

JURISDICTIONAL ANNEX:

City of Fairfield



SOLANO COUNTY
MULTI-JURISDICTIONAL
HAZARD MITIGATION PLAN



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Solano County

Multi-Jurisdiction Hazard Mitigation Plan

CITY OF FAIRFIELD (FF.)

Municipal Annex

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Adoption Resolution

To comply with DMA 2000, the City of Fairfield has officially adopted this Solano County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP), Volume 1, and its jurisdictional annex. The adoption of the MJHMP recognizes the City’s commitment to reducing the impacts of natural hazards. See included adoption resolution.

ADOPTION RECORD TO BE INSERTED UPON COMPLETION.



Section 1. City of Fairfield

1.1 Purpose

This Annex details the hazard mitigation planning elements specific to the City of Fairfield. This Annex is not intended to be a standalone document but appends to and supplements the information contained in the umbrella plan document. As such, all sections of the umbrella plan, including the planning process and other procedural requirements apply to and were met by the City of Fairfield. This Annex provides additional information specific to the City of Fairfield, with a focus on providing additional details on the planning process, risk assessment, and mitigation strategy for this community.

Hazard Mitigation Plan Points of Contact

Primary Point of Contact

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1.2 Planning Methodology

The City of Fairfield followed the planning process detailed in Volume 1, Section 3, including participating in the County Hazard Mitigation Planning Committee (HMPC) and Steering Committee and formulating their own internal planning team to support the broader planning process. Internal planning participants, their positions, and how they participated in the planning process are shown in Table 1-1.

Table 1-1: Planning Committee Members

Planning Committee Members	Department
John Sturdee	Battalion Fire Chief
Steven Conti	Fire Marshal
Amy Kreimeier	Senior Planner
Bill Way	Communications Manager
Brian Coy	Building Inspector
David Gassaway	Ast. City Manager & Community Development
Deanna Cantrell	Chief of Police
Brad Collins	Operations Captain
Jorge Barrera	Sr. Economic Development Project Manager
Stefan Chatwin	City Manager
Mike Gray	Public Works Operations Superintendent
Ryan Panganiban	Ast. Public Works Director
George Shimboff	Water Distribution Manager

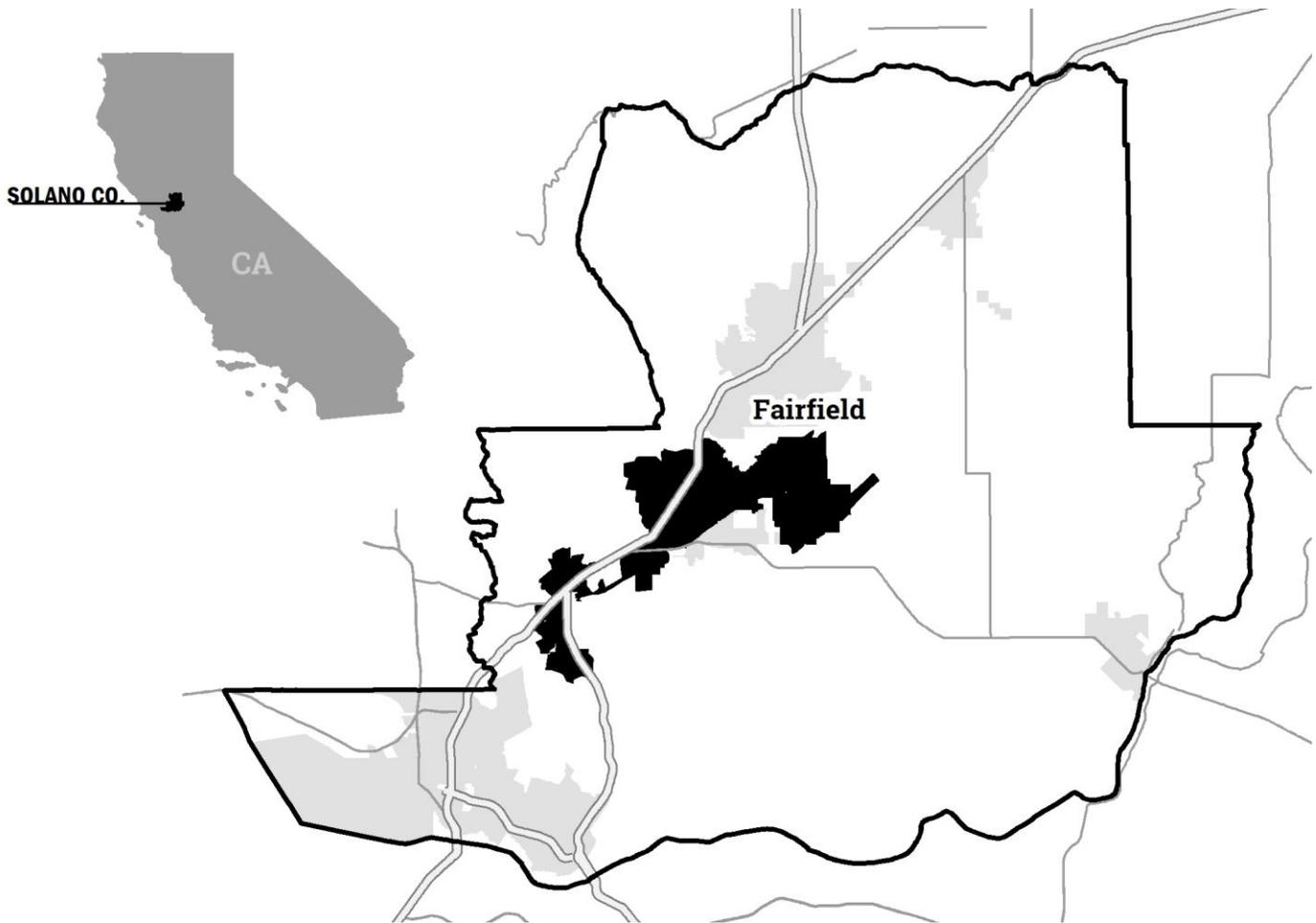


Figure 1-1: Fairfield

1.3 What's New

The City of Fairfield has been making improvements toward reducing natural hazard risks to life and property since the existing MJHMP was adopted.

The City reevaluated previous mitigation actions, including considerations of progress made on mitigation efforts, and retained them as pending or ongoing; no tables for completed or cancelled mitigation actions are included. Ongoing and pending mitigation actions are described in Table 1-14

Success Story: New Geologic Hazard Abatement District (GHAD). The City created a Geologic Hazard Abatement District (GHAD) for paradise valley referred to as the Paradise Valley Maintenance and Monitoring District (PVMMMD). The district was established by the City of Fairfield City Council in 2010. The District was created to monitor, prevent, and mitigate geologic hazards (a.k.a. slope failure) in the Paradise Valley.



Success Story: EOC Relocation. The City relocated their Emergency Operations Center (EOC) to the Fire Administration Building, enhancing the ability for the center to withstand earthquakes.

1.4 Risk Assessment

The intent of this section is to profile the City of Fairfield's hazards and assess the City's vulnerabilities, distinct from that of the County wide planning area. The hazard profiles in Volume 1 discuss overall impacts to the planning area and describes the hazard problem description, hazard extent, magnitude/severity, previous occurrences of hazard events and the likelihood of future occurrences. For more information on Risk Assessment Methodologies, see Vol. 1 and Appendix A.

1.4.1 Hazard Screening Criteria

Planning Team members from each participating jurisdiction collectively discussed which hazards should be profiled in the Plan and which should not. The results of that discussion can be found in Table 1-2. Detailed hazard profiles of the most significant County wide hazards are described in Section 4 of Volume 1. The Planning Team reviewed previously prepared hazard mitigation plans and other relevant documents to determine the realm of natural hazards that have the potential to affect the City of Fairfield. Table 1-3 provides a crosswalk of hazards identified in Vol. 1 of this plan, the City of Fairfield General Plan, and 2018 California State Hazard Mitigation Plan. The crosswalk was used to develop a preliminary hazards list, providing a framework for the Planning Team members to evaluate which hazards were truly relevant to the City of Fairfield and which ones were not. Section 1.4.2 below describes the hazard risk ranking process that was performed by the planning team which prioritized hazards that are specifically relevant to the City of Fairfield.



Table 1-2: County-Wide Hazard Prioritization

Hazard Type	Explanation
Climate Change	High priority county-wide, profiled hazard.
Dam/ Levee failure	Dam failure is possible in Solano County but is best addressed in other plans, specifically Emergency Action Plans for high hazard dams affecting Solano County.
Drought	High priority county-wide, profiled hazard.
Earthquake/ Geologic Hazards	High priority county-wide, profiled hazard.
Flood	High priority county-wide, profiled hazard.
Hazardous Material	While hazardous materials can release and impact the County, there are better avenues to address this hazard outside this plan.
High Winds/ Straight Line Winds	High priority county-wide, profiled as part of Extreme Weather.
Insect Hazards	While hazardous insects exist in Solano County, this was not considered a priority and is not profiled in this plan.
Pandemic Disease	While pandemic disease can impact the County, there are better avenues to address this hazard outside this plan.
Extreme Weather, including:	High priority county-wide for high wind, heavy rain, and high heat.
Extreme Heat	Profiled as part of Extreme Weather.
Hail	Hail events are rare and not considered a priority.
High Wind	Profiled as part of Extreme Weather.
Heavy Rain	Profiled as part of Extreme Weather.
Fog	Fog events are rare and are not considered a priority.
Lightning	Not a priority as an extreme weather event; discussed as source of wildfire.
Severe Thunderstorm	Severe thunderstorms were not identified as a priority in this plan.
Winter Storm / Extreme Cold/ Freeze Events	Winter storms are rare in Solano County and not identified as a priority for this plan.
Slope Failure	High priority county-wide, profiled hazard.
Soil Hazards	While limited soil hazards exist in Solano County (erosion and shifting soils), these are not prioritized in this plan. Erosion discussed under flood hazard.
Terrorism/Human Caused Threats	While terrorism is certainly a threat to the County and participating jurisdictions, it is best addressed in other plans as this HMP does not address human-caused threats.
Tornado	Impacts to the County from tornados are extremely unlikely, if any.
Volcanic Activity	Due to distance from volcanoes and the limited chance of an eruption, this hazard was not identified as a priority.
Wildfire	High priority county-wide, profiled hazard.



Table 1-3: City Document Review Crosswalk

Hazards	2002 Fairfield General Plan	2011 Fairfield HMP	2014 Solano County HMP	2018 California State HMP
Agricultural Pests				■
Climate Change			■	■
Dam Failure		■	■	■
Drought		■	■	■
Earthquake	■	■	■	■
Flood	■	■	■	■
Landslide		■	■	■
Levee Failure				■
Manmade Hazards	■			■
Pandemic Disease				■
Sea Level Rise			■	■
Severe Weather		■	■	■
Soil Hazards		■		■
Terrorism & Tech Hazards	■			■
Tsunami		■		■
Volcano				■
Wildfire	■	■	■	■

1.4.2 Hazard Risk Ranking

The City of Fairfield’s Planning Team used the same hazard prioritization process as the Solano County Hazard Mitigation Planning Committee. This process is described in detail in Section 4.3.1 of Vol. 1. Figure 1-2 displays the results of the hazard risk ranking exercise that was performed by the Planning Team. The Planning Team chose to assess the City of Fairfield’s vulnerability to the following hazards:

- Wildfire
- Flood
- Earthquake
- Extreme Weather (high wind, heavy rain, and high heat)
- Climate Change

All these hazards have been profiled in Vol. 1 of this document. The purpose of this annex to specifically address the City of Fairfield’s vulnerability to these specifically-identified hazards.

1.4.3 Vulnerability Assessment

Assessing vulnerabilities exposes the unique characteristics of individual hazards and begins the process of narrowing down which areas within the City of Fairfield are vulnerable to specific hazard events. The vulnerability assessment considered unique local knowledge of hazards and impacts and a GIS overlaying method for examining such vulnerabilities more in depth. Using these methods, participating jurisdictions estimated vulnerable populations, infrastructure, and potential losses from hazards.



1.4.3.1 Risk Assessment

Each participating jurisdiction developed a risk matrix that assessed the probability and impact of various hazards within the jurisdiction. Figure 1-2 is the jurisdiction's risk assessment, which was completed in part using the web based and interactive Risk Assessment Mapping Platform (RAMP), accessed via the project website at www.mitigatehazards.com. RAMP allows interactive discovery of robust risk, vulnerability, and exposure data developed especially for Solano County. RAMP is a mapping platform built specifically for mitigation planning. It displays County/jurisdiction facilities and buildings overlaid with natural hazards layers to bring interactivity and individual discovery to the GIS analysis performed for the MJHMP. See Vol. 1 for a detailed description of RAMP. The Planning Team used RAMP in meetings and as needed to understand vulnerabilities to the City of Fairfield. Users interactively filter facilities and buildings by natural hazard zones and/or construction characteristics. The City of Fairfield also conducted a more detailed climate vulnerability assessment, included as Appendix A to this annex. The climate vulnerability assessment analyzed climate-related vulnerabilities by considering the impact from the climate vulnerability and the community's adaptive capacity to respond to the particular vulnerability.

1.4.3.2 Exposure Maps and Damage Estimation Tables

The included snapshot maps and damage estimation tables illustrate the City of Fairfield's vulnerability to specific hazards. Based on the risk assessment, the snapshot maps focus on those hazards prioritized by the jurisdiction. These maps helped the Planning Team understand the exposure of population, parcels, and critical infrastructure to specific hazards. Each map contains an exposure summary that displays the percent of the population, the improvement and content value of parcels, and the amount of critical infrastructure that is exposed to each respective hazard. For flood and earthquake, detailed damage estimations were conducted through FEMA's Hazus software and are shown in tabular form. Additional mapping is also included. Figures and tables include:

- Figure 1-3: Fairfield - Wildfire Risk Exposure
- Figure 1-4: Fairfield- Mean Fire Return Interval
- Figure 1-5: Fairfield - FEMA Flood Risk Exposure
- Table 1-4: Fairfield - Damage Estimate Summaries, 100YR Flood
- Table 1-5: Fairfield - Damage Estimate Summaries, 500 YR Flood
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- Figure 1-11: Fairfield - Average Precipitation
- Figure 1-12: Fairfield - Wind Speed
- Figure 1-13: Fairfield - RCP Comparison
- Figure 1-14: Fairfield - Sea Level Rise Exposure



Risk Assessment Matrix Definitions

PROBABILITY RATING

The likelihood of a hazard event occurring within a time period?

