

Orange County, CA

Risk-assessment baseline packet

Unit **County area 06059** Release **2026-10** As of **2026-09-28** Storm Events data through **2026-06-30**

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A starting point for the plan's risk assessment (FEMA Local Mitigation Plan Review Tool, Element B). It does not replace local data or FEMA review. Section headings say which FEMA review item each table supports; whether an item is satisfied is decided by the plan and its reviewers.

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Plan clock

Status	Approved, expires 2026-12-26	Plan	Orange County (FEMA plan 107719)
Approved	2021-12-27	Expires	2026-12-26
As of	2026-09-28	Days	89 days to expiry
Update underway	none in FEMA's plan tracker		

What changed since your last plan (approved 2021-12-27)

New federal declarations	FM-5439-CA, EM-3591-CA, EM-3592-CA, EM-3646-CA (non-natural, not counted) (4 declaration rows; 3 counted incidents)	Storm Events records since approval	125 (data through 2026-06-30)
Repetitive loss now	FMA RL 10, SRL 11 (44 CFR 77.2); any definition: 103	Repeat-flood change	First release: no prior release to compare.

SOURCES: FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API); FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API); NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>; FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)

Plan status for every jurisdiction listed in this county: 56 rows, in the section "Plan clock: Plan status for every jurisdiction listed in this county" after these cover pages.

State plan status and tribal plans in this state: see the state page.

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Plan clock

Plan status for every jurisdiction listed in this county

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Update underway	Notes
Orange County	County	Approved, expires 2026-12-26	Orange County (FEMA plan 107719)	2021-12-27	2026-12-26	89		
Aliso Viejo city	City	Approved, expires 2029-07-17	Aliso Viejo, City of (FEMA plan 109776)	2024-07-18	2029-07-17	1,023		
Anaheim city	City	Approved, expires 2027-09-05	Anaheim, City of (FEMA plan 108316)	2022-09-06	2027-09-05	342		
Brea city	City	Approved, expires 2029-10-29	Brea, City of (FEMA plan 110113)	2024-10-30	2029-10-29	1,127		
Buena Park city	City	Approved, expires 2027-12-19	Buena Park, City of (FEMA plan 108548)	2022-12-20	2027-12-19	447		
Costa Mesa city	City	Approved, expires 2028-04-17	Costa Mesa, City of (FEMA plan 108776)	2023-04-18	2028-04-17	567		
Dana Point city	City	Approved, expires 2030-02-04	Dana Point, City of (FEMA plan 110327)	2025-02-05	2030-02-04	1,225		
Fountain Valley city	City	Approved, expires 2030-11-09	Fountain Valley, City of (FEMA plan 111077)	2025-11-10	2030-11-09	1,503		
Fullerton city	City	Approved, expires 2031-07-08	Fullerton, City of (FEMA plan 111785)	2026-07-09	2031-07-08	1,744		
Garden Grove city	City	Expired on 2025-09-17	Garden Grove, City of (FEMA plan 106425)	2020-09-18	2025-09-17	-376		
Huntington Beach city	City	Approved, expires 2028-01-13	Huntington Beach, City of (FEMA plan 108619)	2023-01-14	2028-01-13	472		
Irvine city	City	No approved plan on record. Approvable pending adoption, not yet eligible	none	none	none		FEMA tracker shows a plan approvable pending adoption	Not yet eligible: adopt the approved plan.
La Habra city	City	Expired on 2025-04-13	La Habra, City of (FEMA plan 106180)	2020-04-14	2025-04-13	-533		
La Palma city	City	Expired on 2025-04-16	La Palma, City of (FEMA plan 106229)	2020-04-17	2025-04-16	-530		
Laguna Beach city	City	Approved, expires 2028-12-21	Laguna Beach, City of (FEMA plan 109423)	2023-12-22	2028-12-21	815		
Laguna Hills city	City	Approved, expires 2030-04-14	Laguna Hills, City of (FEMA plan 110334)	2025-04-15	2030-04-14	1,294		
Laguna Niguel city	City	Approved, expires 2029-01-22	Laguna Niguel, City of (FEMA plan 108847)	2024-01-22	2029-01-22	847		
Laguna Woods city	City	Expired on 2018-05-27	Laguna Woods, City of (FEMA plan 81270)	2013-05-27	2018-05-27	-3,046		
Lake Forest city	City	Approved, expires 2029-09-05	Lake Forest, City of (FEMA plan 109899)	2024-09-06	2029-09-05	1,073		
Mission Viejo city	City	Approved, expires 2030-04-14	Mission Viejo, City of (FEMA plan 109926)	2025-04-15	2030-04-14	1,294		
Newport Beach city	City	Expired on 2021-09-26	Newport Beach, City of (FEMA plan 102049)	2016-09-26	2021-09-26	-1,828		
Orange city	City	Approved, expires 2031-05-06	Orange, City of (FEMA plan 111787)	2026-05-07	2031-05-06	1,681		
Placentia city	City	Approved, expires 2029-07-17	Placentia, City of (FEMA plan 109772)	2024-07-18	2029-07-17	1,023		

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Update underway	Notes
Rancho Santa Margarita city	City	Approved, expires 2030-07-15	Rancho Santa Margarita, City of (FEMA plan 110553)	2025-07-16	2030-07-15	1,386		
San Clemente city	City	Approved, expires 2030-04-14	San Clemente, City of (FEMA plan 110458)	2025-04-15	2030-04-14	1,294		
San Juan Capistrano city	City	Expired on 2025-04-22	San Juan Capistrano, City of (FEMA plan 106331)	2020-04-23	2025-04-22	-524		
Santa Ana city	City	Approved, expires 2028-02-06	Santa Ana, City of (FEMA plan 108208)	2023-02-07	2028-02-06	496		
Seal Beach city	City	Approved, expires 2030-11-16	Seal Beach, City of (FEMA plan 111135)	2025-11-17	2030-11-16	1,510		
Stanton city	City	Approved, expires 2028-04-17	Stanton, City of (FEMA plan 108608)	2023-04-18	2028-04-17	567		
Tustin city	City	Expired on 2024-11-06	Tustin, City of (FEMA plan 105774)	2019-11-07	2024-11-06	-691		
Villa Park city	City	Expired on 2026-07-13	Villa Park, City of (FEMA plan 107223)	2021-07-14	2026-07-13	-77		
Westminster city	City	Expired on 2021-05-13	Westminster, City of (FEMA plan 102262)	2016-05-13	2021-05-13	-1,964		
Yorba Linda city	City	Approved, expires 2028-10-22	Yorba Linda, City of (FEMA plan 109252)	2023-10-23	2028-10-22	755		
Name not given in FEMA data (ID R09_202794)	School/School District	Expired on 2010-07-26	Saddleback Valley Unified School District (FEMA plan 81413)	2005-07-26	2010-07-26	-5,908		
Coast Community College District	College/University	Approved, expires 2027-05-19	Coast Community College District (FEMA plan 107939)	2022-05-20	2027-05-19	233		
Costa Mesa Sanitary District	Water/Sewer Authority	Approved, expires 2030-04-14	Orange County, Municipal Water District of (FEMA plan 110682)	2025-04-15	2030-04-14	1,294		member approved 2025-05-14
East Orange County Water District	Water/Sewer Authority	Approved, expires 2031-02-10	East Orange County Water District (FEMA plan 111579)	2026-02-11	2031-02-10	1,596		
El Toro Water District	Water/Sewer Authority	Approved, expires 2030-04-14	Orange County, Municipal Water District of (FEMA plan 110682)	2025-04-15	2030-04-14	1,294		member approved 2025-05-14
Irvine Ranch Water District	Water/Sewer Authority	Approved, expires 2030-04-14	Orange County, Municipal Water District of (FEMA plan 110682)	2025-04-15	2030-04-14	1,294		member approved 2025-05-14
Laguna Beach County Water District	Water/Sewer Authority	Approved, expires 2030-04-14	Orange County, Municipal Water District of (FEMA plan 110682)	2025-04-15	2030-04-14	1,294		member approved 2025-06-02
Mesa Consolidated Water District	Water/Sewer Authority	Approved, expires 2030-04-14	Orange County, Municipal Water District of (FEMA plan 110682)	2025-04-15	2030-04-14	1,294		
Midway City Sanitary District	Water/Sewer Authority	Approved, expires 2030-10-21	Midway City Sanitary District (FEMA plan 111078)	2025-10-22	2030-10-21	1,484		
Moulton Niguel Water District	Water/Sewer Authority	Approved, expires 2030-04-14	Orange County, Municipal Water District of (FEMA plan 110682)	2025-04-15	2030-04-14	1,294		member approved 2025-05-27
Municipal Water District of Orange County	Water/Sewer Authority	Approved, expires 2030-04-14	Orange County, Municipal Water District of (FEMA plan 110682)	2025-04-15	2030-04-14	1,294		
Orange County Fire Authority	Fire/EMS District	Approved, expires 2026-12-26	Orange County (FEMA plan 107719)	2021-12-27	2026-12-26	89		
Orange County Sanitation District	Water/Sewer Authority	Approved, expires 2030-04-14	Orange County, Municipal Water District of (FEMA plan 110682)	2025-04-15	2030-04-14	1,294		member approved 2025-07-28

