



STATE OF IOWA  
PRELIMINARY DAMAGE ASSESSMENT  
STANDARD OPERATING PROCEDURE

*A guide for local and state partners*

January 21, 2020



## **VISION**

A STATE PREPARED, WITH COORDINATED CAPABILITIES TO PREVENT, PROTECT AGAINST, RESPOND TO, AND RECOVER FROM ALL HAZARDS.

## AUTHORITIES

Robert T. Stafford Disaster Relief and Emergency Assistance Act

44 Code of Federal Regulations

FEMA Public Assistance Program and Policy Guide April 2018

FEMA Damage Assessment Operations Manual: A Guide to Assessing Damage and Impact April 5, 2016

Iowa Code Chapter 29C

Iowa Administrative Code 605, Chapter 7

Iowa Comprehensive Emergency Plan, Part C: State of Iowa Disaster Recovery Plan

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## INTRODUCTION

The purpose of the State of Iowa's Preliminary Damage Assessment Standard Operating Procedure (SOP) is to ensure a complete, quality preliminary damage assessment (PDA) is provided to the Federal Emergency Management Agency (FEMA) for validation when evaluating requests for federal assistance authorized under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act). In support of this purpose, the SOP focuses on defining roles of local and State government<sup>1</sup> in the PDA process, identifying resources available to assist in the completion of PDAs and encouraging local and State coordination and communication. Per Iowa Administrative Code 605, Chapter 7, the Iowa Department of Homeland Security and Emergency Management (HSEMD) is responsible for providing guidance regarding the methodologies to be used in collecting damage assessment and impact statement information and shall provide the forms and format by which this information shall be recorded.

The SOP also describes State assistance programs and methods in which to activate and request such assistance.

## BACKGROUND

FEMA released the Damage Assessment Operations Manual in April of 2016. The Damage Assessment Operations Manual defines national standards for assessing damage and clearly outlines the information considered when FEMA evaluates requests for a Stafford Act Declaration. The SOP is meant to enhance the information found within the Damage Assessment Operations Manual by providing a clear depiction of how the PDA process is conducted in Iowa. The SOP will be utilized to develop a State/local PDA training, specific to Iowa, and consistent with the FEMA Damage Assessment Operations Manual. FEMA's local damage assessment training was last revised in 2013, prior to the release of the Damage Assessment Operations Manual, and does not accurately depict the current process and information required to complete a PDA.

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<sup>1</sup> Iowa Code 29C designates the Iowa Department of Homeland Security and Emergency Management with the authority to administer homeland security and emergency management affairs in the state of Iowa and shall be responsible for preparing and executing the homeland security and emergency management programs of Iowa subject to the direction of the governor.

## CHAPTER 1: RECOVERY PROGRAM OVERVIEW

### I. STATE PROGRAMS

The following state recovery assistance programs are activated by a Governor's Proclamation of Disaster Emergency.

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#### A. STATE INDIVIDUAL ASSISTANCE

The Iowa Individual Assistance Grant Program provides grants of up to \$5,000 for households with incomes up to 200 percent of the federal poverty level. The federal poverty level is adjusted annually. Grants are available for home or vehicle repairs, replacement of clothing or food, and for the expenses related to recovery.

A county emergency management coordinator can request a proclamation for the Iowa Individual Assistance Grant Program through Iowa Homeland Security and Emergency Management's Response Division.

Potential applicants have 45 days from the date of a proclamation to submit a claim.

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#### B. STATE DISASTER CASE MANAGEMENT

Iowa Disaster Case Management includes services to eligible households for the development and implementation of a disaster recovery plan. Iowa Disaster Case Management staff provide guidance and referrals to households for obtaining available services or advocating for additional resources from various providers that address a serious need essential to the household to prevent, mitigate, or overcome a disaster-related hardship, injury, or adverse condition.

The Iowa Disaster Case Management Program is activated as part of a Governor's Proclamation of Disaster Emergency for the Iowa Individual Assistance Grant Program.

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#### C. STATE CONTINGENT FUND

The treasurer of the State of Iowa maintains a contingent fund for use by the Iowa Executive Council. Contingent funds may be used to aid any government subdivision in an area declared by the governor to be a disaster area due to natural disasters. Funds dispersed under this program may be expended for the purpose of paying necessary expense to avert or lessen the impact of potential and actual disasters, as proclaimed by the governor. Contingent funds are provided in the form of an interest-free loan that must be repaid within 20 years. The aggregate total of loans approved under the contingent fund shall not exceed \$1 million.

A governmental subdivision may request a contingent fund loan through Iowa Department of Homeland Security and Emergency Management's Recovery Division within two years from the obligation or expenditure.

## II. FEDERAL PROGRAMS

A Stafford Act declaration activates FEMA's authorities to provide recovery assistance. Following is a description of FEMA's recovery programs.

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### A. FEMA PUBLIC ASSISTANCE

The Public Assistance (PA) program provides assistance to local, state and tribal governments and certain private nonprofit (PNP) organizations to remove debris, provide emergency protective measures, and restore equipment, buildings, and other infrastructure damaged by the disaster.

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### B. FEMA INDIVIDUAL ASSISTANCE

The Individual Assistance (IA) program provides assistance to support the recovery of disaster survivors who have uninsured or underinsured necessary expenses and serious needs.

Assistance available under the IA program includes:

- Grants to help repair/replace damaged primary residences
- Temporary rental assistance
- Lodging expense reimbursement
- Other Needs Assistance: Grants for necessary expenses and serious needs, such as, medical, dental, funeral and burial expenses, essential household items, childcare, fuel for primary heat source, vehicle damage
- Direct Temporary Housing
- Disaster Unemployment Assistance
- Disaster Legal Services
- Crisis counseling

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### C. FEMA HAZARD MITIGATION GRANT PROGRAM

The Hazard Mitigation Grant Program (HMGP) provides grants to local, state and tribal governments for long-term hazard mitigation projects. The purpose of the program is to reduce the loss of life and property in future disaster.

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### D. COMMUNITY DISASTER LOAN



The Community Disaster Loan (CDL) program provides operational funding to assist local governments that have incurred a significant loss in revenues due to a major disaster that has or will adversely affect their ability to provide essential municipal services.

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#### E. DIRECT FEDERAL ASSISTANCE

Following a Stafford Act declaration, FEMA can direct any federal agency to utilize its authorities and resources in support of state and local emergency assistance efforts to save lives, protect property and public health and safety, and lessen or avert the threat of a catastrophe. FEMA will coordinate all disaster relief assistance provided by federal agencies, private organizations, and state and local governments, provide technical and advisory assistance, perform essential community services, remove debris and assist with distribution of medicine, food and other consumable supplies and emergency assistance.

## CHAPTER 2: DECLARATION PROCESS

The preliminary damage assessment (PDA) process is a mechanism used to determine the impact and magnitude of damage and the resulting unmet needs of individuals, businesses, the public sector, and the community as a whole. Utilizing PDA information, Iowa Homeland Security and Emergency Management (State) evaluates the local, State, territorial and/or tribal capability to respond and determines the assistance and programs (State or federal) required. The State has adopted a phased approach to developing a complete PDA. The results of each phase can determine the need to commence the subsequent phase. The phases are as follows:

1. Local damage assessment
2. State verification
3. Federal validation

Information collected within the PDA is used by the State as a basis for the governor's request for a Stafford Act Declaration, and by FEMA to document the recommendation made to the president in response to the governor's request.

The exception to using the phased approach exists within those incidents of unusual severity and magnitude that federal assistance is needed in an expeditious manner and field damage assessments are not required to demonstrate the impact of the incident.

### I. EMERGENCY DECLARATIONS<sup>2</sup>

The governor may request that the president declare an emergency when an incident is of such severity and magnitude that effective response is beyond the capability of the state and the affected local government(s) and requires supplementary federal emergency assistance to save lives and to protect property, public health and safety, or to lessen or avert the threat of a disaster. FEMA will consider the following factors:

- Whether or not federal emergency assistance is necessary to supplement state and local efforts to save lives, protect property and public health and safety, or to lessen or avert the threat of a catastrophe.
- Whether all other resources and authorities available to meet the crisis are inadequate
- Whether assistance provided under federal emergency assistance is appropriate.

A request for an emergency declaration must be submitted within five days after the need for assistance becomes apparent, but no longer than 30 days after the occurrence of the incident, in order to be considered.