Highly Likely	Highly likely - 100% annual probability. Or Likely to occur every year in your lifetime.
Likely	Likely - between 10 & 100% annual probability. Or will occur several times in your lifetime.
Possible	Possible - between 1 & 10% annual probability. Or Likely to occur some time in your lifetime.
Unlikely	Unlikely - less than 1% annual probability. Or unlikely but possible to occur in your lifetime.

IMPACT RATING

In terms of injuries, damage, or death, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs? The impact could be in terms of one hazard event (flooding from a culvert failure) or a large-scale event (multiple rivers flooding) in the same jurisdictional boundary.

IMPACT			
Minor	Limited	Critical	Catastrophic
Minor - very few injuries, if any. Only minor property damage & minimal disruption on quality of life. Temporary shutdown of critical facilities.	Limited - minor injuries only. Approx. 10% or less of property in disaster footprint damaged or destroyed. Complete shutdown of critical facilities for more than one day.	Critical - multiple deaths/injuries possible. Between 25% and 50% of property in disaster footprint is damaged or destroyed. Complete shutdown of critical facilities for more than one week.	Catastrophic - high number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for 30 days or more.

To concentrate resources on highest priority hazards, the jurisdictional planning team will focus on "High" and "Extreme" risk hazards in this annex. These hazards have higher probability and greater impact as it relates to the jurisdiction's planning area.

Hazard definitions are included in Vol. 1 of this plan. If a hazard is grey in color, the jurisdictional planning team felt the hazard had a minimal footprint within their planning area, and no mitigation strategy was developed.

Hazard Information / Legend:



Climate Change is prioritized for all jurisdictions.



Sea Level Rise is a subhazard of climate change for some jurisdictions (County, Vallejo, Benicia, Suisun City, Fairfield).

Extreme Weather in Solano County includes high heat, high wind, and heavy rain.



If a hazard symbol is grey, the planning team did not develop hazard vulnerability information due to lower perceived probability and impact.

City of Fairfield Risk Matrix

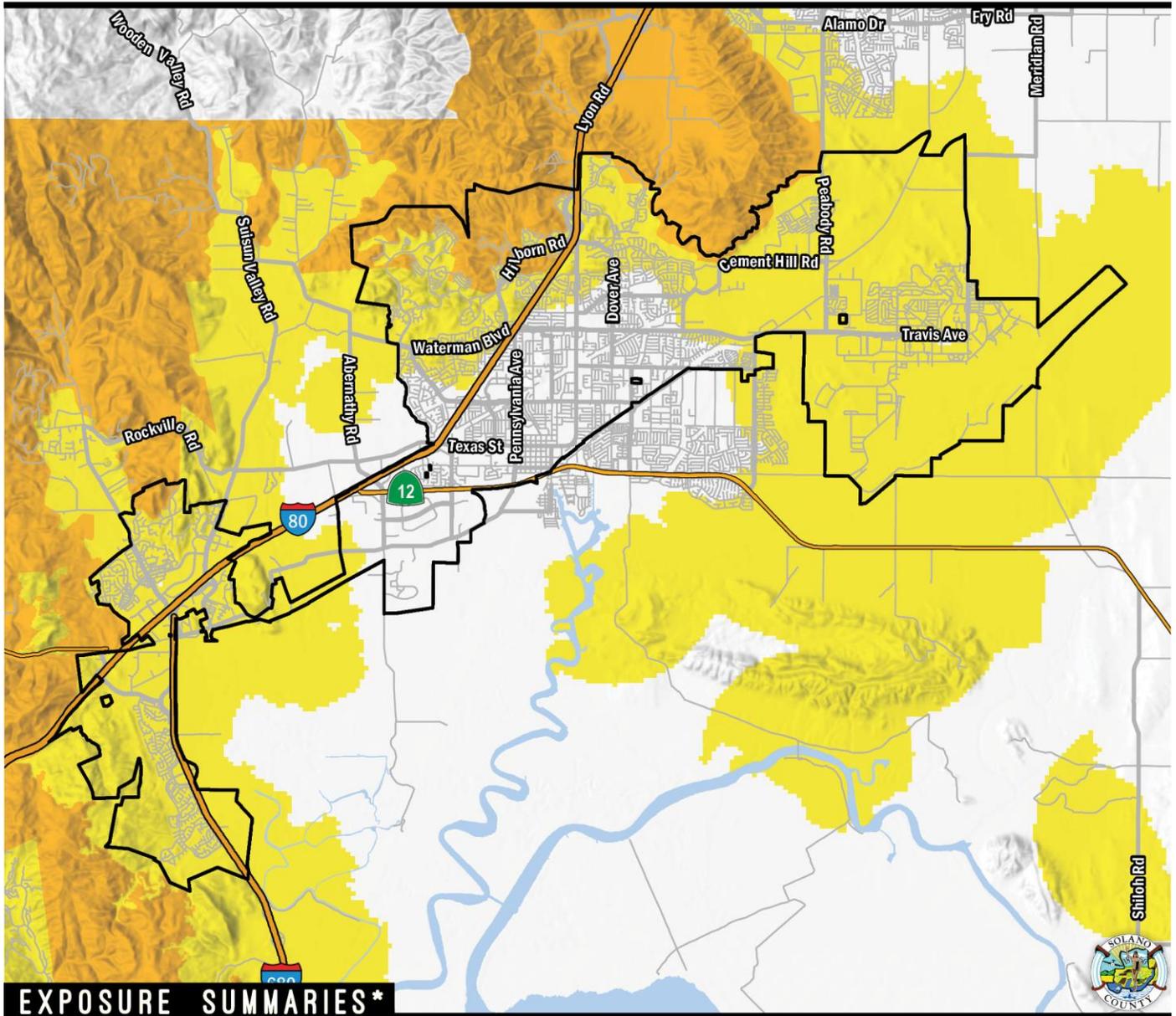
		IMPACT			
		Minor	Limited	Critical	Catastrophic
PROBABILITY	Highly Likely	Medium	High	Extreme	Extreme
	Likely	Medium			
	Possible			High	High
	Unlikely	Low	Low	Medium	Medium

Figure 1-2: City of Fairfield Risk Assessment



WILDFIRE RISK EXPOSURE

FAIRFIELD



EXPOSURE SUMMARIES*

POPULATION COUNT IN HAZARD AREA	
Count	Exp. Rate**
3,474	3%
Count Includes: H VH	

PARCEL COUNT IN HAZARD AREA	
Count	Exp. Rate**
919	3%
Count Includes: H VH	

PARCEL VALUE IN HAZARD AREA	
Sum of Improvement Value	Exp. Rate**
\$726,637,250	4%
Sum of Content Value	
\$363,318,625	3%
Count Includes: H VH	

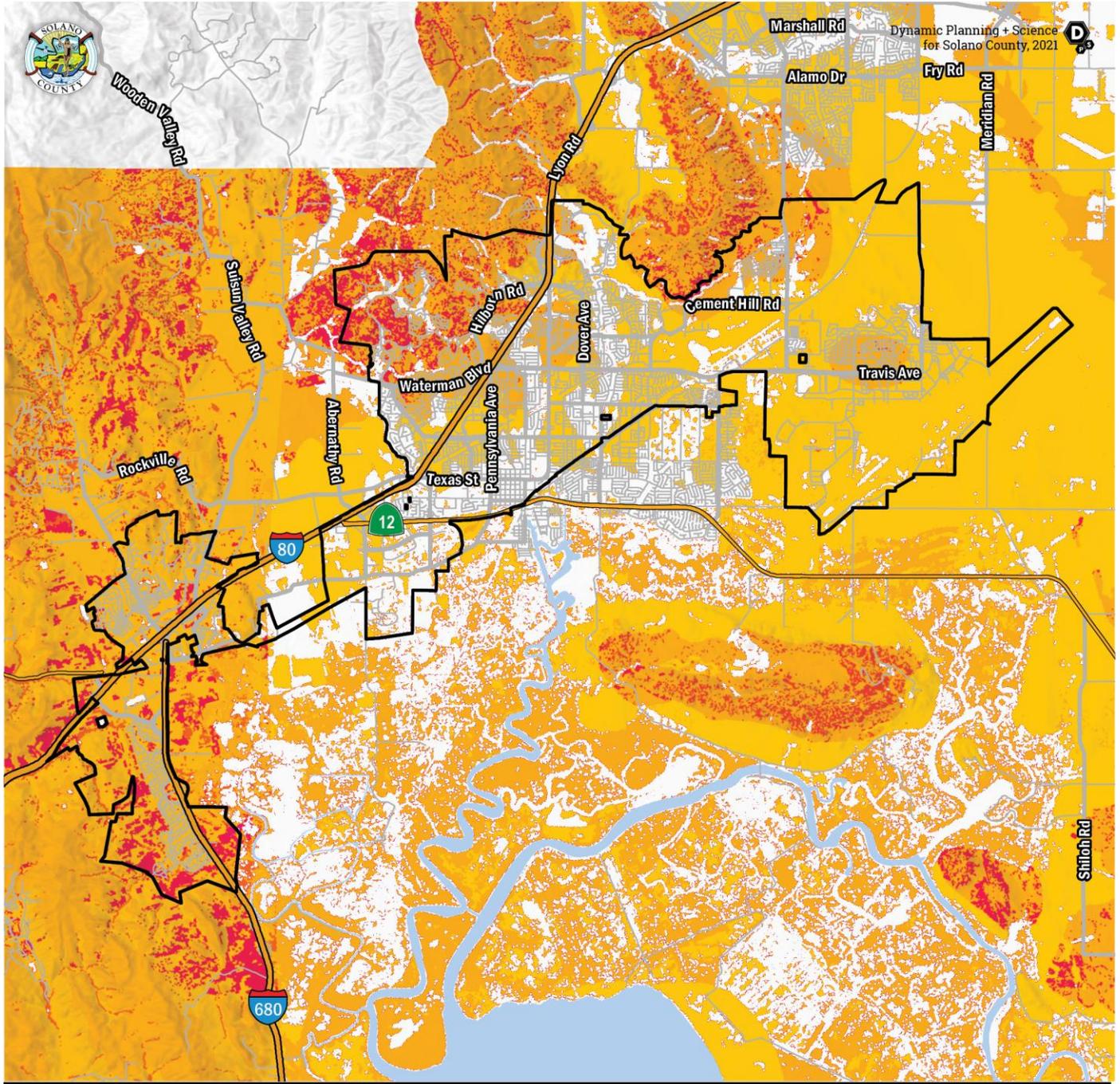
CRITICAL INFRASTRUCTURE COUNTS IN HAZARD AREA			
Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	0	0%	H VH
High Potential Loss	20	3%	Sum of Transportation & Lifeline Linear Mileage
Transportation & Lifeline	7	1%	

MAP LEGEND

MODERATE
HIGH (H)
VERY HIGH (VH)

*Exposure summaries include high and very high risk areas. Hazard data source: Cal Fire, CPUC.
 **Exposure Rate - Exposed summary or count as a percentage of total summary or count within jurisdiction.
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Figure 1-3: Fairfield - Wildfire Risk Exposure Snapshot



MEAN FIRE RETURN INTERVAL FAIRFIELD

*Data sources: USGS LANDFIRE.

MAP LEGEND

AVERAGE PERIOD BETWEEN FIRES (YEARS)

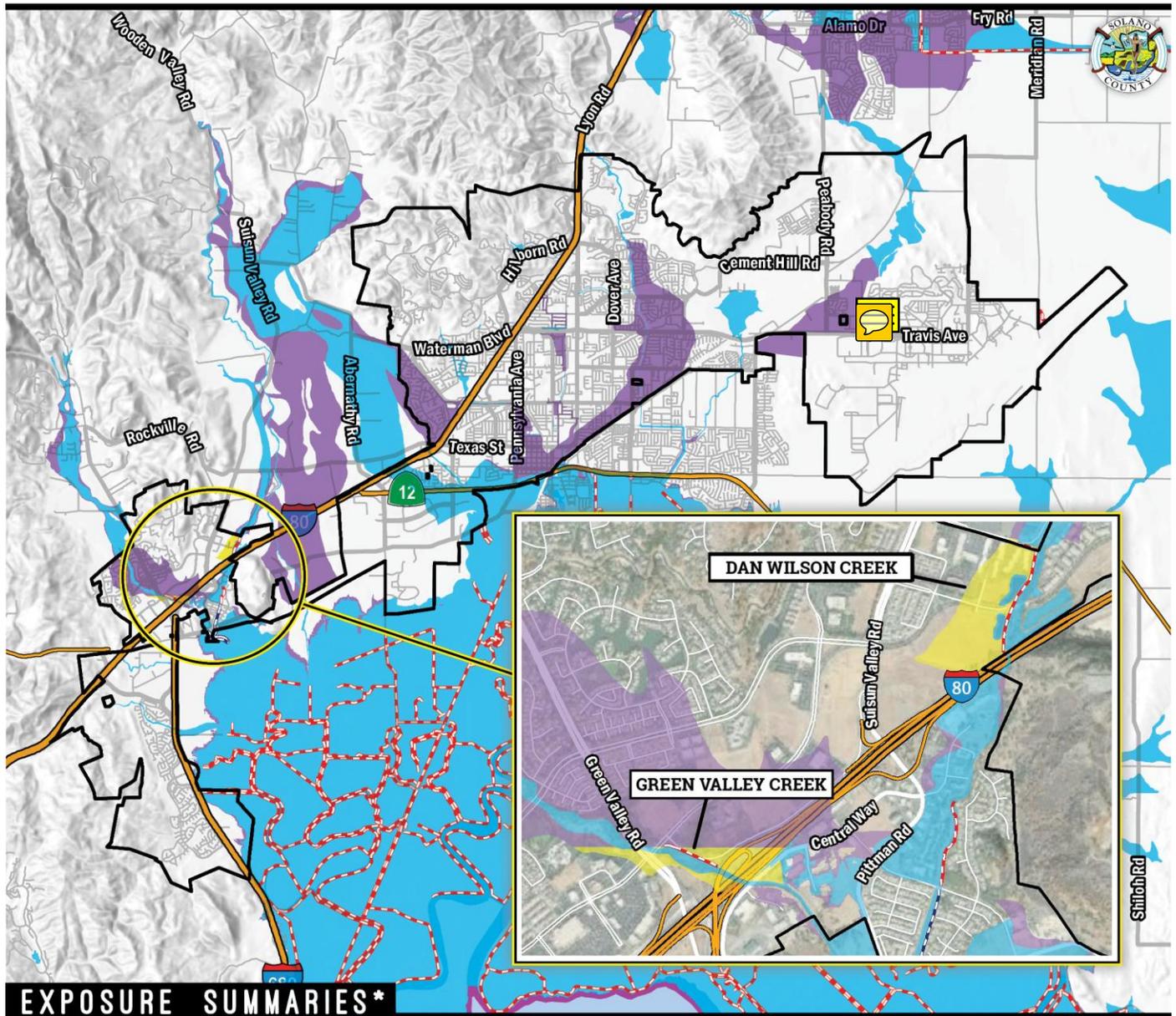
0-5
6-10
11-15
16-20
21-25
26-30
31-35
36-40
41-45
46-50
51-60
61-70
71-80
81-90
91-100
101-125
126-150
151-200
201-300
301-500
501-1000
>1000