Jurisdiction	Type	Status	Plan	Approved	Expires	Days to expiry <i>negative = days since expiry</i>	Update underway	Notes
Orange County Transportation Authority	Transit/Airport	Approved, expires 2027-10-26	Orange County Transportation Authority (FEMA plan 108228)	2022-10-27	2027-10-26	393		
Orange County Water District	Water/Sewer Authority	Approved, expires 2030-04-14	Orange County, Municipal Water District of (FEMA plan 110682)	2025-04-15	2030-04-14	1,294		member approved 2025-09-15
Rancho Santiago Community College District	College/University	Expired on 2022-11-14	Rancho Santiago Community College District (FEMA plan 102698)	2017-11-15	2022-11-14	-1,414		
Santa Margarita Water District	Water/Sewer Authority	Approved, expires 2030-04-14	Orange County, Municipal Water District of (FEMA plan 110682)	2025-04-15	2030-04-14	1,294		member approved 2025-09-05
Serrano Water District	Water/Sewer Authority	Approved, expires 2030-04-14	Orange County, Municipal Water District of (FEMA plan 110682)	2025-04-15	2030-04-14	1,294		member approved 2025-06-02
South Coast Water District	Water/Sewer Authority	Approved, expires 2030-04-14	Orange County, Municipal Water District of (FEMA plan 110682)	2025-04-15	2030-04-14	1,294		member approved 2025-09-15
South Orange County Wastewater Authority	Water/Sewer Authority	Approved, expires 2030-04-14	Orange County, Municipal Water District of (FEMA plan 110682)	2025-04-15	2030-04-14	1,294		member approved 2025-05-14
Southern Orange County Community College District	College/University	Approved, expires 2027-09-13	South Orange County Community College District (FEMA plan 108217)	2022-09-14	2027-09-13	350		
Trabuco Canyon Water District	Water/Sewer Authority	Approved, expires 2030-04-14	Orange County, Municipal Water District of (FEMA plan 110682)	2025-04-15	2030-04-14	1,294		member approved 2025-05-27
Yorba Linda Water District	Water/Sewer Authority	Approved, expires 2030-04-14	Orange County, Municipal Water District of (FEMA plan 110682)	2025-04-15	2030-04-14	1,294		member approved 2025-06-02

SOURCEFEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

Supports B1-a: hazards

Hazards NRI does not cover: check locally

- dam failure (incl. upstream dams)
- levee failure
- flash flood as its own subtype
- ice jams
- debris flows
- erosion (riverine and coastal)
- land subsidence and sinkholes
- expansive soils

The 18 National Risk Index hazards, ranked by expected annual loss (EAL)

Rank by EAL	Hazard	NRI risk rating	EAL rating	EAL buildings modeled dollars per year	EAL agriculture modeled dollars per year	EAL population equivalence statistical value of life and injury, \$13.7M per life, not property damage	EAL total (see note) modeled dollars per year	Storm Events records since 1996 count	Evidence for an omission <i>NRI Not Applicable, no declaration and no Storm Events record since 1996</i>	Storm Events coverage note
1	Earthquake	Very High	Very High	\$706,143,269		\$309,194,322	\$1,015,337,591			Not in Storm Events. Storm Events coverage of this hazard is limited; absence is not evidence of low risk.
2	Inland Flooding	Very High	Very High	\$818,458,922	\$42,587	\$1,429,482	\$819,930,991	138		
3	Wildfire	Relatively High	Relatively High	\$54,812,095	\$3,585	\$2,769,945	\$57,585,624	40		
4	Heat Wave	Relatively High	Relatively High	\$5,894	\$6,845	\$11,014,018	\$11,026,757	51		
5	Coastal Flooding	Relatively High	Relatively High	\$8,410,595		\$2,542	\$8,413,133	14		
6	Tornado	Relatively Moderate	Relatively Moderate	\$3,429,754	\$610	\$1,917,996	\$5,348,360	7		
7	Landslide	Relatively High	Relatively High	\$942,120		\$3,237,130	\$4,179,250	13		
8	Tsunami	Relatively Low	Relatively Low	\$2,529,600		\$0	\$2,529,600	3		
9	Hail	Relatively Moderate	Relatively Moderate	\$900,264	\$441	\$36,678	\$937,384	11		
10	Strong Wind	Relatively Moderate	Relatively Moderate	\$339,316	\$1,650	\$311,609	\$652,575	255		Includes 195 High Wind records and 28 Strong Wind records, event types the NRI definition of this hazard leaves out.
11	Lightning	Relatively Moderate	Relatively Moderate	\$5,801		\$482,869	\$488,671	4		
12	Drought	Relatively Low	Relatively Low		\$36,627		\$36,627	26		
13	Winter Weather	Very Low	Very Low	\$2	under \$1	\$131	\$133	10		
14	Avalanche	Very Low	Very Low	\$2		\$14	\$16	0		No recorded events in Storm Events since 1996 (data through 2026-06-30).
15	Cold Wave	No Rating	No Expected Annual Losses	\$0	\$0	\$0	\$0	2		Includes 2 Frost/Freeze records, event types the NRI definition of this hazard leaves out.
16	Hurricane	No Rating	No Expected Annual Losses	\$0	\$0	\$0	\$0	1		
	Ice Storm	Not Applicable	Not Applicable					0	NRI rates ice storm Not Applicable for this county, and no federal declaration for this county names it.	No recorded events in Storm Events since 1996 (data through 2026-06-30).

Rank by EAL	Hazard	NRI risk rating	EAL rating	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	EAL population equivalence <i>statistical value of life and injury, \$13.7M per life, not property damage</i>	EAL total (see note) <i>modeled dollars per year</i>	Storm Events records since 1996 <i>count</i>	Evidence for an omission <i>NRI Not Applicable, no declaration and no Storm Events record since 1996</i>	Storm Events coverage note
	Volcanic Activity	Not Applicable	Not Applicable					0	NRI rates volcanic activity Not Applicable for this county, and no federal declaration for this county names it.	No recorded events in Storm Events since 1996 (data through 2026-06-30). Storm Events coverage of this hazard is limited; absence is not evidence of low risk.

Total = buildings + agriculture + population equivalence; FEMA values each expected death (or 10 injuries) at \$13.7 million (2024 dollars).

SOURCES
FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip (download, 25 MB), https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip (download, 635 MB)
NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

Check your state hazard mitigation plan's hazard list for this county; explain any hazard you drop.

Supports B1-b: location

Where each hazard occurs

Hazard	Location	Census tracts rated <i>rated of all tracts</i>
Avalanche	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	3 of 613
Coastal Flooding	The FEMA Flood Insurance Rate Map (FIRM) is the required location source for flooding. See the FEMA Flood Map Service Center (https://msc.fema.gov) for this county.	90 of 613
Cold Wave	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	0 of 613
Drought	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	43 of 613
Earthquake	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	613 of 613
Hail	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	613 of 613
Heat Wave	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	613 of 613
Hurricane	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	0 of 613
Ice Storm	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	0 of 613
Inland Flooding	The FEMA Flood Insurance Rate Map (FIRM) is the required location source for flooding. See the FEMA Flood Map Service Center (https://msc.fema.gov) for this county.	613 of 613
Landslide	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	574 of 613
Lightning	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	612 of 613
Strong Wind	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	613 of 613
Tornado	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	613 of 613
Tsunami	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	55 of 613
Volcanic Activity	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	0 of 613
Wildfire	Census tract rating counts from the National Risk Index tract table (see B1-f). Tract maps and place names are not in this packet.	260 of 613
Winter Weather	Affects the whole planning area; national data do not distinguish locations within the county. Confirm locally.	23 of 613

SOURCE

FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip (download, 25 MB), https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip (download, 635 MB)

Supports B1-c: extent

Extent: scale, observed range and worst recorded event per hazard

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
Avalanche	none (count and damage)	0					Physical measure: in event narratives only; local data required.
Coastal Flood, Storm Surge/Tide	none in data (FIRM for depth)	14, 1998 to 2026 (12 zone-level)		Storm Surge/Tide, 2001-01-09, \$240,000 property; crops not reported (2001 dollars)		Event records naming member places: Newport Beach city (1 record), Seal Beach city (1 record). Zone-level records (12) apply countywide.	Flood depth: see the FEMA Flood Insurance Rate Map.
Cold/Wind Chill, Extreme Cold/Wind Chill	wind chill	0					Wind chill: in event narratives only; local data required.
Frost/Freeze (outside NRI Cold Wave definition)	crop damage	2, 2004 to 2022 (2 zone-level)		No crop damage reported in 2 records.		Zone-level records: applies countywide; national data do not locate these events within the county.	Temperature: in event narratives only; local data required.
Drought	US Drought Monitor D-scale	26, 2007 to 2009 (26 zone-level)	167 days to 365 days (median 245 days); 3 with a recorded value	365 days (12 months), 2009-01-01 to 2009-12-31, a run of 12 consecutive Storm Events drought records, zone-level		Zone-level records: applies countywide; national data do not locate these events within the county.	Storm Events enters a drought at D2 or worse east of the Rockies and D3 or worse from the Rockies west (NWS Instruction 10-1605); NRI drought counts D3 and D4 only.
Earthquake	Modified Mercalli (local data)	0					No Storm Events record; local data required (e.g., USGS).
Hail	hail size (inches)	13, 1979 to 2019	0.25 in to 2 in (median 0.75 in); 13 with a recorded value	2 in hail, 1979-01-31	Hail, 2000-03-06, \$75,000 property; crops not reported (2000 dollars)	Event records naming member places: Yorba Linda city (2 records), Anaheim city (1 record), Costa Mesa city (1 record), Garden Grove city (1 record), Huntington Beach city (1 record), Laguna Beach city (1 record), Laguna Hills city (1 record), San Clemente city (1 record), Tustin city (1 record).	
Excessive Heat, Heat	heat index (narratives)	51, 1997 to 2026 (51 zone-level)	1 day to 12 days (median 3 days); 35 with a recorded value	12 consecutive days, 2023-07-11 to 2023-07-22, zone-level		Zone-level records: applies countywide; national data do not locate these events within the county.	Heat index: in event narratives only; local data required. Heat records from November to March (unseasonable warmth, not a heat wave) are counted but not used for the longest run.