### II. MAJOR DISASTER DECLARATIONS<sup>3</sup>

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<sup>2</sup> 44 C.F.R. §206.35

<sup>3</sup> 44 C.F.R. §206.36

When a catastrophe occurs, the governor may request a major disaster declaration from the president when an incident is of such severity and magnitude that effective response is beyond the capabilities of the state and affected local government(s) and federal assistance is necessary to supplement the efforts and available resources of the state, local governments, and compensation by insurance for disaster-related losses. FEMA will consider factors such as:

- The amount and type of damage;
- the impact of damage on affected individuals, the state, and local governments;
- the available resources of the state and local governments, and other disaster relief organizations;
- the extent and type of insurance in effect to cover losses;
- assistance available from other federal programs and other sources;
- imminent threats to public health and safety;
- recent disaster history in the state;
- hazard mitigation measures taken by the state or local governments;
- and other factors pertinent to a given incident.

A request for a major disaster declaration must be submitted within 30 days of the occurrence of the incident in order to be considered.

## CHAPTER 3: PHASED APPROACH

### 1. LOCAL DAMAGE ASSESSMENT

Iowa Administrative Code 605, Chapter 7, establishes the local emergency management coordinator as responsible for the coordination and collection of damage assessment and impact statement information immediately following a disaster that affects the jurisdiction. Not every incident will require detailed information beyond what is available through situational awareness. However, if the county emergency management coordinator determines supplemental recovery funding assistance will likely be necessary, the county emergency management coordinator will coordinate damage reporting with the State.

Within 72 hours of the disaster incident affecting their county, the county emergency management coordinator will develop an initial damage report. The initial damage report is intended to provide an overview estimation of type and amount of damage within areas in local jurisdictions that have sustained damage.

The initial damage report, at a minimum, should include the information contained in Appendix A of this document. County emergency management coordinators can provide the initial damage report through their situational report or an event entry in WebEOC or via the State's damage collection tool. HSEMD's Response Division monitors WebEOC and the collector tool and notifies the HSEMD Recovery Division of damage to homes and public infrastructure. Based on county and statewide initial damage reports, the HSEMD Recovery Division will identify the affected area(s) that will require a local damage assessment. When the need for a local damage assessment is identified and the county emergency management coordinator has confirmed the county's intent to pursue State and/or federal assistance, HSEMD will notify the county emergency management coordinator(s) of the need and will establish a deadline for local damage assessment reporting.

Local emergency management coordinators may request programmatic and technical subject matter experts to assist in the performance of local damage assessments.

Once local damage assessments have been completed, the information collected shall be provided to the State. The collector tool, can be utilized for the purpose of completing the local damage assessment<sup>4</sup>. Utilization of the Collector tool is not required. The State will accept Local Damage Assessments in whatever format the county emergency management coordinator provides it in, as long as the assessment contains the required information

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<sup>4</sup> <https://preliminary-damage-assessment-iowahsemd.hub.arcgis.com/>

mentioned below. If utilizing a format other than Collector, the county emergency management coordinator shall identify this to the Recovery Division upon receiving the request for local damage assessment reporting.

Expedient accurate damage assessments are built on a foundation of information gathered at the local level. A common mistake made in the damage assessment process is the rushing of local assessments, an error that can prolong verification and validation phases and slow the delivery of assistance.

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## A. LOCAL DAMAGE ASSESSMENT TEAMS

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### 1. COUNTY EMERGENCY MANAGEMENT COORDINATOR

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The county emergency management coordinator is the most critical position in the damage assessment process. The county emergency management coordinator is responsible for identifying and training local assessment team members, coordinating assessment activity in the jurisdiction, and submitting information to the State.

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### 2. LOCAL OR COUNTY PA DAMAGE ASSESSMENT TEAM MEMBER

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The local or county PA damage assessment team members are generally representatives of potential applicants from government offices or private nonprofits. PA damage assessment team members should be familiar with the type of work being evaluated and be able to collect information and supporting documentation established by FEMA.

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### 3. LOCAL OR COUNTY IA DAMAGE ASSESSMENT TEAM MEMBER

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The local or county IA damage assessment team members may be representatives of county emergency management, government offices, nongovernmental offices, and Community Emergency Response Team (CERT) programs. IA damage assessment team members should be trained in gathering information related to location, ownership, occupancy, and insurance coverage of impacted residences and categorizing damage according to criteria established by FEMA.

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## B. LOCAL DAMAGE ASSESSMENT INFORMATION REQUIRED <sup>5</sup>

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### 1. FEMA PUBLIC ASSISTANCE DAMAGE ASSESSMENT INFORMATION REQUIRED

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<sup>5</sup> [https://www.fema.gov/media-library-data/1558541566358-30e29cac50605aae39af77f7e25a3ff0/Damage\\_Assessment\\_Manual\\_4-5-2016.pdf](https://www.fema.gov/media-library-data/1558541566358-30e29cac50605aae39af77f7e25a3ff0/Damage_Assessment_Manual_4-5-2016.pdf)

This section is intended to identify the information and documentation collected during the local damage assessment to evaluate the need for the FEMA PA program.

#### A. IDENTIFYING POTENTIAL APPLICANTS

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Identifying potential applicants and damaged facilities are the first steps that jurisdictions must take to conduct the local damage assessment for the FEMA PA program. There are four types of applicants eligible for PA funding.

1. State governments
2. Tribal governments
3. Local governments
  - a. Counties and parishes
  - b. Municipalities, cities, towns, boroughs, and townships
  - c. Local public authorities
  - d. School districts
  - e. Intrastate districts
  - f. Councils of government
  - g. Regional and interstate government entities
  - h. Agencies or instrumentalities of local governments
  - i. State-recognized tribal governments
  - j. Special districts established under State law
  - k. community development districts
4. Certain private nonprofit organizations

Damage assessment estimates and information for State agencies will be gathered by HSEMD and attributed to the appropriate county (determined by the location of the damaged facility) to support the county per capita indicator.

Rural electric cooperatives (REC) have facilities that cross county lines and as a result, are required to separate damage by county. Rather than require RECs to report damage to multiple emergency management coordinators, HSEMD will contact RECs, gather their damage assessment estimates and information, and attribute to appropriate counties.

County emergency management coordinators may come across other entities with facilities that cross county lines. Unless requested by the county emergency management coordinator, HSEMD will not contact these entities directly to gather damage assessment estimates and information. In addition, HSEMD does not contact local entities directly for the purpose of gathering local damage assessment estimates and information, unless requested or permitted by the county emergency management coordinator.

#### B. IDENTIFYING DAMAGED FACILITIES

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Damage to any building, works, system, equipment or improved and maintained natural feature that a potential applicant has legal responsibility to restore should be identified during a local damage assessment.

### C. ESTIMATED COST OF ASSISTANCE

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In order to determine that a disaster is of a size and magnitude that it warrants federal assistance, an estimated program cost is developed for each county and compared to county per capita indicators. The county estimated program costs are then aggregated to determine a total statewide estimated program cost and compared to the established statewide per capita indicator. County estimated program costs are included in the total statewide estimated program cost even if they do not meet or exceed their county per capita indicator. Per capita indicators can be found at, <https://www.homelandsecurity.iowa.gov>.

Estimating program cost for the FEMA PA program requires an understanding of regulations documented in Title 44 of the Code of Federal Regulations (44 CFR) and policies found in the FEMA PA Program and Policy Guide (PAPPG).

Local damage assessments should contain enough information and supporting documentation to allow verification of estimated program costs. FEMA will require additional information or more substantial supporting documentation for projects greater than the large project threshold<sup>6</sup> and/or projects that raise questions regarding eligibility. The need for additional information will generally be identified by the State during the State verification in preparation for FEMA's request for information during the joint preliminary damage assessment (JPDA). For less costly damage, program facility eligibility requirements are generally confirmed verbally with the potential applicant.

### D. DOCUMENTING DAMAGE, WORK, AND COST

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Potential applicants should document the work, and estimated or actual cost, required to perform emergency work or restore damaged infrastructure. To be considered, work must be:

1. required as a result of the disaster;
2. be within a jurisdiction being assessed (with the exception of sheltering and evacuation activities); and
3. be the legal responsibility of a potential applicant.

Documentation may include, but is not limited to:

- Ownership, rental, or lease documents
- Maintenance records
- Insurance policies
- PNP supporting documentation, such as a tax exemption letter

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<sup>6</sup> <https://www.homelandsecurity.iowa.gov>

- Contracts and procurement documentation
- Invoices
- Safety and inspection reports
- Other documentation necessary to establish that program requirements have been met.

