



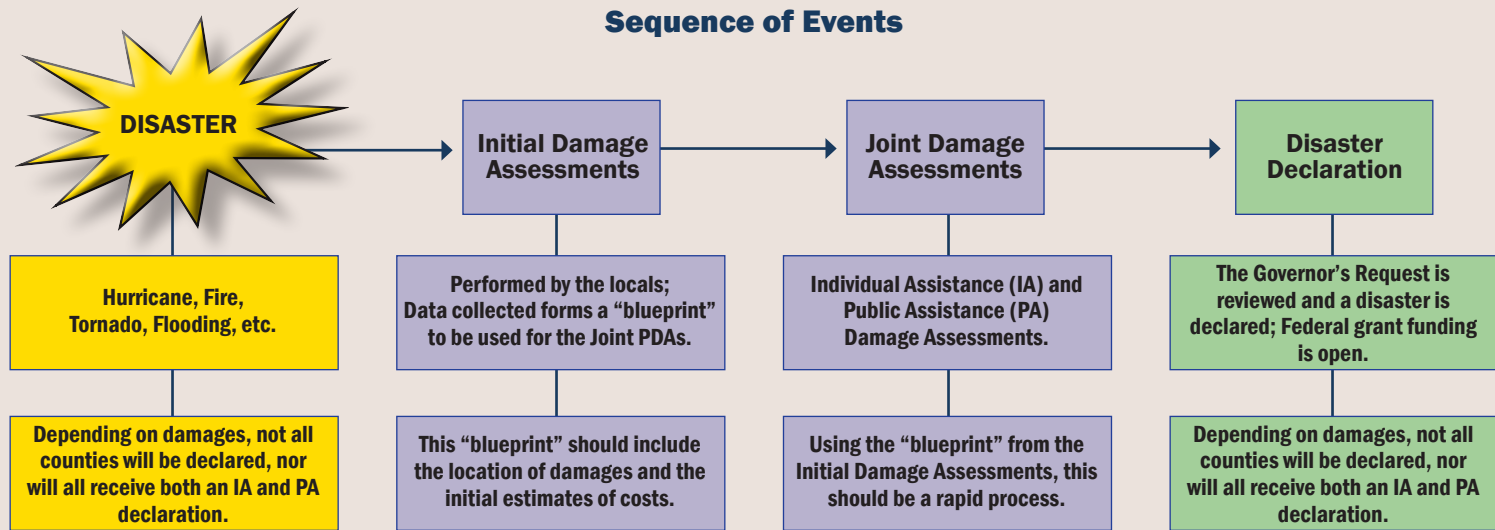
Preliminary Damage Assessment Team
Pocket Guide for PUBLIC ASSISTANCE



**Florida Division of
Emergency Management**
“Failure is not an option”

Preliminary Damage Assessments

A Preliminary Damage Assessment (PDA) is performed immediately after a disaster event in order to gauge the impacts to a community and to determine if the disaster event is beyond the capacity of state and local resources. In essence, it is a data collection process performed by federal, state, and local officials, as well as non-profit and volunteer groups and individuals. The data collected is then reported to the state for a determination to be made as to whether a presidentially declared disaster should be requested. If requested and then granted, FEMA aid programs are then activated to assist.



PDA Equipment

INFORMATION

- Personal photo identification with all relevant health information (allergies, medications, emergency contacts, etc.)
- Maps of the area and all contact info for your applicant and supervisors
- Notebook paper for notes, including a pen and/or pencil
- Official PDA forms
- Any reference materials, including FEMA Public Assistance Guides

ELECTRONICS

- Phone/radio
- Weather radio
- GPS unit
- Laptop or tablet
- Camera
- Calculator
- Flashlight or headlamp
- Spare batteries for all electronics
- Phone chargers and power inverters

TOOLS and MISC.

- Tape measure or ruler
- Small shovel (folding)
- Multitool or knife
- Watch
- Water cooler
- Snack and bottled water
- Cash
- Plastic bag for personal garbage
- Backpack

PERSONAL SAFETY

- Hand sanitizer
- Insect repellent
- Sunscreen
- Hat
- Rain gear
- Boots (steel toed)
- Long pants or jeans
- Gloves
- Bandana
- Sunglasses
- Safety glasses
- Dust filter or paper mask
- First aid kit
- Medications

Helpful Tip!

Ensure that you have your equipment ready to go at a moment's notice. You may be called into the field at any time following the disaster. Additionally, check that your equipment is working and operational every few months.

Priority #1: Team Safety

- Always ensure that you and your team are safe before entering or leaving a site or hazardous area.
- Ask if there are any safety considerations before leaving or entering the field to conduct the PDA.
- Get any appropriate contact information before you leave in case you need assistance.
- Be aware of your surroundings at all times - before entering a site, look up, look down, and look all around.
- If a situation appears dangerous - leave. It's not worth losing your life over collecting data for a PDA. Do not challenge a potentially hostile property owner.
- Remember you are in a disaster zone - there may not be any hospitals or EMS services immediately available.
- Walk or drive cautiously. Debris-filled streets are dangerous to navigate. Weakened roads or bridge structures due to flooding can collapse under the vehicle's weight.
- Be sure to wear a seat belt at all times when driving or riding along as a passenger.
- Before entering a building, check for structural damage to ensure that it's not in danger of collapsing. Never use an open flame as a light source as there may be a gas leak.

- Know your hazards and what to do if you run into them. Check the back of this guide for a list of the most common hazards and how to address each one.
- Remember to bring bottled water and insect spray.
- Pace yourself - you'll be out there all day! Take breaks!

IF YOU ARE INJURED

- Take appropriate steps to prevent further injury.
- If severe, contact emergency medical services or 9-1-1.
- Contact your PDA coordinator or local coordinating entity.
- If state staff, contact State Watch Office.

PDA COORDINATOR CONTACT INFO:

STATE WATCH OFFICE CONTACT INFO:

Federal Emergency Management Agency (FEMA) Public Assistance (PA) Program

PA is a recovery grant program used to provide assistance to state, tribal, local governments and certain types of private nonprofit (PNP) organizations so that communities can quickly respond to and recover from major disasters or emergencies declared by the president.

Types and Categories of Work

The FEMA PA Program distinguishes recovery work between type (temporary or permanent) and category (A – G).

Temporary/emergency work is performed to reduce or eliminate an immediate threat to life, protect health and safety, and to protect improved property that is threatened in a significant way as a result of the disaster.

Permanent work is required to restore a damaged facility, through repair or restoration, to its pre-disaster design, function, and capacity in accordance with applicable codes or standards.