Figure 1-4: Fairfield- Mean Fire Return Interval



FEMA FLOOD RISK EXPOSURE

FAIRFIELD



EXPOSURE SUMMARIES*

POPULATION COUNT IN HAZARD AREA

Count	Exp. Rate**
28,187	25%
Count Includes: 100 + 500	

PARCEL COUNT IN HAZARD AREA

Count	Exp. Rate**
6,843	22%
Count Includes: 100 + 500	

PARCEL VALUE IN HAZARD AREA

Sum of Improvement Value	Exp. Rate**
\$4,084,514,140	20%
Count Includes: 100 + 500	

Sum of Content Value	Exp. Rate**
\$2,768,758,748	20%
Count Includes: 100 + 500	

CRITICAL INFRASTRUCTURE COUNTS IN HAZARD AREA

Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	6	40%	100 + 500
High Potential Loss	127	22%	Sum of Transportation & Lifeline Linear Mileage
Transportation & Lifeline	159	26%	149 18%



*Exposure summaries include 100-year and 500-year flood zone areas, including coastal and leveed areas. Hazard data source: FEMA.

**Exposure Rate - Exposed summary or count as a percentage of total summary or count within jurisdiction.

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Figure 1-5: Fairfield - FEMA Flood Risk Exposure Snapshot



Table 1-4: Fairfield - Damage Estimate Summaries, 100YR Flood

Building Type	Building Damage (\$)	Building Damage (% of total loss)	Content Damage (\$)	Content Damage (% of total loss)	Total Damage (\$)	Proportion of Loss (%)
Agriculture	\$0	0.0%	\$0	0.0%	\$0	0%
Commercial	\$611,896	0.7%	\$3,947,241	4.8%	\$4,559,137	6%
Education*	\$0	0.0%	\$0	0.0%	\$0	0%
Emergency	\$0	0.0%	\$0	0.0%	\$0	0%
Government	\$588	0.0%	\$90	0.0%	\$679	0%
Industrial	\$2,363,576	2.9%	\$64,348	0.1%	\$2,427,924	3%
Religion	\$39,743	0.0%	\$278,278	0.3%	\$318,021	0%
Residential	\$56,246,359	68.9%	\$18,073,864	22.1%	\$74,320,223	91%
Total	\$59,262,162	73%	\$22,363,822	27%	\$81,625,983	

*School district asset information not available during time of Hazus analysis.

Note: Total Inventory Values

1 - Building Replacement Costs = \$3,773,922,295

2 - Content Replacement Costs = \$2,667,166,517

3 - Total Value = \$6,441,088,812

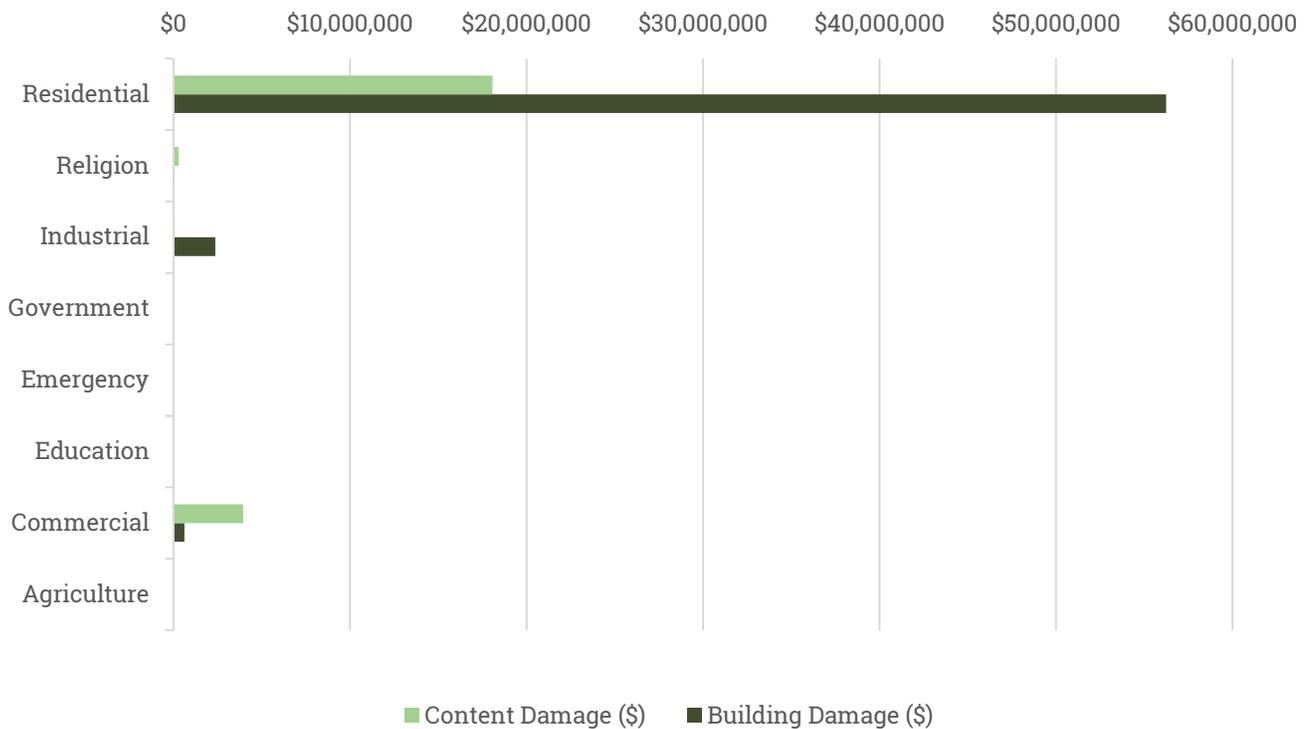




Table 1-5: Fairfield - Damage Estimate Summaries, 500 YR Flood

Building Type	Building Damage (\$)	Building Damage (% of total loss)	Content Damage (\$)	Content Damage (% of total loss)	Total Damage (\$)	Proportion of Loss (%)
Agriculture	\$0	0.0%	\$166	0.0%	\$166	0%
Commercial	\$1,366,801	0.8%	\$4,290,848	2.4%	\$5,657,650	3%
Education*	\$0	0.0%	\$0	0.0%	\$0	0%
Emergency	\$0	0.0%	\$0	0.0%	\$0	0%
Government	\$12,178	0.0%	\$15,134	0.0%	\$27,312	0%
Industrial	\$965,167	0.5%	\$1,239,414	0.7%	\$2,204,581	1%
Religion	\$23,861	0.0%	\$162,006	0.1%	\$185,867	0%
Residential	\$125,501,331	69.7%	\$46,518,495	25.8%	\$172,019,826	96%
Total	\$127,869,338	71%	\$52,226,065	29%	\$180,095,403	

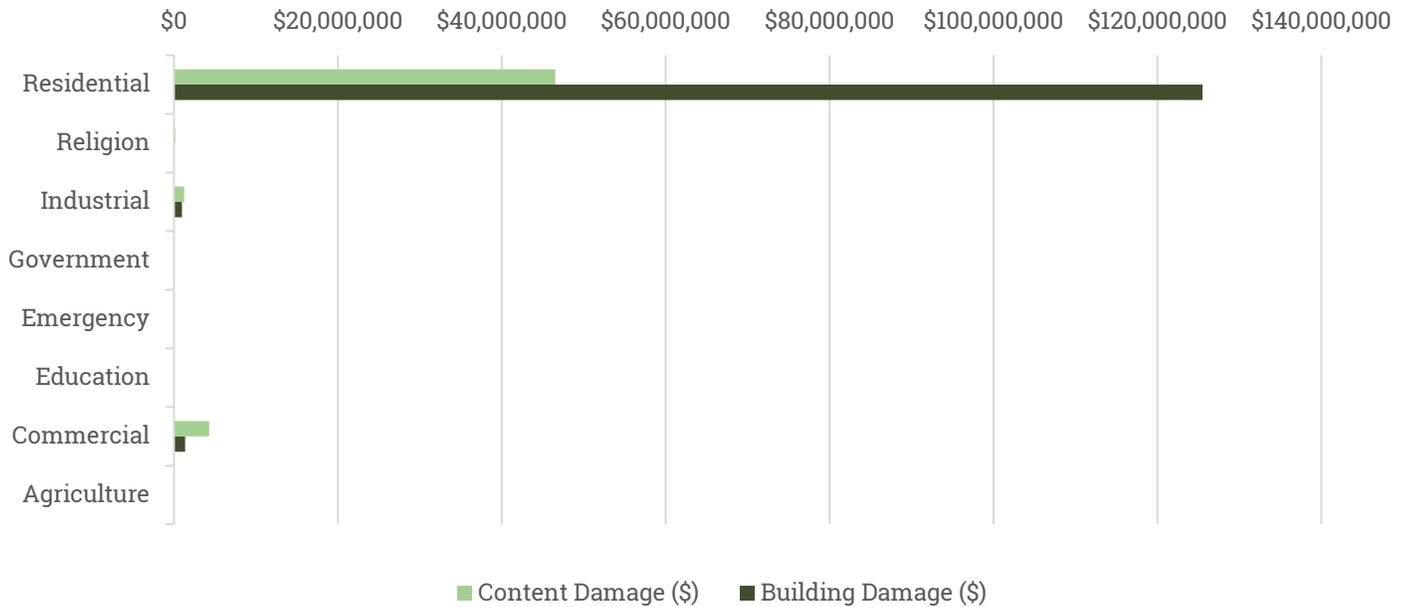
*School district asset information not available during time of Hazus analysis.

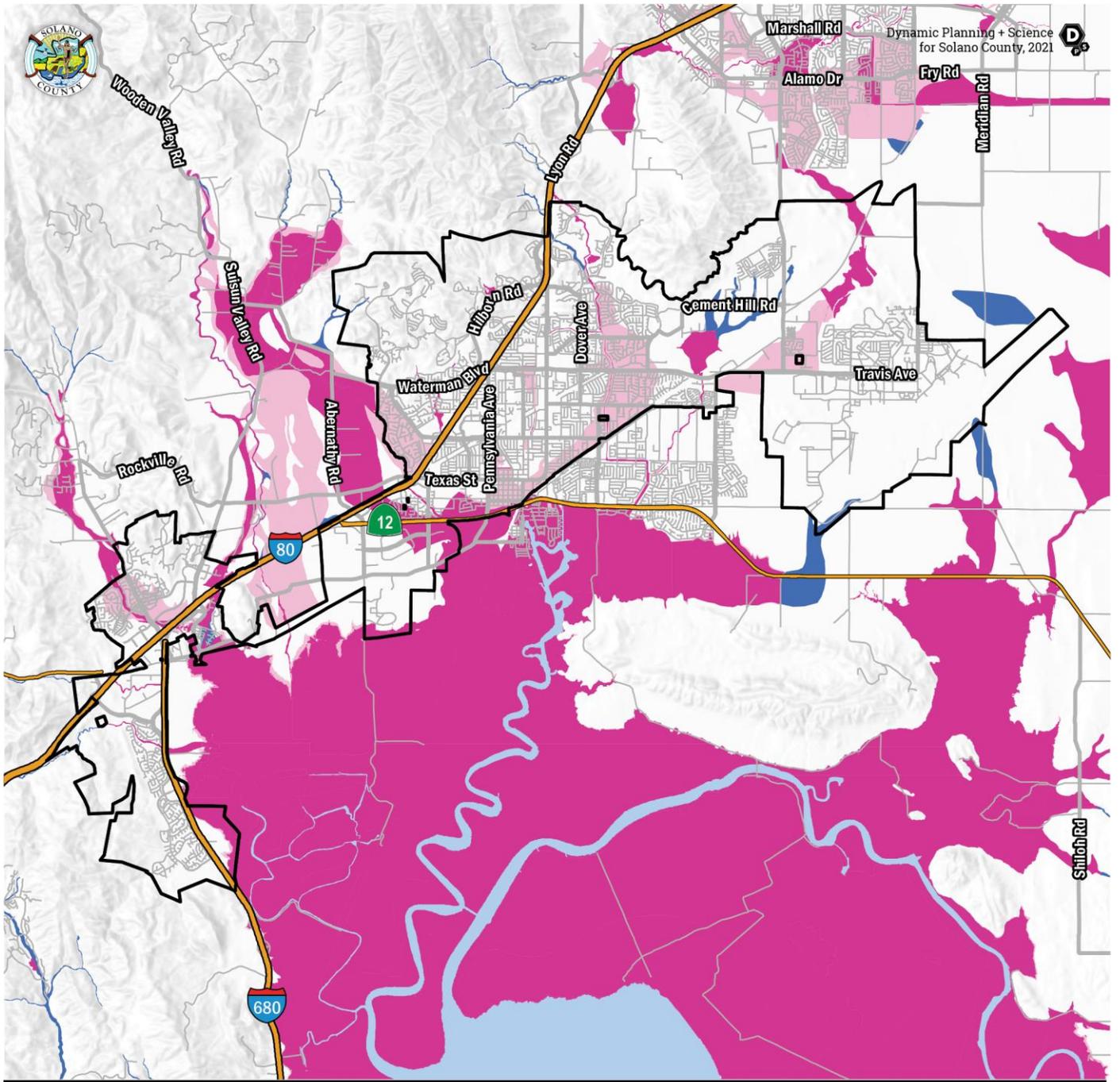
Note: Total Inventory Values

1 - Building Replacement Costs = \$3,773,922,295

2 - Content Replacement Costs = \$2,667,166,517

3 - Total Value = \$6,441,088,812





BEST AVAILABLE MAPPING (BAM) FAIRFIELD

*Data sources: FEMA DFIRM, DWR Awareness Zones (Flood Prone Areas), USACE Comprehensive Study (2002, Sacramento and San Joaquin River Basins).