Potential applicants are encouraged to photograph damage. This may expedite the State verification and help potential applicants to document pre-restoration damage should a disaster be declared. It is not necessary to include photographs of all emergency protective measure work; however, photographs should be included to verify damage at sites where emergency construction is necessary (e.g. construction of an emergency roadway). Potential applicants should document damage dimensions, materials, and the size or capacity of damaged facility elements. This is particularly important for work that hasn't been completed, as the information gathered is often critical to estimating and verifying work and cost required for restoration.

The following examples of cost types should be considered when gathering estimates related to debris removal, emergency protective measures and restoration of damage:

- Labor
- Equipment
- Supplies and materials
- Contracts

Costs not to consider:

- Improvements
  - Local damage assessments should only capture the cost of restoring a facility to its pre-disaster condition, unless, a facility is easily established as a total loss. If this is the case, the cost of replacement with codes and standards should be captured.
- Loss of revenue
- Loss of useful service life
- Tax assessments
- Increased operating expenses
- Cost of restoring facilities that were not in active use at the time of the disaster

Local damage assessment estimates should be reduced by the actual or anticipated insurance proceeds. Costs not addressed by insurance, including a potential applicant's deductible, damage not covered under an existing policy or required by regulation, and in circumstances where restoration costs exceed policy limits, will be considered.

Work is divided into categories and should be documented as such during the local damage assessment.



Type	Category of Work	
Emergency Work:	A	Debris Removal
	B	Emergency Protective Measures
Permanent Work:	C	Roads and Bridges
	D	Water Control Facilities
	E	Buildings and Equipment
	F	Utilities
	G	Parks, Recreation and Other

## E. CONSIDERATIONS BY CATEGORY OF WORK<sup>7</sup>

### 1. CATEGORY A – DEBRIS REMOVAL

Debris removal activities, such as clearance, removal, and disposal, are considered during damage assessments if they do not fall under the authority of another federal agency and the removal is in the public interest.

Debris removal from the following locations/areas will not be considered:

- Federally maintained navigable channels and waterways
- Flood control works under the authority of the Natural Resources Conservation Service (NRCS)
- Agricultural land
- Natural, unimproved land, such as heavily wooded areas and unused areas

Local damage assessments should include the type and estimated amount of debris that will need to be removed in units (cubic yards or tons). A rough estimate can be developed by first estimating the amount of debris that needs to be removed for an area that represents a typical or average amount of debris. This estimated quantity can then be divided by the area, or length of road, to yield an average unit estimate. This unit estimate can then be used to estimate the total amount of debris in the jurisdiction. These calculations should be provided to support estimates developed. Locations where these estimates were developed should be documented and photographs should be taken to aid in verifying estimates.

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<sup>7</sup> [https://www.fema.gov/media-library-data/1525468328389-4a038bbef9081cd7dfe7538e7751aa9c/PAPPG\\_3.1\\_508\\_FINAL\\_5-4-2018.pdf](https://www.fema.gov/media-library-data/1525468328389-4a038bbef9081cd7dfe7538e7751aa9c/PAPPG_3.1_508_FINAL_5-4-2018.pdf)

Once a debris estimate has been developed, the cost of removal must be calculated. Costs for the pick-up, staging/transferring, separating, reducing, and disposing of debris should be taken into account.

Potential applicants may also use cubic yard rates supplied by contracts or historic costs to estimate costs. Unit costs for debris removal can also be calculated by dividing the amount of debris removed by the cost of removal. Calculations used to estimate the cost of debris removal should be provided to support estimates.

Potential applicants should document the location of all temporary and permanent debris sites, including temporary debris staging and reduction sites (TDSR). These locations are important to validate quantity estimates and the early identification of potential environmental requirements.

Potential applicants should be aware of environmental requirements for the disposal of debris and take appropriate measures to ensure that disposal sites and methods comply with applicable laws and regulations.<sup>8</sup>

## 2. CATEGORY B – EMERGENCY PROTECTIVE MEASURES

Emergency protective measures are actions taken before, during, and after a disaster to eliminate or lessen immediate threats to life, public health, or safety, or to eliminate or lessen immediate threats of significant additional damage to improved public and private property in a cost effective manner.

The following is a list of emergency protective measures often taken to save lives or protect public health or safety that may be considered. This list is not all-inclusive.

- Transporting and pre-positioning equipment and other resources for response
- Flood fighting
- Emergency operations center (EOC)-related costs
- Emergency access
- Supplies and commodities
- Medical care and transport
- Evacuation and sheltering costs
- Childcare
- Safety inspections
- Search and Rescue
- Fire fighting
- Security, such as barricades, fencing, or law enforcement

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<sup>8</sup> [www.iowadnr.gov/disaster.html](http://www.iowadnr.gov/disaster.html)

- Use or lease of temporary generators for facilities that provide essential community services
- Dissemination of information to the public to provide warnings and guidance about health and safety hazards

The following are emergency protective measures to protect improved property that may be considered when specific requirements are met. This list is not all-inclusive.

- Constructing emergency berms or temporary levees to provide protection from floodwaters or landslides
- Emergency repairs necessary to prevent further damage, such as covering a damaged roof to prevent infiltration of rainwater
- Buttressing, shoring, or bracing facilities to stabilize them or prevent collapse
- Temporary slope stabilization
- Mold remediation
- Removal and storage of contents from facilities that meet program requirements for the purpose of minimizing additional damage
- Extracting water and clearing mud, silt, or other accumulated debris from facilities that meet program requirements

### 3. CATEGORY C – ROADS AND BRIDGES

Permanent work required to restore roads, bridges, and their components to their pre-disaster design and function is considered unless the restoration falls under the authority of another federal agency, such as the Federal Highway Administration. Permanent restoration of private roads are not considered.

Work to repair potholes or fatigue cracking is generally not considered as this type of damage is rarely caused directly by a single incident.

Work to repair scour or erosion damage to a channel or stream bank will be considered if the repair is necessary to restore the structural integrity of a road, culvert, or bridge.

### 4. CATEGORY D – WATER CONTROL FACILITIES

Work done to restore publicly-owned water control facilities that do not fall under the authority of another federal agency may be considered. Water control facilities are those facilities built for the following purposes:

- Channel alignment
- Recreation
- Navigation
- Land reclamation
- Irrigation

- Maintenance of fish and wildlife habitat
- Interior drainage
- Erosion prevention
- Flood control
- Storm water management

Restoring the pre-disaster carrying or storage capacity of engineered channels, debris and sediment basins, storm water detention and retention basins, and reservoirs may be considered, but only if the potential applicant can establish:

- The pre-disaster capacity of the facility; and
- The facility was maintained on a regular schedule.

## 5. CATEGORY E – BUILDINGS AND EQUIPMENT

Work required to restore damaged buildings will be considered along with upgrades required by codes and standards. This includes all structural and non-structural components, including mechanical, electrical, and plumbing systems, as well as contents, furnishing and equipment within the building.

Environmental and historic preservation requirements are common to the restoration of public buildings. Potential applicants are encouraged to identify damaged facilities over 45 years old, and any work that may be environmentally or culturally sensitive to avoid jeopardizing federal funding should a disaster be declared.

Work required to restore damaged equipment will be considered. This includes any vehicles and construction equipment. When equipment is not repairable, potential applicants may use “blue book” values or similar price guides to estimate the cost of replacing the damaged equipment with equivalent items – similar age, condition, and capacity. If the cost to replace damaged equipment is less than the cost to repair it, the estimate should be based on the replacement cost as it represents the lowest cost option.

## 6. CATEGORY F – UTILITIES

Work required to restore damaged utility facilities to pre-disaster design and function will be considered under Category F. This includes:

- Water storage facilities, treatment plants, and delivery systems
- Power generation, transmission, and distribution facilities, including, but not limited to, wind turbines, generators, substations, and power lines
- Natural gas transmission and distribution facilities
- Sewage collection systems and treatment plants
- Communication systems

Work and cost estimates should be based on specific disaster-related damage. As an example, if there is evidence of a broken sewer line between A and B streets, potential applicants should not estimate complete replacement between A and B streets, but use an appropriate length of repair given the above ground indicators.

If an electric utility cannot effectively repair damaged conductors and would like to have conductor replacement work considered, information supporting the need should be provided for review during the State verification.

## 7. CATEGORY G – PARKS, RECREATION FACILITIES, AND OTHER

Eligible publicly owned facilities in this category include:

- Mass transit facilities such as railways
- Beaches
- Parks
- Playground equipment
- Swimming pools
- Bath houses
- Tennis courts
- Boat docks
- Piers
- Picnic tables
- Golf courses
- Ball fields
- Fish hatcheries
- Ports and harbors
- Other facilities that do not fit in Categories C–F

Unimproved natural features are not eligible. The cost of replanting trees, shrubs, and other vegetation will be considered when they are part of the restoration of an eligible facility and are needed for erosion control, to minimize sediment runoff, or to stabilize slopes, including dunes on eligible improved beaches.