Type of Work	Time to Complete Work*	Category of Work	Description
Emergency or Temporary	6 months to 1 year*	A	Debris Removal
		B	Emergency Protective Measures
Permanent	1.5 – 4 years*	C	Roads and Bridges
		D	Water Control Facilities
		E	Buildings and Equipment
		F	Utilities
		G	Parks, Recreational Facilities, and Other

*Approximate; can be extended in certain cases

Cost Thresholds

Unlike the Individual Assistance Program, the Public Assistance Program has damage cost thresholds that should be reached to increase the chance of achieving a presidential disaster declaration. Every state and county has their own threshold of damage costs that they should reach. These threshold amounts are released annually by FEMA and are based on the adjustments to the Consumer Price Index (CPI). Using the most recent census data, the state and each affected county can calculate the total damage threshold to reach for their area.

Ensure that your county knows its threshold number before starting the damage assessment process. **If that threshold number is reached, DO NOT STOP your damage assessment.** Continue to collect damage information and estimated costs so that you can better gauge all of the impacts to the community as well as to be better prepared for the next step in the Public Assistance Program if you receive a declaration.

PA Damage Thresholds for Your Area

Fiscal Year: _____

State Population: _____

County Population: _____

FEMA Per Capita (State): _____

FEMA Per Capita (County): _____

State Threshold: _____

County Threshold: _____

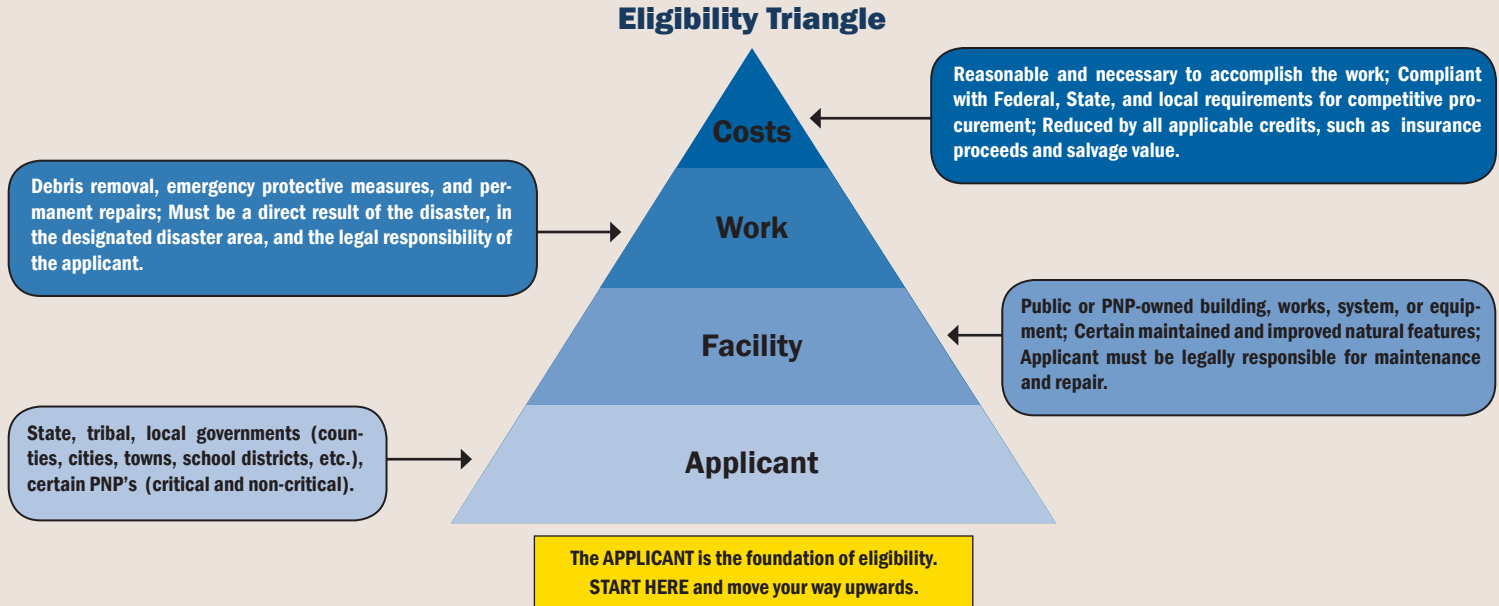


PA Threshold Data can be found at FDEM's website at this link:

<http://www.floridadisaster.org/Recovery/PublicAssistance/documents/Disaster%20Relief%20Thresholds.pdf>

Eligibility in the FEMA PA Program

There are 4 eligibility components to the FEMA PA Program: Applicant, Facility, Work, and Costs. Each component has its own eligibility rules which are covered in the next few pages. To determine eligibility, first start at the bottom of the triangle and work your way to the top, meeting each eligibility criteria along the way.



Eligibility: Applicants

State Governments
State department, agency, commission, court, or office.

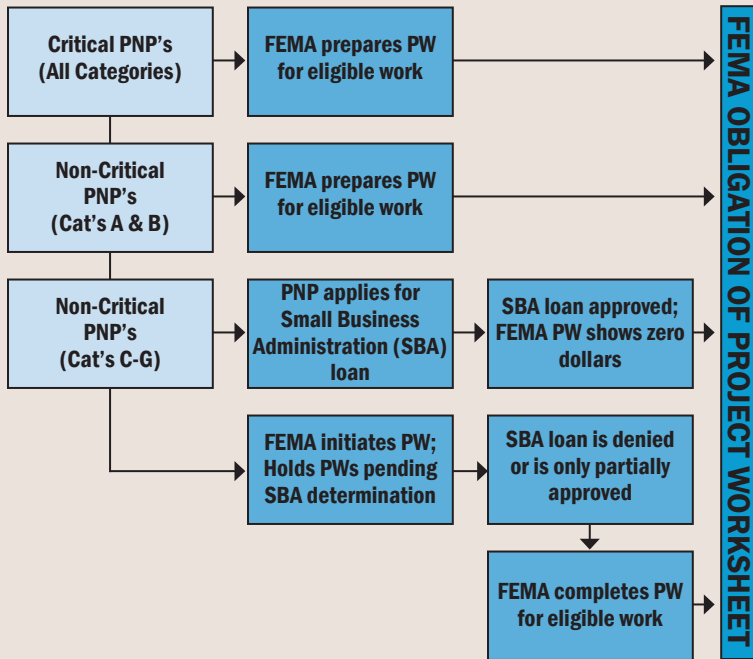
Local Governments
Towns, cities, counties, townships, municipalities, local public authorities, councils of governments, school districts, etc.

