

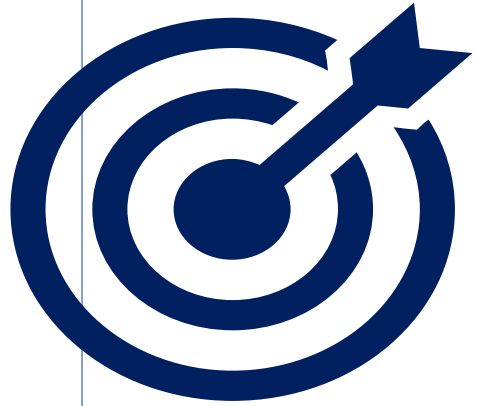


Presented by Bureau of Recovery

Joint Preliminary Damage Assessment (JPDA) County Guide: What Does the Process Look Like and How My County Prepare?

Rebuilding Together





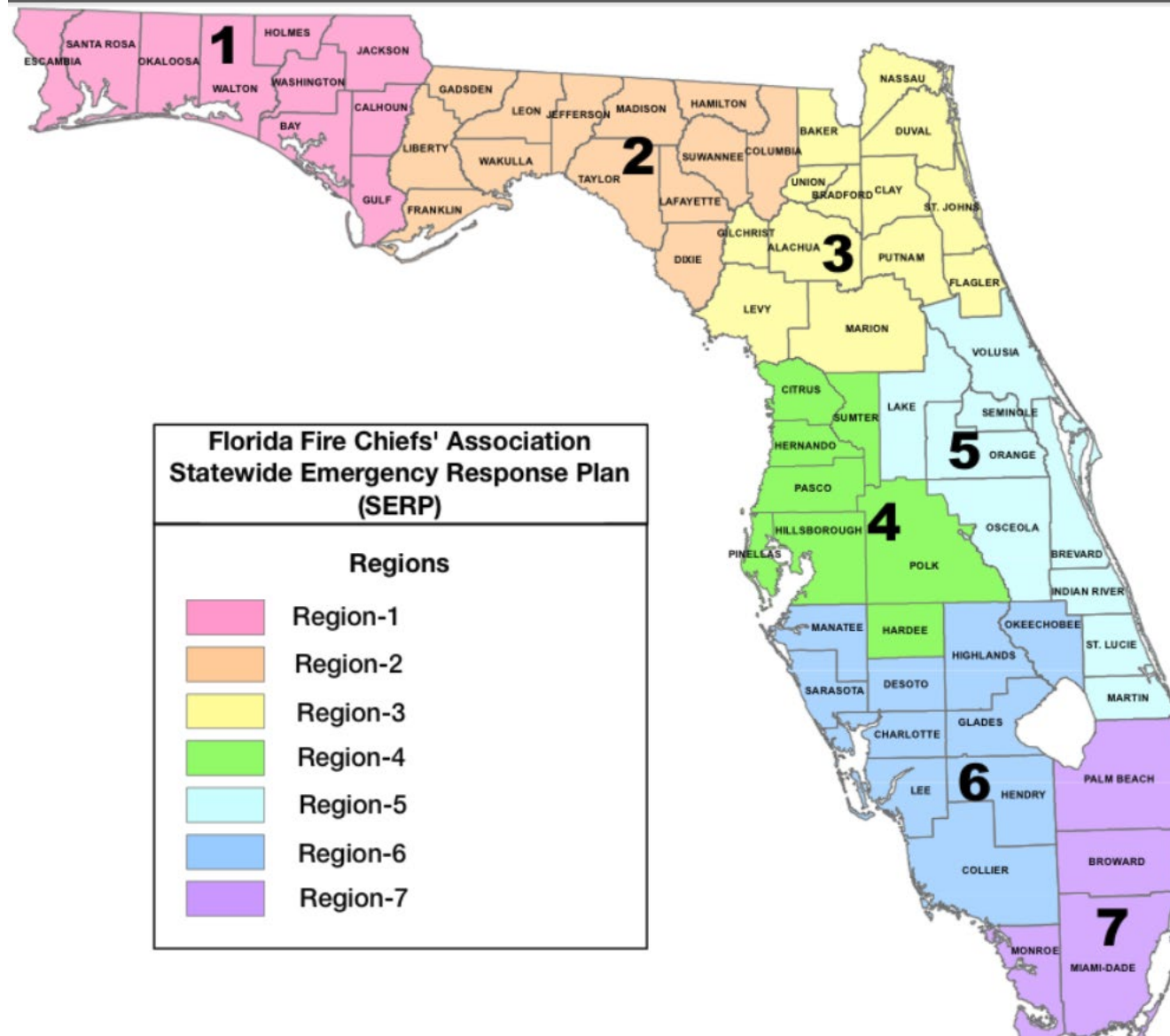
To provide counties a guide of what to anticipate when going through the JPDA process and how to prepare in advance.

Schedule

- Damage Assessment County Guide (What does the process look like and how my county can prepare) (FDEM)
- Preliminary Damage Assessments (PDA) Overview (FEMA)
- Response to Recovery: How to maximize federal resources for state and local governments. (FEMA)
- Flagler County Damage Assessment Overview (Flagler EM)
- Questions



Florida Regions



Objectives

- Provide an overview of the Initial Damage Assessment (IDA) / Preliminary Damage Assessment (PDA) within the Individual Assistance (IA) Program and the Public Assistance (PA) Program
- Explain how a potential Applicant would quantify and document damages for county and state level thresholds
- Explain how the Initial Damage Assessments / Preliminary Damage Assessments (IDA/PDA) are integral to the overall declaration process
- Describe the depth and necessity of an Initial Damage Assessment at the county level after a presidentially declared disaster





Overview of the Damage Assessment (DA) Process

Purpose of Damage Assessments (DA)

Officials work together to estimate and document the impact and magnitude of the incident.

At the state level, it is necessary to provide information to the Governor to decide on whether or not to request a Presidential disaster declaration.



Scope and Applicability

SCOPE & APPLICABILITY

The PDA focuses on damage assessments that **support** a request for federal assistance disaster declaration.


1. What information does FEMA need from the damage assessment?
2. How should that information be collected?
3. What standards does FEMA have for validating damage?



Resources



- [PDA Guide](#) – used as a preparedness tool; provides the most updated and authoritative information on PDAs.
- [PDA Pocket Guide](#) – supplement to the full PDA guide; provides high-level guidance that can be used as a reference in the field.
- [Summary of Changes](#) – an overview of the major changes.



Preparing for Damage Assessments (DAs) at the **Local Level**

Readiness and Planning for Damage Assessments



Pre-Incident Damage Assessment Readiness and Planning Activities

- Standard Operating Procedure
- Identify Risks to Critical Infrastructure
- PDA Plan of Action Template
- Assembling the Right Team
- Pre-Positioned Contracts and Memoranda of Understanding
- Training
- Exercises
- Technology



Initial Damage Assessment

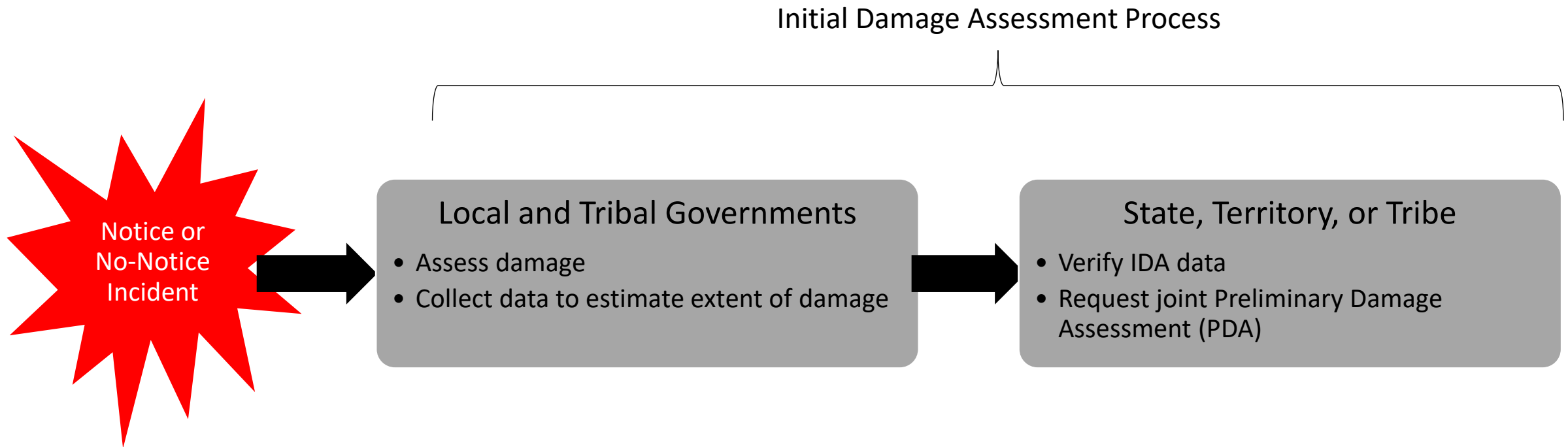
Initial
Damage
Assessment



*The effort by local
authorities to collect
data immediately
after the incident
related to the extent
of damage within a
jurisdiction.*



PDA and Declaration Process



Local Government Sends Data to State

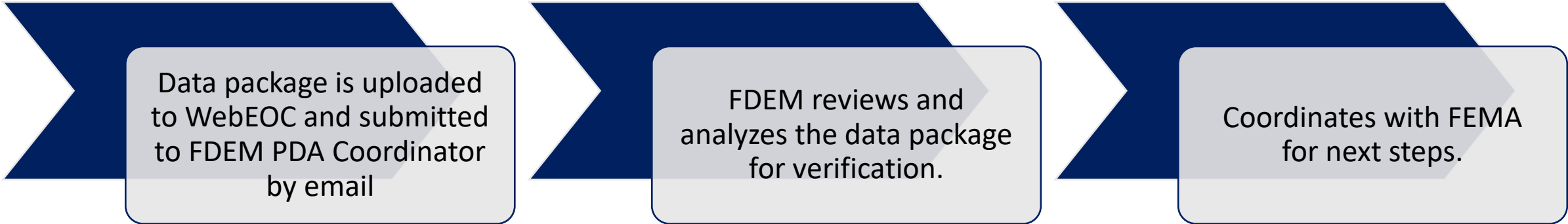
Data Upload



Following the IDA, the local government sends its collected data to its state counterparts to continue the PDA process.

How does YOUR county submit its data?

My County IDA is Submitted, What's Next?



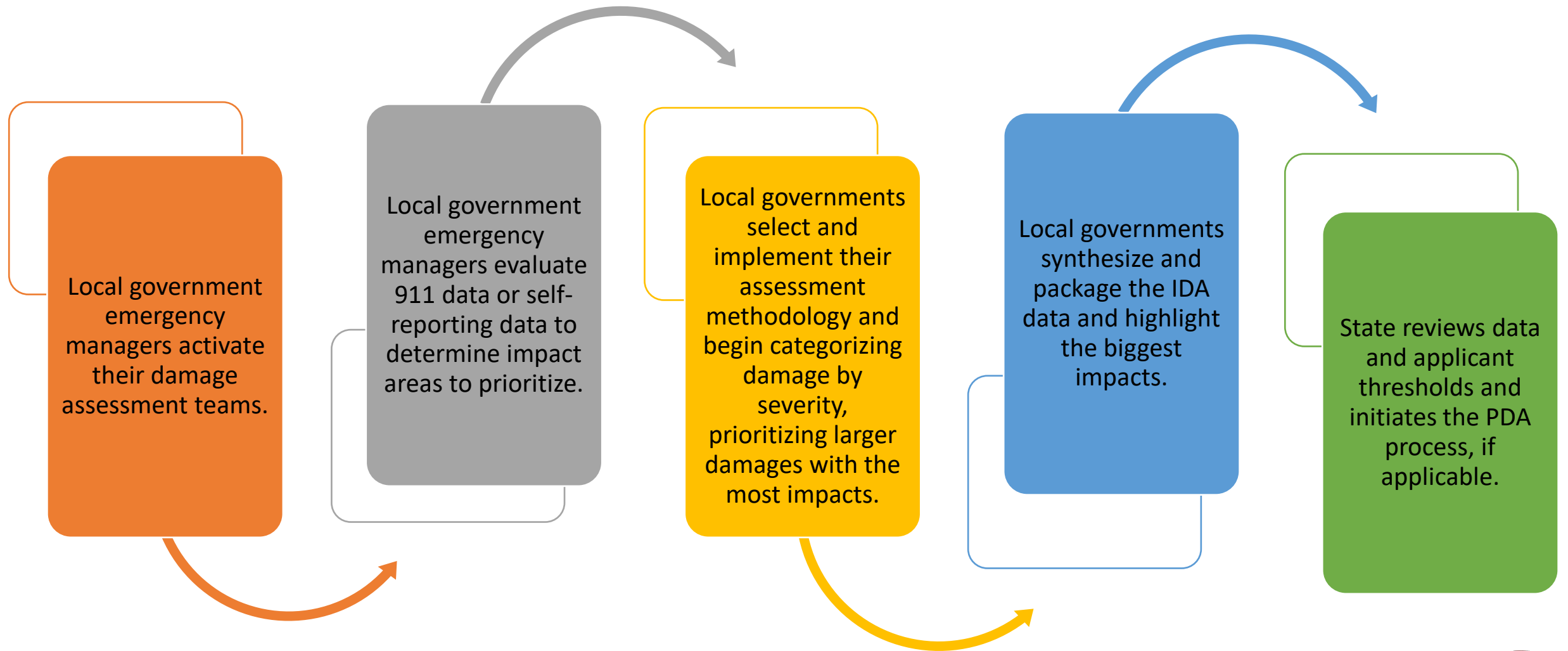
Data package is uploaded to WebEOC and submitted to FDEM PDA Coordinator by email

FDEM reviews and analyzes the data package for verification.

Coordinates with FEMA for next steps.



IDA Process



Joint PDA Request Process



- Data reviewed and verified
- Director may proceed with request
- Joint PDA request is submitted to FEMA regional office, containing
 - List of disaster-impacted locations
 - Basic PDA schedule

PDA Plan of Action



A hand-drawn diagram of a 'PDA Plan of Action' table. The title 'ACTION PLAN' is written in large blue letters at the top. Below it is a table with four columns labeled 'WHO', 'WHAT', 'WHEN', and 'HOW' in red. The table has three empty rows for data entry. The entire diagram is enclosed in a green border with two red dots at the top, resembling a binder or a sign.

WHO	WHAT	WHEN	HOW

PDA Plan of Action

- Methodology for validation;
- List of most extensive damages and locations;
- Schedule for visiting and assessing areas; and
- List of PDA team members and team requirements.

Be Flexible

In some cases, a complete initial damage assessment will not be performed by the local community.

- Heavy damages and impacts are apparent.
- Resources are overwhelmed.
- Unprepared to conduct one.

If **unprepared**, the Joint PDA team may still arrive for the county, but the PDA will take much longer and be difficult.

- In other words, a slow recovery.
- Ensure that your community is prepared.



