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)
# Statewide GIS Data Legend

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<thead>
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<td>100-yr Floodplain</td>
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<tr>
<td>500-yr Floodplain</td>
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</table>

## Table of Contents

### Summary of Exposure and Infrastructure Inventory by County

**September 2013**

**Attachment D**

**US Army Corps of Engineers**

**STATEWIDE FLOOD MANAGEMENT PLANNING PROGRAM**
1. Summary of Available Flood Types, Flood History, and Flood Hazard Exposures

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 Yuba, Eel, Siskiyou, 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, Aluvial 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 10 acres except where the number is smaller than 10. In such cases, they are rounded to the nearest 10 acres for values between 10 and 100, and to the nearest 1 acre for values between 1 and 10.

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

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

Disclaimers

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

2. Summary of Available Flood Infrastructure Information

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

1. Flood Infrastructure GIS Data Received from Agencies - Infrastructure data provided by local agencies in GIS compatible formats (shapefile and geodatabase) is shown on the maps for the respective counties and is listed with the corresponding map symbol.
2. Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted - Infrastructure data provided by local agencies is listed for informational purposes only. This data is not displayed graphically on the maps.
3. Agencies Contacted as Part of SFMP - This is a list of those agencies contacted by the information gathering teams.
4. Statewide GIS Data - A legend of available statewide GIS data is provided at the bottom of each map. Statewide GIS Data sources include:
   - 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), v2.2.2, 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.

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.

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)

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 maintenance 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.
Summary of Available Flood Infrastructure Information

Los Angeles County

Flood Infrastructure GIS Data
Received from Agencies Contacted:
- Pump Plant
- Major Dam
- Debris Basin
- Major Channel
- Palmdale Maintained Basin

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

Agencies Contacted as Part of SFMP:
- City of Lancaster
- City of Los Angeles
- City of Palmdale

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

Statewide GIS Data Sources:
- CLD layers are from California Levee Database, v2.2.0, 2010.
- NFHL layers are from the National Flood Hazard Layer, FEMA, August 2011.
- Rivers and Lakes modified from DTG, N.A. Floodplains compiled for SFMP.

All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.
Selected Flood Events by Event Year

- 1861-1862: Winter, The Great Flood
- 1867-1868: Winter
- 1911: January
- 1945:
- 1950: Winter
- 1958: Spring
- 1964-1965: Winter
- 1966-1967: Winter
- 1967: Spring
- 1980: Winter
- 1986: Winter, St. Valentine's Day Storm
- 1992-1993: Late Winter Storms
- 2006: 2006 Spring Storms
- 2010-2011: December 2010 Winter Storm Event

Flood Hazard Exposure

County Statistics
- Total Acreage: 1.4 million
- Total Population: 123,100
- Total Structures: 42,800
- Total Depreciated Replacement Value of Structures and Contents: $9.7 billion
- Total Crop Acreage: 356,500
- Total Value of Crops: $583.8 million

Summary of Exposure to Flood Hazard Reported by County

- 100-yr Event
  - Area Exposed (acres): 168,600
  - Population Exposed: 12,200
  - Depreciated Replacement Value of Structures and Contents Exposed: $338.2 million
  - Value of Crops Exposed: $229.0 million
- 500-yr Event
  - Area Exposed (acres): 208,000
  - Population Exposed: 5,600
  - Depreciated Replacement Value of Structures and Contents Exposed: $1.1 billion
  - Value of Crops Exposed: $246.4 million

Types of Flooding

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

Hydrologic Regions

- North Coast
- San Francisco Bay
- Central Coast
- South Coast
- Sacramento River
- San Joaquin River
- Tulare Lake
- North Lahontan
- South Lahontan
- Colorado River

Figure D-39

Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Madera County.