FEMA FLOOD ZONES

100-YR (SFHA) 500-YR

DWR AWARENESS ZONES

USACE SAC. SAN JOAQUIN R. COMPREHENSIVE STUDY

100-YR 200-YR 500-YR

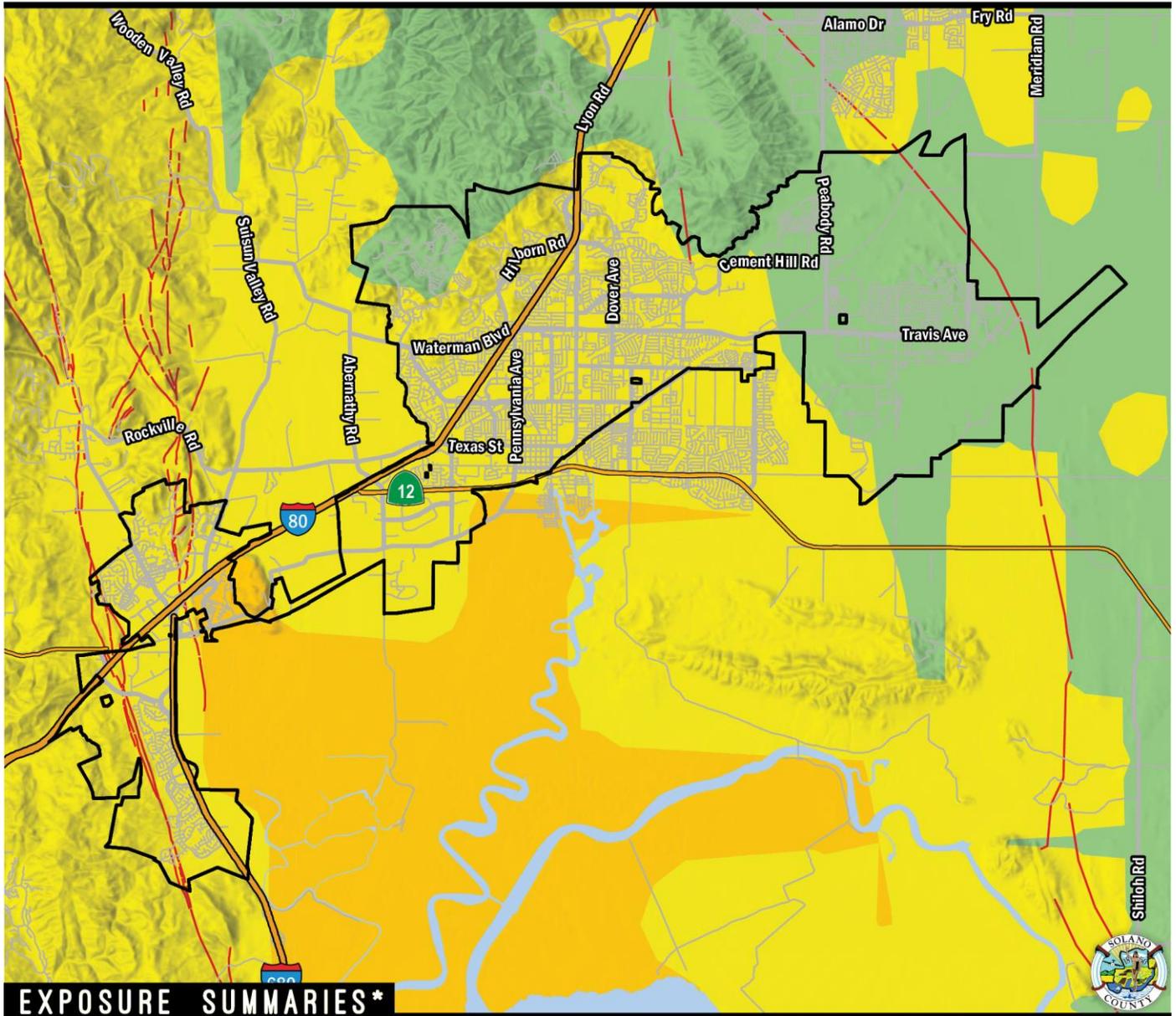
Legend above represents all possible flood classes - may not be present on map

Figure 1-6: Fairfield – DWR Best Available Mapping for Flooding



HAYWARD-RODGER'S CREEK EARTHQUAKE SCENARIO (M7.1)

FAIRFIELD



EXPOSURE SUMMARIES*

POPULATION COUNT IN HAZARD AREA	
Count	Exp. Rate**
102,445	90%
Count Includes: S+++E	

PARCEL COUNT IN HAZARD AREA	
Count	Exp. Rate**
27,685	90%
Count Includes: S+++E	

PARCEL VALUE IN HAZARD AREA	
Sum of Improvement Value	Exp. Rate**
\$18,188,058,324	89%
Sum of Content Value	
\$12,039,526,464	89%
Count Includes: S+++E	

CRITICAL INFRASTRUCTURE COUNTS IN HAZARD AREA			
Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	12	80%	S+++E
High Potential Loss	508	88%	Sum of Transportation & Lifeline Linear Mileage
Transportation & Lifeline	574	93%	661 80%



*Exposure summaries include strong, very strong, violent, and severe MMI classes. Hazard data source: USGS.
 **Exposure Rate - Exposed summary or count as a percentage of total summary or count within jurisdiction.
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Figure 1-7: Fairfield - Hayward Rodger's Creek EQ Scenario (M7.1) Snapshot



Table 1-6: Fairfield - Hayward Rogers Creek Damage Estimate Summaries

Building Type	Average of Potential Damage to Exceed "Slight"	Average of Potential Damage to Exceed "Moderate"	Average of Potential Damage to Exceed "Extensive"	Average Economic Loss for Each Building Category	Sum of Economic Loss	Proportion of Loss (%)
Agriculture	22%	9%	1%	\$1,264	\$2,527	0%
Commercial	12%	3%	0%	\$130,276	\$95,622,419	33%
Education*	21%	8%	1%	\$32,744	\$130,976	0%
Emergency	8%	2%	0%	\$43,130	\$388,174	0%
Government	8%	2%	0%	\$51,113	\$4,855,755	2%
Industrial	22%	7%	1%	\$215,320	\$54,475,966	19%
Religion	8%	1%	0%	\$25,566	\$1,201,597	0%
Residential	7%	1%	0%	\$4,371	\$129,319,424	45%
Total					\$285,996,838	

*School district asset information not available during time of Hazus analysis.

Note: Total Inventory Values

1 - Building Replacement Costs = \$3,773,922,295

2 - Content Replacement Costs = \$2,667,166,517

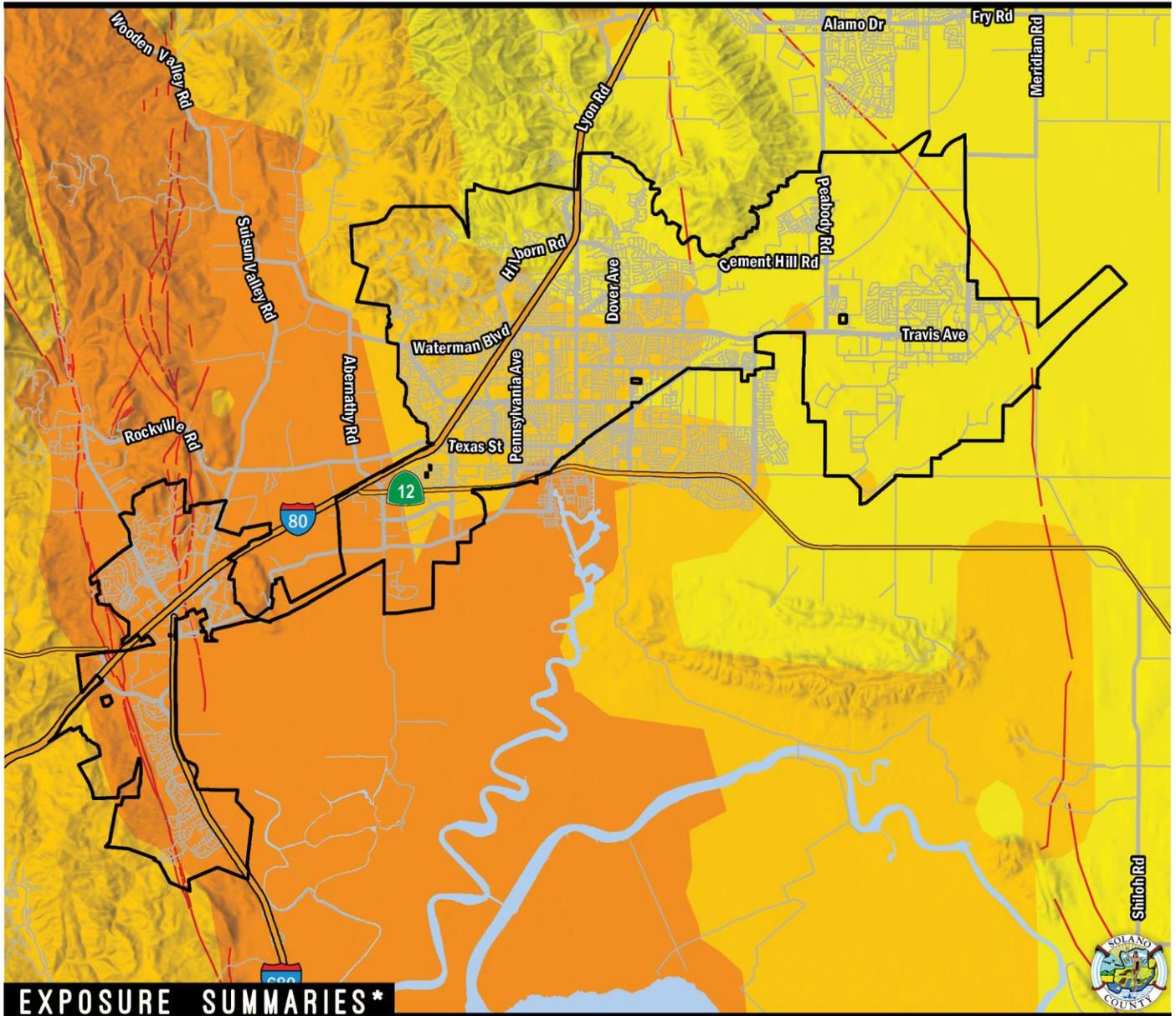
3 - Total Value = \$6,441,088,812





CONCORD-GREEN VALLEY EARTHQUAKE SCENARIO (M6.8)

FAIRFIELD



EXPOSURE SUMMARIES*

POPULATION COUNT IN HAZARD AREA		PARCEL COUNT IN HAZARD AREA		PARCEL VALUE IN HAZARD AREA		CRITICAL INFRASTRUCTURE COUNTS IN HAZARD AREA			
Count	Exp. Rate**	Count	Exp. Rate**	Sum of Improvement Value	Exp. Rate**	Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
114,101	100%	30,644	100%	\$20,470,427,213	100%	Essential Facilities	15	100%	S+++E
Count Includes: S+++E		Count Includes: S+++E		Sum of Content Value	Exp. Rate**	High Potential Loss	577	100%	Sum of Transportation & Lifeline Linear Mileage
				\$13,557,102,770	100%	Transportation & Lifeline	614	100%	823
				Count Includes: S+++E					



*Exposure summaries include strong, very strong, violent, and severe MMI classes.
Hazard data source: USGS.
**Exposure Rate - Exposed summary or count as a percentage of total summary or count within jurisdiction.
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Figure 1-8: Fairfield - Concord Green Valley EQ Scenario (M6.8) Snapshot



Table 1-7: Fairfield - Concord Green Valley Damage Estimate Summaries

Building Type	Average of Potential Damage to Exceed "Slight"	Average of Potential Damage to Exceed "Moderate"	Average of Potential Damage to Exceed "Extensive"	Average Economic Loss for Each Building Category	Sum of Economic Loss	Proportion of Loss (%)
Agriculture	65%	48%	21%	\$4,158	\$8,315	0%
Commercial	42%	15%	3%	\$687,414	\$504,561,844	31%
Education*	56%	30%	6%	\$140,778	\$563,112	0%
Emergency	34%	13%	3%	\$258,116	\$2,323,048	0%
Government	34%	11%	2%	\$315,429	\$29,965,711	2%
Industrial	60%	34%	10%	\$929,864	\$235,255,509	15%
Religion	35%	10%	1%	\$147,927	\$6,952,590	0%
Residential	34%	6%	0%	\$28,059	\$830,223,818	52%
Total					\$1,609,853,946	

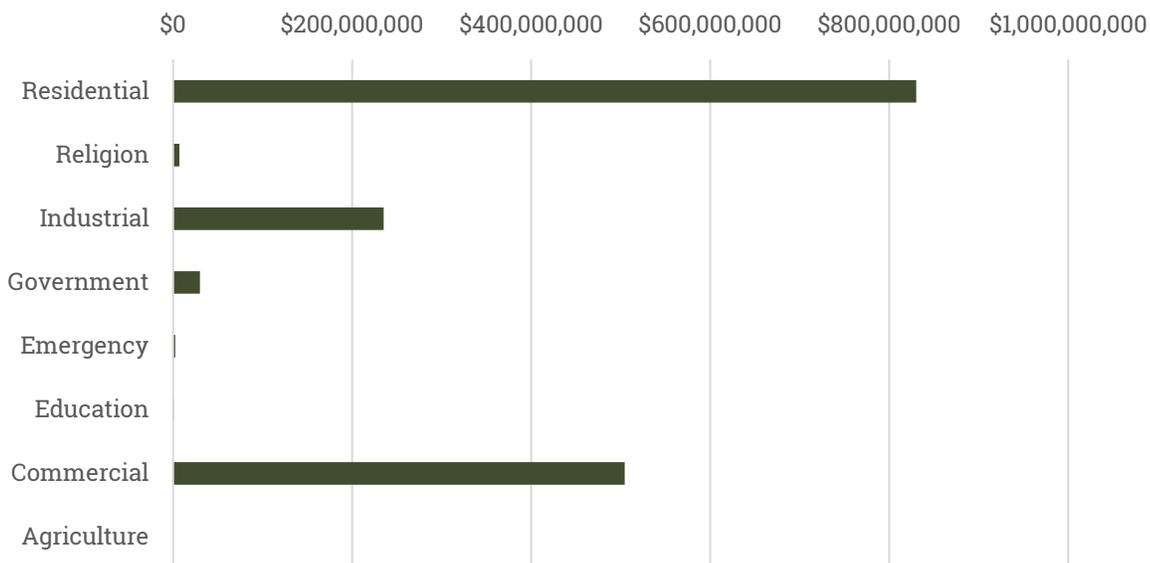
*School district asset information not available during time of Hazus analysis.

