

FLORIDA EMERGENCY GIS RESPONSE TEAM (FLORIDA EGRT)



Scott Warner- Bay County, FL Emergency Services



INTRODUCTION: FLORIDA EGRT

Florida EGRT is a volunteer based organization set up to help coordinate emergency GIS response to local jurisdictions and takes an all hazards approach.

- Based on Texas EGRT ideas and concepts
- Formed Summer of 2016
- The idea is for State and Local government GIS to work with other State and Local government agencies to help with GIS needs in a response.
- However private partners are welcome as well as students.



MISSION STATEMENT

The mission of the Florida Emergency GIS Response Team (Florida EGRT) system is to provide mapping and analysis products in support of any deployment of emergency response personnel, whether that be local or regional. This is accomplished by training GIS professionals to provide mapping support for a wide variety of incident types, compiling data that can be used for incident response, and establishing an activation protocol for deployment.



GOALS

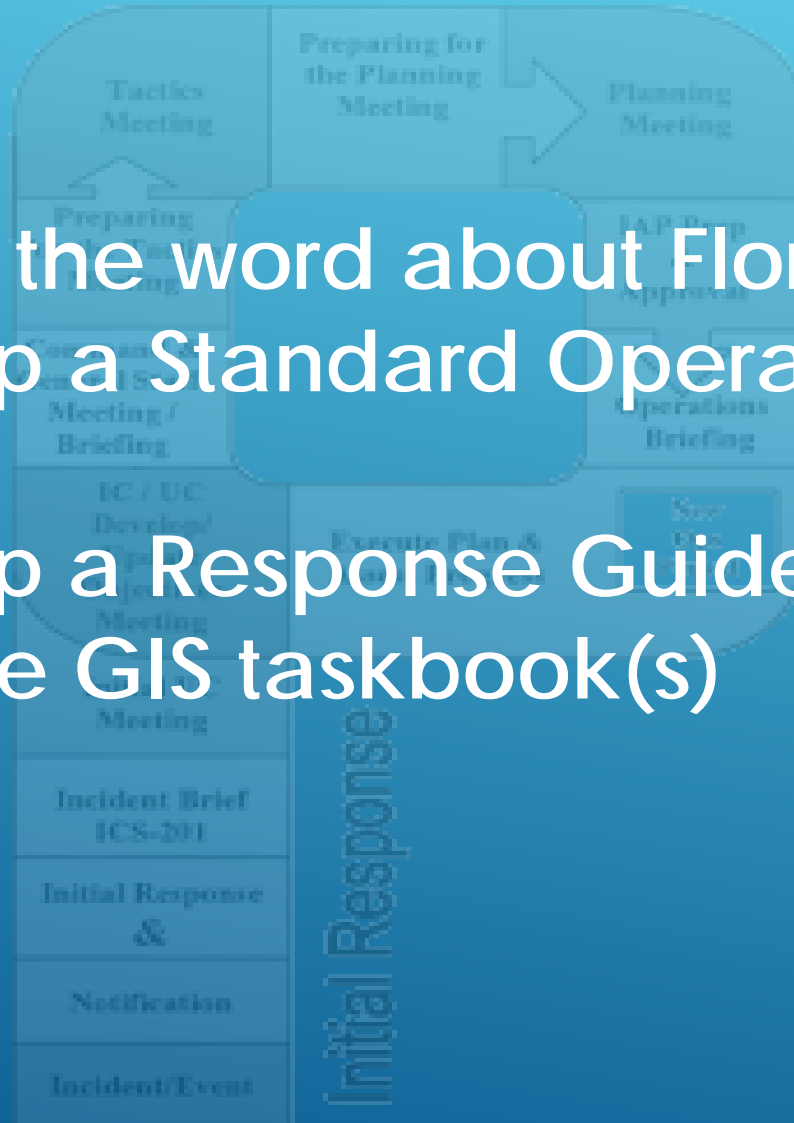
Like Texas EGRT our goal is to integrate local response teams, Florida EGRT, and Florida SERT into a state-wide GIS resource.





CURRENT OBJECTIVES

- Spread the word about Florida EGRT
- Develop a Standard Operating Guide (SOG)
- Develop a Response Guide
- Build the GIS taskbook(s)