September 2013
Figure D-40
Summary of Available Flood Infrastructure Information, Madera County

**Madera County**

**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:**

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

**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

**Statewide GIS Data:**
- DWR Local Agency Dam
- CLD Pump Station
- NFHL Levee
- NFHL Control Structure
- Highway
- 100-yr Floodplain
- City
- DWR Other Dam
- CLD Local Agency Levee
- NFHL Flood Event Structure
- NFHL Dike
- Major River
- 500-yr Floodplain
- Populated Place
- NFHL Dam or Weir
- CLD Other Levee
- NFHL Channel
- NFHL Retaining Wall
- Major Water Body
- County
Figure D-42
Summary of Available Flood Infrastructure Information, Marin County

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

Statewide GIS Data Sources:
- All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

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 extended 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.

Summary of Available Flood Infrastructure Information

<table>
<thead>
<tr>
<th>Planned Projects:</th>
<th>Number of Local Projects:</th>
<th>Number of USACE Projects:</th>
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<tbody>
<tr>
<td>32</td>
<td>2</td>
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</table>

Estimated Cost of Local Projects: $217.7 million
Estimated Cost of USACE Projects: $37.6 million

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

Agencies Contacted as Part of SFMP:
Marin County Flood Control and Water Conservation District
City of Corte Madera
City of Mill Valley
City of Novato
City of San Rafael
City of Sausalito
City of Tiburon

Flood Infrastructure GIS Data Received from Agencies Contacted:
- Pump Station
- Levee

DISCLAIMER:
- Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as “Statewide GIS Data” or extended in a GIS format by one of the interviewed agencies is shown.
- The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.
Summary of Available Flood Infrastructure Information

Mariposa County

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

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

Agencies Contacted as Part of SFMP:
Mariposa County

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

Statewide GIS Data Sources:

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

September 2013

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

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

Flood Hazard Exposure

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

- Summary of Exposure to Flood Hazard Reported by County
  - 100-yr Event
    - Area Exposed (acres): 48,600
    - Population Exposed: 7,200
    - Percent of Population Exposed: 8%
    - Structures Exposed: 3,200
    - Depreciated Replacement Value of Structures and Contents: $590.6 million
    - Value of Crops Exposed: $50.2 million
  - 500-yr Event
    - Area Exposed (acres): 25,000
    - Population Exposed: 17,800
    - Percent of Population Exposed: 10%
    - Structures Exposed: 3,800
    - Depreciated Replacement Value of Structures and Contents: $724.2 million
    - Value of Crops Exposed: $53.6 million

Types of Flooding

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

Hydrologic Regions

- County
  - North Coast
  - South Coast
  - Central Coast
  - San Francisco Bay
  - San Joaquin Valley
  - Sacramento River
  - San Juan River
  - Tulare Lake
  - North Lahontan
  - South Lahontan
  - Colorado River

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

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

September 2013

Disclaimer: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.
SUMMARY OF AVAILABLE FLOOD INFRASTRUCTURE INFORMATION

Mendocino County

Figure D-46

SUMMARY OF AVAILABLE FLOOD INFRASTRUCTURE INFORMATION, Mendocino County

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:


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 extended 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.
Summary of Available Flood Infrastructure Information

**Merced County**

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

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

**Agencies Contacted as Part of SFMP:**
- Merced County Public Works
- Merced Irrigation District
- Lower San Joaquin Levee District

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

**Statewide GIS Data Sources:**
- Cities derived from CAL FIRE incorporated city limit polygons, 2011.
- Populated Places from GNIS, 2011.
- Dams modified from DWR, Bulletin 17-00, 2000.
- NFHL layers are from the National Flood Hazard Layer, FEMA, August 2011.
- 100-yr Floodplain and 500-yr Floodplain compiled for SFMP, 2011.

