

Annex F – Damage Assessment Procedures

1.0 Purpose

- 1.1 This annex is used when assessing the extent of property damage affecting West Virginia University (WVU) property after an accident, emergency, or disaster.
- 1.2 This document serves as a guideline for prioritization of activities, rapid assessment, and recovery.
- 1.3 This document assigns general responsibilities, including documentation for reimbursement from Federal and State agencies.

2.0 Planning Assumptions

- 2.1 WVU may be affected by natural, technological, or human-caused hazards.
- 2.2 External hazard risks at WVU are identified in the State and County emergency operations plans, such as flash floods, tornados, winter storms, etc.
- 2.3 Internal hazard risks at WVU, such as chemical storage, live viruses, gas lines, etc., have been identified.
- 2.4 WVU key staff have assessed the potential risks to WVU and implemented preventive actions whenever possible.
- 2.5 Building floor plans and system plans would be readily available during response and recovery.
- 2.6 Life-saving activities take precedence over other emergency activities.

3.0 Concept of Operations

3.1 Damage Assessment

- 3.1.1 Damage assessment is the systematic gathering of information that details an emergency's or disaster's nature, and includes categories such as the effects on public and private property; numbers of people and communities affected; the potential dollar cost; and the extent or severity of damage in the communities/counties affected.
- 3.1.2 Damage assessments provide the Governor with information to decide whether to request Federal assistance to supplement State and local resources, indicate what types of assistance should be requested, and provide support for the request of Federal assistance.

- 3.1.3 Damage assessment data provide the information needed to efficiently and effectively manage the operation.
- 3.1.4 If WVU is affected, WVU damage assessment teams may integrate with Federal, State, and local damage assessment teams.
- 3.1.5 At all times, saving lives is the priority.

3.2 Search and Rescue

- 3.2.1 Search and Rescue (SAR) operations may be carried out concurrently with damage assessment activities.
- 3.2.2 SAR operations are performed to locate and safely recover persons who may be lost, stranded, or trapped, and involve the use of private and public (Federal, State, and local) resources.
- 3.2.3 WVU personnel may participate in SAR operations affecting the campus and/or the community.
- 3.2.4 There are three SAR categories:

A. **Category 1: Lost Person(s)/Aircraft.** This operation may involve many searches over a large area. The primary distinction is that a lost or missing person or aircraft represents the actual emergency; it is not the result of another emergency event.

- Overall direction of Category 1 SAR operations rests with the West Virginia Civil Air Patrol and the National Search and Rescue Plan in coordination with the Monongalia Emergency Centralized Communications Agency (MECCA).
- Operations involving lost people will be under the direction of the applicable local government agency in coordination with the Monongalia County Office of Emergency Management (MCOEM).
- When SAR 1 operations involve State property such as parks, forests, and non-navigable waterways, the West Virginia Department of Natural Resources (WVDNR) will have responsibility for overall direction of operations.
- Requests for State assistance will be made through the Emergency Management Coordinator (EMC) at the MCOEM.

B. **Category 2: Industrial Explosions/Transportation Accidents.** This SAR operation involves a large number of searches operating within a limited area at and around the emergency event. The SAR operations are a function of the emergency response rather than the actual emergency.

- Directed and performed largely with local resources.
- May be augmented with private resources from private entities involved.
- Requests for State assistance are made through the EMC.

C. **Category 3: Widespread Disaster (Flood, Tornados).** This SAR operation involves a large number of searches operating over a widespread area. As in Category 2 operations, these SAR operations are functions of a larger emergency or disaster.

- All local resources are used before State assistance is provided.
- When State assistance is provided, local resources and assets remain under local control, unless local government requests otherwise.
- In multi-county events, the State directs SAR activities.

3.2.5 The MCOEM will initiate SAR operations in and around the area impacted by flooding to locate and rescue survivors and to provide initial damage assessment information, which will include stranded or dead livestock and farm animals.

3.3 Safety Issues

Potential safety issues for damage assessment teams include:

- 3.3.1 Unsafe areas, including buildings and structures
- 3.3.2 Building/structure collapse
- 3.3.3 Sanitary conditions
- 3.3.4 Unsafe drinking water
- 3.3.5 Use of utilities
- 3.3.6 Downed power wires
- 3.3.7 Continuing threats from hazard (aftershocks, gas line rupture, fire, severe weather, chemicals, secondary devices, disease, injury, etc.)

4.0 Responsibilities

4.1 General

4.1.1 Assessment of damages is the responsibility of the affected location's government.

4.2 Federal

4.2.1 Assessment of damage to Federal property is a Federal responsibility.

4.2.2 Liaison with Federal field officials should be maintained by both local government(s) and the county EMC for information and possible mutual-aid assistance.