Desktop Validation

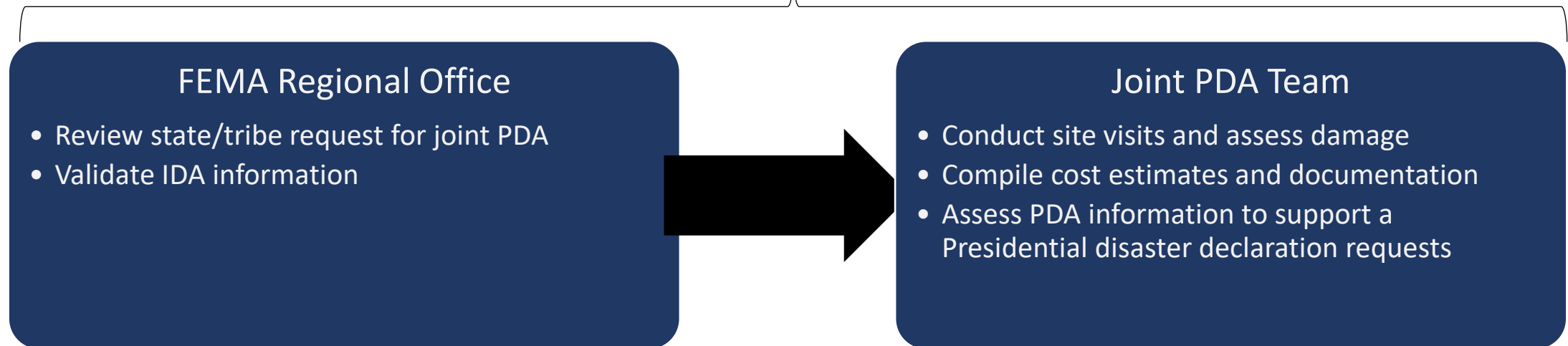
Desktop Validation Process



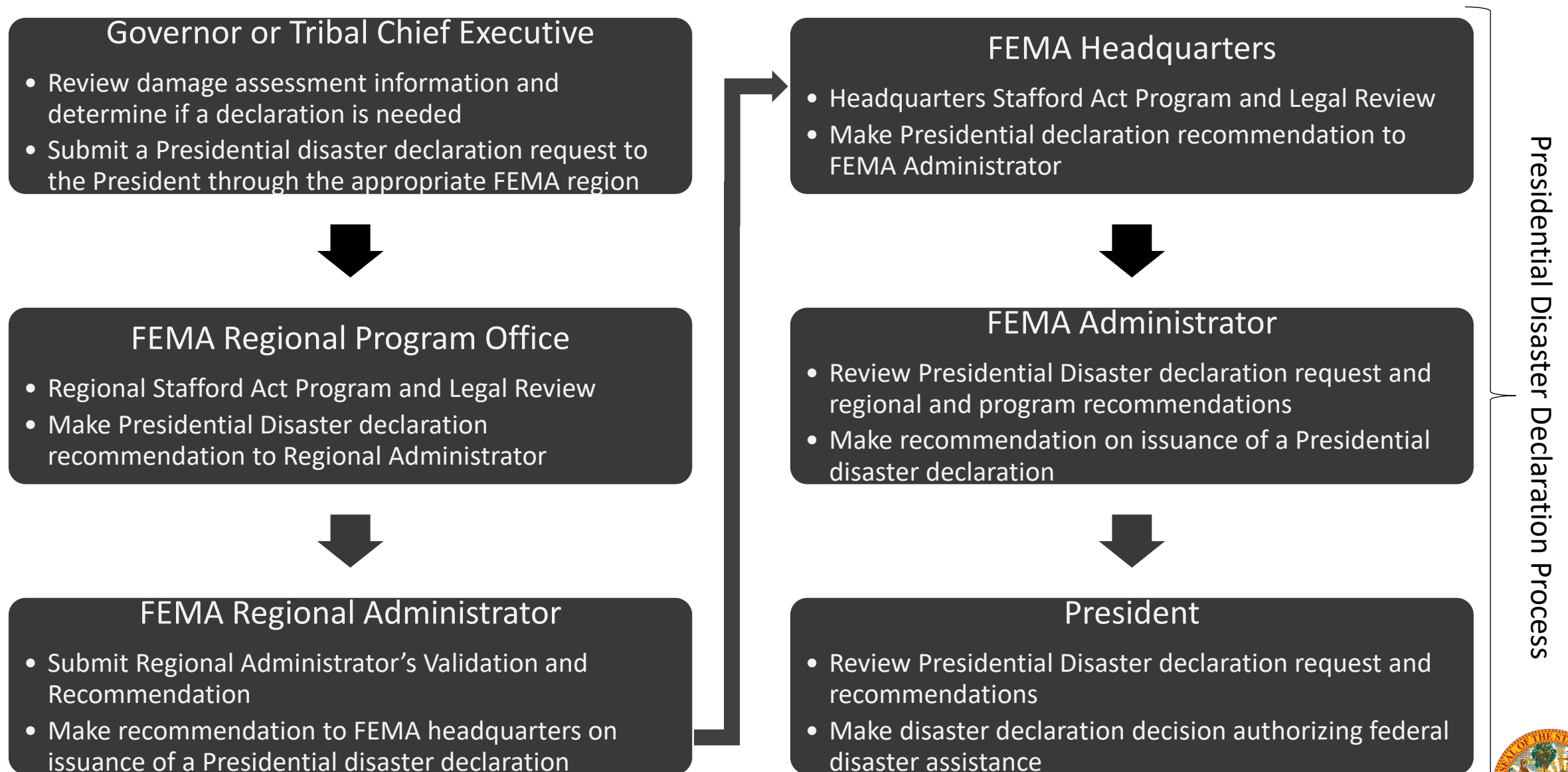
- 1) FEMA / State develop rules, logistical requirements, and establish date/time
- 2) State develops PDA plan of action
- 3) Local staff verifies IDA data
- 4) State completes verification of PDAs before submitting to FEMA
- 5) FEMA PDA reviews information and assigns PDA team
- 6) FEMA PDA team members review information for eligibility and reasonable cost
- 7) Validation questions addressed.

PDA and Declaration Process

Preliminary Damage Assessment Process



PDA and Declaration Process





Individual Assistance (IA) Program

Collecting Information for an IA Assessment

44 C.F.R. 206.48(b) establishes six Individual Assistance Declaration Factors:

- 1) State Fiscal Capacity and Resource Availability
- 2) Uninsured Home and Personal Property Losses
- 3) Disaster Impacted Population Profile
- 4) Impact to Community Infrastructure
- 5) Casualties
- 6) Disaster Related Unemployment





Individual Assistance Program and Policy Guide (IAPPG)

Version 1.1

FP 104-009-03 | May 2021



Individual Assistance Program and Policy Guide

The Individual Assistance Program and Policy Guide (IAPPG) consolidates policy statements for all IA programs, including:

- the Individuals and Households Program,
- the Mass Care and Emergency Assistance programs, and
- the Community Services programs.

The IAPPG is intended to provide a comprehensive policy resource for SLTT governments, non-governmental partners, and other entities who assist disaster survivors with post-disaster recovery.

Essential Living Spaces

Essential Living Space



- Per the IAPPG, an essential living spaces is regularly occupied or used by one or more members of the household and requires repair to bring its functionality back to the home.
 - Bedroom
 - Bathroom
 - Kitchen, and/or
 - Living Room



Is it Habitable?

FEMA defines “habitable” as safe, sanitary, and functional.

“**Safe**” refers to being secure from disaster-caused hazards or threats to occupants.

“**Sanitary**” refers to being free of disaster-caused health hazards.

“**Functional**” refers to an item or home capable of being used for its intended purpose.



Inaccessible Homes

Inaccessible residences are those in which damage to the home cannot be visually verified because of disaster-related loss of access.

- Flood waters blocking access
- Washed out or destroyed roads
- Debris blocking or disrupting access

Home is NOT considered inaccessible if it can be reached by another route.



Insurance

Capture insured vs. uninsured home numbers.

Large numbers of uninsured homes may suggest a greater need for supplemental federal assistance.

Degrees of Damage



Affected



Minor



Major



Destroyed



Public Assistance (PA) Program

All Disasters are Local

Have these items prepared before the disaster:



County demographic information and threshold

Parties responsible for conducting the initial damage assessment

List of potential applicants and critical facilities

Contact Information (local and state staff)



Public Assistance Indicator

Calculating Threshold:

Population x FY20 Per Capita

Example:

Orange County (2010 pop.)

$1,145,956 \times \$3.89 = \$4,457,769$

Example:

State of Florida (2010 pop.)

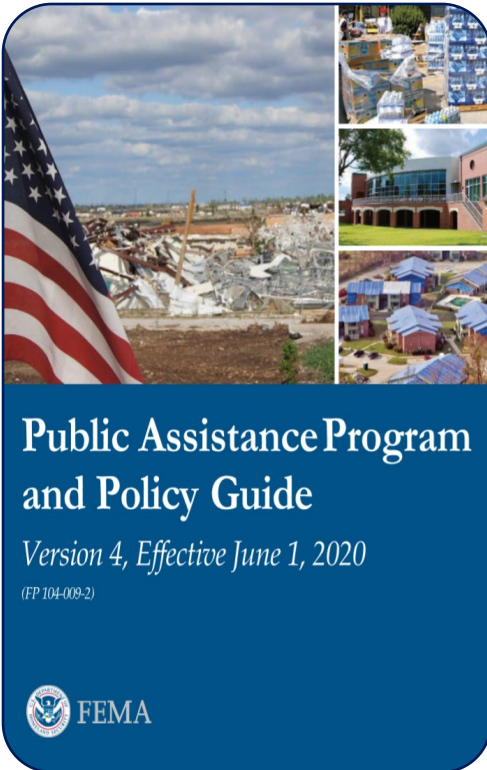
$18,801,310 \times \$1.55 = \$29,142,031$

Final estimated cost should exceed county and state thresholds in order to achieve a disaster declaration.



Public Assistance Program and Policy Guide (PAPPG)

PAPPG



- FEMA issues policy to articulate the Agency's intent and direction in applying statutory and regulatory authority to achieve desired outcomes. They do this via issuance of the *Public Assistance Program and Policy Guide* (PAPPG).
- The PAPPG provides high-level program delivery information and describes important PA functions and requirements.

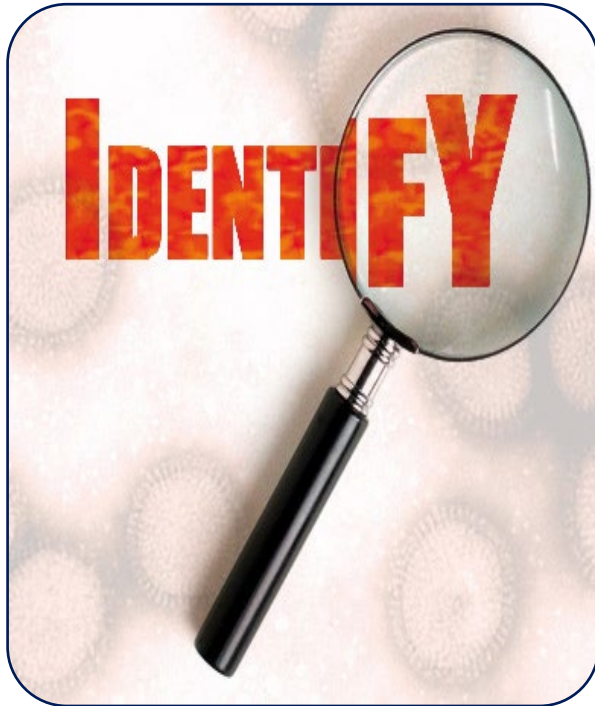


PA Site Assessments



- JPDAs typically conducted in-person.
 - Take photographs to support restoration work and cost estimates.
- Desktop validation is an alternative.

Collecting Information for a PA Assessment



Identify Damaged Facilities

FEMA will consider disaster-related damage to all:

- buildings
- works
- systems
- equipment (built or manufactured) or
- improved and maintained natural features

Second Step: Prioritize Areas to Inspect

Ask these questions:

First Inspection:

Where are the most severely impacted areas?

Second Inspection:

Where are the “high dollar” damages?

Third Inspection:

What critical facilities or structures were damaged that would have the most severe impact on the community?



What are Critical Facilities?

Critical Facilities:

Examples include:

- Hospitals, urgent care facilities.
- Fire and police stations.
- Communications facilities.
- Roads/transportation infrastructure.
- Electric utilities, facilities, systems.
- Water/wastewater treatment.



Summary of Damages Form

FEDERAL EMERGENCY MANAGEMENT AGENCY PRELIMINARY DAMAGE ASSESSMENT SUMMARY						SHEET 1 OF SHEETS	
PART I - APPLICANT INFORMATION						DATE	
COUNTY		NAME OF APPLICANT		NAME OF LOCAL CONTACT		PHONE NO.	
POPULATION		TOTAL BUDGET Approved \$		MAINTENANCE COST Approved \$		DATE FY BEGINS	
		Balance \$		Balance \$			
PART II - COST ESTIMATE-SUMMARY (COMPLETE SITE ESTIMATE BEFORE SUMMARIZING BELOW)							
CATE- GORY	NO. OF SITES	TYPES OF DAMAGE	COST ESTIMATE	POTENTIAL LOCAL FUNDS FOR RECOVERY			
				FUND/ACCT	AVAILABLE BALANCE		
A	0	Debris Removal	0.00				
B	0	Protective Measures					
C	0	Roads & Bridges					
D	0	Water Control Facilities					
E	0	Public Buildings					
F	0	Public Utilities					
G	0	Recreational or Other					
			TOTAL	0.00	TOTAL	0.00	
PART III - DISASTER IMPACTS (USE SEPARATE SHEETS IF NECESSARY)							
A. GENERAL IMPACT							
1. Identify and describe damages which constitute a health and/or safety hazard to the general public:							
2. Population adversely affected directly or indirectly by the loss of public facilities or damages:							
3. What economic activities are adversely affected by the loss of public facilities or damages?							
B. RESPONSE CAPABILITY: Can the applicant respond and recover from the damages quickly and without degradation of public services? Describe.							
C. IMPACT ON PUBLIC SERVICES IF DECLARATION IS NOT MADE: e.g., Deferral of permanent repairs, impact on ongoing services and capital improvements, etc. Describe.							
NAME OF INSPECTOR			AGENCY			PHONE NO.	
			FDEM				

FEMA Form 90-80, JAN 84 (W/S Excel)

General information

- Date of the PDA
- Team leader name
- Name of applicant
- Population of county
- Contact information
- Total operating budget
- Maintenance budget



Summary of Damages Form

FEDERAL EMERGENCY MANAGEMENT AGENCY PRELIMINARY DAMAGE ASSESSMENT SITE ESTIMATE				SHEET 2 OF SHEETS	
DATE					
PART I - APPLICANT INFORMATION					
COUNTY		NAME OF APPLICANT		NAME OF LOCAL CONTACT	
				PHONE NO.	
KEY FOR DAMAGE CATEGORY (Use appropriate letters in the "category" blocks below)					
A. DEBRIS REMOVAL		D. WATER CONTROL FACILITIES		G. RECREATIONAL OR OTHER	
B. PROTECTIVE MEASURES		E. PUBLIC BUILDINGS			
C. ROADS AND BRIDGES		F. PUBLIC UTILITIES			
SITE NO.	CATE-GORY	LOCATION (Use map location, address, etc.)			
DESCRIPTION OF DAMAGE					
IMPACT:				% COMPLETE	COST ESTIMATE
SITE NO.	CATE-GORY	LOCATION (Use map location, address, etc.)		0.00%	
DESCRIPTION OF DAMAGE					
IMPACT:				% COMPLETE	COST ESTIMATE
SITE NO.	CATE-GORY	LOCATION (Use map location, address, etc.)		0.00%	
DESCRIPTION OF DAMAGE					
IMPACT:				% COMPLETE	COST ESTIMATE
SITE NO.	CATE-GORY	LOCATION (Use map location, address, etc.)		0.00%	
DESCRIPTION OF DAMAGE					
IMPACT:				% COMPLETE	COST ESTIMATE
SITE NO.	CATE-GORY	LOCATION (Use map location, address, etc.)		0.00%	
DESCRIPTION OF DAMAGE					
IMPACT:				% COMPLETE	COST ESTIMATE
NAME OF INSPECTOR		AGENCY		PHONE NO.	HOME
		FDEM		OFFICE	

FEMA Form 90-81, JAN 84 [M/S Excel]

Facility

- Number of sites inspected
- Projected cost by category
- General description of the type / critical facility





Impact Statements

- Capture the impact in a narrative format.
- Illustrate the impact of the disaster.
- Shows the disaster is beyond the capacity of the impacted jurisdiction.
- Supports the need for federal assistance.
- Include numbers or statistics.



Public Assistance Damage Categories

Describe Damages - Categories

Categories

Emergency Work

(6 months to 1 year to complete work)

- **Category A** – Debris
- **Category B** – Emergency Protective Measures

Permanent Work

(1.5 years to 4 years to complete work)

- **Category C** – Road Systems and Bridges
- **Category D** – Water Control Facilities
- **Category E** – Buildings, Contents, and Equipment
- **Category F** – Utilities
- **Category G** – Parks, Recreational, and Other



Where does all this information go?

In the field:

- Organized notes and pictures. *TIP:* Use digital damage assessment tools like Survey 123 or similar
- These are time-sensitive damage assessments.

Back in the office:

- Goes on the official “Inspection Report” forms.
- Transfer your notes back to these inspection reports.

Remember:

- You have a FEMA partner you work with on this entire PDA process; Work together to determine damage totals.





Hurricane Sally





Any
Questions



Contact Information

Florida Division of Emergency Management

2555 Shumard Oak Blvd.
Tallahassee, FL 32399-2100
www.floridadisaster.org

Jarrett McLane

Emergency Management Specialist, PDA Unit
Jarrett.McLane@fema.dhs.gov

Pamela Bergstrom

Region 3, Regional Recovery Coordination Team
Pamela.Bergstrom@em.myflorida.com

Ryan Simpson

Emergency Management Senior Planner
rsimpson@flaglercounty.gov

Jeremy O'Dell

Manager, Regional Recovery Coordination Team
Jeremy.ODell@em.myflorida.com





Preliminary Damage Assessments

Preliminary Damage Assessment Unit | Recovery Directorate | April 2022



FEMA

The background of the slide is a photograph of a building that has been severely damaged, likely by a hurricane or similar natural disaster. The structure is in ruins, with debris scattered everywhere. A blue semi-transparent overlay is applied to the entire image to make the white text stand out.

About the PDA Program Office

The mission of the PDA Program Office is to support and empower Joint Preliminary Damage Assessment teams through collaboration, outreach, and technology.