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

**Remark:**
- Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as “Statewide GIS Data” or extended in a GIS format by one of the interviewed agencies is shown. 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
- 1867-1868 Winter
- 1889-1890 Winter
- 1913-1914 Winter
- 1928 March
- 1937-1938 Winter, Great Flood
- 1955-1956 Winter, 1955 Christmas Flood
- 1958 Winter/Spring
- 1964-1965 Winter, Christmas 1964 Disaster
- 1966-1967 Winter/Spring
- 1969-1970 Winter/Spring, Northern California Flooding
- 1974 Winter/Spring, 1974 Flood
- 1986 February, St. Valentine’s Day Storm
- 1993 February, Late Winter Storms
- 1995 Severe Winter Storms
- 1996-1997 Winter, January 1997 Floods
- 2002 December, El Niño Floods
- 2005-2006 Winter, New Year’s Eve Flood of 2006
- 2011 March

Flood Hazard Exposure

County Statistics

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<th>Total Acreage</th>
<th>Total Population</th>
<th>Total Structures</th>
<th>Total Depreciated Replacement Value of Structures and Contents</th>
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<td>2.7 million</td>
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<td>500-yr Event</td>
<td>$704.1 million</td>
<td>$96.6 million</td>
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Summary of Exposure to Flood Hazard

Reported by County

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<td>11%</td>
<td>900</td>
<td>1,000</td>
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</table>

Types of Flooding

Likely:
- Slow Rise
- Stormwater

Present:
- Alluvial Fan
- Debris Flow
- Engineered Structure Failure
- Flash

Hydrologic Regions

- Sensitive Plant Species Exposed: 33
- Sensitive Animal Species Exposed: 33
- Total Acreage: 6,400
- Total Depreciated Replacement Value of Structures and Contents: $704.1 million
- Total Population: 9,400
- Total Structures: 6,400
- Total 100-yr Floodplain:
- Total 500-yr Floodplain:

**DISCLAIMER:** The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.
Summary of Available Flood Infrastructure Information

Modoc County

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

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

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

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

Statewide GIS Data Sources:
- Cities derived from CAL FIRE incorporated city limit polygons, 2010.
- Populated Places from GNIS, 2011.
- 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.
- Other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

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 extended 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.
Selected Flood Events by Event Year

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

Flood Hazard Exposure

- County Statistics
  - Total Acreage: 2.0 million
  - Total Population: 12,900
  - Total Structures: 9,100
  - Total Depreciated Replacement Value of Structures and Contents: $2.2 billion
  - Total Crop Acreage: 3.7 billion
  - Total Value of Crops: $2.8 billion

- Summary of Exposure to Flood Hazard
  - Reported by County
    - 100-yr Event
      - Area Exposed (acres): 65,900
      - Population Exposed: 300
      - Depreciated Replacement Value of Structures and Contents Exposed: $53.4 million
      - Value of Crops Exposed: $468,800
    - 500-yr Event
      - Area Exposed (acres): 5,200
      - Population Exposed: 300
      - Depreciated Replacement Value of Structures and Contents Exposed: $62.6 million
      - Value of Crops Exposed: $469,100

- Department of Defense Facilities Exposed: 0
- Essential Facilities Exposed: 0
- High Potential Loss Facilities Exposed: 0
- Lifeline Utilities Exposed: 0
- Transportation Facilities Exposed: 0
- Transportation Segments Exposed (miles): 0
- Native American Tribal Land Exposed (acres): 0
- Total Sensitive Plant Species Exposed: 0
- Total Sensitive Animal Species Exposed: 0

Types of Flooding

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

Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Mono County.

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

Figure D-51

September 2013

DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.
Summary of Available Flood Infrastructure Information

Mono County

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

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

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

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

Statewide GIS Data Sources:

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

September 2013

DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or extended 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.
Selected Flood Events by Event Year

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

Flood Hazard Exposure

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

Summary of Exposure to Flood Hazard Reported by County

<table>
<thead>
<tr>
<th>County</th>
<th>100-yr Event</th>
<th>500-yr Event</th>
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<tbody>
<tr>
<td>Area Exposed (acres)</td>
<td>121,400</td>
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<td>Population Exposed:</td>
<td>18,200</td>
<td>216,500</td>
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<td>Percent of Area Exposed:</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>Percent of Population Exposed:</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Structures Exposed:</td>
<td>5,600</td>
<td>54,600</td>
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<tr>
<td>Depreciated Replacement Value of Structures and Contents Exposed:</td>
<td>$1.9 billion</td>
<td>$14.3 billion</td>
</tr>
<tr>
<td>Crops Exposed (acres):</td>
<td>54,400</td>
<td>66,300</td>
</tr>
<tr>
<td>Value of Crops Exposed:</td>
<td>$311.0 million</td>
<td>$411.2 million</td>
</tr>
</tbody>
</table>