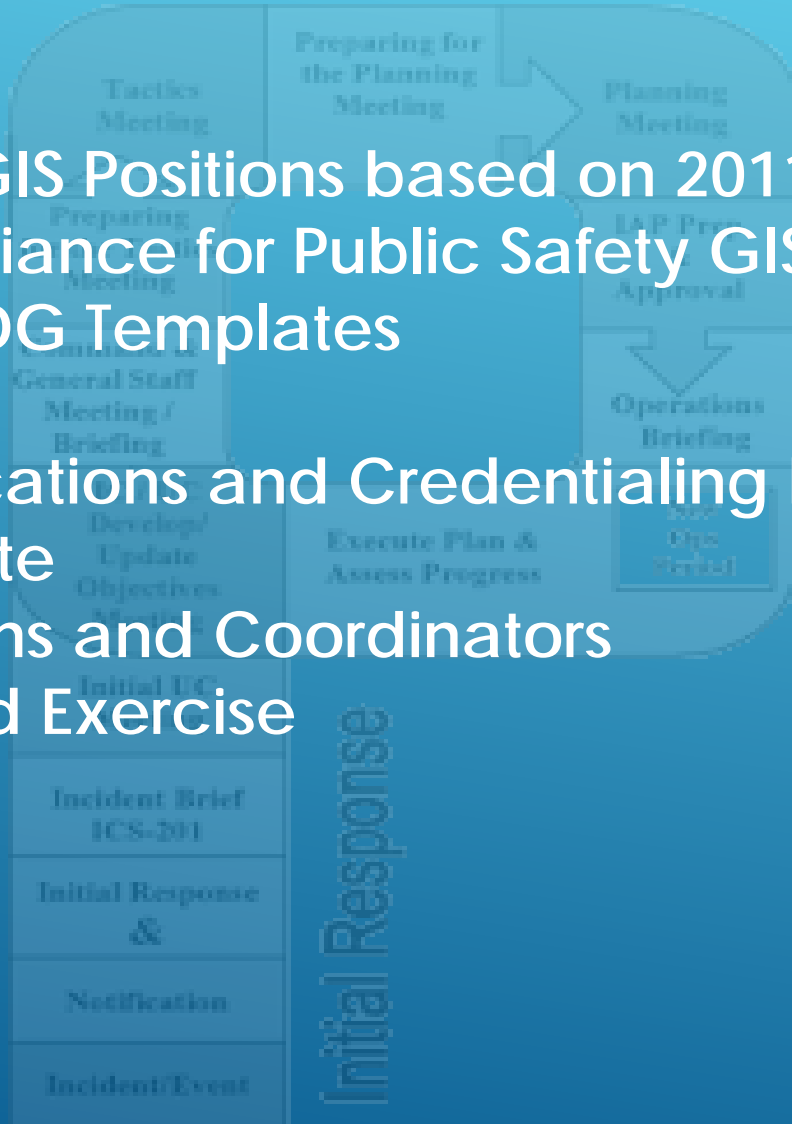
ALL HAZARDS INCIDENT MANAGEMENT TEAMS

- As we all know an effort underway to form Incident Management Teams with credentialed and qualified personnel
- Team members must complete training, have documented experience, and complete a taskbook to be qualified for a position
- However, **NO GIS POSITIONS INCLUDED.**
 - GIS can join a team under a universal Technical Specialist position at this time.

FLORIDA EGRT MOVING FORWARD



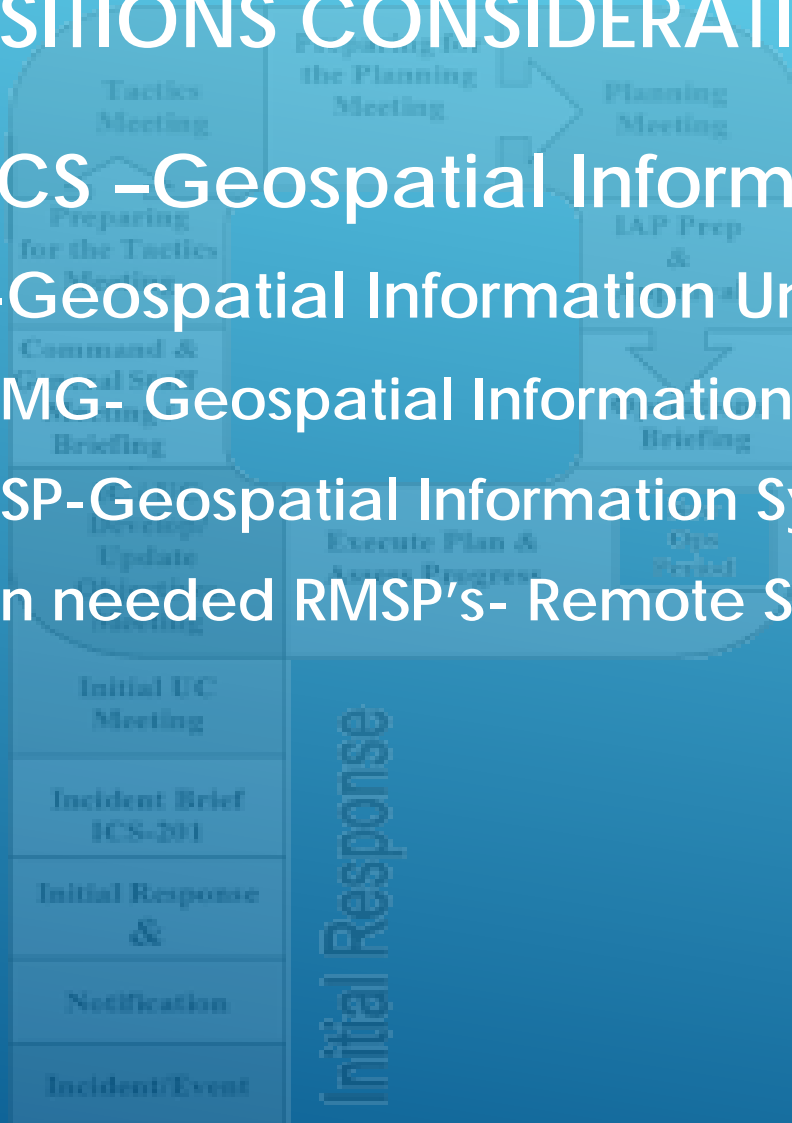
- FEMA/ICS GIS Positions based on 2011 FEMA taskbooks
- National Alliance for Public Safety GIS Foundation (NAPSG) SOG Templates
- GIS Typing
- GIS Qualifications and Credentialing based on NAPSG
- EGRT Website
- EGRT Regions and Coordinators
- Training and Exercise
- GAPS
- Benefits





FEMA GEOSPATIAL INFORMATION UNIT POSITIONS CONSIDERATIONS

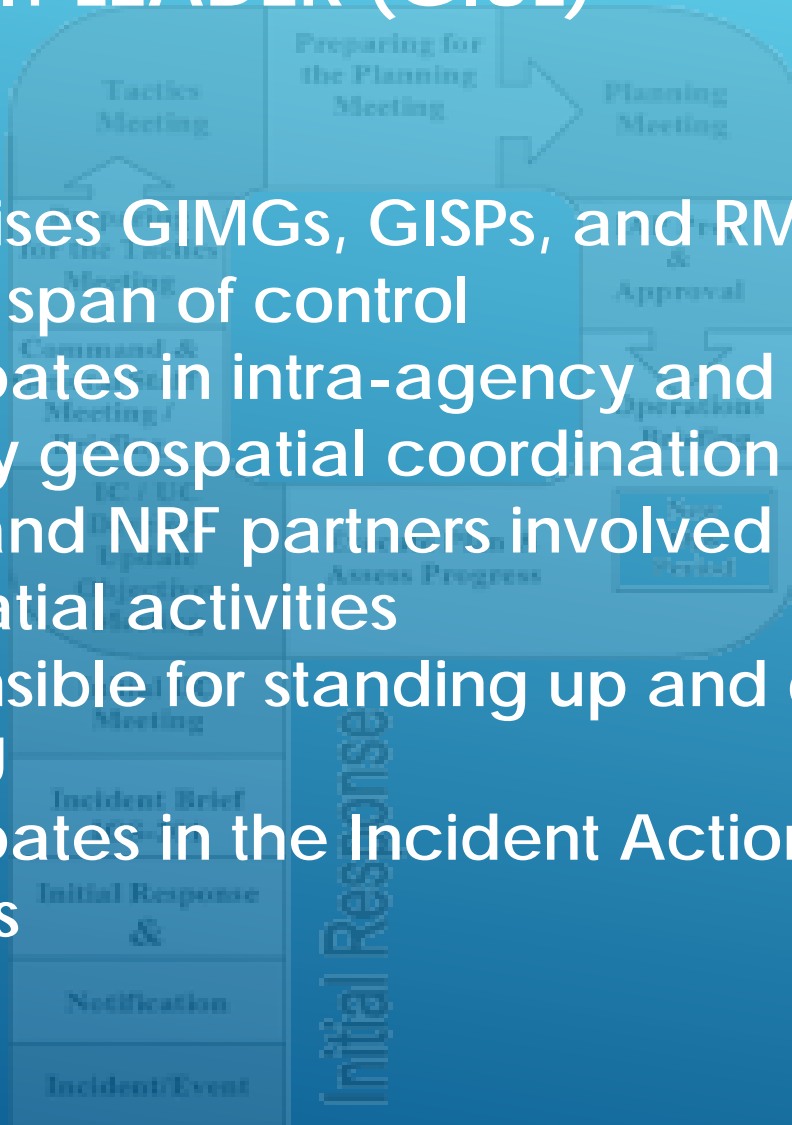
- FEMA/ICS –Geospatial Information Unit
 - GIUL-Geospatial Information Unit Leader
 - GIMG- Geospatial Information Manager
 - GISP-Geospatial Information System Specialist
 - When needed RMSP's- Remote Sensing Specialists





