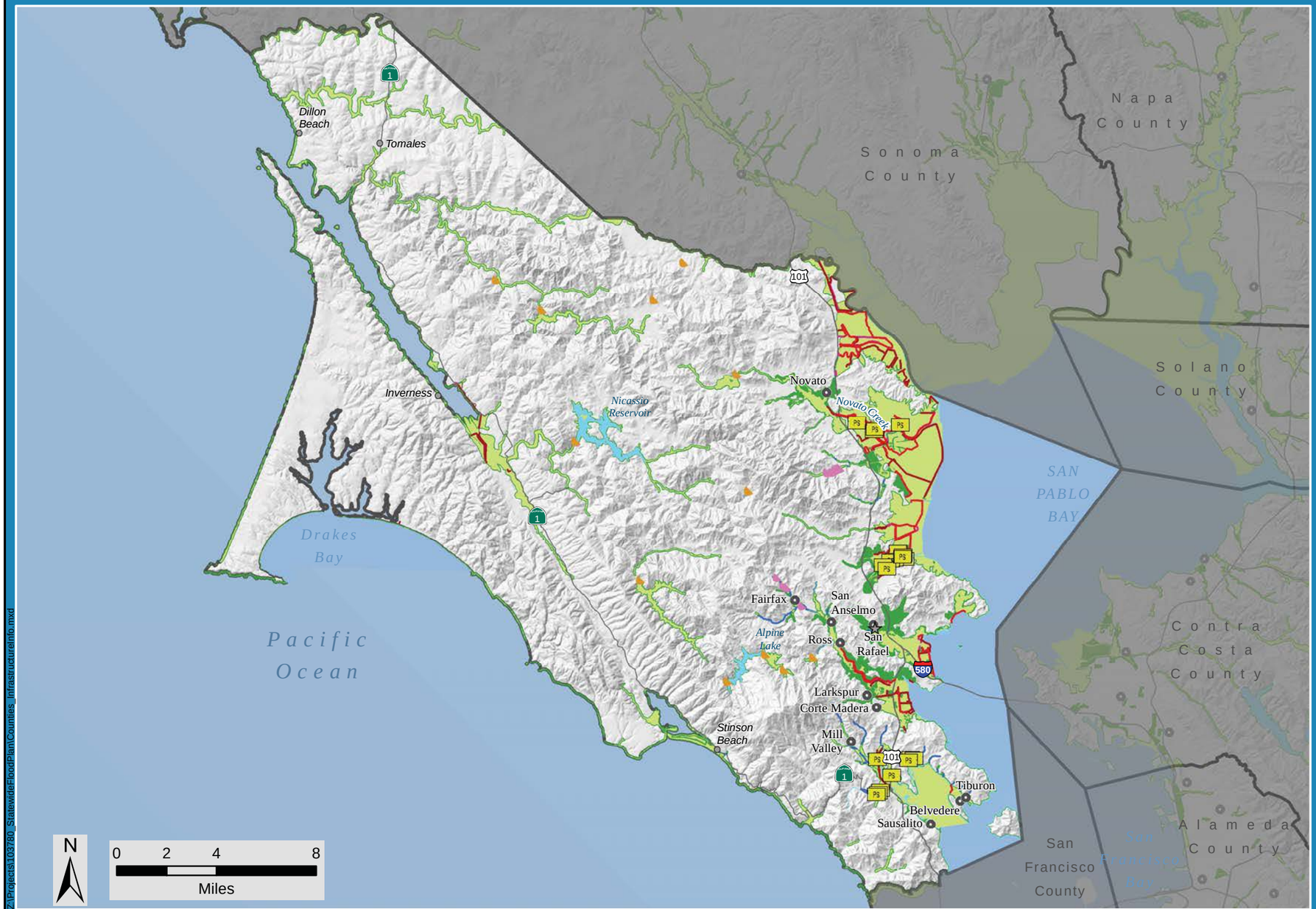
FloodSAFE CALIFORNIA

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

Summary of Available Flood Infrastructure Information



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Marin County

Flood Infrastructure GIS Data Received from Agencies Contacted:

- Pump Station
- Levee

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

Channel
Dam
Pump Station

Agencies Contacted as Part of SFMP:

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

Planned Projects:

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

Statewide GIS Data Sources:

Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bullletin 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.

Marin 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-42

Summary of Available Flood Infrastructure Information, Marin County

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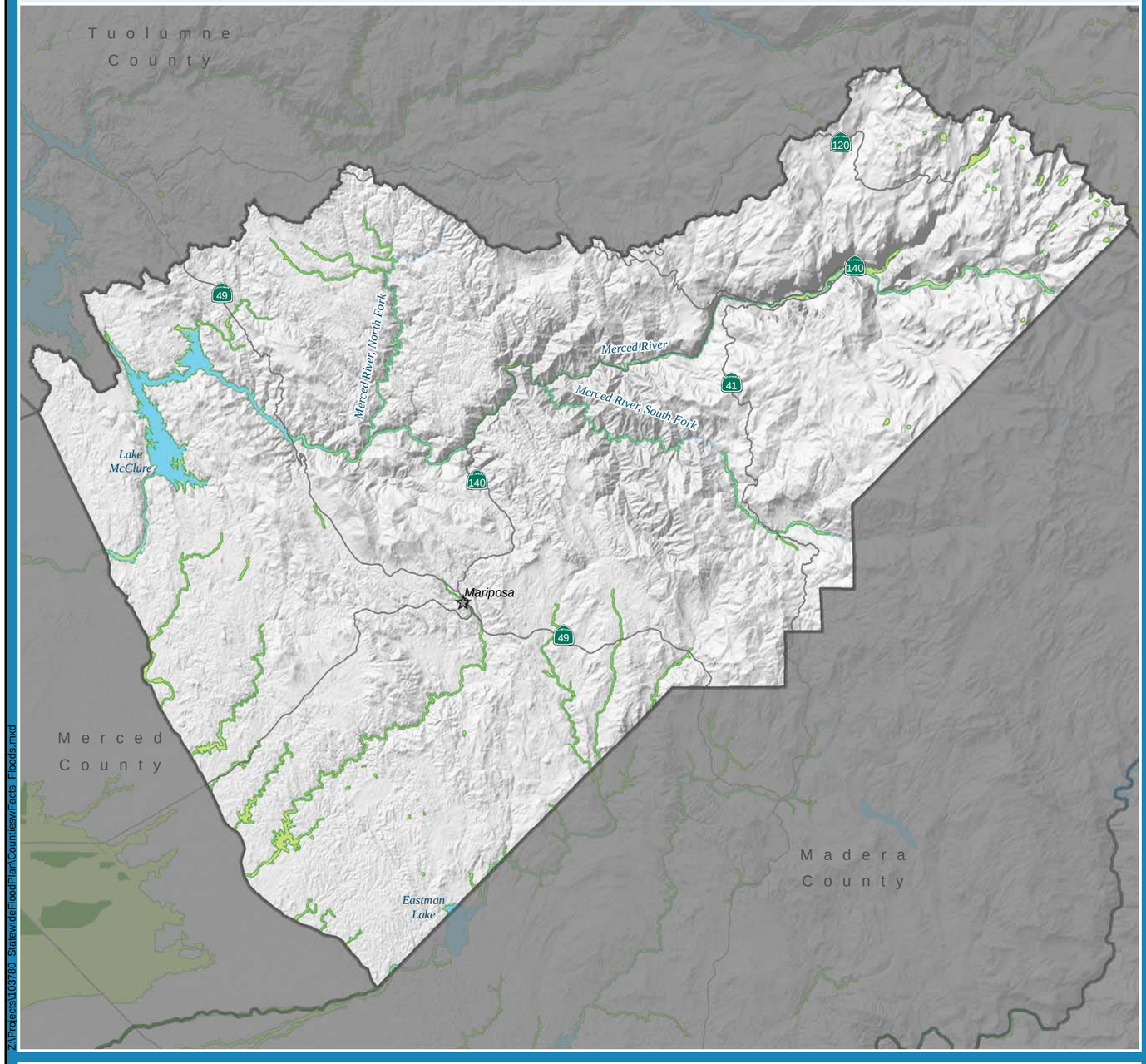
STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM

FloodSAFE CALIFORNIA

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



N

0 2.75 5.5 11

Miles

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

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Selected Flood Events by Event Year

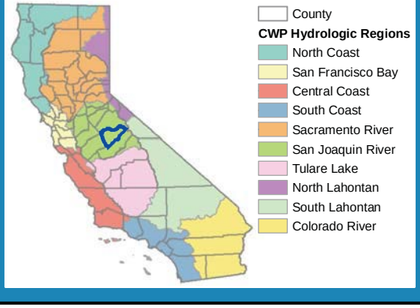
1861-1862 Winter, The Great Flood
1867 February
1868 March
1911 January
1955-1956 December-January, 1955 Christmas Flood
1958 February-April
1962-1963 December-February
1968-1969 December-March, Winter '69 Storms, Countywide
1982 April
1986 February-March, St. Valentine's Day Storm
1995 January - March, Severe Winter Storms
1997 January

Types of Flooding

Likely:
Slow Rise
Stormwater
Flash

Present:
Engineered Structure Failure
Debris Flow

Hydrologic Regions



Flood Hazard Exposure

County Statistics

Total Acreage:	935,608
Total Population:	17,140
Total Structures:	9,500
Total Value of Structures and Contents:	$1.8 billion
Total Agricultural Acreage:	3,642
Total Value of Crops:	$758,900

Summary of Exposure to Flood Hazard Reported by County	100-yr Event	500-yr Event
Exposed Area (acres):	17,356	17,356
Percent of Area Exposed:	2	2
Population Exposed:	249	249
Percent of Population Exposed:	1	1
Structures Exposed:	181	181
Total Depreciated Replacement Value of Exposed Structures and Contents:	$46.0 million	$46.0 million
Exposed Crops (acres):	98	98
Value of Exposed Crops:	$0	$0
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	0	0
High Potential Loss Facilities Exposed:	4	4
Lifeline Utilities Exposed:	0	0
Transportation Facilities Exposed:	7	7
Transportation Segments Exposed (miles):	14	14
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	35	35
Total Sensitive Animal Species Exposed:	39	39

Mariposa County

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

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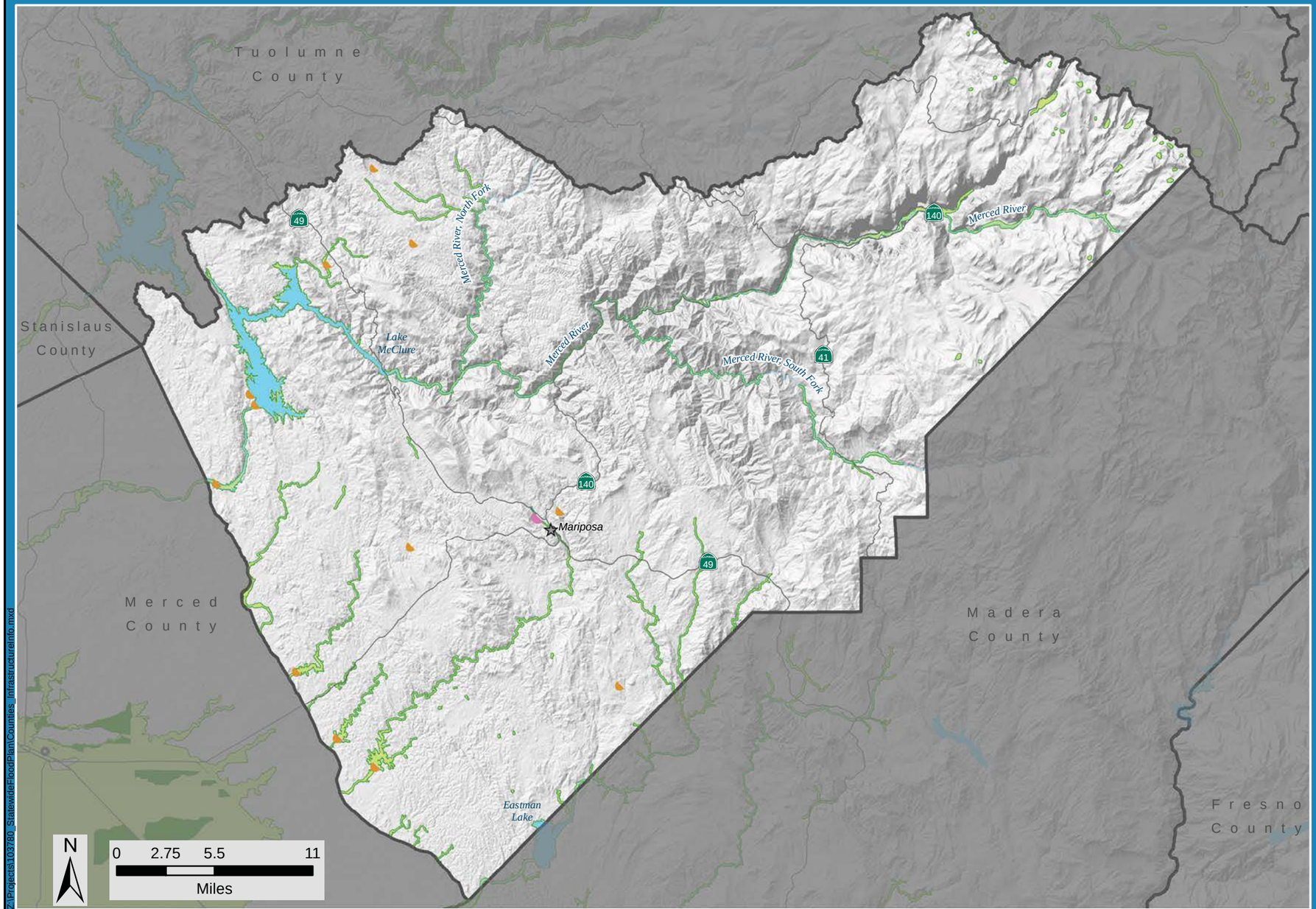
STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM

FloodSAFE CALIFORNIA

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

Summary of Available Flood Infrastructure Information



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Mariposa County

Flood Infrastructure GIS Data Received from Agencies Contacted:

No Flood Infrastructure GIS Data Received

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

Channel
Dam

Agencies Contacted as Part of SFMP:

Mariposa County

Planned Projects:

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

Statewide GIS Data Sources:

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

Mariposa County

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-44

Summary of Available Flood Infrastructure Information, Mariposa County

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STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM

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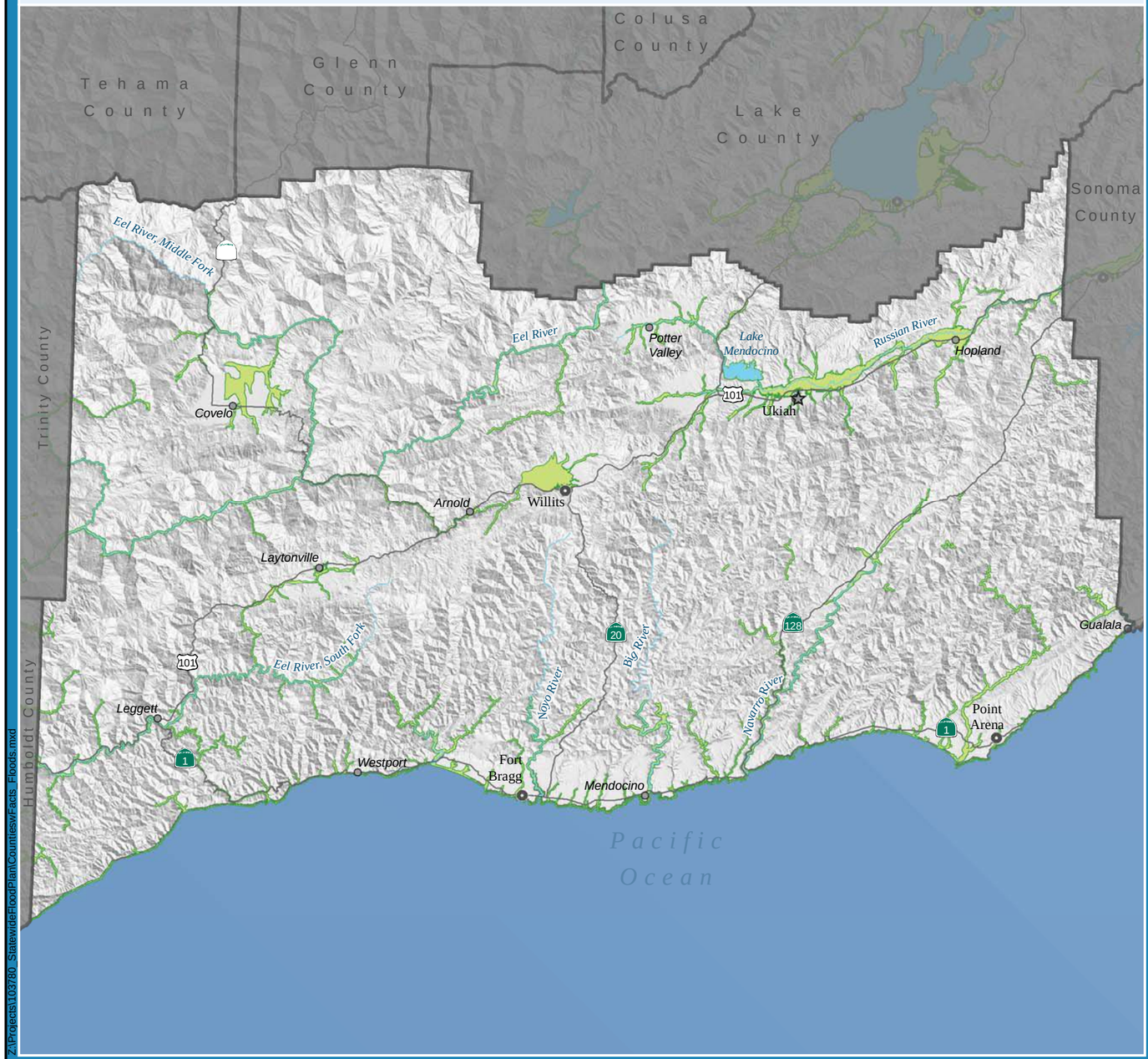
DISCLAIMER: *1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain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

100-year and 500-year Floodplains



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Selected Flood Events by Event Year

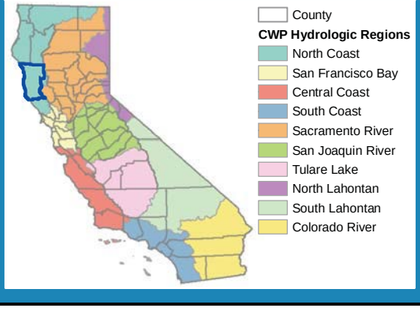
1861-1862 Winter, The Great Flood
1912 November, Russian River
1937 December, Russian River
1953 January, Eel River
1955-1956 December-January, 1955 Christmas Flood, Russian River, Eel, Noyo Creek, Mattole Creek
1964 March-April
1966 January
1968-1969 December-January, Winter '69 Storms, Elk River, Gualala River, Russian River
1970 Winter, Northern California Flooding, Russian River
1974 January, Russian River
1978 January
1982-1983 December-April, Winter Storms
1986 February, St. Valentine's Day Storm Russian River
1993 Late Winter Storms
1995 January-March, Severe Winter Storms
1998 February 9, El Niño Floods
2005-2006 December-January, New Year's Eve Flood of 2006
2006 March 29-April 1, May 10

Types of Flooding

Likely:
Slow Rise
Flash
Coastal
Stormwater
Debris Flow

Present:
Engineered Structure Failure
Tsunami
Alluvial Fan

Hydrologic Regions



Flood Hazard Exposure

County Statistics

Total Acreage:	2.2 million
Total Population:	86,198
Total Structures:	41,100
Total Value of Structures and Contents:	$7.7 billion
Total Agricultural Acreage:	80,134
Total Value of Crops:	$196.7 million

Summary of Exposure to Flood Hazard Reported by County	100-yr Event	500-yr Event
Exposed Area (acres):	48,590	49,988
Percent of Area Exposed:	2	2
Population Exposed:	7,227	8,881
Percent of Population Exposed:	8	10
Structures Exposed:	3,152	3,788
Total Depreciated Replacement Value of Exposed Structures and Contents:	$590.6 million	$724.2 million
Exposed Agricultural	17,151	17,775
Value of Exposed	$50.2 million	$53.6 million
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	9	10
High Potential Loss Facilities Exposed:	11	11
Lifeline Utilities Exposed:	2	2
Transportation Facilities Exposed:	75	88
Transportation Segments Exposed (miles):	69	77
Native American Tribal Land Exposed (acres):	505	505
Total Sensitive Plant Species Exposed:	70	70
Total Sensitive Animal Species Exposed:	39	39

Mendocino County

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

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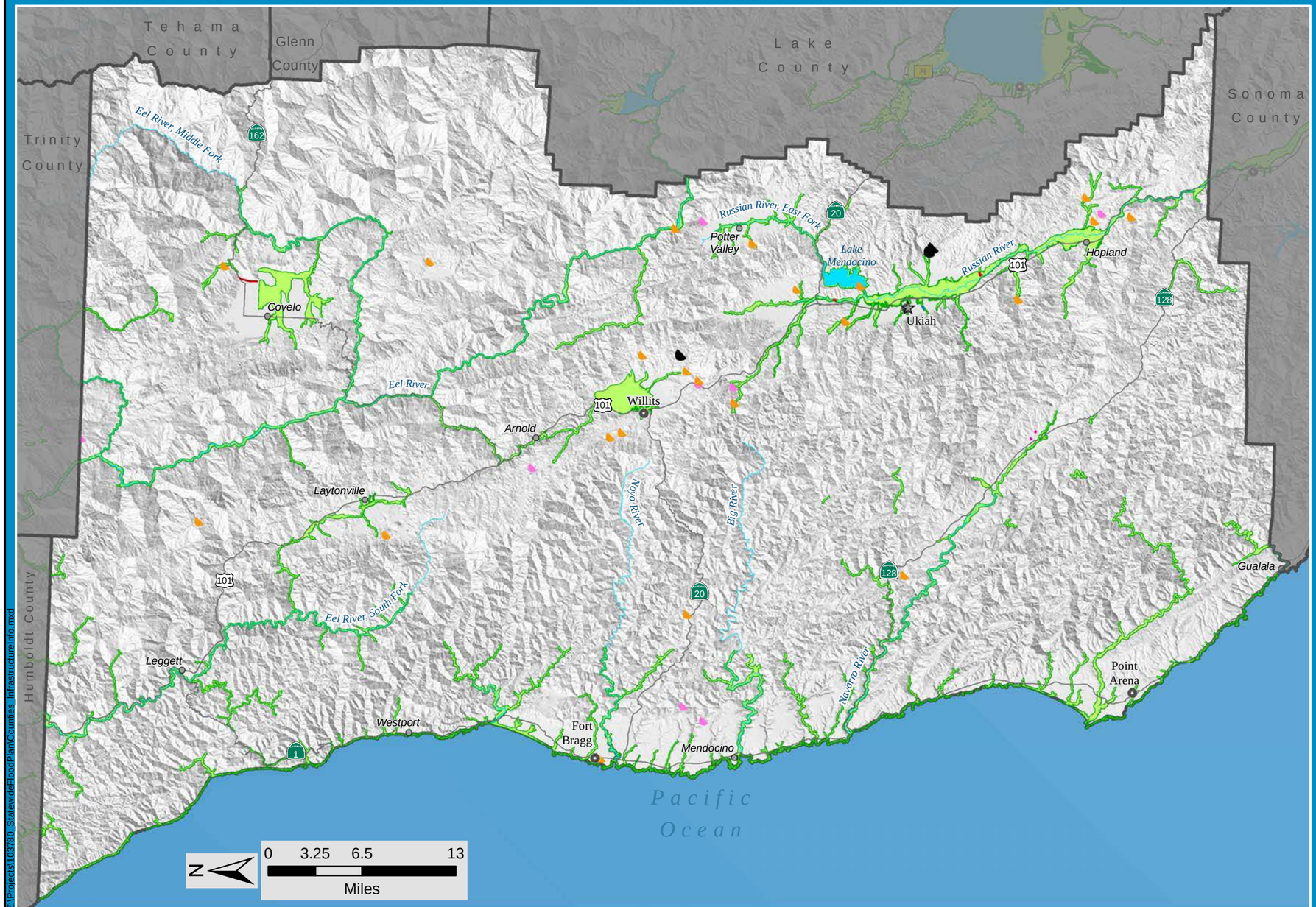
DISCLAIMER: *The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.*

Summary of Available Flood Infrastructure Information



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Mendocino County

Flood Infrastructure GIS Data Received from Agencies Contacted:

No Flood Infrastructure GIS Data Received

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

Channel
Dam

Agencies Contacted as Part of SFMP:

Mendocino County Water Agency

Planned Projects:

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

Statewide GIS Data Sources:

Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bullletin 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-46
Summary of Available Flood Infrastructure Information, Mendocino County

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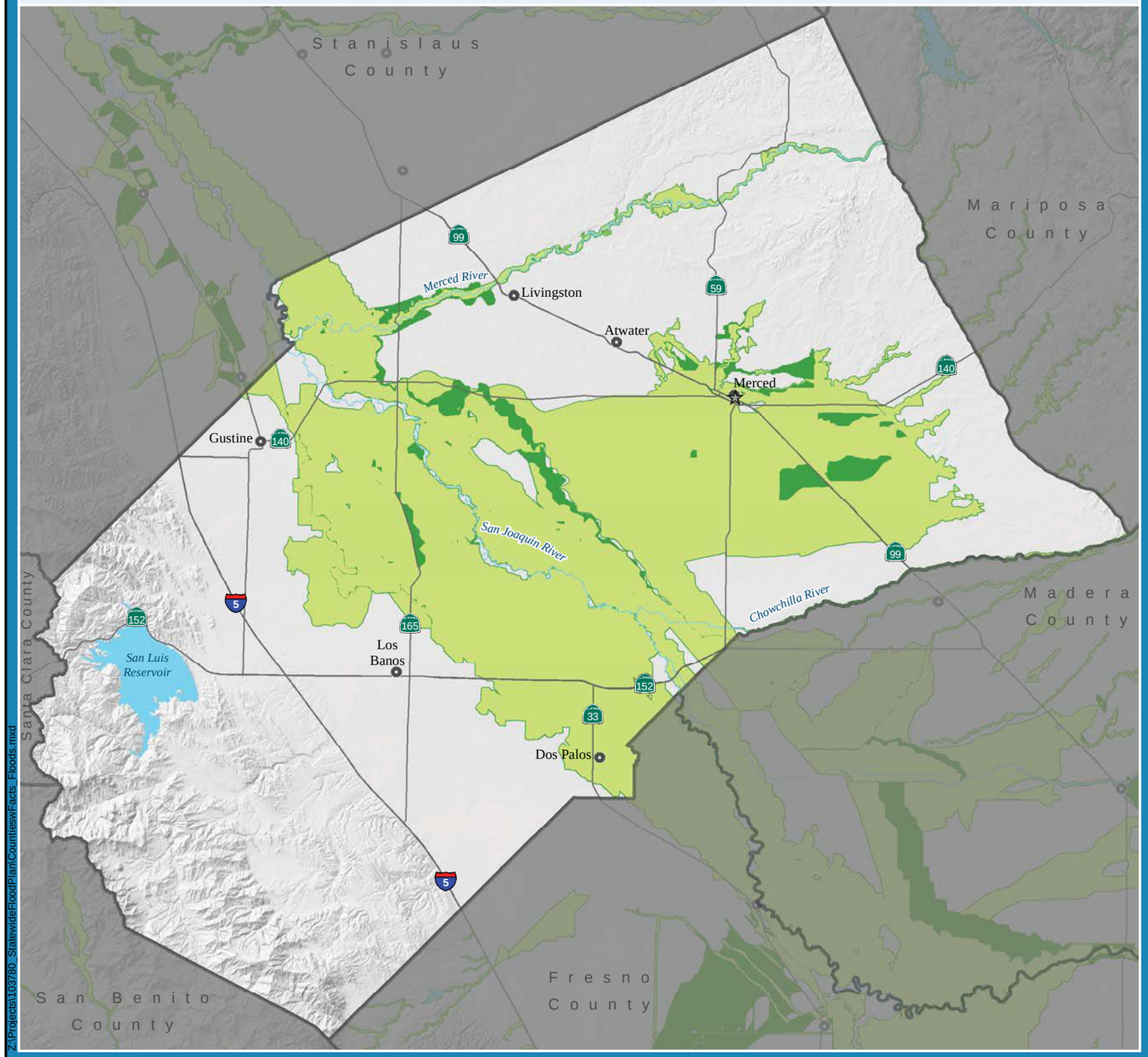
100-year and 500-year Floodplains



N

0 3.25 6.5 13

Miles

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

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Selected Flood Events by Event Year

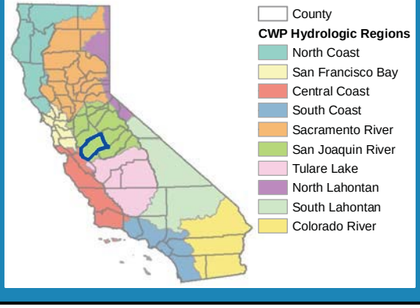
1861-1862 Winter, The Great Flood
1867 February
1868 March
1911 January, Mokelumne River Flood
1950 November - December
1955-1956 December-January, Christmas Flood
1958 FebruaryApril
1962-1963 December-February
1968-1969 December-February, Winter '69 Storms, Klamath River Basin
1982-1983 December-March, Winter Storms
1995 January-April, 1995 Christmas Flood
1997 January, Bear Creek
2006 March 29 - April 1, May 10, Spring Storms

Types of Flooding

Likely:
Slow Rise
Stormwater
Flash

Present:
Engineered Structure Failure
Debris Flow

Hydrologic Regions



Flood Hazard Exposure

County Statistics

Total Acreage:	1.3 million
Total Population:	211,108
Total Structures:	69,800
Total Value of Structures and Contents:	$15.4 billion
Total Agricultural Acreage:	550,475
Total Value of Crops:	$1.0 billion

Summary of Exposure to Flood Hazard Reported by County	100-yr Event	500-yr Event
Exposed Area (acres):	371,139	391,669
Percent of Area Exposed:	29	31
Population Exposed:	61,886	70,103
Percent of Population Exposed:	29	33
Structures Exposed:	20,588	22,983
Total Depreciated Replacement Value of Exposed Structures and Contents:	$3.4 billion	$4.0 billion
Exposed Crops (acres)	225,663	237,841
Value of Exposed Crops:	$370.4 million	$391.0 million
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	44	49
High Potential Loss Facilities Exposed:	11	11
Lifeline Utilities Exposed:	9	9
Transportation Facilities Exposed:	187	190
Transportation Segments Exposed (miles):	140	152
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	25	26
Total Sensitive Animal Species Exposed:	38	38

