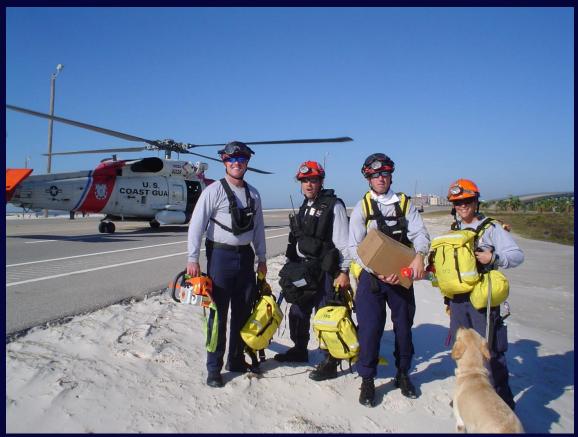


Simple Damage Assessment by First Responders





Presenters – FEMA Urban Search and Rescue (US&R)

Dave Weber

- Missouri Task Force 1
- Incident Support Team (IST) Structures Specialist
- Licensed Structural Engineer

Juan Ramon Mestas

- Florida Task Force 2
- Deputy Incident Support Team (IST) Leader



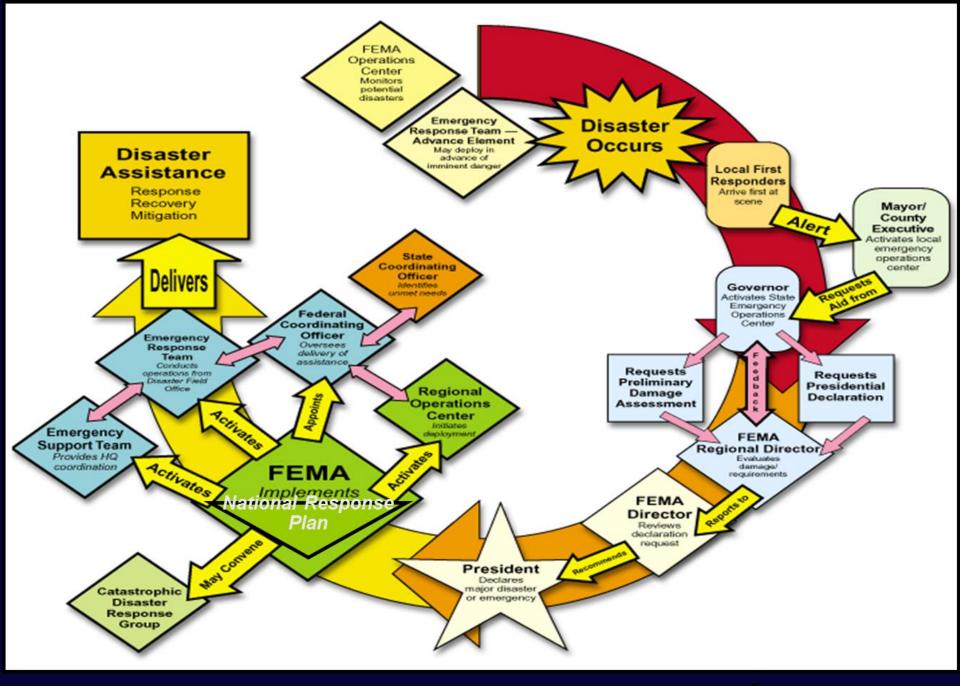
Let's Begin at the End







Introduction to the Federal Emergency Management Agency Urban Search and Rescue System FEMA US&R





National US&R Response System



National US&R Response System

In the early 1980s, the Fairfax County Fire & **Rescue and Metro-Dade County Fire Department** created elite search-and-rescue (US&R) teams trained for rescue operations in collapsed buildings. Working with the United States State **Department and Office of Foreign Disaster Aid,** these teams provided vital search-and-rescue support for catastrophic earthquakes in Mexico **City, the Philippines and Armenia.**









Hurricane Katrina - Aug. 2005





Authority Having Jurisdiction (AHJ)

RC

ESL

Note to self: I have to get these guys real hats National Urban Search & Rescue Response System FEMA Urban Search and Rescue Florida Task Force 2 and Missouri Task Force 1



Haiti - Jan. 2010

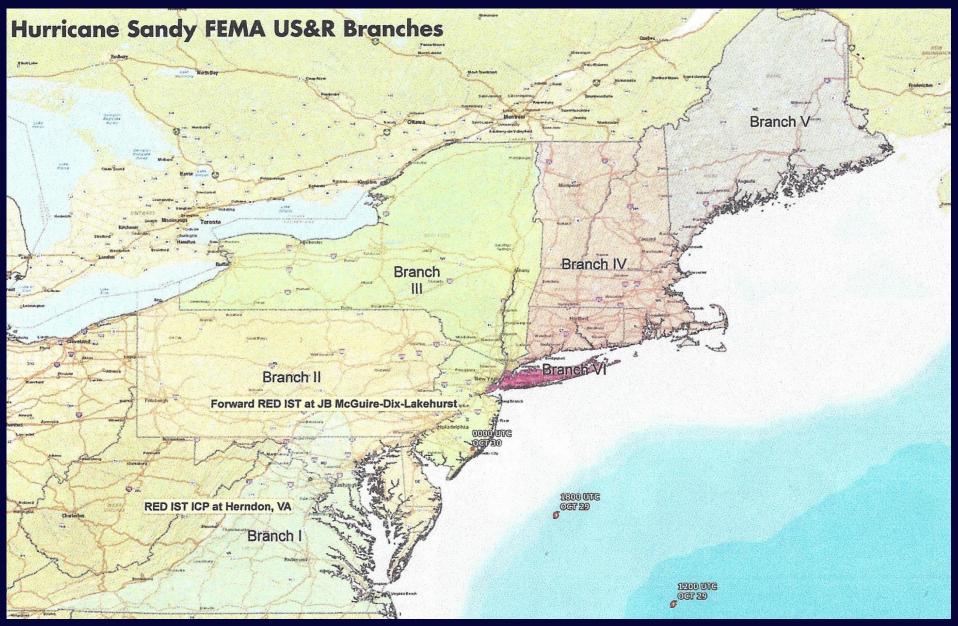




Hurricane Sandy 2012







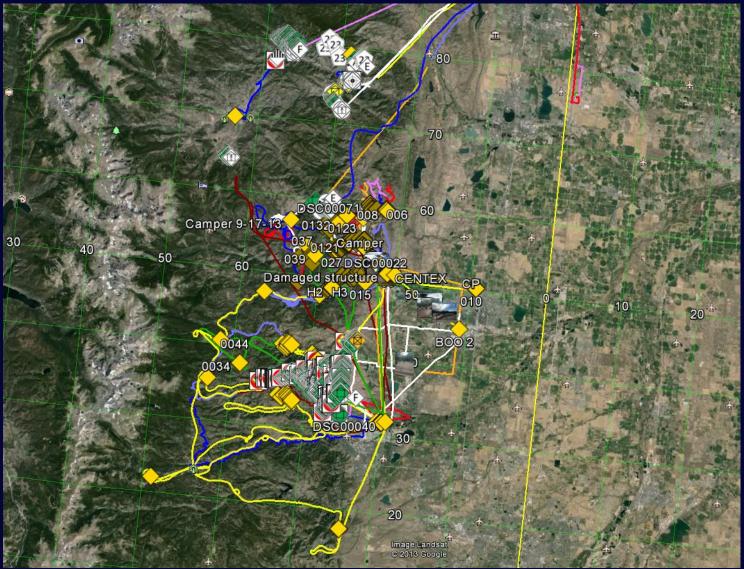


Colorado Floods 2013





Colorado Floods 2013





Washington State Mudslides 2014







Article/After Action Report Lessons Learned



Hurricane Sandy USAR Response, **One Man's Experience and Lessons**

By Juan Ramón Mestas, Office of Emergency Management, Planner/Subject Matter Specialist, City of Miami Fire Rescu

0 I reported to Geoff Miller, FRMA Urban Search on November 2nd. and Rescue (US&R) New York City Branch Department of New York (FDNY) Incident November Srd, after several days of sleep deprimand center. It usually becomes a challenge in the NYC Office of Emergency Management Bennett field the following morning. that you are assigned to a group that is too busy humanitarian effort. Urban Search and Rescue We're used to doing everything from technical The IMT crew at FDNY headquarters greated

me warmly and gave me the most comprehen- City. sive briefing I've ever received by the Planning

a November 1st after 36 hours with little ing discussions and even asist with phone calls, was confronted with a similarly sleep deprived eep, traveling by ground and air to the My mission ended the next day after the IMT was group of Task Force Leaders. The most chalimpacted area. I arrived in New York City. There demobilized when search operations concluded lenging part of my mission at that time of night

was speaking clear sentences that would be Back at our forward Base of Operations in understood by all, most importantly myself. A Director and he asked me to Liaise with the Fire Joint Base McGuire-Dix-Lakehurst, on group of Task Force Leaders from Ohio Task Force 1, Virginia Task Force 1 and Virginia Task Management Team (IMT). The job of a Liaison vation, I was asked to help with the unerwiable Force 2 met with me and my staff to formulate a (LNO) on the surface seems pretty simple...you task of changing gears from the previously plan that would put three eighty person teams show up at a command center and act as a conduit between your organization and the com- ing the Branch Director NNC Mayor's Office and mainly pickup trucks and box trucks on Floyd

handling their own issues to be able to exchange task force members were to set up a logistical disinformation with a one that just walked in that in tribution system, conduct health and wellness in Haiti to wide area searches and water rescues most cases has no authority and nothing to give checks, and distribute vital commodities and performed during this deployment. This misimportant storm-related contact information to sion was a stretch for our teams...I remember trasurvivors in priority areas identified by New York ing to instill a sense of purpose to the teams by elating how rewarding this type of mission had