## F. CAPTURING IMPACT

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Capturing the impact that lost or damaged infrastructure had on the jurisdiction is an essential damage assessment task. Narrative statements that illustrate the impact of the disaster can help show whether or not the disaster is beyond the capacity of the local, State or tribal government, and whether federal assistance is required to recover. HSEMD will request impact statements be provided during the State verification.

To capture impact, the local damage assessment should document the direct and indirect consequences that damaged and destroyed infrastructure has on the community. The loss or degradation of facilities built to support normal community functions like roads, bridges, and critical infrastructure can have an immediate impact on the population and slow recovery. Impact statements should include mention of mitigation measures that had a significant effect in reducing the estimated damage.

Recent disasters can have a dramatic impact on the State or local ability to recover. For this reason, any disasters that occurred in the jurisdiction within the previous 12 months should be considered. Disasters are those incidents that are declared by either the governor or president.

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## 2. FEMA INDIVIDUAL ASSISTANCE DAMAGE ASSESSMENT INFORMATION REQUIRED

This section is intended to identify the information and documentation collected during the local damage assessment to evaluate the need for the FEMA IA program.

To evaluate damage to homes, FEMA has identified several elements of information that should be collected during damage assessment including:

- Address
- Damage level
- Cause of damage
- Jurisdictions impacted and concentration of damage
- Types of homes
- Homeownership rate of impacted homes
- Percentage of affected households with insurance coverage appropriate to the peril
- Number of homes impacted and degree of damage; to include depth for flood events – in living area of the home or basement.
- Inaccessible communities
- Special Flood Hazard Areas (SFHA), sanctioned communities, Coastal Barrier Resource System zones and other protected areas
- Primary or secondary residence
- Other relevant PDA data, such as income levels, poverty, trauma, and special needs
- Impact on the structure utilities

### A. CAUSE OF DAMAGE

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Causes of damage may include:

- Earthquake
- Fire
- Flooding (includes mudslide)
- Landslide

- Severe storms
- Sewer back-up
- Utility outages and impacts
- Straight-line winds/derecho
- Tornado
- Terrorism

#### B. JURISDICTIONS IMPACTED AND CONCENTRATION OF DAMAGE

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Collecting physical addresses of damaged homes according to the standardized degrees of damage (affected, minor, major, and destroyed) described below, along with the category for inaccessible homes is required and can assist in understanding the severity and magnitude of an incident.

#### C. TYPES OF HOMES

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Local damage assessments should note whether a structure is a single family residence, a multi-family residence, or a manufactured home.

Information should be provided on the common types of construction in the impacted area, such as slab on grade, basements, and the number of manufactured home parks impacted. This information can be helpful in illustrating the length of time that may be necessary for repairs and potential impacts on the community.

#### D. HOMEOWNERSHIP RATES OF IMPACTED HOMES

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The ownership and occupancy status for impacted residences are important factors to consider while conducting the local damage assessment. Under the Individuals and Households Program (IHP), only a homeowner's primary residence is eligible for home repair and personal property assistance, while renters may be eligible for temporary rental assistance and Other Needs Assistance (ONA). Federal assistance is not available for damage to secondary residences and outbuildings.

The information required includes:

- Ownership status
- Owner
- Renter

##### Occupancy Status

- Primary residence: A permanent residence that is occupied, by owner or renter, for more than six months out of the year.

- Secondary residence: A vacation home, home under construction, or home occupied less than six months out of the year. Not considered/assessed during damage assessments.
- Vacant property: Not considered/assessed during damage assessments.

U.S. Census Bureau information may be used to estimate demographic, income, homeownership, occupancy, and insurance trends and identify areas of potential greater need.

#### E. PERCENT OF IMPACTED HOUSEHOLDS WITH INSURANCE COVERAGE APPROPRIATE TO THE PERIL

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Recent U.S. Census data, local officials, and impacted residents themselves can be useful in determining whether an impacted area or group of homes are insured. In order to estimate the level of applicable insurance coverage the best available information will be utilized.

When damage may be covered under the National Flood Insurance Program, FEMA may be able to provide information on the number of households located in a Special Flood Hazard Area that have a flood insurance requirement from a previous disaster. If flooding has impacted homes in a community that does not participate in the NFIP, FEMA IA is unavailable to residents in the identified floodplain.

#### F. NUMBER OF HOMES IMPACTED AND DEGREE OF DAMAGE

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FEMA has established four degrees to describe damage to homes: Destroyed, Major, Minor, and Affected with an Inaccessible category for the homes that cannot be reached for assessment. The degrees are not intended to align with other types of local assessments such as red or yellow tagging of damaged homes.

All damage degree determinations should be based on viewed damage and focus only on disaster-related damage. Damage not caused by the disaster event should not be included. Photographs should be included within the local damage assessment as these are very useful in verifying damage determinations. In particular, a photograph of the damage and portion of the structure that the determination relies on.

##### 1. DESTROYED:

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One photo/dwelling is required.

The residence is a total loss, or damaged to such an extent that repair is not feasible.

Contributing factors that constitute a degree of destroyed include:

- Complete failure of two or more structural components (basement, foundation, load-bearing walls, or roof)
- Only foundation remains



- Imminent threat of collapse
- Manufactured home: Frame is bent, twisted or compromised
- Manufactured home: Missing roof covering and the structural ribbing has collapsed for the majority of the roof system

## 2. MAJOR:

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One photo/dwelling is required.

The residence has sustained significant structural damage and requires extensive repair.

Including:

- Failure or partial failure to structural elements of the roof
- Failure or partial failure to structural elements of the walls
- Failure or partial failure to foundation
- Water line 18 inches above the floor in an essential living space, above the electrical outlets, or on the first floor with a completely full basement
- Manufactured home: Displaced from foundation, block or pier and other structural components have been damaged
- Manufactured home: Water has come into contact with the floor system to include belly board insulation, ductwork, and subflooring

## 3. MINOR:

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Damage that does not affect the structural integrity of the residence:

- Nonstructural damage to roof components over essential living space
- Nonstructural damage to the interior walls components
- Multiple small vertical cracks in the foundation
- Damage to chimney
- Damage to or submersion of mechanical components
- Waterline less than 18 inches in an essential living space
- Damage or contamination to a private well or septic system
- Manufactured home: No structural damage and not displaced from the foundation
- Manufactured home: Nonstructural components have sustained damage (windows, doors, wall coverings, roof, bottom board insulation, ductwork and utility hookup)
- Manufactured home: Interior mechanical unit impacted

## 4. AFFECTED:

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Minimal damage to the exterior of the residence and non-essential basements:

- Partial missing shingles or siding
- Cosmetic damage such as paint discoloration or loose siding
- Broken screens
- Gutter damage and debris

- Damage to attached structure (porch, carport, garage, or outbuilding)
- Damage to landscaping, retaining walls or downed trees that does not affect access to the residence or is collapsed into the residence
- Any waterline in the crawl space or basement when essential living space or mechanical components are not damaged or submerged
- Manufactured home: Cosmetic damage and/or damage to porch, carport, garage, and/or outbuilding

## 5. INACCESSIBLE

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Residences that are not accessible by reasonable means. Residences that have damage that can be viewed from a safe vantage point are not inaccessible and should be assigned a degree of damage.

## G. CAPTURING IMPACT

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There is no established threshold or indicator associated with FEMA IA; however, the following factors are considered when evaluating the need for the IA program:

- Concentration of damage
- Trauma (deaths and injuries, disruption of normal community functions, emergency needs, etc.)
- Impact on populations with greater need
- Ability of local, State or tribal government, and voluntary organization programs to address needs
- Uninsured/underinsured home and personal property losses

### 1. CONCENTRATION OF DAMAGE

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High concentrations of damage may indicate a greater need for federal assistance in some areas. However, widespread damage throughout much of a state may be more difficult for the state to respond to.

### 2. TRAUMA

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Trauma includes deaths and injuries, disruptions to normal community functions, and extended power or utility outages. County emergency management coordinators should consider the ability of the IA program to address the need and include the findings in the impact statement.

### 3. IMPACT TO POPULATIONS WITH GREATER NEED

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Local damage assessments should include information related to demographics of impacted communities. The demographics of the disaster impacted population identifies areas of increased need for assistance.

