

**VENTURA COUNTY OPERATIONAL AREA
DISASTER DAMAGE ASSESSMENT PLAN**
*(An Annex to the Ventura County Emergency
Operations Plan)*

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1.0 Introduction

This document is intended to serve as a guide for conducting disaster damage assessment operations after a major disaster affecting Ventura County. Disaster damage assessments are conducted by several agencies and this document proposes a unified approach for conducting the multiple phases of disaster damage assessments.

1.1 Purpose

Disaster Damage Assessments:

- **Provide local government with accurate information to ensure an adequate response to life-threatening situations.**
- **Rapidly collect and collate information required to aid in the State and Federal declaration process.**
- **Assists in identifying and applying resources necessary to recover from a major or catastrophic disaster.**

To be eligible for State or Federal monetary assistance, the County's aggregate damage totals must exceed the minimum thresholds established by Federal Emergency Management Agency (FEMA). This threshold is based upon a per-capita dollar figure and is established annually for both public and individual damage costs.

1.2 Scope

This plan identifies protocols for relaying disaster damage assessment information to the Operational Area Emergency Operations Center (EOC).

Disaster Damage Assessments should be conducted in three phases, which may be conducted concurrently, and in multiple areas simultaneously.

- **Rapid Damage Assessments (RDA)** ideally take place within 4 hours or less of the incident.
- **Initial Damage Estimates (IDE)** should take place within the first 24-48 hours of the incident.
- **Detailed Damage Assessments (DDA)** take place within 48-72 hours from the incident.

2.0 Recommended Procedures

2.1 Rapid Damage Assessments (RDA) take place within 4 hours or less of the incident.

- May be conducted by a variety of units/agencies and/or personnel, such as, but not limited to law enforcement. These resources are assigned to and tasked by the EOC.
- Provides a high-level overview of the impact to local neighborhoods, facilities & infrastructure.
- Intelligence gained aids the EOC Operations Section in allocating and requesting resources.
- Safety of personnel conducting assessments is a prime consideration in determining timing and execution of the assessments.
- The EOC's Damage Assessment Unit will establish communications with facilities that have responsibility of reporting their status, such as hospitals, dams and schools.

2.2 Initial Damage Estimates (IDE) take place within the first 24-48 hours of the incident.

- Conducted by a variety of units/agencies and/or personnel, such as, but not limited to, law enforcement, Search & Rescue, DART, etc.
- Just-in-Time training (or refreshers) might be necessary.
- Based on intelligence provided from the **RDA**, the **IDE** is conducted by teams deployed into disaster areas.
- Data from **IDEs** are compiled by the EOC and Office of Emergency Services to estimate damage in dollars based on assessor's values and % of structure damage.
- The information is recorded on the CalOES IDE form and submitted to the CalOES Regional Emergency Operations Center.

2.3 Detailed Damage Assessments (DDA) take place within 48-72 hours of the incident.

- Conducted by qualified (SAP/ATC-20) building and safety inspectors & structural engineers under the guidance of the Building Safety Response Plan.
- Includes a detailed inspection of damage to individual sites by trained personnel.
- May include CalOES/FEMA personnel initiating Preliminary Damage Assessment Worksheets (public facilities/infrastructure).
- External factors, such as aftershocks, may require re-examination or inspection of properties if further damage is detected.

3.0 Rapid Damage Assessments (RDA) Process

- **Agencies should use special consideration for the type of resources they assign to this role.**
- The RDA should be conducted, if safe, within the first four hours of an incident. It may be safer to conduct the RDA in daylight if power service is not available.
- The RDA should not interfere with emergency responses.
- Discoveries of emergent needs should be communicated to the unit's dispatch center for prioritization and possible dispatch of uniformed personnel.
- On-Duty law enforcement and fire resources will likely be focused on responding to incidents and will be unable to perform this task in a timely manner.
- 2-person teams of plain-clothes personnel in un-marked vehicles should be considered for this task.
- Appropriate forms should be stored on the unit computer, and in hard copy.
- **RDA is conducted in sections based upon pre-determined law enforcement "beats."**
- Damage Assessment teams should consist of no less than two personnel: a driver and a scribe.
- If possible, the teams should start at the northerly most point (of the assigned area), and work southward in east to west sweeps.
- Larger beats may be swept by multiple units and coordinated by the EOC.
- The RDA is a quick estimation tool, to assist the EOC in identifying areas for further assessment, or assignment of resources.
- Completed RDA forms should be signed and submitted to the EOC as soon as possible upon completion of the assignment.
- **Information is collected and returned to local EOCs and forwarded to the Operational Area EOC (OA EOC)**
- City EOC's should relay information to the OA EOC for information only.

- The OA EOC will use information to assist in the prioritization of assigned resources, and to direct the next phase of disaster damage assessment.