GEOSPATIAL INFORMATION UNIT LEADER (GIUL)

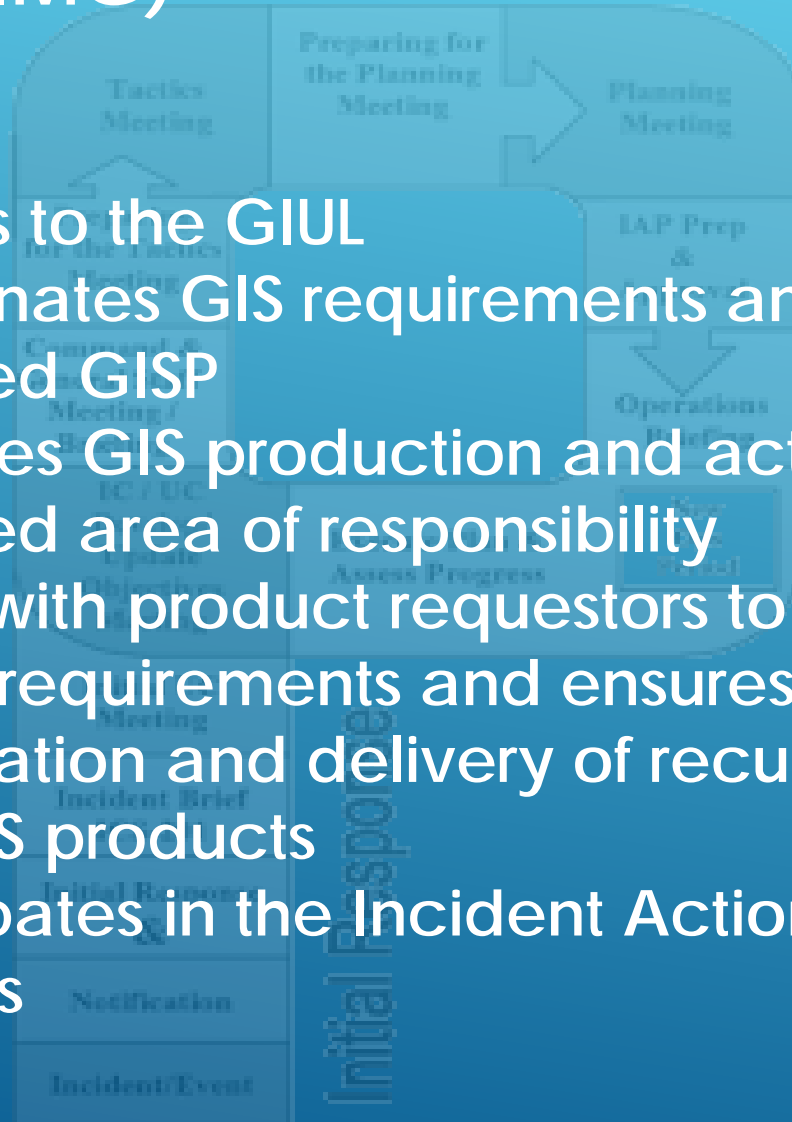
- Supervises GIMGs, GISPs, and RMSPs, within his/her span of control
- Participates in intra-agency and multi-agency geospatial coordination with State, FEMA and NRF partners involved in geospatial activities
- Responsible for standing up and demobilizing the GIU
- Participates in the Incident Action Planning process





GEOSPATIAL INFORMATION MANAGER (GIMG)