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
Hurricane, Tropical Storm, Tropical Depression	Saffir-Simpson	1, 2023 to 2023 (1 zone- level)		Strongest recorded (records with damage, a wind speed or direct casualties first, then storm type, category and wind): Tropical Storm record, 2023-08-20 to 2023-08-21, \$0 property; \$0 crops, reported for the zone (2023 dollars); NWS zone CAZ057 (SANTA ANA MOUNTAINS AND FOOTHILLS), zone-level: may include parts of neighboring counties		Zone-level records: applies countywide; national data do not locate these events within the county.	Storm Events files every zone of a storm's episode under the storm's event type and category, so a Hurricane (Typhoon) record, especially an inland or remnant one, does not by itself mean hurricane-force winds here; read the damage and wind columns.
Ice Storm	Sperry-Piltz (local data)	0					Ice thickness: in event narratives only; local data required.
Flash Flood, Flood, Lakeshore Flood	damage and flood days (FIRM for depth)	138, 1997 to 2026		Flood, 2010-12-19, \$36,000,000 property; \$0 crops (2010 dollars)		Event records naming member places: San Clemente city (10 records), Huntington Beach city (9 records), Seal Beach city (9 records), Irvine city (7 records), Yorba Linda city (7 records), Santa Ana city (6 records), Garden Grove city (4 records), Laguna Beach city (4 records), Placentia city (4 records), Tustin city (4 records); and 11 more member places (see the XLSX file).	Flood depth: see the FEMA Flood Insurance Rate Map. Storm Events damage can be \$0 or blank even for a major flood, so the worst record here may not be the worst flood; compare FEMA Public Assistance by declaration in B1-d.
Debris Flow	none (count and damage)	13, 2003 to 2023 (3 zone- level)		Debris Flow, 2005-02-20, \$300,000 property; crops not reported, reported for the zone (2005 dollars), 1 direct death (reported for the zone); NWS zone CAZ057 (NE ORANGE), zone-level: may include parts of neighboring counties		Event records naming member places: Mission Viejo city (1 record), San Clemente city (1 record). Zone-level records (3) apply countywide.	Physical measure: in event narratives only; local data required.
Lightning	annualized frequency (the measure FEMA's Local Mitigation Planning Handbook names)	4, 1998 to 2016		Lightning, 2000-03-03, \$50,000 property; crops not reported (2000 dollars)		Event records naming member places: Irvine city (1 record), Newport Beach city (1 record), San Clemente city (1 record).	Storm Events lists lightning with damage or casualties; physical measure in event narratives only; local data required.

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
High Wind and Strong Wind (outside NRI Strong Wind definition)	wind speed (kt and mph)	223, 1996 to 2026 (223 zone-level)	26 kt (30 mph) to 104 kt (120 mph) (median 60 kt (69 mph)); 223 with a recorded value	104 kt (120 mph), measurement type not recorded, High Wind, 1999-12-03; NWS zone CAZ057 (SANTA ANA MOUNTAINS AND FOOTHILLS), zone-level: may include parts of neighboring counties	Strong Wind, 2017-02-17, \$200,000 property; \$0 crops, reported for the zone (2017 dollars)	Zone-level records: applies countywide; national data do not locate these events within the county.	
Thunderstorm Wind	wind speed (kt and mph)	38, 1978 to 2026	26 kt (30 mph) to 81 kt (93 mph) (median 52 kt (60 mph)); 35 with a recorded value	81 kt (93 mph) measured gust, Thunderstorm Wind, 2010-01-19	Thunderstorm Wind, 1998-12-06, \$450,000 property; crops not reported (1998 dollars)	Event records naming member places: Laguna Beach city (3 records), Newport Beach city (3 records), Costa Mesa city (2 records), Huntington Beach city (2 records), Orange city (2 records), San Clemente city (2 records), Brea city (1 record), Buena Park city (1 record), Fullerton city (1 record), Garden Grove city (1 record); and 6 more member places (see the XLSX file).	
Tornado	Enhanced Fujita (F before Feb 2007)	31, 1958 to 2010	F/EF0 to F/EF3 (median F/EF0); 28 with a recorded value	F3 tornado, 1978-02-09, 2 mi path length (records before 1996 may include the whole path; rating and listing come from the county where the tornado began), 67 yd wide, \$2,500,000 property; crops not recorded (1978 dollars), 6 direct injuries	Tornado, 1993-01-17, \$5,000,000 property; crops not recorded (1993 dollars)	Event records naming member places: Huntington Beach city (3 records), Newport Beach city (2 records), Brea city (1 record), Irvine city (1 record), Lake Forest city (1 record), Orange city (1 record), Santa Ana city (1 record), Seal Beach city (1 record), Tustin city (1 record).	From 1996 on, tornado records are per-county segments and length is the path length within this county (NWS Instruction 10-1605); records before 1996 may give the whole path length, including the path outside this county, and before 1996 a tornado is listed once, under the county where it began, with the whole path's rating; counties farther along the path may not list it. Length is not used to rank tornadoes.
Tsunami	none (count and damage)	3, 2015 to 2025 (3 zone-level)		No damage reported in 3 records.		Zone-level records: applies countywide; national data do not locate these events within the county.	Physical measure: in event narratives only; local data required.
Volcanic Ash, Volcanic Ashfall	Volcanic Explosivity Index (local data)	0					Physical measure: in event narratives only; local data required.
Wildfire	acres burned (local data)	40, 1996 to 2024 (20 zone-level)		Wildfire, 2022-05-11, \$60,000,000 property; \$0 crops, reported for the zone (2022 dollars); NWS zone CAZ552 (ORANGE COUNTY COASTAL), zone-level: may include parts of neighboring counties		Event records naming member places: Mission Viejo city (4 records), Lake Forest city (2 records), San Clemente city (2 records), Yorba Linda city (2 records), Anaheim city (1 record), Costa Mesa city (1 record), Garden Grove city (1 record), Laguna Beach city (1 record). Zone-level records (20) apply countywide.	Acres burned: in event narratives only; local data required.

Hazard	Scale	Records <i>count, years</i>	Observed range	Worst recorded event	Most damaging (when different)	How it applies to members	Note
Winter Storm, Heavy Snow, Blizzard, Lake-Effect Snow, Winter Weather, Sleet	none in data (snowfall local)	10, 1997 to 2023 (10 zone-level)		Heavy Snow, 2019-02-21, \$30,000 property; \$0 crops, reported for the zone (2019 dollars); NWS zone CAZ057 (SANTA ANA MOUNTAINS AND FOOTHILLS), zone-level: may include parts of neighboring counties		Zone-level records: applies countywide; national data do not locate these events within the county.	Snow depth: in event narratives only; local data required.

Where a hazard names more than 10 member places, the table lists the 10 with the most records; every place is in the XLSX file, sheet "B1-c Extent".

Storm Events records are more complete after 1996; before 1996 only Tornado (from 1950), Hail and Thunderstorm Wind (from 1955) exist. Zone-level records are placed with NWS zone-county files, which exist from 2020 on; an earlier record is placed by its zone number in the nearest later file only when its zone name matches that file, records from zones NWS renumbered are placed by name or left out, and a record whose zone is in no known file is left out of every count, so counts before 2020 can be low. Some current zones are also missing from the NWS files, so recent counts can be low too.

Dollars are nominal (as reported), labeled with the year; not adjusted for inflation.

SOURCES

NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>
NOAA National Weather Service, NWS county-public forecast zones correlation file, version bp03mr20 to bp16ap26 (11 files; newest bp16ap26), pulled 2026-09-28, <https://www.weather.gov/gis/ZoneCounty>

Supports B1-d: previous occurrences

Declaration rows 42 Counted incidents 34

Federal disaster declarations for this county

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance <i>federal share obligated, nominal dollars</i>	Flags	Notes
2026-05-25	2026-05-21	EM-3646-CA	Emergency	CHEMICAL RELEASE	Non-natural, not counted	none found	new since last plan; within last 5 years	
2023-03-10	2023-03-09	EM-3592-CA	Emergency	SEVERE WINTER STORMS, FLOODING, LANDSLIDES, AND MUDSLIDES	Inland Flooding (primary); also designated: Landslide, Winter Weather	none found	new since last plan; within last 5 years	
2023-01-09	2023-01-08	EM-3591-CA	Emergency	SEVERE WINTER STORMS, FLOODING, AND MUDSLIDES	Inland Flooding (primary); also designated: Landslide, Winter Weather	none found	new since last plan; within last 5 years	
2022-05-12	2022-05-11	FM-5439-CA	Fire management	COASTAL FIRE	Wildfire	none found	new since last plan; within last 5 years	
2020-12-03	2020-12-03	FM-5383-CA	Fire management	BOND FIRE	Wildfire	none found		
2020-10-26	2020-10-26	FM-5381-CA	Fire management	BLUE RIDGE FIRE	Wildfire	none found		
2020-10-26	2020-10-26	FM-5380-CA	Fire management	SILVERADO FIRE	Wildfire	none found		