Having done this kind of thing in the past for been to me in the past. And how I knew that no Section Chief, I planted myself next to the Florida Task Force 2 during Hurricane Wilma in matter what the obstacles, that they would figure Operations Chief and was allowed to sit in dur- Miami, I cautiously volunteereel. Late at night, I out how to overcome them. Having just finished

After Action Report - IST Red - Hurricane Sandy October 26, 2012 to November 10, 2012



ESF 9 Leader:	Diane Wilson
Deputy ESF 9 Leader:	Cathie Deel
IST Leader:	David Lesh
Deputy IST Leader:	David Fiero



Recommendation

1. Institute standardized training to meet the needs for data collection, emphasizing the benefits of proper data collection on searches



Recommendation

2. Establish a cloud application so that each TF can drop their docs directly into the "cloud" file and thus standardize the reporting process across the system.



Recommendation

3. Institutionalize the collection of GIS data by establishing a policy for SITL or their designee to make a high priority the collection of GIS data from the AHJ(s) in the areas impacted by disasters.



Dave versus Wally





Search and Rescue Class

A Basic Search and Rescue eight hour class was developed based on FEMA's doctrine (hyperlink below) and was delivered to members of the Key Biscayne Fire Department and Florida Task Force 2.

1. Institute standardized training to meet the needs for data collection, emphasizing the benefits of proper data collection

http://www.fema.gov/media-library-data/20130726-1823-25045-3914/us_r_just_in_time_training_course.pdf



Basic Search and Rescue for First Responders

- Unit 1. United States National Grid (USNG)
- Unit 2 GPS Awareness/SAR Symbology
- Unit 3 Emerging Technologies, Smartphone Applications, Geotagging Photos
- Unit 4 Search Definitions and Strategies
- Unit 5 Building Markings
- Unit 6 Final Exercise



Excerpts from the Search and Rescue (SAR) Class



DEATH BY POWERPOINT

Slow and painful.

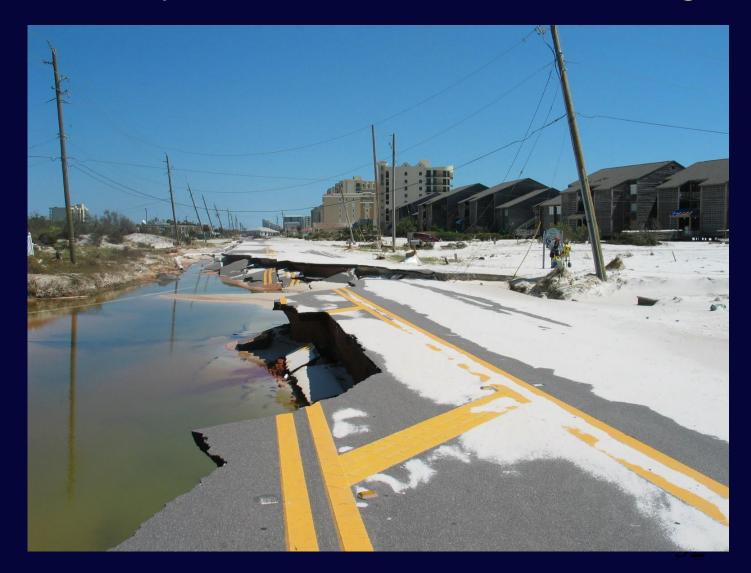
National Urban Search & Rescue Response System FEMA Urban Search and Rescue Florida Task Force 2 and Missouri Task Force 1



U.S. National Grid (USNG)



What do you do when the roads are gone?





What do you do when the SIGNS are gone?



Windows

A fatal exception OE has occurred at 0028:C0011E36 in UXD UMM(01) + 00010E36. The current application will be terminated.

- * Press any key to terminate the current application.
- Press CTRL+ALT+DEL again to restart your computer. You will lose any unsaved information in all applications.

Press any key to continue _



United States National Grid USNG What is it? U.S. National Grid Grid Zone Designations (GZD) Navigation system Same as the Military Grid System 11R

Why?

The USNG has been adopted by FEMA as the standard for navigation and location identification

11Q

18R

18Q

16R

15R



The US National Grid

- USNG is a ground-based coordinate system that uses the meter as a basic unit of measure
- It is anchored by NAD 83
- It is nearly identical to the Military Grid Reference System (interoperable with military standards)
- It is composed of three parts:
 - A grid zone identification (number and a letter)
 - A sub-grid zone identification called the 100,000-m Square ID (2 letters)
 - A coordinate value, separated into east and north components and measured as ground distance from standardized reference lines



How to read USNG

16R GU 66000 64820

Grid Zone Designation – for a worldwide unique address, identifies the longitude zone number and the latitude band letter

100,000 Meter Grid – identification for – regional areas

Grid Coordinates – Easting and Northing position

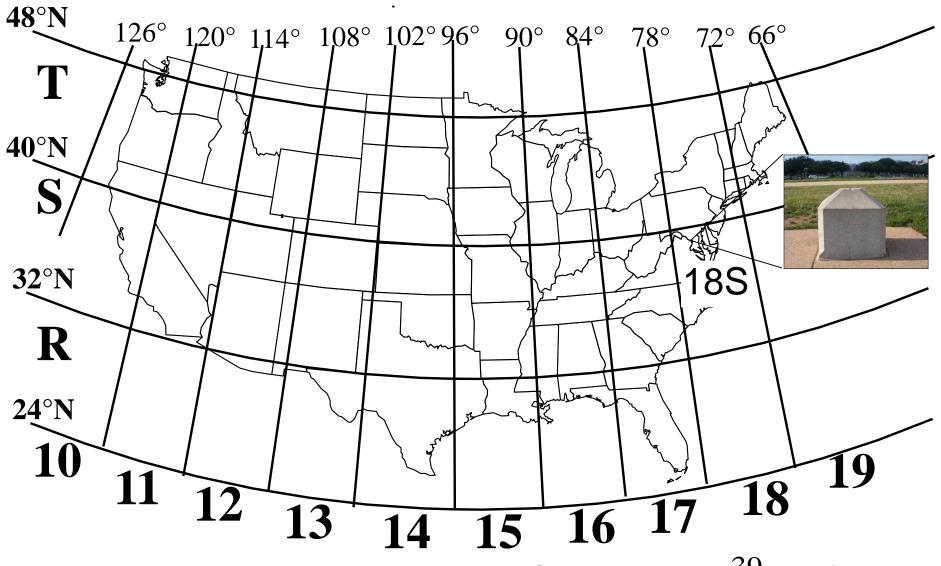


Step 1: Determine the US National Grid Zone

38

How to read the USNG...

U UTM/USNG Grid Zone Designations



© 2006 N.G.Terry, Jr.

Jefferson Pier: 18S UJ 2337 0652 (NAD 83)

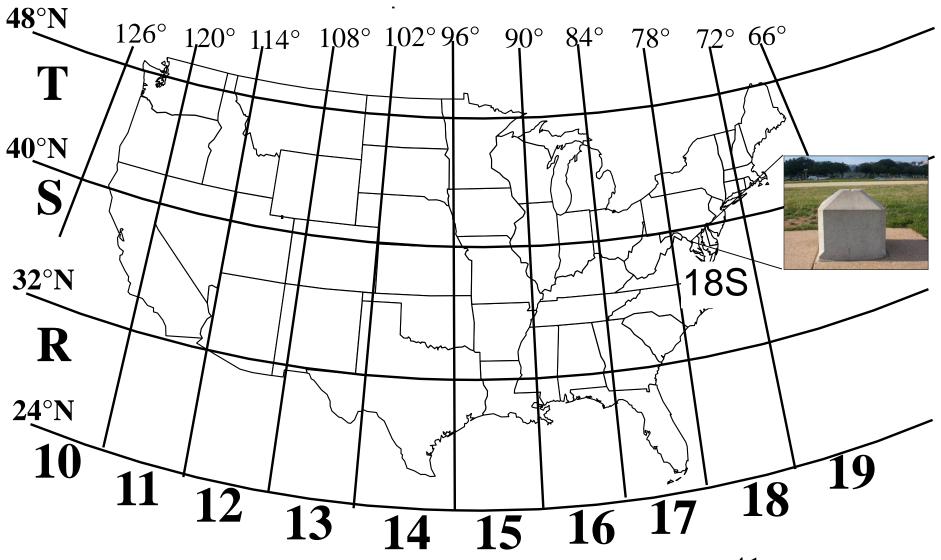


Name the 2 Grid Zones for the State of Florida

40

How to read the USNG...