List of Types of Flooding:

Likely:
- Coastal Debris Flow
- Flash Flood
- Slow Rise Flooding

Present:
- Alluvial Fan
- Engineered Structure Failure
- Tsunami

Hydrologic Regions:
- Monterey County
- North Coast
- San Francisco Bay
- Central Coast
- South Coast
- Sacramento River
- San Joaquin River
- Tulare Lake
- North Lahontan
- South Lahontan
- Colorado River
- Delta

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

Note: The CHP 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:

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.
Selected Flood Events by Event Year

- 1798-1799 Winter
- 1840-1850
- 1861-1862 Winter, The Great Flood
- 1897-1898 Winter, Great Flood
- 1911 Winter
- 1951-1952 Winter
- 1955-1956 Winter, 1955 Christmas Flood
- 1962-1963 Winter
- 1964-1965 Winter, Christmas 1964 Disaster
- 1969-1970 Winter/Spring, Northern California Flooding
- 1981-1982 Winter/Spring Storms
- 1982-1983 Winter/Spring, Winter Storms
- 1992 Winter Storms
- 1995-1996 Winter/Spring
- 1996-1997 Winter, January 1997 Floods
- 2005-2006 Winter, New Year’s Eve Flood of
- 2006 Spring Storms
- 2008 January 5-14, 2008 Winter Storms

Flood Hazard Exposure

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

Summary of Exposure to Flood Hazard Reported by County

- 100-yr Event
  - Area Exposed (acres): 17,300
  - Population Exposed: 6,500
  - Structures Exposed: 13,600
  - Depreciated Replacement Value of Structures and Contents Exposed: $1.9 billion
  - Value of Crops Exposed: $1.5 billion

- 500-yr Event
  - Area Exposed (acres): 4,900
  - Population Exposed: 1,000
  - Structures Exposed: 4,900
  - Depreciated Replacement Value of Structures and Contents Exposed: $342,200
  - Value of Crops Exposed: $336,900

Types of Flooding

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

Hydrologic Regions

- North Coast
- South Coast
- North Lahontan
- South Lahontan
- Colorado River

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

Napa County

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

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

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

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

Statewide GIS Data Sources:

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

September 2013

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

Statewide GIS Data:
- DWR Local Agency Dam
- DWR Other Dam
- NFHL Levee
- NFHL Control Structure
- Highway
- 100-yr Floodplain
- County

City
- CLD Pump Station
- 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

Legend
Selected Flood Events by Event Year

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

Flood Hazard Exposure

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

Summary of Exposure to Flood Hazard Reported by County

<table>
<thead>
<tr>
<th>County</th>
<th>100-yr Event</th>
<th>500-yr Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nevada County</td>
<td>Area Exposed (acres): 14,200</td>
<td>14,400</td>
</tr>
<tr>
<td></td>
<td>Percent of Area Exposed: 2%</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Population Exposed: 1,300</td>
<td>1,700</td>
</tr>
<tr>
<td></td>
<td>Percent of Population Exposed: 1%</td>
<td>2%</td>
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<tr>
<td></td>
<td>Structures Exposed: 700</td>
<td>1,000</td>
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<td></td>
<td>Depreciated Replacement Value of Structures and Contents Exposed: $156.3 million</td>
<td>$206.9 million</td>
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<tr>
<td></td>
<td>Crops Exposed (acres): 60</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Value of Crops Exposed: $58,400</td>
<td>$60,200</td>
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</tbody>
</table>

Types of Flooding

Likely:
- Flash Flooding
- Slow Rise Flooding
- Stormwater Flooding

Present:
- Debris Flow
- Engineered Structure Failure

Hydrologic Regions

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

September 2013

DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.
Summary of Available Flood Infrastructure Information

Nevada County

Flood Infrastructure GIS Data

No Flood Infrastructure GIS Data Received

Received from Agencies Contacted:

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

Statewide GIS Data Sources:


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 extended 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.