Merced County

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

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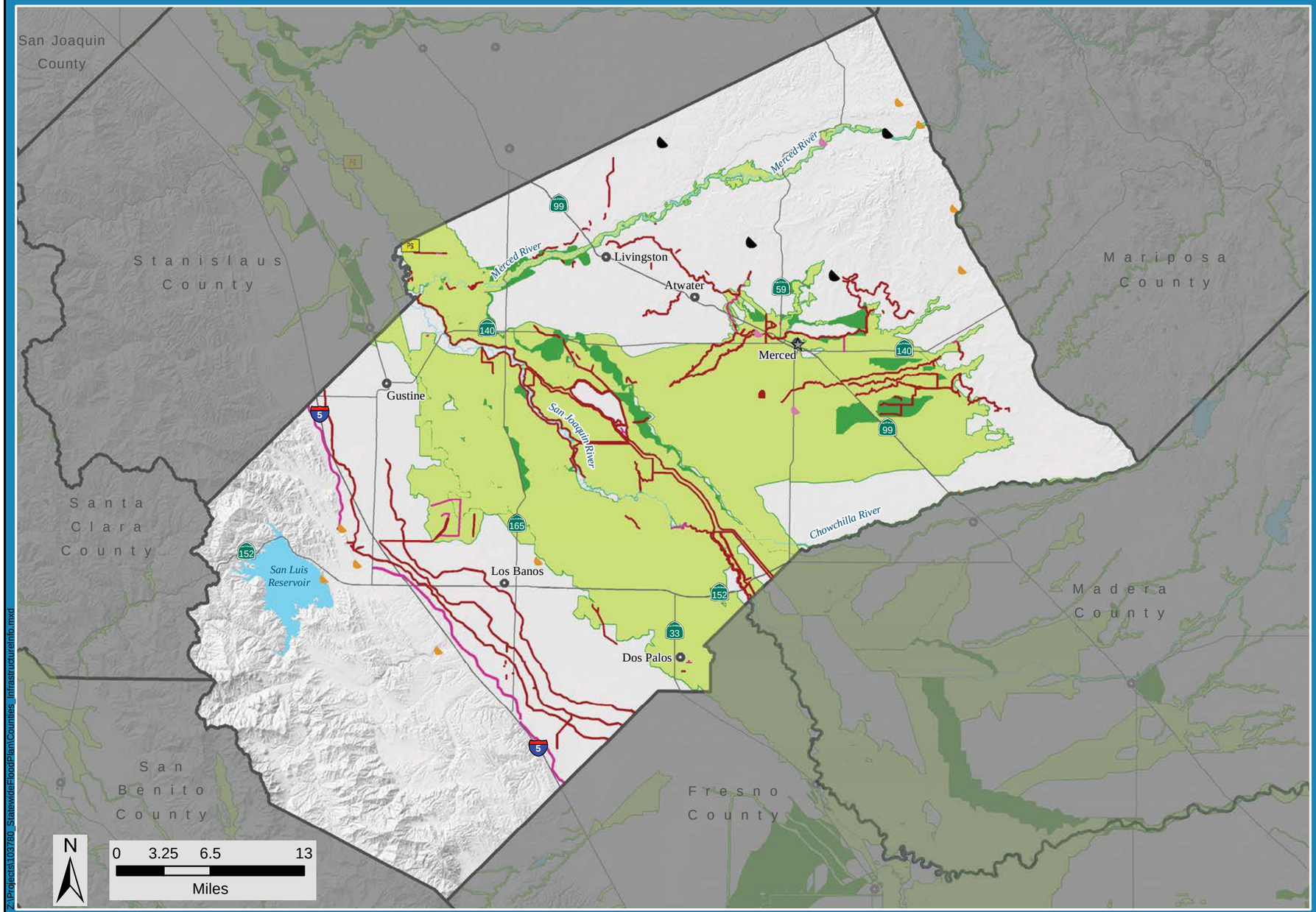
DISCLAIMER: *The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.*

Summary of Available Flood Infrastructure Information



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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

Merced County

Flood Infrastructure GIS Data Received from Agencies Contacted:

No Flood Infrastructure GIS Data Received

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

Channel
Dam
Debris Basin

Agencies Contacted as Part of SFMP:

Merced County Public Works
Merced Irrigation District

Planned Projects:

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

Statewide GIS Data Sources:

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

Merced County

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

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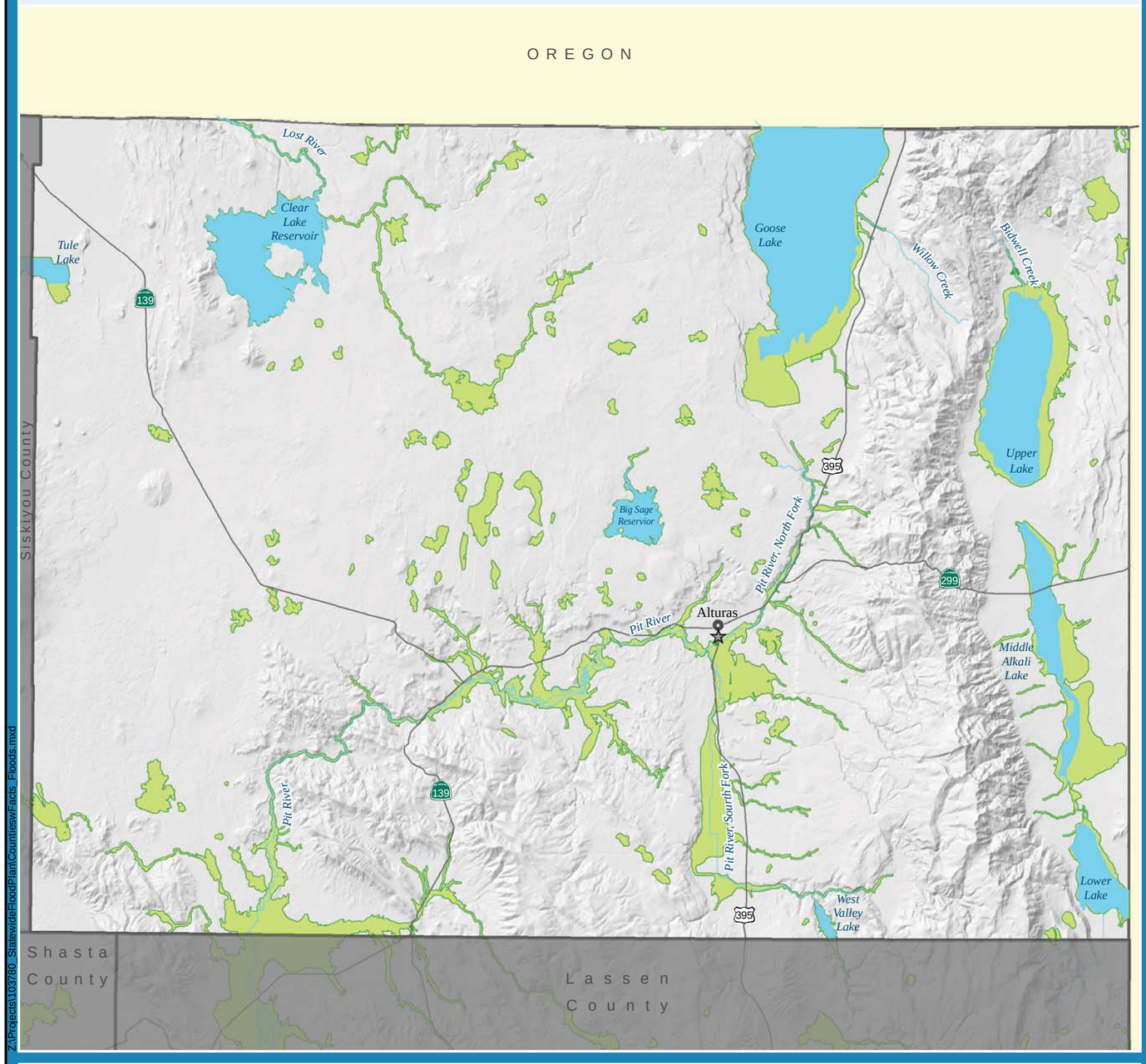
STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM

FloodSAFE CALIFORNIA

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

100-year and 500-year Floodplains



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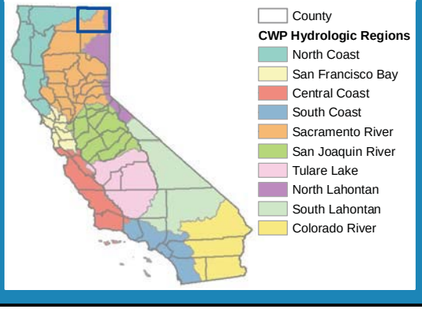
Selected Flood Events by Event Year

1861-1862 Winter, The Great Flood
1955-1956 December-January, Christmas Flood
1964-1965 December-January, Northern California Christmas 1964 Disaster
1969-1970, Winter '69 Storms, Countywide
1970 December, Countywide
1974 January-April
1986 February, St. Valentine's Day Storm
1993 January-February, Late Winter Storms
1995 January-March, Severe Winter Storms, Sacramento River Basin
1996-1997 December-January
2005-2006 December-January, New Year's Eve Flood of 2006

Types of Flooding

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

Hydrologic Regions



Flood Hazard Exposure

County Statistics

Total Acreage:	2.7 million
Total Population:	9,445
Total Structures:	6,400
Total Value of Structures and Contents:	$704.1 million
Total Agricultural Acreage:	182,946
Total Value of Crops:	$96.6 million

Summary of Exposure to Flood Hazard Reported by County	100-yr Event	500-yr Event
Exposed Area (acres):	294,725	294,876
Percent of Area Exposed:	11	11
Population Exposed:	914	1,007
Percent of Population Exposed:	10	11
Structures Exposed:	626	695
Total Depreciated Replacement Value of Exposed Structures and Contents:	$80.2 million	$94.9 million
Exposed Crops (acres)	46,391	46,490
Value of Exposed Crops	$8.0 million	$8.0 million
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	4	7
High Potential Loss Facilities Exposed:	24	24
Lifeline Utilities Exposed:	0	0
Transportation Facilities Exposed:	42	42
Transportation Segments Exposed (miles):	30	30
Native American Tribal Land Exposed (acres):	1,490	1,495
Total Sensitive Plant Species Exposed:	50	50
Total Sensitive Animal Species Exposed:	33	33

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

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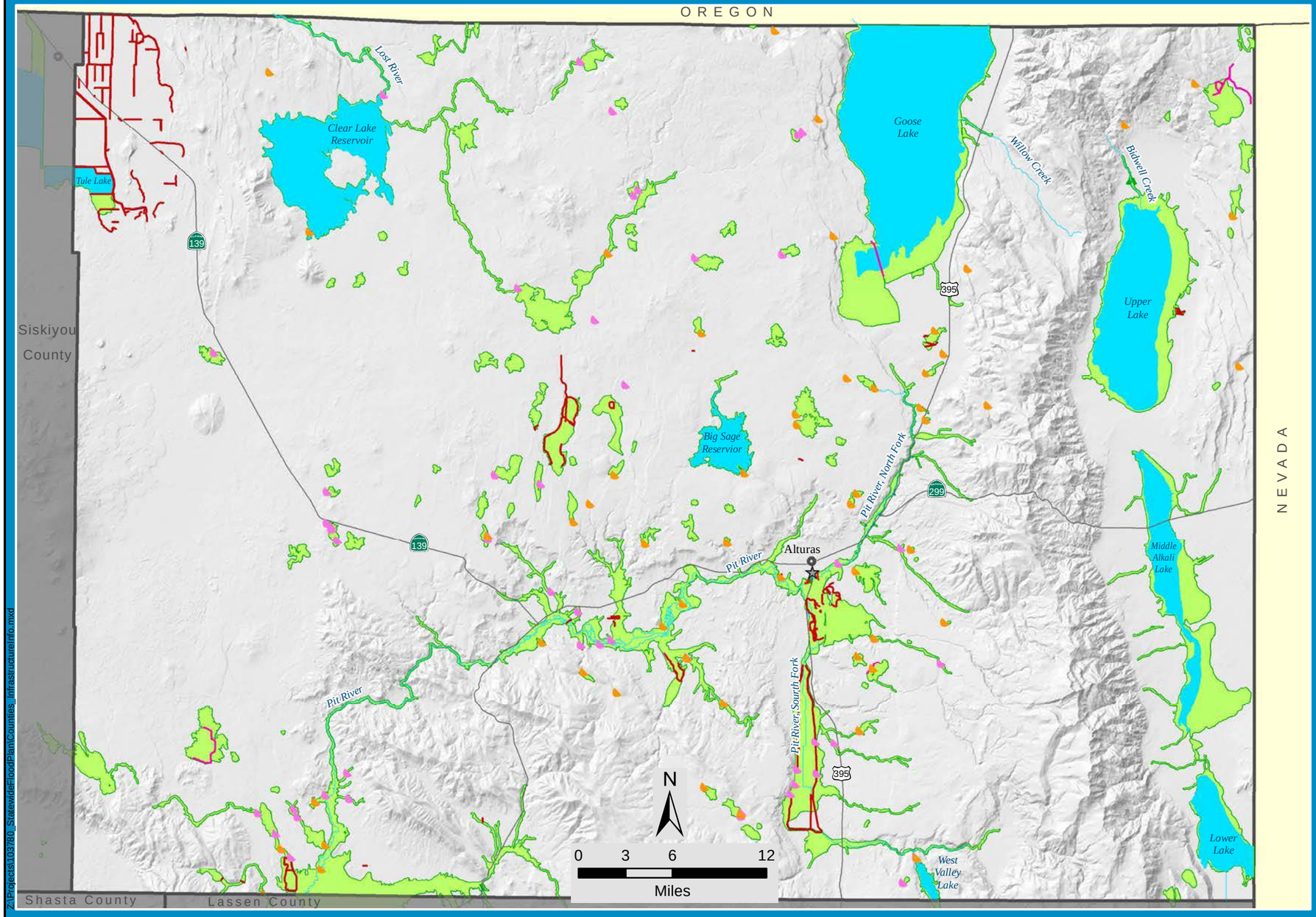
DISCLAIMER: *The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.*

Summary of Available Flood Infrastructure Information



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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

Modoc County

Flood Infrastructure GIS Data Received from Agencies Contacted:

No Flood Infrastructure GIS Data Received

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

Dam

Agencies Contacted as Part of SFMP:

Modoc County
City of Alturas
Central Modoc Resource Conservation District

Planned Projects:

Number of Local Projects:	10
Estimated Cost of Local Projects:	$1.1 million
Number of USACE Projects:	0
Estimated Cost of USACE Projects:	none

Statewide GIS Data Sources:

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

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

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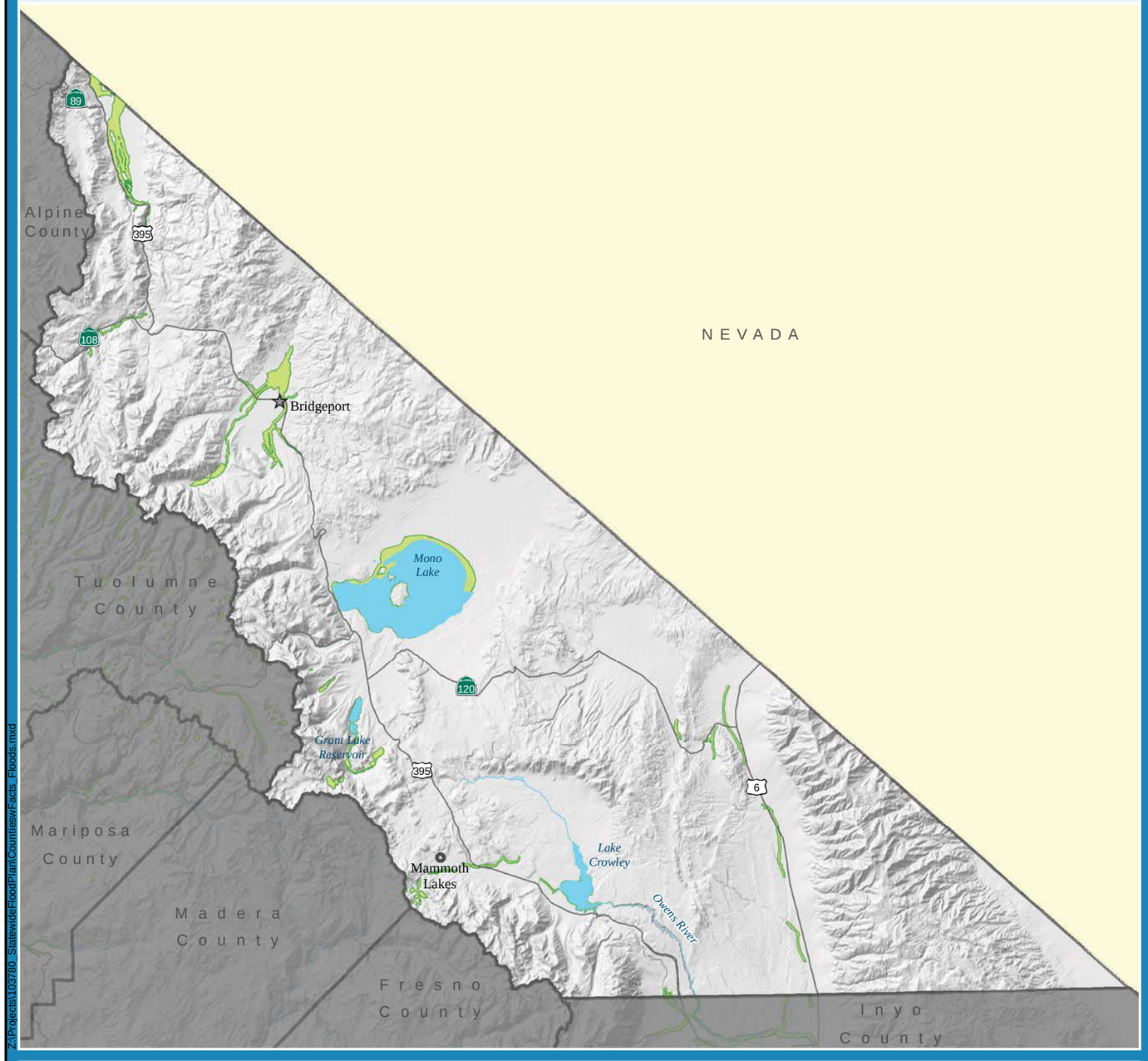
STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM

FloodSAFE CALIFORNIA

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

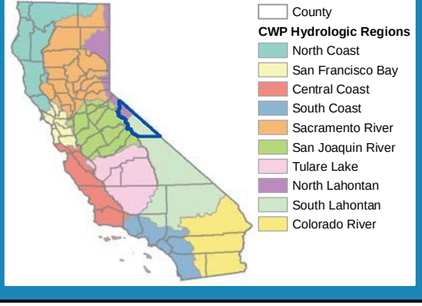
1861-1862 Winter, The Great Flood
1962-1963 December-February
1968-1969 December-January, Winter '69 Storms
1978 Communities of Benton, Hammil, and Chalfant Valley
1984 Communities of Benton, Hammil, and Chalfant Valley
1986 February, St. Valentine's Day Storm
1989 June-August, Communities of Benton, Hammil, and Chalfant Valley
1995 January-March, Severe Winter Storms, Walker and Coleville areas
1997 January 1-2, Walker River Basin, countywide
2001 January, Walker River

Types of Flooding

Likely:
Slow Rise
Flash
Debris Flow
Alluvial Fan
Stormwater

Present:
Engineered Structure Failure

Hydrologic Regions



Flood Hazard Exposure

County Statistics

Total Acreage:	2.0 million
Total Population:	12,851
Total Structures:	9,100
Total Value of Structures and Contents:	$2.2 billion
Total Agricultural Acreage:	37,129
Total Value of Crops	$2.8 million

Summary of Exposure to Flood Hazard Reported by County	100-yr Event	500-yr Event
Exposed Area (acres):	65,911	66,251
Percent of Area Exposed:	3	3
Population Exposed:	304	370
Percent of Population Exposed:	2	3
Structures Exposed:	318	371
Total Depreciated Replacement Value of Exposed Structures and Contents:	$53.4 million	$62.6 million
Exposed Crops (acres)	5,228	5,403
Value of Exposed Crops:	$468,801	$469,725
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	2	2
High Potential Loss Facilities Exposed:	2	2
Lifeline Utilities Exposed:	1	1
Transportation Facilities Exposed:	6	6
Transportation Segments Exposed (miles):	17	18
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	23	23
Total Sensitive Animal Species Exposed:	28	28

Mono County

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

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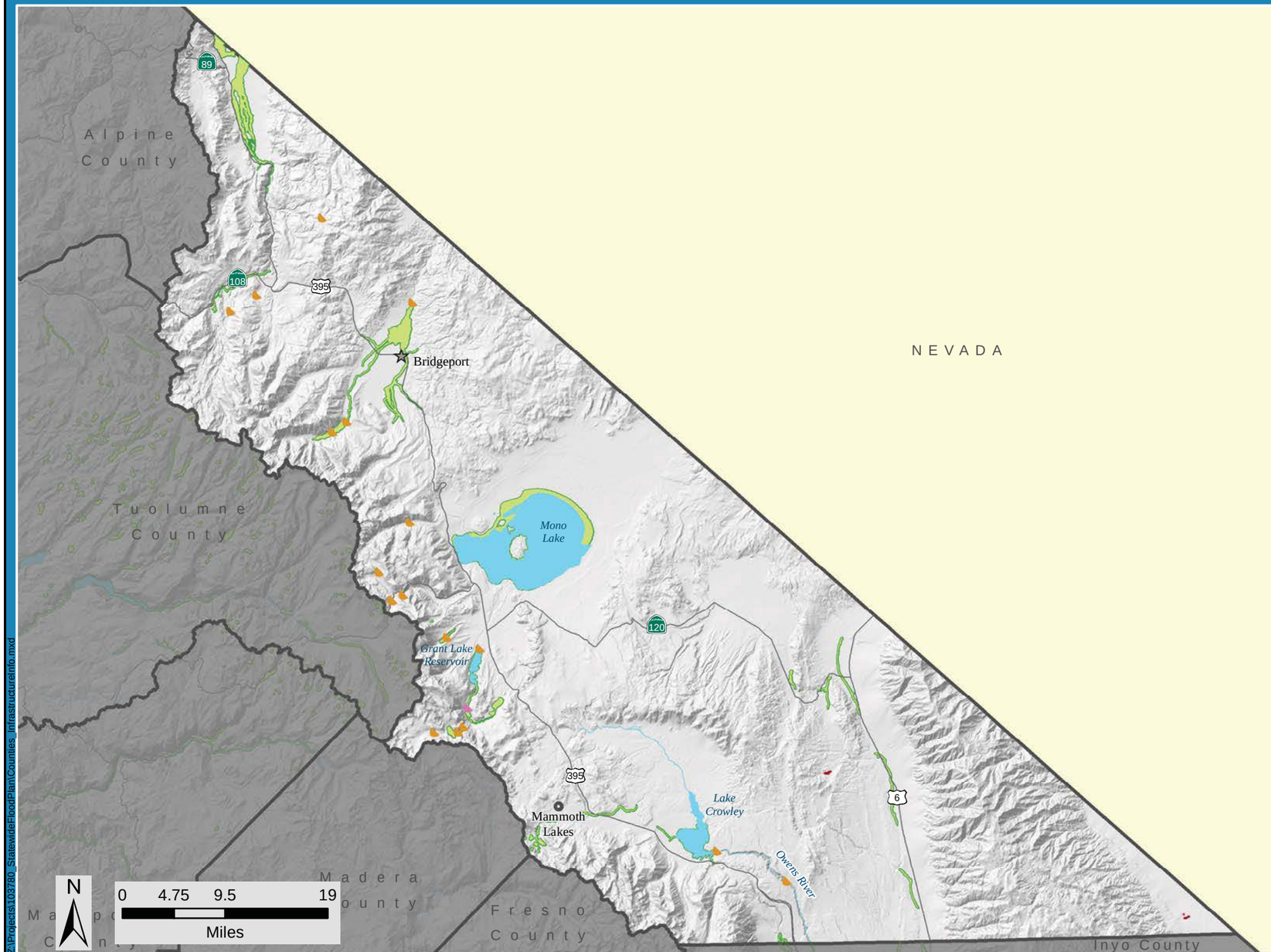
FloodSAFE CALIFORNIA

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

Summary of Available Flood Infrastructure Information



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Mono County

Flood Infrastructure GIS Data Received from Agencies Contacted:

No Flood Infrastructure GIS Data Received

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

Channel

Agencies Contacted as Part of SFMP:

Mono County
Town of Mammoth Lakes

Planned Projects:

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

Statewide GIS Data Sources:

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

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

Mono County

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-52

Summary of Available Flood Infrastructure Information, Mono County

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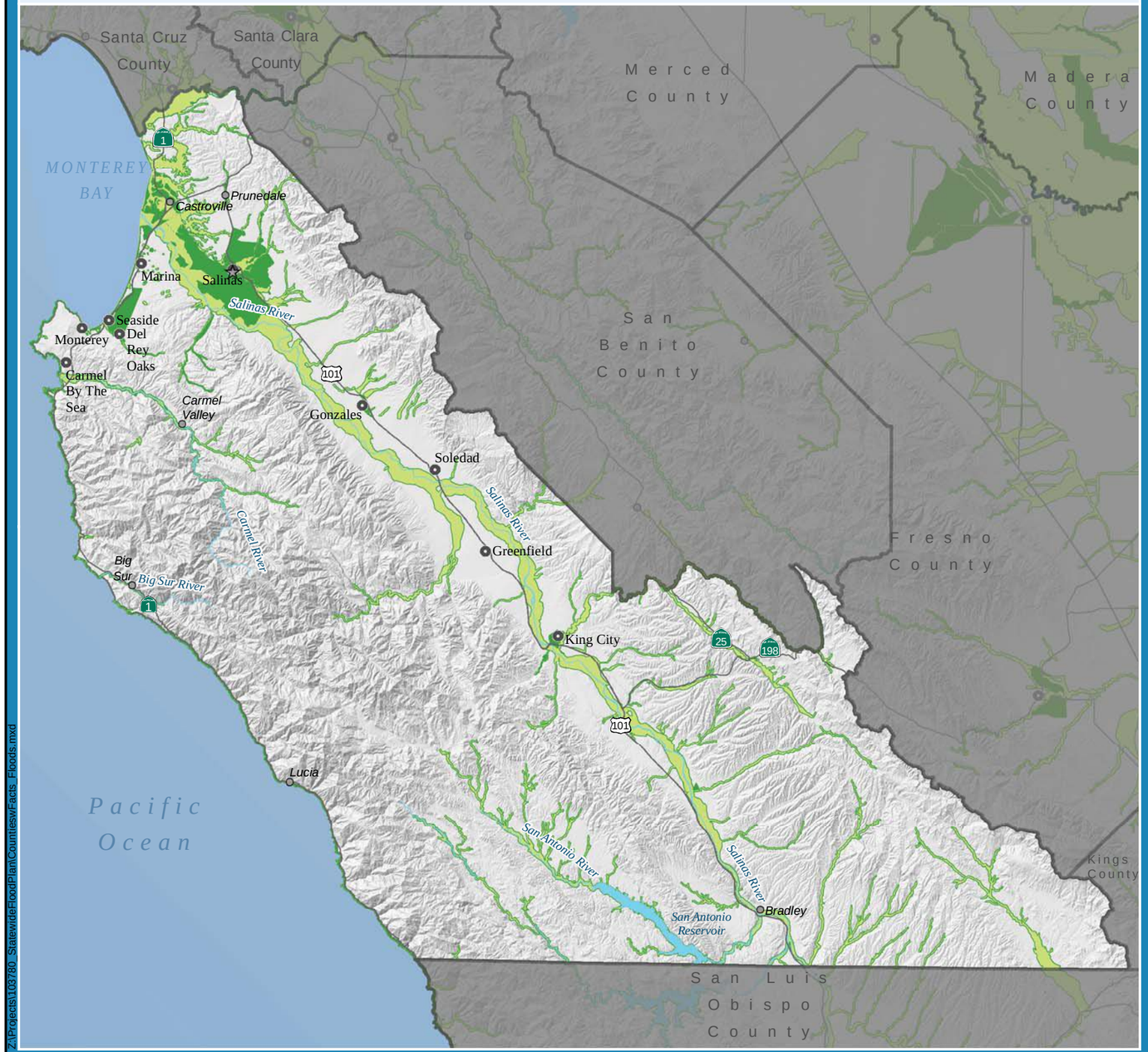
STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM

FloodSAFE CALIFORNIA

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



N

0 4.75 9.5 19

Miles

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

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Selected Flood Events by Event Year

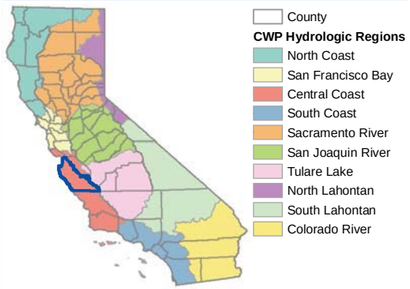
1937 February
1938 February-March, Salinas River
1955-1956 December-January, 1955 Christmas Flood, Salinas Valley
1958 March-April, Countywide
1962 February, Countywide
1963 January-February , Salsipuedes Creek, Pajaro River
1969 January-February, Winter '69 Storms, Pajaro River, Salinas River, San Lorenzo River
1970 January
1973 January-February, Salinas Valley
1978 January-February, Countywide
1980 February 12-22, Countywide
1982-1983 November-March, Winter Storms, Salinas River
1995 January-March, Severe Winter Storms, Countywide
1997 December-January
1998 February, El Niño Floods, Coastal Communities, Pajaro River
2006 March 29-April 1, May 10

Types of Flooding

Likely:
Slow Rise
Flash
Coastal
Stormwater
Debris Flow

Present:
Engineered Structure Failure
Tsunami
Alluvial Fan

Hydrologic Regions



Flood Hazard Exposure

County Statistics

Total Acreage:	2.1 million
Total Population:	401,683
Total Structures:	123,700
Total Value of Structures and Contents:	$33.1 billion
Total Agricultural Acreage:	262,671
Total Value of Crops:	$1.4 billion