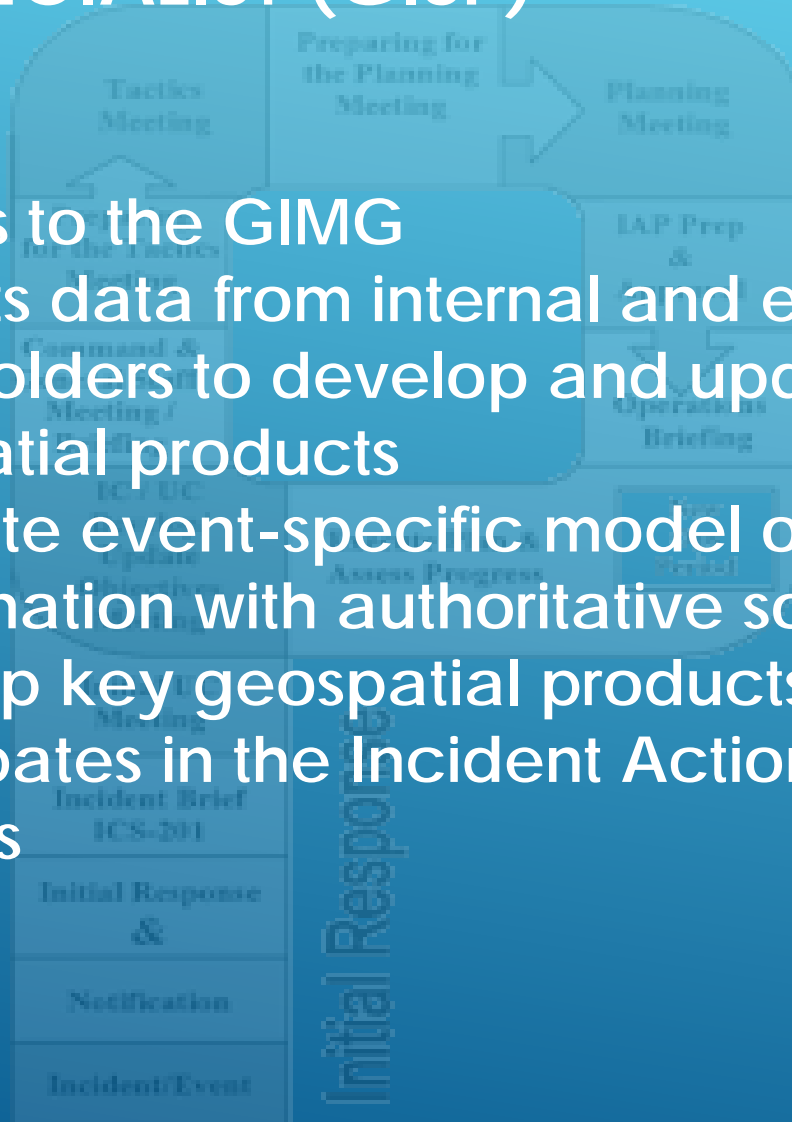
- Reports to the GIUL
- Coordinates GIS requirements and supervises assigned GISP
- Prioritizes GIS production and activities within assigned area of responsibility
- Works with product requestors to properly define requirements and ensures the timely preparation and delivery of recurring and ad hoc GIS products
- Participates in the Incident Action Planning process





GEOSPATIAL INFORMATION SYSTEMS SPECIALIST (GISP)

- Reports to the GIMG
- Collects data from internal and external stakeholders to develop and update geospatial products
- Integrate event-specific model output in coordination with authoritative sources
- Develop key geospatial products
- Participates in the Incident Action Planning process





OTHER GIS POSITION/TASKBOOK CONSIDERATIONS OUTSIDE THE GIU

- **HM HPA Specialist Expert (HPEX)**
- **HM Floodplain Management Specialist Expert (FPEX)**
- **HM HPA Specialist (HPSP)**
- **Several more Hazard Mitigation and Environmental Specialists**





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STANDARD OPERATING GUIDE TEMPLATES

NAPSG Foundation makes available a suite of GIS Standard Operating Procedure (SOP) Templates that provide a set of guidelines for coordinating geospatial emergency response efforts. These guidelines are intended to serve as a shared foundation, encouraging improved communication and collaboration amongst GIS and other emergency management staff preparing for and responding to incidents. Provided below is a list of the existing SOP templates with links to each:

- [Quick Guide to NAPSG's SOP Templates](#)
- [GIS Standard Operating Guideline & Template for Incident Management & Coordination](#)
- Incident-Specific SOP Template Supplements
 - [Tornado SOP Template](#)
 - [Coastal Storms SOP Template](#)
 - [Wildfire SOP Template](#)
 - [Oil Spill SOP Template](#)

Agencies are encouraged to modify content in the templates to accommodate local and regional specific details. How these guidelines are implemented will depend on the organization and the level of government responding to the incident. In the future NAPSG will be enhancing the template to provide additional tools that aid agency-level implementation. Stay tuned!



ENVISIONED ASSISTANCE TYPES

- Type 1- assistance to an emergency management organization at the request of the Emergency Management Director.
 - If a local, county, or state operation center responds to an incident and determines that they need GIS support, they may contact EGRT for assignments. A completed MOU would then be on file which covers liability between agencies.
- Type 2- assistance between members
 - If a member responds to an incident within their own jurisdiction and needs additional GIS support, they may contact EGRT for assignments.

Strictly NO self-deployments!



QUALIFICATIONS AND CREDENTIALING

GIS professionals and staff that are dedicated to supporting the public safety mission require a unique combination of knowledge, skills, and abilities in order to effectively support emergency operations. Establishing **minimum criteria and qualifications** for GIS personnel and teams for the Nation is critical to building the Public Safety GIS Workforce. NAPSG has developed the first version of Position Qualification Sheets and Resource Types/Packages for use by agencies nationwide, and across all disciplines, as guidance in the following:

- Informing the hiring process for GIS personnel in public safety
- Establishing professional development pathways for GIS personnel in public safety
- Achieving consistency in the request and deployment of GIS personnel and teams for mutual aid operations
- Building and sustaining GIS resource packages for use in support of emergency management
- Serving as a foundation for the development of credentialing processes and tools for GIS personnel and teams

Level	Position
Basic 1	Field Data Entry Technician
Basic 2	GIS Technician
Intermediate 1	GIS Analyst
Intermediate 2	GIS Team Leader
Advanced	GIS Supervisor

Resource Type: [GIS Map Support Team](#)

About this Effort – In developing these position qualification sheets NAPSG reviewed and

SEARCH RESOURCES

All Categories

SEARCH

GEOSPATIAL SUPPORT FOR PUBLIC SAFETY

This toolbox is designed to raise awareness and support preparedness efforts. Utilized in combination with free [resources for the community](#) such as Education & Virtual Training, Organization Standard Operating Guidelines, and National Guidance Documents, you can build your GIS capacity and resilience.

WORK WITH US

Do you have an interesting project and need support? Take a look at our capabilities, or email us if you want to start the discussion: services@publicsafetygis.org

Our expertise is in public safety GIS, and as a non-profit we are dedicated solely to your success. Download the brochure below for more information.