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance		Flags	Notes
						<i>federal share obligated,</i>	<i>nominal dollars</i>		
2020-03-22	2020-01-20	DR-4482-CA	Major disaster	COVID-19 PANDEMIC	Non-natural, not counted	\$213,521,546.04			
2020-03-13	2020-01-20	EM-3428-CA	Emergency	COVID-19	Non-natural, not counted	none found			same incident as DR-4482
2017-10-10	2017-10-08	DR-4344-CA	Major disaster	WILDFIRES	Wildfire	\$2,685,239.42			
2017-10-09	2017-10-09	FM-5223-CA	Fire management	CANYON 2 FIRE	Wildfire	none found			same incident as DR-4344
2017-09-26	2017-09-25	FM-5213-CA	Fire management	CANYON FIRE	Wildfire	none found			
2017-03-16	2017-01-18	DR-4305-CA	Major disaster	SEVERE WINTER STORMS, FLOODING, AND MUDSLIDES	Inland Flooding (primary); also designated: Landslide, Winter Weather	\$4,108,333.72			
2011-01-26	2010-12-17	DR-1952-CA	Major disaster	SEVERE WINTER STORMS, FLOODING, AND DEBRIS AND MUD FLOWS	Inland Flooding (primary); also designated: Winter Weather	\$11,846,048.30			
2008-11-18	2008-11-13	DR-1810-CA	Major disaster	WILDFIRES	Wildfire	\$2,146,095.15			
2008-11-15	2008-11-15	FM-2792-CA	Fire management	FREEWAY FIRE COMPLEX	Wildfire	none found			same incident as DR-1810
2007-10-24	2007-10-21	DR-1731-CA	Major disaster	WILDFIRES, FLOODING, MUD FLOWS, AND DEBRIS FLOWS	Wildfire	\$2,547,928.83			
2007-10-23	2007-10-21	EM-3279-CA	Emergency	WILDFIRES	Wildfire	none found			same incident as DR-1731
2007-10-22	2007-10-21	FM-2737-CA	Fire management	SANTIAGO FIRE	Wildfire	none found			same incident as DR-1731
2007-03-11	2007-03-11	FM-2683-CA	Fire management	241 FIRE	Wildfire	none found			
2006-02-06	2006-02-06	FM-2630-CA	Fire management	SIERRA FIRE	Wildfire	none found			
2005-09-13	2005-08-29	EM-3248-CA	Emergency	HURRICANE KATRINA EVACUATION	Hurricane: evacuation support, not a local hazard event; not counted	\$1,214.70			
2005-04-14	2005-02-16	DR-1585-CA	Major disaster	SEVERE STORMS, FLOODING, LANDSLIDES, AND MUD AND DEBRIS FLOWS	Inland Flooding; Landslide	\$30,740,786.15			
2005-02-04	2004-12-27	DR-1577-CA	Major disaster	SEVERE STORMS, FLOODING, DEBRIS FLOWS, AND MUDSLIDES	Inland Flooding; Landslide	\$16,064,610.35			
2002-05-14	2002-05-13	FM-2405-CA	Fire management	ANTONIO FIRE	Wildfire	none found			
1998-02-09	1998-02-02	DR-1203-CA	Major disaster	SEVERE WINTER STORMS AND FLOODING	Inland Flooding; Winter Weather	none found			
1996-10-23	1996-10-21	EM-3120-CA	Emergency	SEVERE FIRESTORMS	Wildfire	none found			
1995-03-12	1995-02-13	DR-1046-CA	Major disaster	SEVERE WINTER STORMS, FLOODING LANDSLIDES, MUD FLOW	Inland Flooding; Landslide; Winter Weather	none found			

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	County Public Assistance	Flags	Notes
						<i>federal share obligated, nominal dollars</i>		
1995-01-10	1995-01-03	DR-1044-CA	Major disaster	SEVERE WINTER STORMS, FLOODING, LANDSLIDES, MUD FLOWS	Inland Flooding; Landslide; Winter Weather	none found		
1994-01-17	1994-01-17	DR-1008-CA	Major disaster	NORTHRIDGE EARTHQUAKE	Earthquake	none found		
1993-10-28	1993-10-26	DR-1005-CA	Major disaster	FIRES, MUD/LANDSLIDES, FLOODING, SOIL EROSION	Wildfire (primary); also designated: Inland Flooding, Landslide	none found		
1993-02-03	1993-01-05	DR-979-CA	Major disaster	SEVERE WINTER STORM, MUD & LAND SLIDES, & FLOODING	Inland Flooding (primary); also designated: Landslide, Winter Weather	none found		
1992-02-25	1992-02-10	DR-935-CA	Major disaster	RAIN/SNOW/WIND STORMS, FLOODING, MUDSLIDES	Inland Flooding (primary); also designated: Landslide, Strong Wind, Winter Weather	none found		
1988-02-05	1988-01-17	DR-812-CA	Major disaster	SEVERE STORMS, HIGH TIDES & FLOODING	Inland Flooding (primary); also designated: Coastal Flooding	none found		
1987-10-07	1987-10-01	DR-799-CA	Major disaster	EARTHQUAKE & AFTERSHOCKS	Earthquake	PA not declared for this county		
1983-02-09	1983-01-21	DR-677-CA	Major disaster	COASTAL STORMS, FLOODS, SLIDES & TORNADOES	Coastal Flooding; Inland Flooding; Landslide; Tornado	none found		
1982-04-24	1982-04-24	DR-657-CA	Major disaster	URBAN FIRE	Wildfire	PA not declared for this county		
1980-11-27	1980-11-27	DR-635-CA	Major disaster	BRUSH & TIMBER FIRES	Wildfire	none found		
1980-02-21	1980-01-08	DR-615-CA	Major disaster	SEVERE STORMS, MUDSLIDES & FLOODING	Inland Flooding (primary); also designated: Landslide	none found		
1978-10-09	1978-10-09	DR-566-CA	Major disaster	LANDSLIDES	Inland Flooding (primary); also designated: Landslide	none found		
1978-02-15	1978-02-15	DR-547-CA	Major disaster	COASTAL STORMS, MUDSLIDES & FLOODING	Coastal Flooding (primary); also designated: Landslide	none found		
1969-01-26	1969-01-26	DR-253-CA	Major disaster	SEVERE STORMS & FLOODING	Inland Flooding	none found		

School districts and special districts in this county: \$25,554,968.15 (included in the county total above). Public Assistance matched by applicant name to the school districts and special districts FEMA lists as plan members in this county. They are not shown as member blocks, so their total is listed here. These dollars are already included in the county PA column of the declarations table (the FEMA record places each applicant in this county); do not add this line to the county total.

County Public Assistance: applicants the FEMA record places in this county, including any state agencies FEMA files there; statewide rows are listed on the state page; federal share obligated, nominal dollars.

Dollars are nominal (as reported), labeled with the year; not adjusted for inflation.

SOURCES

FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)

FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-26T151157Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)

FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

Statewide declarations

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	Flags	Notes
1964-04-01	1964-04-01	DR-169-CA	Major disaster	SEISMIC SEA WAVE	Tsunami		
1963-12-21	1963-12-21	DR-161-CA	Major disaster	FLOOD DUE TO BROKEN DAM	Other, not an NRI hazard; not counted		
1963-02-25	1963-02-25	DR-145-CA	Major disaster	SEVERE STORMS, HEAVY RAINS & FLOODING	Inland Flooding		

Declared	Incident began	FEMA number	Type	Title	Mapped hazard	Flags	Notes
1962-10-24	1962-10-24	DR-138-CA	Major disaster	SEVERE STORMS & FLOODING	Inland Flooding		
1962-03-06	1962-03-06	DR-122-CA	Major disaster	FLOODS	Inland Flooding		
1961-11-16	1961-11-16	DR-119-CA	Major disaster	FIRE (LOS ANGELES COUNTY)	Wildfire		
1958-04-04	1958-04-04	DR-82-CA	Major disaster	HEAVY RAINSTORMS & FLOOD	Inland Flooding		
1956-12-29	1956-12-29	DR-65-CA	Major disaster	FOREST FIRE	Wildfire		
1955-12-23	1955-12-23	DR-47-CA	Major disaster	FLOOD	Inland Flooding		
1954-02-05	1954-02-05	DR-15-CA	Major disaster	FLOOD & EROSION	Inland Flooding		

FEMA recorded these with designated area Statewide and no county. Listed on every county page in the state; not counted with county rows.

5 Fire Management declarations (1977-08-07 to 1988-09-13) FEMA filed as Statewide with no county; each names one local fire. Listed on the state page.

SOURCE

FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)

Public Assistance filed under this county for declarations that do not list it: 1 row, \$249,401.57

FEMA number	Declared	Title	Applicant	PA obligated <i>federal share obligated, nominal dollars</i>
DR-4431-CA	2019-05-01	SEVERE WINTER STORMS, FLOODING, LANDSLIDES, AND MUDSLIDES	Orange County Water District	\$249,401.57

FEMA's Public Assistance summaries file these applicants under this county, but FEMA's declaration rows for these disasters do not designate it (an electric cooperative or district serving several counties, for example). Not in any declaration row above and not counted.

SOURCES

FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-26T151157Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)

FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)

Previous occurrences by hazard, with explicit no-event rows

Hazard	Storm Events records <i>full period</i>	Since plan approval records	During plan review records	Last 5 years records	Declared incidents <i>distinct incidents</i>	Declared since approval <i>distinct incidents</i>	Period	Statement
Avalanche	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Coastal Flooding	14	4	0	4	3	0	1996 to 2026-06-30	
Cold Wave	2	1	0	1	0	0	1996 to 2026-06-30	Includes 2 Frost/Freeze records, event types the NRI definition of this hazard leaves out.
Drought	26	0	0	0	0	0	1996 to 2026-06-30	
Earthquake	0	0	0	0	2	0		No Storm Events record; local data required (e.g., USGS).
Hail	13	0	0	0	0	0	1955 to 2026-06-30	
Heat Wave	51	17	8	19	0	0	1996 to 2026-06-30	
Hurricane	1	1	0	1	0	0	1996 to 2026-06-30	

Hazard	Storm Events records <i>full period</i>	Since plan approval <i>records</i>	During plan review <i>records</i>	Last 5 years <i>records</i>	Declared incidents <i>distinct incidents</i>	Declared since approval <i>distinct incidents</i>	Period	Statement
Ice Storm	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Inland Flooding	138	40	11	46	17	2	1996 to 2026-06-30	
Landslide	13	3	2	3	14	2	1996 to 2026-06-30	
Lightning	4	0	0	0	0	0	1996 to 2026-06-30	
Strong Wind	261	48	11	56	1	0	1955 to 2026-06-30	Includes 195 High Wind records and 28 Strong Wind records, event types the NRI definition of this hazard leaves out.
Tornado	31	0	0	0	1	0	1950 to 2026-06-30	
Tsunami	3	2	0	2	0	0	1996 to 2026-06-30	
Volcanic Activity	0	0	0	0	0	0	1996 to 2026-06-30	No recorded events, 1996 to 2026-06-30, NOAA NCEI Storm Events
Wildfire	40	7	1	7	15	1	1996 to 2026-06-30	
Winter Weather	10	2	0	2	9	2	1996 to 2026-06-30	

SOURCESNOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)NOAA National Weather Service, NWS county-public forecast zones correlation file, version bp03mr20 to bp16ap26 (11 files; newest bp16ap26), pulled 2026-09-28, <https://www.weather.gov/gis/ZoneCounty>**Notable Storm Events records**

Date	Event type	Magnitude or extent	Damage <i>nominal dollars</i>	Direct deaths, injuries <i>indirect not counted</i>	Location	Flags	Why listed
2026-06-09	Storm Surge/ Tide		\$0 property; \$0 crops, reported for the zone (2026 dollars)	1, 0	NWS zone CAZ552 (ORANGE COUNTY COASTAL), zone-level: may include parts of neighboring counties	new since last plan; within last 5 years	deaths or injuries recorded
2023-07-11	Excessive Heat		\$0 property; \$0 crops, reported for the zone (2023 dollars)	0, 0	NWS zone CAZ554 (ORANGE COUNTY INLAND), zone-level: may include parts of neighboring counties	new since last plan; within last 5 years	B1-c worst recorded: Excessive Heat, Heat
2022-05-11	Wildfire		\$60,000,000 property; \$0 crops, reported for the zone (2022 dollars)	0, 0	NWS zone CAZ552 (ORANGE COUNTY COASTAL), zone-level: may include parts of neighboring counties	new since last plan; within last 5 years	B1-c worst recorded: Wildfire

Date	Event type	Magnitude or extent	Damage <i>nominal dollars</i>	Direct deaths, injuries <i>indirect not counted</i>	Location	Flags	Why listed
2010-12-19	Flood		\$36,000,000 property; \$0 crops (2010 dollars)	0, 0	SAN CLEMENTE to SUNSET BEACH		B1-c worst recorded: Flash Flood, Flood, Lakeshore Flood
2010-01-19	Thunderstorm Wind	81 kt (93 mph) measured gust	\$350,000 property; \$0 crops (2010 dollars)	0, 0	COSTA MESA to NEWPORT BEACH		B1-c worst recorded: Thunderstorm Wind
2005-02-20	Debris Flow		\$300,000 property; crops not reported, reported for the zone (2005 dollars)	1, 0	NWS zone CAZ057 (NE ORANGE), zone-level: may include parts of neighboring counties		deaths or injuries recorded
2001-01-09	Storm Surge/Tide		\$240,000 property; crops not reported (2001 dollars)	0, 0	SEAL BEACH		B1-c worst recorded: Coastal Flood, Storm Surge/Tide
2000-03-03	Lightning		\$50,000 property; crops not reported (2000 dollars)	0, 0	NEWPORT BEACH		B1-c worst recorded: Lightning
1999-12-03	High Wind	104 kt (120 mph), measurement type not recorded	\$20,000 property; crops not reported, reported for the zone (1999 dollars)	0, 0	NWS zone CAZ057 (SANTA ANA MOUNTAINS AND FOOTHILLS), zone-level: may include parts of neighboring counties		B1-c worst recorded: High Wind and Strong Wind (outside NRI Strong Wind definition)
1998-02-23	Flash Flood		\$29,700,000 property; \$280,000 crops (1998 dollars)	2, 2	COUNTYWIDE		deaths or injuries recorded
1979-01-31	Hail	2 in	damage not recorded (pre-1996 record)	0, 0	location not recorded		B1-c worst recorded: Hail
1978-02-09	Tornado	F3, 2 mi path length (records before 1996 may include the whole path; rating and listing come from the county where the tornado began), 67 yd wide	\$2,500,000 property; crops not recorded (1978 dollars)	0, 6	location not recorded		B1-c worst recorded: Tornado

The full list is in the XLSX file, sheet "B1-d Storm Events history" (607 rows).

Storm Events records are more complete after 1996; before 1996 only Tornado (from 1950), Hail and Thunderstorm Wind (from 1955) exist. Zone-level records are placed with NWS zone-county files, which exist from 2020 on; an earlier record is placed by its zone number in the nearest later file only when its zone name matches that file, records from zones NWS renumbered are placed by name or left out, and a record whose zone is in no known file is left out of every count, so counts before 2020 can be low. Some current zones are also missing from the NWS files, so recent counts can be low too.

SOURCES

NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>
 NOAA National Weather Service, NWS county-public forecast zones correlation file, version bp03mr20 to bp16ap26 (11 files; newest bp16ap26), pulled 2026-09-28, <https://www.weather.gov/gis/ZoneCounty>
 FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

State-declared emergencies are not in federal data. Add them from your state emergency management agency.

Tribal and special-area declarations in this state are listed on the state page.

Supports B1-e: probability

Probability: FEMA annualized frequency and descriptor per hazard

Hazard	FEMA annualized frequency (modeled) <i>unit per row</i>	Unit	In plain terms	Descriptor	Descriptor basis	NRI events or days in its record period (hail, wind and tornado are area-weighted, so can be fractional)	NRI period	Location	Note
Avalanche	0.01	events per year	about 1 in 100 years	Possible	FEMA annualized frequency (modeled)	0	1994 to 2023 (30 years)	see B1-f	0.01 is NRI's minimum avalanche frequency for a county in an avalanche susceptibility zone; NRI records no avalanche here, so the descriptor reflects the floor, not local events.
Coastal Flooding	2.13	events per year at a location (modeled)	about 2.1 per year at a given location in the county	Highly likely	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	Descriptor from NRI: the rate at a location is 1 or more a year, so the county rate is at least that.
Cold Wave	0	event-days per year	none modeled		event-days in 0 of 30 years, 1996 to 2025 (0%)	0	2005-11-12 to 2024-11-12 (19 years)	countywide	No recorded event-days, 1996 to 2025; descriptor not assigned. Frost/Freeze records are not counted in this descriptor: they record crop freezes, not cold waves.
Drought	62.6	event-days per year	about 62.6 days per year	Likely	event-days in 3 of 30 years, 1996 to 2025 (10%)	2,569	2000 to 2025 (25.25 years; D3 and D4 only)	countywide	NRI gives about 62.6 drought event-days a year here (its annualized frequency over 25.25 years; not its event count divided by the years), but Storm Events has a record in only 3 of 30 years. NRI counts from a different source that records far more events than Storm Events, so this descriptor reads much lower than NRI's frequency; read the two together.
Earthquake	0.0975	annual probability at a location	chance a given location in the county has at least minor-damage shaking in a year: 9.75%			not shown	modeled	see B1-f	Descriptor not assigned: the NRI value is the chance at a location in the county, not how often the hazard affects the county, and Storm Events does not record earthquakes.
Hail	0.104	events per year	about 1 in 10 years	Likely	FEMA annualized frequency (modeled)	4.0 (modeled)	1986 to 2023 (38 years)	countywide	
Heat Wave	7.41	event-days per year	about 7.41 days per year	Likely	event-days in 13 of 30 years, 1996 to 2025 (43.3%)	81.2	2005-11-12 to 2024-11-12 (19 years)	countywide	NRI gives about 7.41 heat wave event-days a year here (its annualized frequency over 19 years; not its event count divided by the years), but Storm Events has a record in only 13 of 30 years. NRI counts from a different source that records far more events than Storm Events, so this descriptor reads much lower than NRI's frequency; read the two together.
Hurricane	0	events per year	none modeled	Unlikely	FEMA annualized frequency (modeled)	0	1851 to 2024 (Atlantic); 1949 to 2024 (Pacific)	see B1-f	NRI counts hurricane and tropical storm tracks passing within storm-force wind range; federal declarations are counted separately in B1-d and need not match.

Hazard	FEMA annualized frequency (modeled) <i>unit per row</i>	Unit	In plain terms	Descriptor	Descriptor basis	NRI events or days in its record period (hail, wind and tornado are area-weighted, so can be fractional)	NRI period	Location	Note
Ice Storm		event-days per year					1946-12-31 to 2014-02-12 (67 years)	countywide	Not Applicable in NRI for this county; no descriptor.
Inland Flooding	2.89	event-days per year	about 2.89 days per year	Likely	event-days in 25 of 30 years, 1996 to 2025 (83.3%)	81	1996 to 2023 (28 years)	see B1-f	
Landslide	17.8	events per year (modeled)	about 17.8 per year	Highly likely	FEMA annualized frequency (modeled)	not shown	modeled	see B1-f	
Lightning	7.43	days per year with a strike	about 7.43 days per year	Highly likely	FEMA annualized frequency (modeled)	not shown	1995 to 2023 (29 years; CONUS)	countywide	
Strong Wind	0.175	events per year	about 1 in 6 years	Likely	FEMA annualized frequency (modeled)	6	1986 to 2023 (38 years)	countywide	
Tornado	0.129	events per year	about 1 in 8 years	Likely	FEMA annualized frequency (modeled)	not shown	1950 to 2023 (EF2+); 1986 to 2023 (EF0-1)	see B1-f	
Tsunami	0.388	annual probability at the most exposed location (used in place of a county value)	chance at the county's most exposed location in a year: 38.8%	Likely	Storm Events records in 3 of 30 years, 1996 to 2025 (10%)	not shown	modeled	see B1-f	Descriptor from Storm Events, not NRI: the NRI value is the chance at a location in the county, not how often the hazard affects the county.
Volcanic Activity		annual probability				not shown	modeled	see B1-f	Not Applicable in NRI for this county; no descriptor.
Wildfire	0.0107	annual probability at a location	chance a given location in the county burns in a year: 1.07%	Likely	Storm Events records in 18 of 30 years, 1996 to 2025 (60%)	not shown	modeled	see B1-f	Descriptor from Storm Events, not NRI: the NRI value is the chance at a location in the county, not how often the hazard affects the county.
Winter Weather	0.201	event-days per year	about 0.201 days per year	Likely	event-days in 7 of 30 years, 1996 to 2025 (23.3%)	3.19	2005-11-12 to 2024-11-12 (19 years)	countywide	