#### 4. ABILITY OF LOCAL, STATE, TRIBES AND VOAD TO ADDRESS NEEDS

Impact statements should identify any local or State assistance programs or VOAD support that has been made available for disaster relief.

#### 5. UNINSURED/UNDERINSURED HOME AND PERSONAL PROPERTY LOSSES

Large numbers of damaged uninsured homes or damaged homes without insurance applicable to the peril, may suggest a greater need for federal assistance. This information is developed by HSEMD in conjunction with the State Insurance Commissioner's Office or through GIS or Census information.

### II. STATE VERIFICATION

44 Code of Regulations (C.F.R.) §206.33(a) requires that the State verify the local damage assessment information before requesting federal support. Ideally local damage assessments can be verified remotely; however this phase may require follow-up and in-person site visits depending on the level of information provided within the local damage assessment.

The State will focus on verifying areas with concentrated and/or large damage impacts first to achieve per capita indicators and/or to establish the impact to individuals. Impact statements will generally be requested of the county emergency management coordinator by HSEMD during the State verification.

#### A. STATE DAMAGE ASSESSMENT TEAMS

The State, Iowa Department of Homeland Security and Emergency Management, Recovery Division, serves as the principal entity overseeing damage assessment, verification, and validation activities. The State is responsible for ensuring that local damage assessments are appropriately supported; local, State or tribal government personnel are prepared to verify local assessment findings; coordinating with federal representatives during the joint PDA; and ensuring appropriate support is provided as requests for federal assistance are drafted.

### III. FEDERAL VALIDATION

If the State's review of the local damage assessment results in a determination that criteria has been met to justify an emergency or major disaster declaration, a joint preliminary damage assessment (JPDA) will be requested of FEMA. The request for a JPDA will include the counties or tribal lands to be assessed and a summary of information verified by the State shall be

provided to FEMA. Ideally, during the JPDA, local damage assessments can be validated remotely by FEMA with the State; however this phase may require follow-up and in-person site visits dependent on the level of information provided within the local damage assessment and verified by the State.

In the instance of in-person site visits, JPDA field teams should be composed of at least one FEMA representative and one representative of the State. A local government representative, familiar with the extent and location of damage in his/her community, should also be included, if possible. Joint FEMA State JPDAs are intended to validate information - not to find damage. The State is responsible for coordinating with local county emergency management to ensure they are prepared to discuss damage and guide field teams to residences, businesses, and/or damaged infrastructure, to conduct site visits. Generally, JPDA teams ask to start with the most heavily damaged homes (IA) and infrastructure (PA), and work their way down, taking into account geography and travel time. When joint PDAs are required to validate damage for the PA program, local county emergency coordinators will need to schedule time with potential applicants to discuss damage, review supporting documentation, and conduct site visits.

## APPENDIX A: INITIAL DAMAGE REPORTING

- Identify significant impacts to jurisdictions
- If impact is major or destroyed damage to homes/public infrastructure, provide:
  - Brief description of type and extent of damage
  - Photos or aerial footage of facilities
- If impact is widespread minor damage to homes/public infrastructure, provide:
  - Brief description of type and extent of damage
  - Number of homes/sites



STATE OF IOWA PRELIMINARY DAMAGE ASSESSMENT SOP

APPENDIX B: IOWA PUBLIC ASSISTANCE PRELIMINARY DAMAGE ASSESSMENT FIELD GUIDE



*A tool for local damage assessment teams*

February 21, 2020



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The Public Assistance (PA) Preliminary Damage Assessment (PDA) Field Guide is designed to provide a quick reference for PDA teams within the field to assist with damage identification and cost estimation. The PA PDA Field Guide does not provide all available assessment methodologies; rather the PA PDA Field Guide addresses common assessment methodologies and scenarios.

## SECTION 1: DAMAGE IDENTIFICATION

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### ELIGIBLE APPLICANTS

Applicants are state and local government (state agencies, townships, municipalities, county departments, authorities, special districts, primary, secondary and higher education, etc.) and certain private nonprofits (PNP).

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### ELIGIBLE FACILITIES

Facilities are any building, works, system or equipment, built or manufactured, or an improved and maintained natural feature that a potential applicant has legal authority to restore. There are specific parameters for determining eligible PNP facilities and whether their services are critical or noncritical.

**Inaccessible Sites:** At times, sites can be impossible to access and/or are underwater and damage cannot be seen. When reporting damage for these sites, consider the following:

- Identify what facilities are potentially damaged by the event that are inaccessible<sup>1</sup>
- Use historical damage data and repair costs; or
- Insurance values.

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### ELIGIBLE COST

Costs must be directly tied to the performance of eligible work, adequately documented and necessary, and reasonable to accomplish the work properly and efficiently.

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### ELIGIBLE WORK

Work must be required as a direct result of the declared disaster, located within the county and the legal responsibility of an eligible applicant.

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<sup>1</sup> Aerial Photos can be used to substantiate level of damage (completely submerged, water line)

Type	Category of Work	
Emergency Work:	A	Debris Removal
	B	Emergency Protective Measures
Permanent Work:	C	Roads and Bridges
	D	Water Control Facilities
	E	Buildings and Equipment
	F	Utilities
	G	Parks, Recreation and Other

## SECTION 2: COST ESTIMATING – DEBRIS REMOVAL – CATEGORY A

### DEBRIS REMOVAL ELIGIBILITY CONSIDERATIONS

To be eligible, debris removal must eliminate immediate threats to lives, public health and safety, and/or improved public or private property.<sup>2</sup>

Debris includes, but is not limited to, vegetative, construction and demolition, sand, silt, gravel, rocks, boulders, and vehicle and vessel wreckage. Debris removal includes clearance, removal, and disposal.

- **Debris removal from private property:** not eligible UNLESS it has been brought to the public right of way (ROW) by the property owner or volunteers.
- **Hazardous trees:** damaged trees still standing may be eligible if trunk is greater than 6" in diameter, has a split trunk, has a broken canopy, or leaning at greater than 30-degree angle.<sup>3</sup>
- **Broken limb/branch removal (hangars):** to be eligible, removal of broken hanging limbs must be 2" or larger and pose immediate threat to the public (e.g., hanging over sidewalks, trails, playgrounds, etc.).
- **Hazardous debris:** must be collected, documented, and disposed of separately from all other debris types.
- **White goods:** refrigerators, stoves, washers/dryers, etc. must be collected, documented, and disposed of separately from all other debris types.
- **Debris in waterways:** must present an immediate threat to structures such as bridges, culverts, intakes, etc.


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<sup>2</sup> For a PNP, eligible debris, removal is limited to that which is associated with an eligible facility.

<sup>3</sup> FEMA pays to "flush cut" the tree; stump removal generally not eligible although some exceptions may apply

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## ESTIMATING QUANTITIES OF DEBRIS

- **Measuring debris piles:** visualize the debris pile as a cube. Provide quantities in cubic yards (cy) or tons:  $l \times w \times h / (1 \text{ cy} / 27 \text{ cubic feet (cf)}) = \text{cy}$ . 
- **Vegetative or construction debris piles:** use a factor of 0.33 to allow for air space:  $l \times w \times h \times 0.33 / 27 \text{ cf} = \text{cy}$ .
  - Vegetative/tree debris: 5 cy = 1 ton;
  - Construction type debris: 2 cy = 1 ton; and
  - Sand/gravel/silt debris: 1 cy = 1.5 tons.

### Example: Measuring Debris Pile

Debris (vegetative or construction) has been staged.

- The pile measures 100 ft. long x 80 ft. wide x 8 ft. high.
- Quantity Calculation:  $100 \text{ ft.} \times 80 \text{ ft.} = 64,000 \text{ cf.} \times .33 = 21,120 \text{ cf.} / 27 = 782 \text{ cy}$

- **Quantify amounts of debris already disposed of:** consider the cubic yard capacity of dump trucks used to haul; consider using land fill scale/weigh tickets
- **Household Debris within the right of way:** calculate the amount of personal property within an average single-family home.
  - 25-30 cy for homes without basement
  - 45-50 cy for homes with basement
  - 290 cy for a single-wide mobile home
  - 415 cy for a double-wide mobile home

- **Widely scattered debris (city/county wide):**
  - Quantify smaller, representative piles/areas. When 20-30% of small piles/areas are measured and quantified, determine an average.

#### Example: Widespread Debris

City of XYZ had a severe windstorm and vegetative debris is scattered throughout the city. It was determined that 20 square blocks were impacted. By quantifying debris in four square blocks (20%) within the impacted area, it was determined that block one has approximately 1,000 cy of debris, block two has approximately 500 cy of debris, block three has approximately 100 cy of debris, and block four has approximately 1,500 cy of debris. Average debris within the four blocks measured equals 775 cy per square block.