U UTM/USNG Grid Zone Designations



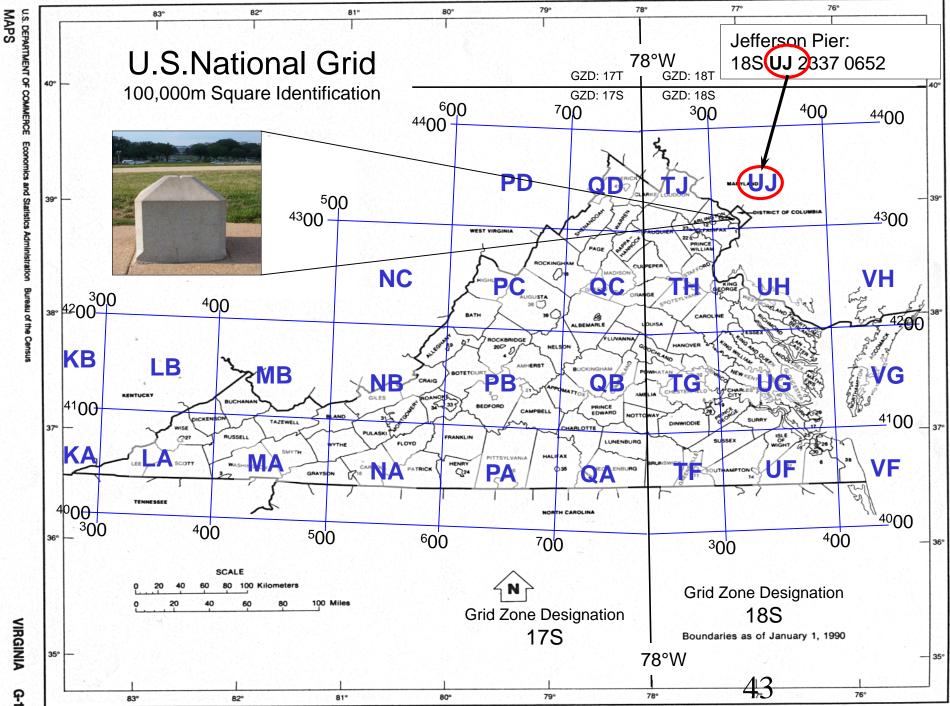
© 2006 N.G.Terry, Jr.

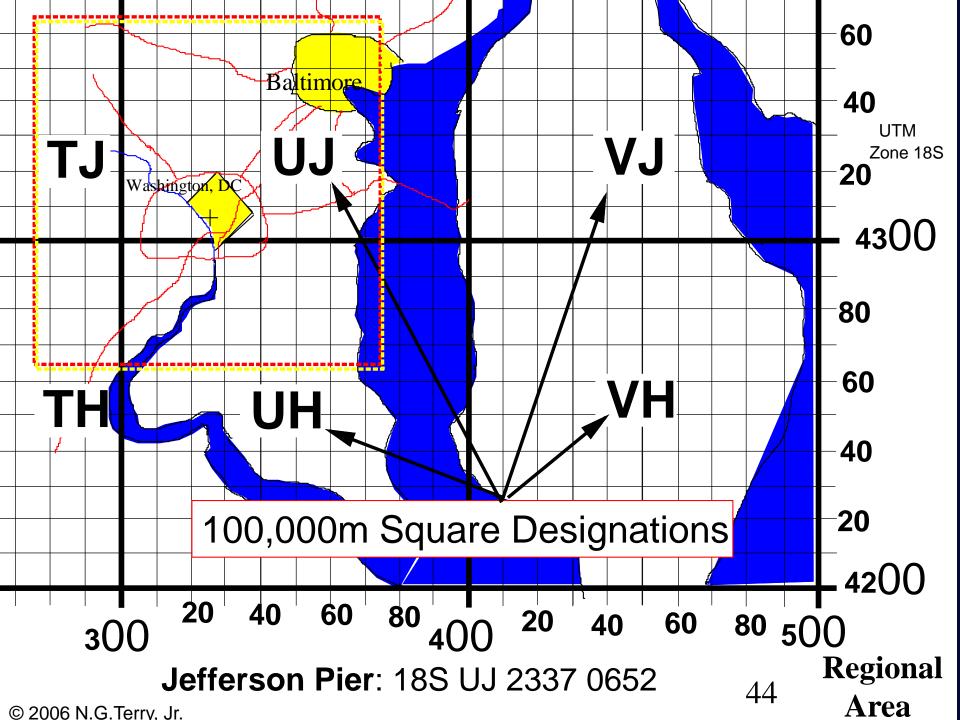
Jefferson Pier: 18S UJ 2337 0652 (NAD 83)



Step 2: Determine the 100,000-m Square ID

42





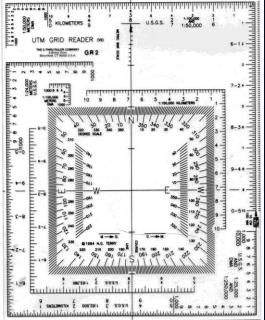


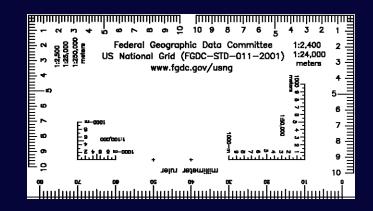
Step 3: Measuring the Coordinate

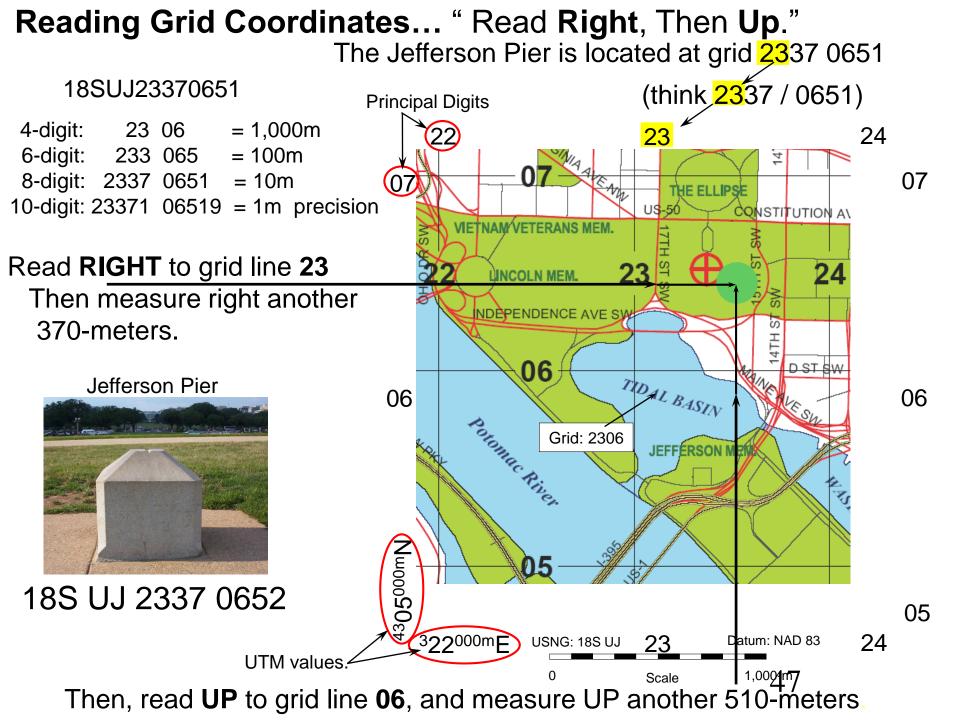
45



United States National Grid (USNG))





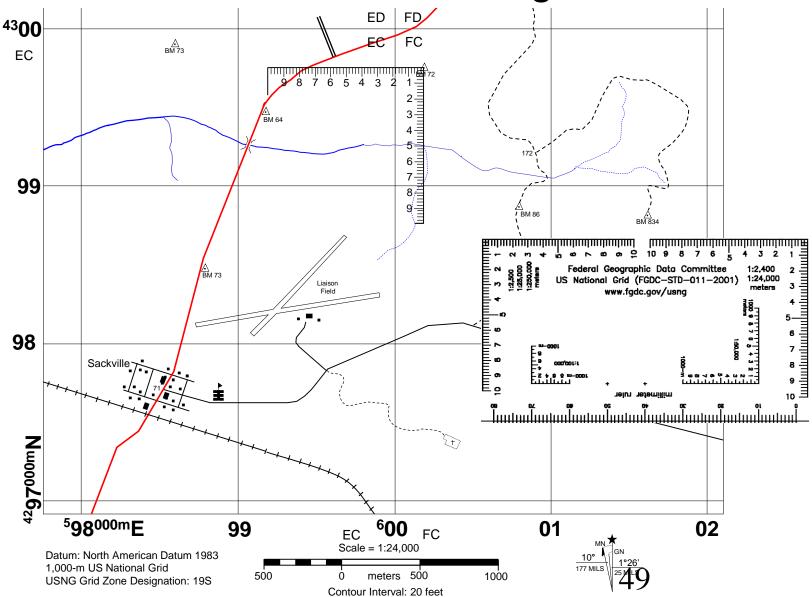




Remember...