Tribal Governments
Federally recognized Indian Tribal governments.

Critical PNP's
Utility companies, water control agencies, fire departments, ambulance services, hospitals and medical providers, schools, etc.

Non-Critical PNP's
Animal control facilities related to public health and safety, libraries, food programs for the needy, assisted living facilities, museums, performing art centers, zoos, community centers, daycare facilities.

Application Requirements for PNP's



Eligibility: Facilities

Facility – any publically owned or PNP-owned building, works, system, or equipment (built or manufactured); or certain improved and maintained natural features.

Improved and Maintained Natural Features – a documented design that improves the natural characteristics of the feature and makes a measurable difference between improved vs. natural features. Maintenance of the improvement is done on a regular schedule and to standards to ensure that the improvement is performed as designed.

Legal Responsibility – the applicant must be legally responsible for the repair and maintenance of the damaged facility or the performance of eligible emergency services; legal “ability” is not the same as legal “responsibility”.

Active Use – the facility must be in active use at the time *unless* the facility was temporarily inoperative for repairs; it was unoccupied for a short time between tenants; active use by the applicant was established in an approved budget; or the applicant can demonstrate to FEMA that there was an intent to begin use within a reasonable time.

Alternate Use – if the facility is being used for purposes other than its original design or purpose, restoration is limited to returning it to its original design and capacity or to the immediate pre-disaster alternate purpose.

Example Eligible Facilities

- Improved or maintained beaches
- Soil and vegetation used for soil stabilization measures
- Roads constructed by the U.S. Forest Service but the legal responsibility of maintenance is now a local agency
- Temporarily unoccupied building owned by an eligible applicant responsible for maintenance and repairs

Example Ineligible Facilities

- Agricultural lands and planted trees and shrubs
- Roads and bridges that are under the control of the Federal Highway Administration (FHWA)
- Water control facilities under the legal responsibility of the United States Army Corp of Engineers (USACE) or National Resources Conservation Service (NRCS)

Eligibility: Work

Direct Result – the damages caused and the subsequent work performed must be related directly to that presidentially declared disaster; damages must occur within the incident period of the disaster unless it's for emergency protective measures before or after the incident; or if damages occur after the incident period that can be tied to that disaster.

Designated Disaster Area – the work performed must be within the designated disaster area or counties; owners within a designated disaster area cannot perform eligible work on a facility outside the designated disaster area; owners outside of a designated disaster area can perform eligible work on a facility within the designated disaster area (ex: state agencies).

Negligence – damages caused by negligence on the part of the applicant are not eligible—this often happens when the applicant fails to take prudent measures to protect a facility from further damage in the wake of a disaster.

Maintenance – damages caused must not be attributed to the lack of proper maintenance by the eligible applicant; use of pre-disaster inspection or maintenance reports can help the applicant prove eligibility; routine maintenance items are not eligible which could include pot hole repair, pulling of ditches, repairing asphalt or leaking roofs, etc.

Example Eligible Work

- Sandbagging and temporary levees set-up before the disaster
- Road damage caused by heavy equipment used to construct temporary berms or other emergency protective measures
- *In certain cases*, repairing buildings to new codes and standards, including the Americans with Disabilities Act (ADA)
- Temporary/permanent relocation of facilities, *with exceptions*

Example Ineligible Work

- Interior water damage caused by the applicant failing to take steps to cover roof damages unless reasonably justified
- Updating damaged facilities (not grandfathered in), that were in violation of current codes and standards before the disaster
- Repairs to a damaged facility by the agency that is legally responsible for repairs if that agency is an ineligible applicant

Eligibility: Costs

Reasonable Costs – costs do not exceed those which would be incurred by a prudent person under the same circumstances prevailing at the time the decision was made to incur the costs; reasonableness can be established through average costs for similar work in the area, historical prices, nationally published cost estimating databases, FEMA cost codes, etc.

Labor

Types of Employees	Temporary Work (Category's A-B)		Permanent Work (Category's C-G)	
	Regular	Overtime	Regular	Overtime
Permanent / Seasonal		X	X	X
Reassigned		X	X	X
Backfill (Extra hire)	X	X	X	X
Backfill (Regular Employee)		X		X
Temporary	X	X	X	X
Foreman and Supervisor (First Line)		X	X	X
Contract Supervision		X	X	X