4.0 Initial Damage Estimates (IDE) Process

- The **IDE** is a critical process and document for supporting gubernatorial proclamations and presidential declarations. The process of quickly collecting disaster damage assessment information; assigning dollar values; and relaying that information to CalOES is critical to receiving resources; both financial and physical.
- Assignment of IDE Teams is based upon information developed from the RDA.
- 2-person teams in un-marked vehicles should be considered for this task.
- Teams may consist of volunteers (pre-trained and/or expediently trained).
- Teams should not be assigned without appropriate communications capabilities (amateur or public safety radio), especially if wireline & cellular systems are compromised.
- It should not be necessary to leave the vehicle to conduct the IDE.
- Electronic or hard copy forms may be used, provided they can be collected and collated rapidly by the EOC upon completion of the assignment.
- Determination of building damage, square footage, usage, or ownership should not unnecessarily delay the survey process.
- Insurance information should be obtained only when made available by an owner's representative.
- Determination of the level of damage is made based upon standard FEMA categories:
 - **Affected**
 - The structure is habitable. The structure is damaged but may continue to be used for its intended purposes.
 - **Minor**
 - The structure is uninhabitable. The structure may be easily repaired in a short amount of time and made safe.
 - **Major**
 - The structure is uninhabitable. The structure received substantial damage and will take a considerable amount of time to repair but remains economically feasible to repair.
 - **Destroyed**
 - Structure is permanently uninhabitable, has received considerable damage and repair is not economically or technically feasible.
- When the level of damage is in question, the next higher level of damage should be indicated.
- The "Comments" column may be used to elaborate on questionable or uncertain data.
- Completed IDE forms should be signed and submitted to the EOC as soon as possible upon completion of the assignment.
- City EOC's should collect and tabulate field information for:
 - Assignment and prioritization of resources
 - Transmission to the OA EOC to assist in the proclamation/declaration process
 - OA EOC staff should establish a connection to the Assessor's Parcel Database to produce dollar value calculations.
- Estimated Damage Formula:

- **Assessor's value x % Damage = Damage Value**
- **Affected – 10%**
- **Minor – 15%**
- **Major – 50%**
- **Destroyed – 100%**
- OA EOC staff will transcribe the information received from the Cities, Special Districts, and IDE Teams onto the prescribed CalOES or CalEOC form for transmission to the CalOES REOC.

NOTE: Both the **RDA** & the **IDE** may require repetition because of external factors, such as aftershocks, or subsequent damaging events.

5.0 detailed Damage Assessments (DDA) Process

- Detailed Damage Assessments typically begin within 48-72 hours of the incident.
- The Resource Management Agency's Building and Safety Division leads this effort, in conjunction with the EOC and is guided by the "Building Safety Response Plan."
- The DDA is a detailed inspection of damage to individual sites by trained personnel.
 - The assessment(s) should be conducted by qualified (SAP/ATC-20) building and safety inspectors and/or structural engineers.
 - 2-3 person teams in un-marked vehicles should be considered for this task. Teams should be assigned appropriate communications capabilities (amateur or public safety radio), especially if wireline & cellular systems are compromised.
- A Safety Plan and appropriate Personal Protective Equipment should be in place before dispatching DDA personnel.
- The EOC should prioritize facilities for inspection as follows:
 - Facilities critical to the response or recovery (schools, hospitals, water, sewer, communications, government)
 - Residences (consider prioritizing multi-family structures first, to assist in shelter closing and consolidation determinations)
 - Businesses (consider prioritizing groceries, pharmacies, building supply resources, and banking resources)
- Teams may include CalOES/FEMA personnel initiating Preliminary Damage Assessment Worksheets (public facilities/infrastructure).
- Property Insurance information (including Flood Insurance) should be obtained whenever possible.
- Aftershocks may require re-examination or inspection of properties if further damage is suspected or identified.
- Results of the DDA may be applied to subsequent submissions of the IDE.

Appendix A: Acronyms

ARC – American Red Cross
CalOES – Governor’s Office of Emergency Services
DART – Disaster Assistance Response Team
DDA – Disaster Damage Assessment
DOC – Department Operations Center
EOC – Emergency Operations Center
EOP – Emergency Operations Plan
FEMA – Federal Emergency Management Agency
IDE – Initial Damage Assessment
MOA – Memorandums of Agreement
MOU – Memorandums of Understanding
NIMS – National Incident Management System
NRF – National Response Framework
OES – Office of Emergency Services (Ventura County)
PIO – Public Information Officer
RDA – Rapid Damage Assessment
REOC – CalOES Regional Emergency Operations Center
SAP/ATC-20 – Safety Assessment Program/Applied Technology Council 20
SEMS – Standardized Emergency Management System
SOP – Standard Operating Procedures

RAPID DAMAGE ASSESSMENT

VENTURA COUNTY OPAREA EOC

COMPLETED BY:

AGENCY:

BEAT / SECTOR:

TITLE:

DATE:

START
TIME:

END TIME:

PROPERTY TYPE	MINOR DAMAGE < 30%	MAJOR DAMAGE > 30 %	COLLAPSED / DESTROYED
SINGLE FAMILY DWELLING			
APARTMENT COMPLEXES			
MOBILE HOME			
SMALL BUSINESS < 10,000 Sq. Ft.			
LARGE BUSINESS > 10,000 Sq. Ft.			
PUBLIC BUILDING			
UTILITIES			
SCHOOLS			
ROADS			
BRIDGES			

INITIAL DAMAGE ESTIMATE

VENTURA COUNTY OPAREA EOC

COMPLETED BY:

TITLE:

AGENCY:

DATE:

BEAT / SECTOR:

START
TIME:

END
TIME:

OBS. TIME	ADDRESS	DAMAGE	TYPE	INSURANCE	COMMENTS / DETAILS
		<input type="checkbox"/> AFFECTED <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> DESTROYED	<input type="checkbox"/> PRIVATE <input type="checkbox"/> PUBLIC	<input type="checkbox"/> YES <input type="checkbox"/> NO	
		<input type="checkbox"/> AFFECTED <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> DESTROYED	<input type="checkbox"/> PRIVATE <input type="checkbox"/> PUBLIC	<input type="checkbox"/> YES <input type="checkbox"/> NO	

		<input type="checkbox"/> AFFECTED <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> DESTROYED	<input type="checkbox"/> PRIVATE <input type="checkbox"/> PUBLIC	<input type="checkbox"/> YES <input type="checkbox"/> NO	
		<input type="checkbox"/> AFFECTED <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> DESTROYED	<input type="checkbox"/> PRIVATE <input type="checkbox"/> PUBLIC	<input type="checkbox"/> YES <input type="checkbox"/> NO	
		<input type="checkbox"/> AFFECTED <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> DESTROYED	<input type="checkbox"/> PRIVATE <input type="checkbox"/> PUBLIC	<input type="checkbox"/> YES <input type="checkbox"/> NO	
		<input type="checkbox"/> AFFECTED <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> DESTROYED	<input type="checkbox"/> PRIVATE <input type="checkbox"/> PUBLIC	<input type="checkbox"/> YES <input type="checkbox"/> NO	

AFFECTED – Structure is habitable. Structure is damaged but usable for its intended purposes.

MINOR – Structure is currently uninhabitable. Structure may be repaired and made safe in a short amount of time.

MAJOR – Structure is currently uninhabitable. Structure received substantial damage and will take considerable time to repair but is economically feasible to repair.

DESTROYED – Structure is permanently uninhabitable. Structure has received considerable damage and repair is not economically or technically feasible.

**VENTURA COUNTY SHERIFF
OFFICE OF EMERGENCY SERVICES
INITIAL DAMAGE ASSESSMENT DAMAGE CATEGORIES**

DAMAGE DEFINITIONS	GENERAL DESCRIPTION	THINGS TO LOOK FOR	WATER LEVELS
DESTROYED	DESTROYED	DESTROYED	DESTROYED
Structure is a total loss. Not economically feasible to rebuild.	Structure leveled above the foundation, or second floor is gone. Foundation or basement is significantly damaged.	Structure leveled or has major shifting off its foundation or only the foundation remains. Roof is gone with noticeable distortion to walls.	More than 4 feet of water in the first floor. More than 2 feet of water present in a mobile home.
MAJOR	MAJOR	MAJOR	MAJOR
Structure is currently uninhabitable. Extensive repairs are necessary to make structure habitable.	Walls collapsed. Exterior frame damaged. Roof off or collapsed. Major damage to utilities furnace, water heater, well or septic system	Portions of the roof and decking missing. Twisted, bowed, cracked or collapsed walls. Structure penetrated by large foreign object such as a tree. Damaged foundation.	2 to 4 feet of water in the first floor without a basement. 1 foot or more in first floor with basement. 6 inches to 2 feet in a mobile home with plywood floors. 1 inch in a mobile home with particle board floors.
MINOR	MINOR	MINOR	MINOR
Structure is damaged and uninhabitable. Minor repairs are necessary to make structure habitable. Will take less than 30 days to repair.	Interior flooring / exterior walls with minor damage. Tree(s) fallen on structure. Smoke damage, shingles/roof tiles moved or missing.	Many missing shingles, broken windows and doors. Loose or missing siding. Minor shifting or settling of foundation. Minor damage to septic system.	2 inches to 2 feet of water in first floor without basement. 1 foot or more in basement. Crawlspace - reached insulation. Sewage - in basement.
AFFECTED	AFFECTED	AFFECTED	AFFECTED
Structure has received minimal damage and is habitable without repairs.	Chimney or porch damaged. Carpet on first floor soaked. Broken windows.	Few missing shingles, some broken windows. Damage to air conditioning units / etc. Some minor basement flooding.	Less than 2 inches in first floor, minor basement flooring.

REFERENCE INFORMATION FOR DETERMINING WATER LEVELS

Red Brick height - 2" per brick
Cinder block - 8" per block

Aluminum siding - 4" or 8" per section
Door knobs - 36" above floor level

Stair risers - 7"
Standard Doors - 6' 8" tall