PDA Process Overview

General Concept of Operations for Requesting and Conducting
Individual and Public Assistance PDAs

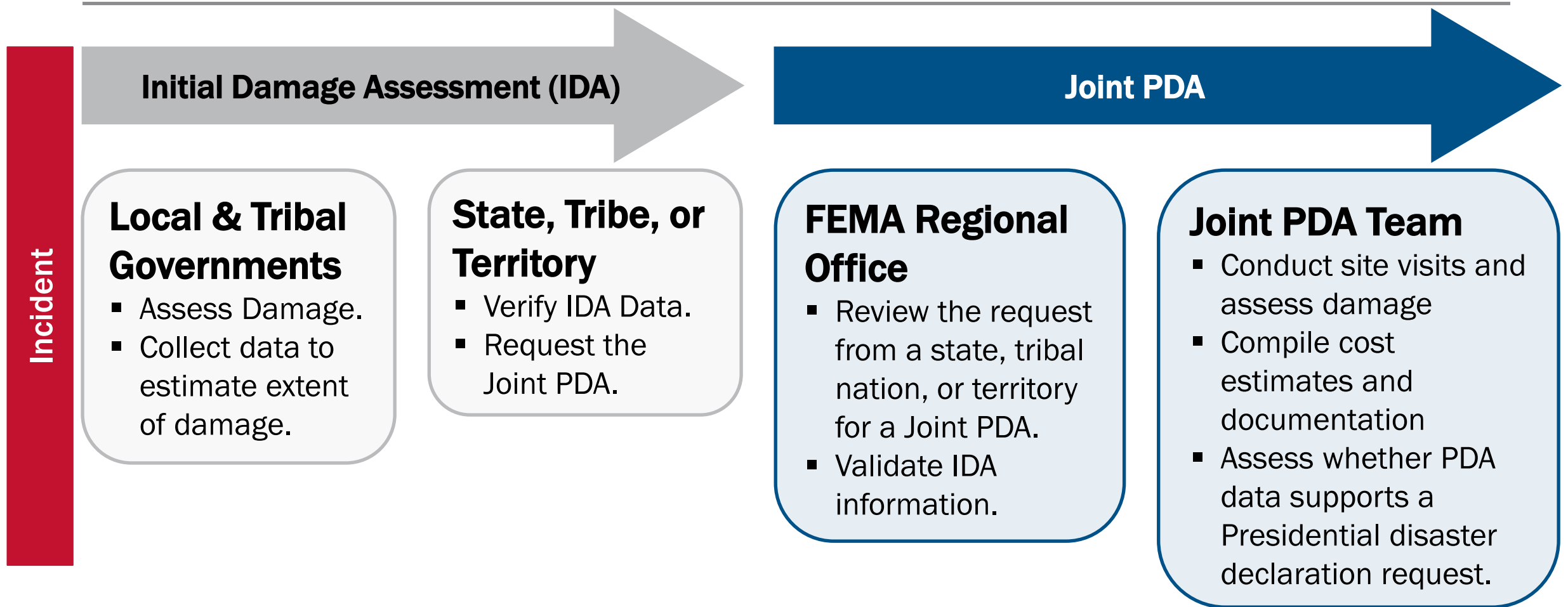
Code of Federal Regulations (CFR)

- 44 CFR § 206.33 addresses PDAs.
 - Pre-assessment by the State:
 - “When an incident occurs, or is imminent, which the State official responsible for disaster operations determines may be beyond the State and local government capabilities to respond, **the State will request the Regional Administrator to perform a joint FEMA-State preliminary damage assessment.**”
 - “It is not anticipated that all occurrences will result in the requirement for assistance; therefore, **the State will be expected to verify their initial information, in some manner, before requesting this support.**”



FEMA

Timeline of a Preliminary Damage Assessment (PDA)



FEMA



Damage Level Definitions

Individual Assistance PDAs

Overview of IA Information Collected

- FEMA uses the following levels of damage to categorize residences:
 - Destroyed
 - Major
 - Minor
 - Affected
 - FEMA may also use the following identifiers:
 - Inaccessible (cannot reach residence to verify damage)
 - Unaffected (no significant damage present)
- Other information collected:
 - Is the residence insured or uninsured?
 - Is the residence primary or secondary (occupied 6+ months of the year)?
 - Is the residence owned or rented?
 - Is the residence a single or multi-family structure or a manufactured home?





Affected Damage

Conventionally-Built Home

Minimal damage to the exterior and/or contents of the home.

- No damage affecting habitability.
- Water line in the crawl space or basement; essential living space or mechanical components are not damaged or submerged.
- Partial missing shingles or siding.
- Cosmetic damage (paint discoloration or loose siding).
- Broken screens, gutter damage and debris.
- Damage to an attached structure (porch, carport, garage, or outbuilding not for commercial use).
- Damage to landscaping, retaining walls, or downed trees that do not affect access to the residence.



Affected Damage

Manufactured Home

Minimal damage to the exterior and/or contents of the home.

- No damage affecting habitability.
- The dwelling's frame is not bent, twisted, or otherwise compromised.
- No structural components of the dwelling have been damaged.
 - Such as windows, doors, wall coverings, roof, bottom board insulation, ductwork, and/or utility hook up.
- Damage to an attached structure such as a porch, carport, garage, or outbuilding not for commercial use.



Minor Damage

Conventionally-Built Home

Wide range of damage that does not affect the structural integrity of the residence.

- Water line up to 18 inches in an essential living space.
- Damage to mechanical components (furnace, boiler, water heater, HVAC, etc.).
- Nonstructural damage to:
 - Roof components over essential living space (shingles, roof covering, fascia board, soffit, flashing, and skylight).
 - Interior wall components to include drywall, insulation.
 - Exterior components.
- Multiple small vertical cracks in the foundation.
- Damage to chimney to include, tilting, fallen, cracks, or separated from the residence.
- Damage or disaster related contamination to a private well or septic system.



Minor Damage Manufactured Home

The residence is damaged and requires minimal repairs.

- Water line is below the floor system.
- Skirting or HVAC is impacted.
- There is no structural damage to the residence, and it has not been displaced from the foundation.
- Nonstructural components have sustained damage (windows, doors, wall coverings, roof, bottom board insulation, ductwork, and/or utility hook up).
- Skirting or HVAC is impacted.



Major Damage

Conventionally-Built Home

Residence has sustained significant structural damage and requires extensive repairs.

- Water line is:
 - Above 18 inches in an essential living space.
 - Above the electrical outlets.
 - On the first floor of a residence with a basement.
- Failure/partial failure to structural elements of the roof over required rooms (rafters, ceiling joists, ridge boards, etc.).
- Failure/partial failure to structural elements of the walls to include framing, sheathing, etc.
- Failure/partial failure to foundation to include crumbling, bulging, collapsing, horizontal cracks of more than two inches, and shifting of the residence on the foundation of more than 6 inches.



Major Damage

Manufactured Home

The residence has sustained structural or significant damage that require extensive repairs.

- Water has come into contact with the floor system.
- The residence has been displaced from the foundation, block or piers and other structural components have been damaged.



Destroyed Damage Conventionally-Built Home

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

- Complete failure of two or more major structural components (e.g., collapse of basement walls/foundation, walls, or roof)
- Only foundation remains.
- A residence that will require immediate demolition or removal because of disaster-related damage or confirmed imminent danger (e.g., impending landslides, mudslides, or sinkholes).



Destroyed Damage

Manufactured Home

The residence is a total loss.

- The residence's frame is bent, twisted, or otherwise compromised.
- The residence is missing the roof covering or the structural ribbing has collapsed for the majority of the roof system.



Categories of Work

Public Assistance PDAs



Category A

Debris Removal

- Major types of debris:
 - Vegetative (trees, limbs, brush)
 - Construction and demolition (siding, roofs, porches, brick and block, etc.)
 - Metals (metal roofs, manufactured homes)
 - White goods (Major household appliances such as washers, dryers, freezers, refrigerators)
 - Household hazardous materials (normal amounts and types of cleaning materials, gas or propane cylinders, paint, etc.)
 - Hazardous materials (major industrial, commercial, agricultural, recreational products)
 - Sediment/sand



Category B

Emergency Protective Measures

- Examples of Emergency Work:
 - Protective Measures
 - Barricading
 - Sandbagging
 - Boarding Up Windows
 - Temporary Roof Coverings
- Fire & Police Activities
- Temporary Relocation
- Mutual Aid



Category C

Roads and Bridges

- If impassable, note alternative routes.
- Identify maintenance responsibility.
- Note road surface materials, lanes, and road-classification.
- Note bridge size and type (steel, concrete, timber, truss).
- Describe specific type of damage.
- Note any history of previous damage.
- Describe the social and economic impacts.



Category D

Water Control Facilities

- Identify the organization responsible for maintenance.
- Provide clear, concise description of facility.
- Note purpose of facility and extent of damages.
- Note ensuing threats.
- Identify impacts.



Category E

Public Buildings and Contents

- More than 50% damaged?
- Note building type.
- Clearly identify functions of damaged buildings/equipment.
- Describe and dimension damaged building elements.
- Is there insurance?
- Has the facility function been moved somewhere else?
- Is the building historic? Over 50 years old?
- In floodplain or COBRA zone?



Category F

Public Utilities

- Critical facility-work mainly complete at time of PDA.
- Distinguish damage to physical plants and distribution or collection systems.
- Note components/system damages & dimensions.
- Determine operational status: time offline and back online.
- Describe local response.
- Note extent and frequency of previous damage.
- Describe the work remaining.



Category G

Parks, Recreational, and Other Facilities

- Identify type of facility that sustained damage.
- Note the function of the facility.
- Identify the organization responsible for maintenance.
- Describe specific damage.
- If a beach, ensure it meets criteria for engineered beach.
- May include damaged roads, utilities, erosion, structures, etc. located within a park.

PA Damage Inventory Sheet

For Initial Assessments



FEMA

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1																	
2	Disaster Number:					Program Delivery Manager (PDMG) Name:					N/A						
3	Applicant Name:					Program Delivery Manager (PDMG) Phone:					N/A						
4	Applicant FIPS:					Program Delivery Manager (PDMG) Email:					N/A						
5	Applicant Point of Contact Name:																
6	Applicant Point of Contact Phone:																
7	Applicant Point of Contact Email:																
8	Category	Name of damage/facility	Address 1	Address 2	City	State	Zip	Latitude	Longitude	Describe Damage (Damage Descriptions and Dimensions)	Primary Cause of Damage	Approx. Cost	% Work Complete	Labor Type	Has received PA grant(s) on this facility in a past?	Applicant priority	Date Damaged
9	C	Example - Lake Johnson Bridge Washout	789 CR 123		Anytown	FL	99999	33.56789	-85.25879	Two span, 80 ft long x 24 ft wide, concrete beam and deck structure	Flood	\$500,000	15%	FA/C	N	High	01/01/2020
10																	

Damage Inventory

Lists

Public Assistance Damage Inventory Sheet for IDAs

- Category of Work.
- Common Name for the Damaged Facility.
- Location Information:
 - Street address (if applicable)
 - Coordinates of the damage (latitude/longitude)
- Short description of the damage.
- The peril or primary cause of the damage.
- Approximate cost of the repairs.
- Percentage of repair work complete.



Public Assistance Damage Inventory Sheet for IDAs (continued)

- Category/type of labor (MAA, MA, MOU, FA, C, FA/C, DR)
 - Mutual Aid, Mission Assigned, Memorandum of Understanding, Force Account, Contract, Force Account & Contract, Donated Resource
- Indicate whether PA grant(s) have been received on this facility in a past.
- Indicate the priority of repairs (low, medium, high, urgent).
- Indicate the date of the damage.



Resources Available to You

To Assist Before and During a Joint PDA

Initial Damage Assessment (IDA) Checklists

- Condense information found in the PDA Guide into a quick-reference format.
- Outline documentation and information essential to paving the way for a successful Joint PDA operation.
- Highlight additional resources that a jurisdiction may optionally share during the PDA that can assist in the operation.
- Partner feedback is welcome!



FEMA

Virtual Joint Preliminary Damage Assessment Preparation Checklist

Individual Assistance Initial Damage Assessments

The purpose of this checklist is to identify essential elements of information during an Initial Damage Assessment (IDA) that are valuable in supporting virtual Joint PDAs. In some cases, FEMA Regions may choose to virtually assess Individual Assistance (IA) damages, supported as necessary with a hybrid approach to assess damages that cannot be validated virtually. FEMA Regions decide whether to assess damages with a limited field presence based on incident specific factors.

Requesting a Joint PDA

If the incident is of such severity and magnitude that resources tribal, or territorial (STT) government capability, the director of joint PDA. The joint PDA request is accomplished through a joint office, which should contain a list of disaster-impacted locations less the time required for FEMA to virtually verify damage by whether the IDA information submitted is complete and aligned with standards.

- **Damage Inventory** – catalogue of damaged residences including additional supporting factors below)
- **Summary of Community Impacts** – disaster-related information underscore how the unique resources of the Federal Government
- **Damage Photographs** – evidence provided along with the summary to confirm damage assessments

Damage Inventory

Each damaged residence should have a damage report. Damage will assist FEMA in validating the damage and completing the PDA.

- ☐ Level of damage (using the [PDA Guide](#), pages 29-32 and Appendix A)
- ☐ Dwelling Type (single, multi-family (include number of affected units))
- ☐ Owner/Renter status
- ☐ Whether or not the home is insured to cover the disaster-related damage (Housing Insurance Matrix)



FEMA

Virtual Joint Preliminary Damage Assessment Preparation Checklist

Public Assistance Initial Damage Assessments

The purpose of this checklist is to identify essential elements of information during an Initial Damage Assessment (IDA) that are valuable in supporting virtual Joint PDAs. In some cases, FEMA Regions may choose to virtually assess Public Assistance (PA) damages, supported as necessary with a hybrid approach to assess damages that cannot be validated virtually. FEMA Regions decide whether the assessments will be virtual, or hybrid with a limited field presence based on incident specific factors.

Requesting a Joint PDA

If the incident is of such severity and magnitude that resources needed to recover are expected to exceed state, tribal, or territorial (STT) government capability, the director of STT emergency management agencies may request a joint PDA. The joint PDA request is accomplished through a joint PDA request letter to the appropriate FEMA regional office, which should contain a list of disaster-impacted locations and a basic PDA schedule. STT governments can lessen the time required for FEMA to virtually verify damage by working with local emergency managers to assess whether the IDA information submitted is complete and aligned with established FEMA programmatic eligibility standards.

- **Essential Documentation Information** – inventory of damaged facilities including facility description, category of damage, method of repair, etc. (see additional supporting factors below)
- **Summary of Facility Impacts** – disaster-related information that should illustrate the overall impacts upon the facility and the unique resources of the Federal Government that are necessary to support repair efforts
- **Damage Photographs** – visual evidence provided along with the summary of facility impacts and damage reports to confirm damage assessments

Essential Documentation Information

The following information should be provided for damaged facilities. Damage description and dimensions must clearly separate the dimensions and description of the facility from those of the intended repairs. Dimensions and descriptions of completed work must also be reported separately. Refer to Appendix J of the [PDA Guide](#) for the Public Assistance Eligibility Matrix.

Collecting Information for a PA Assessment

Capture and document as many damage sites as possible, regardless of whether the damage site is thought to be eligible or ineligible for federal disaster assistance. Regional PA leadership will review the validated PDA information.



FEMA

March 2021 1



Aerial Imagery Resources

- Sources of Imagery
- Civil Air Patrol Post-Incident Imagery
- NOAA Post-Incident Imagery
- FEMA GeoPlatform Publicly Available Imagery (Remote Sensing)
- Aerial Imagery Options Document

Individual and Households Program (IHP) Cost Calculator

- Calculates potential Housing Assistance (HA) and Other Needs Assistance (ONA) awards for each county (or equivalent) using:
 - Number of residences assessed at each level of damage.
 - Percentage of residences owned vs. rented.
 - Percentage of residences with insurance.
 - Low-income percentage of the area.
 - HUD Fair Market Rent (FMR) rates.



FEMA

Preliminary Damage Assessments (PDA) - Individuals and Households									
1									
2	STATE/TRIBE/TERRITORY:					Enter State/Tribe/Territory			
3	INCIDENT START DATE(S):					Enter as MM/DD/YYYY			
4	INCIDENT TYPE:					Select from List			
5	What percent of the Affected damage level dwellings will be eligible for IHP?					Input percentage			
6									
7	County Name	Destroyed	Major	Minor	Affected	Affected Getting Assistance	Total	% Owner	% Insured
8						0	0		
9						0	0		
10						0	0		
11						0	0		
12						0	0		
13						0	0		
14						0	0		
15						0	0		
16						0	0		
17						0	0		
18						0	0		
19						0	0		
20						0	0		
21						0	0		
22						0	0		
23						0	0		
24						0	0		
25						0	0		
26						0	0		
27						0	0		
28						0	0		
29						0	0		
30						0	0		
31						0	0		
32						0	0		
33						0	0		
34						0	0		
35						0	0		
36						0	0		
37						0	0		
38						0	0		
39						0	0		
40						0	0		
41						0	0		
42						0	0		
43						0	0		
44						0	0		
45						0	0		
46						0	0		
47						0	0		
48						0	0		
49						0	0		
50						0	0		
51						0	0		
52						0	0		
53						0	0		



PDA Training Resources

- **IS-772.a: Individual Assistance PDAs**
 - Overview of IA PDAs, including the declaration process and team roles and responsibilities.
- **IS-556: Damage Assessment for Public Works**
 - Describes the development or refinement of a damage assessment program for public works agencies.
- **IS-559: Local Damage Assessment**
 - Plan an effective damage assessment program and conduct rapid and effective damage assessments.