- Coordinates are always given as an even number of digits (i.e. 55905 74965) Separate coordinates in half (55905 74965) into the easting and northing components. Read right to grid line 55. Then measure right another 905-m
- Read up to grid line 74. Then measure up another 965 – m
 48

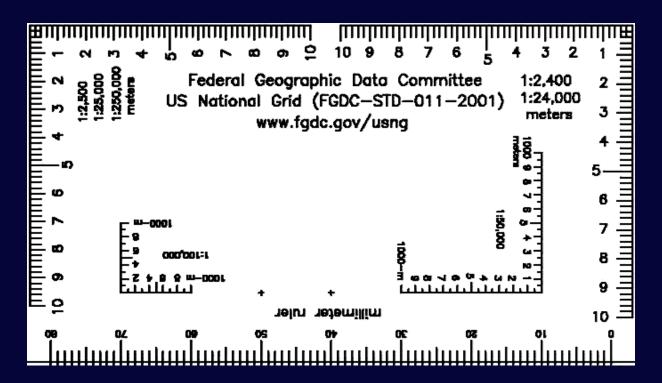
Measure precise locations with a Romer scale or grid reader.





Grid readers and map scale

Note that the grid reader has many different grids marked – these are for use with different map scales: USE THE RIGHT ONE!!!





Scale...

Representative Fractions...

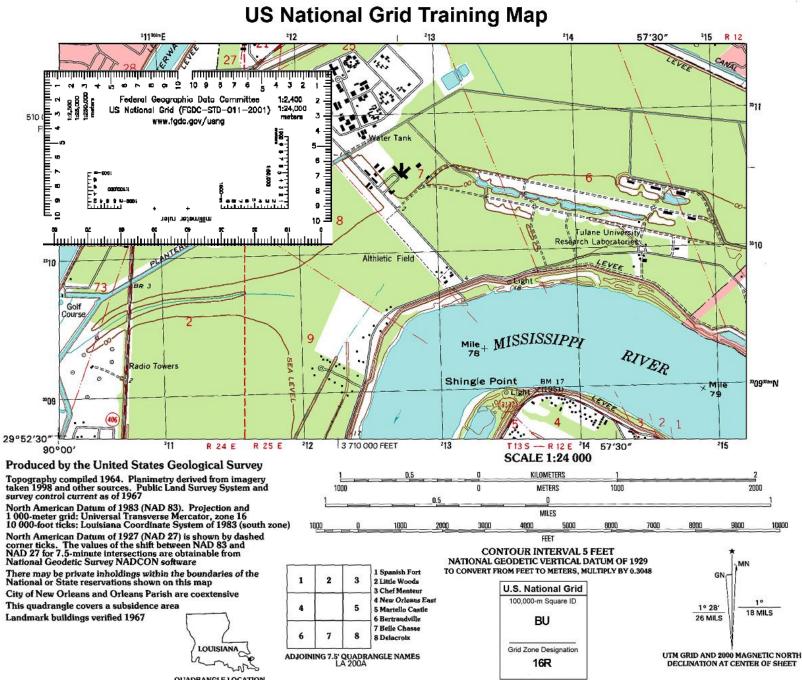
24,000



1 part on the map = 24,000 parts on the ground.

At 1:24,000, a *0.5mm* mechanical pencil lead dot on the map is equal to *12 meters*!

Put your 0.5mm pencil dot.



QUADRANGLE LOCATION



USNG in Disaster Response

- Can be used to assign areas of responsibility without defined boundaries
 - tasking to 'search proximity' around coordinate
- Coordinate point position can define:
 - Survivor location
 - Base of Operations
 - Address of significance
 - Landing Zone (LZ)

- Survivor Collection Point
- Hazards
- Vehicle location
- Other?







National SAR Committee

CISAR Geo-referencing Matrix

Georeference System User	United States National Grid (USNG)	Latitude/Longitude DD-MM.mmm ¹
Land SAR Responder ³	Primary	Secondary
Aeronautical SAR Responders ⁴	Secondary	Primary
Air Space Deconfliction ⁵	N/A	Primary
Land SAR Responder/ Aeronautical SAR Responder Interface. ⁶	Primary	Secondary
Incident Command: Air SAR Coordination Land SAR Coordination	Secondary Primary	Primary Secondary



Summary

- Multiple SAR agencies used a variety of georeferencing systems during Hurricane Katrina, causing confusion.
- USNG geo-referencing scheme is to be used when a Catastrophic Incident is declared as outlined in the National Response Framework (January, 2008).
- Additional information and training concerning the USNG can be found online. <u>http://www.fgdc.gov/usng</u>

Gas station Road Map

ARCH

ESL

National Urban Search & Rescue Response System

FEMA Urban Search and Rescue Florida Task Force 2 and Missouri Task Force 1



FEMA

Fri, Feb 7, 5:10 PM



Your friend here said hello.

CB#:3052196436

Hilarious! Is this Eric?

Yep....Some friends of my soon took us there to sneak up and wrestle them. Let s talk soon.

Text Message





Unit 2 GPS Awareness



This program will cover... **Components GPS/NAVSTAR** Features and operation of the GPS unit **Benefits to the First Responder** Using a GPS unit in SAR Operations

Basic Components of GPS

- GPS Receiver handheld device used to communicate with satellites to track position on earth.
- Computer mapping software is used to produce maps with detail downloaded from GPS Receivers
- GPS use with maps
- GPS use in the Search and Rescue setting







Search and Rescue Benefits

- Better routing to and around mobilization site
- More accurate mapping/documentation for TF Operations
- Enhanced communications which enables pinpoint accurate location information
- Limitations



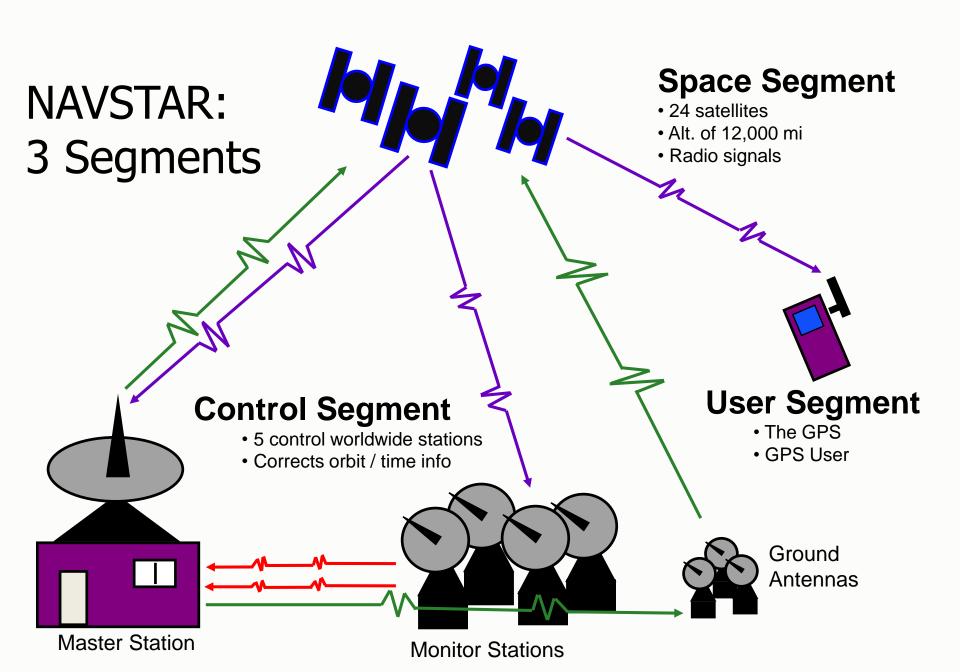
What is GPS?

Global Positioning System is a network of satellites that continually transmit coded information, which make It possible to identify positions on earth by measuring distance from satellites. Those positions are reported in coordinates. (i.e..Lat/Long,USNG,etc)



Four Primary Functions

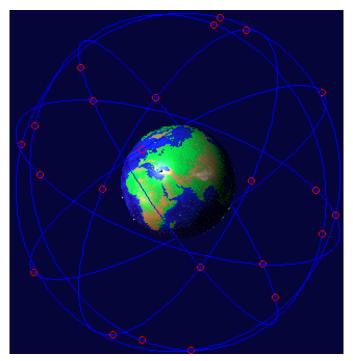
- 1. Provides a position and coordinates
- Can calculate distance and direction between any two waypoints, or a position and a waypoint.
- 3. Provides travel progress reports, like estimated time to waypoint.
- 4. Accurate time measurement





How Does GPS Work?