BASIC 1



Public Safety GIS Position Qualifications Version 1.0

GEOGRAPHIC INFORMATION SYSTEMS (GIS) FIELD DATA ENTRY TECHNICIAN

TYPE	TYPE 1	NO TYPE 2
DESCRIPTION	The Type 1 GIS Field Data Entry Technician is responsible for gathering location-based data from the field to support an incident using mobile data collection devices that are Global Positioning System (GPS) capable.	Not Applicable
CATEGORY	CRITERIA	CRITERIA
EDUCATION	<p>Not Specified</p> <p>This position does not require a formal education requirement. All education for this position is provided on the job and through the training listed below.</p> <p>NOTES: Not Specified</p>	Not Applicable
TRAINING	<ol style="list-style-type: none"> IS-100: Introduction to Incident Command System (ICS) IS-200: ICS for Single Resources and Initial Action Incidents IS-700: National Incident Management System (NIMS) An Introduction <p>NOTES: Additional incident-specific training may be needed based on the characterization of the threat or hazard.</p>	Not Applicable
EXPERIENCE	<p>Knowledge, Skills, and Abilities:</p> <ol style="list-style-type: none"> Knowledge of and ability to use common location reference systems to include: United States National Grid (USNG), latitude/longitude, and other appropriate location languages in support of disaster operations Ability to locate and navigate to features using a paper map and compass Ability to use and maintain mobile data collection devices such as mobile smart phones, tablet-based hardware, laptops, GPS enabled devices, GPS field data collectors, and GPS enabled cameras. Ability to edit geometry of a point, line, and polygon Ability to edit attributes of geospatial data in a GIS Ability to add data across multiple file formats from different physical sources into field data collection applications <p>Experience: Three months of practical experience with GPS capable mobile data collection devices. Practical experience can include, but is not limited to, time on a job using GPS capable mobile data collection devices.</p> <p>NOTES: Not Specified</p>	Not Applicable
PHYSICAL/ MEDICAL FITNESS	Ability to perform duties under moderate circumstances characterized by working consecutive 12-14 hour days under physical and emotional stress for sustained periods of time. This position may require work outdoors and in the field in disaster environments.	Not Applicable

ADVANCED LEVEL



Public Safety GIS Position Qualifications Version 1.0

GEOGRAPHIC INFORMATION SYSTEMS (GIS) SUPERVISOR

TYPE	TYPE 1	NO TYPE 2
DESCRIPTION	The Type 1 GIS Supervisor is responsible for: <ol style="list-style-type: none"> 1. Providing oversight on GIS activities of multiple GIS Teams during expanding and/or complex incidents. 2. Managing GIS Team Leaders and coordinates staffing and resources to appropriately support mission specific needs and activities. 	Not Applicable
CATEGORY	CRITERIA	CRITERIA
EDUCATION	Completion of a formal GIS-related educational or certificate program. or Recognition of prior learning focusing on demonstrated knowledge and skills.	Not Applicable
NOTES: GIS-related education comes in a variety of formats including GIS certificates, GIS degrees, or GIS on the job training		
TRAINING	All training identified for the Type 1 GIS Analyst and the Type 1 GIS Team Leader, including: <ol style="list-style-type: none"> 1. IS-100: Introduction to Incident Command System (ICS) 2. IS-200: ICS for Single Resources and Initial Action Incidents 3. ICS-300: Intermediate ICS for Expanding Incidents 4. ICS-400: Advanced ICS for Command and General Staff – Complex Incidents 5. IS-700: National Incident Management System (NIMS) An Introduction 6. IS-701: NIMS Multi-Agency Coordination System (MACS) Course 7. IS-703: NIMS Resource Management 8. IS-800: National Response Framework, An Introduction 9. IS-922: Applications of GIS for Emergency Managers 10. E0170: Hazus-Multi-Hazard for Hurricane 11. E0172: Hazus-Multi-Hazard for Flood 12. E0174: Hazus-Multi-Hazard for Earthquake 13. E0176: Hazus-Multi-Hazard for Flood Plain Managers 14. Virtual Course: Introduction to the Hazus-MH 2.0 Storm Surge Model available at www.fema.gov 15. E0179: Application of Hazus Multi-Hazard for Disaster Operations 16. E0190: ArcGIS for Emergency Managers Formal or informal training consistent with GIS industry standard certification or educational programs to include: <ol style="list-style-type: none"> 1. Geospatial database management 2. Editing and managing GIS resources 3. Creating and executing GIS queries 4. Use of scripting applications 5. Acquisition and use of remote sensing products 	Not Applicable



ADVANCED LEVEL (CONTINUED)



Public Safety GIS Position Qualifications Version 1.0

TYPE	TYPE 1	NO TYPE 2
TRAINING	PLUS 1. E0950: ICS All-Hazards Incident Commander 2. E0960: NIMS ICS All-Hazards Division/Group Supervisor Course 3. E0962 : NIMS ICS All-Hazards Planning Section Chief Course 4. E0964: NIMS ICS All-Hazards Situation Unit Leader Course 5. G0191: Emergency Operations Center/Incident Command System Interface 6. G0775: Emergency Operations Center Management and Operations	Not Applicable
	NOTES: Not Specified	



Public Safety GIS Position Version 1.0

TYPE	TYPE 1	NO TYPE 2
EXPERIENCE	All Knowledge, Skills, and Abilities identified for the NIMS Type GIS Analyst and NIMS Type GIS Team Leader, including: 1. Knowledge of and ability to use common location reference systems to include: United States National Grid (USNG), latitude/longitude, and other appropriate location languages in support of disaster operations 2. Ability to create maps with different projections 3. Ability to create a reference map 4. Ability to create a thematic and categorical map 5. Ability to create paper maps to meet incident needs consistent with GIS industry practices 6. Ability to publish maps in multiple forms including bulk printing, map books, and paper files 7. Ability to create a map from GPS point data or list of addresses 8. Ability to digitize a paper map 9. Ability to prepare data for use in GIS software 10. Ability to join GIS data 11. Ability to open and manipulate attribute tables of GIS data 12. Ability to edit and join boundaries 13. Ability to manipulate and analyze raster-based data 14. Ability to query information on the map based on either attribute or the location of the feature(s) 15. Ability to create a report from GIS data 16. Ability to create buffers, clips, intersects, unions, merge, and dissolves of GIS features 17. Ability to evaluate different map types and data sources to understand limitations and present the most useful information 18. Ability to use Hazus-MH models including Earthquake, Flood, Hurricane, and Storm Surge models 19. Ability to apply Hazus-MH models to create maps, conduct analyses, and produce reports for use in situational awareness and decision making 20. Ability to conduct infrastructure analysis 21. Ability to use and perform CBNRE hazard modeling 22. Ability to use plume and blast modeling tools and methods	No