Summary of Exposure to Flood Hazard Reported by County

	100-yr Event	500-yr Event
Exposed Area (acres):	121,375	154,034
Percent of Area Exposed:	6	7
Population Exposed:	18,185	216,515
Percent of Population Exposed:	5	54
Structures Exposed:	5,650	54,575
Total Depreciated Replacement Value of Exposed Structures and Contents:	$1.9 billion	$14.3 billion
Exposed Crops (acres):	54,385	69,310
Value of Exposed Crops:	$311.0 million	$411.2 million
Department of Defense Facilities Exposed:	4	4
Essential Facilities Exposed:	9	106
High Potential Loss Facilities Exposed:	6	8
Lifeline Utilities Exposed:	4	7
Transportation Facilities Exposed:	92	139
Transportation Segments Exposed (miles):	75	146
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	79	79
Total Sensitive Animal Species Exposed:	56	57

Monterey County

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

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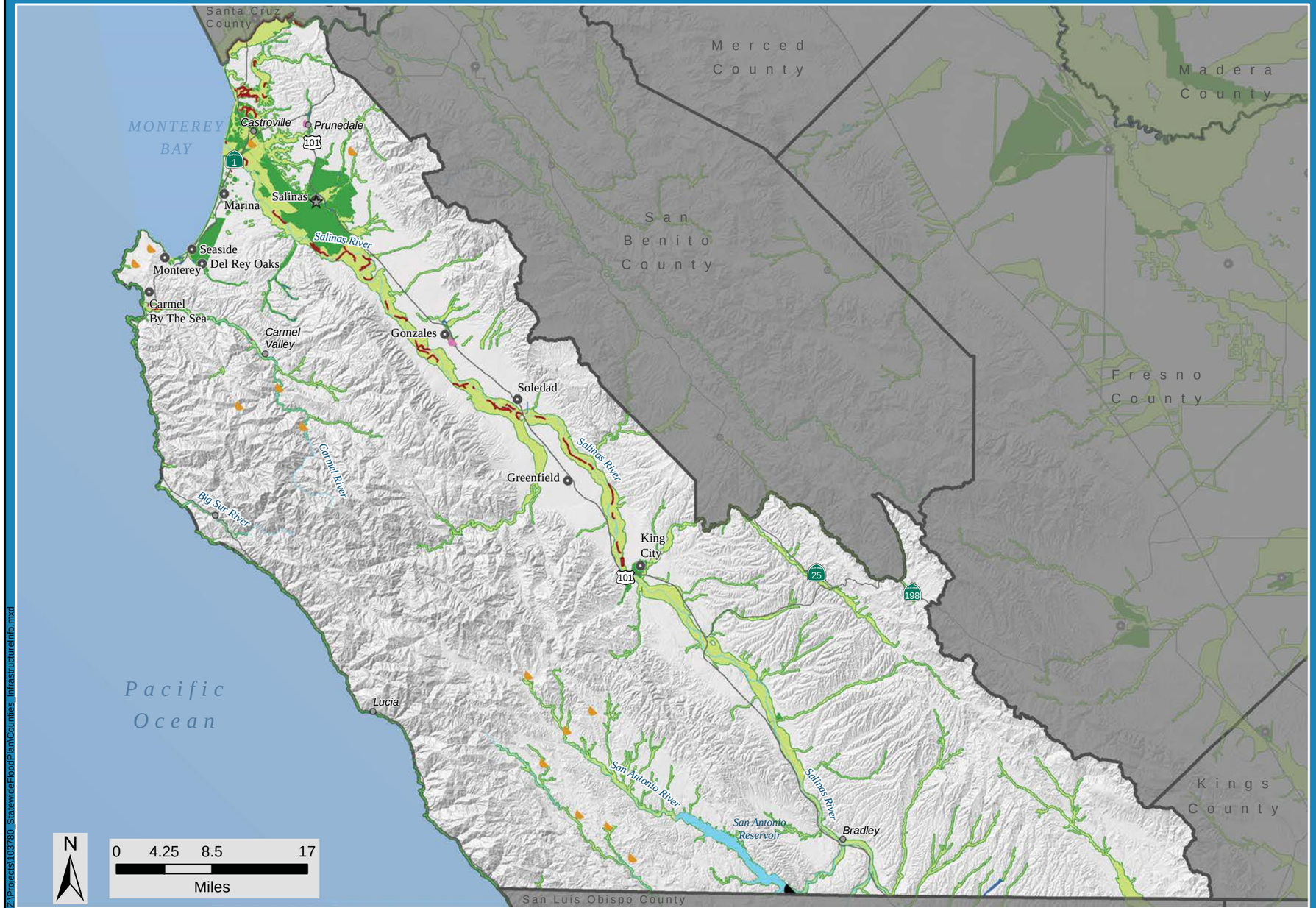
DISCLAIMER: *The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.*

Summary of Available Flood Infrastructure Information



Monterey County

Flood Infrastructure GIS Data Received from Agencies Contacted:

No Flood Infrastructure GIS Data Received

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

Channel
Dam

Agencies Contacted as Part of SFMP:

Monterey County Water Resources Agency

Planned Projects:

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

Statewide GIS Data Sources:

Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bullletin 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-54
Summary of Available Flood Infrastructure Information, Monterey County

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FloodSAFE CALIFORNIA

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.*

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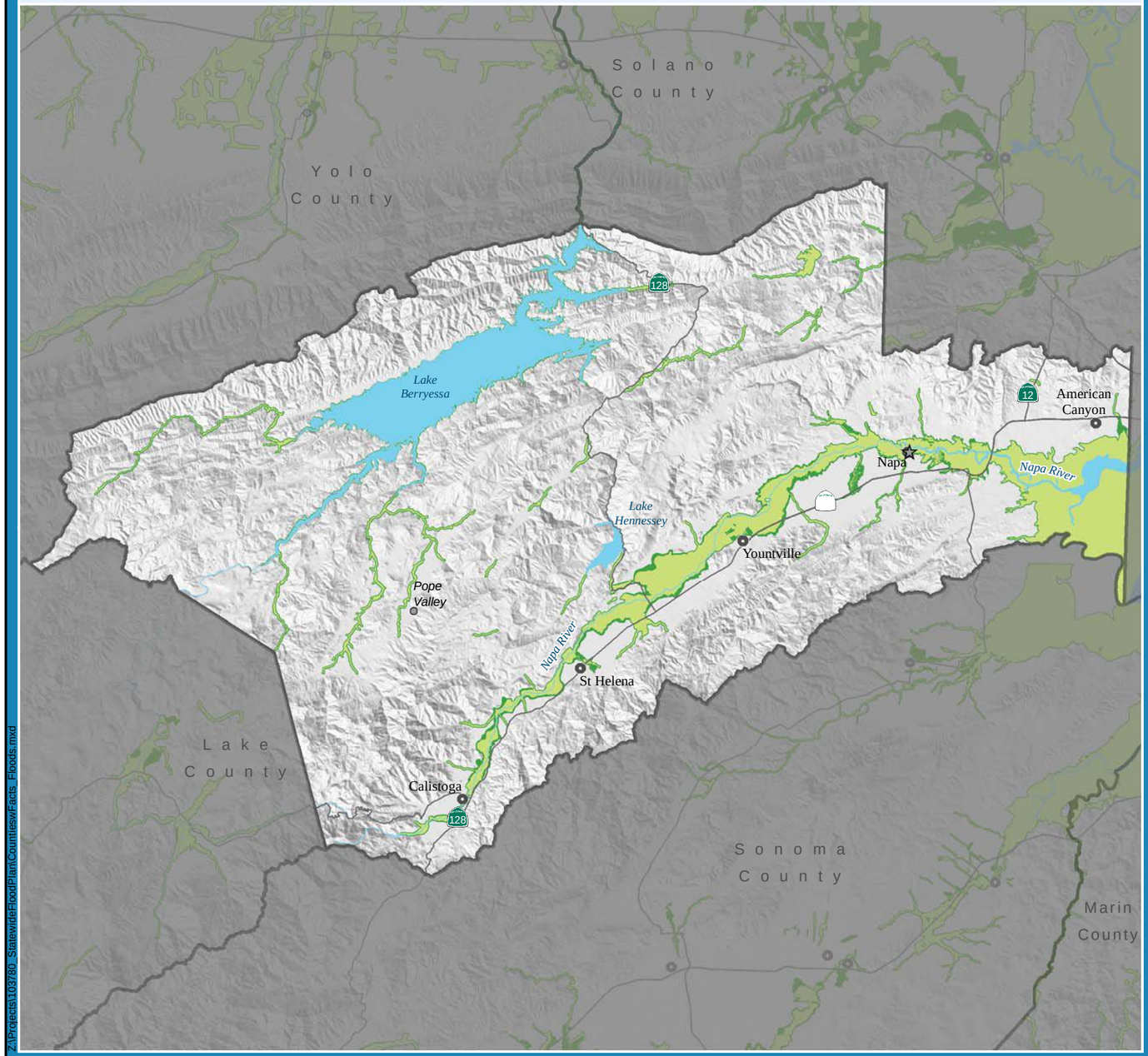
100-year and 500-year Floodplains



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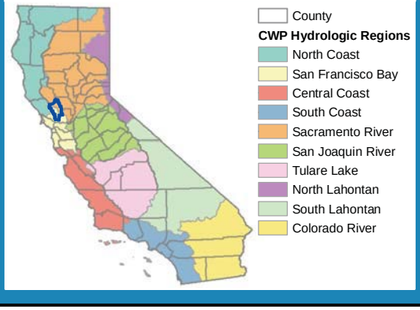
Selected Flood Events by Event Year

1861-1862 Winter, The Great Flood
1937-1938 December-March, Bay Area
1942 February 6, Napa River
1955-1956 December-January, 1955 Christmas Flood, Bay Area
1964-1965 December-January , Northern California Christmas 1964 Disaster, Bay Area
1969 January, Winter '69 Storms, Countywide
1969-1970 December-April, San Francisco Bay Area, Napa
1973 January-February, Central Coast Ranges (including Bay Area) to Transverse and Peninsula Ranges
1974 February, San Francisco Bay Area
1982 January-February, Winter Storms, San Francisco Bay Area
1986 February 17-18, St. Valentine's Day Storm, San Pablo Bay, Napa River
1993 January 20-25, Late Winter Storm
1995 January-March, 1995 Christmas Flood
2002 December 16, Napa River
2006 February 3-April 1, May 10, Spring Storms

Types of Flooding

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

Hydrologic Regions



Flood Hazard Exposure

County Statistics

Total Acreage:	505,857
Total Population:	124,232
Total Structures:	49,200
Total Value of Structures and Contents:	$14.2 billion
Total Agricultural Acreage:	48,639
Total Value of Crops	$1.7 million

Summary of Exposure to Flood Hazard Reported by County	100-yr Event	500-yr Event
Exposed Area (acres):	51,436	53,775
Percent of Area Exposed:	10	11
Population Exposed:	13,559	17,322
Percent of Population Exposed:	11	14
Structures Exposed:	4,926	6,509
Total Depreciated Replacement Value of Exposed Structures and Contents:	$1.5 billion	$1.9 billion
Exposed Crops (acres)	8,780	9,992
Value of Exposed Crops	$336,927	$342,212
Department of Defense Facilities Exposed:	1	1
Essential Facilities Exposed:	11	12
High Potential Loss Facilities Exposed:	1	1
Lifeline Utilities Exposed:	3	3
Transportation Facilities Exposed:	42	51
Transportation Segments Exposed (miles):	24	27
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	39	40
Total Sensitive Animal Species Exposed:	28	28

Napa County

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

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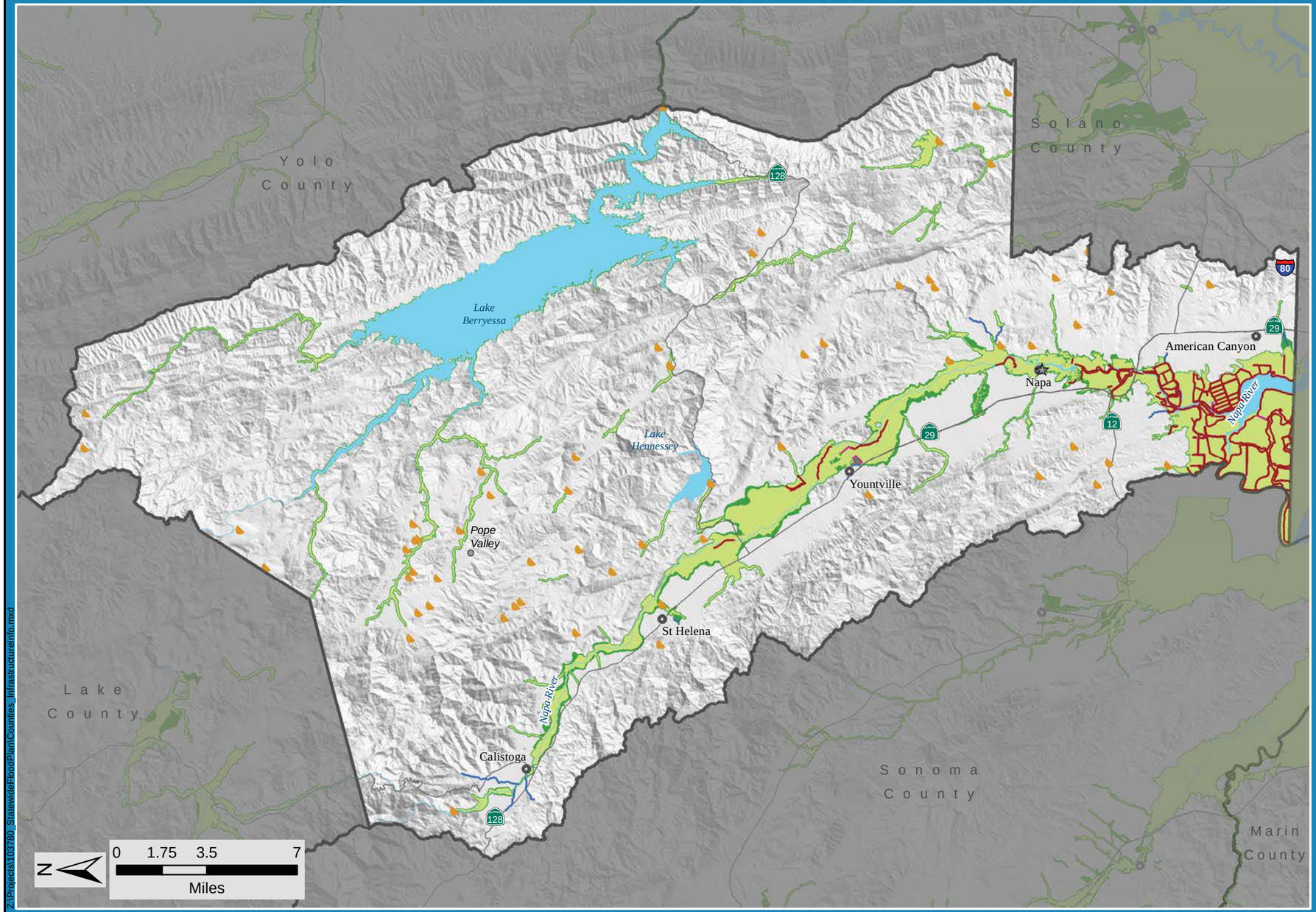
DISCLAIMER: *The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.*