FEMA annualized frequency (modeled) comes from the National Risk Index v1.20 (December 2025). It is not recorded events divided by years, and what it measures depends on the hazard. For most hazards it estimates how often the hazard affects this county each year: it counts events or event-days (drought, heat wave, cold wave, winter weather, ice storm and inland flooding are in days per year; lightning is the number of days per year with a recorded cloud-to-ground strike, from the NOAA Storm Prediction Center daily lightning climatology); it may count events in the surrounding area (hail, strong wind, tornado, hurricane and ice storm use a 49 km grid and buffers) and is averaged over the county's area; and some hazards use a minimum value for places with no recorded event. Earthquake, wildfire and coastal flooding are different: FEMA computes them for each census block and averages them over the county, so the value is the chance (for coastal flooding, the modeled number of floods per year) at a location in the county, which is lower than the chance that the hazard strikes somewhere in the county. Earthquake is the chance of at least minor-damage shaking (U.S. Geological Survey model); wildfire is the chance that a location burns in a large fire (U.S. Forest Service burn probability); coastal flooding comes from FEMA flood zones and NOAA high-tide flooding, so it can be above 1 where high-tide flooding is frequent. Tsunami is the

value at the county's most exposed location, from recorded events and modeled return periods. For these four hazards the packet gives no "1 in N years" and takes the descriptor from Storm Events (none for earthquake) unless the value is 1 or more a year. Landslide is a U.S. Geological Survey modeled county rate spread by slope susceptibility. Volcanic activity is the chance that a volcano affecting the county erupts in a year. Drought counts only extreme and exceptional drought (D3 and D4). Source: FEMA, National Risk Index Technical Documentation v1.20, sections 5.2.2 (Table 5), 5.2.3, 7.4, 10.4, 16.5, 17.1, 17.3.1, 17.5, 20.3.1, 21.4, 22.4 and 6 to 23.

SOURCES
FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip (download, 25 MB), https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip (download, 635 MB)
NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

Descriptor scale used in this packet (defined per unit)

Unit	Descriptor	Definition
events per year	Highly likely	1 or more per year
events per year	Likely	about once in 1 to 10 years
events per year	Possible	about once in 10 to 100 years
events per year	Unlikely	less than once in 100 years
annual probability	Likely	10% to under 100% chance in a given year
annual probability	Possible	1% to under 10% chance in a given year
annual probability	Unlikely	under 1% chance in a given year
event-days (share of years)	Highly likely	event-days recorded in 90% or more of years
event-days (share of years)	Likely	event-days recorded in 10% to under 90% of years
event-days (share of years)	Possible	event-days recorded in some years but under 10% of years
lightning strike-days	Highly likely	cloud-to-ground strikes on 1 or more days per year

SOURCES
FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip (download, 25 MB), https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip (download, 635 MB)
NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

Intensity bands: historical frequency (Storm Events)

Hazard	Band	Years	Events <i>county-coded records</i>	Years in period	Events per year <i>events / years</i>
Hail	1.00-1.99 in	1996 to 2025	4	30	0.133
Hail	2.00 in+	1996 to 2025	0	30	0
Strong Wind (Thunderstorm Wind records)	50-64 kt	1996 to 2025	15	30	0.5
Strong Wind (Thunderstorm Wind records)	65 kt+	1996 to 2025	6	30	0.2
Strong Wind (Thunderstorm Wind records)	unmeasured or below 50 kt	1996 to 2025	10	30	0.333
Tornado	EF0-1	1996 to 2025	7	30	0.233
Tornado	EF2-3	1996 to 2025	0	30	0
Tornado	EF4-5	1996 to 2025	0	30	0
Tornado	unrated (EFU)	1996 to 2025	0	30	0

Hail smaller than 1 inch is not counted: on 2010-01-05 the National Weather Service raised its severe-hail threshold from 3/4 inch to 1 inch, so smaller reports became less common after 2009 (NWS Service Change Notice 09-52). NRI hail frequency uses a 0.75 inch threshold.

SOURCE

NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

Optional: future conditions. Not a required item in the 2025 FEMA Local Mitigation Planning Policy Guide; some states ask for it. The federal Climate Mapping for Resilience and Adaptation (CMRA) site gives county exposure to future climate conditions.

Supports B1-f: variation across the planning area

Range of census tract risk within the county

Hazard	Tracts <i>rated of all</i>	Risk score min <i>NRI score, 0 to 100</i>	Median	Max	Tracts by rating	Note
Avalanche	3 of 613	4.7	5.0	5.5	Very Low 3, Not Applicable 610	
Coastal Flooding	90 of 613	69.6	83.0	99.9	Very High 2, Relatively High 6, Relatively Moderate 10, Relatively Low 50, Very Low 22, No Rating 523	
Cold Wave	0 of 613				No Rating 613	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Drought	43 of 613	66.9	74.2	89.6	Relatively Low 3, Very Low 40, No Rating 570	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. Agriculture is all of NRI's expected annual loss for this hazard in the county, so the tract range above mostly reflects where crop and livestock value is, not where buildings and people are. Confirm locally.
Earthquake	613 of 613	74.6	92.3	100.0	Very High 77, Relatively High 400, Relatively Moderate 134, Relatively Low 2	
Hail	613 of 613	2.8	24.2	57.4	Relatively Low 32, Very Low 581	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Heat Wave	613 of 613	1.8	23.8	73.8	Relatively Moderate 7, Relatively Low 409, Very Low 197	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Hurricane	0 of 613				No Rating 613	
Ice Storm	0 of 613				Not Applicable 613	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Inland Flooding	613 of 613	3.3	74.3	100.0	Very High 84, Relatively High 186, Relatively Moderate 212, Relatively Low 117, Very Low 14	
Landslide	574 of 613	8.9	60.6	99.9	Very High 1, Relatively High 14, Relatively Moderate 46, Relatively Low 111, Very Low 402, No Rating 39	

Hazard	Tracts <i>rated of all</i>	Risk score min <i>NRI score, 0 to 100</i>	Median	Max	Tracts by rating	Note
Lightning	612 of 613	0.4	4.0	33.8	Relatively Low 1, Very Low 611, No Rating 1	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Strong Wind	613 of 613	1.7	9.5	29.1	Relatively Low 3, Very Low 610	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.
Tornado	613 of 613	2.9	18.6	48.9	Relatively Low 33, Very Low 580	
Tsunami	55 of 613	12.3	40.7	88.7	Relatively Moderate 3, Relatively Low 19, Very Low 33, No Rating 12, Not Applicable 546	
Volcanic Activity	0 of 613				Not Applicable 613	
Wildfire	260 of 613	18.6	73.7	100.0	Very High 14, Relatively High 27, Relatively Moderate 38, Relatively Low 63, Very Low 118, No Rating 353	
Winter Weather	23 of 613	10.5	10.6	15.8	Very Low 23, No Rating 590	National data give a county-wide or coarse (49 km grid or NWS zone) frequency for this hazard, so they cannot show members' hazard differing. The tract range above mostly reflects where buildings and people are. Confirm locally.

Rated tracts only: No Rating (score 0.0), Not Applicable and Insufficient Data tracts are counted but not used for the minimum, median and maximum.

SOURCE

FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip (download, 25 MB), https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip (download, 635 MB)

Per-member block (Starter, confirm locally)

Member	Type	Plan status	Repetitive loss <i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i>	Public Assistance matched <i>federal share obligated, nominal dollars</i>	Event records naming this place <i>all years; since the member's plan</i>	Notes
Orange County	County	Approved, expires 2026-12-26	FMA RL 0, SRL 0; any 11	\$180,664,202.60	0; 0	Includes \$173,716,030.32 for declarations not counted as hazard incidents (DR-4482-CA, EM-3248-CA).
Aliso Viejo city	City	Approved, expires 2029-07-17	FMA RL 0, SRL 0; any 0	\$45,308.85	0; 0	
Anaheim city	City	Approved, expires 2027-09-05	FMA RL 0, SRL 0; any 0	\$3,939,002.96	5; 0	Includes \$606,168.07 for declarations not counted as hazard incidents (DR-4482-CA).
Brea city	City	Approved, expires 2029-10-29	FMA RL 0, SRL 0; any 0	\$475,654.56	3; 0	Includes \$121,520.22 for declarations not counted as hazard incidents (DR-4482-CA).
Buena Park city	City	Approved, expires 2027-12-19	FMA RL 0, SRL 0; any 0	\$503,510.73	1; 1	Includes \$503,510.73 for declarations not counted as hazard incidents (DR-4482-CA).