X = Eligible

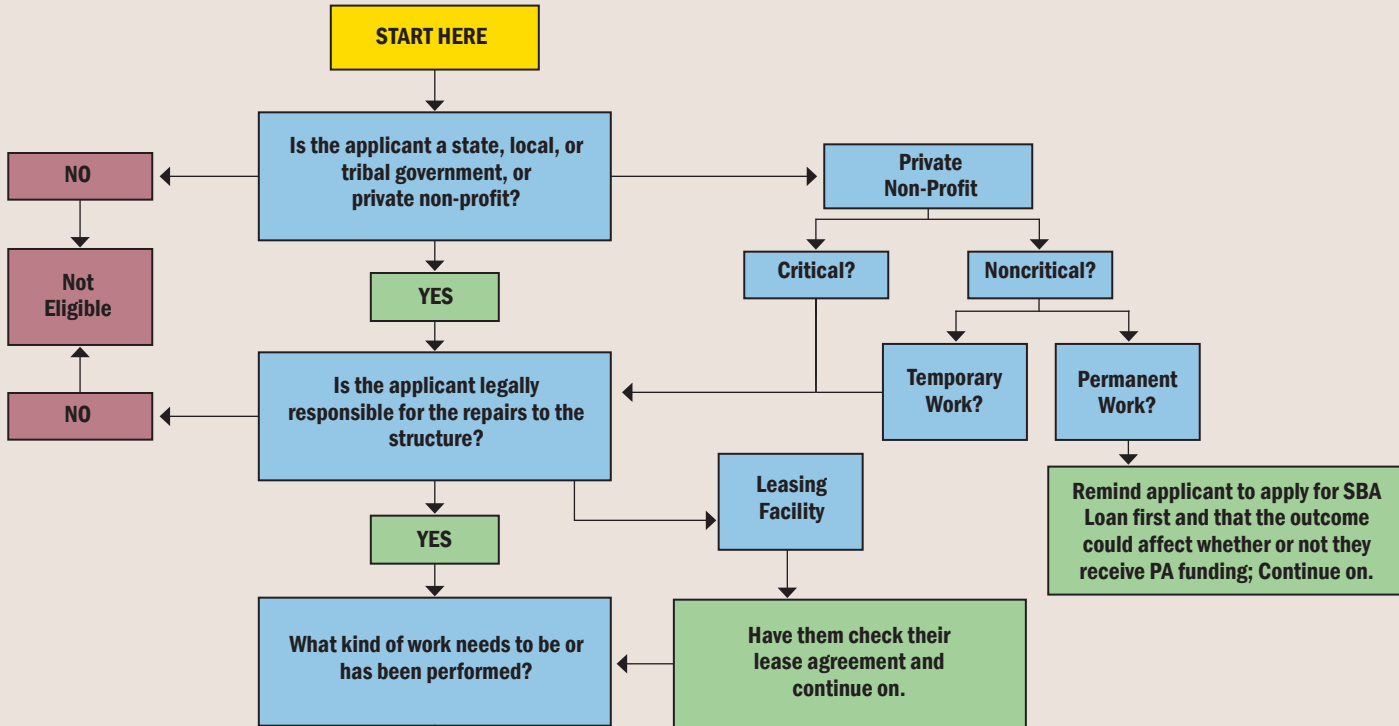
Example Eligible Costs

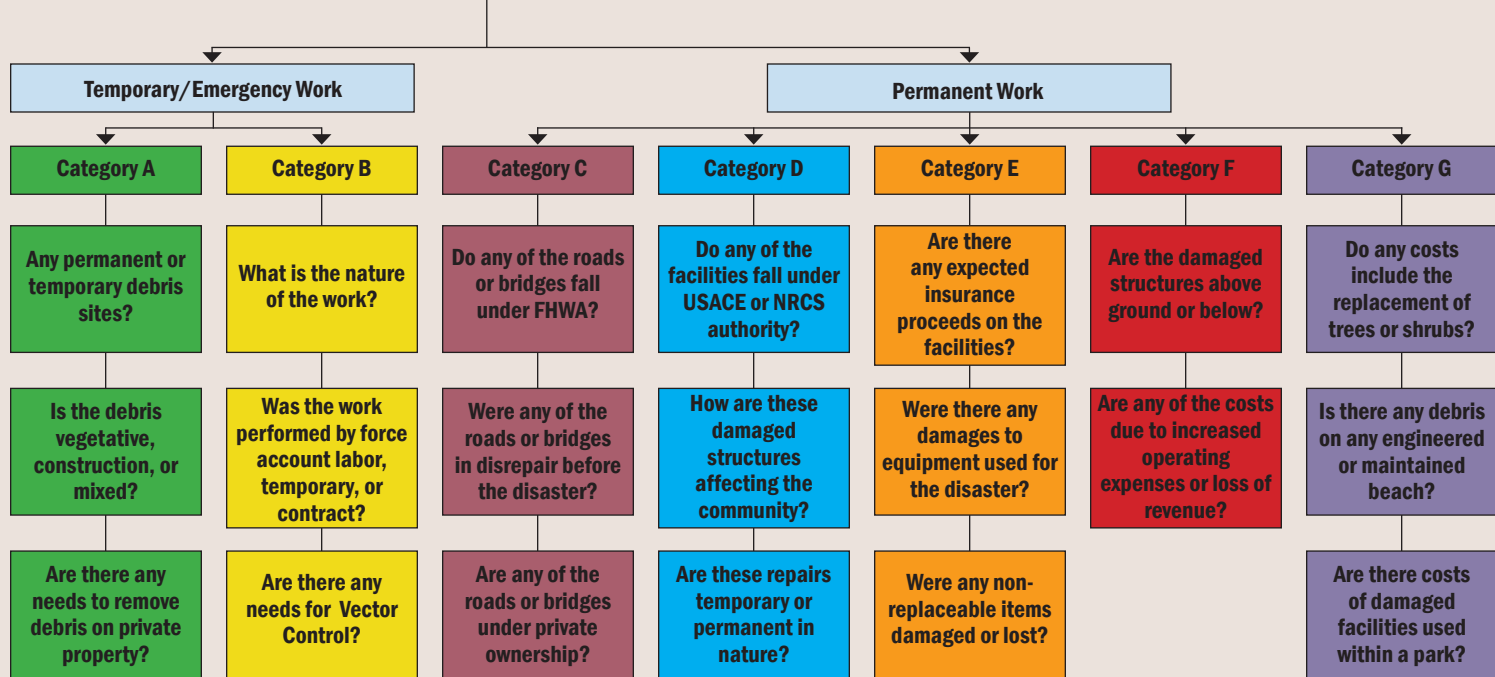
- Costs determined by historical data or national databases
- Replacement materials/equipment used for disaster response
- Salvage value of used materials reducing replacement costs
- Mutual aid reimbursements from assisting governments
- Donated resources/labor to offset non-Federal share of costs
- Engineering and design services for construction projects

Example Ineligible Costs

- Duplication of benefits due to anticipated insurance proceeds
- Loss of normal revenue due to the impacts of the disaster
- Increased operating expenses, with exceptions for short-term, reasonable expenses due to a response to an emergency
- Surveys to discover if there are damages to an eligible facility
- Contracts obtained through non-legal procurement standards

Questions to Ask Potential Applicants





Tips for a Successful PA PDA

- Be sure to **inspect the critical facilities and heavily impacted areas first** when you start the PA PDA.
 - ◆ Critical facilities are those that if lost would present an immediate threat to health, public safety and property.
 - ◆ This includes hospitals, utilities, water treatment plants, fire/police stations, schools, etc.
- Watch out for roads, water control facilities, and buildings that would **fall under another federal agency's jurisdiction** such as FHWA, USACE, or NRCS.
- Ask each potential applicant if there are any anticipated Insurance proceeds or if there is a history of damage on the structure. If so, did FEMA require that they have insurance on that structure to be eligible for any future damages? If they expect insurance proceeds then deduct those costs.
- **Always** take pictures and identify the location of each site.
 - ◆ Put something in the picture to use as a scale.
 - ◆ Pictures can be used later to see the damages that occurred from the disaster before the repairs were completed.
 - ◆ GPS coordinates assist in pin-pointing the location.
- **Always** identify the source for your data, including cost estimates that you are recording.
 - ◆ Show how final costs were determined.
 - ◆ Use various guides and formulas.
 - ◆ Use the local expertise for that type of work.
- You are **not** alone during the damage assessment process.
 - ◆ Call your PDA Coordinator.
- Use other Public Assistance guides to your advantage.
 - ◆ FEMA Public Assistance 322
 - ◆ FEMA Public Assistance Policy Digest 321
 - ◆ FEMA Public Assistance Applicant's Handbook 323
 - ◆ FEMA 9500 Series

Category A - Debris Removal

Eligibility – Debris removal operations must eliminate threats to lives, public health and safety; eliminate immediate threats of significant damage to improved public or private property; ensure economic recovery of the affected community to the benefit of the community at large.