4.2.3 When Federal assistance may be needed, a preliminary damage assessment to gain information on the severity and magnitude of the situation may be made by the Federal Emergency Management Agency (FEMA) jointly with the West Virginia State government. This assessment is used in formulating decisions regarding disaster declarations or other Federal commitments.

4.2.4 Federal funding may be available in the event of a major disaster.

4.3 State of West Virginia

4.3.1 State departments and agencies assess damage to the properties under their jurisdiction.

4.3.2 The West Virginia Office of Emergency Services may form damage assessment teams with local jurisdictions and Federal agencies.

4.3.3 State agencies make assessments in two principal areas: Individual Assistance and Public Assistance.

A. *Individual Assistance* damage assessment includes damage to homes, personal property, businesses, and farms, as well as unemployment resulting from a disaster.

B. *Public Assistance* damage assessment identifies damage to public facilities such as roads, bridges, public utilities, public buildings, schools, and hospitals.

4.3.4 The Office of Emergency Services directs State preliminary damage assessments (PDAs).

- 4.3.5 A PDA is begun as soon as possible after destruction has peaked. If possible, the assessment should be completed within 48 hours. The Office of Emergency Services will identify the counties in which damage is to be assessed, and provide this information to the State agencies. In a large-scale event, assessment can and will go on after the declaration is made.
- 4.3.6 Each State agency with damage assessment responsibilities appoints a standing damage assessment coordinator and identifies personnel qualified to assess damage and estimate the value of damaged or destroyed property.
- 4.3.7 Damage assessment coordinators are responsible for:
 - A. Directing their agency's damage assessment operations.
 - B. Assigning personnel to field inspection tasks.
 - C. Reviewing damage assessment information submitted by field personnel for thoroughness and credibility.
 - D. Compiling damage assessment information by county and submitting it to the Office of Emergency Services.
- 4.3.8 Although assessment teams are expected to use their professional expertise in making cost projections, they should also be aware that they are making estimates.
- 4.3.9 The Office of Emergency Services is responsible for compiling a complete damage assessment by county for the Governor's use.
- 4.3.10 The U.S. President may issue a Presidential Declaration before all affected areas have been assessed. However, the assessment must be finished in all areas so a full picture of the situation will be available to guide the recovery forces in meeting public and private disaster-related needs and managing the recovery effort.
- 4.3.11 Federal personnel may be available shortly after the onset of the disaster. If so, they will accompany state agency personnel to do a preliminary damage assessment to estimate the damage to public and private property.

4.4 Local

- 4.4.1 Local governments make damage assessments for public and private property within their jurisdiction.
- 4.4.2 Monongalia County has detailed damage assessment procedures.

4.4.3 Building Inspection after Flood

After a flood, buildings that are still standing often have structural damage from either water pressure and floating debris, or both. To protect against casualties and injuries, proper building and structure inspections should be conducted to determine if they are safe to inhabit after a flood. During flood emergencies that result in Presidential Disaster Declarations, such inspections will be conducted by the West Virginia Fire Marshal. During local flood emergencies, such inspections are the responsibility of the Monongalia County Dilapidated Buildings Committee or other appropriate municipal agency. Such inspections are necessary to:

- A. Identify buildings/structures that are threats to public safety.
- B. Identify buildings/structures that are safe for occupancy.
- C. Identify with highly visible markings/signage those buildings/structures that are condemned.

4.5 West Virginia University

4.5.1 The **WVU Planning Section Chief** oversees damage assessment activities, including:

- A. Gathers information and issues a report to WVU administration on the following:
 - Probable cause of incident
 - Extent of property damage
 - Number and extent of casualties
- B. Appoints a Safety Officer.
- C. Develops an Incident Action Plan (IAP) to:
 - Control and contain the emergency
 - Survey facilities and structures and do inspections
 - Shut down and restore damaged structures
- D. Assigns and dispatches Technical Specialists from Environmental Health and Safety (EHS) to:
 - Identify hazardous material problems that will or could impact the emergency response.
 - Advise on containment and cleanup of hazardous materials.
 - Identify unsafe conditions at campus facilities.
 - Coordinate with Safety Officer for personal safety issues.

- E. Coordinates with Building Safety Committee.
- F. Maintains and readily provides hazardous materials information for various buildings, such as on pesticides, flammable gases, biohazards, pathogens, asbestos, PCBs, mercury, reactives, corrosives, cryogenics, radiation, etc.