Note: Total Inventory Values

1 - Building Replacement Costs = \$3,773,922,295

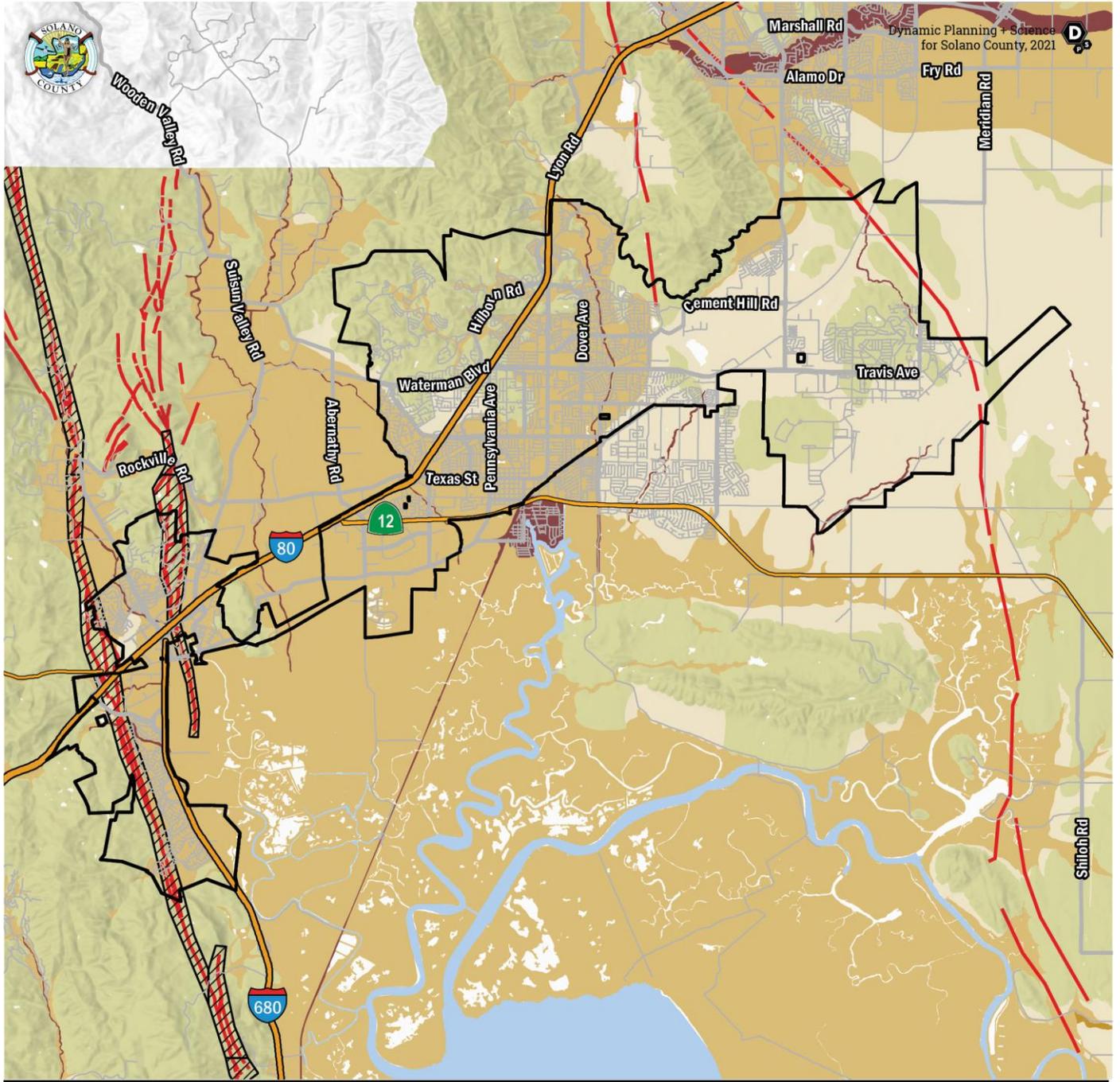
2 - Content Replacement Costs = \$2,667,166,517

3 - Total Value = \$6,441,088,812





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POTENTIAL FOR LIQUEFACTION FAIRFIELD

*Data sources: USGS.

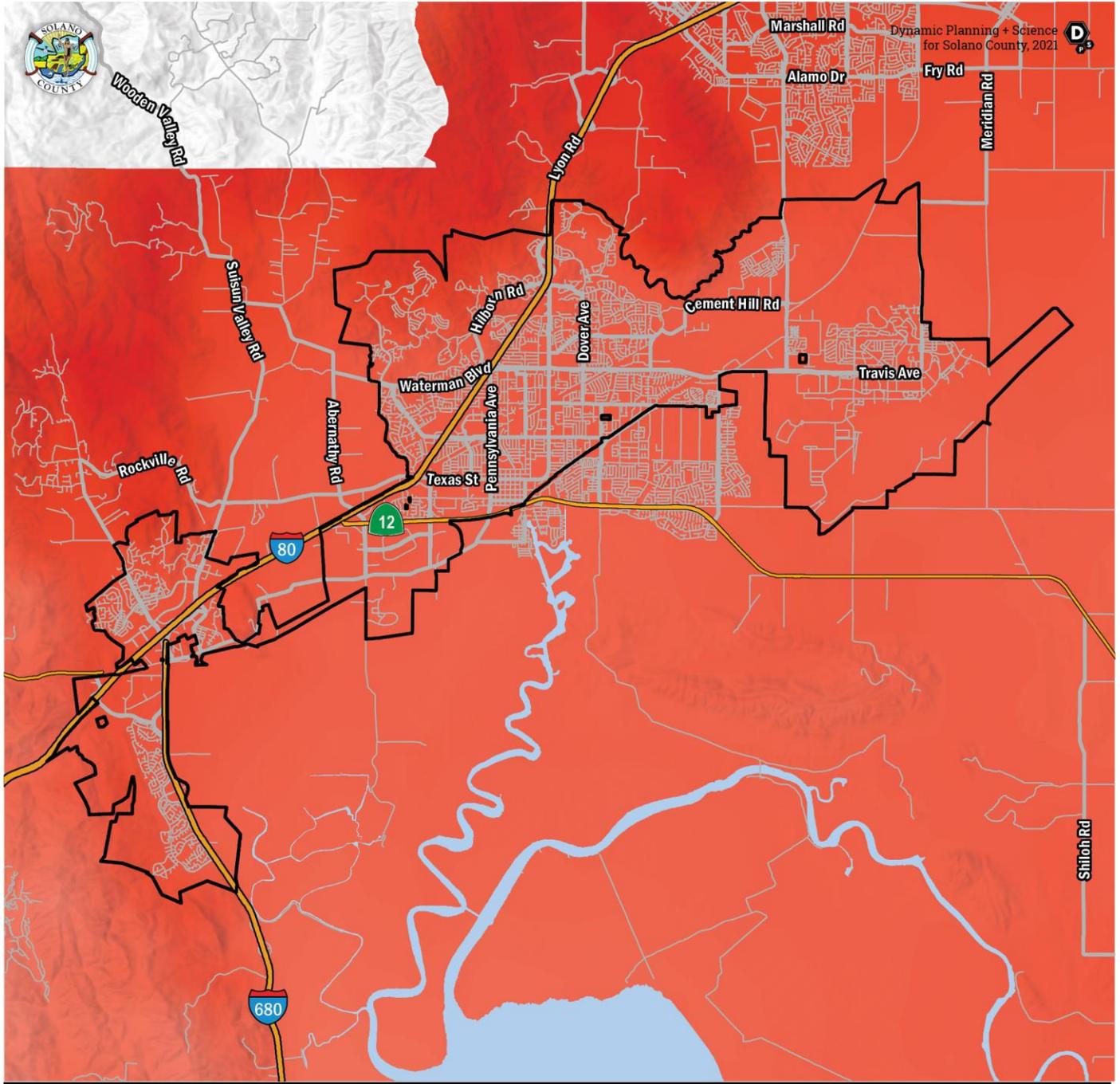
MAP LEGEND

QUATERNARY FAULTS (USGS)

EARTHQUAKE FAULT ZONE OF REQUIRED INVESTIGATION (CGS)

VL	L	M	H	VH
VERY LIGHT	LIGHT	MODERATE	HIGH	VERY HIGH

Figure 1-9: Fairfield - Liquefaction Potential



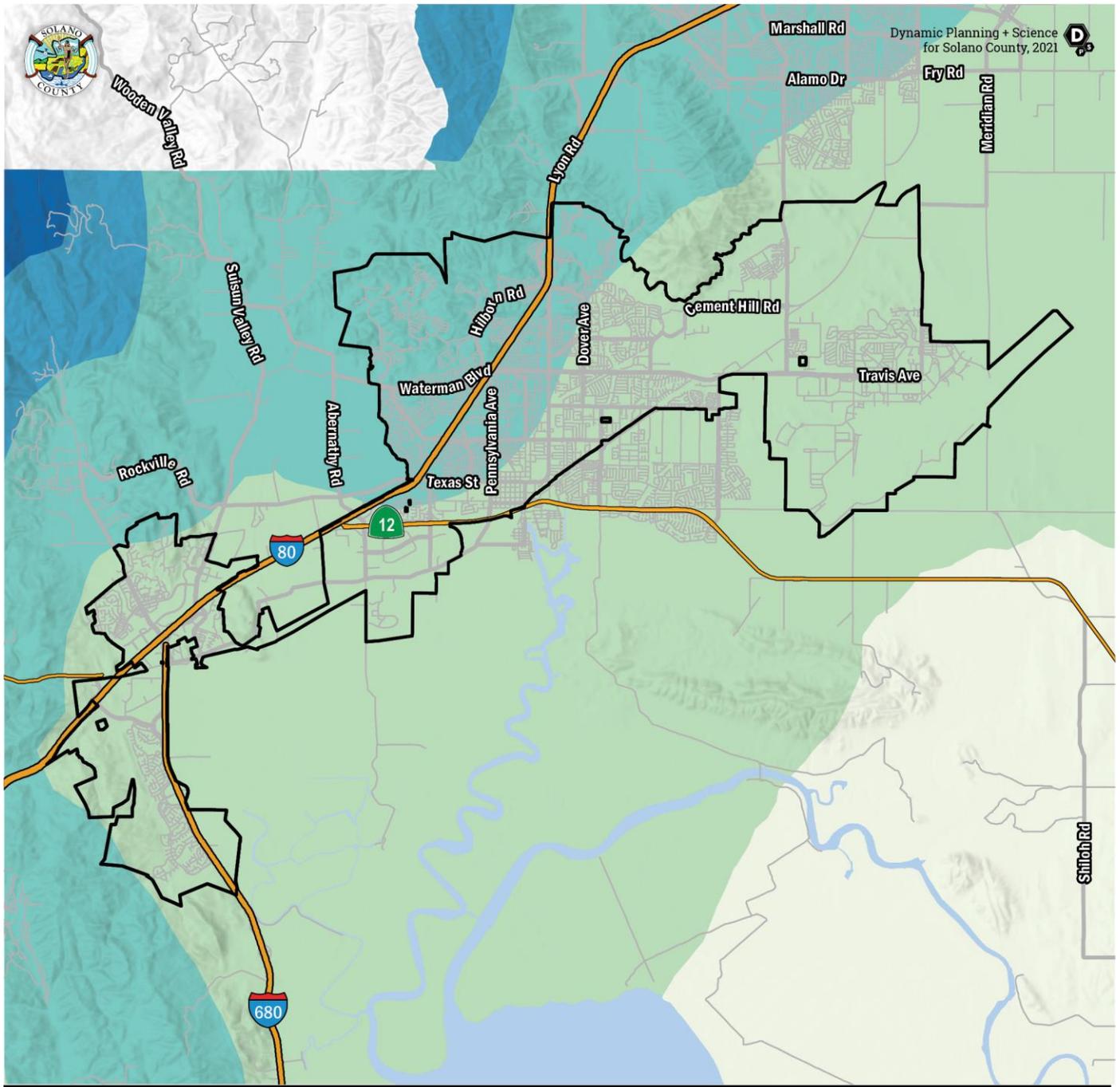
30-YR NORMAL MAXIMUM TEMPERATURE FOR JULY FAIRFIELD

*Data sources: PRISM 800m Resolution 30-YR Normals.