Member	Type	Plan status	Repetitive loss <i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i>	Public Assistance matched <i>federal share obligated, nominal dollars</i>	Event records naming this place <i>all years; since the member's plan</i>	Notes
Costa Mesa city	City	Approved, expires 2028-04-17	FMA RL 1, SRL 1; any 4	\$1,431,853.35	7; 0	Includes \$1,335,061.03 for declarations not counted as hazard incidents (DR-4482-CA).
Dana Point city	City	Approved, expires 2030-02-04	FMA RL 0, SRL 1; any 1	\$530,452.72	0; 0	Includes \$186,403.49 for declarations not counted as hazard incidents (DR-4482-CA).
Fountain Valley city	City	Approved, expires 2030-11-09	FMA RL 0, SRL 0; any 1	\$126,043.66	0; 0	Includes \$119,798.87 for declarations not counted as hazard incidents (DR-4482-CA).
Fullerton city	City	Approved, expires 2031-07-08	FMA RL 0, SRL 0; any 2	\$374,886.45	2; not yet covered	Includes \$208,207.90 for declarations not counted as hazard incidents (DR-4482-CA).
Garden Grove city	City	Expired on 2025-09-17	FMA RL 0, SRL 1; any 5	\$17,011.38	7; 0	
Huntington Beach city	City	Approved, expires 2028-01-13	FMA RL 0, SRL 0; any 8	\$4,722,413.37	15; 4	Includes \$4,258,379.06 for declarations not counted as hazard incidents (DR-4482-CA).
Irvine city	City	No approved plan on record. Approvable pending adoption, not yet eligible	FMA RL 0, SRL 0; any 0	\$2,040,125.30	9; no approved plan	Includes \$1,532,458.90 for declarations not counted as hazard incidents (DR-4482-CA).
La Habra city	City	Expired on 2025-04-13	FMA RL 0, SRL 0; any 0	\$112,454.08	1; 0	
La Palma city	City	Expired on 2025-04-16	FMA RL 0, SRL 0; any 0	none found	0; 0	
Laguna Beach city	City	Approved, expires 2028-12-21	FMA RL 8, SRL 6; any 31	\$25,533,428.36	9; 0	Includes \$181,216.19 for declarations not counted as hazard incidents (DR-4482-CA).
Laguna Hills city	City	Approved, expires 2030-04-14	FMA RL 0, SRL 0; any 0	\$10,081.37	5; 0	
Laguna Niguel city	City	Approved, expires 2029-01-22	FMA RL 0, SRL 0; any 0	\$438,076.82	0; 0	Includes \$86,894.62 for declarations not counted as hazard incidents (DR-4482-CA).
Laguna Woods city	City	Expired on 2018-05-27	FMA RL 0, SRL 0; any 0	\$8,027.29	0; 0	Includes \$8,027.29 for declarations not counted as hazard incidents (DR-4482-CA).
Lake Forest city	City	Approved, expires 2029-09-05	FMA RL 0, SRL 0; any 0	\$215,264.26	3; 0	
Mission Viejo city	City	Approved, expires 2030-04-14	FMA RL 0, SRL 0; any 1	\$2,603,062.72	9; 0	Includes \$497,629.51 for declarations not counted as hazard incidents (DR-4482-CA).
Newport Beach city	City	Expired on 2021-09-26	FMA RL 0, SRL 0; any 8	\$518,699.06	8; 1	
Orange city	City	Approved, expires 2031-05-06	FMA RL 0, SRL 0; any 0	\$499,346.61	3; 0	Includes \$85,269.27 for declarations not counted as hazard incidents (DR-4482-CA).
Placentia city	City	Approved, expires 2029-07-17	FMA RL 0, SRL 0; any 0	\$70,418.26	4; 0	Includes \$57,758.26 for declarations not counted as hazard incidents (DR-4482-CA).
Rancho Santa Margarita city	City	Approved, expires 2030-07-15	FMA RL 0, SRL 0; any 0	\$75,270.04	0; 0	

Member	Type	Plan status	Repetitive loss <i>FMA RL and SRL (44 CFR 77.2); repeat-flood, any definition</i>	Public Assistance matched <i>federal share obligated, nominal dollars</i>	Event records naming this place <i>all years; since the member's plan</i>	Notes
San Clemente city	City	Approved, expires 2030-04-14	FMA RL 1, SRL 1; any 5	\$1,239,849.91	17; 0	
San Juan Capistrano city	City	Expired on 2025-04-22	FMA RL 0, SRL 0; any 1	\$4,658,465.26	2; 1	
Santa Ana city	City	Approved, expires 2028-02-06	FMA RL 0, SRL 0; any 7	\$886,781.12	8; 2	Includes \$381,590.90 for declarations not counted as hazard incidents (DR-4482-CA).
Seal Beach city	City	Approved, expires 2030-11-16	FMA RL 0, SRL 1; any 13	\$75,688.93	11; 0	
Stanton city	City	Approved, expires 2028-04-17	FMA RL 0, SRL 0; any 0	none found	0; 0	
Tustin city	City	Expired on 2024-11-06	FMA RL 0, SRL 0; any 0	\$131,406.99	7; 3	Includes \$87,666.32 for declarations not counted as hazard incidents (DR-4482-CA).
Villa Park city	City	Expired on 2026-07-13	FMA RL 0, SRL 0; any 0	\$305,655.37	1; 0	Includes \$11,663.17 for declarations not counted as hazard incidents (DR-4482-CA).
Westminster city	City	Expired on 2021-05-13	FMA RL 0, SRL 0; any 3	\$134,366.70	2; 2	Includes \$125,791.68 for declarations not counted as hazard incidents (DR-4482-CA).
Yorba Linda city	City	Approved, expires 2028-10-22	FMA RL 0, SRL 0; any 0	\$940,207.59	12; 0	

Member rows are whole NFIP communities and need not add up to the county total: a community that extends into another county is counted in full on each member row, while the county table counts only its part in this county.

School districts and special districts get a plan clock row only.

SOURCES

FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)

FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-26T151157Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)

NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

Supports B2-a and B2-b: assets and impacts

Local data required

County-level starter. The plan must describe impacts for each participant and its own assets.

- Critical facilities and lifelines per hazard
- A problem statement per participant per hazard
- Changes in development in hazard-prone areas since the last approval, or a statement of none (E1-a)
- Future assets

County-level starter: exposure, expected annual loss and damage since the plan

Hazard	Building exposure <i>modeled dollars</i>	Agriculture exposure <i>modeled dollars</i>	Population exposed <i>people</i>	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	EAL population equivalence <i>statistical value of life and injury, \$13.7M per life, not property damage</i>	EAL as % of exposure <i>buildings; agriculture where noted</i>	Storm Events damage since 2021-12-27 <i>county-coded records, property plus crops, nominal dollars</i>	Zone-level damage since plan <i>property plus crops, reported for the zone</i>	Public Assistance since plan <i>nominal dollars; see note</i>	Note
Avalanche	\$2,115,116		under 1	\$2		\$14	0.000105%				
Coastal Flooding	\$227,200,148,733		1,407,001	\$8,410,595		\$2,542	0.0037%		\$0		
Cold Wave	\$0	\$0	0	\$0	\$0	\$0			\$0		building exposure is 0 in NRI
Drought		\$104,082,934			\$36,627		0.0352% (agriculture)				NRI has no building exposure for this hazard; agriculture shown
Earthquake	\$1,036,878,807,347		3,186,989	\$706,143,269		\$309,194,322	0.0681%				
Hail	\$606,399,782,637	\$106,232,076	3,183,647	\$900,264	\$441	\$36,678	0.000148%				
Heat Wave	\$606,392,893,807	\$106,232,076	3,183,636	\$5,894	\$6,845	\$11,014,018	under 0.0001%		\$0		
Hurricane	\$606,399,782,637	\$106,232,076	3,183,647	\$0	\$0	\$0	0%		\$0		
Ice Storm											Not Applicable in NRI for this county
Inland Flooding	\$605,852,900,878	\$5,118,118	104,939	\$818,458,922	\$42,587	\$1,429,482	n/a (see note)	\$10,000	none found (2 declarations)		NRI counts the full building value of any census block with some flood loss; this is not the value of buildings in the floodplain. Use local FIRM overlays for B2-a/B2-b. EAL as % of exposure: n/a.
Landslide	\$19,882,297,040		78,135	\$942,120		\$3,237,130	0.00474%	\$30,000	none found (2 declarations)		
Lightning	\$606,399,782,637		3,183,647	\$5,801		\$482,869	under 0.0001%				

Hazard	Building exposure <i>modeled dollars</i>	Agriculture exposure <i>modeled dollars</i>	Population exposed <i>people</i>	EAL buildings <i>modeled dollars per year</i>	EAL agriculture <i>modeled dollars per year</i>	EAL population equivalence <i>statistical value of life and injury, \$13.7M per life, not property damage</i>	EAL as % of exposure <i>buildings; agriculture where noted</i>	Storm Events damage since 2021-12-27 <i>county-coded records, property plus crops, nominal dollars</i>	Zone-level damage since plan <i>property plus crops, reported for the zone</i>	Public Assistance since plan <i>nominal dollars; see note</i>	Note
Strong Wind	\$606,399,782,637	\$106,232,076	3,183,647	\$339,316	\$1,650	\$311,609	under 0.0001%	\$2,000	\$74,000		Storm Events damage since the plan includes 1 zone-level High Wind record (\$40,000) and 7 zone-level Strong Wind records (\$34,000), event types the NRI definition of this hazard leaves out.
Tornado	\$606,399,782,637	\$106,232,076	3,183,647	\$3,429,754	\$610	\$1,917,996	0.000566%				
Tsunami	\$38,426,334,141		75,685	\$2,529,600		\$0	0.00658%		\$0		
Volcanic Activity											Not Applicable in NRI for this county
Wildfire	\$16,625,760,768	\$74,070,839	112,865	\$54,812,095	\$3,585	\$2,769,945	0.33%		\$110,140,000	none found (1 declaration)	
Winter Weather	\$1,500,418,974	\$260,659	5,810	\$2	under \$1	\$131	under 0.0001%		\$0	none found (2 declarations)	

Totals since 2021-12-27 (Storm Events through 2026-06-30): 47 county-coded records, 45 with a damage value recorded (including \$0), \$42,000; 78 zone-level records, 72 with a damage value recorded (including \$0), \$110,214,000 reported for the zone; Public Assistance on counted declarations none found (3 declarations, 0 with PA).

Total = buildings + agriculture + population equivalence; FEMA values each expected death (or 10 injuries) at \$13.7 million (2024 dollars).

FEMA does not split Public Assistance by hazard. A declaration mapped to several hazards is listed under each of them with its full amount, so the per-hazard column must not be added up; the unit total counts each declaration once.

Dollars are nominal (as reported), labeled with the year; not adjusted for inflation.