Digital Survey Templates

Gather, Analyze, and Transmit Damage Data Faster

Benefits to Digital Surveys

- Electronically collect, submit and validate damage assessment information.
 - No more juggling paper and sending scanned PDFs.
 - Transit workable data that leads to more efficient PDAs.
- Standardizes the collection of incident reported damages across different levels of government.
- Data sent to FEMA using these templates will be uploaded to our system for review.



FEMA

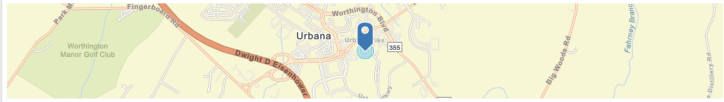
v3.1.4 Individual Assistance PDA Survey

For questions on conducting damage assessments, refer to the:
[2021 Preliminary Damage Assessment Pocket Guide](#)

Individual Assistance Field Collection Survey

Incident Begin Date: *

Coordinates of the damage: *



▼ Location Information:

Street Address:
*Confirm address - New divisions may not reflect accurate location.

City/Town:

State/Territory: *
📍 Reverse geocoding suggests the state is: (Scroll for additional choices)

County: *
📍 Reverse geocoding suggests this county is: (Scroll for additional choices)

Zipcode
Provide in Zipcode or Zipcode + 4 format

Is any member of the household affiliated with a federally recognized tribe?
☐ Yes
☐ No

What event type caused the damage? *
(Select all that apply)

<input type="checkbox"/> Drought	<input type="checkbox"/> Earthquake	<input type="checkbox"/> Explosion	<input type="checkbox"/> Fire	<input type="checkbox"/> Flood	<input type="checkbox"/> Hurricane	<input type="checkbox"/> Landslide
<input type="checkbox"/> Mudslide	<input type="checkbox"/> Severe Storm	<input type="checkbox"/> Snowstorm	<input type="checkbox"/> Straight-Line Winds/ Derecho	<input type="checkbox"/> Terrorism	<input type="checkbox"/> Tidal Wave	<input type="checkbox"/> Tornado
<input type="checkbox"/> Tropical Depression	<input type="checkbox"/> Tropical Storm	<input type="checkbox"/> Tsunami	<input type="checkbox"/> Volcanic Eruption	<input type="checkbox"/> Winter Storm	<input type="checkbox"/> Other	

Are there any immediate needs?
☐ Yes
☐ No
☐ Unsure

How to Access the Templates

- Visit [FEMA.gov/PDA](https://www.fema.gov/PDA)
 - Templates are located under “Digital Damage Surveys”
- Templates are downloadable in .xls format.
- Collect damage information in the same data format as FEMA.
- Add questions you that are important to your jurisdiction.

The screenshot shows the FEMA website's 'Preliminary Damage Assessments' page. The top navigation bar includes the FEMA logo, a search bar, and links for 'Prepare for Disasters', 'Apply for Assistance', and 'Get Flood Insurance'. Below this is a secondary navigation bar with links for 'Disasters & Assistance', 'Grants', 'Floods & Maps', 'Emergency Management', 'About', and 'Work With Us'. The main content area is titled 'Preliminary Damage Assessments' and features three buttons: 'Reports & Guide', 'How to Conduct a PDA', and 'Digital Damage Surveys'. The 'Digital Damage Surveys' button is circled in red. To the left of the main content is a sidebar with a 'Disaster Information' section containing links such as 'How a Disaster Gets Declared', 'Preliminary Damage Assessments', 'Preliminary Damage Assessment Reports', 'Preliminary Damage Assessment Guide', 'Request For Presidential Disaster Declaration', 'Individual Assistance Declaration Factors', 'Tribal Declarations Pilot Guidance', 'All Disaster Declarations', 'Disaster Authorities', and 'Historic Disasters'. Below the buttons, there is a paragraph explaining that Preliminary Damage Assessments (PDAs) are conducted to enable FEMA and its partners to determine the magnitude of damage and impact of disasters. At the bottom, there are two sections: 'PDA Reports' with a link to 'View all Preliminary Damage Assessment (PDA) reports' and 'PDA Guide' with a link to 'View the PDA Guide'.



Your Feedback

On the Preliminary Damage Assessment Process and Available Resources

Your Feedback on PDA Experiences

- What feedback do you have regarding PDA operations or planning?
 - PDA Guidance
 - Training
 - Technology and Tools
 - Field Operations and Coordination
 - Gaps in Resources and Support

FEMA PDA Program Office

Recovery Directorate
Office of Response and Recovery

FEMA-Recovery-PDA@fema.dhs.gov
www.FEMA.gov/PDA



FEMA

www.fema.gov/pda



Flagler County Damage Assessment Overview

2022 National Hurricane Conference

Training on Preliminary Damage Assessment

Orlando, Florida

April 11, 2022, 1:30 PM – 5:00PM

Ryan Simpson, MPA, FPEM, Senior Emergency
Management Planner

Flagler County Emergency Management

www.FlaglerCounty.gov/emergency

EOC@FlaglerCounty.gov - 386.313.4243

Topics I will Cover:

1. How Flagler County is using Esri QuickCapture application for Damage Assessment

- **Case Example: Flagler County Search and Rescue Exercise, January 12, 2022**
- **Case Example: Documenting Infrastructure Damage for Public Assistance**

2. How Flagler County is using Esri Field Maps and ArcGIS Survey for residential damage assessment planning

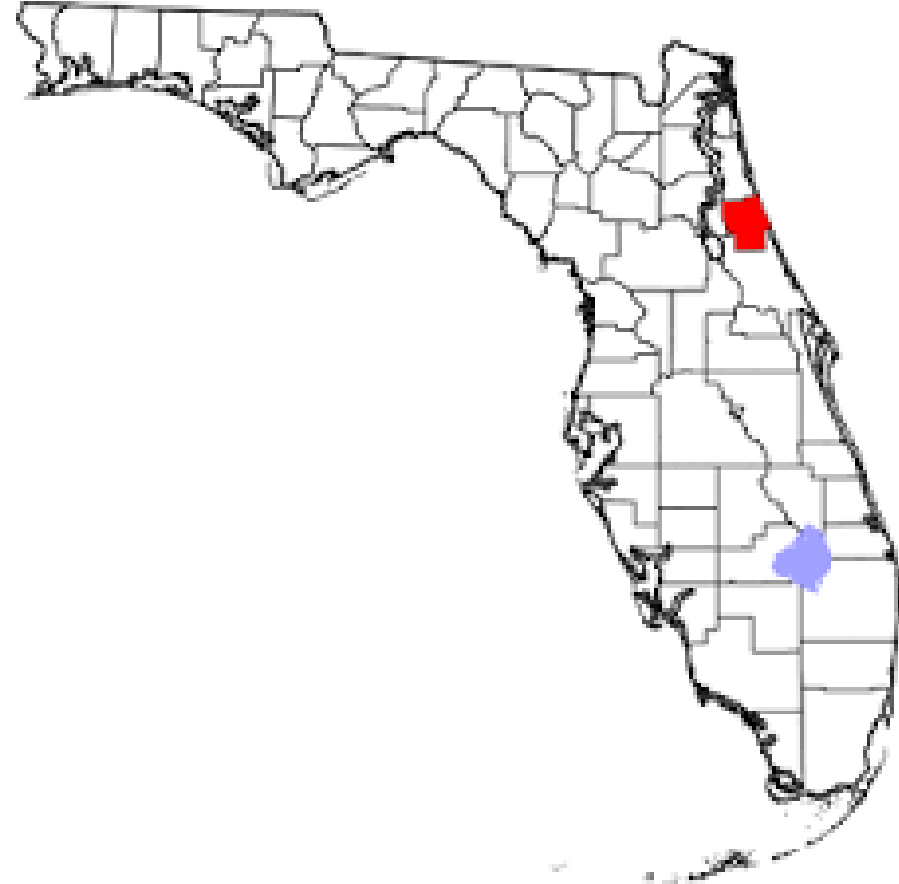
- **Case Example: Flagler County residential damage assessment pre-planning, 2022**

Flagler County Damage Assessment Planning Team



County Team / Planning Partners:

- **Flagler County GIS**
- **Flagler County Property Appraiser**
- **Flagler County Building Department**
- **Flagler County Emergency Management**
- **City of Palm Coast, Florida**



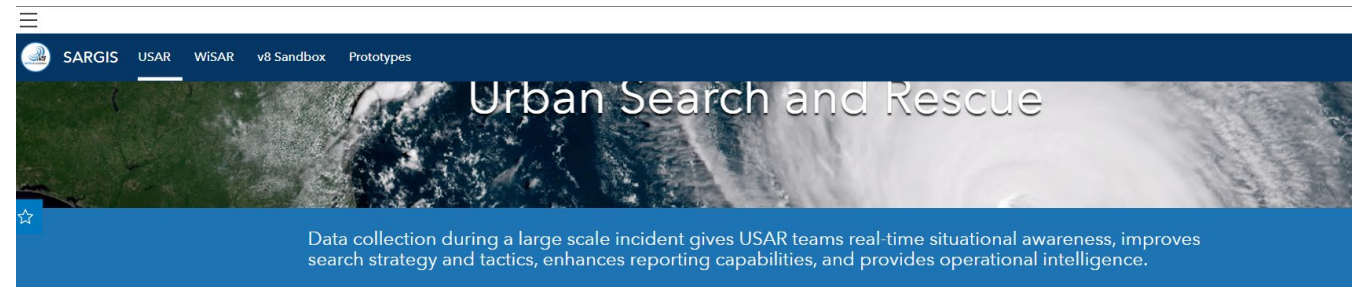
Esri ArcGIS QuickCapture Application

- **FREE - Included with Esri Software License**
- **App for rapid data collection implemented in Flagler County in 2021**
- **Solves a Real-world Problem to: Locate & Access, Captures data with the touch of a button**
- **Once the Template is saved to the mobile device there is no need to be concerned with connectivity.**
- **No longer a need to stress whether you will have internet in the field**
- **View real-time data**
- **Endorsed by National Alliance for Public Safety GIS (NAPSAG) Foundation**
 - **NAPSAG developed SAR Common Operating Platform in attempt increase standardization**
 - **NAPSG is striving to get all SAR Teams into the same environment**
- **Allows for increased coordination with responders in mutual aid situations**

National Alliance for Public Safety GIS (NAPSAG)

How to Connect

- **NAPSG – Urban Search and Rescue**
 - <https://sargis.napsgfoundation.org/pages/usar/>
- **State of Florida Division of Emergency Management**
 - **Daniel Rydl, GIS Administrator (850) 815-4732**
daniel.Rydl@em.myflorida.com



Get Started

The roles below correspond with the type of information that someone in that position will find most useful. "Field Operations" takes you to a sandbox where you can try out the latest version of the SAR survey and its corresponding support apps. "TIS/GIS" includes content the Tech Info Specialist or GIS Specialist needs to deploy the survey and support Operations. Finally, the "Chiefs" page provides a high-level overview of the search data collection process and includes points of contact across the SAR and First Responder Community.



Field Operations

[Try the Sandbox](#)



TIS/GIS

[Deploy and Support](#)



Chiefs

[Points of Contact](#)

Flagler County Search & Rescue Exercise

- **Full Scale Exercise**
- **Date: January 12, 2022**
- **Location: Princess Place Preserve**
- **Participants: 68**
- **Participating Agencies & Depts: 19**
- **Scenario: Tornado caused isolated damages to residential and commercial development**
- **Functions: Search and Rescue and Missing Person Search**



Exercise Objectives related to Esri Quick Capture Search & Rescue Application

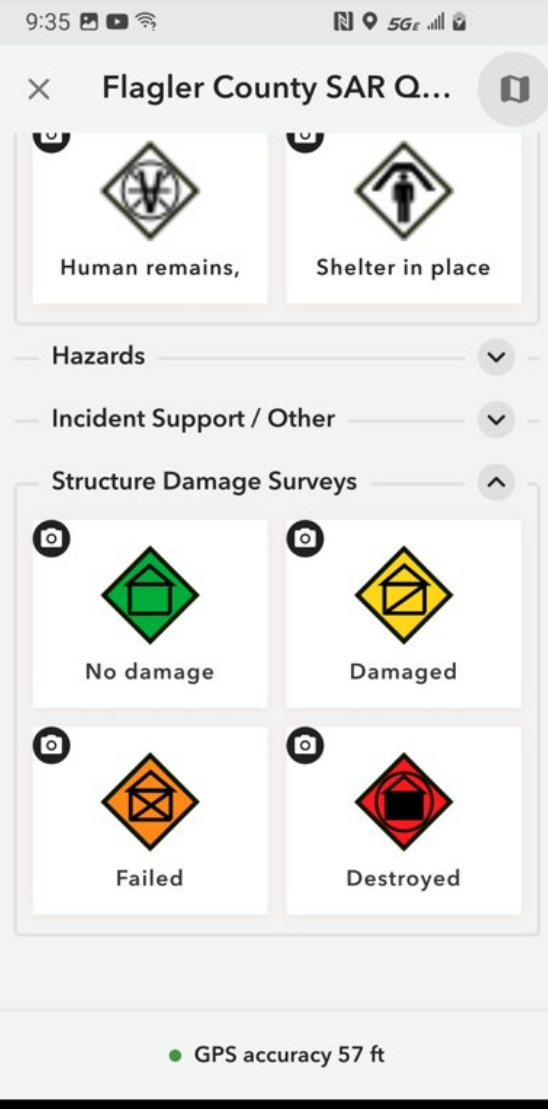
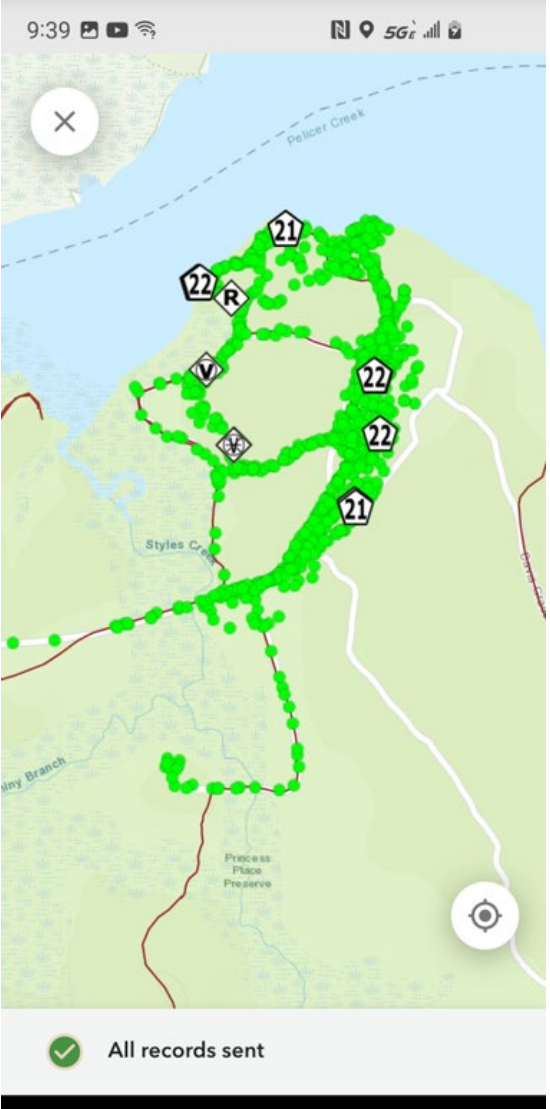
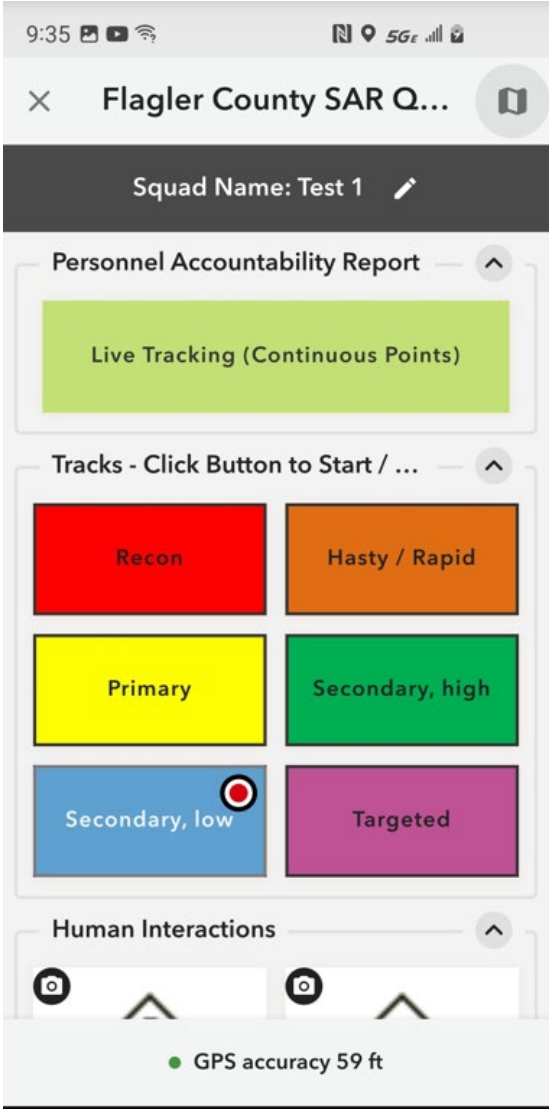
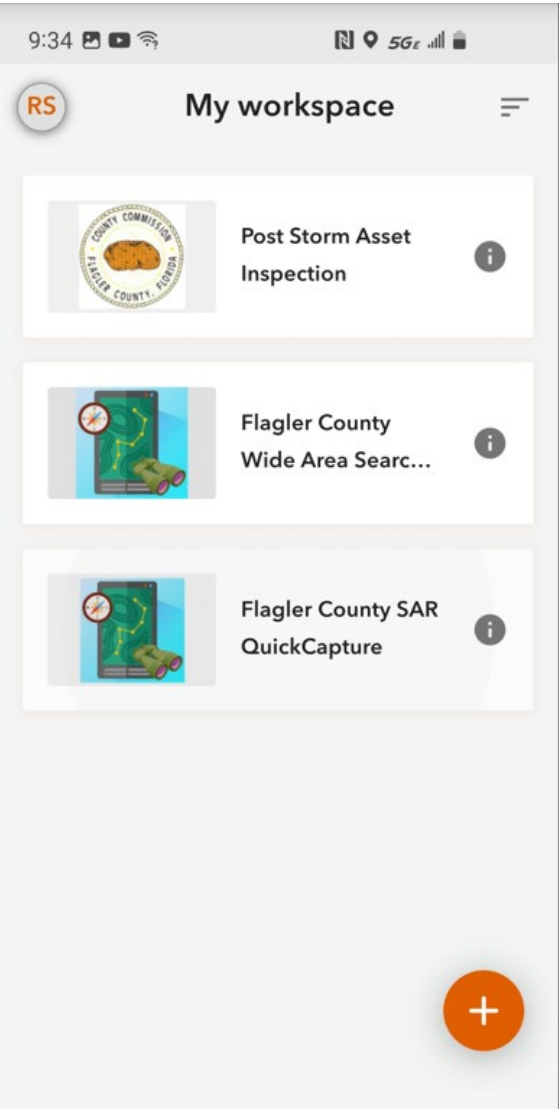
- ✓ **Conduct search and rescue operations to locate and rescue persons in distress and demonstrate use of Esri Quick Capture Search & Rescue Application**
- ✓ **Conduct a missing person(s) search and demonstrate use of Esri Quick Capture Search & Rescue Application to assist Law Enforcement document and monitor progress of missing person search operations**