Types of debris – Vegetative (trees, sand, mud, silt, gravel), building components (drywall, cinder blocks, rebar and other building materials), household goods (cleaning solutions and other chemical items), “white goods” (refrigerators, stoves, air conditioners), or disaster-related wreckage from emergency protective measures (eroded road material and asphalt).

Impacts to Consider for Estimating Costs

Amount	More debris equals more land clearing for debris removal sites, equipment, and manpower costs.
Type	Household goods cost more to remove - refrigerators must have the Freon removed before disposal.
Location	Widespread debris increases travel costs of debris removal equipment; Beach debris requires special types of equipment.
Debris Site	Construction of new, temporary debris sites costs more due to clearing of land, placement of public facilities, rental fees.
Other Entities	Other entities legally responsible for debris removal and private property issues.



Mixed-use debris along the public right-of-way

Category A - Debris Removal



Vegetative debris removal

Methods of Estimating Costs

Applicant	Speak to the local debris expert (ex. waste management) or the applicant on estimating total costs for debris removal.
Ground Measurement	Take dimensions of debris and calculate costs out to cubic yards or using nationally acceptable debris formulas/tables.
Aerial Photography	Determines how widespread debris is. Be careful of eligibility of costs associated with this estimating method.
GIS	Use Geographic Information Systems (GIS) to develop maps of areas with high and low concentrations of debris.

Critical Issue – Private Property Debris Removal

INELIGIBLE ACTIVITIES

- Applicant does not have legal responsibility to remove debris.
- FEMA did not approve the work before it started.
- Removal of private vehicles, old white goods, equipment and materials on private property before the disaster; damaged swimming pools, basements, and foundations; reconstruction debris; and debris on agricultural lands.

ELIGIBLE ACTIVITIES

- Removes a public health and safety hazard, threats of significant damage to improved public or private property, or ensures economic recovery of the affected community.
- FEMA approves the work before it's started and has received an indemnification from any claims arising from this activity.
- Debris moved by the private owner to the public right-of-way.

Category B - Emergency Protective Measures

Eligibility – activities undertaken by the community before, during, and following a disaster to eliminate or reduce an immediate threat to life, public health or safety, or eliminate an immediate threat of significant damage to improved public or private property.



Activation of the State EOC

Ineligible Cat. B Projects

- Emergency medical treatment costs, labor costs, follow-up treatment costs, and loss of revenue.
- Lease costs for temporary shelters, unless in extraordinary situations.
- Demolishing buildings that were already determined to be a safety threat before the disaster occurred.
- Inspection of damaged structures to determine any necessary repairs.
- Facility costs for shelter operations.
- Certain ineligible labor hours, depending on type of employee.

Eligible Cat. B Projects

- Search and rescue, including the transportation of disaster victims.
- Security in an emergency area.
- Provision of food, water, ice and other essential services at central distribution points.
- Activation of local/State EOCs.
- Measures used to prevent further damages to an eligible facility.
- Removal of health/safety hazards.
- Temporary generators for facilities providing health and safety services.
- Emergency communications set-up.

Helpful Tip!

If in doubt when determining eligibility or costs, consult your FEMA PDA partner who will be with you to assist. Remember, the PDA is a team effort!

Category B - Emergency Protective Measures



Flood control measures such as sandbagging could be an eligible Category B project

Collecting Your PDA Data

- **Start/end dates for work:** Record the time started on any work related to emergency protective measures and the time when the work ended.
- **Nature of the protective measures:** What was the purpose of the work? Temporary construction of levees or sandbagging? Emergency evacuations of affected residents? Temporary repairs to eligible buildings and roofs?
- **Type of labor used:** Were they force account labor or volunteer? Note that, if a disaster is declared, volunteer labor and other donated resources can be used to eventually offset some of the non-federal share of costs.

Critical Issue – Vector Control

- Vector control activities include spraying for mosquitoes and other organisms that can carry diseases after a disaster.
- Several criteria are used to justify reimbursement, such as: evidence of an outbreak after an event, an increase in the disease carrying mosquito population, and/or a significant increase in the biting mosquito population which poses a threat to emergency workers.
- Work with the local mosquito control district or the State Division of Emergency Management (DEM) on helping to determine eligibility or costs.



Category C - Roads and Bridges



Bridge destroyed as a result of Hurricane Ivan

Helpful Tip!

Always ensure that the applicant has legal responsibility of the repairs to the damaged structure. Be careful of federal/state highways that fall under the jurisdiction of the Federal Highway Administration (FHWA)

	Roads	Bridges
Eligible	Surfaces, bases, shoulders, ditches, drainage structures, low water crossings.	Decking and pavement, piers, girders, abutments, slope protection, approaches.
Ineligible	Unmaintained or pre-disaster damaged roads and bridges; Roads and bridges under a separate federal aid program or jurisdiction; Private roads (homeowners' association roads).	

Critical Issue – Landslides

Emergency Work	Permanent Work
<ul style="list-style-type: none"> • Emergency slope stabilization when there is an immediate threat to life, public health, and safety, or improved public or private property. • Must be for the affected or impacted area and not the entire hillside or long-term stabilization of the area. 	<ul style="list-style-type: none"> • Repairs are eligible when an eligible facility is damaged due to a landslide caused by the disaster (includes replacing integral ground to support the structure). • Natural slopes and hillsides do not qualify as permanent work structures.

Category C - Roads and Bridges

Collecting Your PDA Data

Identify Responsible Agency: Who is legally responsible for the repairs? Does the road or bridge fall under the FHWA program? Is it a service road maintained by the Natural Resources Conservation Service (NRCS) or the United States Army Corps of Engineers (USACE)?

Note Features: Identify the road surface materials (dirt, asphalt, gravel, etc.), how many lanes, and classification. Identify the bridge size and type (steel, concrete, timber, truss).

Describe Impacts: What is the damage to the road? Does it affect the county as a whole or specific residents? Are there any alternative routes?

Take Measurements: Take dimensions if possible of the affected area of the road or bridge as they can help in calculating costs.

Calculate Costs: Talk to the local officials or responsible agency in charge of the road or bridge to help determine total repair costs. If costs cannot be determined using this method, use appropriate calculations and formulas together with other sources of information (i.e. FEMA cost codes or Florida Department of Transportation historical data).