SOURCES

FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip (download, 25 MB),

https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip (download, 635 MB)

NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>

NOAA National Weather Service, NWS county-public forecast zones correlation file, version bp03mr20 to bp16ap26 (11 files; newest bp16ap26), pulled 2026-09-28, <https://www.weather.gov/gis/ZoneCounty>

FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)

FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-26T151157Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)

FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

Supports B2-a: context

County context

Measure	Value
Population	3,183,647
Building value (total, not at risk)	\$606,399,782,637
Agriculture value (total, not at risk)	\$106,232,076
NRI risk rating (all hazards)	Very High
Expected annual loss, buildings and agriculture, all hazards	\$1,596,069,979
Expected annual loss, population equivalence, all hazards (NRI values each statistical life at \$13.7M; a modeled value of expected deaths and injuries, not property damage)	\$330,396,735
Social vulnerability rating	Relatively Low
Community resilience rating	Very Low
NRI version	December 2025

FEMA's all-hazard expected annual loss total adds buildings, agriculture and population equivalence; the two parts are shown separately so the property figure is not read as including the statistical value of life.

SOURCE

FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip (download, 25 MB), https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip (download, 635 MB)

Supports B2-c: repetitive loss

Repetitive loss in this county, both definitions

Definition	Properties	Severe repetitive loss	Properties
Repetitive loss, FMA definition (44 CFR 77.2)	10	Severe repetitive loss, FMA definition (44 CFR 77.2)	11
Repetitive loss, NFIP insurance definition	100	Severe repetitive loss, NFIP insurance definition	9

Your state NFIP coordinator's list may use the NFIP insurance definition, so its counts can be higher.

SOURCES

FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)
FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

Repeat-flood properties: county and state-level rows

Scope	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
County total	10	11	100	9	103	0	30
ORANGE COUNTY *	0	0	11	0	11	0	0
COSTA MESA, CITY OF	1	1	4	1	4	0	2
FOUNTAIN VALLEY, CITY OF	0	0	1	0	1	0	0
FULLERTON, CITY OF	0	0	2	0	2	0	2

Scope	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
GARDEN GROVE, CITY OF	0	1	5	1	5	0	1
LAGUNA BEACH, CITY OF	8	6	28	5	31	0	10
NEWPORT BEACH, CITY OF	0	0	8	0	8	0	1
SAN CLEMENTE, CITY OF	1	1	5	0	5	0	2
SAN JUAN CAPISTRANO, CITY OF	0	0	1	0	1	0	1
SANTA ANA, CITY OF	0	0	7	0	7	0	2
SEAL BEACH, CITY OF	0	1	13	1	13	0	5
WESTMINSTER, CITY OF	0	0	3	0	3	0	0
MISSION VIEJO, CITY OF	0	0	1	0	1	0	0
DANA POINT, CITY OF	0	1	1	1	1	0	1
HUNTINGTON BEACH, CITY OF	0	0	8	0	8	0	3
Unknown (community ID Unknown in FEMA data)	0	0	2	0	2	0	0
State level, not in this county: county not reported	0	1	3	0	4	1	0

SOURCESFEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)**Repeat-flood properties by plan member (NFIP community)**

Member	NFIP community ID	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>	Note
Orange County	060212	0	0	11	0	11	0	0	
Aliso Viejo city	060770	0	0	0	0	0	0	0	
Anaheim city	060213	0	0	0	0	0	0	0	
Brea city	060214	0	0	0	0	0	0	0	
Buena Park city	060215	0	0	0	0	0	0	0	
Costa Mesa city	060216	1	1	4	1	4	0	2	
Dana Point city	060736	0	1	1	1	1	0	1	
Fountain Valley city	060218	0	0	1	0	1	0	0	
Fullerton city	060219	0	0	2	0	2	0	2	
Garden Grove city	060220	0	1	5	1	5	0	1	
Huntington Beach city	065034	0	0	8	0	8	0	3	
Irvine city	060222	0	0	0	0	0	0	0	
La Habra city	060224	0	0	0	0	0	0	0	
La Palma city	060225	0	0	0	0	0	0	0	
Laguna Beach city	060223	8	6	28	5	31	0	10	
Laguna Hills city	060760	0	0	0	0	0	0	0	

Member	NFIP community ID	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>	Note
Laguna Niguel city	060764	0	0	0	0	0	0	0	
Laguna Woods city	060768	0	0	0	0	0	0	0	
Lake Forest city	060759	0	0	0	0	0	0	0	
Mission Viejo city	060735	0	0	1	0	1	0	0	
Newport Beach city	060227	0	0	8	0	8	0	1	
Orange city	060228	0	0	0	0	0	0	0	
Placentia city	060229	0	0	0	0	0	0	0	
Rancho Santa Margarita city	060769	0	0	0	0	0	0	0	
San Clemente city	060230	1	1	5	0	5	0	2	
San Juan Capistrano city	060231	0	0	1	0	1	0	1	
Santa Ana city	060232	0	0	7	0	7	0	2	
Seal Beach city	060233	0	1	13	1	13	0	5	
Stanton city	060234	0	0	0	0	0	0	0	
Tustin city	060235	0	0	0	0	0	0	0	
Villa Park city	060236	0	0	0	0	0	0	0	
Westminster city	060237	0	0	3	0	3	0	0	
Yorba Linda city	060238	0	0	0	0	0	0	0	

Per-member types: XLSX sheet 'B2-c Members'.

Member rows are whole NFIP communities and need not add up to the county total: a community that extends into another county is counted in full on each member row, while the county table counts only its part in this county.

SOURCES

FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)

FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

County repeat-flood properties by occupancy group

Occupancy group	RL, FMA <i>properties</i>	SRL, FMA <i>properties</i>	RL, NFIP <i>properties</i>	SRL, NFIP <i>properties</i>	Any category <i>properties</i>	Mitigated <i>properties</i>	Currently insured <i>properties</i>
single-family residential	8	8	71	6	74	0	22
2 to 4 unit residential	0	0	11	0	11	0	2
other residential	0	0	6	0	6	0	0
non-residential	2	3	12	3	12	0	6
not reported	0	0	0	0	0	0	0

Institutional properties cannot be separated in this data: FEMA's occupancy groups have no institutional class, so they fall in non-residential or other residential in the table by occupancy group.

SOURCES

FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)

FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)

FMA RL and FMA SRL are the Flood Mitigation Assistance definitions (44 CFR 77.2), the ones the FEMA Local Mitigation Planning Policy Guide cites; OpenFEMA's fmaRI field description omits the Increased Cost of Compliance clause of 44 CFR 77.2(i). NFIP repetitive loss (FEMA insurance definition, nfipRI) is 2 or more claims over \$1,000 in 10 years and can drop to false when a property is mitigated. Also shown: NFIP severe repetitive loss, any category, mitigated and currently insured.

Your state NFIP coordinator's list may use the NFIP insurance definition, so its counts can be higher.

Counts are aggregates of FEMA's public NFIP Multiple Loss Properties file (as of 2026-08-02). No property is identified. County assignment is FEMA's geocode.

Counts may differ from your state NFIP coordinator's list, which is the source the Handbook names.

In this county 3 properties are FMA repetitive loss but not NFIP repetitive loss, and 93 properties are NFIP repetitive loss but not FMA repetitive loss.

Exact counts; no count suppression.

Sources

Every table above lists its own sources. The full list, for the plan's bibliography (FEMA review item A4-a):

1. FEMA, OpenFEMA HazardMitigationPlanStatuses v1, version 2026-09-26T121003Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/HazardMitigationPlanStatuses> (API)
2. FEMA, OpenFEMA DisasterDeclarationsSummaries v2, version 2026-09-27T010817Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v2/DisasterDeclarationsSummaries> (API)
3. FEMA, OpenFEMA PublicAssistanceFundedProjectsSummaries v1, version 2026-09-26T151157Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/PublicAssistanceFundedProjectsSummaries> (API)
4. FEMA, OpenFEMA NfipMultipleLossProperties v1, version 2026-08-04T164045Z, pulled 2026-09-28, <https://www.fema.gov/api/open/v1/NfipMultipleLossProperties> (API)
5. FEMA, FEMA National Risk Index 1.20.0 (December 2025), county and census tract tables, version 1.20.0, pulled 2026-09-28, https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_Counties.zip (download, 25 MB), https://www.fema.gov/about/reports-and-data/openfema/nri/v120/NRI_Table_CensusTracts.zip (download, 635 MB)
6. NOAA NCEI, NOAA NCEI Storm Events Database, details files (csvfiles v1.0), version c20260918, pulled 2026-09-28, <https://www.ncei.noaa.gov/pub/data/swdi/stormevents/csvfiles/>
7. NOAA National Weather Service, NWS county-public forecast zones correlation file, version bp03mr20 to bp16ap26 (11 files; newest bp16ap26), pulled 2026-09-28, <https://www.weather.gov/gis/ZoneCounty>
8. U.S. Census Bureau, Census 2024 Gazetteer, 2020 place by county, CT county-to-cousub crosswalk, version 2024-gazetteer, pulled 2026-09-28, https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_counties_national.zip, [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_cousubs_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_cousubs_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_place_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_place_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_unsd_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_unsd_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_elsd_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_elsd_national.zip), [https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gazetteer/2024_Gaz_scsd_national.zip](https://www2.census.gov/geo/docs/maps-data/data/gazetteer/2024_Gaz_scsd_national.zip), https://www2.census.gov/geo/docs/reference/codes2020/national_place_by_county2020.txt, https://www2.census.gov/geo/docs/reference/ct_change/ct_cou_to_cousub_crosswalk.xlsx

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Cite this: Hazard Plain (2026). Orange County, CA: risk-assessment baseline packet, release 2026-10 (data as of 2026-09-28; County area 06059). Preview: automated baseline. Built from FEMA OpenFEMA, the FEMA National Risk Index and NOAA NCEI Storm Events; source versions in the packet's Sources list.

Corrections: to report an error, name the packet, the table and what your records show. Contact: to be added

Hazard Plain release 2026-10. As of 2026-09-28; Storm Events data through 2026-06-30. File hazard-plain_2026-10_CA_06059. Preview: automated baseline.