- Start up
 - Cold start up is when a unit is started for the first time in a new area or after a long time of no use. It will take longer for the unit to locate & identify satellites. Thus longer time to usable data.
 - This can be overcome by turning on the GPS receiver prior to use. This way it can get your general location and be usable in a shorter time frame. This is termed a warm start up.
 - If you are going to be using a GPS Unit, turn it on as soon as you can to allow for proper set up.





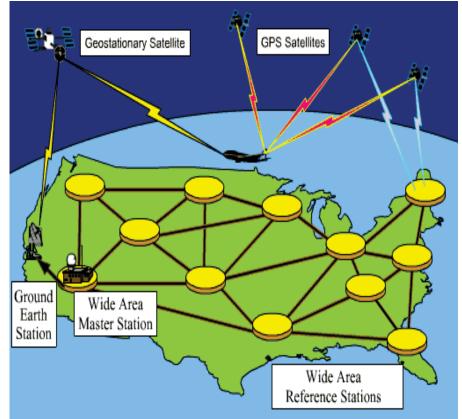
Selective Availability (S/A)

 Department of Defense placed "dithered" satellite time message to prevent GPS from being used against us. This made the coordinates only accurate to a set area which the military could change as they needed. In May 2000, Pentagon set S/A to Zero meters error. S/A can be reactivated, by the military, at any time.



Wide Area Augmentation System (WAAS)

- Ground based correction signal
- Corrects GPS satellite orbit and clock drift plus signal delays caused by atmosphere
- If your GPS is WAAS enabled be sure to have it turned on in the set up
- This will give an even more accurate location

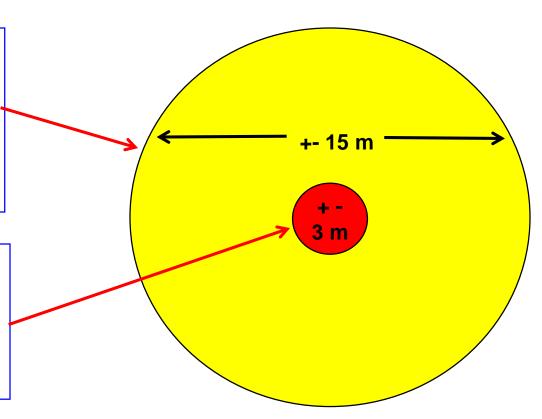




Wide Area Augmentation System (WAAS)

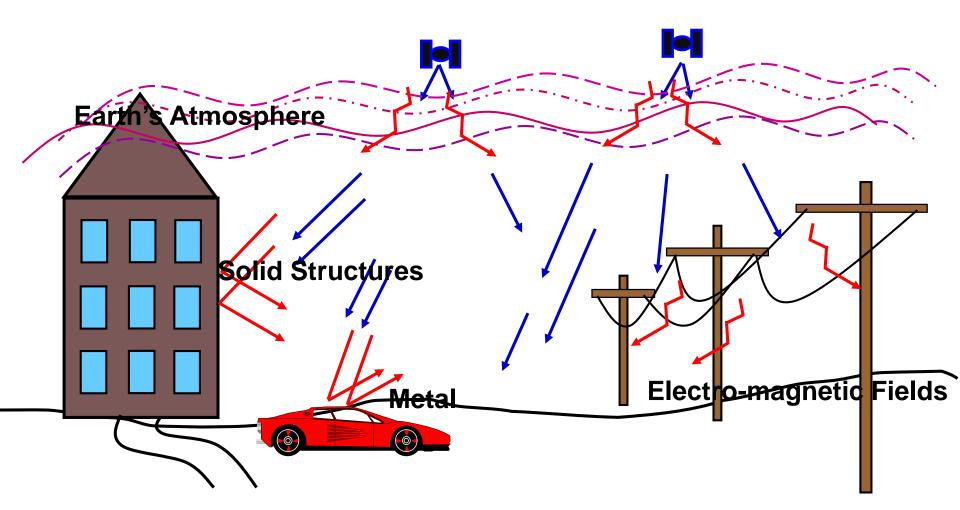
With Selective Availability set to zero, and under ideal conditions, a GPS receiver without WAAS can achieve 15-meter accuracy most of the time.*

Under ideal conditions, a WAAS equipped GPS receiver can achieve 3meter accuracy 95% of the time.*



* Precision depends on good satellite geometry, open sky view, and no user-induced errors.

Sources of GPS Errors Receiver Errors are Cumulative!





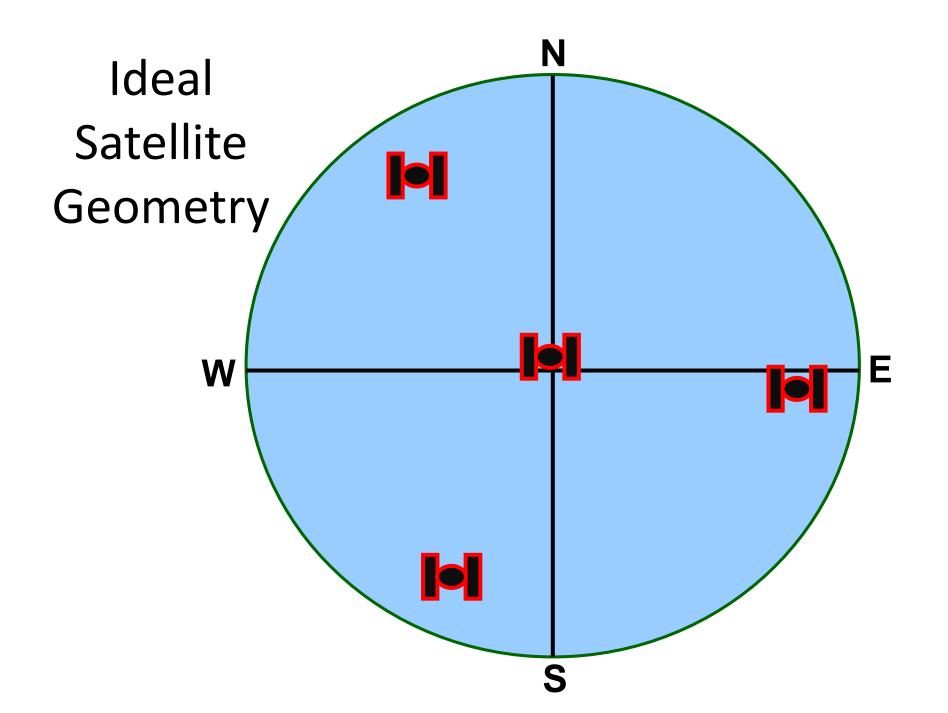
Sources of Errors

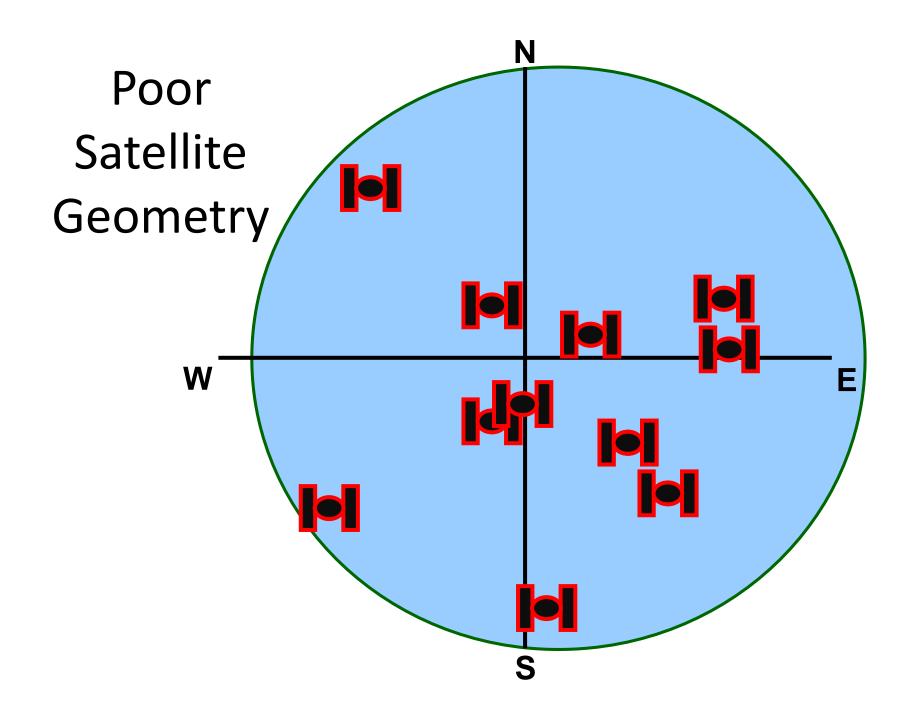
- Reflections- signals can reflect off of buildings,rocks,metal objects
- Electromagnetic fields (power lines etc)
- Buildings, while inside signal may be blocked.
- Best to try and maintain clear view of the sky.
- The more obstacles to view sky the higher the likelihood of errors.