Figure D-58

Summary of Available Flood Infrastructure Information, Nevada County

Statewide GIS Data:
- DWR Local Agency Dam
- CLD Pump Station
- NFHL Levee
- NFHL Control Structure
- Highway
- 100-yr Floodplain
- 500-yr Floodplain
- County

City
- DWR Other Dam
- CLD Local Agency Levee
- NFHL Flood Event Structure
- NFHL Levee
- NFHL Dike
- Major River
- Major Water Body

Populated Place
- NFHL Dam or Weir
- CLD Other Levee
- NFHL Channel
- NFHL Retaining Wall
1770-1771
1861-1862
Winter, The Great Flood
1916
January, Great Flood of 1916
1933-1934
Winter, New Year’s Flood
1937-1938
Winter, Great Flood
1958
Spring
1965
Winter
1969
January 18-26, February 20-26, Winter
1969 Storms
1980
Winter
1982-1983
Winter/Spring, Winter Storms
1986
March 15-16
1992
Late Winter Storms
1995
Severe Winter Storms
1997
Winter, January 1997 Floods
1998
Winter, El Niño Floods
2002
December, El Niño Floods
2004-2005
Winter
2010
February
2010-2011
December 2010 Winter Storm Event
2011
March

Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Orange County.
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

Agencies Contacted as Part of SFMP:
- Orange County Public Works
- Santa Ana River Flood Protection Agency

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

Statewide GIS Data Sources:
- Cities derived from CAL FIRE incorporated city limit polygons, 2011.
- Populated Places from GNIS, 2011.
- 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.

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

Figure D-60
Summary of Available Flood Infrastructure Information, Orange 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 indicated 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.
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
Number of USACE Projects: 0
Estimated Cost of Local Projects: $20.7 million
Estimated Cost of USACE Projects: none

Statewide GIS Data Sources:

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

September 2013

DISCLAIMER: 1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as “Statewide GIS Data” or extended 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.
Plumas County

**Summary of Available Flood Infrastructure Information**

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

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

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

**Planned Projects:**
- Number of Local Projects: 10
- Estimated Cost of Local Projects: $4.7 million
- Number of USACE Projects: 0
- Estimated Cost of USACE Projects: none

**Statewide GIS Data Sources:**
- Cities derived from CAL FIRE incorporated city limit polygons, 2011.
- Populated Places from GNIS, 2011.
- Dams modified from DWR, Bulletin 17-00, 2000.
- CLD layers are from California Levee Database, v2.2.0, 2010.
- NFHL layers are from the National Flood Hazard Layer, FEMA, August 2011.
- Major Rivers and Lakes from DFG, N/A.
- 100-yr Floodplains compiled for SFMP, 2011.
- All other Flood Infrastructure GIS data, noted above, received from Agencies Contacted.

**Figure D-64**

**Summary of Available Flood Infrastructure Information, Plumas 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. If the DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.

**Statewide GIS Data:**
- City
- Populated Place
- DWR Local Agency Dam
- CLD Pump Station
- NFHL Levee
- NFHL Control Structure
- Highway
- 100-yr Floodplain
- 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
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
- Storm Drains

Agencies Contacted as Part of SFMP:
- Coachella Valley Water District
- Riverside County Flood Control and Water Conservation District

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

Statewide GIS Data Sources:
- Dams modified from DWR, Bulletin 17-00, 2000. CLD layers are from California Levee Database, V.2, 2010.