- Total area impacted = 20 square blocks
- Average debris per square block = 775 cy per sq. block (Average of 4 blocks)  
Total estimated debris amount for 20 square blocks =  $20 \times 775 \text{ cy} = 15,500 \text{ cy}$

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#### COST OF DEBRIS COLLECTION AND DISPOSAL

- **Work completed:** obtain the following cost information, as applicable:
  - Labor (Provide hours and cost for straight time and overtime);
  - Equipment (Provide hours and use FEMA or IDOT cost codes)<sup>4</sup>;
  - Materials (Provide receipts and invoices);
  - Contract (Provide agreements/contracts and invoices);
  - Disposal (Provide landfill invoices and scale/weigh tickets); and
  - Mutual Aid (provide invoices and agreements).

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<sup>4</sup> <https://www.fema.gov/schedule-equipment-rates>

#### Example: Cost of Debris Collection and Disposal – Work Completed

City of XYZ used its own employees to collect and dispose at the landfill approximately 2,500 cy of the total 15,500 cy of vegetative debris. Provide the following information:

- Labor regular-time – eight employees worked 60 hours each (480 total) at an average hourly rate of \$20 per hr.;  $480 \times \$20 = \$9,600$
  - Equipment – Two dump trucks used for total of 80 hrs.; using FEMA cost code 8722 @ \$67.70 per hr.;  $80 \times \$67.70 = \$5,416$
  - Hauled to landfill – Landfill fees equal \$5,000
- Total debris removal cost = \$20,016 / 2,500 cy (approx. \$8 per cy)

- **Work to be Completed:** the following can be used;
  - Unit cost. Determine a cost per cy/ton. This unit cost should include all labor, equipment, and disposal fees;
  - Obtain a quote from a contractor (either lump sum or unit cost); and
  - Use historical data from previous contracts (unit cost or lump sum) or using data from current or past work completed with own employees.

#### Example: Cost of Debris Collection and Disposal – Work to be Completed

Using the work completed totals from the previous example, we can arrive at a reasonable cost estimate for the remaining debris for City XYZ. The debris work already completed had a cy average of \$8. The remaining debris to be removed is 13,000 cy  $13,000 \times \$8 = \$104,000$ . This is a reasonable approach to estimating the cost of remaining debris removal.

- **Insurance coverage:** Does the legally responsible party have insurance coverage that will cover the expense of the debris removal? If yes, do not include the cost.

## SECTION 3: COST ESTIMATING – EMERGENCY PROTECTIVE MEASURES – CATEGORY B

### EMERGENCY PROTECTIVE MEASURES ELIGIBILITY CONSIDERATIONS

Emergency protective measures are actions taken before, during, and after a disaster to eliminate or lessen immediate threats to life, public health, or safety, or to eliminate or lessen immediate threats of significant additional damage to improved public and private property.

Emergency protective measures include:

- Flood fighting such as sandbagging, erecting HESCO barrier walls, and berms;
- Emergency operations centers;
- Needed supplies and commodities;
- Evacuation and sheltering;
- Search and rescue;
- Security such as barricades, fencing, law enforcement road blocks;
- Emergency pumping operations; and
- Use or lease of temporary generators.

### COST OF PERFORMING EMERGENCY PROTECTIVE MEASURES

- **Labor:** Provide hours and cost for straight time and overtime;
- **Equipment:** Provide hours and use FEMA or IDOT cost codes<sup>5</sup>;
- **Materials:** Provide cost, actuals, historical or obtained from informal quotes;
- **Contract(s):** Provide agreements/contracts and invoices;
- **Mutual aid:** Provide invoices and agreements;
- **Quote(s):** from a contractor (either lump sum or unit cost);

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<sup>5</sup> <https://www.fema.gov/schedule-equipment-rates>



- **Historical data:** from previous contracts (unit cost or lump sum) or using data from current or past work completed with own employees; and
- **Insurance coverage:** Does the legally responsible party have insurance coverage that will cover the expense of the debris removal? If yes, do not include the cost.

Example: Cost of Performing Emergency Protective Measures

Sandbagging to protect public facilities

- FA Labor 60 overtime hrs. @ \$35/hr. avg. = \$2,100
- FA Equipment (1) 15 cy. dump truck for 60 hrs. @ \$65/hrs. = \$3,900
- Materials = \$500

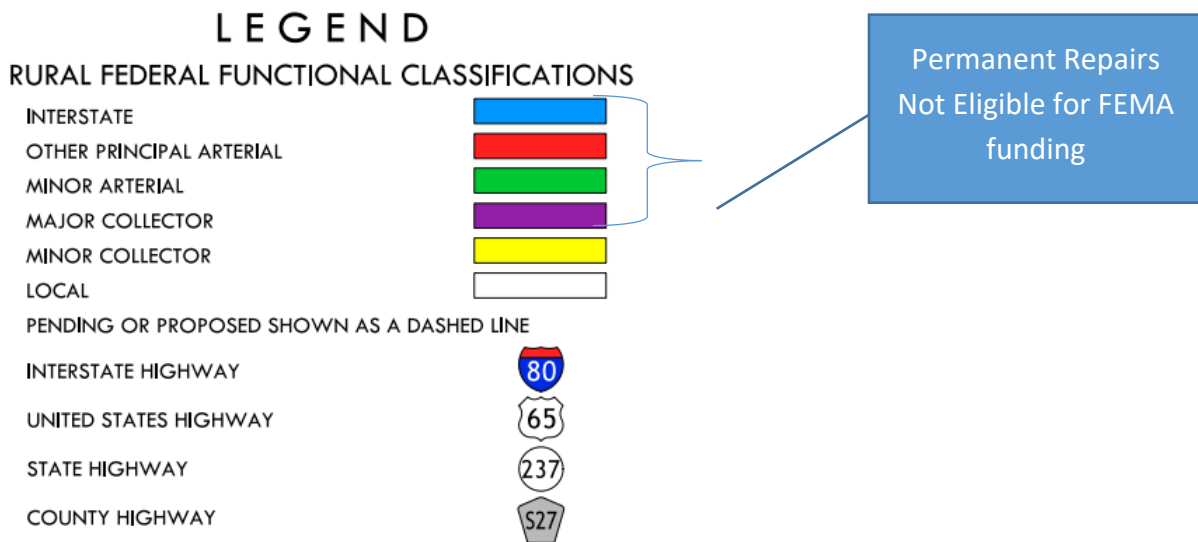
Total Cost = \$6,500

## SECTION 4: COST ESTIMATING ROADS AND BRIDGES – CATEGORY C

### REPAIRS TO ROADS AND BRIDGES ELIGIBILITY CONSIDERATIONS

Permanent work required to restore roads (paved, gravel, dirt), bridges, and associated components to their pre-disaster design and function should be considered during the damage assessment.

Permanent repairs to roads, bridges, and associated components (culverts, traffic signals, intake structures, etc.) within the public right of way, whether rural or urban, identified as a major collector, or higher, are not eligible for FEMA funding. However, identify these structures on your damage assessment with an FHWA identifier. This information will be shared with the Iowa Department of Transportation for consideration under the Federal Highway Administration's ER program<sup>6</sup>.



<sup>6</sup> <https://iowadot.gov/maps/Digital-maps/Other-maps/Federal-Functional-Classification-maps-CountyListing>

<https://iowadot.gov/maps/Digital-maps/Other-maps/Federal-Functional-Classification-maps-UrbanListing>

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## ESTIMATING REPAIRS OF ROADS AND BRIDGES

- **Roads:** Paved (concrete, asphalt), granular surface, sealcoat, and dirt roads and their associated components (shoulders, fore slope, etc.) should be identified. The extent of damage and total number of roads damaged will determine the amount of documentation needed for your damage assessment.<sup>7</sup>

### Example A: Estimating Damage to Roads

The City of XYZ was flooded. Ten separate street locations were overtopped and washed away. Each of these 10 sites can easily be identified.

- Damage dimensions – Length in feet x width in feet x depth in feet (consider surface and subbase damage, or undermining)  
Quantify in CY, by site, the concrete needing replaced ( $L \times W \times D / 27 = CY$ )

### Example B: Estimating Damage to Roads

Flooding occurred throughout the entire southwest quadrant of ABC County. The number of road closures indicate that nearly every road in this quadrant of the county was inundated. It is estimated that 150 separate granular surface roads have been damaged or completely washed out in spots. Go to the sites that represent the worst damage and continue until a representative 10-20 percent sampling has been viewed. Provide the following:

- Damage dimensions of each road site visited - Length in feet x width in feet x depth in feet (consider surface and subbase damage, and bank/fore slope failures)
- Quantify in cy or tons the amount of granular material and/or dirt needing replaced

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<sup>7</sup> Potholes and “alligator cracking” is generally viewed by FEMA as a maintenance issue and is generally not funded. Only include this damage if it is certain the event caused this damage. Do not include private streets/roads, such as gated communities, in your damage assessment.