Minimizing User Errors

- Keep GPS away from your body with antenna directed skyward for best reception
- Always verify your GPS is set to correct DATUM and coordinate system(<u>This is the biggest cause of</u> <u>errors)</u>
- Always verify you are receiving enough signals before making critical navigational decisions(at least three signals)





Summary



- Satellites have very low power
 - Poor to no reception in buildings or under cover
- Be aware of interference and obstructions
- Cold versus warm start-up issues
 - Cold start is first time unit starts in area of operation must locate itself.(Takes longer)
- Always keep extra batteries
- Try to obtain 3D (DGPS) positioning
- Keep a paper map as a backup



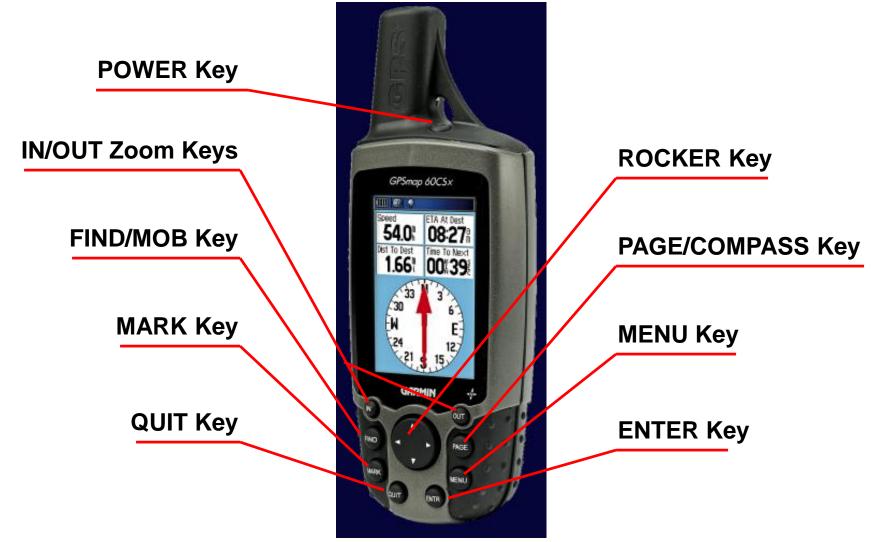
) FEMA

Basic GPS Training

- GPS Use
 - Proper initial setup
 - Basic features
 - Key functions and routines



The GPS map Key Layout



Power Considerations

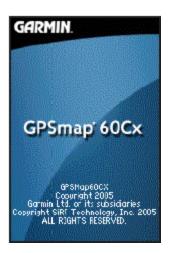
- Two AA batteries, USB cable, 12v DC adapter
 Battery Life: 18 hours
 Alkaline batteries lose capacity in low temps
 Lithium batteries in below freezing temperatures
 - Extensive use of backlighting, electronic compass, and audible tones significantly reduce

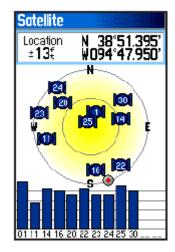






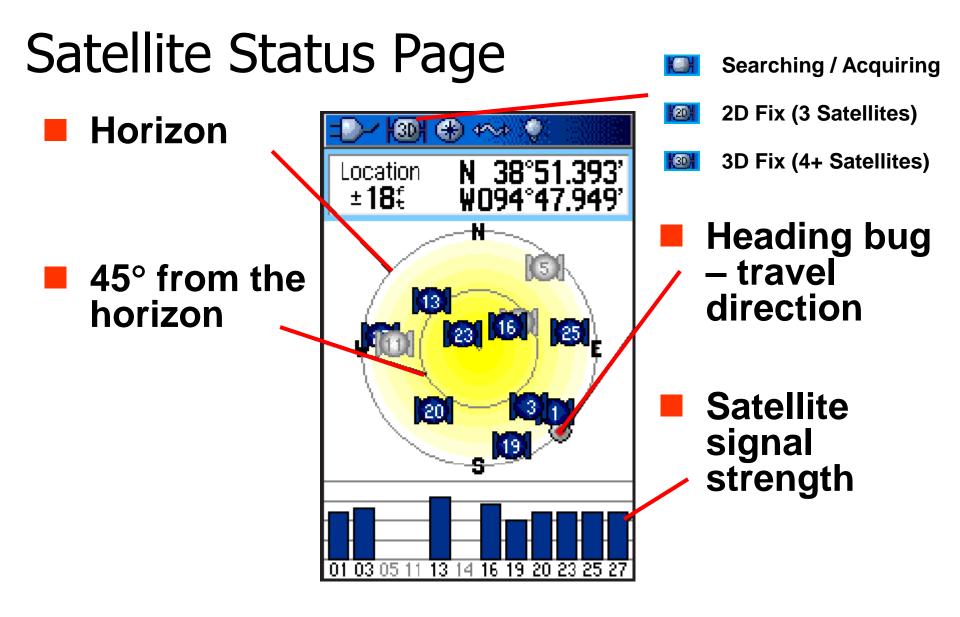
- Press and hold the POWER key
- Title screen appears
- Satellite status page







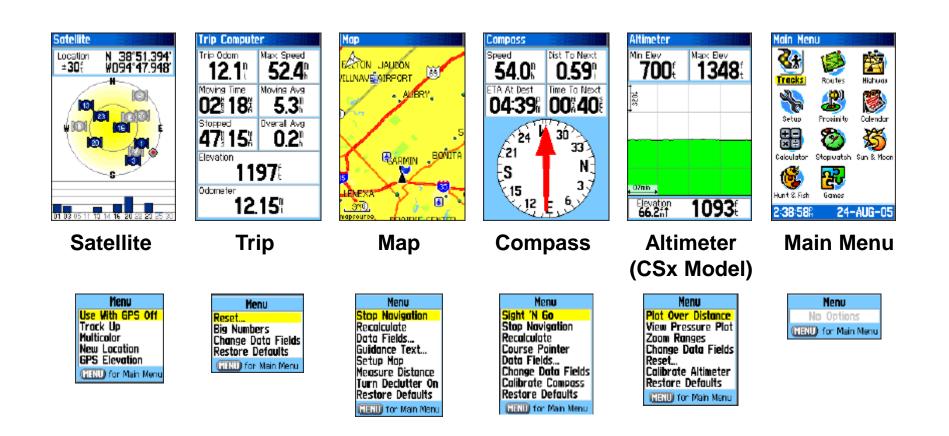




Main Pages



• Cycle through pages using PAGE or QUIT

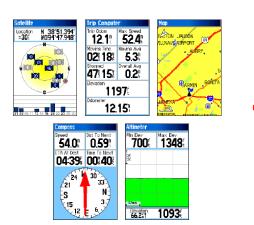


National Urban Search & Rescue Response System

Main Menu



• Press MENU button twice for Main Menu from any Page









Main Menu (continued)



GPSmap 60CSx



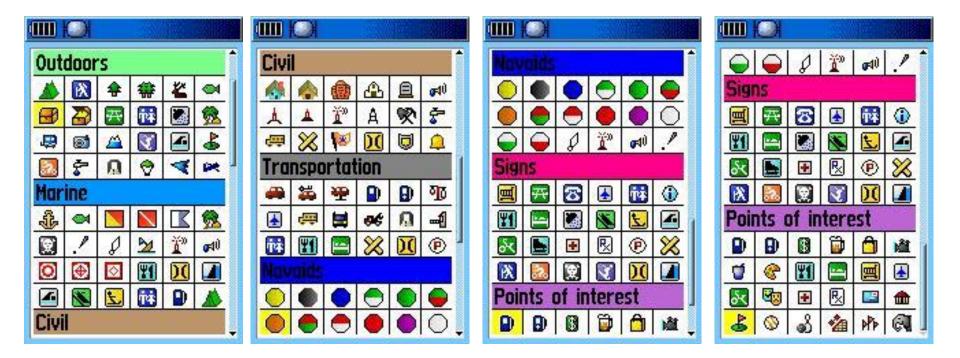
Adjusting Screen Settings



To minimize battery drain, limit or turn off backlight Press and quickly release the POWER button. Press up on ROCKER to increase, down to decrease. Press ENTER or QUIT to close **Backlight adjustment** window.



Waypoints: Available Map Symbols





Search Icons

 Availability of 24 custom symbols specifically designed for Search and Rescue

> 3. Institutionalize the collection of GIS data by establishing a policy for SITL or their designee to make a high priority the collection of GIS data from the AHJ(s) in the areas impacted by disasters.