Summary of Available Flood Infrastructure Information



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Napa County

Flood Infrastructure GIS Data Received from Agencies Contacted:

No Flood Infrastructure GIS Data Received

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

Levee
Channel
Floodwall

Agencies Contacted as Part of SFMP:

Napa County Flood Control and Water Conservation District

Planned Projects:

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

Statewide GIS Data Sources:

Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bullletin 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-56
Summary of Available Flood Infrastructure Information, Napa County

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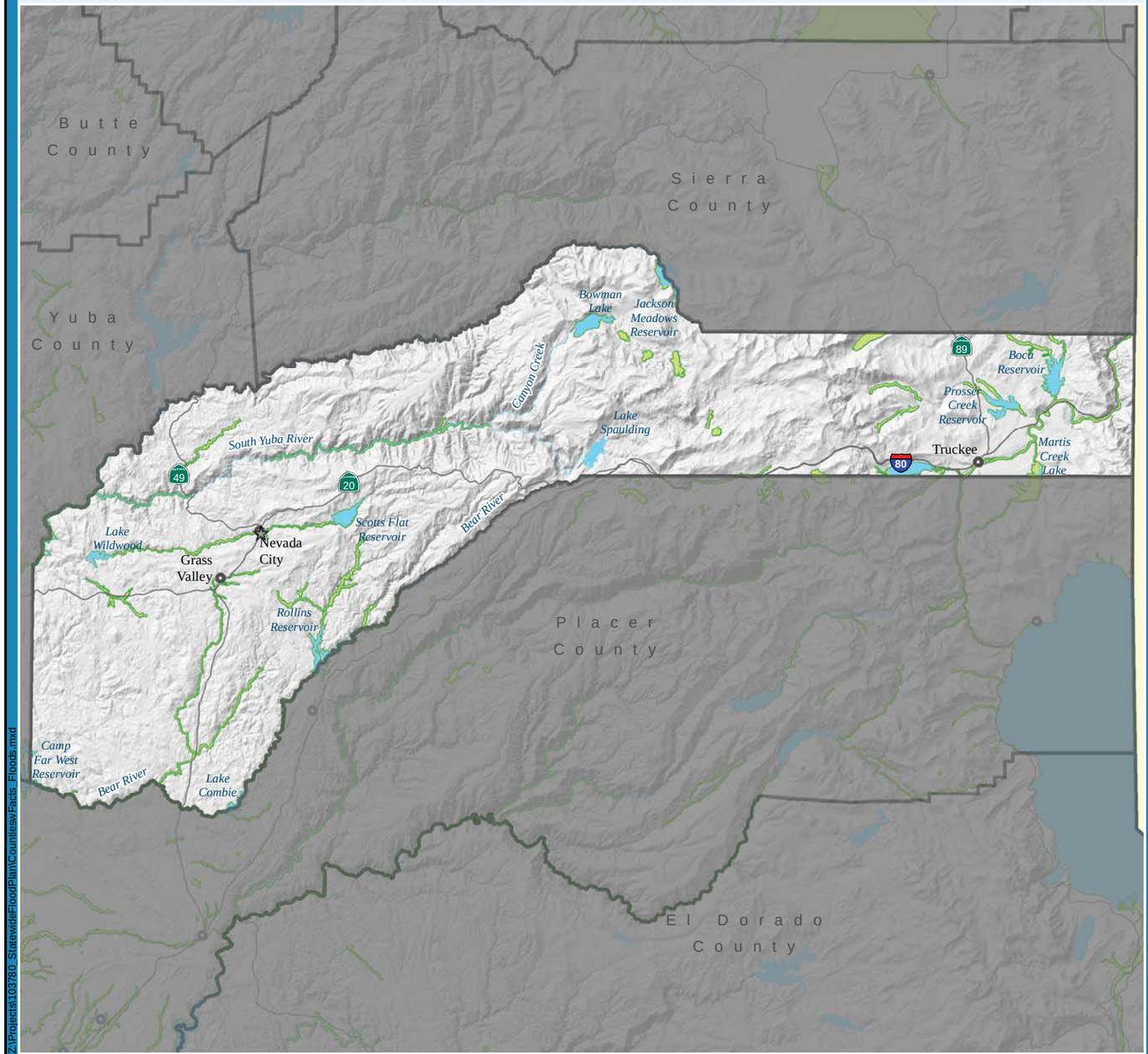
FloodSAFE CALIFORNIA

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
1942 January-February, Regional
1950-1951 December-March, Truckee River Basin
1955-1956 December-January, Christmas Flood
1962-1963 December-February, Truckee
1964-1965 December-January, Northern California Christmas 1964 Disaster, Truckee River Basin
1969-1970 Winter, Winter '69 Storms
1982-1983 December-March
1986 February, St. Valentine's Day Storm
1995 January-March, Severe Winter Storms, Sacramento River Basin, Lake Tahoe
1997 January 1-2, Truckee River Basin
2006 March 29 - April 1, May 10, Spring Storms
2008 January 5-14, Winter Storms

Types of Flooding

Likely:
Slow Rise
Flash
Stormwater

Present:
Debris Flow
Engineered Structure Failure

Hydrologic Regions

Flood Hazard Exposure

County Statistics

Total Acreage:	623,851
Total Population:	92,066
Total Structures:	47,800
Total Value of Structures and Contents:	$11.6 billion
Total Agricultural Acreage:	6,358
Total Value of Crops	$1.0 million

Summary of Exposure to Flood Hazard Reported by County	100-yr Event	500-yr Event
Exposed Area (acres):	14,159	14,415
Percent of Area Exposed:	2	2
Population Exposed:	1,255	1,704
Percent of Population Exposed:	1	2
Structures Exposed:	739	960
Total Depreciated Replacement Value of Exposed Structures and Contents:	$156.3 million	$206.9 million
Exposed Crops (acres)	58	64
Value of Exposed Crops	$58,401	$60,189
Department of Defense Facilities Exposed:	0	0
Essential Facilities Exposed:	0	0
High Potential Loss Facilities Exposed:	6	6
Lifeline Utilities Exposed:	0	0
Transportation Facilities Exposed:	14	17
Transportation Segments Exposed(miles):	11	12
Native American Tribal Land Exposed (acres):	0	0
Total Sensitive Plant Species Exposed:	15	15
Total Sensitive Animal Species Exposed:	18	18

Nevada County

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

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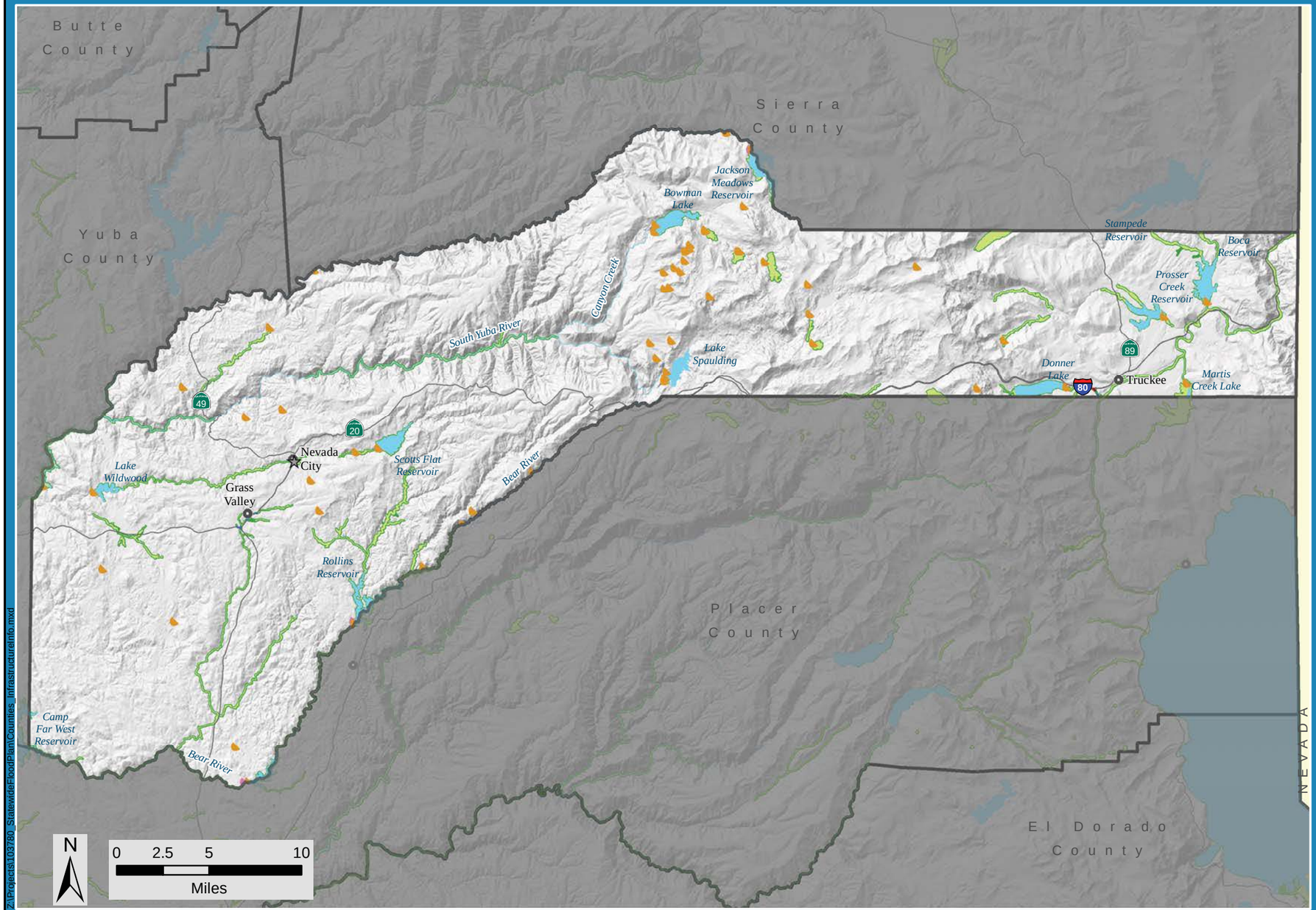
DISCLAIMER: *The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.*

Summary of Available Flood Infrastructure Information



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Nevada County

Flood Infrastructure GIS Data Received from Agencies Contacted:

No Flood Infrastructure GIS Data Received

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

Dam

Agencies Contacted as Part of SFMP:

Nevada County

Planned Projects:

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

Statewide GIS Data Sources:

Cities derived from CAL FIRE incorporated city limit polygons, 2010. **Populated Places** from GNIS, 2011. **Counties** from CalAtlas, 2009. **Dams** modified from DWR, Bullletin 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.

Nevada 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-58

Summary of Available Flood Infrastructure Information, Nevada County

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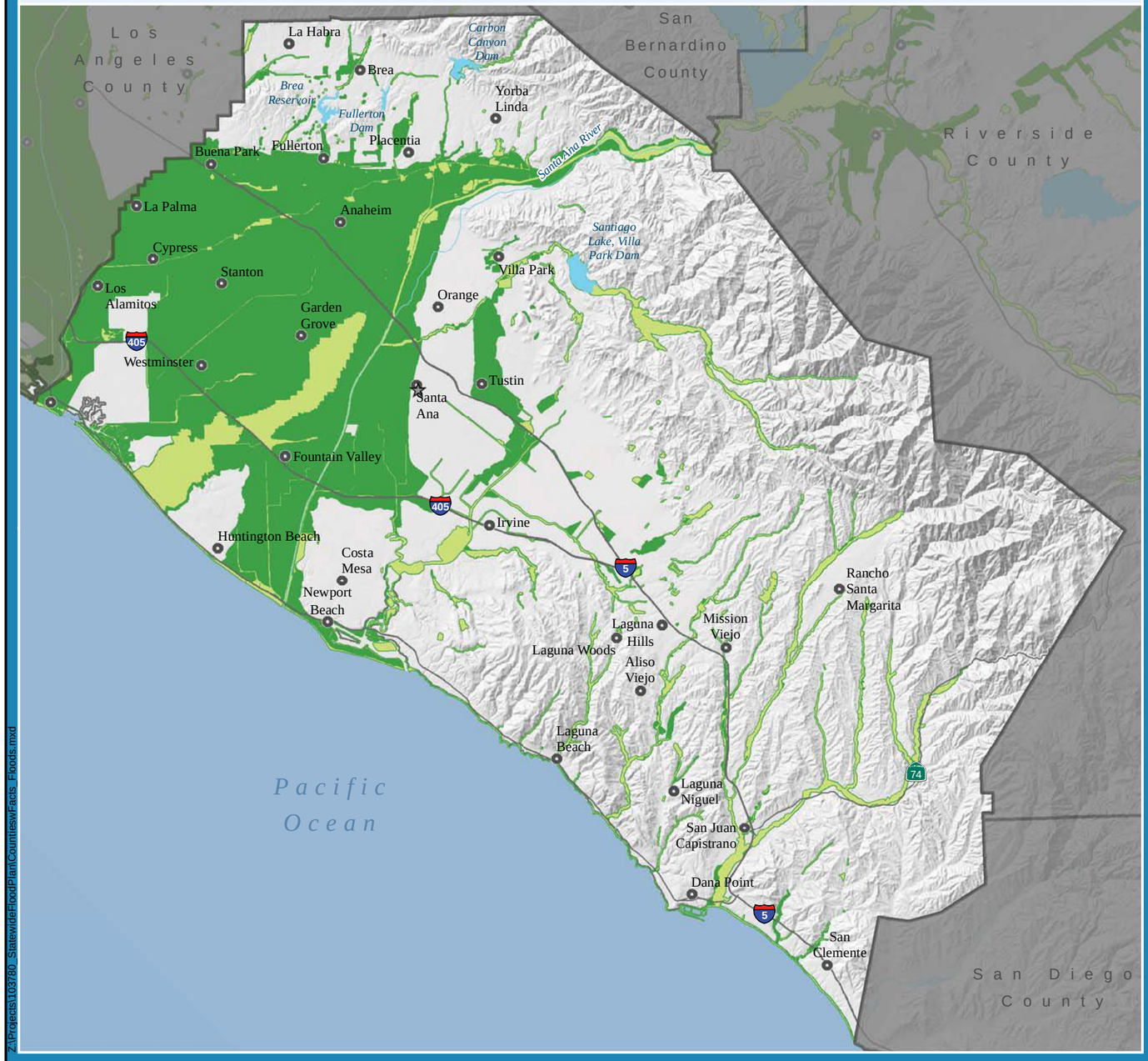
FloodSAFE CALIFORNIA

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

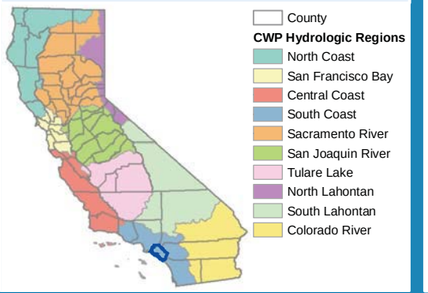
1861-1862 Winter, The Great Flood, Santa Ana River
1884 February-March, Santiago Creek, Santa Ana River
1916 January, Great Flood of 1916, Santa Ana River, City of Santa Ana and Westminster
1925 Santa Ana River
1927 February, Santa Ana River
1938 March, Great Flood, Santa Ana River
1958 February-April, 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