Helpful Tip!

In addition to being on the lookout for FHWA roads and bridges, be careful of roads and bridges that were in disrepair or weren't maintained prior to the disaster. FEMA will NOT pay for these items as they were not the direct result of the disaster!



SERT vehicle stopped in front of a flooded road

Category D - Water Control Facilities



Damaged levee caused by floodwaters

Helpful Tip!

Be sure to note the right category for the type of work involved. For example, clearing debris from a canal or other flood control work to prevent further flooding or damage to another structure would fall under Category A: Debris Removal.

Water Control Facilities

Eligible	Dams and reservoirs, levees, lined and unlined engineered drainage channels, canals, aqueducts, sediment basins, shore protective devices, irrigation/pumping facilities.
Ineligible	Flood control works that fall under the authority of the USACE or NRCS; Channels or basins restored to an increased capacity from their pre-disaster condition.

Critical Issue – USACE and NRCS

- The United States Army Corps of Engineers (USACE) and the Natural Resource Conservation Service (NRCS) have primary authority for the repair of flood control works.
- USACE has the Rehabilitation and Inspection Program (RIP) and NRCS has the Emergency Watershed Protection (EWP) Program.
- Check with the potential applicant on whether the facility falls under their jurisdiction and if reimbursement is expected from these programs. FEMA may provide funding, in certain cases, for certain ineligible or eligible work items that fall under the RIP or EWP programs.

Category D - Water Control Facilities

Collecting Your PDA Data

Identify Responsible Agency: Note the agency responsible for the repairs to the damaged water control facility. Be careful of recovery projects that fall under USACE or NRCS jurisdiction.

Note Purpose: Describe the overall purpose of the facility. Does it provide clean potable water to the community? Does it prevent flooding and erosion to land? Does it help control water runoff into retention areas?

Describe Damages and Impacts: Describe the damages to the structure or facility and the impacts it has on the community. Is the damage primarily underground or above ground? Is it clogged and could be repaired or does it need to be replaced?

Calculate Costs: Taking dimensions and calculating costs can be difficult when the damaged structure is underground or not easily accessible. Always consult with the local expert on water control facilities to help with determining costs.



Clogged drainpipes as a result of flooding

Category E - Buildings and Equipment

Ineligible Cat. E Projects

- Re-establishing files and records from original information.
- Any equipment or structures that are covered by insurance.
- Upgrading of buildings (not grandfathered) to current codes and standards when buildings were in violation of codes prior to impact.
- Increased maintenance of equipment used during the disaster.
- Replacement of damaged equipment caused by an accident that could have been avoided.
- Additional damages caused by the applicant's neglect after an event.
- Lack of maintenance or pre-existing conditions (applies to all categories).

Eligible Cat. E Projects

- In general, buildings, structural components, interior electrical or mechanical work, and contents.
- Damages caused as a direct result of the disaster (watch out for pre-existing conditions or neglect).
- Replacement of consumables, inventory, and publications.
- Replacement of damaged vehicles and other equipment with costs from used equipment with similar age, capacity, and condition.
- Extraordinary damage to equipment used on eligible disaster work that is caused by the disaster.
- Necessary cleaning and treatment of mold to restore the building.



Interior damage of a building from Hurricane Ivan

Helpful Tip!

Insurance is a huge issue after a disaster. It can greatly impact recovery costs and it even has an effect on declaring a disaster. Always ask the applicant or local official if there is insurance on the damaged facility as it could affect the estimated costs you're collecting.

Category E - Buildings and Equipment



Collapsed structure requiring replacement

Critical Issue – FEMA 50 Percent Rule

In some cases where the damages are so severe that repair costs exceed 50% of the cost of replacing the structure, FEMA will pay for the replacement of the building. The repair vs. replacement data may not be available at the time of the PDA but keep it in mind when surveying damages and estimating costs.

Collecting Your PDA Data

Identify Responsible Agency: Be careful of those entities that lease the building from someone else - they may or may not be eligible depending on what the lease agreement says on who is responsible for the repairs.

Note Purpose: Describe the overall purpose of the facility or equipment. What was the building being used for pre-disaster? Is the structure a governmental facility or a private non-profit? What function does it provide the community as a whole?

Describe Damages and Impacts: Remember that you need to survey the damages outside, as well as inside the building. Ask yourself if these damages can be repaired or is it a total loss? What kind of damages are they (structural, mold, equipment loss, etc.)? Are any of the damages covered by a pre-existing insurance policy?

Calculate Costs: Buildings are extremely difficult to estimate. Take note of the function, floor area, number of stories, type of construction (wood framed, masonry, concrete, steel, etc.), and type of roof (pitched or low slope).

Category F - Utilities

Ineligible Cat. F Projects

- Surveys performed to discover if there are damages to the facility.
- Increased operating expenses due to the disaster.
- Loss of revenue if a utility is shut down due to the disaster.

Eligible Cat. F Projects

- In general, water treatment plants and delivery systems, power generation and distribution facilities (natural gas, wind, power lines), sewage collection systems and treatment plants, and communications.

Helpful Tip!

Safety is the number one priority while performing a damage assessment. When surveying a dangerous site such as the one below, never enter the area to get a closer look at the damages or take dimensions - it can be gathered later when the site is secure.

Critical Issue - Loss of Revenue and Increased Operating Expenses

When Ineligible

Any loss of revenue or increased operating expenses directly related to the impacts of the disaster. Examples could include the time off-line for a utility system or increased cost of obtaining water or electrical power from an alternative source.

When Eligible

Reasonable short-term additional costs that are directly related to accomplishing emergency health and safety tasks that would fall under Category B work. An example would include increased utility costs of a permanently mounted generator at a hospital or a police station.



Downed utility poles blocking a road

Category F - Utilities



Destroyed concrete utility pole with light fixtures

Helpful Tip!

When dealing with other categories of work such as debris or structural damage, it is relatively easy to identify the damages. However, when inspecting utilities or water control facilities, remember that many critical functioning elements are underground!

Collecting Your PDA Data

Distinguish Categories: Be sure to note the differences in work that could be categorized as either emergency or permanent work projects. Any temporary repairs would fall under Category B.

Note Purpose: Describe the overall purpose of the utilities. Is it designed to provide power, lighting, communications, etc.?

Describe Damages and Impacts: Describe if the damaged structure can be repaired or if it will need to be replaced. What portion of the structure is damaged? Is it the physical plant, distribution lines, or collection systems? What are the impacts as a result of the damage or loss of this utility system? How many homes do not have service?