Search Icons and their Definitions

\bigcirc	Structure No Damage	Low Risk, low probability of further collapse
	Structure Damaged	Medium Risk, structure is significantly damaged
Ì	Structure Failed	High Risk, may be subject to sudden collapse
Ò	Structure Destroyed	Complete destruction of structure
À	Assisted	Material assistance provided to residents
E	Evacuated	Survivors transported to collection point
Ŕ	Rescued	Technical rescue that required physical intervention
F	Follow-Up Form	Additional information required not adequately described by symbol set
V	Victim Detected	Potential victim detected (including canine alert or intelligence)
Ŵ	Confirmed Victim	Confirmed live survivor (visual, audible, physical confirmation)
Ŵ	Human Remains	Confirmed victim determined to be deceased
Ŵ	Confirmed Victim Removed	Victim removed from specific location

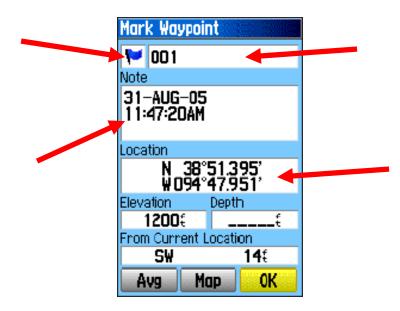


Search Icons and their Definitions

	Shelter in Place	Survivors have chosen to remain at location
$\overline{\mathbf{r}}$	Animal Issue	Issue including aggression, location, assistance needed, etc
Ď	Emergency Shelter	Identified location for survivors or collection point
T	Emergency Food Distribution Center	Field kitchen or distribution point for provisions
٢	Fire Incident	General fire occurrence
	Hazardous Material Incident	Nuclear, biological, or chemical incident
\bigcirc	Targeted Search	Specific location or condition requiring increased search effort
	Flood/Water Level	Predetermined site for documentation of water line
	Helicopter Landing Site	Appropriate site for landing zone
	Route Blocked	Inaccessible route by land or water
23	Extra 23	Mission specific placeholder to be determined (e.g. evidence)
24	Extra 24	Mission specific placeholder to be determined (e.g. evidence)

Waypoints: Mark Current Location Quickest way to mark a waypoint

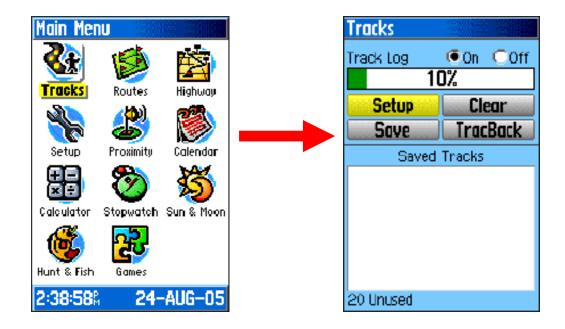
- Press and hold the MARK key until the Mark Waypoint page appears.
- To accept the waypoint with the default information, highlight OK and press ENTER.

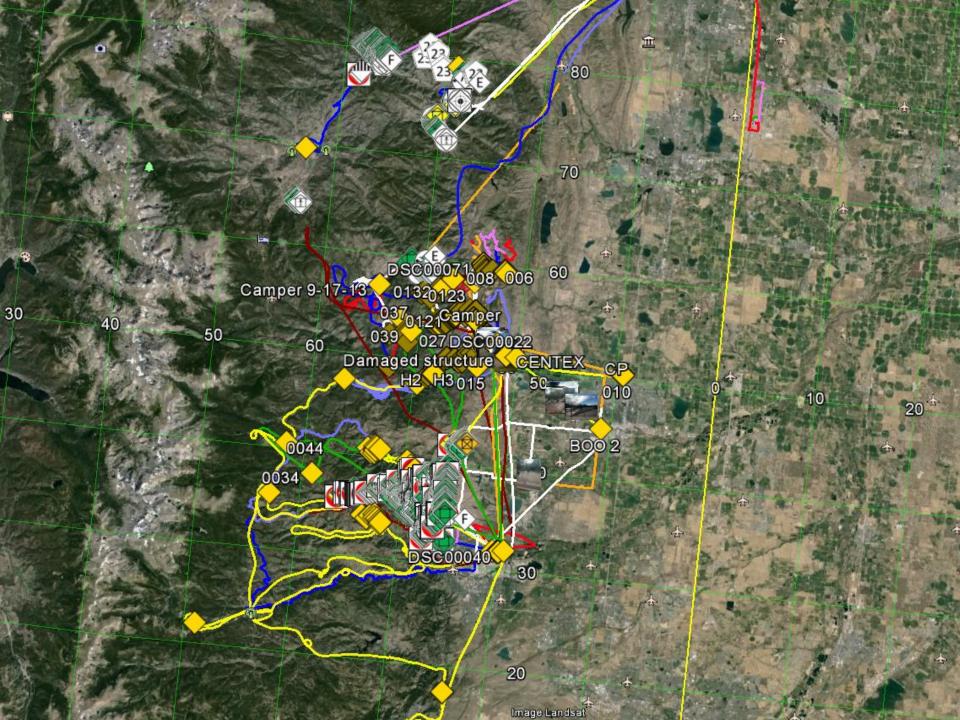




Track Log: Access Track Logs

Press MENU button twice for the Main Menu. Select Tracks and press ENTER.







Exercise

 Outdoors with GPS Units and Guide Sheets, go over lesson





Unit 3 - Emerging Technologies, Smartphone Applications, Geotagging Photos

- Emerging Technologies
 Smartphone Applications
 Enabling your Smartphone to Geotag
 - Photos



What's coming down the Pike

National Geospatial Agency



Т 8



US&R Field Operations (UFO)

2. Establish a cloud application so that each TF can drop their docs directly into the "cloud" file and thus standardize the reporting process across the system.

3. Institutionalize the collection of GIS data by establishing a policy for SITL or their designee to make a high priority the collection of GIS data from the AHJ(s) in the areas impacted by disasters.

🖌 🖁 Not Charging 🛄

FEMA



GEOINT Apps



FEMA



crisistrack



phaero



VizOps



UFO FEMA

•••• Verizon 3G

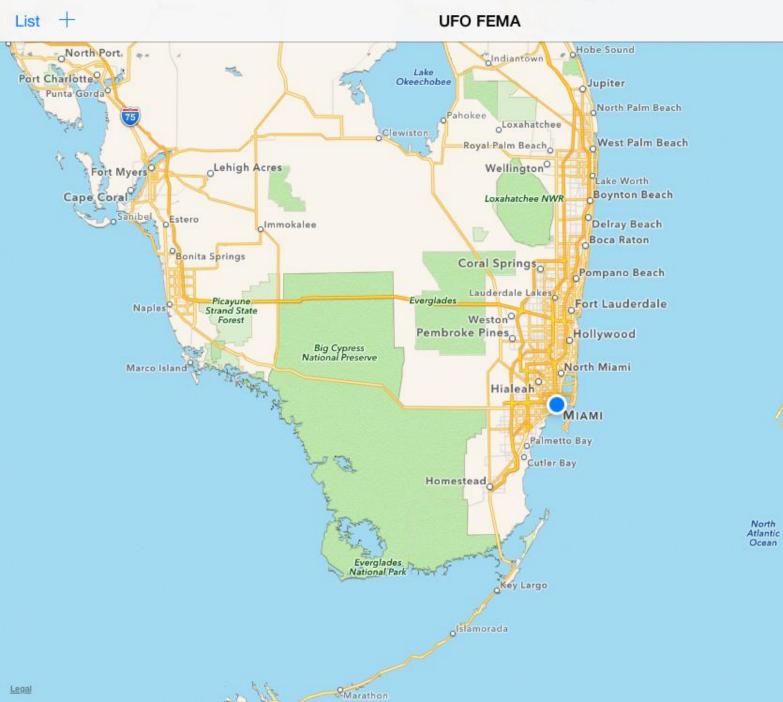
13:34

1 🖇 Not Charging 💷

Settings 💍

Envir

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Ocean

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Submit

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GENERAL	
Date	04/03/2014 13:34:44 >
USNG	17RNJ80375049
DETAIL	
Level	Normal >
Туре	>
Team	>
Unit	
Description	

Hold for 2 seconds to remove media

Submit

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GENERAL		
Date	Normal	04/03/2014 13:34:44 >
USNG	Yellow	17RNJ80375049
DETAIL	Red	
Level		Normal >
Туре		>
Team		>
Unit		
Description		

Hold for 2 seconds to remove media

Dismiss

Submit

GENERAL		
Date		04/03/2014 13:34:44 >
USNG		17RNJ80375049
DETAIL		
Level		Normal 🗦
Туре		>
Team	Animal Issue	>
Unit	Assisted	
Description	Confirmed Victim Removed	
_	Confirmed Victim	
	Emergency Food Dist Center	
	Emergency Shelter	
	Evacuated	
Hold for 2 secor	ds t Fire Incident	