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

September 2013

DISCLAIMER:
1) Information displayed on the map does not represent all existing flood infrastructure in the county. Only infrastructure available as "Statewide GIS Data" or submitted in a GIS format by one of the interviewed agencies is shown. 2) The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.
**100-year and 500-year Floodplains**

**Selected Flood Events by Event Year**

- 1805
- 1852-1853
- 1861-1862
- 1878
- 1897
- 1913-1914
- 1937-1938
- 1955-1956
- 1961
- 1964-1965
- 1967-1968
- 1974
- 1977
- 1986-1987
- 1995-1996
- 1997-1998
- 2005-2006
- 2008

**Flood Hazard Exposure**

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

- **Summary of Exposure to Flood Hazard by Event Year**
  - **100-yr Event**
    - 1907 Winter
    - 1913-1914 Winter
    - 1937-1938 Winter
    - 1955-1956 Winter
    - 1974 Winter
    - 1997-1998 Winter
    - 2005-2006 Winter
    - 2008 Winter
  - **500-yr Event**
    - 1907 Winter
    - 1913-1914 Winter
    - 1937-1938 Winter
    - 1955-1956 Winter
    - 1974 Winter
    - 1997-1998 Winter
    - 2005-2006 Winter
    - 2008 Winter

- **Types of Flooding**
  - Likely:
    - Flash
    - Slow Rise
    - Stormwater
  - Present:
    - Engineered Structure Failure

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

**Summary of Available Flood Types, Flood History and Flood Hazard Exposure, Sacramento County.**

**Figure D-67**

*DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.*
Summary of Available Flood Infrastructure Information

Sacramento County

Flood Infrastructure GIS Data Received from Agencies Contacted:
- Drainage Pumping Station
- Pump

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

Agencies Contacted as Part of SFMP:
- American River Flood Control District
- City of Sacramento
- Sacramento Area Flood Control Agency
- Sacramento County Department of Water Resources

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

Statewide GIS Data Sources:
- CLD layers are from California Levee Database, v2.2, 2010.
- NFHL layers are from the National Flood Hazard Layer, FEMA, August 2011.
- Rivers and Lakes modified from EDG, N.A. Floodplains compiled for SFMP, 2011.

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

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

- **1905**
  - March
- **1907**
  - Winter, Great Flood
- **1938**
  - Winter
- **1955-1956**
  - Winter, 1955 Christmas Flood
- **1958**
  - Spring
- **1966-1967**
  - Winter
- **1969**
  - Winter 1969 Storms
- **1973**
  - Winter
- **1974**
  - January
- **1978**
  - Winter
- **1980**
  - Winter
- **1982-1983**
  - Winter/Spring, Winter Storms
- **1986**
  - February, St. Valentine’s Day Storm
- **1995-1996**
  - Winter, 1995 Christmas Floods
- **1996-1997**
  - Winter, January 1997 Floods
- **1998**
  - Winter/Spring, El Niño Floods
- **2002**
  - December, El Niño Floods
- **2005**
  - January

Flood Hazard Exposure

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

Summary of Exposure to Flood Hazard Reported by County

<table>
<thead>
<tr>
<th>Event</th>
<th>100-yr Event</th>
<th>500-yr Event</th>
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<tbody>
<tr>
<td>Area Exposed (acres):</td>
<td>33,800</td>
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<tr>
<td>Population Exposed:</td>
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<td>Structures Exposed:</td>
<td>900</td>
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<tr>
<td>Crops Exposed (acres):</td>
<td>13,800</td>
<td>13,800</td>
</tr>
<tr>
<td>Value of Crops Exposed:</td>
<td>$30.2 million</td>
<td>$30.2 million</td>
</tr>
</tbody>
</table>

- **Department of Defense Facilities Exposed:**
  - 0
- **Essential Facilities Exposed:**
  - 2
- **High Potential Loss Facilities Exposed:**
  - 2
- **Lifeline Utilities Exposed:**
  - 2
- **Transportation Facilities Exposed:**
  - 37
- **Transportation Segments Exposed (miles):**
  - 21
- **Native American Tribal Land Exposed (acres):**
  - 0
- **Total Sensitive Plant Species Exposed:**
  - 20
- **Total Sensitive Animal Species Exposed:**
  - 38

Types of Flooding

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

Hydrologic Regions

- **San Benito County**

Selected Flood Types, Flood History and Flood Hazard Exposure, San Benito County.