### Example C: Estimating Damage to Roads

Flooding occurred throughout the northeast quadrant of ABC County. Fifty separate road locations were identified as damaged. Most roads lost 2-3 inches of surface aggregate and some lost shoulder embankment. Prior to the damage assessment being performed, county personnel had 100 percent of the repairs made. Provide the following:

- Name of road for each repair location
- Dimensions of the repair – L in feet x W in feet x D in feet/27 = cy
- Actual tonnage of aggregate/embankment material placed by location
- Sampling of invoices (say 10-20 percent) or documentation identifying amount of rock taken from stockpile
- Force account labor and equipment used, identifying equipment types
- Contracted work – invoices, contracts, etc.

- **Bridges and culverts:** Each bridge that is damaged or destroyed must be identified. Sampling methodology is not accepted for these structures.
  - Historic costs for similar work can be used;
  - Estimates developed by professional familiar with the facility; or
  - Commercial estimating source (RS Means, Cost Works, etc.) report.

### Example: Estimating Damage to Bridges

#### Bridge Washout

- Two span, 80 ft. long x 24 ft. wide, concrete beam and deck structure
- Restoration cost est.: \$240/sq. ft. (historic cost provided by county engineer)
- Repair cost calculation: 80 ft. x 24 ft. x \$40/sq. ft. = \$460,800
- Engineering: \$69,120
- Geotechnical Study: \$6,912

Total Estimated Cost = \$536,832

## SECTION 5: COST ESTIMATING – WATER CONTROL FACILITIES – CATEGORY D

### REPAIR OF WATER CONTROL FACILITIES ELIGIBILITY CONSIDERATIONS

Types of water control facilities to include are, but not limited to:<sup>8</sup>

- Dams
- Levees
- Engineered drainage channels
- Storm water retention/detention basins
- Pumping facilities

Sediment/debris removal to restore capacity to the above facilities should be captured as Category D. This is important as regular time force account labor of permanent employees is eligible under Category D and ineligible under Category A.

### ESTIMATING REPAIRS OF WATER CONTROL FACILITIES

- Historic costs for similar work can be used<sup>9</sup>;
- Estimates developed by professional familiar with the facility;

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<sup>8</sup> Damage assessment data for water control facilities that fall under the authority of another federal agency (OFA) such as the USACE or NRCS should NOT be included.

<sup>9</sup> <https://www.fema.gov/schedule-equipment-rates>

- Commercial estimating source (RS Means, Cost Works, etc.) report; or

#### Example: Estimating Damage to Water Control Facility

##### Drainage Ditch Capacity Restoration

- Dimensions: 200 ft. x 20 ft. x 10 ft.
- Estimated depth of sediment: 1.5 ft.
- Amount of sediment attributable to flood = 80 percent (ditch last cleaned three mo. earlier @ \$20.00/cy)
- FA labor and equipment
- Cost calculation:  $200 \text{ ft.} \times 20 \text{ ft.} \times 1.5 \text{ ft.} = 6,000 \text{ cf} \times .8 = 4,800 \text{ cf} / (1 \text{ cy}/27 \text{ cu. ft.}) = 178 \text{ cy} \times \$20.00 = \$3,556$

## SECTION 6: COST ESTIMATING – BUILDINGS AND EQUIPMENT – CATEGORY E

### REPAIRS TO BUILDINGS AND EQUIPMENT ELIGIBILITY CONSIDERATIONS

Work required to restore damaged buildings should be documented along with any upgrades required by codes and standards. Additionally, work required to restore damaged equipment should be documented.

- **Buildings:** Damage to consider:
  - Exterior and interior (siding, brick, roofing, walls, flooring, etc.)
  - Structural (foundations, beams, columns, etc.)
  - Nonstructural (electrical, plumbing, mechanical, etc.)
  - Contents, furnishings, and equipment within the building
  - Clean-up and mold remediation (flood and other water damage)
  - Parking lots, fences, etc. in close proximity to building
- **Equipment:** Equipment means tangible personal property (including information technology systems) having a useful life of more than one year and a per-unit acquisition cost which equals or exceeds the lesser of the capitalization level established by the non-federal entity for financial statement purposes, or \$5,000.

### ESTIMATING REPAIRS OF BUILDINGS AND EQUIPMENT

- Historic costs for similar work can be used<sup>10</sup>;
- Estimates developed by professional familiar with the facility;
- Commercial estimating source (RS Means, Cost Works, etc.) report;
- Insurance documentation;
- When equipment is not repairable, FEMA uses “blue book” values or similar price guides to estimate the eligible cost; and

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<sup>10</sup> <https://www.fema.gov/schedule-equipment-rates>

- Estimates from dealers, insurance values, web-based prices, etc.

#### Example: Estimating Damage to Building

##### City Building

- Four stories
- Built 1998
- Basement and first floor flooding – flood debris removal and remediation, building mechanical system, damaged furniture, interior wall repair and painting
- Contract quote: \$840,000 (unit bid provided)
- Anticipated Insurance: \$700,000 (policy provided)

Total estimated cost = \$140,000



## SECTION 7: COST ESTIMATING – UTILITIES – CATEGORY F

### REPAIRS TO UTILITIES ELIGIBILITY CONSIDERATIONS

Work required to restore damaged utilities to pre-disaster design and function should be documented. Examples of utilities to include are, but not limited to:

- Water treatment plants, storage, and delivery systems
- Electric distribution, transmission, to include poles, conductor, transformers, etc.<sup>11</sup>
- Sewage treatment plants, collection, and delivery systems
- Communication systems
- Natural gas systems

### ESTIMATING REPAIRS TO UTILITIES

- Historic costs for similar work can be used<sup>12</sup>;
- Estimates developed by professional familiar with the facility;
- Commercial estimating source (RS Means, Cost Works, etc.) report; and
- Insurance documentation.

#### Example: Estimating Damage to Electric Distribution Lines

- Fourteen utility poles destroyed – conductor will be re-hung
- FA labor, equipment, and materials
- Estimated cost of repair = \$4,750/pole (historic)
- Cost calculation: 14 poles x \$4,750 = \$66,500.

Total estimated cost = \$66,500

<sup>11</sup> HSEMD will contact and work directly with rural electric cooperatives to obtain damage assessment data

<sup>12</sup> <https://www.fema.gov/schedule-equipment-rates>

#### Example: Estimating Damage to Sanitary Sewer

A sinkhole is observed directly above a known sanitary sewer pipe between A and B streets. The extent of damage is unknown and is not visible but it is reasonable to assume that a break in the sewer line exists. The recommendation is NOT to estimate replacement of the entire sewer line from A to B streets. Instead, use an appropriate length of repair given the above ground conditions. If additional work becomes known later it can be added. Local city or county staff generally can quickly identify a repair method.

## SECTION 8: COST ESTIMATING PARKS, RECREATION, AND OTHER – CATEGORY G

### REPAIRS TO PARKS, RECREATION, AND OTHER ELIGIBILITY CONSIDERATIONS

Types of facilities to include are, but not limited to:

- Parks – playground equipment, picnic tables, bathhouses, boat docks, shelter houses, etc.
- Municipal golf courses
- Ball fields
- Tennis courts
- Fish hatcheries
- Beaches
- Other facilities that do not “fit” in Categories C-F

Do not include:

- Unimproved natural features – river/stream banks, wooded areas, etc.
- Replacement of damaged trees, shrubs, cosmetic or aesthetic vegetation. However, it is acceptable to include lost vegetation that was utilized to reduce sediment runoff, stabilize slopes, and also sod/grass if it was an integral part of an eligible facility (e.g. ball fields).

### ESTIMATING REPAIRS TO PARKS, RECREATION, AND OTHER

- Historic costs for similar work can be used<sup>13</sup>;
- Estimates developed by professional familiar with the facility;
- Commercial estimating source (RS Means, Cost Works, etc.) report; and
- Insurance documentation.