MAP LEGEND



Figure 1-10: Fairfield - July Max Temp



AVERAGE ANNUAL PRECIPITATION (1981-2010, INCHES) FAIRFIELD

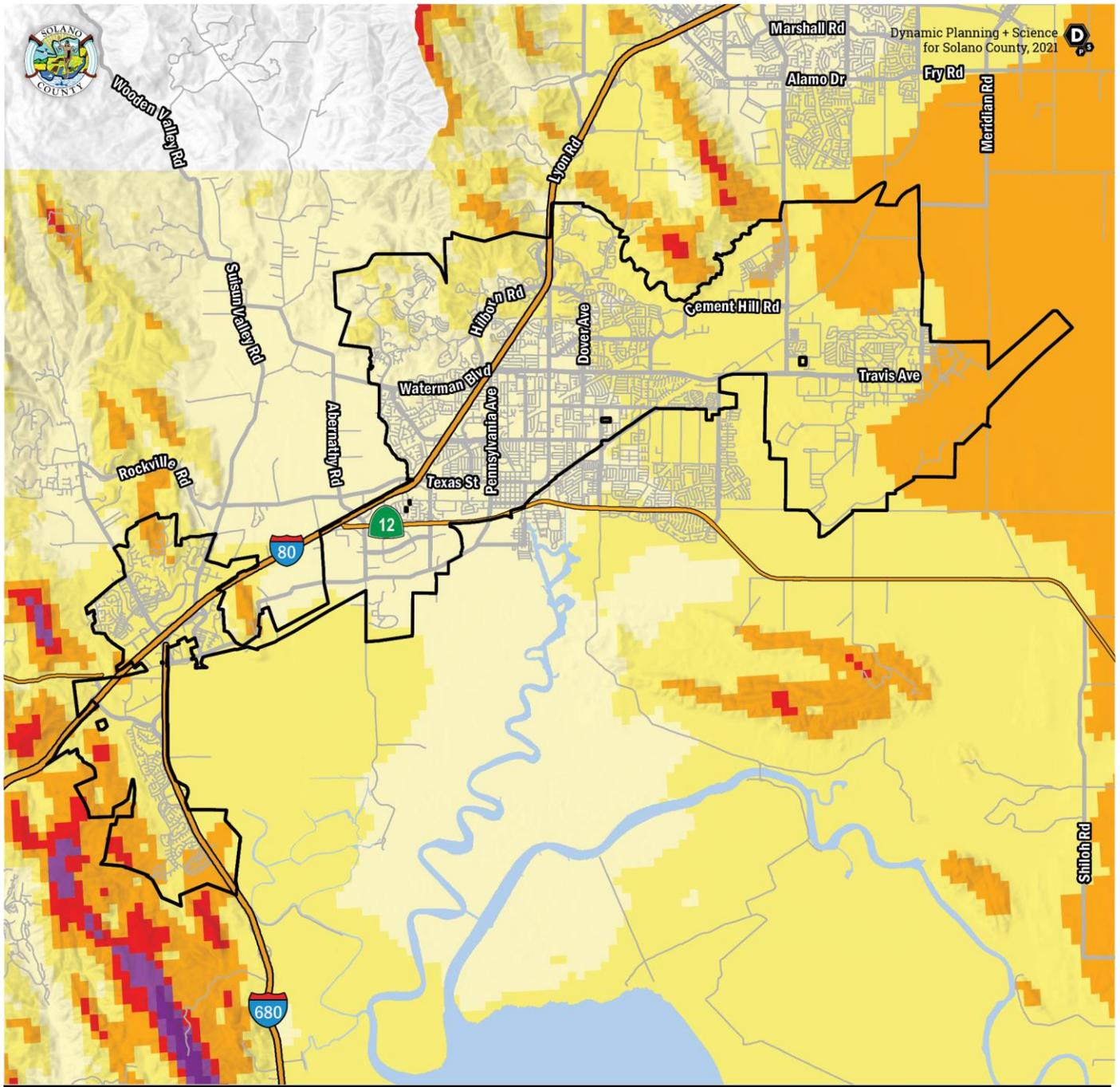
*Data sources: USDA - 1981-2010 Annual Average Precipitation by State.

MAP LEGEND

14	18	23	28	33
17	22	27	32	37

INCHES

Figure 1-11: Fairfield - Average Precipitation



**ANNUAL AVERAGE WIND SPEED (POWER CLASS)
FAIRFIELD**

*Data sources: NREL.

MAP LEGEND



Figure 1-12: Fairfield - Wind Speed



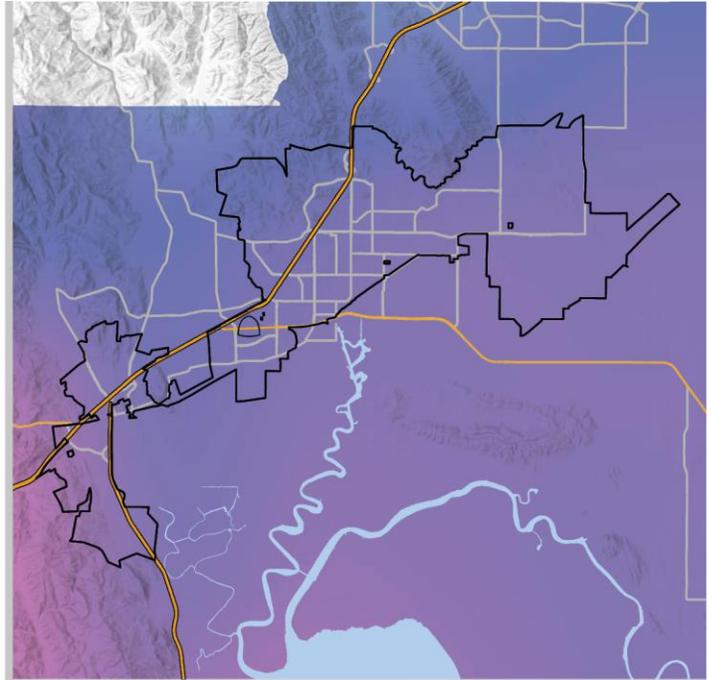
FAIRFIELD

AVERAGE ANNUAL MAXIMUM TEMPERATURE

COMPARISON OF CURRENT OBSERVED TO RCP 4.5 AND RCP 8.5 SCENARIOS



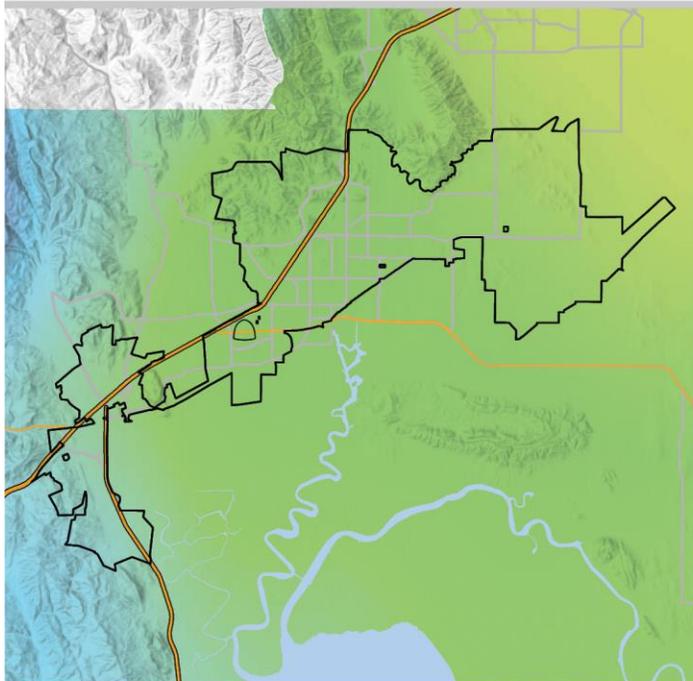
*Data sources: Cal-Adapt CanESM2 RCP 4.5 & 8.5, PRISM 30-YR Norms Annual Max Temp



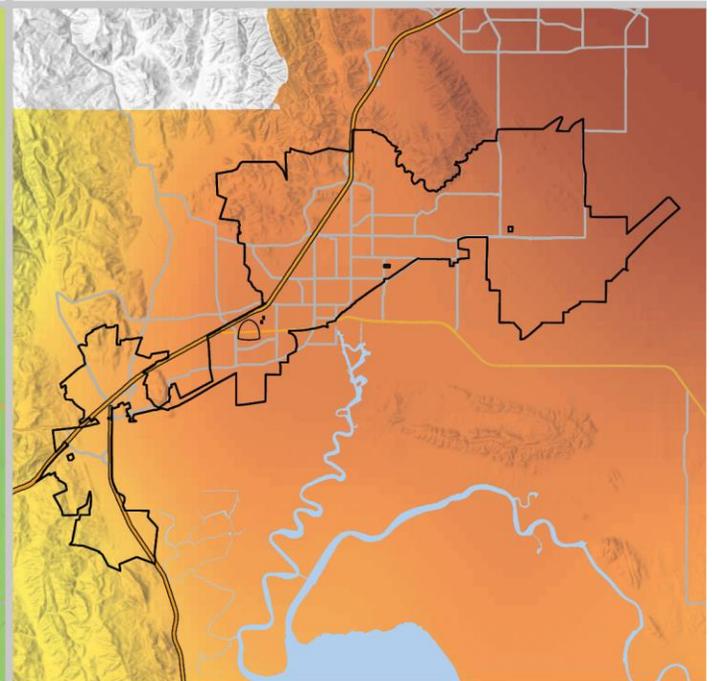
CURRENT 30-YR NORMAL



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RCP 4.5 YEAR 2100



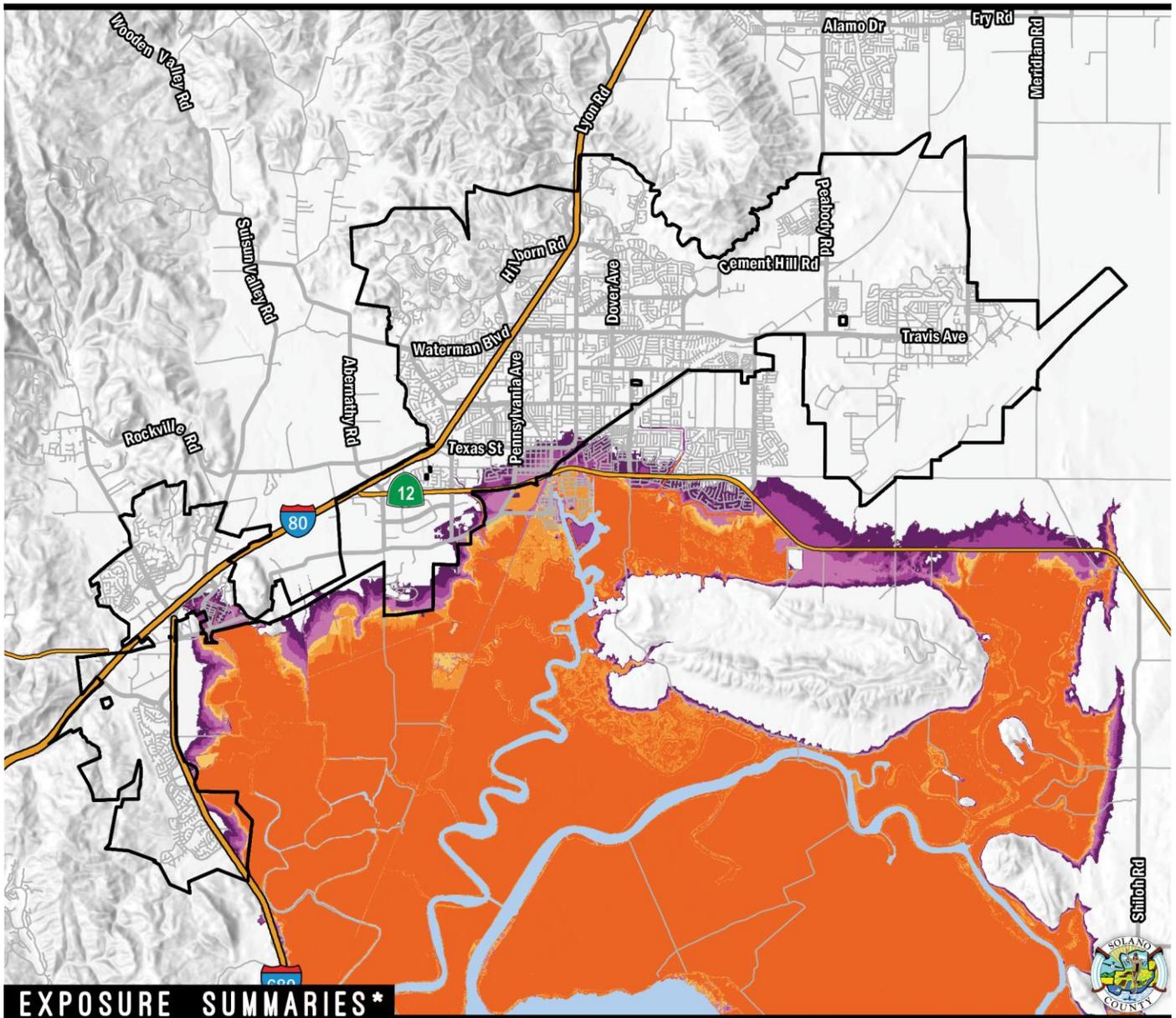
RCP 8.5 YEAR 2100

Figure 1-13: Fairfield - RCP Comparison



SEA LEVEL RISE EXPOSURE

FAIRFIELD



EXPOSURE SUMMARIES *

POPULATION COUNT IN HAZARD AREA

Count	Exp. Rate**
5,112	4%
Count Includes:	L+++E

PARCEL COUNT IN HAZARD AREA

Count	Exp. Rate**
856	3%
Count Includes:	L+++E

PARCEL VALUE IN HAZARD AREA

Sum of Improvement Value	Exp. Rate**
\$581,736,409	3%
Sum of Content Value	Exp. Rate**
\$435,407,273	3%
Count Includes:	L+++E

CRITICAL INFRASTRUCTURE COUNTS IN HAZARD AREA

Infrastructure Category	Count	Exp. Rate**	Count/Sum Includes:
Essential Facilities	5	33%	L+++E
High Potential Loss	29	5%	Sum of Transportation & Lifeline Linear Mileage
Transportation & Lifeline	22	4%	

MAP LEGEND

AMOUNT OF RISE

EXTREME (2.5M)	INTERMEDIATE (1.0M)
HIGH (2.0M)	INTERMEDIATE LOW (0.5M)
INTERMEDIATE HIGH (1.5)	LOW (0.3M)

*Exposure summaries include scenarios low rise to extreme rise. Hazard data source: NOAA.
 **Exposure Rate - Exposed summary or count as a percentage of total summary or count within jurisdiction.
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Figure 1-14: Fairfield - Sea Level Rise Exposure Snapshot



1.4.3.3 Past and Future Development

The City of Fairfield is a general law city that crafts its own development regulations and is subject to State law. Future development is subject to compliance with state and local planning, zoning, subdivision, and architecture laws.