Types of Flooding

Likely:
Slow Rise
Flash
Debris Flow
Alluvial Fan
Coastal
Stormwater

Present:
Tsunami
Engineered Structure Failure

Hydrologic Regions



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

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

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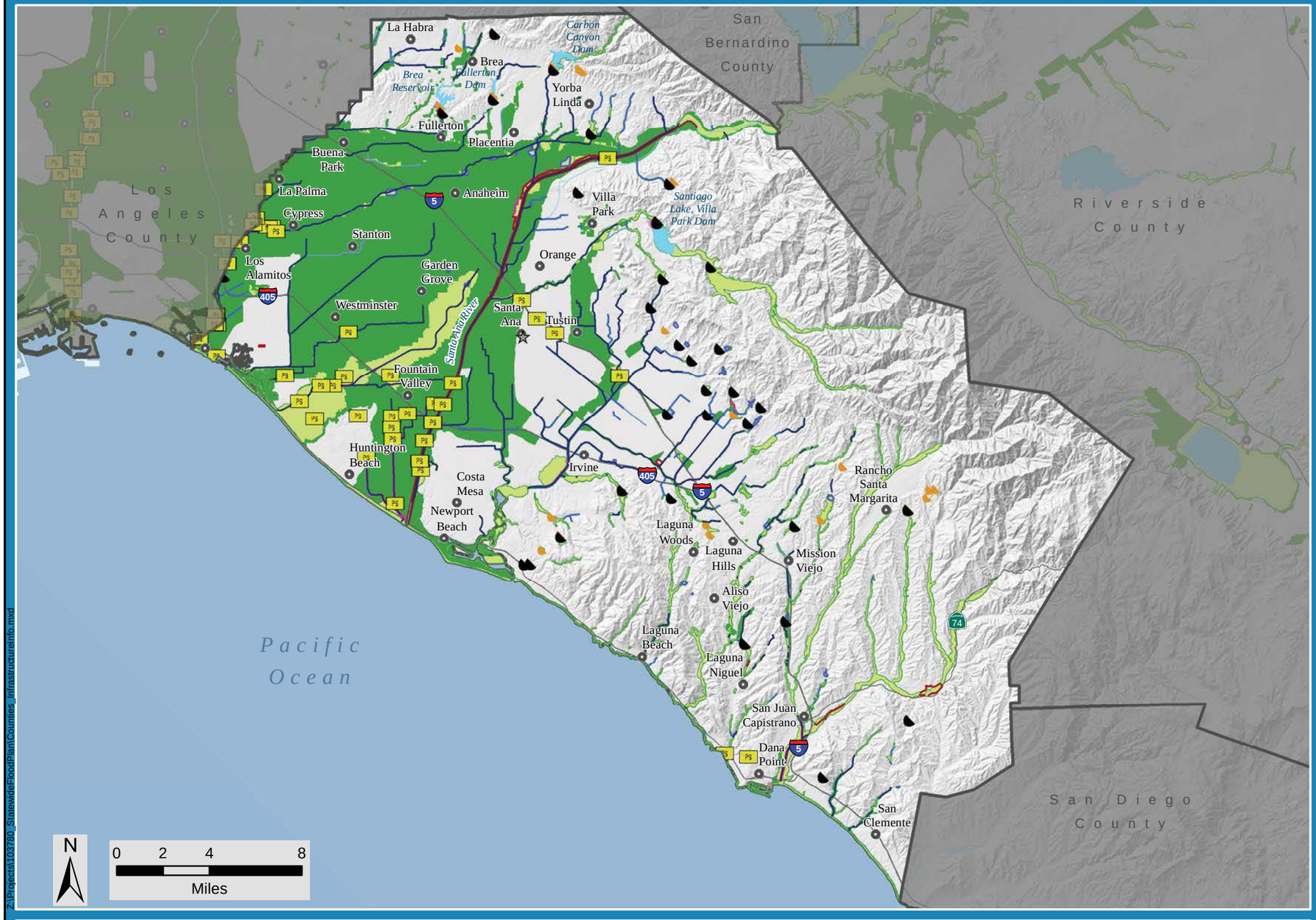
DISCLAIMER: *The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.*

Summary of Available Flood Infrastructure Information



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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, Bullletin 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.

Orange 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-60

Summary of Available Flood Infrastructure Information, Orange County

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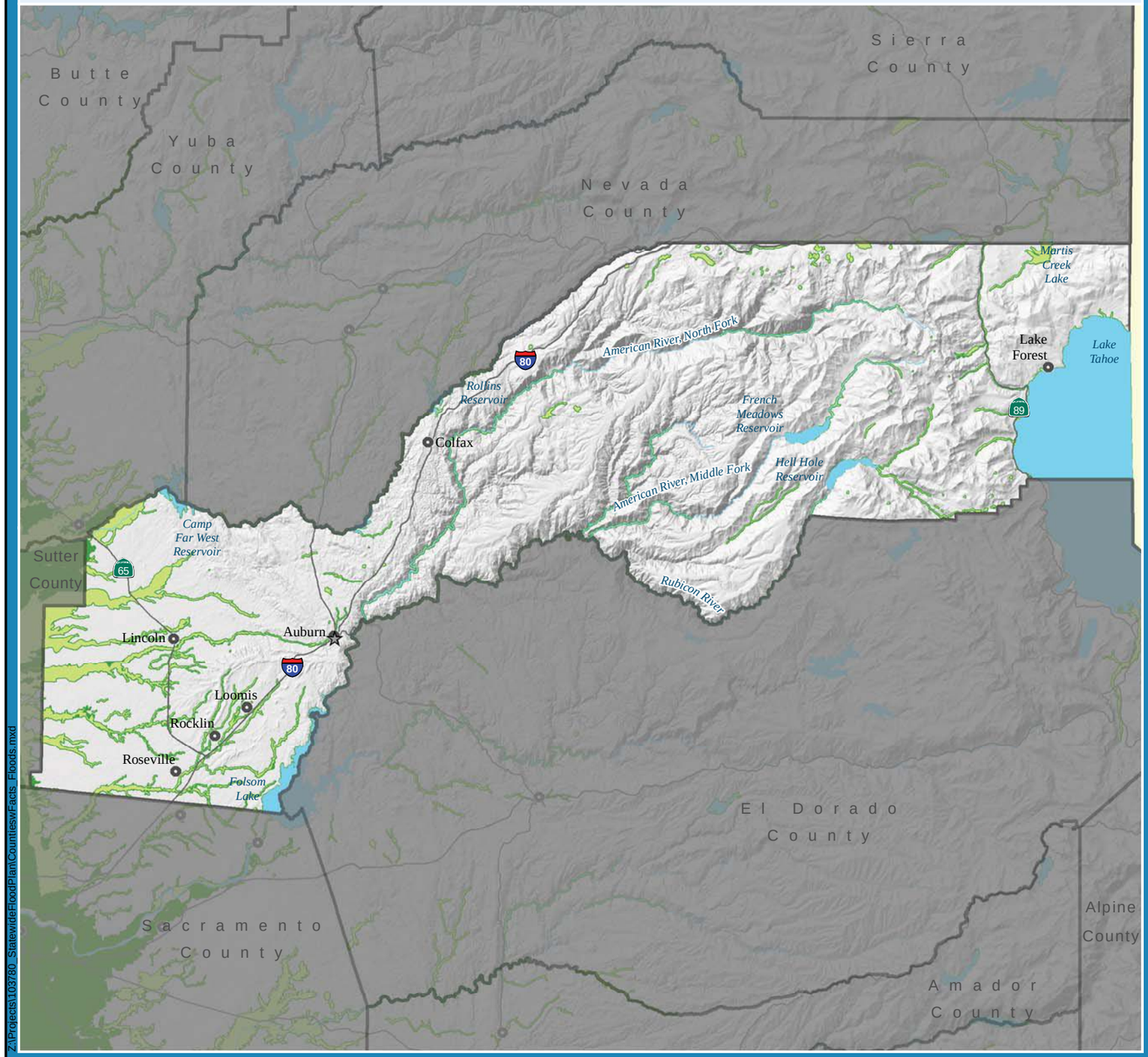
STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM

FloodSAFE CALIFORNIA

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

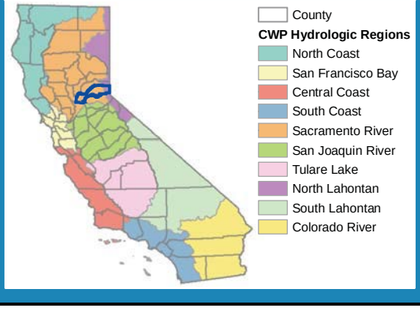
1861-1862 Winter, The Great Flood, Lincoln, Bear River, Auburn Ravine
1875 January, Bear River
1955-1956 December-January, 1955 Christmas Flood, Countywide
1962 October
1963 January-February
1964-1965 December-January, Northern California Christmas 1964 Disaster
1970 Winter, Northern California Flooding
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

Types of Flooding

Likely:
Slow Rise
Flash
Stormwater
Debris Flow

Present:
Engineered Structure Failure

Hydrologic Regions



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

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

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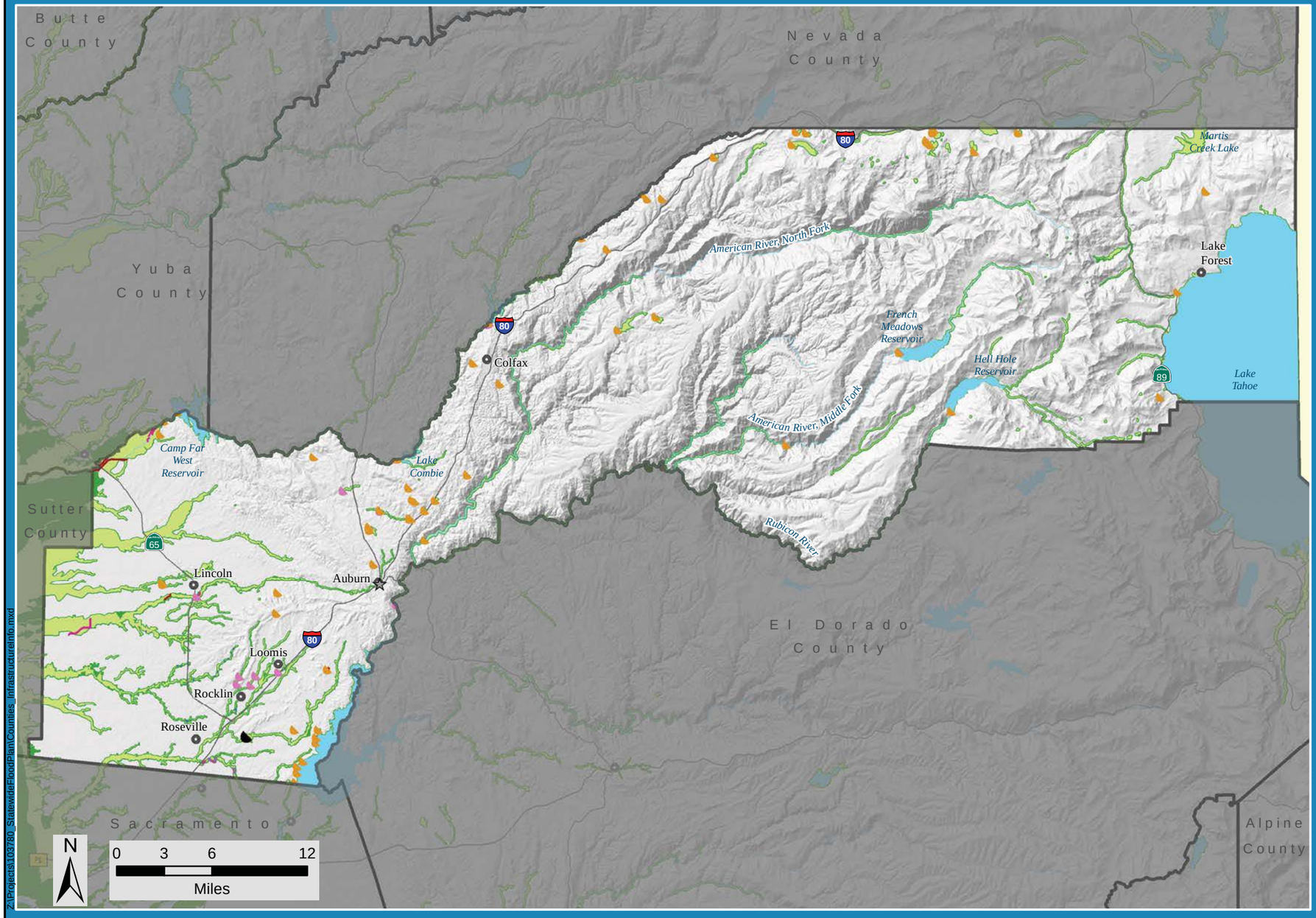
DISCLAIMER: *The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.*

Summary of Available Flood Infrastructure Information



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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, Bullletin 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

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-62
Summary of Available Flood Infrastructure Information, Placer County

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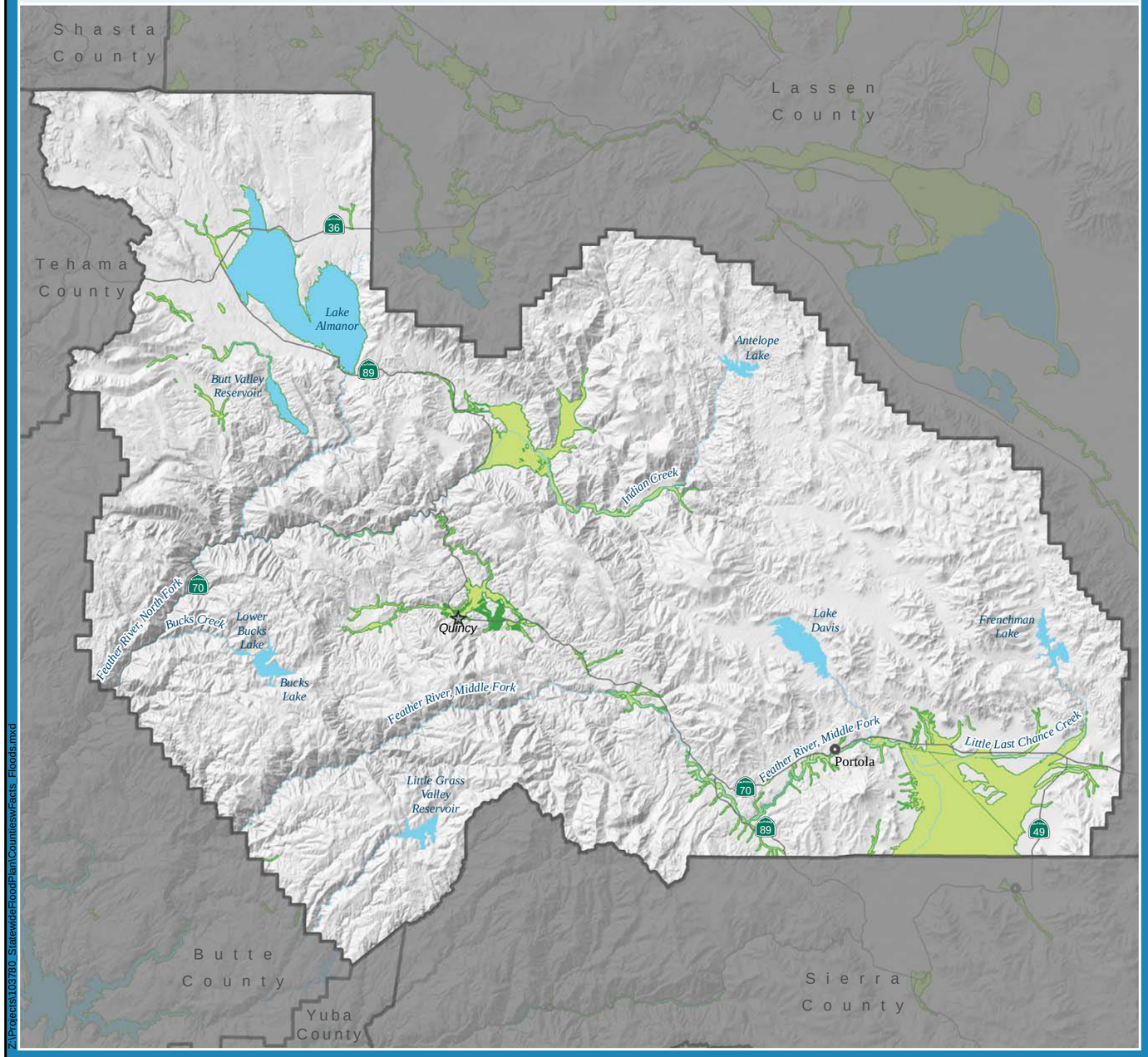
STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM

FloodSAFE CALIFORNIA

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



N

0 3.5 7 14

Miles

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

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Selected Flood Events by Event Year

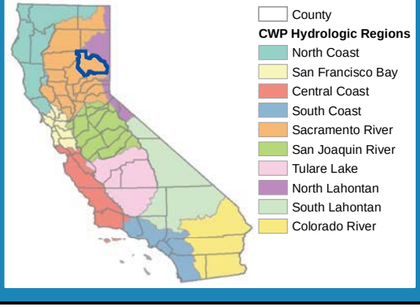
1861-1862 Winter, The Great Flood
1937-1938 December-March, Countywide
1942 January-February, Countywide
1955-1956 December-January, 1955 Christmas Flood, Feather River
1963 January-February
1964-1965 December-January, Northern California Christmas 1964 Disaster
1969 January, Winter '69 Storms, Countywide
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

Types of Flooding

Likely:
Slow Rise Flash
Stormwater
Debris Flow

Present:
Alluvial Fan
Engineered Structure Failure

Hydrologic Regions



County
CWP Hydrologic Regions
North Coast
San Francisco Bay
Central Coast
South Coast
Sacramento River
San Joaquin River
Tulare Lake
North Lahontan
South Lahontan
Colorado River

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

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

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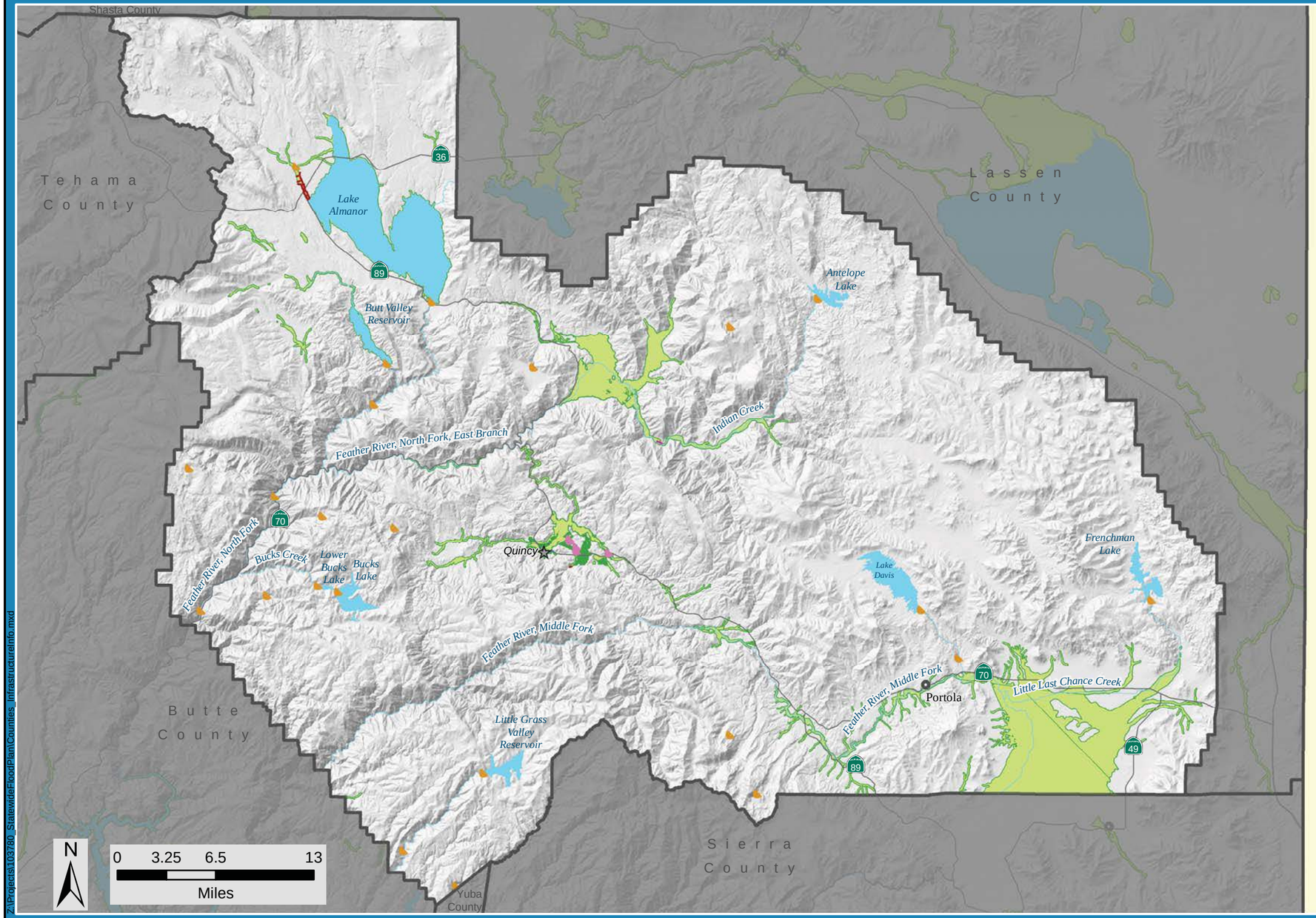
FloodSAFE CALIFORNIA

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

Summary of Available Flood Infrastructure Information



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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, Bullletin 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

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-64

Summary of Available Flood Infrastructure Information, Plumas County

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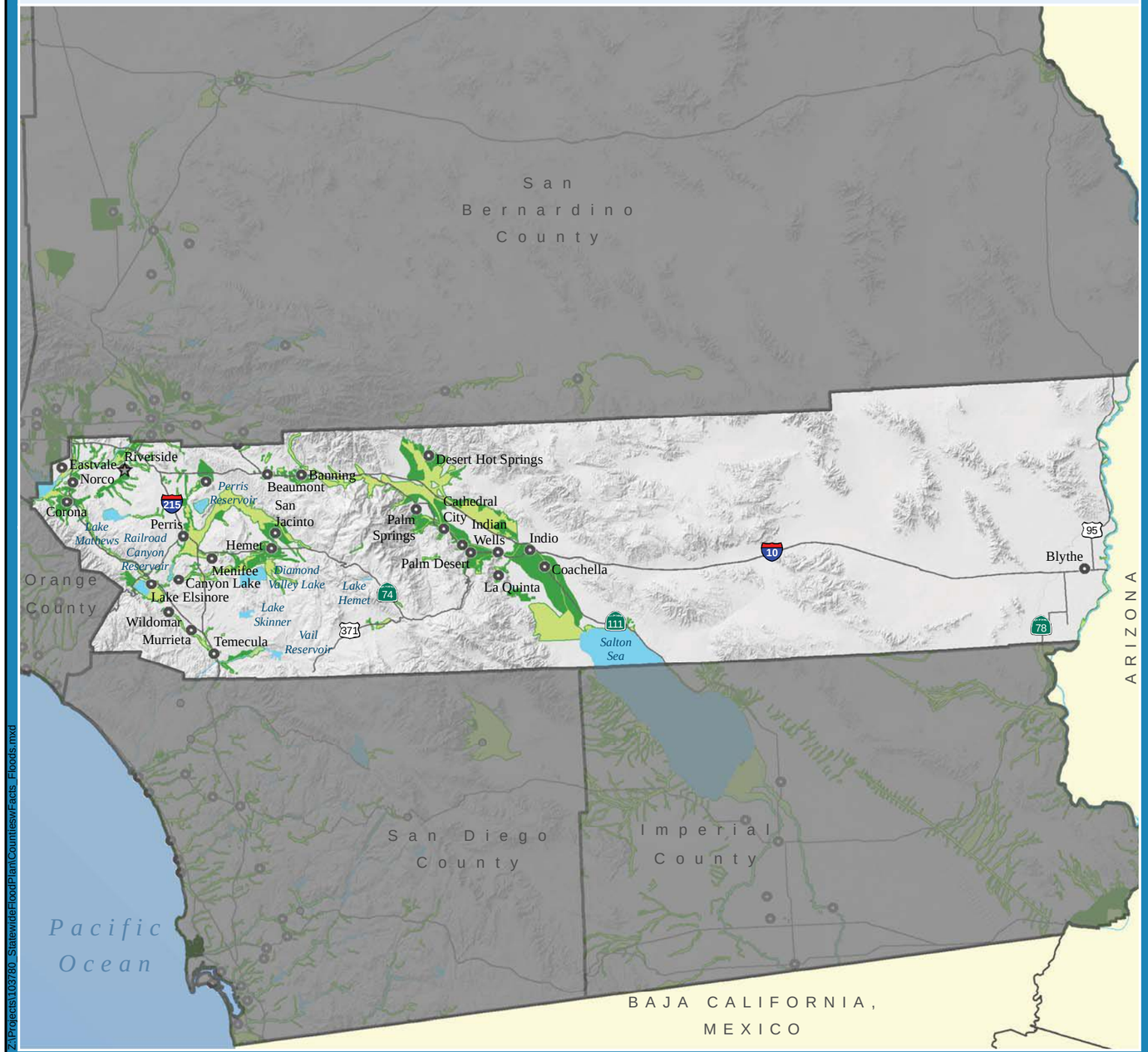
STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM

FloodSAFE CALIFORNIA

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



N

0 5 10 20

Miles

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

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

Selected Flood Events by Event Year

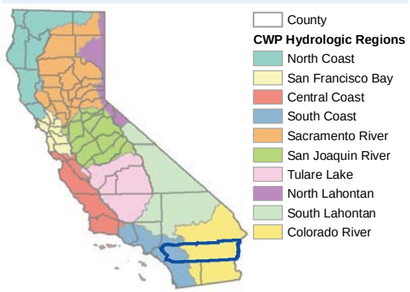
1861-1862 Winter, The Great Flood
1916 January, Great Flood of 1916, Santa Ana River
1925 Santa Ana River
1927 February, San Jacinto River, Whitewater River
1938 March, Great Flood, Santa Ana River, City of Riverside, Whitewater River, Palm Springs
1965 November-December, Countywide, Cottonwood Creek 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

Types of Flooding

Likely:
Slow Rise
Flash
Debris Flow
Alluvial Fan
Stormwater

Present:
Engineered Structure Failure

Hydrologic Regions



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

Riverside County

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

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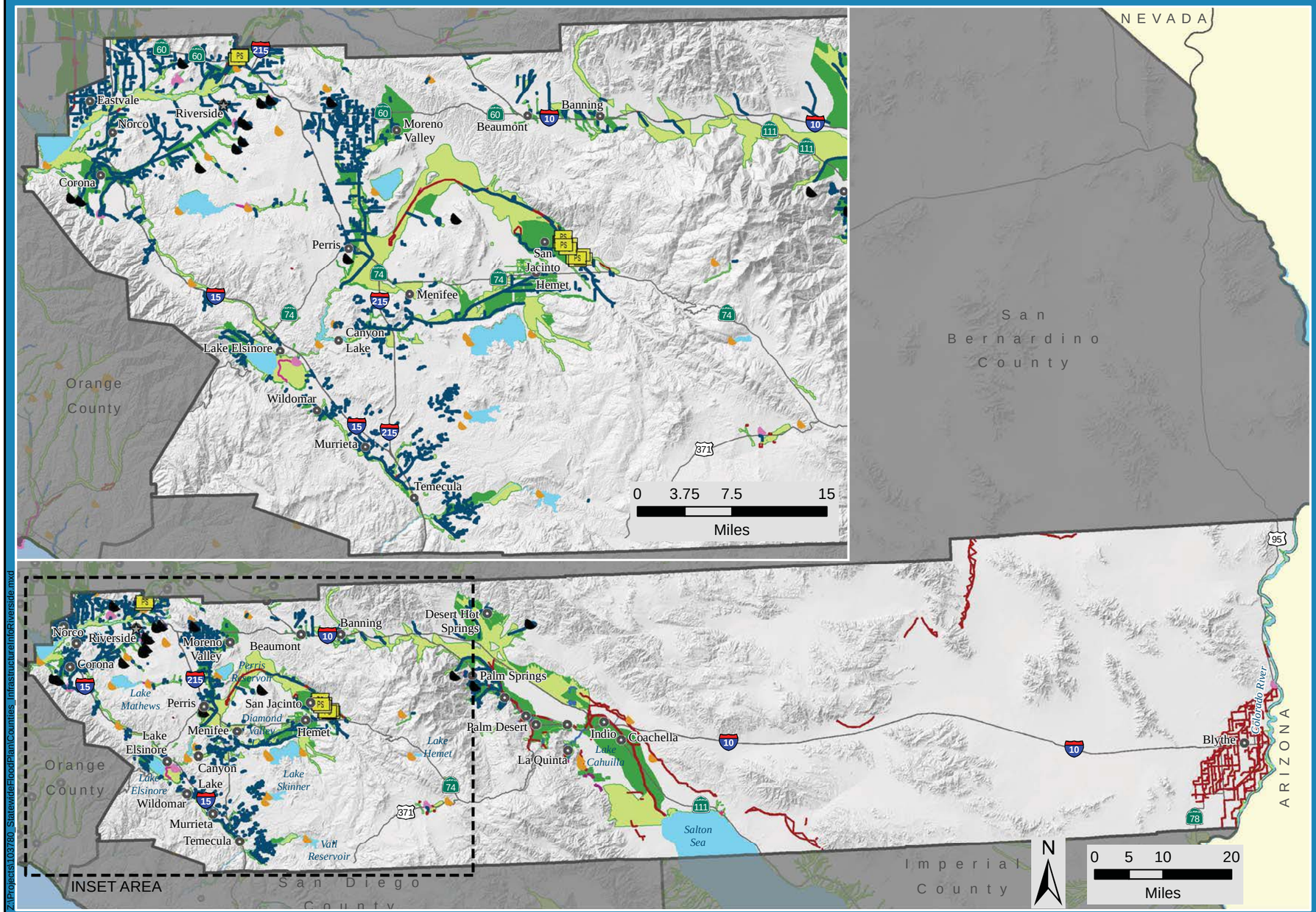
STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM
FloodSAFE CALIFORNIA

Summary of Available Flood Infrastructure Information



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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, Bullletin 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.

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

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Mar 22, 2013

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STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM

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