4.5.2 The **WVU Operations Section Chief** is responsible for these tasks:

A. Oversee Facilities Management staff responsible for the following:

- Do initial damage inspections
- Do safety inspections of all facilities, initially or later
- Assess and document damage to buildings and facilities
- Prepare structural damage assessment reports
- Post and secure unsafe buildings
- Mark hazardous areas
- Recommend emergency measures, such as repairs
- Shut off and/or restore essential utilities, reducing further hazards
- Clear debris from roadways and essential areas for emergency equipment and building inspection

B. Ensure that the WVU team is integrated into Federal, State, or county damage assessment teams.

C. Oversee University Police staff responsible for the following:

- Direct priority (life-safety) activities, including immediate evacuation of hazardous areas and rescue.
- Assist in SAR activities.
- Provide traffic control, crowd control, access control, and property protection.
- Cordon off areas that may pose safety risks.
- May assist with search and closure of damaged buildings.

4.5.3 The **WVU Financial and Administration Section Chief** is responsible for the following:

A. Assemble all documentation of the event for possible reimbursement of costs incurred, including that involving personnel; equipment; and contractual, supply, and material costs.

B. Oversee all accounting and fiscal operations related to the disaster, including documentation and follow-up audits.

C. Maintain records of all damage assessment costs.

- D. Ensure participation in all Federal/State briefings relating to fiscal reimbursement.
- E. Provide insurance and documentation required for applying for Federal assistance.

5.0 Procedures

5.1 Initial Response

- 5.1.1 Determine the severity and extent of injuries and damages.
- 5.1.2 Determine the need to implement or prioritize response activities:
 - A. SAR operations
 - B. Damage assessment
 - C. Access control and re-entry to the impacted area
 - D. Debris clearance
 - E. Restoration of utilities
 - F. Building/structure inspection, condemnation, and/or demolition

5.2 Search and Rescue

- 5.2.1 SAR operations involve locating and removing people who are trapped or injured, administering first aid, and transporting the more seriously injured to hospitals.
- 5.2.2 Initial damage assessment information will be used to identify areas in which SAR operations should be conducted.
- 5.2.3 Priority in SAR operations will be based on damage assessment information.

5.3 Damage Assessment

Damage assessment is the systematic gathering of information that details the nature of an emergency or disaster, and includes categories such as the effects on public and private property; numbers of people and communities affected; the potential dollar cost; and the extent or severity of damage to the communities/counties affected. Reports provide the Governor with information to help guide the decision on whether to request Federal assistance to supplement State and local resources, to indicate what types of assistance should be requested, and to provide support for the request of Federal assistance. Damage assessment data provide the information needed to efficiently and effectively manage the operation.

- 5.3.1 Windshield surveys are conducted as soon as possible to determine if any victims are trapped or isolated, and to assess the extent of property damage.
- 5.3.2 Immediate notifications to the Health and Medical Section are made in the event that victims are discovered.
- 5.3.3 When directed by the WV Division of Emergency Management, or in cases of serious and widespread damage, damage assessments may be conducted by the EMC in the affected area, assisted as needed by State personnel in the affected area or augmented by State personnel from elsewhere.
- 5.3.4 Damage assessments are assembled under the direction of the EMC (Office of Emergency Management/MECCA 911). Local damage assessments will be transmitted to the WV Division of Homeland Security and Emergency Management (WVDHSEM) in Charleston, when, in the judgment of local officials, State assistance may be needed.
- 5.3.5 All emergency responders will provide immediate information to MECCA regarding the extent of damages, the number and types of injuries/ casualties, and the status of any key facilities, particularly those involved in emergency response activities.
- 5.3.6 Forms A and B are used to record damage assessment information for external and internal structures.

5.4 Access Control and Re-entry

- 5.4.1 Access to an area affected by a tornado will be controlled until it is safe. Only those directly involved in emergency response and management activities will be allowed in the affected area. The EMC will establish a protocol to determine when evacuees and the general public may re-enter the affected area.
- 5.4.2 WVU staff may restrict access to unsafe areas on the campus.

5.5 Debris Clearance

- 5.5.1 The identification, removal, and disposal of rubble, wreckage, and other materials is a high priority, as this will enable all emergency responders to perform their tasks better. The tasks of highest priority include:
 - A. The demolition or removal of rubble/materials to clear obstructed roads.

- B. The repair or temporary reinforcement of roads and bridges.
- C. The construction of emergency detours and access roads.

5.5.2 WVU staff may assist in debris clearance on roads and walkways on campus to assist in emergency response and recovery.