The City of Fairfield's General Plan (GP) establishes long-range development policies. The GP is designed to help the City address issues related to land use, circulation (traffic), housing, open space, conservation, noise, and safety. The Land Use portion of the plan helps guide the City in determining the location of future development(s), including possible future annexation. In addition to the GP, the City has other plans that guide development in specific areas, including specific plans, policy plans, and master plans. These plans help to shape future development and dictate the City's Sphere of Influence (SOI). One of the central functions in these planning documents is to decrease risk of impact from natural hazards.

Development since Previous HMP

The City considered its growth since the last HMP and determined it had completed several significant mitigation activities and substantially decreased its vulnerability to hazards. The City created a Geologic Hazard Abatement District (GHAD) for paradise valley referred to as the Paradise Valley Maintenance and Monitoring District (PVMMMD) and developed fuel breaks on the Western edge of the City. The City also relocated their Emergency Operations Center (EOC) to the Fire Administration Building enhancing the ability to withstand earthquakes. This HMP Annex has been revised to reflect this substantial change in past development and continues to focus on avenues to better mitigate impacts from problematic past development.

Future Development

City of Fairfield is required to update building codes to meet the minimum standards to those required in the California Building Code last updated in 2019. California Building Codes provide some of the safest construction standards in the world and are meant to reduce risk to occupants from high wind, seismic activity, landslides, flood, wildfire, and other natural hazards. In addition to California minimum development standards, all jurisdictions belong to the NFIP, and all development must meet minimum flood protection standards set forth by FEMA. See Section 4.3.5 of Volume 1 for more information about past and future development in Solano County.

As the General Plan is updated and incorporates information from this HMP, City of Fairfield staff are continually improving hazard information through these hazard mitigation plan updates. With this 2020 update, improved online mapping about natural hazards available on RAMP will inform those responsible for future development to make better decisions where and how future development occurs.

City of Fairfield reviewed its general plans under the capability assessments undertaken for this hazard mitigation plan. See Section 1.5.1. Deficiencies revealed by these reviews are identified as mitigation actions to decrease risks to move beyond past trends.



The City's municipal codes includes regulations to mitigate the impact of hazards on new and existing development, including:

- Drainage and stormwater retention requirements,
- Steep slope restrictions for new development,
- Waterbody buffer requirements,
- Floodplain management regulations,
- Zoning that prevents development in hazardous areas of the community such as floodplains, landslide areas, the wildland-urban interface (WUI), or other known hazard areas, and
- Building codes that include the most up-to-date California Fire Code, seismic standards, and many other provisions crafted to protect new construction from hazard events.

Even in the event that limited development did occur within a hazard area, the municipal code should ensure impacts from a hazard event are mitigated and losses are minimal. If development does occur in hazard areas, evacuation and emergency planning should take into consideration the anticipated local impacts of the hazard event, including potential interrupted services or the elimination of access.

The anticipated growth in the City will not cause significant change in vulnerability to the City for identified priority hazards.

National Flood Insurance Program (NFIP)

The NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in participating communities. FEMA has prepared a detailed Flood Insurance Study (FIS) for Solano County and municipalities. The study presents water surface elevations for floods of various magnitudes, including the 1-percent annual chance flood and the 0.2-percent annual chance flood (the 500-YR flood). Base flood elevations and the boundaries of the 100- and 500-YR floodplains are shown on Flood Insurance Rate Maps (FIRMs), which are the principal tools for identifying the extent and location of the flood hazard. FIRMs are the most detailed and consistent data source available, and for many communities they represent the minimum area of oversight under their floodplain management program. See Section 4 of Volume 1 for general information on the NFIP.

The City of Fairfield has participated in the NFIP since 1984. The City of Fairfield is currently in good standing with the provisions of the NFIP. Compliance is monitored by FEMA regional staff and by the California Department of Water Resources under a contract with FEMA. Maintaining compliance under the NFIP is an important component of flood risk reduction. See Table 1-8 for more information on the City's policies and historic flood insurance claims.

The City of Fairfield also participates in the NFIP Community Rating System (CRS). The City joined the program in 1992 and maintains a rating of 7. Residents purchasing flood insurance under the NFIP in CRS communities receive discounted premiums based on community actions to reduce flood risks. The CRS rating is based on the amount of flood reduction actions taken in the community.



Table 1-8: NFIP Status Table

NFIP and CRS Status & Information	
City of Fairfield	
NFIP Status	07/05/84
CRS Class	7
Policies in Force	54
Policies in SFHA	36
Policies in non-SFHA	18
Total Claims Paid	\$747,977
Paid Losses	43
Repetitive Loss Properties	4
Severe Repetitive Loss Properties	-
Repetitive Loss Payment by NFIP on Building	\$320,154
Repetitive Loss Payment by NFIP on Contents	\$88,873

Source: OpenFEMA Data, FIMA RUL Solano County

Note: Policies and claims tabulation by jurisdiction is derived from the "reported city." Repetitive loss tabulations by jurisdiction derived via GIS-based intersect of data available at OpenFEMA Data (<https://www.fema.gov/about/openfema/data-sets>). Countywide data reported for entire county area including municipalities. The Privacy Act of 1974 (5 U.S.C. 522a) restricts the release of certain types of data to the public. Flood insurance policy and claims data are included in the list of restricted information. FEMA can only release such data to state and local governments, and only if the data are used for floodplain management, mitigation, or research purposes. Therefore, this plan does not identify the repetitive loss properties or include claims data for any individual property.

See Volume 1, Section 4.5 for more information on the NFIP

1.4.3.4 Identify Hazard Problem Statements

As part of the mitigation action identification process, the Planning Committee for each jurisdiction identified areas of concern (aka problem statements) for their respective facilities based on the risk assessment and vulnerability analysis, utilizing the RAMP mapping and static snapshot maps. Problem statements focused on the impact, victim, or threat that the hazard could create in the jurisdiction, as described in Figure 1-15. Identifying common issues and weaknesses through these problem statements assisted the Planning Committee in understanding the realm of resources needed for mitigation. Jurisdiction problem statements are listed in Table 1-9.

The goal is to have at least one mitigation action for every problem statement. Projects or actions have been developed to mitigate each problem identified. See Table 1-14 for a full list of mitigation actions and corresponding problem statements that they address. Each problem statement is coded with a problem number for cross-referencing between Table 1-9 and Table 1-14.



Figure 1-15: Guidance for Problem Statements

Table 1-9: Problem Statements

Problem No.	Hazard Type	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-AH-FF-136	All Hazard	Impact	PRV - Prevention, PE&A - Public Education & Awareness	City of Fairfield	Train derailment could impact egress within the jurisdiction.	ma-AH-FF-137
ps-FL-FF-137	Flood	Impact	PRV - Prevention, PPRO - Property Protection, PE&A - Public Education & Awareness, NRP - Natural Resource Protection	City of Fairfield	Trash and debris from homeless communities, dams up local creek beds that causes flooding issues from obstructed drainage paths.	ma-FL-FF-181
ps-FL-FF-138	Flood/Climate Change	Impact	PRV - Prevention, PPRO - Property Protection, PE&A - Public Education & Awareness, SP - Structural Projects	City of Fairfield	King tide events are causing more flooding and worsening with climate change.	ma-FL-FF-138
ps-EW-FF-139	Extreme Weather	Impact	PRV - Prevention, PE&A - Public Education & Awareness, ES -	City of Fairfield	High wind events have been causing tree failure within the jurisdiction.	ma-EW-FF-139



Problem No.	Hazard Type	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
			Emergency Services			
ps-EW-FF-140	Extreme Weather	Impact	ES - Emergency Services	City of Fairfield	Need for more generators throughout the jurisdiction for cooling centers.	ma-EW-FF-140
ps-EW-FF-141	Extreme Weather	Impact	PRV - Prevention, PPRO - Property Protection, NRP - Natural Resource Protection, SP - Structural Projects	City of Fairfield	Heavy rain concerns with flooding in downtown are exacerbated by climate change.	ma-FL-FF-146, ma-FL-FF-138, ma-EW-FF-187
ps-WF-FF-142	Wildfire	Impact	PRV - Prevention, PPRO - Property Protection, PE&A - Public Education & Awareness, ES - Emergency Services	City of Fairfield	Fairfield has small pockets of grasslands that need mitigation.	ma-WF-FF-141
ps-WF-FF-143	Wildfire	Victim	PRV - Prevention, PPRO - Property Protection, PE&A - Public Education & Awareness, ES - Emergency Services	City of Fairfield	Small fires have been jumping into people's backyards causing enhanced risk and potential structural damage.	ma-WF-FF-142
ps-WF-FF-144	Wildfire	Victim	PE&A - Public Education & Awareness, ES - Emergency Services	City of Fairfield	Fairfield is working to bring better coordination throughout the city to ensure ongoing mitigation.	ma-WF-FF-143, ma-WF-FF-142
ps-EQ-FF-145	Earthquake	Impact	PRV - Prevention, PPRO - Property Protection, SP - Structural Projects	City of Fairfield	The city has new and old subgrade and above grade infrastructure with gravity + direct fed water systems. Tanks are all secure however, major earthquakes could significantly damage pumps, storage tanks, and could cause small flooding, resulting in water loss for the fire district.	ma-EQ-FF-144
ps-EQ-FF-146	Earthquake	Impact	PRV - Prevention, PPRO - Property Protection, SP - Structural Projects	City of Fairfield	City owned buildings are old and not retrofitted to appropriate codes.	ma-EQ-FF-145



Problem No.	Hazard Type	Area of Concern	Mitigation Alternatives	Primary Agency	Problem Description	Related MA
ps-EQ-FF-147	Earthquake	Impact	PRV - Prevention, PPRO - Property Protection, PE&A - Public Education & Awareness, ES - Emergency Services, SP - Structural Projects	City of Fairfield	The city has a Clorox chemical plant in the 39th district, a major earthquake could cause a hazardous material spill(s).	ma-EQ-FF-182, ma-EQ-FF-183
ps-EQ-FF-148	Earthquake	Impact	PRV - Prevention, PPRO - Property Protection, PE&A - Public Education & Awareness, ES - Emergency Services, SP - Structural Projects	City of Fairfield	The city has commercial storage warehouses, that contain flammable materials, Cordelia area, this causes a secondary vulnerability with potential fire hazards, because of a major earthquake.	ma-EQ-FF-183

1.4.4 Mitigation Action Support Tool (MAST)

As a living document, hazard problem statements and mitigation activities will be updated through a web interface application developed specifically for participating jurisdictions. The Mitigation Action Support Tool (MAST) is accessible through mitigatehazards.com/SolanoHMP/.

MAST is a web-based interactive tool that enables multiple users to search, view, enter, and update mitigation actions, ideas or projects, and other information. MAST provides participating jurisdictions and plan reviewers (Cal OES/FEMA) access to valuable mitigation information that can be leveraged by future planning or other risk reduction efforts within the County. Participating jurisdictions can update the status of their mitigation projects throughout the planning lifecycle, and this web-based tool will improve participating jurisdiction’s ability to apply for FEMA’s Hazard Mitigation Assistance (HMA) grant programs including initial grant application processes through Cal OES.



1.5 Mitigation Strategy

The mitigation strategy is the guidebook to future hazard mitigation administration, capturing the key outcomes of the MJHMP planning process. The mitigation strategy is intended to reduce vulnerabilities outlined in the previous section (a.k.a. problem statements) with a prescription of policies and physical projects. These mitigation actions should be compatible with existing planning mechanisms and should outline specific roles and resources for implementation success.

1.5.1 Capabilities & Adaptive Capacity Assessment

This section examines the planning and regulatory, administrative, technical, financial, educational, and outreach capabilities to augment known issues and weaknesses from identified natural hazards.

Capabilities assessments in this Volume 1 and in Volume 2 include considerations of a community's adaptive capacity for climate change, as outlined in Cal OES' 2020 California Adaptation Planning Guide. Adaptive capacity is a community or region's existing ability to moderate climate change impacts. Assessing adaptive capacity includes analysis of policies, plans, programs, funding, and staffing capacity.

The tables in this section explore various local planning mechanisms, administrative capacity, financial capabilities, and education and outreach initiatives. The columns in each table represent deeper dives into the following questions:

- Is the existing planning or regulatory mechanism used currently? (Column 1, Status)
- Has the HMP been integrated into the planning mechanism currently so that the named mechanism is currently used in HMP planning? (Column 2, Current Mitigation Use)
- Is there a future opportunity to expand, improve upon, and incorporate this 2020 HMP Update into the planning or regulatory mechanism? (Column 3, Future Opportunity)

The capabilities assessment is easily digestible and based on color coding to indicate which policies and plans are adequate, need improvement or in which the HMP could be integrated. Each table includes a legend that explain how each one of these questions are being answered according to the color indicated: green, yellow, and orange.

For more information on the regulatory environment surrounding each hazard, see hazard-specific sections of Volume 1. Volume 1, Section 5.3.5 includes an extensive list of federal and state funding opportunities as well.