September 2013

DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.
Summary of Available Flood Infrastructure Information

San Benito County

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

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

Agencies Contacted as Part of SFMP:
San Benito Water District

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

Statewide GIS Data Sources:
- Cities derived from CAL FIRE incorporated city limit polygons, 2011.
- Populated Places from GNIS, 2011.
- 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.
- 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.

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 extended 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.

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

September 2013
Selected Flood Events by Event Year

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

Flood Hazard Exposure

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<tr>
<th>County Statistics</th>
<th>100-yr Event</th>
<th>500-yr Event</th>
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<tbody>
<tr>
<td>Total Structures</td>
<td>578,200</td>
<td>$126.7 billion</td>
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<td>Total Depreciated Replacement Value of Structures and Contents:</td>
<td>$65.9 million</td>
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<tr>
<td>Total Crop Acreage:</td>
<td>67,100</td>
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<tr>
<td>Total Value of Crops:</td>
<td>$65.9 million</td>
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</table>

Summary of Exposure to Flood Hazard Reported by County

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<thead>
<tr>
<th>County</th>
<th>100-yr Event</th>
<th>500-yr Event</th>
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<tbody>
<tr>
<td>Area Exposed (acres):</td>
<td>120,300</td>
<td>197,600</td>
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<tr>
<td>Population Exposed:</td>
<td>41,000</td>
<td>254,300</td>
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<tr>
<td>Structures Exposed:</td>
<td>16,400</td>
<td>78,400</td>
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<td>Depreciated Replacement Value of Structures and Contents Exposed:</td>
<td>$3.3 billion</td>
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<td>Crops Exposed (acres):</td>
<td>2,500</td>
<td>8,600</td>
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<td>Value of Crops Exposed:</td>
<td>$2.2 million</td>
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<td>Department of Defense Facilities Exposed:</td>
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<td>Essential Facilities Exposed:</td>
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<td>High Potential Loss Facilities Exposed:</td>
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<td>Transportation Segments Exposed (miles):</td>
<td>94</td>
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<td>Native American Tribal Land Exposed (acres):</td>
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<td>Total Sensitive Plant Species Exposed:</td>
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<td>Total Sensitive Animal Species Exposed:</td>
<td>103</td>
<td>103</td>
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</table>

Likely: Alluvial Fan, Debris Flow, Stormwater
Present: Engineered Structure Failure

Types of Flooding

Likely:
- Alluvial Fan
- Debris Flow
- Flash
- Slow Rise
- Stormwater

Present:
- Engineered Structure Failure

Hydrologic Regions

San Bernardino County

DISCLAIMER: The DWR did not develop all the displayed floodplain extents and cannot guarantee their accuracy.
Summary of Available Flood Infrastructure Information

San Bernardino County

Flood Infrastructure GIS Data
Received from Agencies Contacted:

- Storm Drain
- Basins

Non-GIS, PDF/Hard Copy Flood Infrastructure Data Received from Agencies Contacted (Not Shown On Map):
- Channel
- Dam
- Basin
- 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, 2011
- Populated Places: from GNIS, 2011
- Counties: from CalAtlas, 2009
- Dams: modified from DWR, Bulletin 17-00, 2000
- 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-72
Summary of Available Flood Infrastructure Information, San Bernardino County