TYPE	TYPE 1
EXPERIENCE	23. Ability to serve as lead in conducting spatial analysis and production for all Consequence Management Area Assignment 24. Knowledge of wildland fire behavior modeling tools and methods 25. Ability to create and edit using modeling tools 26. Ability to use wildland fire behavior modeling tools and methods 27. Knowledge of wildland fire operations 28. Ability to apply wildland fire data to create maps, conduct analyses, and produce reports for use in situational awareness and decision making 29. Ability to identify local hazard-specific threat data 30. Ability to identify local hazard-specific social vulnerability data 31. Ability to identify local hazard-specific consequence data 32. Ability to identify and employ best-of-breed models to visualize the efficacy of mitigation measures 33. Ability to identify response and recovery map product templates or data collection tools based upon local plans 34. Knowledge of the emergency management lifecycle and ability to identify common local workflows in each phase 35. Knowledge of common local workflows in each phase of the emergency management lifecycle and ability to identify best of breed analytical models for each map product or data collection tool 36. Knowledge of Multiagency Coordination Systems and the Incident Command System 37. Ability to perform a stakeholder analysis and provide direction to staff on tailoring map products or collection tools for various audiences within the public, private and non-governmental organizations sectors 38. Knowledge of local information protection and security policies and ability to provide direction on tailoring map products according to policies 39. Knowledge of local crisis communications guidelines and ability to provide direction on tailoring public-facing map products accordingly 40. Ability to manage routine reporting requirements during continuous operations 41. Ability to manage information sharing procedures/governance to coordinate activities among project stakeholders 42. Ability to manage project timelines for multiple simultaneous projects and incidents 43. Ability to apply a repeatable and defensible decision-making process 44. Ability to manage quality assurance/quality control procedures 45. Ability to manage human resources, including but not limited to performance evaluations and professional development planning 46. Ability to conduct project briefings 47. Ability to manage business continuity procedures

PLUS

ADVANCED LEVEL (CONTINUED)



Public Safety GIS Position Qualifications Version 1.0

TYPE	TYPE 1	NO TYPE 2
	<p>Experience:</p> <ol style="list-style-type: none"> Three years of practical GIS experience. Practical experience can include producing maps for real world projects in any sector or discipline. Five years in a management position in public safety, emergency management or a GIS team, including familiarity with GIS industry standard methods and processes to manage GIS resources and produce GIS products and services. Two previous deployments as a GIS Team Leader, Situation or Advanced Planning Unit Leader. Deployment should include assessment, preparation, analysis and presentation of GIS data in support of the incident. Completion of a GIS Supervisor Position Task Book (PTB) or equivalent documentation that validates and verifies (by AHJ) the successful completion of all skills and demonstrates the ability to perform skills 	
	NOTES: Not Specified	
PHYSICAL/ MEDICAL FITNESS	<p>Ability to perform duties under moderate circumstances characterized by working consecutive 12-14 hour days under physical and emotional stress for sustained periods of time. This position may require work outdoors and in the field in disaster environments.</p>	Not Applicable
	NOTES: Moderate fitness or work capacity criteria should be consistent with the physical fitness levels defined in the National Wildfire Coordinating Group's (NWCG) Fitness and Work Capacity, National Fire Protection Association (NFPA) 1582: Standard on Comprehensive Occupational Medical Program for Fire Departments, or equivalent physical and medical fitness criteria determined by the AHJ.	
CURRENCY	<ol style="list-style-type: none"> Operational incident experience and/or participation in exercises, drills, or simulations within five years from the time approved by the AHJ to serve as the GIS Supervisor This position maintains currency for the NIMS Type 1 GIS Analyst and the NIMS Type 1 GIS Team Leader positions 	Not Applicable
	NOTES: Not Specified	
PROFESSIONAL AND TECHNICAL LICENSES AND CERTIFICATIONS	<ol style="list-style-type: none"> Completion of GIS industry standards certification program or equivalent Maintain currency in the use and application of the latest GIS technology and certifications used in the industry 	Not Applicable
	NOTES: Not Specified	

ORDERING SPECIFICATIONS OR DESIGNATIONS

- Can be ordered as a single resource
- Can be ordered in conjunction with a typed team (GIS Map Support Team)
- Can be ordered in conjunction with a typed unit



BASIC QUALIFICATIONS AND TRAINING

FEMA training website: <https://training.fema.gov/>

IS-100.b: Introduction to Incident Command System

<https://training.fema.gov/EMIWeb/IS/courseOverview.aspx?code=IS-100.b>

IS-200.b: ICS for Single Resources and Initial Action Incidents

<https://training.fema.gov/EMIWeb/IS/courseOverview.aspx?code=IS-200.b>

IS-700.a: National Incident Management System (NIMS) – An Introduction

<https://training.fema.gov/EMIWeb/IS/courseOverview.aspx?code=IS-700.a>

IS-800.b: National Response Framework – An Introduction

<https://training.fema.gov/EMIWeb/IS/courseOverview.aspx?code=IS-800.b>

IS-103: GIS Specialist

<http://training.fema.gov/EMIWeb/IS/courseOverview.aspx?code=IS-103>

IS-922: Applications of GIS for Emergency Management

<http://training.fema.gov/EMIWeb/IS/courseOverview.aspx?code=is-922>



EGRT WEBSITE

- <http://www.floridadisaster.org/gis/egrt>
- Contacts
- Standard Operating Guidelines
- GIS Position Typing
- Training Requirements