1.5.1.1 Planning and Regulatory Capabilities

Table 1-10: Planning and Regulatory Capabilities

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Planning and Regulatory Capabilities				
Construction and Future Development Regulations				
Building Codes				2019 California Building Code
Building Code Effectiveness Grading Schedule (BCEGS) Rating	N/A	N/A	N/A	Unknown
Public Protection (ISO Class)				3
Hazard Related Development Standards				Fire Protection, Development Requirements (104.2.2); Establishment of Flood Plain Development Permit (8A.4.1); Provisions for Flood Hazard Reduction, Standards of Construction (8A.5.1)
Hazard-Specific Ordinance				Seismic Hazards Identification Program (5.3.6); Provisions for flood hazard reduction (Article V.)
Zoning Ordinance				
Growth Management Ordinance			N/A	
Hazard Reduction Programs (Annually Conducted)				
Capital Improvements Program (CIP) or Plan				
Erosion/Sediment Control Program				Required for improvement plans
Hazard-Related Public Outreach Program				See Education & Outreach Capabilities for more specifics.
Stormwater Management Program (Annual Inspections)				Fairfield-Suisun Urban Runoff Management Program, Stormwater C.3 Guidebook (2012)
Seismic Safety Program (Non-structural Inspections)				
Earthquake Modernization Program (Building Safety Inspections)				
Hazard Plans				



General Plan Safety Element				Health and Safety Element 2004; Currently being updated
Noteworthy Area/ Specific Plan with Hazard Focus				
Community Wildfire Protection Plan (CWPP)				
Wildfire Vulnerability Assessment				
Urban or Integrated Regional Water Management Plan				2015 Urban Water Management Plan
Floodplain Management Plan				See UWMP
Stormwater Management Plan				
Ground Water Management Plan(s)				
Open Space and Land Management Plan(s)				General Plan Element, Parks Master Plan, Rockville Hills Master Plan, participation in Joint Powers Authority for open space issues.
Emergency Operations Plan				2017 Solano County Emergency Operations Plan
Climate Action Plan, Vulnerability Ass'mt, or Adaptation Plan				2011 Sustainability & Climate Change Plan
Sustainable Community Plan (SB 375)				ABAG Plan Bay Area 2040
Local Delta/ Wetlands Program(s)	N/A	N/A	N/A	
Downtown Plan with hazard focus				Heart of Fairfield, 2017, discusses flooding
Community Health Assessment(s)	N/A	N/A	N/A	
National Flood Protection Program (NFIP)				
Floodplain Management Regulations				Flood Damage Prevention, Statutory Authorization and Findings (8A.1.1)
Flood Insurance Education and Technical Assist.				
Flood Hazard Mapping / Re-Mapping				Flood Insurance Rate Maps
Community Rating System (CRS)				



1.5.1.2 Administrative and Technical Capabilities

Table 1-11: Administrative and Technical Capabilities

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Administrative and Technical				
Community Planning and Development Services				
Community Planner				Planning Department with several planners All staffing is currently adequate, no hazard mitigation additional staffing is identified; staff can continue to integrate hazard mitigation.
Civil Engineer				Petya McInnis, Associate Civil Engineer
Building Code Official				Jeff Thomas, Chief Building Official
Floodplain Administrator				Director of Public Works, Paul Kaushal
Fire Marshall				Steven Conti, Fire Marshal
Dedicated Public Outreach Personnel				Bill Way
GIS Specialist and Capability				Jasmin Acuna
Emergency Manager				Fire Chief
Grant Manager, Writer, or Specialist				Multiple City staff write grants
Other				
Warning Systems/Services				
General				AlertSolano
Flood				AlertSolano: Flood Risk: California Department of Water Resources Flood Risk Notification Program Flood Control: Solano County Water Agency
Wildfire				AlertSolano
Geological Hazards				AlertSolano ShakeAlert.org (nation-wide)



1.5.1.3 Financial Capabilities

Table 1-12: Financial Capabilities

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Fiscal Capabilities				
Financial Resources for Hazard Mitigation				
Levy for Specific Purposes with Voter Approval				Many of these fiscal capabilities are not expected to be utilized in the future to fund hazard mitigation; thus the opportunity is limited.
Utilities Fees				
Benefit assessments				Paradise Valley Assessment District
System Development Fee				
Various Bonds to Incur Debt				
Withheld Spending in Hazard-Prone Areas				
Stormwater Service Fees				
Capital Improvement Project Funding				



1.5.1.4 Education and Outreach

Table 1-13: Education and Outreach Capabilities

CAPABILITY ASSESSMENT LEGEND		
Status	Current Mitigation Use	Future Opportunity
Currently in use or present.	Used widely for mitigation.	Opportunity to expand and integrate.
(Sort of) Seldomly used or limited presence.	Limited use in mitigation planning.	Limited opportunity to expand and integrate.
(No) Not present or available.	Not used in mitigation planning.	No opportunity to expand or integrate.

Resource	HMP Integration			Notes / Additional Detail
	Status	Current Mitigation Use	Future Opportunity	
Education / Outreach Capabilities				
Education/Outreach Resources				
Website Dedicated to Hazard Topics				Flood Hazard Information webpage; Disaster Preparedness Links
Dedicated Social Media				Sometimes topical on City website
Hazard Info. Avail. at Library/ Planning Desk				General Plan Hazards Maps are very conceptual in scale and utility.
Annual Public Safety Events				None during COVID-19
Ability to Field Public Tech. Assistance Requests				
Public Safety Newsletters or Printed Outreach				
Fire Safe Councils				
Resource Conservation Districts				Solano Resource Conservation District
Other				

1.5.1.5 Capability and Adaptive Capacity Opportunities

The City of Fairfield identified many opportunities for strengthening community capabilities and adaptive capacity. The City considered this assessment in developing its Mitigation Strategy.

The City is updating its General Plan, which will set the foundation for additional hazard mitigation capacity in the future. The City identified opportunities to revisit code language that could be strengthened for hazard protection and additional outreach and planning opportunities related to wildfire in particular.

Volume 1, Section 5.3.5 includes an extensive list of federal and state funding opportunities to leverage to improve community capabilities.



1.5.2 Mitigation Actions

Mitigation actions were developed based upon the jurisdiction’s priorities, risk assessment results, and mitigation alternatives. The mitigation action prioritization method used by all participating jurisdictions is described in Section 5.5.1 of Volume 1. Table 1-14 lists each priority mitigation action, responsible party, time frame, potential funding source, implementation steps, and resources need to implement based upon the Planning Committee consensus.

Each participating jurisdiction, including the City of Fairfield, considered ongoing relevancy of mitigation actions from the existing MJHMP and retained or removed such actions while adding new relevant actions as well. Mitigation actions were examined for relevancy and the potential for future implementation and then evaluated for potential follow-up. Some mitigation actions developed during the previous HMP effort were not included because they were an inherent part of the HMP update process or were not detailed enough for implementation at a local Jurisdiction level. the City of Fairfield has made significant changes to other mitigation actions because of the updated risk assessment and implementation strategy, to include more detail, or to update based on current mitigation practices. Volume 1, Section 5.5.2 provides a record of County wide mitigation actions, the status, and additional notes for each action.

Table 1-14 lists each mitigation action for the City of Fairfield. Each participating jurisdiction developed unique mitigation actions, targeted at their own unique priorities and vulnerabilities. Each mitigation action identifies the responsible party, time frame, potential funding source, implementation steps and resources needed to implement these priority mitigation actions. As a living document, hazard problem statements and mitigation activities will be updated through MAST. The detail in Table 1-14 meets the regulatory requirements of FEMA and DMA 2000.

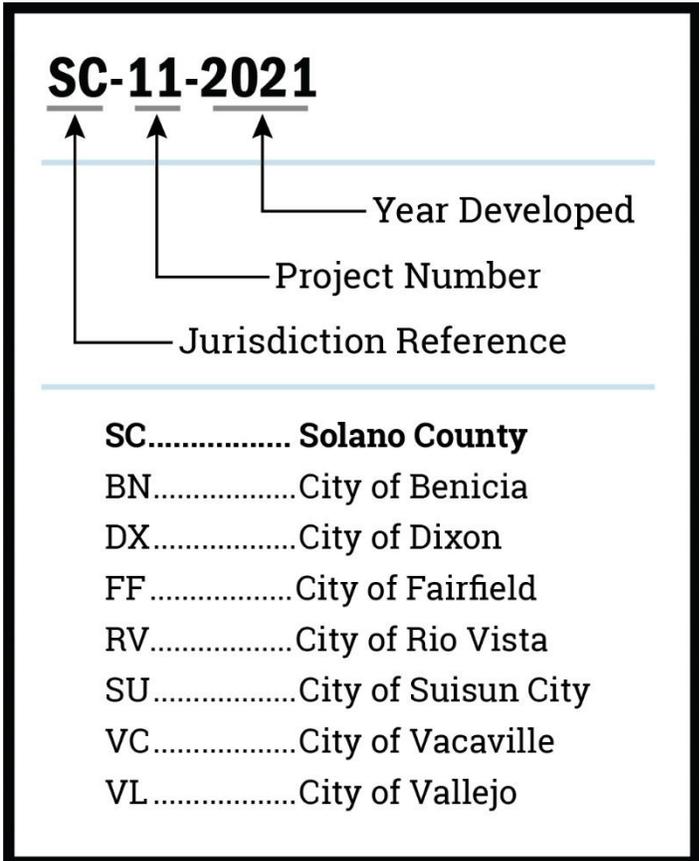


Figure 1-16: Mitigation Action Key

Table 1-14: City of Fairfield Mitigation Actions

Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Goal(s)	Related Problem Statements
ma-AH-FF-137	All Hazard	ES - Emergency Services	Pending	2021	City of Fairfield	Develop an assessment plan to determine railway points of vulnerability to more accurately predict areas of which would be impacted most during railway damage events.	Fire Department	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	1-3 Years	N/A	EMPG , Internal Funding	Medium	Goal 2: Infrastructure , Goal 4: Resilience	ps-AH-FF-136
ma-AH-FF-193	All Hazard	ES - Emergency Services	Pending	2011	City of Fairfield	Designate and outfit Back-Up Emergency Operations Center	Fire Department	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , EMPG , Internal Funding	High	Goal 4: Resilience	ps-EW-FF-139, ps-EW-FF-140
ma-EQ-FF-144	Earthquake	SP - Structural Projects	Pending	2021	City of Fairfield	Reinforce local direct fed water systems, tanks, pumps and storage tanks through various protection activities.	City Public Works	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , FMA , Internal Funding	High	Goal 2: Infrastructure	ps-EQ-FF-145
ma-EQ-FF-145	Earthquake	SP - Structural Projects	Pending	2021	City of Fairfield	Retrofit City-owned critical facilities and buildings.	City Public Works	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , Internal Funding	High	Goal 2: Infrastructure	ps-EQ-FF-146
ma-EQ-FF-183	Earthquake	ES - Emergency Services	Pending	2021	City of Fairfield	Develop a run book for buildings containing hazardous materials, including hazardous material locations and site map.	Fire Department; Police Department	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	1-3 Years	N/A	EMPG , Internal Funding	High	Goal 2: Infrastructure , Goal 3: Environment	ps-EQ-FF-148, ps-EQ-FF-147

Mitigation No.	Hazard Type	Mitigation Type	Status	Year	Primary Agency	Title/Description	Responsible Party	Estimated Cost	Estimated Benefit	Time Frame	HMA Activity Type	Potential Grant Source	Priority	Related Goal(s)	Related Problem Statements
ma-EW-FF-139	Extreme Weather	PRV - Prevention	Pending	2021	City of Fairfield	Implement a tree removal program for trees that are at a high risk to snapping in wind events around City facilities and infrastructure.	Fire Department	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	N/A	Internal Funding	Medium	Goal 1: People , Goal 2: Infrastructure	ps-EW-FF-139
ma-EW-FF-140	Extreme Weather	ES - Emergency Services	Pending	2021	City of Fairfield	Install backup power generators to support operation of critical facilities, including water and wastewater systems, emergency services, and cooling and heating centers.	Fire Department; Police Department	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	Project	HMGP / BRIC , EMPG , Internal Funding	Medium	Goal 1: People , Goal 2: Infrastructure , Goal 4: Resilience	ps-EW-FF-140
ma-FL-FF-138	Flood	SP - Structural Projects	Pending	2021	City of Fairfield	Reinforce local ramps, bridges, and roads from flooding, including elevating road(s) and installing culverts beneath roads or building a higher bridge across areas that experiences regular flooding.	City Public Works	Medium - The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.	High - Project will provide an immediate reduction of risk exposure for life and property.	3-5 Years	Project	HMGP / BRIC , FMA , Internal Funding	Medium	Goal 2: Infrastructure	ps-FL-FF-138, ps-EW-FF-141
ma-FL-FF-181	Flood/ Climate Change	PRV - Prevention	Pending	2021	City of Fairfield	Develop an annual drainage maintenance plan including assessing high water marks to assess water depth and settling locations. Including in the plan the clearing of inlets annually (or more often as necessary) prior to monsoon season heavy rain events which are worsening due to climate change.	City Public Works	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	N/A	FMA , EMPG , Internal Funding	Medium	Goal 2: Infrastructure , Goal 4: Resilience	ps-FL-FF-137
ma-WF-FF-141	Wildfire	PRV - Prevention	Ongoing	2021	City of Fairfield	Develop a community wildfire protection plan (CWPP) that identifies and prioritizes areas for hazard fuel reduction treatments and recommend the types of methods of treatments.	Fire Department	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will not provide an immediate reduction in the risk exposure for property.	1-3 Years	Planning	HMGP / BRIC , FP&S , Internal Funding	High	Goal 4: Resilience	ps-WF-FF-142
ma-WF-FF-142	Wildfire	PRV - Prevention	Ongoing	2021	City of Fairfield	Develop a wildfire education program in collaboration with local fire entities to conduct a public outreach and education campaign to encourage homeowners to mitigate their properties and vegetation accumulation around their homes.	Fire Department	Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.	High - Project will provide an immediate reduction of risk exposure for life and property.	1-3 Years	5%	FP&S , Internal Funding	High	Goal 4: Resilience	ps-WF-FF-143, ps-WF-FF-144