Flagler County Search & Rescue Exercise

QuickCapture Project



ArcGIS QuickCapture / Flagler County



Standardized Data Collection



QuickCapture Field Reference Guide

1. Project User Input

The first questions that you must answer is called "Project User Input". Answer these questions based on the information in the "hint". (This is where you can edit what you entered on the previous slide.)

2. Create Tracks

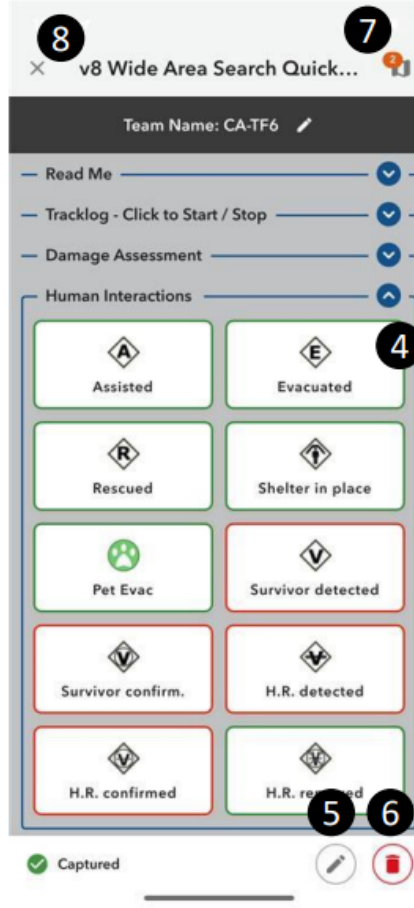
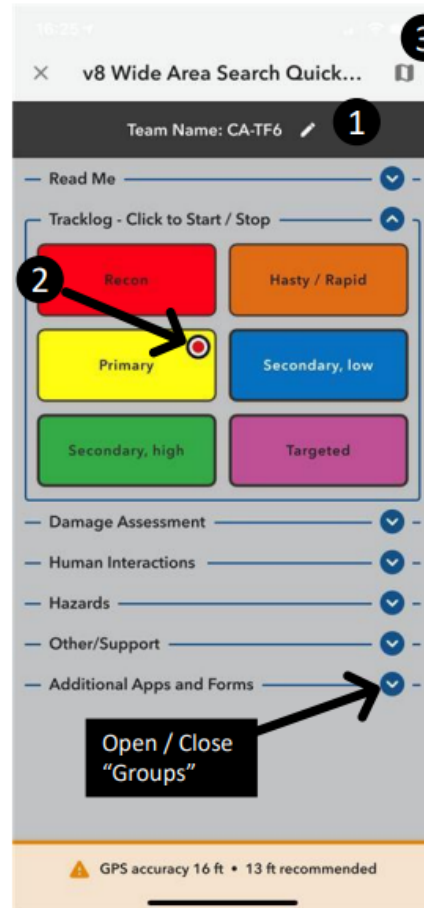
Click on a track category to start creating your tracklog. This will store your progress on the device. It will blink and show a recording button while active.

Once you complete your mission, click on the same button again to complete your tracklog (i.e., when completing a segment or at end of day).

3. Open Map / Status

Click here to view the map associated with the project. On a tablet, map displays automatically.

If you see a #, this is the number of entries pending. When offline, this number will show until you connect and send your data.



4. Create Waypoint

Click on a waypoint category to collect it. Photo – you may be prompted for an optional or required photo. Button User Input – Depending on the type of point, you will be asked an additional optional or required question. Click DONE when you are ready.

5. Edit Data

If you want to edit the location of the point because it isn't accurate (see GPS accuracy) or you're not close to your observation, click on the pencil icon, then drag the pin to the correct location (e.g., A-side of structure for damage assessment).

6. Delete Data

If you made a mistake, click the trash can icon to delete the point and start over. If you missed an opportunity to edit or delete the data, it can be edited in Survey123 or the SAR Intel Manager.

7. Submit Records

The number in the orange circle indicates the number of records on your device. If you click on this number, you can see your waypoints on a map and manually send the records when connected to the internet. Be sure to submit all records before closing the project.

8. Close Project







Click the 'x' when you are done collecting data or want to adjust your settings, open a new project, etc. If you are online this will send any pending data. If you are offline, you should remember to open the project when you go back online to send the data.

Updated on 1/21/2022 10:57 AM

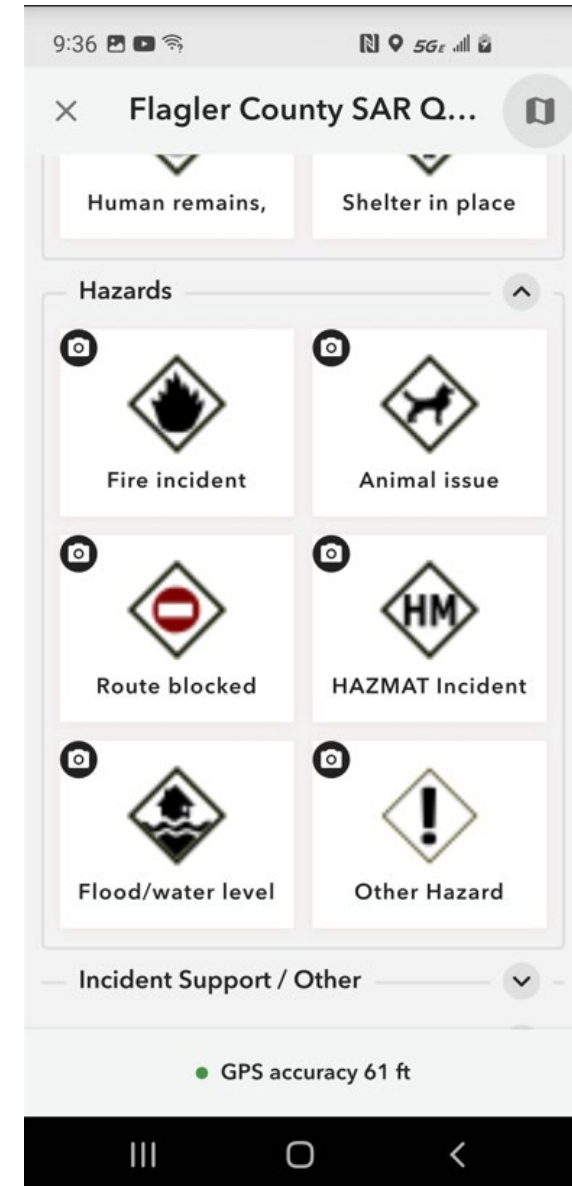
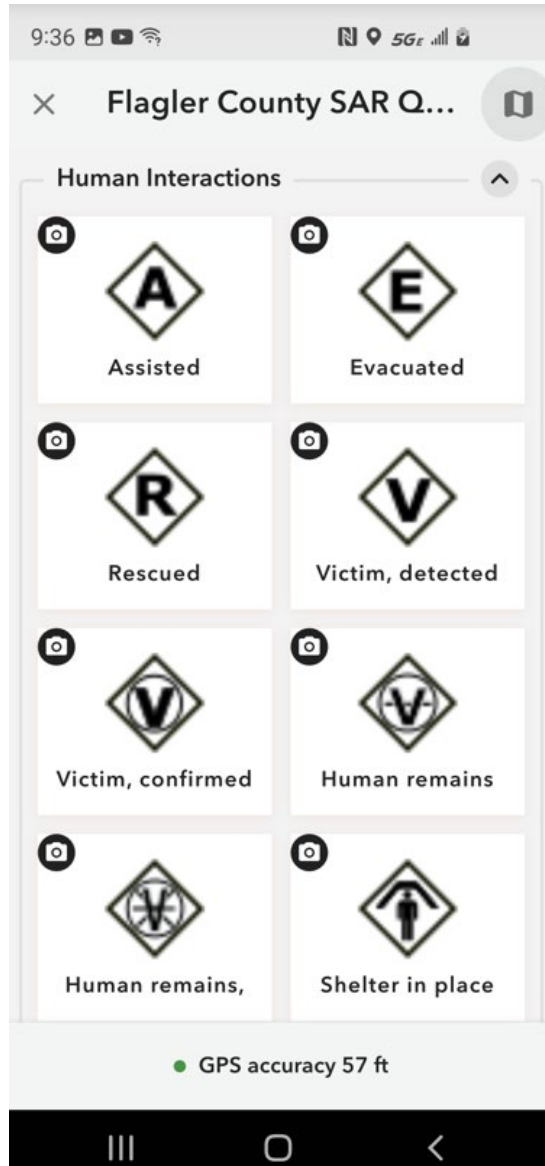
Standardized Data Collection & Symbology



Wide Area Search Waypoint Data Dictionary

Symbol	Name	Description
Structure Damage		
	Unaffected	No visible or reported damage.
	Affected	Damage to the structure is mostly <u>cosmetic</u> .
	Minor	Repairable <u>non-structural</u> damage.
	Major	Structural damage or other significant damage that <u>requires extensive repairs</u> .
	Destroyed	The structure is a <u>total loss</u> .
	Unknown	The status of the structure is unknown.

Data Collection










Data Analysis

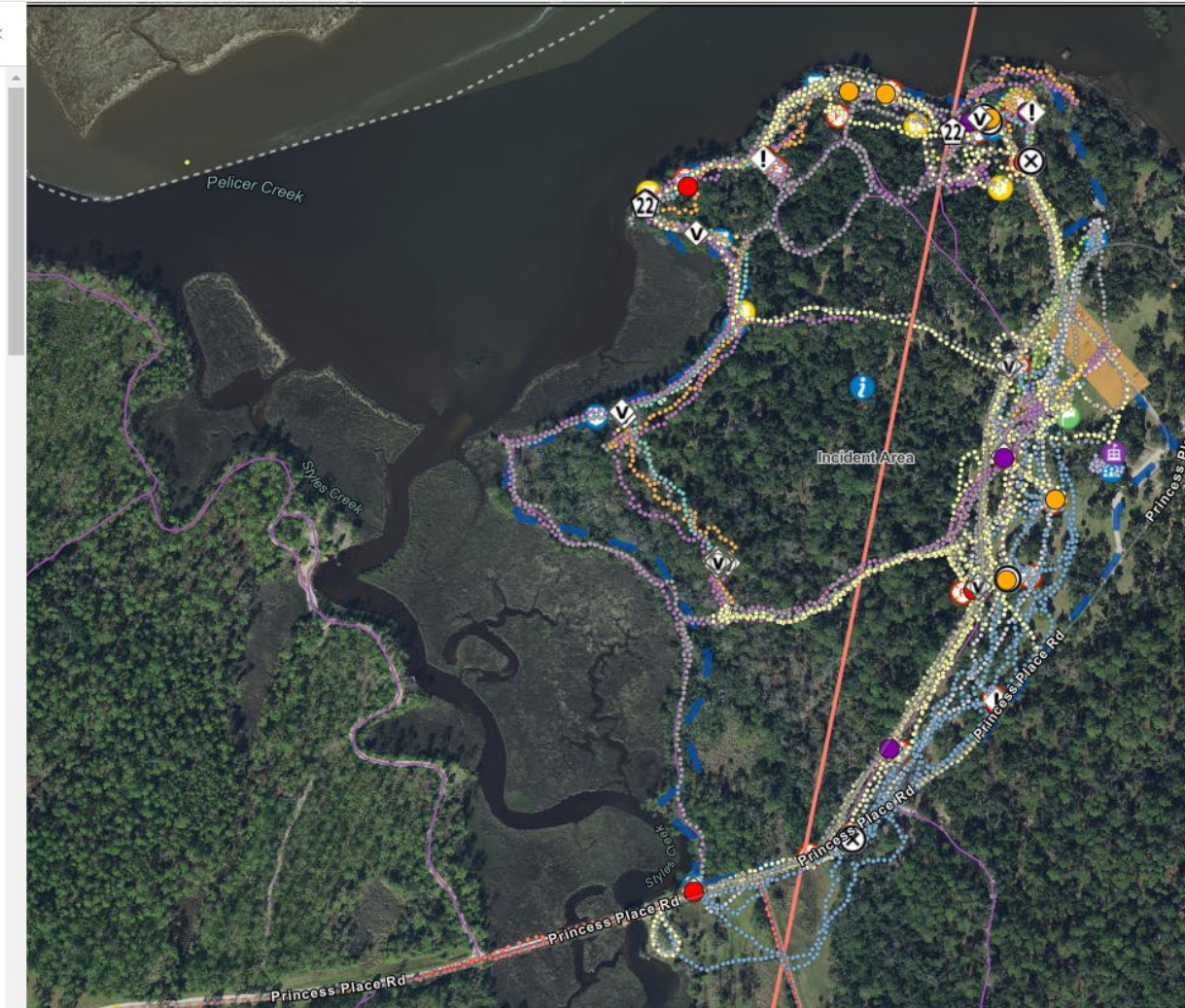
SAR Exercise Planning Map 

Legend

Waypoints - e33097

Waypoint

-  Structure - Unaffected
-  Structure - Affected
-  Structure - Minor
-  Structure - Major
-  Structure - Destroyed
-  Structure - Unknown
-  Assisted
-  Evacuated
-  Rescued
-  Shelter in place
-  Victim, detected
-  Victim, confirmed
-  Human remains, detected
-  Human remains, confirmed
-  Human remains, removed
-  Pet Evacuation
-  Animal hazard
-  Fire incident
-  HAZMAT Incident
-  Flood/water level