5.6 Restoration/Shutdown of Utilities

5.6.1 Restoring or shutting down utilities may mitigate further hazards.

5.6.2 All safety precautions will be taken.

5.6.3 Notification of dangers will be reported immediately (e.g., gas leaks).

5.6.4 WVU staff may work closely with local utilities in mitigating the situation.

5.7 Building/Structure Inspection, Condemnation, Demolition

5.7.1 Building inspection procedures established by the Facilities Management Division should be followed.

5.7.2 Information should be recorded on the appropriate forms.

5.7.3 Buildings should be placarded appropriately.

5.7.4 Areas with safety concerns should be cordoned off.

5.7.5 WVU architects and engineers and the Monongalia Fire Marshal should be consulted whenever possible regarding structural safety.

5.7.6 Historical buildings should be noted in surveys.

5.8 Documentation and Reimbursement

5.8.1 Reports of property damage in total numbers and degree of damage (destroyed, major, minor) are required.

5.8.2 Reports on total dollar losses in terms of current replacement or repair costs and the uninsured portion of the dollar loss are also needed. The dollar amount is the best estimate of the total replacement cost of each type of property.

6.0 Equipment

Individuals and teams should have the following, at a minimum:

- 6.1 Personal protective equipment (masks, suits for hazards)
- 6.2 Safety equipment (hard hat, reflective vest, safety shoes, safety glasses)
- 6.3 Flashlight and spare batteries
- 6.4 Cell phone and radio
- 6.5 Cameras and film
- 6.6 Identification
- 6.7 Vehicle
- 6.8 Clipboard, pen, marker, paper
- 6.9 Duct tape
- 6.10 Pocket knife
- 6.11 First-aid kit
- 6.12 Damage assessment forms
- 6.13 Contact lists
- 6.14 Barrier tape
- 6.15 Barricades
- 6.16 Warning placards

7.0 Training

- 7.1 WVU damage assessment team members will:
 - 7.1.1 Complete all appropriate National Incident Management System training.
 - 7.1.2 Receive training on all appropriate safety and personal protection procedures.
 - 7.1.3 Receive orientation and conduct walk-through of all WVU buildings and systems.
 - 7.1.4 Train and exercise with other Federal, State, and local damage assessment teams.
- 7.2 Periodic exercises should test the procedures in this annex.

8.0 References

FEMA Public Assistance Guide

West Virginia Code as amended

West Virginia Executive Order No. 20-04 2004, or as amended

West Virginia Emergency Operations Plan, Division of Homeland Security and
Emergency Management 1999, or as amended

Monongalia County Emergency Operations Plan

Annex I, Search and Rescue

Annex L, Public Works

Annex M, Damage Assessment

Appendix 1 – Housing: Damage Assessment Procedures

Appendix 2 – Business: Damage Assessment Procedures

Appendix 3 – Public Assistance Damage Categories

Appendix 4 – Public Assistance Report Form

Appendix 5 – Final Report Form

FORM A **BUILDING EXTERIOR INITIAL DAMAGE ASSESSMENT**

BLDG. NAME _____ BLDG # _____

STORM/EVENT _____ ASSESSMENT DATE: _____

ASSESSMENT BY: _____

BUILDING AREA	CAUSE*	DAMAGE COMMENTS	PHOTO	IMMEDIATE ACTION
Roof				
Soffits				
Gutters				
Entry				
Stairs				
Landscaping				
Walls				
Fences				
Gates				
Power				
Other				

Action Required/Comments:

***Cause Code**

I = Impact **F** = Flood **W** = Wind **L** = Lightning **DR** = Wind-Driven Rain/Leaks **WD** = Water through Storm-Related Bldg Damage/Failure

FORM B BUILDING INTERIOR INITIAL DAMAGE ASSESSMENT

BLDG. NAME _____ BLDG # _____

STORM/EVENT _____ ASSESSMENT DATE: _____

ASSESSMENT BY: _____

ROOM#	CAUSE*	DAMAGE COMMENTS	PHOTO	IMMEDIATE ACTION
CARPET				
FLOOR				
WALLS				
CEILING TILE				
CEILING, OTHER				
WINDOWS				
BUILT-INS				
FURNISHINGS				
LIGHT FIXTURES				
HVAC				

Other Action Required/Comments: _____

ROOM#	CAUSE*	DAMAGE COMMENTS	PHOTO	IMMEDIATE ACTION
CARPET				
FLOOR				
WALLS				
CEILING TILE				
CEILING, OTHER				
WINDOWS				
BUILT-INS				
FURNISHINGS				
LIGHT FIXTURES				
HVAC				

Other Action Required/Comments: _____

***Cause Code**

I = Impact **F** = Flood **W** = Wind **L** = Lightning **DR** = Wind-Driven
Rain/Leaks **WD** = Water through Storm-Related Bldg Damage/Failure