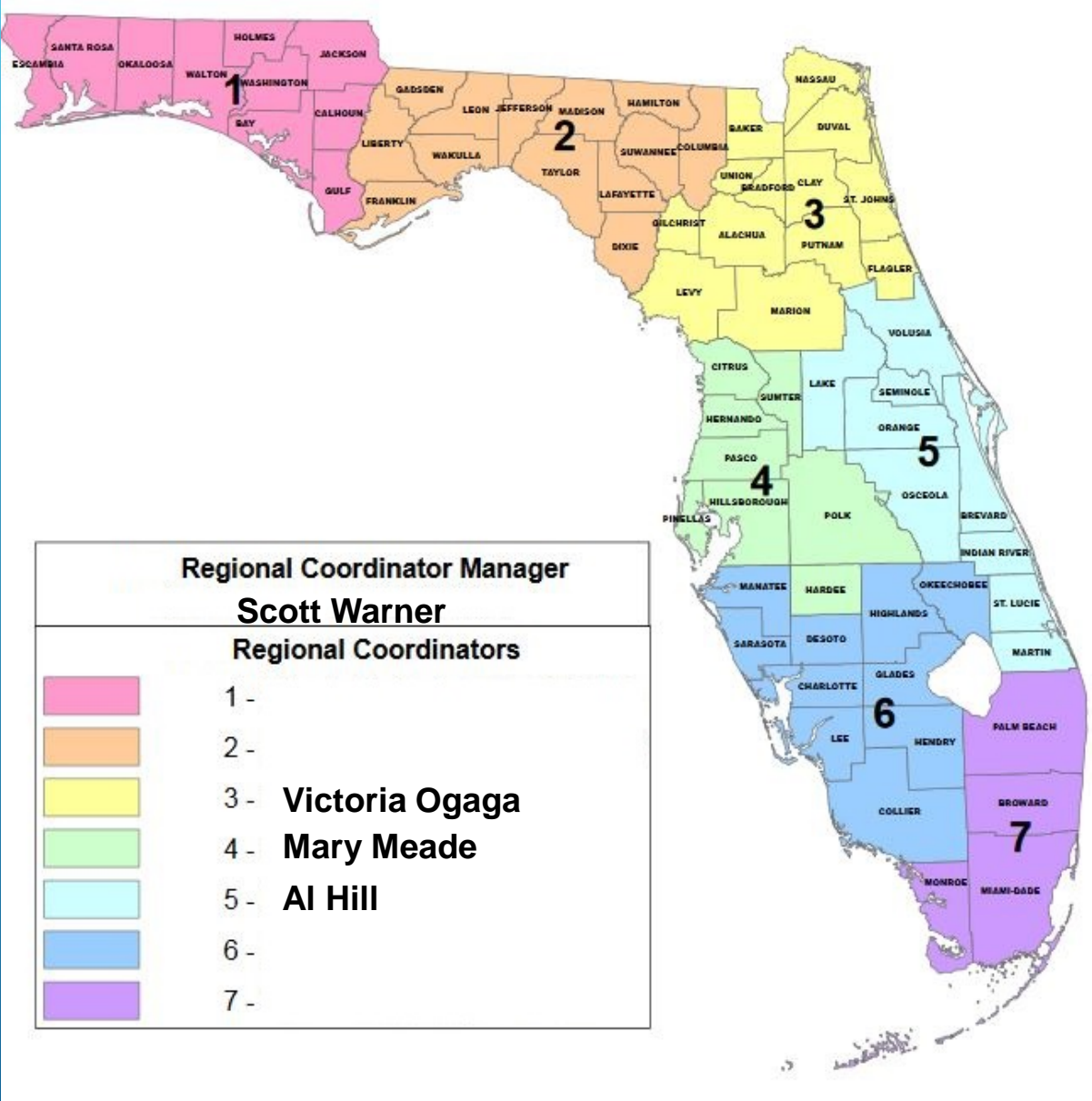


TRACKING TRAINING

- SERT TRAC will be utilized
- <https://trac.floridadisaster.org>
- To track your training accomplishments, users will need to establish a user profile in SERT TRAC for visibility to region coordinators



REGIONS AND COORDINATORS

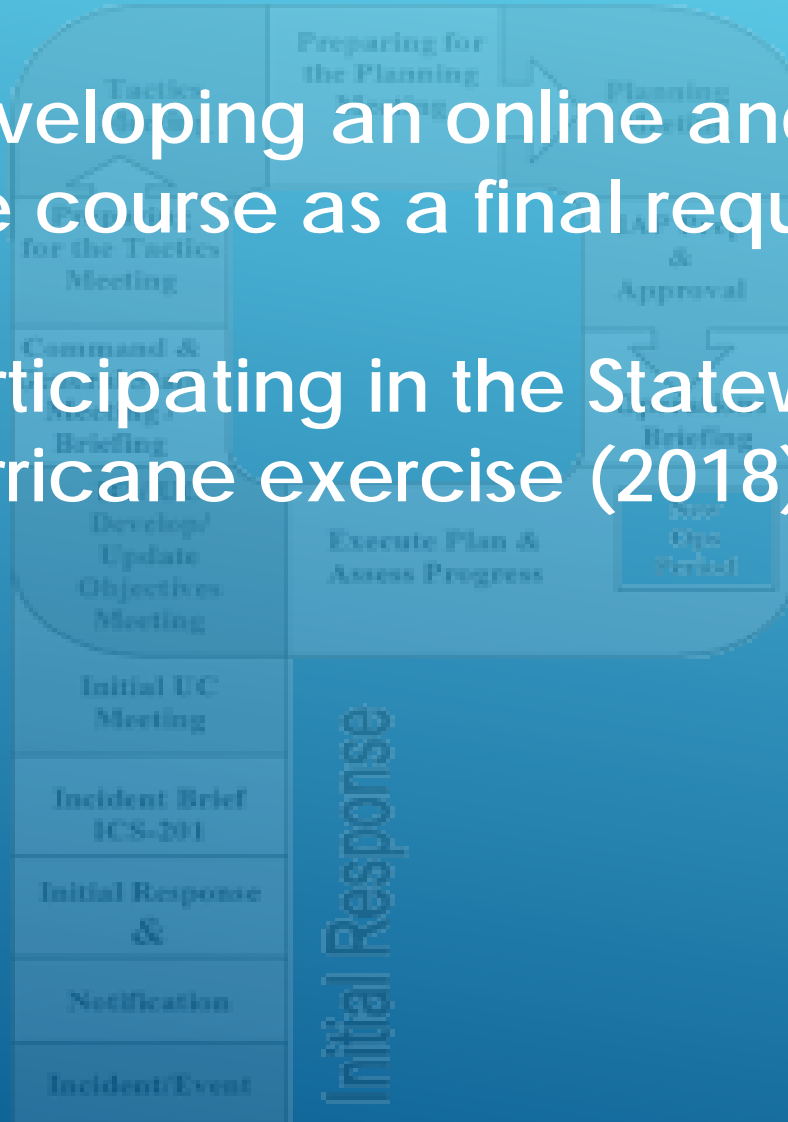




TRAINING AND EXERCISE

Developing an online and/or on-site course as a final requirement.