Data Analysis – Zoom in

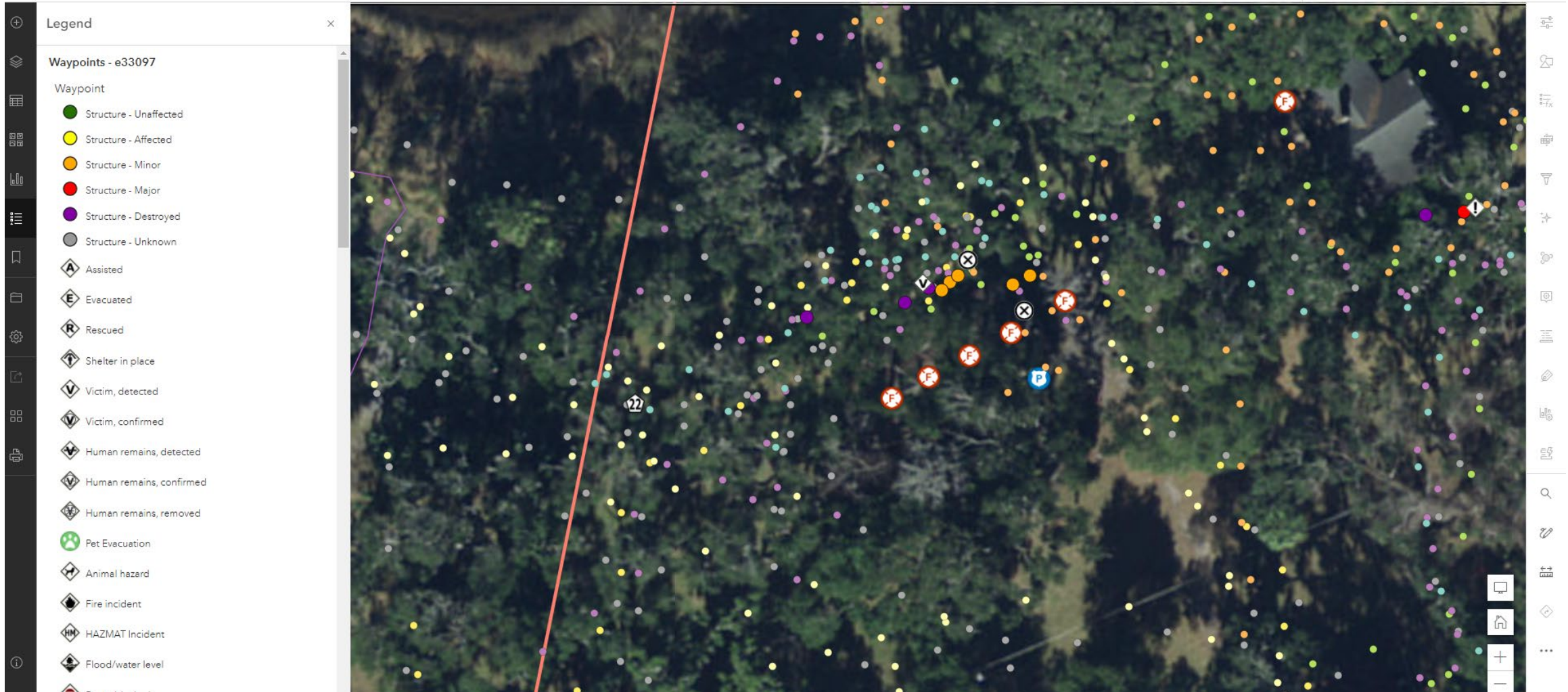


SAR Exercise Planning Map

Open in Map Viewer Classic



Ryan Simpson
rsimpson_FCMAPS

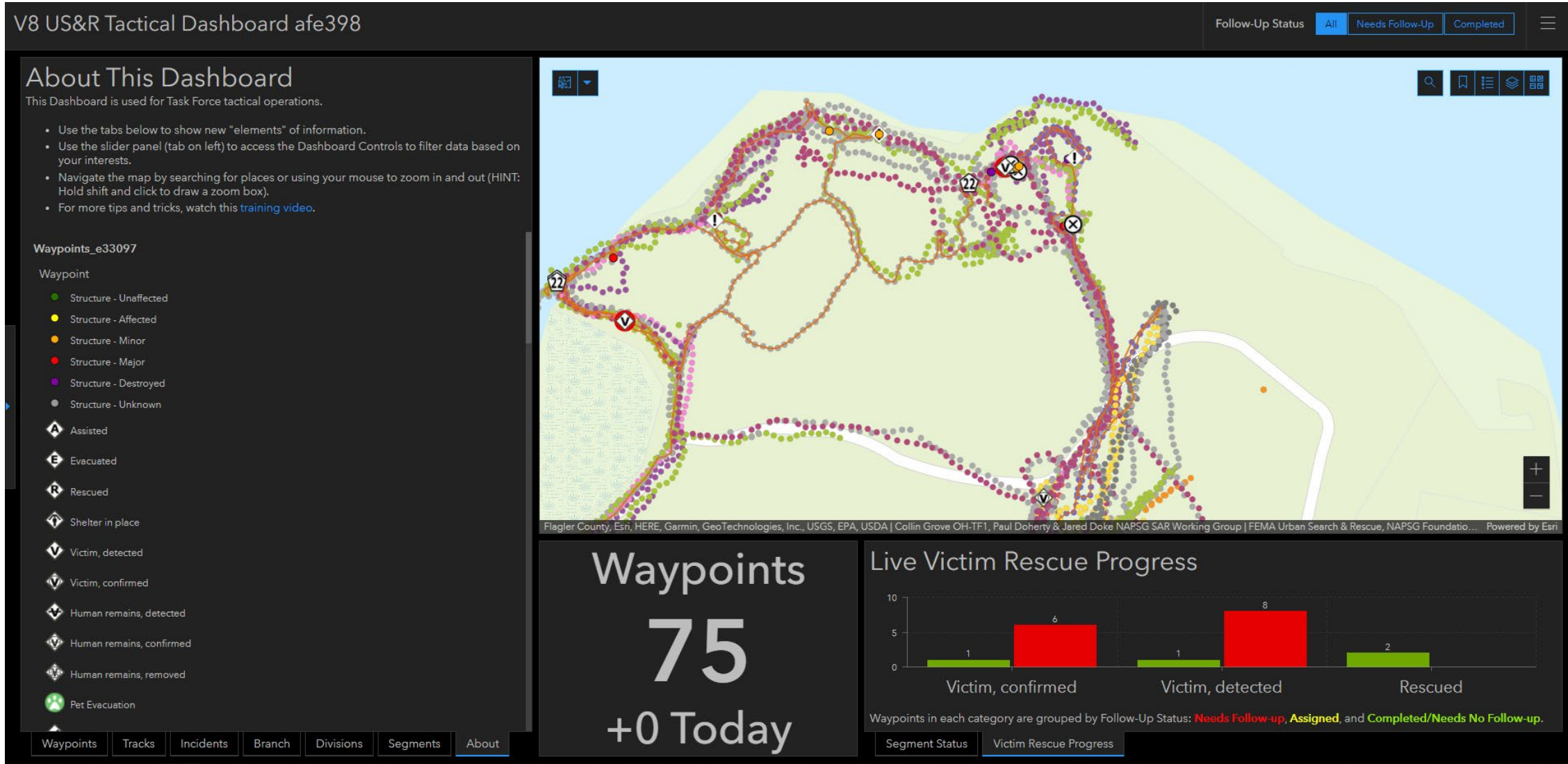


Strategic Dashboard

- High level overview of the incident with key performance indicators that update in real time
- Audience: Decision Makers – Incident Commanders
- Data Driven, track at high level
- Turn Layers on, off, zoom in and out, change base map
- Real-time situational awareness and up to date situation reports for strategic level decision making



Strategic Dashboard: Map



Strategic Dashboard: Waypoint Tally



v8 US&R Strategic Dashboard 437de3

About This Dashboard

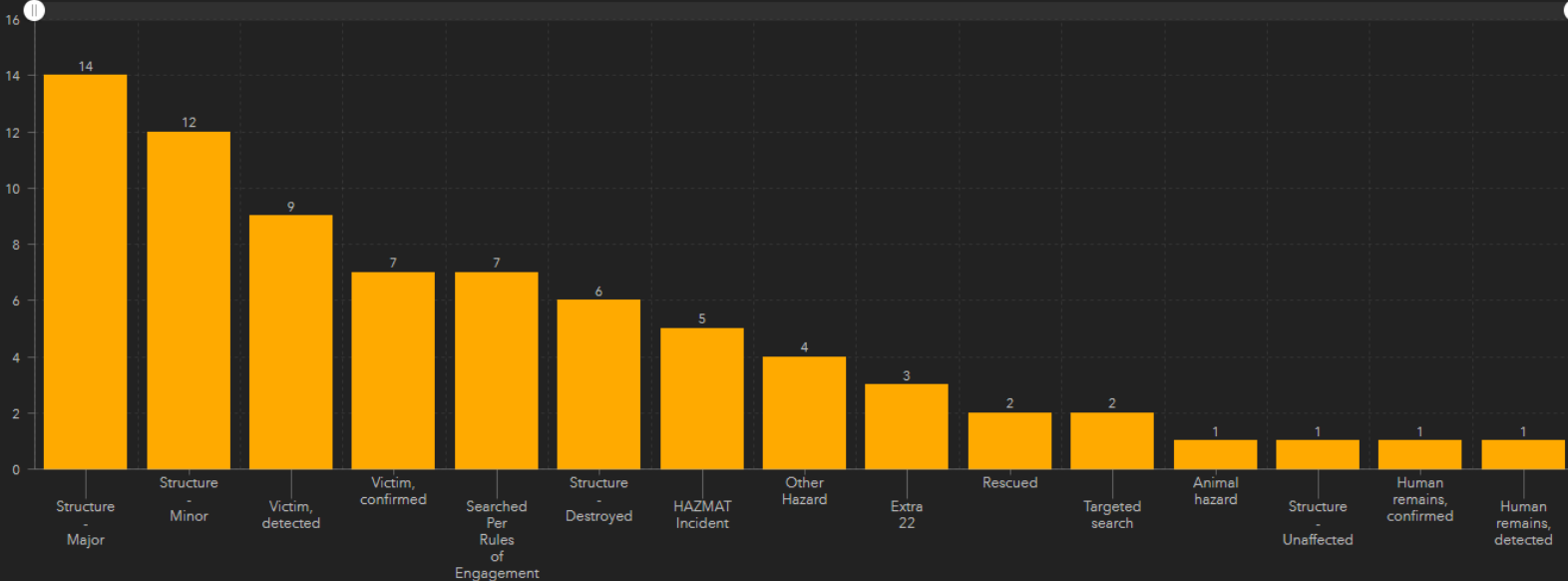
This Dashboard is used for Task Force tactical operations.

- Use the tabs below to show new "elements" of information.
- Use the slider panel (tab on left) to access the Dashboard Controls to filter data based on your interests.
- Navigate the map by searching for places or using your mouse to zoom in and out (HINT: Hold shift and click to draw a zoom box).
- For more tips and tricks, watch this [training video](#).

Waypoints_e33097

Waypoint

- Structure - Unaffected
- Structure - Affected
- Structure - Minor
- Structure - Major
- Structure - Destroyed
- Structure - Unknown
- Assisted
- Evacuated
- Rescued
- Shelter in place
- Victim, detected
- Victim, confirmed
- Human remains, detected
- Human remains, confirmed
- Human remains, removed
- Pet Evacuation
- Animal hazard



Last update: 2 minutes ago

Map Waypoint Tally People Damage Segment Status Waypoints Per Day

Waypoints



75

+0 Today

Human Interactions



20

+0 Today

Assists, Rescues, Evacuations, and Shelter-in-Place.

Last update: 2 minutes ago

Damage Assessments



33

+0 Today

Rapid damage assessment only.

Last update: 2 minutes ago

About Incident Branches Divisions

Strategic Dashboard: Damage



About This Dashboard

This Dashboard is used for Task Force tactical operations.

- Use the tabs below to show new "elements" of information.
- Use the slider panel (tab on left) to access the Dashboard Controls to filter data based on your interests.
- Navigate the map by searching for places or using your mouse to zoom in and out (HINT: Hold shift and click to draw a zoom box).
- For more tips and tricks, watch this [training video](#).

Waypoints_e33097

Waypoint

- Structure - Unaffected
- Structure - Affected
- Structure - Minor
- Structure - Major
- Structure - Destroyed
- Structure - Unknown

- Assisted
- Evacuated
- Rescued
- Shelter in place
- Victim, detected
- Victim, confirmed
- Human remains, detected
- Human remains, confirmed
- Human remains, removed
- Pet Evacuation
- Animal hazard

Count of Structures by Waypoint Type

Waypoint Type	Count
Structure - Major	14
Structure - Minor	12
Structure - Destroyed	6
Structure - Unaffected	1

Last update: a few seconds ago

Map Waypoint Tally People Damage Segment Status Waypoints Per Day

Waypoints

75

+0 Today

Human Interactions

20

+0 Today

Assists, Rescues, Evacuations, and Shelter-in-Place.

Last update: a few seconds ago

Damage Assessments

33

+0 Today

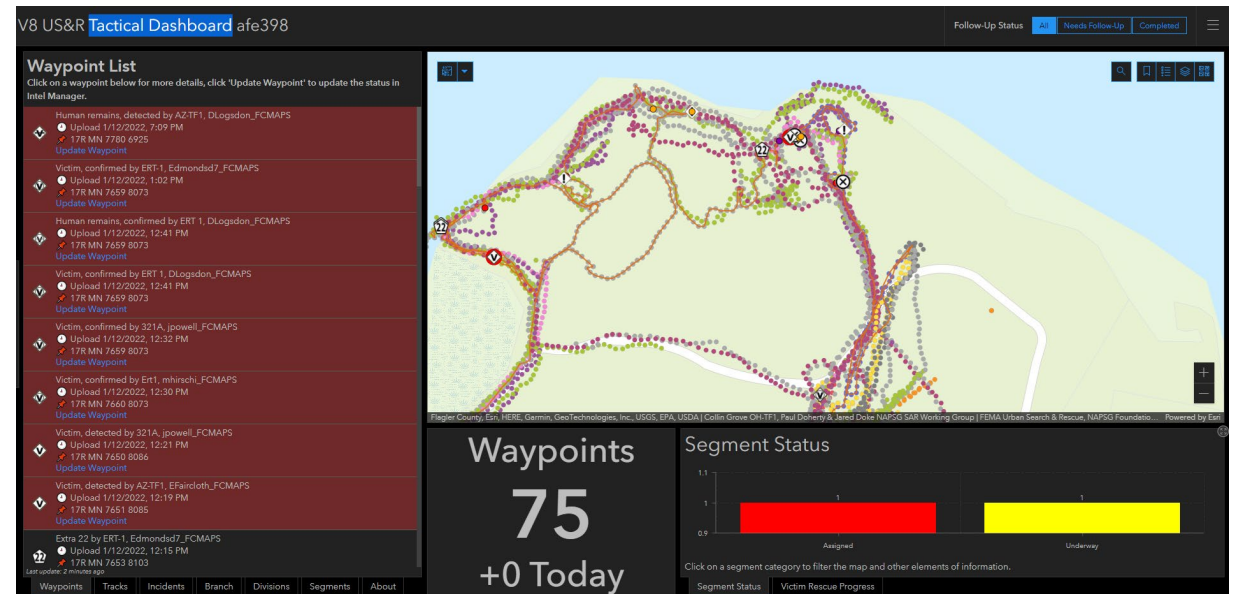
Rapid damage assessment only.

Last update: a few seconds ago

About Incident Branches Divisions

Tactical Dashboard

- More detailed than strategic
- Target Audience: Planning and Operations Staff supporting field staff
- Filter buttons that allow for team follow up
- Tracklogs
- Customizable



Tactical Dashboard: Waypoints



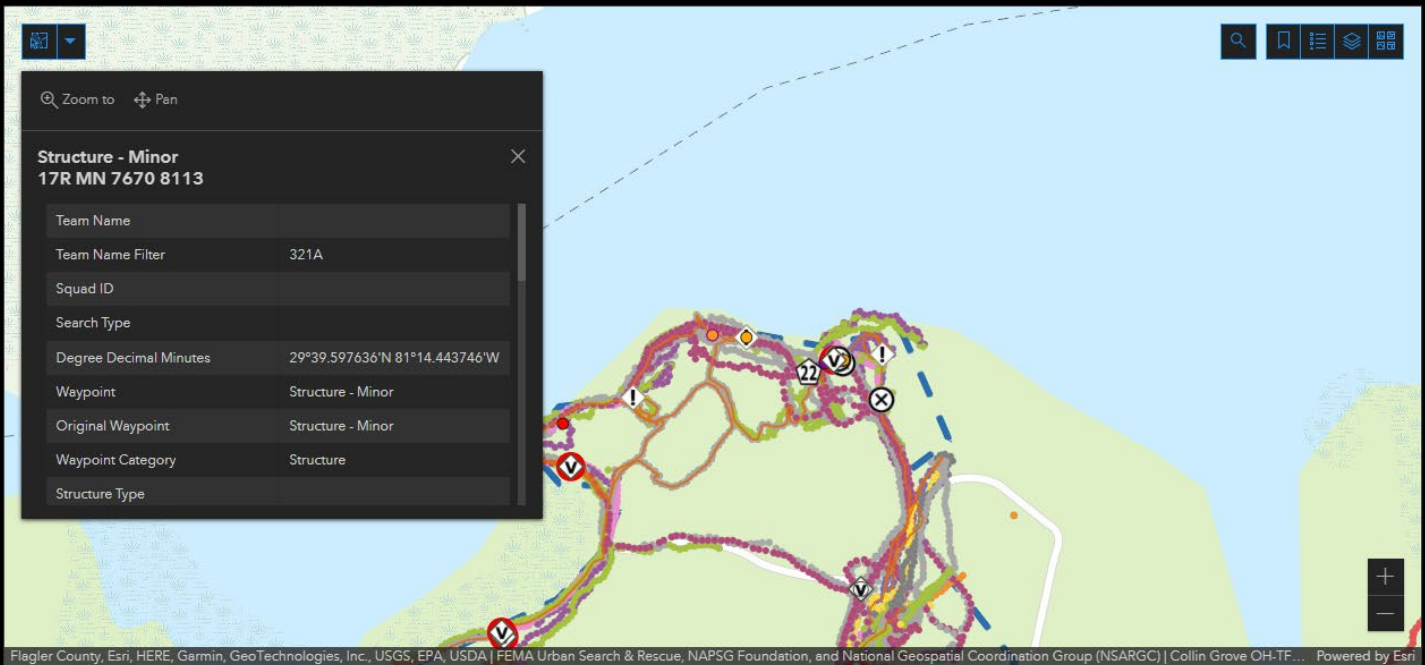
V8 US&R Tactical Dashboard afe398

Follow-Up Status **All** Needs Follow-Up Completed

Waypoint List

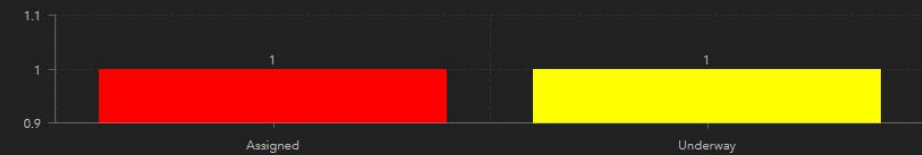
Click on a waypoint below for more details, click 'Update Waypoint' to update the status in Intel Manager.