San Bernardino County Department of Public Works

September 2013

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1760</td>
<td>Winter, The Great Flood</td>
</tr>
<tr>
<td>1861-1862</td>
<td>January, Great Flood of 1861</td>
</tr>
<tr>
<td>1837-1838</td>
<td>Winter, Great Flood</td>
</tr>
<tr>
<td>1858</td>
<td>Spring</td>
</tr>
<tr>
<td>1865</td>
<td>Winter</td>
</tr>
<tr>
<td>1869</td>
<td>Winter 1869 Storms</td>
</tr>
<tr>
<td>1916</td>
<td>January, Great Flood of 1916</td>
</tr>
<tr>
<td>1937-1938</td>
<td>Winter, Great Flood</td>
</tr>
<tr>
<td>1958</td>
<td>Spring</td>
</tr>
<tr>
<td>1965</td>
<td>Winter</td>
</tr>
<tr>
<td>1969</td>
<td>Winter 1969 Storms</td>
</tr>
<tr>
<td>1976-1977</td>
<td>September, Tropical Storm Kathleen</td>
</tr>
<tr>
<td>1977-1978</td>
<td>September, Tropical Storm Doreen</td>
</tr>
<tr>
<td>1983</td>
<td>March 1983 Storms</td>
</tr>
<tr>
<td>1997</td>
<td>January 1-4, Severe Winter Storms</td>
</tr>
<tr>
<td>1998</td>
<td>Winter, El Nino Floods</td>
</tr>
<tr>
<td>2002</td>
<td>December, El Nino Floods</td>
</tr>
<tr>
<td>2004-2005</td>
<td>Winter</td>
</tr>
<tr>
<td>2010-2011</td>
<td>December 2010 Winter Storm Event</td>
</tr>
<tr>
<td>2011-2012</td>
<td>December 2011 Winter Storm Event</td>
</tr>
<tr>
<td>2013</td>
<td>August 25, Tropical Storm Ivo</td>
</tr>
</tbody>
</table>

Flood Hazard Exposure

<table>
<thead>
<tr>
<th>County Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Acreage:</td>
</tr>
<tr>
<td>Total P Population:</td>
</tr>
<tr>
<td>Total S Structures:</td>
</tr>
<tr>
<td>Total Depreciated Replacement Value of Structures and Contents:</td>
</tr>
<tr>
<td>Total Crop Acreage:</td>
</tr>
<tr>
<td>Total Value of Crops:</td>
</tr>
</tbody>
</table>

Summary of Exposure to Flood Hazard Reported by County

<table>
<thead>
<tr>
<th>100-yr Event</th>
<th>500-yr Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area Exposed (acres):</td>
<td>84,000</td>
</tr>
<tr>
<td>Percent of Population Exposed:</td>
<td>3%</td>
</tr>
<tr>
<td>Structures Exposed:</td>
<td>23,900</td>
</tr>
<tr>
<td>Depreciated Replacement Value of Structures and Contents Exposed:</td>
<td>$8.5 billion</td>
</tr>
<tr>
<td>Crops Exposed (acres):</td>
<td>7,600</td>
</tr>
<tr>
<td>Value of Crops Exposed:</td>
<td>$27.6 million</td>
</tr>
</tbody>
</table>

Types of Flooding

<table>
<thead>
<tr>
<th>Likely:</th>
<th>Present:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alluvial Fan</td>
<td>Engineered Structure Failure</td>
</tr>
<tr>
<td>Coastal</td>
<td>Tsunami</td>
</tr>
<tr>
<td>Debris Flow</td>
<td></td>
</tr>
<tr>
<td>Flash</td>
<td></td>
</tr>
<tr>
<td>Slow Rise</td>
<td></td>
</tr>
<tr>
<td>Stormwater</td>
<td></td>
</tr>
</tbody>
</table>

Hydrologic Regions

- North Coast
- San Francisco Bay
- Central Coast
- South Coast
- Sacramento River
- San Joaquin River
- Tulare Lake
- North Lahontan
- South Lahontan
- Colorado River
Summary of Available Flood Infrastructure Information

San Diego County

Flood Infrastructure GIS Data Received from Agencies Contacted:
- Levee
- Flood Control Channel
- Basin/Detention Basin

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

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

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

Statewide GIS Data Sources:
- Cities derived from CAL FIRE incorporated city limit polygons, 2011
- 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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September 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:
City and County of San Francisco
San Francisco Department of Public Works

NOTE: San Francisco County floodplain delineation is in progress.

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

Statewide GIS Data Sources:

Figure D-76
Summary of Available Flood Infrastructure Information, San Francisco County
September 2013

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