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<sup>13</sup> <https://www.fema.gov/schedule-equipment-rates>

### Example: Estimating Damage to a Park

#### State Park

- Clean/repair: 10 wood picnic tables, one playground, four benches, 16 trash receptacles and two sets of bleachers
- Replace: 400 playground safety play surface tiles @ \$24.50/tile – verbal contractor quote
- FA labor to perform repairs and replace safety tiles: 20 regular hours @ \$25/hr. avg. = \$500
- Playground safety tiles: 400 tiles @ \$24.50/tile = \$9,800

Total estimated cost = \$10,300

## SECTION 9: REQUIRED PDA DOCUMENTATION

### DOCUMENTATION CHECKLIST

- **Required PDA documentation all categories**
  - ✓ Location(s): address, GPS coordinates
  - ✓ Authority of another federal agency: yes/no/unsure
  - ✓ Facility type: specific structure and material, and equipment
  - ✓ Description: damaged elements or activity required
  - ✓ Dimensions
  - ✓ How work will be accomplished: force account, contract, combination
  - ✓ Labor, equipment<sup>14</sup> and materials summaries
  - ✓ Material cost (actual or estimate): invoices, receipts
  - ✓ Contract cost (actual or estimate): agreements, invoices, bids, quotes
  - ✓ Mutual aid cost: agreements
  - ✓ Historic costs for similar work
  - ✓ Estimate by professional familiar with the facility
  - ✓ Commercial estimating source report (RS Means, Cost Works, etc.)
  - ✓ Explain unique requirements that impact cost
  - ✓ Environmental and historic preservation considerations
  - ✓ Photos
  - ✓ Insurance
  - ✓ Codes and standard upgrades applicable to the repair

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<sup>14</sup> <https://www.fema.gov/schedule-equipment-rates>

- **Required PDA Documentation Category A**

- ✓ Classification of debris by type
- ✓ Location of debris (roads, ROW, private property, waterways, parks, etc.) GPS coordinates required for all trees and hangars being removed
- ✓ Location of debris operations facilities (reduction sites, disposal sites, temporary staging areas)
- ✓ Quantity of each type of debris removed
- ✓ Trunk diameter for any tree removal (flush cut)/stump removal)
- ✓ Photos of every tree and hangar requiring removal (photo should depict that it is located on public ROW and poses an immediate threat to public health and safety)

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**SUMMARY RECORDS** – <https://www.fema.gov/media-collection/public-assistance-project-worksheets>

Force Account Labor Summary Record

Materials Summary Sheet

Rented Equipment Summary Record

Contract Work Summary Record

Force Account Equipment Summary Record

Applicant's Benefits Calculation Worksheet





STATE OF IOWA PRELIMINARY DAMAGE ASSESSMENT SOP

APPENDIX C: IOWA INDIVIDUAL ASSISTANCE PRELIMINARY DAMAGE ASSESSMENT FIELD GUIDE



*A tool for local damage assessment teams*

February 21, 2020



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The Individual Assistance (IA) Preliminary Damage Assessment (PDA) Field Guide is designed to provide a quick reference for PDA teams within the field to assist with damage identification and classification. This Field Guide does not describe all possible damage assessment scenarios, however it provides information to assist in the collection of data for common individually owned structures damaged by a disaster.

## SECTION 1: PURPOSE

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### WHY PERFORM A DAMAGE ASSESSMENT?

Conducting an individual assistance damage assessment enables officials to determine the magnitude and severity of an event as it pertains to homes and businesses. It is the method used to quantify the number of individually owned structures impacted by the disaster. This allows officials to determine whether local resources will be sufficient to effectively respond to and recover from the event; or if State and/or Federal resources will be necessary.

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### RAPID, DETAILED AND ACCURATE

Preliminary individual assistance damage assessments should be completed and results reported to Iowa Department of Homeland Security and Emergency Management (HSEMD) within 24 hours of the event. Where possible, reporting results within 12 hours can expedite actions needed to follow up on the assessment.

The data collected is analyzed to determine if a Joint PDA is merited, and if supplemental assistance is expected to be needed. When necessary, HSEMD will request a Joint PDA with the Federal Emergency Management Agency (FEMA) and/or the Small Business Administration (SBA). Any delay in completing the initial assessment may result in a delay to the provision of disaster assistance to victims in need.

Critical data includes the property address, GPS coordinates, degree of damage, cause of damage, structure type and occupancy. Additional notes or details describing the damage are also beneficial.

## SECTION 2: PREPARE

Prior to and during a damage assessment, there are several things to bear in mind to ensure success:

- Conduct a visual assessment of all structures to verify reported damage
- Be sensitive when discussing damage with the property owner
- Determine the extent of insurance coverage (i.e. homeowner's insurance policy vs. flood insurance – homeowner's insurance does not cover flood damage)
- Include any impact to businesses in the damage assessment
- Accuracy of the assessment and estimated degree of damage is critical. Keep in mind that initial reports come in during times of high tension, which can understandably exaggerate the amount of damage, which is detrimental during a Joint PDA.
- Be consistent
- Focus on the degree of damage. In the realm of damage assessment, habitability of the structure is more important than the property value.
- Look for waterlines and debris lines to assist in determining the depth of flood water
- Report only disaster-related damage
- Be prepared to make judgement calls in times of uncertainty so that the assessment can be completed efficiently and expeditiously

## SECTION 3: DEGREES OF DAMAGE

### DESTROYED

Structures with damage significant enough that the home or structure is deemed a total loss are considered to be “destroyed”. Characteristics of a destroyed structure:

- Complete failure of 2 or more major structural components:
  - Basement walls
  - Foundation
  - Walls
  - Roof
- Repair is not possible
- Permanently uninhabitable
- Entire structure is compromised
- Requires immediate demolition due to the level of damage, confirmed imminent danger and/or the threat of collapse

Manufactured/Mobile homes may also fit the Destroyed category with the following damage:

- Frame is bent, twisted or otherwise compromised
- Missing roof covering or structural ribbing/sheathing/framing collapsed or missing for majority of roof system
- Residence is a total loss or the event has removed the structure in its entirety
- Repairs are not economically feasible
- No value other than scrap due to damage

### MAJOR

Structural damage or other significant damage that requires extensive repairs. For conventionally built homes/structures, damage from flood waters when the waterline is 18” or higher. For manufactured homes, major damage exists if flood waters enter the living space. Other identifiers of a structure with “major” damage:

- Flood depth or water line 18” or above in an essential living space

- Flood depth or water line above electrical outlets in an essential living space
- Failure of structural elements (wall, roof, floors, foundation, etc.) that is repairable
- Flooding reached the first floor of a structure with a basement
- Substantial damage to structure (cost to repair is greater than 50% of pre-event structure value)
- Damage that will require more than 30 days to repair

Additional characteristics of manufactured/mobile homes in the Major category:

- Water has come into contact with floor system
- Displaced from foundation / frame and other structural components damaged

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## MINOR

Damage that is repairable and non-structural in nature. For conventionally built homes/structures, damage from flood waters when the waterline is lower than 18". For manufactured homes, minor damage would be the likely result if the waterline is at or below the floor system.

- Wide range of damages that are repairable in less than 30 days
- Flood depth or water line up to 18" in an essential living space
- Damage to mechanical components/utilities such as furnace, water heater, HVAC, boiler, etc.
- Damage to private well or septic system
- Structural integrity is NOT compromised
- Windows/doors are unsecured and/or damaged

Manufactured/mobile homes in the Minor category may also be identifiable because:

- Flood depth or water line below floor system
- Non structural damage
- Structure has not been displaced from foundation or frame, on frame damage
- Components may be damaged such as windows, doors, wall coverings, roof, bottom board insulation, ductwork, utility hook-up, skirting, HVAC

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## AFFECTED

Affected properties encompass a wide range of impacts causing little or no damage to the structure. Often the impact is cosmetic in nature and/or would only require minor clean up.

- Structure is repairable and can still be occupied without repairs
- Flood depth or water line in basement or crawl space only
- Essential living space/mechanicals/utilities were not submerged or otherwise damaged

Look for the below when it comes to a manufactured/mobile homes that is Affected only:

- Damage to only porch, carport, garage or other outbuildings
- Frame is NOT bent, twisted or otherwise compromised
- No damage to structure or components such as windows, doors, wall coverings, roof, bottom board insulation, ductwork or utility connection
- No measurable amount of water in the living space

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## INACCESSIBLE

Inaccessible means that an obstruction prevents the damage assessment team from being able to make a visual inspection. Whenever safely possible, attempt to view the structure from a vantage point to assign a damage level. Occasionally a home or a group of homes is inaccessible due to thing like a disaster-related damage to a road or bridge, downed trees, or flooded or otherwise impassable roads.