Calculate Costs: Work with the applicant or any local resources on helping to determine costs. Identify those costs that may be ineligible or eligible such as inspections to discover damages vs. safety inspections on already identified damaged structures. Take measurements only if necessary, safe, and easily available or identifiable.

Category G- Parks, Recreational Facilities, and Other

Ineligible Cat. G Projects

- Private Non-Profit (PNP) owned parks or recreational facilities, including supporting facilities such as roads, buildings, and utilities.
- Restoration of sand on natural beaches or berms that is beyond what is necessary for emergency protection.
- In general, replacement of any trees, shrubs, or ground cover, including those in parks or other public facilities such as median strips along the roadway. This also includes the replacement of any disturbed ground caused by heavy equipment when performing eligible work.

Eligible Cat. G Projects

- In general, mass transit facilities such as railways, swimming pools, playground equipment, bath houses, tennis courts, boat docks, piers, golf courses, picnic tables, and other types of facilities that do not fit in Categories C - F.
- Roads, buildings, or utilities located in parks and recreational areas.
- Engineered and maintained beaches.
- Natural features as long as they are improved or maintained.
- Any grass, trees, or ground cover when it is necessary for slope stabilization and/or erosion control.



Destroyed dock from high seawater and winds

Helpful Tip!

Debris is going to be a huge issue following a disaster - a lot of trees, shrubs, and grass will be damaged or destroyed. Ensure that you are not collecting cost estimates for the replacement of trees or shrubs for a facility. These are ineligible expenses!

Category G- Parks, Recreational Facilities, and Other



Beach erosion caused by high seas

Collecting Your PDA Data

Note Purpose: Describe the overall purpose of the facility. Is it a public park, beach, or recreational facility? What services does it provide the community?

Describe Damages: Distinguish between damages that are a result of the disaster and those due to a lack of maintenance prior to the disaster. Identify any of the structures that are part of the facility including roads or utilities.

Calculate Costs: Work with local experts on determining costs. If they are unavailable and you have time, take dimensions of the damage and calculate costs later after you have finished your inspections.

Critical Issue – Beach Damage Assessments

Improved or maintained beaches have a significant impact on a community's economy, especially those that are in Florida. Damage assessments on beaches are typically a special process performed by the Department of Environmental Protection (DEP) in coordination with the Environmental and Debris Section of the Florida Division of Emergency Management (FDEM). You can assist the applicant by asking them to have the following beach information ready: 1) design documents and specifications, including analysis of grain size; 2) "as-built" plans; 3) pre and post-storm cross sections or surveys of the beach; and 4) documentation related to the regular maintenance and nourishment of the beach.

Common Weights and Measurements

*****ALL MEASUREMENTS MUST BE IN FEET*****

Distance

1 inch = 2.54 centimeters
 12 inches = 1 foot
 3 feet = 1 yard
 1 mile = 5,280 feet or 1,760 yards

Weight

1 pound = 16 ounces
 2,000 pounds = 1 ton

Estimating Debris from a House

Structure

$(\text{Length} \times \text{Width}) \times ((\# \text{ of Floors} \times 8) \times 0.333) / 27 = Y \text{ Cubic Yards}$

Vegetative

$\text{Factor} \times Y \text{ (from above formula)} = \text{Cubic Yards}$
 Factor = 0 to 0.5 depending on amount of trees/shrubs
 0 = none; 0.5 = heavy trees/shrubs

Square Yards (SY)

$(\text{Length} \times \text{Width}) / 9$

Cubic Yards (CY)

$(\text{Length} \times \text{Width} \times \text{Depth}) / 27$

Volume of Pipe

$(3.1416 \times \text{Radius}^2) \times \text{Length} / 27$

Converting Tons (TN) to Cubic Yards (CY)

$\text{Tons} \times \text{Factor} = \text{CY}$

Factor = Number of CY's per Ton

Common Factors for Materials

Cement, Portland	- 1.3	Oyster, shell	- 0.7
Cement, Mortar	- 1.8	Rip Rap	- 1.4
Cement, Slurry	- 1.2	Sand, dry	- 1.4
Clay, Compacted	- 1.5	Sandstone, broken	- 1.3
Garbage	- 0.4	Shale, broken	- 1.3
Gravel, loose, dry	- 1.3	Slate, broken	- 1.4
Limestone, broken	- 1.3	Stone, crushed	- 1.4

0.5" 1" 1.5" 2" 2.5" 3" 3.5" 4" 4.5" 5" 5.5" 6" 6.5" 7" 7.5" 8"

Estimating Debris Quantities for a County (USACE Debris Estimating Formula)

FORMULA

$$H \times C \times V \times B \times S = \text{Debris Quantity in Cubic Yards}$$

KEY

- H = Population of the "county" / # of persons per household
- C = Storm Category Factor
- V = Multiplier for Vegetative Debris
- B = Multiplier for Heavy Commercial Debris
- S = Multiplier for Heavy Storm Event

EXAMPLE SCENARIO

A category 4 storm (C) impacted Hyattstown, FL, which is a small city with a total population around 165,500 people (H). The impacted area consisted of single family homes (B), apartment complexes (B), schools (B), and shopping centers (B). Vegetation was heavy (V) in the impacted area due to it being primarily residential. The storm was very wet (S) with rain falling for days.

$$(165,600/3) \times 50 \times 1.5 \times 1.3 \times 1.3 = \mathbf{6,992,374 \text{ cubic yards of debris}}$$

Hurricane Category	Value of "C"
1	2 cy
2	8 cy
3	26 cy
4	50 cy
5	80 cy

Vegetative Cover	Value of "V"
Light	1.1
Medium	1.3
Heavy	1.5

Commercial Density	Value of "B"
Light	1.0
Medium	1.2
Heavy	1.3

Precipitation	Value of "S"
None to Light	1.0
Medium to Heavy	1.3

Potential Hazards

HAZARD	SIGNS	PREVENTION	SUGGESTED RESPONSE
Heat Stress and Exposure	Headaches, dizziness, vomiting, dry, hot skin, confusion, seizure, loss of consciousness	Block out sun, rest regularly, drink lots of water (at least 1 cup every 20 minutes), avoid alcohol or caffeine	Move to cool, shaded area, loosen or remove heavy clothing, provide cool drinking water, fan and mist the person, call 9-1-1.
Severe Weather	Rise in wind speed, sharp drop in temperature, sudden reversal of wind direction, heavy rain, hail or lightning	Watch for onset conditions and retreat to safety before the weather arrives. Pay attention to any received weather reports.	Take shelter in building or car if possible. Avoid high objects and avoid grouping.
Insects	Ticks: body aches, fever, headaches, fatigue, rash, stiff neck, facial paralysis.	Wear repellent with Deet, long pants. Avoid sites with woods, bushes, tall grass.	Remove tick with fine-tipped tweezers - grasp tick firmly as close to skin as possible. Clean area with soap and water.
	Bees, wasps, hornets: severe pain at sting site.	Avoid perfumed shampoos, soaps, and deodorants. Bathe daily.	Ensure no allergic reaction. Wash site with soap and water. Remove stinger with gauze or fingernail. Apply ice or antihistamines.
Flood Water Contact	Bacterial infection, stomach ache, fever, vomiting, diarrhea	Wear boots and rain gear. Protect from cuts and scrapes. Wash hands often.	Use soap and clean water to wash off exposed areas. See a doctor if ill.