Update Waypoint
Other Hazard by 321A, jpowell_FCMAPS Upload 1/12/2022, 12:00 PM 17R MN 7663 8107 Update Waypoint
Other Hazard by 312B, ACastaneda_FCMAPS Upload 1/12/2022, 11:59 AM 17R MN 7682 8061 Update Waypoint
Structure - Major by 312B, ACastaneda_FCMAPS Upload 1/12/2022, 11:59 AM 17R MN 7682 8061 Update Waypoint
Structure - Major by 321A, jpowell_FCMAPS Upload 1/12/2022, 11:59 AM 17R MN 7663 8107 Update Waypoint
HAZMAT Incident by 312B, ACastaneda_FCMAPS Upload 1/12/2022, 11:59 AM 17R MN 7682 8061 Update Waypoint
Structure - Minor by 321A, jpowell_FCMAPS Upload 1/12/2022, 11:56 AM 17R MN 7670 8113 Update Waypoint
Other Hazard by 321A, jpowell_FCMAPS Upload 1/12/2022, 11:54 AM 17R MN 7673 8112 Update Waypoint
Searched Per Rules of Engagement by 312B, ACastaneda_FCMAPS Upload 1/12/2022, 11:53 AM 17R MN 7683 8071 Update Waypoint
Structure - Minor by 321A, jpowell_FCMAPS Upload 1/12/2022, 11:53 AM Last update: a minute ago



Waypoints
75
+0 Today

Segment Status



Click on a segment category to filter the map and other elements of information.

Segment Status Victim Rescue Progress

Waypoints Tracks Incidents Branch Divisions Segments About

Tactical Dashboard: Tracklogs



V8 US&R Tactical Dashboard afe398

Follow-Up Status

All

Needs Follow-Up

Completed

Tracklogs

Click on a tracklog below for more details. This list is sorted by time of entry with most recent creation at the top. Click on a tracklog for more details.

Hasty / Rapid by 321A

1/12/2022, 11:45 AM to 1/12/2022, 12:51 PM

Hasty / Rapid by ERT-1

1/12/2022, 12:05 PM to 1/12/2022, 12:13 PM

N/A

Hasty / Rapid by 312A

1/12/2022, 11:17 AM to 1/12/2022, 11:43 AM

N/A

Hasty / Rapid by AZ-TF1

11/30/2021, 4:30 PM to 11/30/2021, 4:30 PM

N/A

Recon by AZ-TF1

11/30/2021, 4:30 PM to 11/30/2021, 4:30 PM

Test

Hasty / Rapid by AZ-TF1

11/18/2021, 9:27 AM to 11/18/2021, 9:36 AM

N/A

This list is sorted by time of entry with most recent creation at the top. Click on a tracklog for more details.

Last update: 3 minutes ago

Waypoints

Tracks

Incidents

Branch

Divisions

Segments

About

Flagler County, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, EPA, USDA | Collin Grove OH-TF1, Paul Doherty & Jared Doke NAPSG SAR Working Group | FEMA Urban Search & Rescue, NAPSG Foundatio ...

Powered by Esri

Waypoints

75

+0 Today

Segment Status

1.1

1

1

0.9

Assigned

Underway

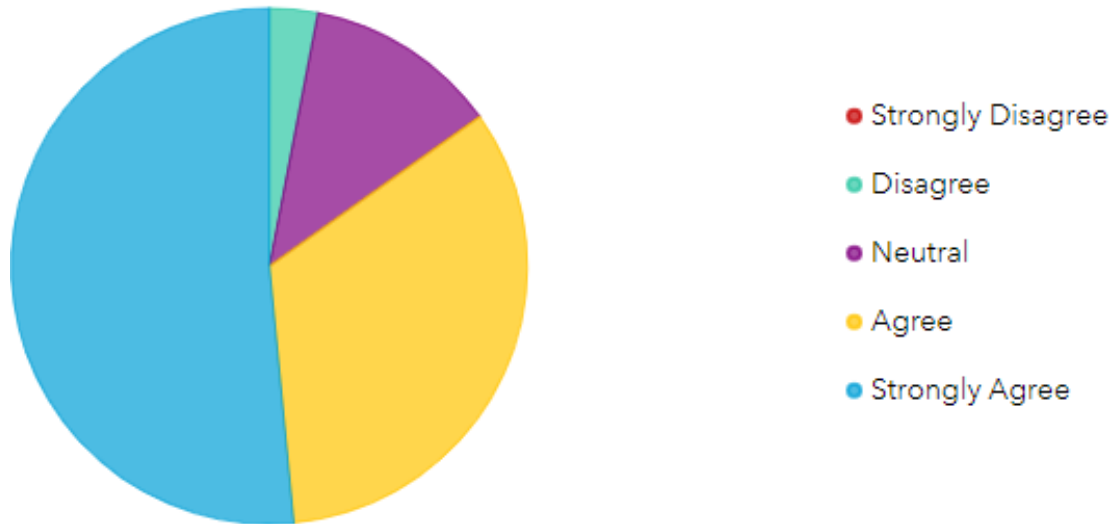
Click on a segment category to filter the map and other elements of information.

Segment Status

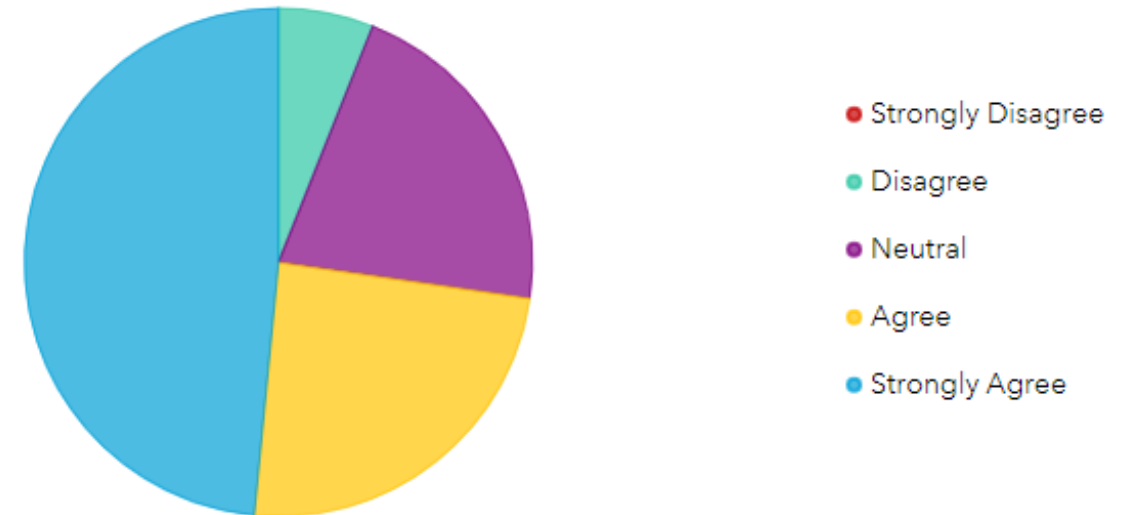
Victim Rescue Progress

Exercise: Search & Rescue

The exercise increased my understanding about and familiarity with the capabilities and resources of other participating organizations:



After this exercise, I am better prepared to deal with capabilities and hazards addressed:



Exercise: Search & Rescue



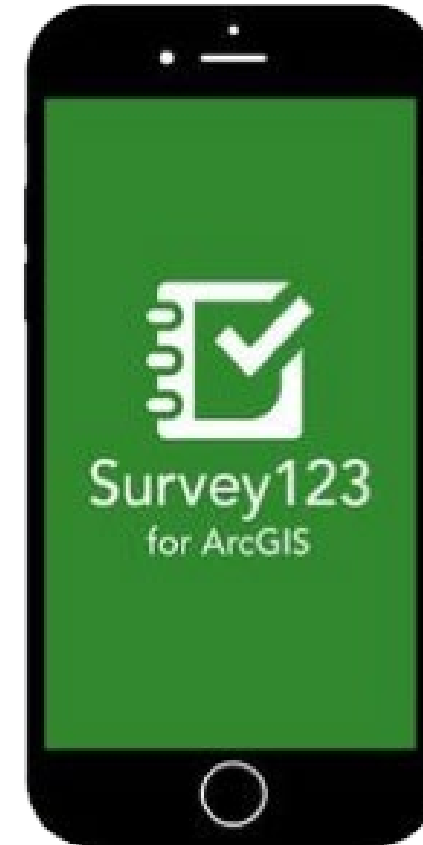
How Flagler County is using Esri ArcGIS Field Maps and ArcGIS Survey for Residential Damage Assessment



- **FREE - Included with Esri Software License**
- **Because it is built on ArcGIS, everyone—whether in the field or the EOC— will benefit from using the same data**
- **All-in-one app that uses data-driven maps to help mobile workers perform data collection and editing**
- **Report responders/damage assessment team real-time locations**
- **ArcGIS Field Maps is the go-to field app, powered by field maps, that streamlines the critical workflows field personnel use every day**

ArcGIS Survey123

- **Survey123 is echoed by FEMA as allowing users to collect:**
 - ***“Location***
 - ***Category of damage***
 - ***Ownership and insurance information***
 - ***Cost estimates***
 - ***Other local community impact information”***



Digital Damage Surveys

- **Transitioned from proprietary system to internally developed system powered by Esri using ArcGIS Filed Maps and ArcGIS Survey**
- **This is our first year using Survey for DA, previously it was done in ArcGIS**
- **Goal – collect and share damage assessment information faster and with more accuracy**
- **Once the Template is saved to the mobile device there is no need to be concerned with connectivity.**

Training

Preliminary Damage Assessment Field Guide



FLOOD DAMAGE

- Any waterline in the crawl space or an unfinished basement when essential living space or mechanical components are not damaged or submerged.
- Damage to a porch, carport, garage, and/or an outbuilding not for commercial use, etc.

NON-FLOOD DAMAGE

- Cosmetic damage such as paint discoloration or loose siding.
- Minimal missing shingles or siding.
- Damage to an attached structure (e.g., porch, carport, garage, or outbuilding not for commercial use)

FLOOD DAMAGE

- Residences with damage to a porch, carport, garage, and/or an outbuilding not for commercial use, etc.

NON-FLOOD DAMAGE

- No damage affecting habitability; cosmetic damage only (e.g., skirting is impacted).
- No damage affecting habitability; cosmetic damage only (e.g., skirting is impacted).
- Residences with damage to a porch, carport, garage, and/or an outbuilding not for commercial use, etc.

FLOOD DAMAGE

- Waterline at 1 to 3 in. in an essential living space.
- Waterline exceeds 3 in. but below 18 in., damage may be major or minor depending on the following factors: duration of the flood; contaminates in the water; if waterline reached outlets; and number of essential living spaces flooded.

NON-FLOOD DAMAGE

- Nonstructural damage to roof components over essential living spaces (e.g., shingles, roof covering, fascia board, soffit, flashing, and skylight).
- Nonstructural damage to exterior and interior wall components to include drywall and insulation.
- Multiple small vertical cracks in the foundation.
- Damage to mechanical components (e.g., furnace, boiler, water heater, HVAC, etc.)
- Damage or disaster related contamination to a private well, septic system, or damage to chimney.

FLOOD DAMAGE

- When the waterline has reached the floor system but has not entered the living space of the unit. Examples of damage include: Bottom board, insulation, or ductwork in the floor system. HVAC is impacted.
- There is no structural damage to the residence, and it has not been displaced from the foundation.

NON-FLOOD DAMAGE

- Some of the nonstructural components have sustained damage (e.g., windows, doors, wall coverings, roof, bottom board insulation, ductwork, and/or utility hook ups).
- HVAC is impacted.

Per May 2020 FEMA Damage Assessment Operations Manual

AFFECTED



MINOR



Preliminary Damage Assessment Field Guide



MAJOR

FLOOD DAMAGE

- Waterline above 18 in. or the electrical outlets in an essential living space.
- When waterline exceeds 3 in. but is below 18 in., damage may be major or minor depending on the following factors: Duration of the flood; contaminates in the water; if waterline reached outlets; and number of essential living spaces flooded.

NON-FLOOD DAMAGE

- Failure of structural elements of the roof over essential living spaces, to include rafters, ceiling joist, ridge boards, etc.
- Failure of structural elements of the walls, to include framing.
- Failure of foundation to include crumbling, bulging, collapsing, horizontal cracks of more than 2 in., and shifting of the residence on the foundation of more than 6 in.

FLOOD DAMAGE

- Water has covered the floor system and entered the living space of the unit, but is still below the roofline.
- The residence has been displaced from the foundation, block, or piers, and other structural components have been damaged.

NON-FLOOD DAMAGE

- The residence has been displaced from the foundation, block or, piers, and other structural components have been damaged.
- 50% or more of nonstructural components have sustained significant damage (e.g., roof, walls, utilities).

FLOOD DAMAGE

- Waterline at the roofline or higher, or complete failure of two or more major structural components (e.g., collapse of basement walls, foundation, walls, or roof).

NON-FLOOD DAMAGE

- Only foundation remains.
- Complete failure of two or more major structural components
- The residence has a confirmed imminent danger (e.g., impending walls, foundation, roof or sinkholes.)

FLOOD DAMAGE

- The residence is a total loss, for example: Waterline is at the roofline or higher.
- Residence's frame is bent, twisted, or otherwise compromised.

NON-FLOOD DAMAGE

- Residence's frame is bent, twisted, or otherwise compromised.
- The majority of the structural framing of the roof or walls has been compromised, exposing the interior.

Please Note-damage categories only apply to living spaces. Do not include sheds, detached garages, or fences in your determinations. For damages to attached garages, please consider whether or not it has a direct affect on the integrity of the living space.