Participating in the Statewide hurricane exercise (2018)

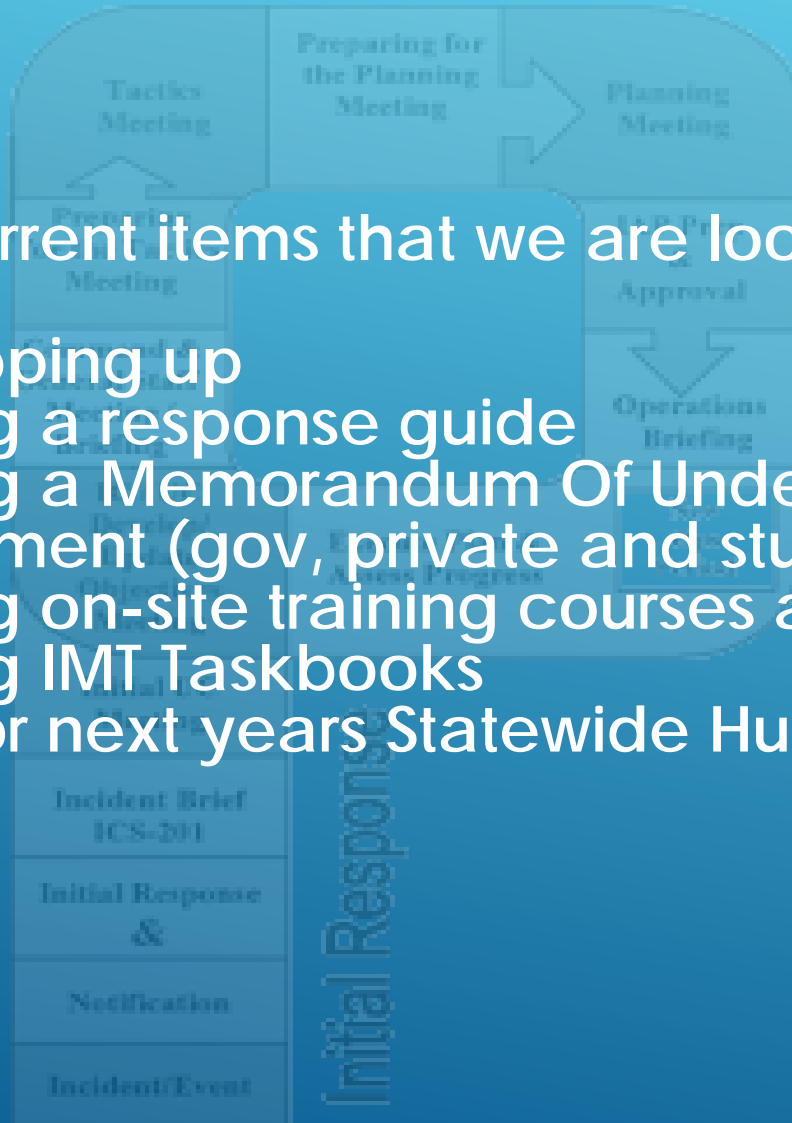




GAPS (CONTINUED)

These are current items that we are looking for help on:

- SOG- wrapping up
- Developing a response guide
- Developing a Memorandum Of Understanding (MOU)
- Reimbursement (gov, private and student?)
- Developing on-site training courses and exercises
- Developing IMT Taskbooks
- Planning for next years Statewide Hurricane Exercise for GIS



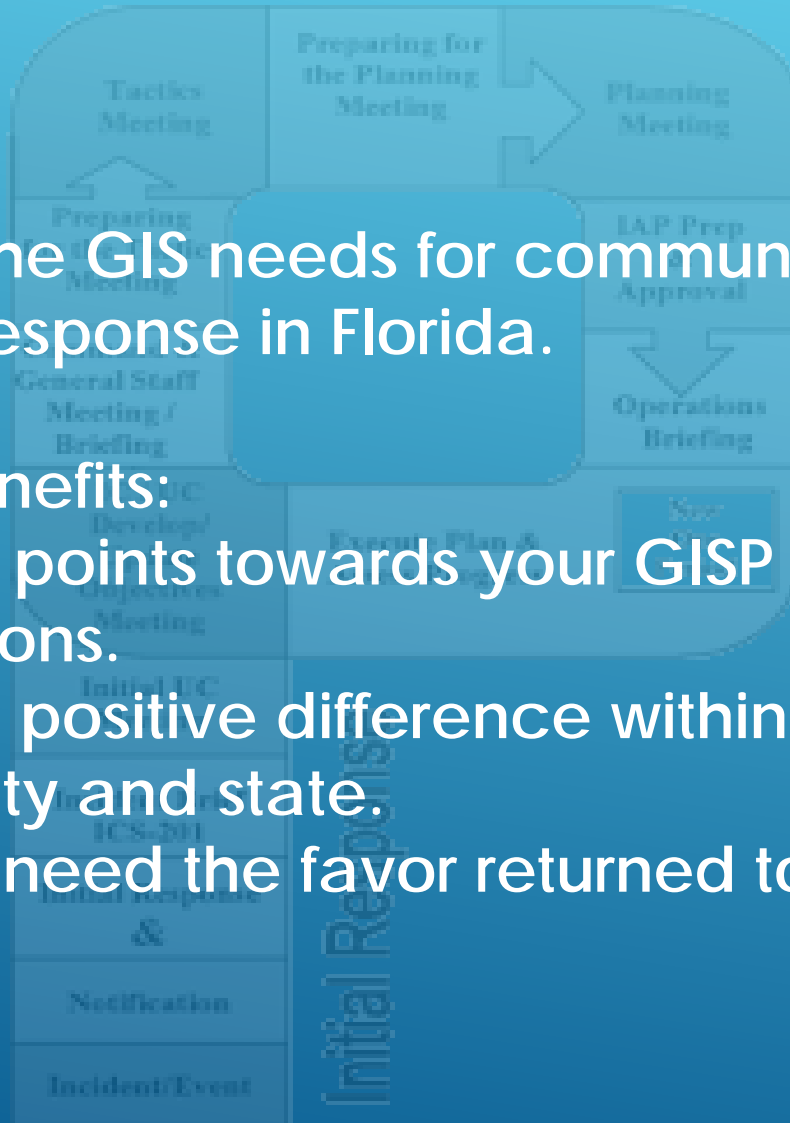


BENEFITS

Improving the GIS needs for communities and a better GIS response in Florida.

Personal Benefits:

- Providing points towards your GISP and other certifications.
- Making a positive difference within your community and state.
- You may need the favor returned to you one day.





HOW TO GET INVOLVED?

All qualified Florida GIS Professionals are eligible.

Complete online training through FEMA and upload certificates to SERT TRAC *(more training and exercises likely going to be required)*

Join our Google Group

<https://groups.google.com/d/forum/florida-egrt>





QUESTIONS?

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