Potential Hazards

HAZARD	SIGNS	PREVENTION	SUGGESTED RESPONSE
Snakes	Puncture marks. Redness and swelling. Severe pain at site of the bite. Nausea and vomiting, numbness or tingling of limbs.	Wear protective boots and long pants. Stay away from tall grass, rocks, and piles of leaves when possible.	Remember the color and shape of the snake. DO NOT attempt to catch the snake, apply tourniquet, slash wound, suck out venom, or apply ice.
Poisonous Plants	Red rash within days. Possible bumps, patches, streaking or weeping blisters. Swelling or itching.	Wear long pants and boots. Identify plants with the Rule of Thumb: "Leaves of 3, let it be."	Rinse skin with rubbing alcohol or degreasing soap. Do not scratch. Use wet compress and calamine lotion to reduce itching.
Downed Power Lines	Downed power lines, downed conductor. Electrical sparks.	ALWAYS assume electrical lines are energized. Do not drive over downed electrical lines. Watch other objects (fences, pipes, bushes, trees) as they may be energized.	Take shelter in a building or car if possible. Avoid high objects and avoid grouping.
Incident Stress	Chest pain, difficulty breathing, shock, fatigue, dizziness, memory loss, behavior shifts.	Pace yourself, monitor each other, take frequent breaks and maintain adequate nutrition.	Demobilize. Talk about experience when ready.

Sandy Recovery Improvement Act

The Sandy Recovery Improvement Act of 2013 added provisions to the Stafford Act in several key areas:

Debris Management Alternate Procedures: the changes to Debris procedures are meant to incentivize speedy and planned debris management.

	PREVIOUS PROCEDURES	NEW PROCEDURES
Sliding-Scale for Cost-Share	Cost-share is established for the disaster by FEMA, and is generally constant across all categories of work.	FEMA will incentivize speedy debris removal by implementing a sliding-scale: 0 days to 30 days: 85% federal cost share 31 days to 90 days: 80% federal cost share 91 days to 180 days: 75% federal cost share
Revenue From Recycling	Any revenue from recycling will reduce the amount of assistance provided for eligible projects.	Revenue from recycling will not reduce the amount of assistance provided as long as the revenue is used for an approved purpose: to meet the non-federal cost share for Cat. A projects, develop disaster preparedness plans, conduct mitigation activities, or improve future debris removal operations and planning.
FEMA-Approved Debris Management Plan	There are no monetary incentives for a subgrantee to have a debris management plan.	If a subgrantee has a FEMA-approved Debris Management Plan at the time of an event, FEMA can if requested provide a one-time incentive of an additional 2% federal cost share adjustment.

Sandy Recovery Improvement Act

Labor, Dispute Resolution, and Mitigation Procedures: the changes to these procedures are meant to provide additional funding for emergency work, streamlined review procedures for hazard mitigation funding, and alternative methods of disputing FEMA project determinations.

	PREVIOUS PROCEDURES	NEW PROCEDURES
Emergency Work Labor Procedures	Permanent Work: regular and overtime are eligible Emergency Work: only overtime is eligible	Permanent Work: regular and overtime are eligible. Debris Removal: regular and overtime are eligible as long as the employee is not performing their regular force account job functions.
Dispute Resolution Procedures	Subgrantees have the option of filing a first appeal with Region IV, and if unsuccessful, a second appeal with Headquarters in Washington, D.C.	Subgrantees have the option of filing a second appeal or utilizing an independent arbitration review panel if the project is at least \$1 million and has a non-federal share.
Availability of Hazard Mitigation Funds	There is no explicit statutory authority for streamlined environmental and/or historic preservation analysis.	Up to 25% of the estimated Hazard Mitigation Grant Program funding may be advanced to the State before eligible costs are incurred.
Streamlined Review Procedures	There is no explicit statutory authority for streamlined environmental and/or historic preservation analysis.	A clear statutory goal has been established that reviews should be performed by the most expedient process allowed by law.

Sandy Recovery Improvement Act

Public Assistance Alternative Procedures: the PA Alternative Procedures consist of one required part, with several optional features that can be added if the sub-grantee chooses.

Required: Subgrants are based on fixed cost estimates. If the sub-grantee chooses the PA Alternative Procedures, large projects will be reimbursed on the basis of fixed estimates. Over runs will not be paid by FEMA, and any under runs may be kept by the subgrantee in certain circumstances.

OPTIONAL	CURRENT PROCEDURES	NEW PROCEDURES
Consolidation of an Applicant's Subgrants (projects)	Projects are stand-alone.	FEMA will write projects by consolidating scopes of work from what could be individual projects. This option allows overages on the components of the consolidated project to offset underages on other components.
Validation and Review of Cost Estimates	The subgrantee develops cost estimates and FEMA conducts a separate analysis. FEMA has the option to deobligate funding based on the "reasonableness" standard.	FEMA can (but isn't required) to accept mutually agreed upon certified cost estimates prepared by a subgrantee's licensed engineers. Subgrantees may request to use a FEMA-funded, independent validation of project estimates for permanent work projects with estimated Federal shares >\$5 million.
Alternate Projects	There is a reduction of the otherwise-eligible federal cost-share for alternate projects.	No reduction will be taken. Projects will be paid at 100% of the otherwise-eligible federal cost-share.
Keeping Excess Funds	Subgrantees must return excess funds not utilized in completing the approved scope of work.	When the cost of work to complete a project is less than the fixed estimate, the subgrantee may use excess funds for public assistance program related purposes upon FEMA Approval.

FLORIDA DIVISION OF EMERGENCY MANAGEMENT

Recovery Bureau, Public Assistance

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