CONVENTIONAL



MANUFACTURED

DESTROYED

CONVENTIONAL



MANUFACTURED

Map View



Damage Assessment 2022

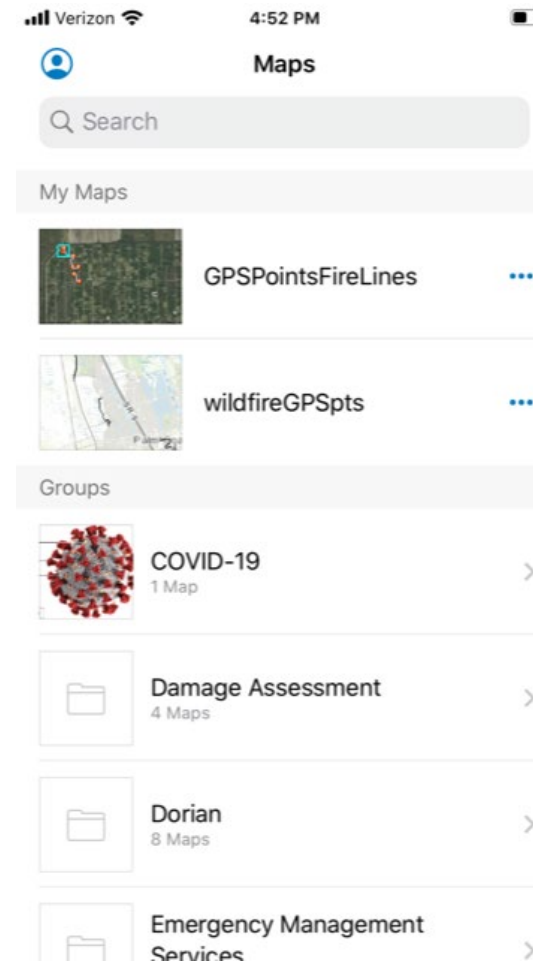
Open in Map Viewer Classic

Ryan Simpson
rsimpson_FCMAI

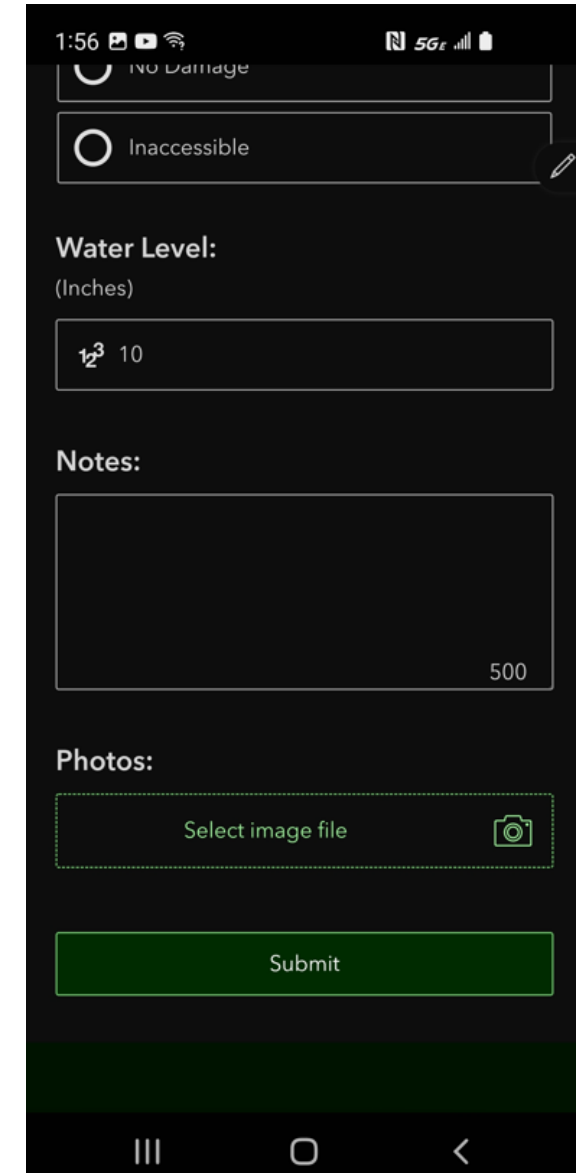
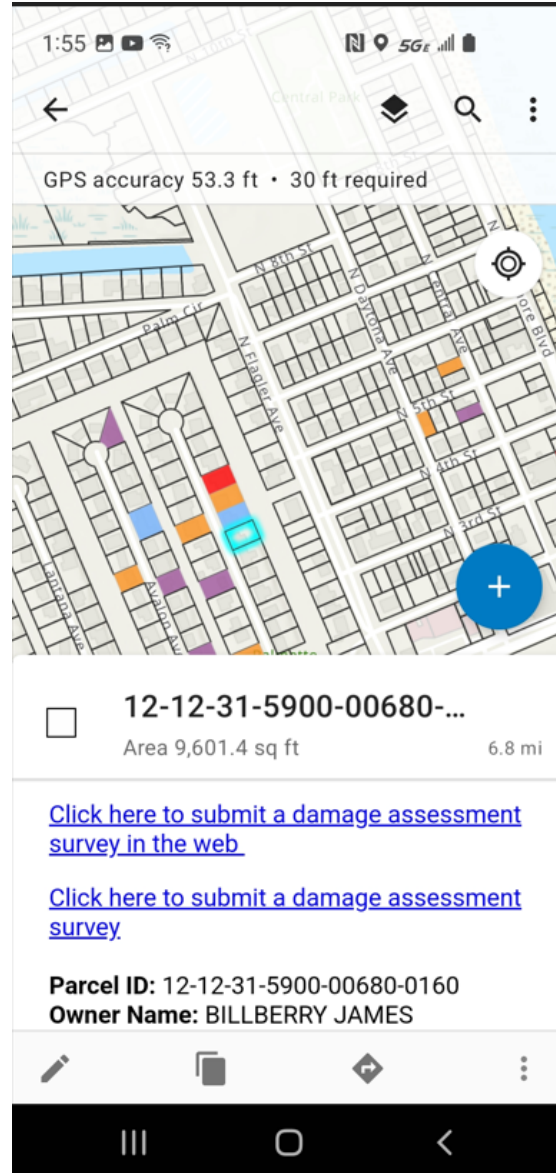


Logging Into Field Maps

- Download Field Maps app onto your phone or mobile device
- Using your assigned credentials log into Field Maps
- Select the Damage Assessment Group
- Search for the map for the named event – each storm will have it's own map



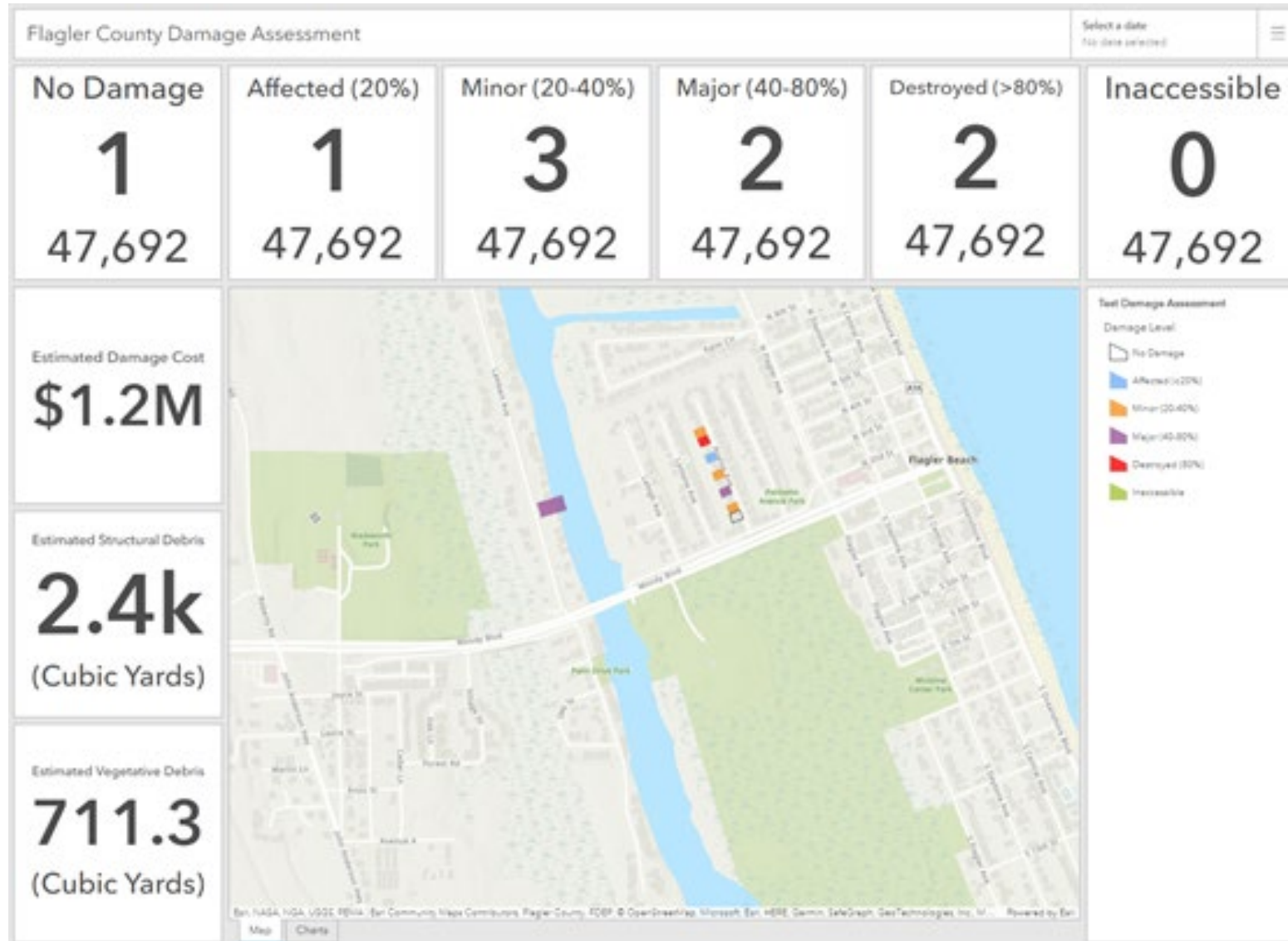
Entering a Damage Assessment



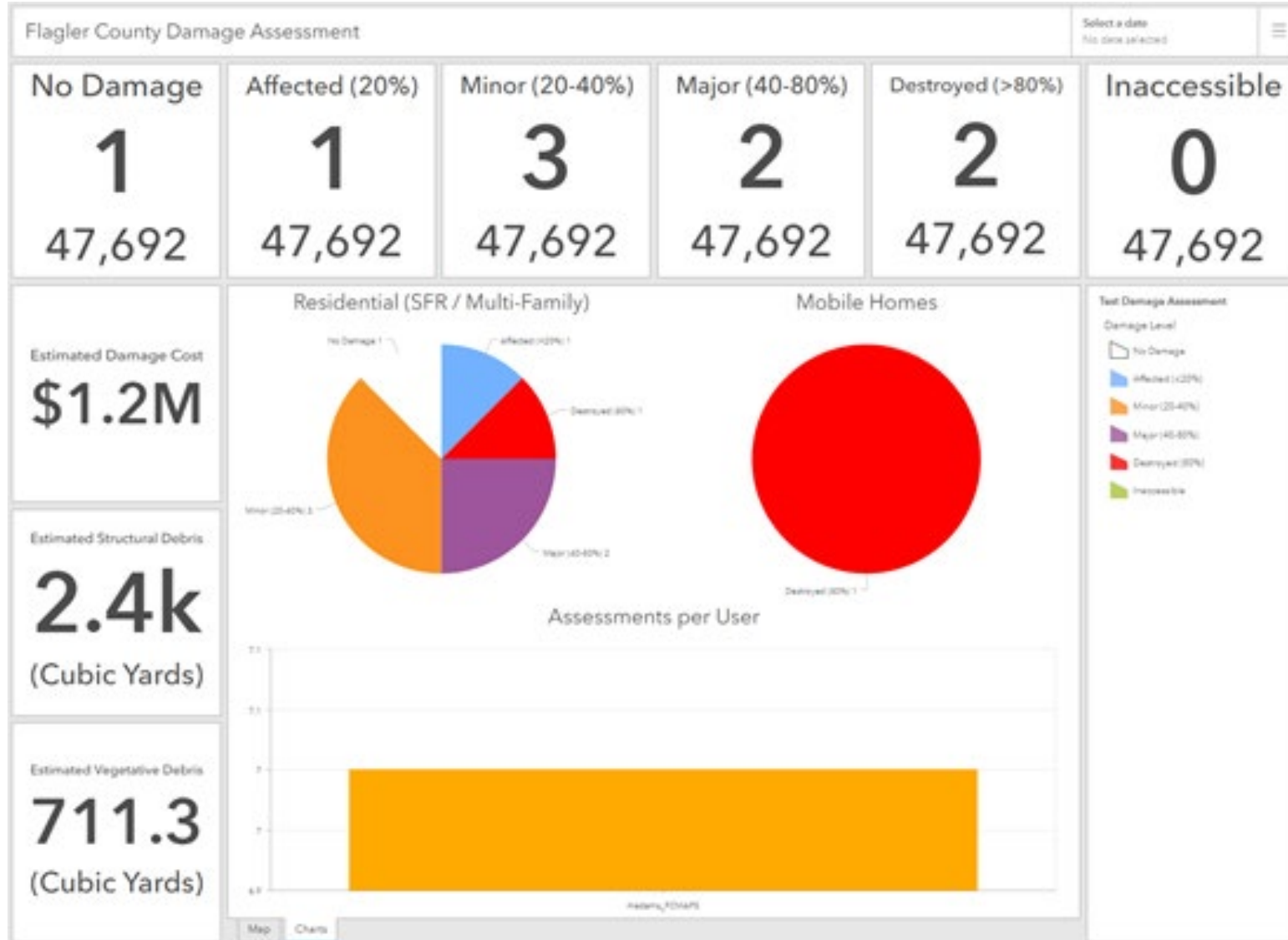
Dashboard Views

- **Provides geographic representation of damage in the County**
- **Allow for real-time situation awareness**
- **Provide snapshot of totals (affected, minor, major, destroyed)**
- **Auto calculates estimated damage costs Countywide**
- **Auto calculates structure and vegetative debris**

Dashboard Views



Dashboard Views



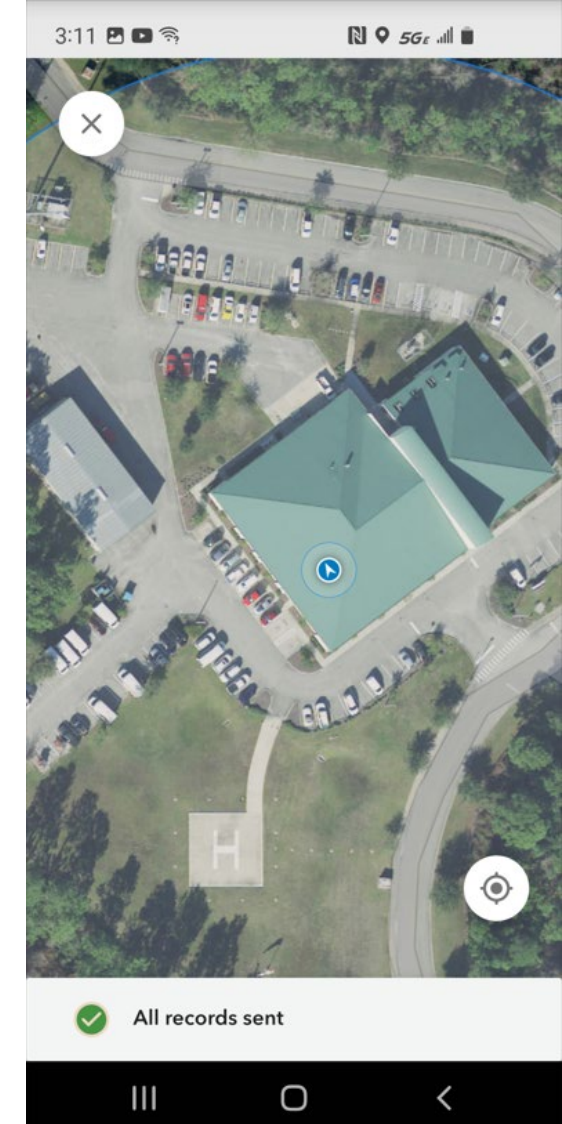
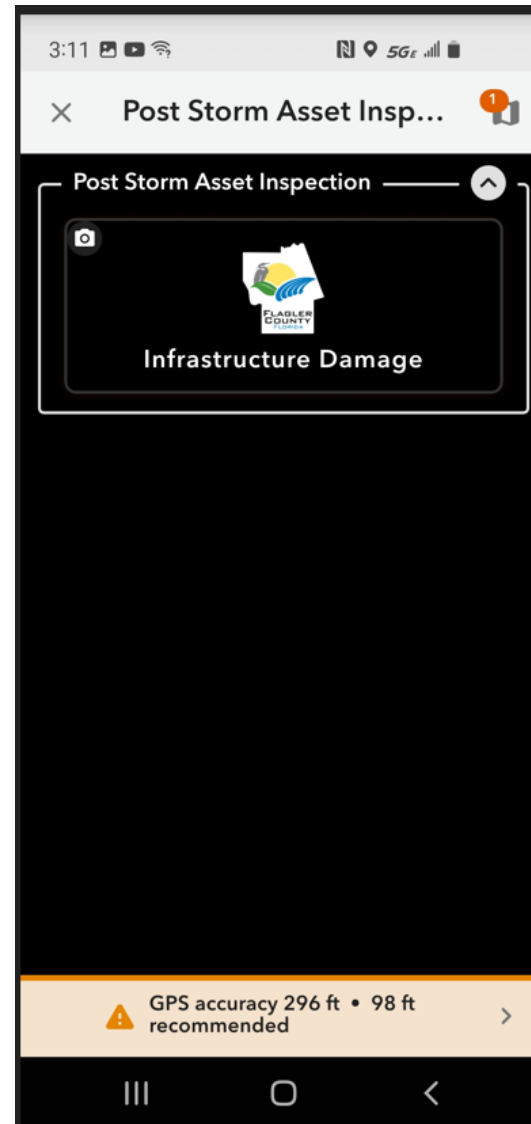
IA Street Sheet Example

[illegible]

County Number	Flagler Street	Dates Type	Damage Level	Flood Depth
109	AVALON AVE	SINGLE FAMILY	No Damage	
111	AVALON AVE	SINGLE FAMILY	Minor (20-40%)	2
119	AVALON AVE	SINGLE FAMILY	Major (40-80%)	6
127	AVALON AVE	SINGLE FAMILY	Minor (20-40%)	
137	AVALON AVE	SINGLE FAMILY	Affected (<20%)	
143	AVALON AVE	SINGLE FAMILY	Destroyed (80%)	10
147	AVALON AVE	SINGLE FAMILY	Minor (20-40%)	6
Totals:		Estimated Cost	Estimated Debris	Vegetative Debris
Affected:	1	\$19884.2	162.41	48.72
Minor:	3	\$245990.7	703.47	211.04
Major:	1	\$178236.59	491.36	147.41
Destroyed:	1	\$263347.19	247.65	74.3
Inaccessible:	0	\$		
Total:	7	\$707458.68	1824.52 cubic yards	547.36 cubic yards

Flagler County - Public Assistance

- Primary focus is the data collection in the field and not worry about details that could slow them down.
- QuickCapture app called “Post Storm Asset Inspection”
- Up to 5 photos attached per point
- Enter a note
- Street name or nearest intersection can be added internally into the database
- Flagler Drone Team flies the structure pre and post storm to document the conditions before an event



Questions / My Contact Info



Ryan Simpson, FPEM MPA

**Senior Emergency
Management Planner,
Flagler County Emergency
Management**

rsimpson@flaglercounty.gov

(386)313-4243