Flood Water Level

Camera Camera Roll Record Voice

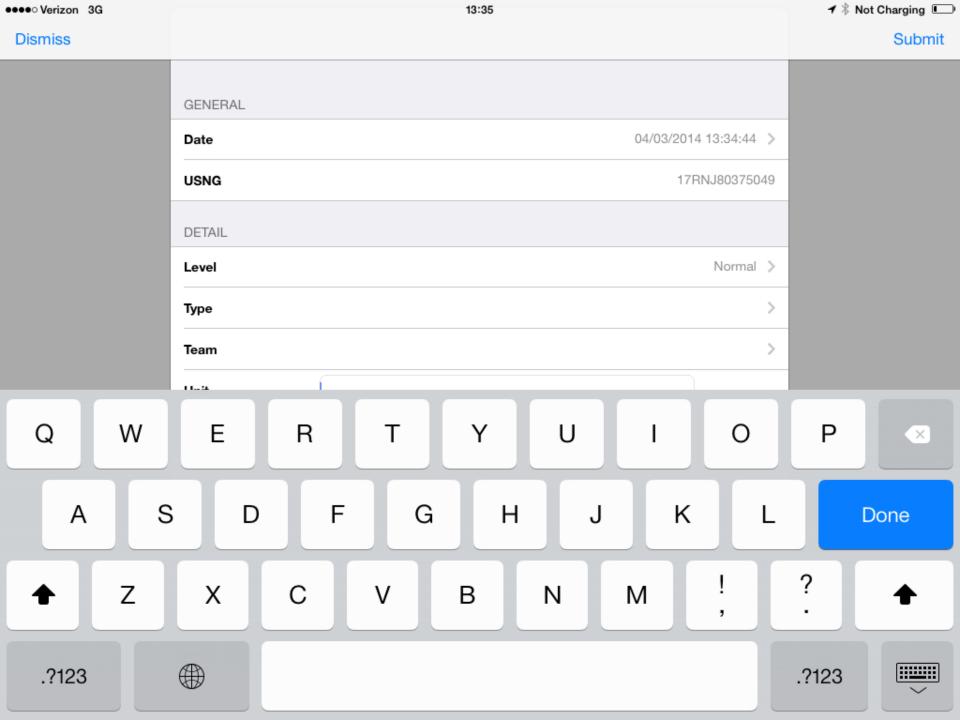
Dismiss

Submit

GENERAL		
Date		04/03/2014 13:34:44 >
USNG		17RNJ80375049
DETAIL		
Level		Normal >
Туре		>
Team		>
Unit	AZ-TF1	
Description	CA-TF1	
	CA-TF2	
	CA-TF3	
	CA-TF4	
	CA-TF5	
Hold for 2 secor	nds t CA-TF6	
	CA-TE7	

CA-TF7

Camera Camera Roll Record Voice



S

-				
		\sim		<u>_</u>
		ГU		-
	.		-	-

GENERAL		
Date		04/03/2014 13:34:44 >
USNG		17RNJ80375049
DETAIL		
Level		Normal >
Туре		>
Team		>
Unit	Squad 1	
Description		

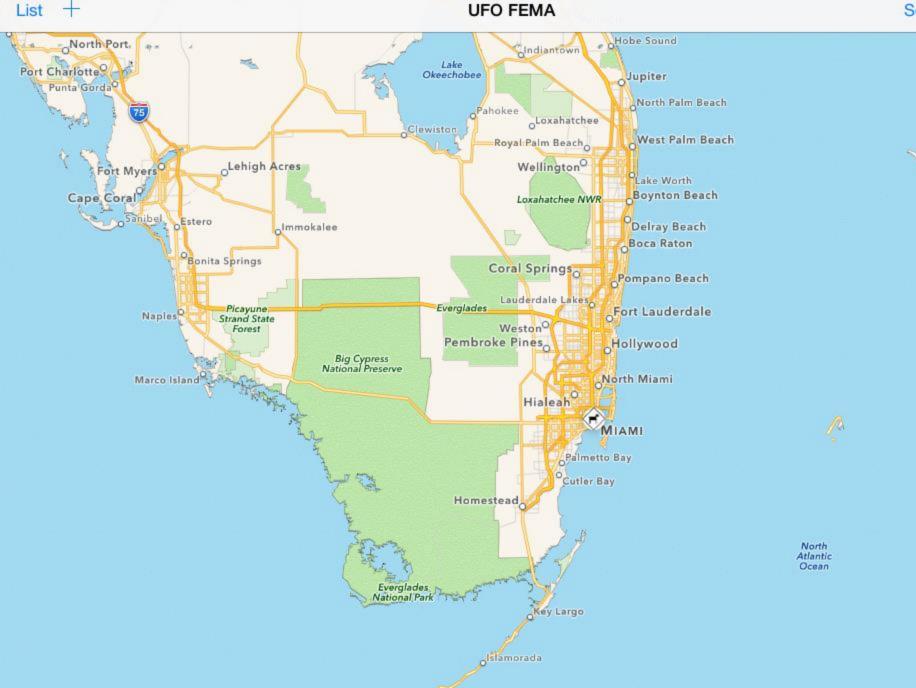


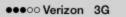
13:37

◀ ∦ Not Cha

UFO FEMA

Setting





13:47

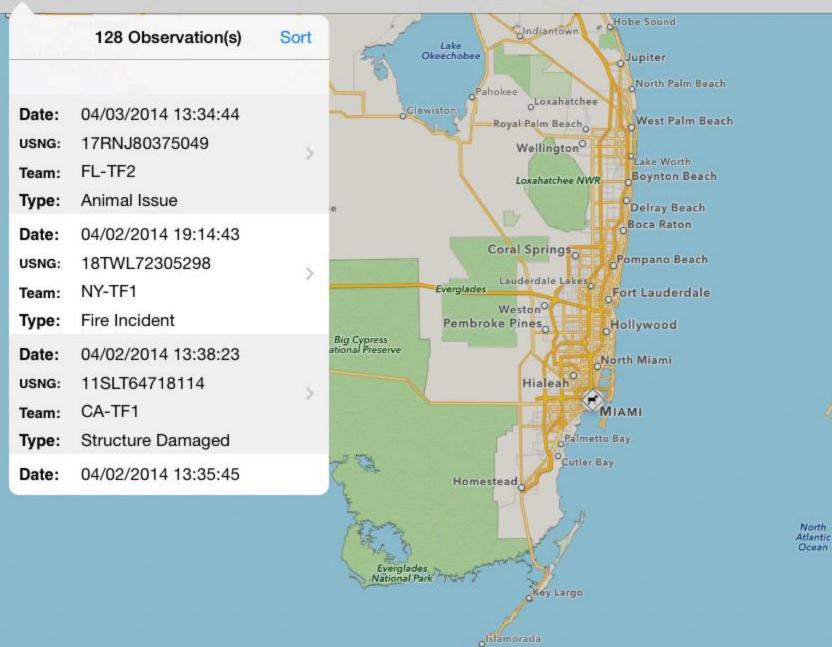
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List +

UFO FEMA

Setting

- BAN



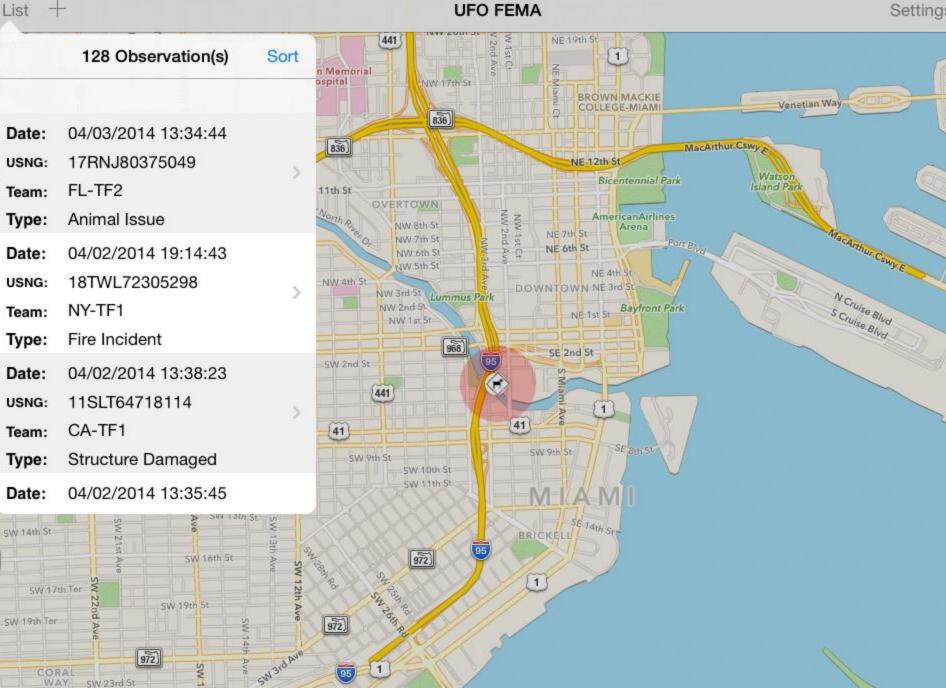


ğ

13:49

✓ ∦ Not Cha

Setting



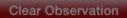
●●●●○ Verizon	3G
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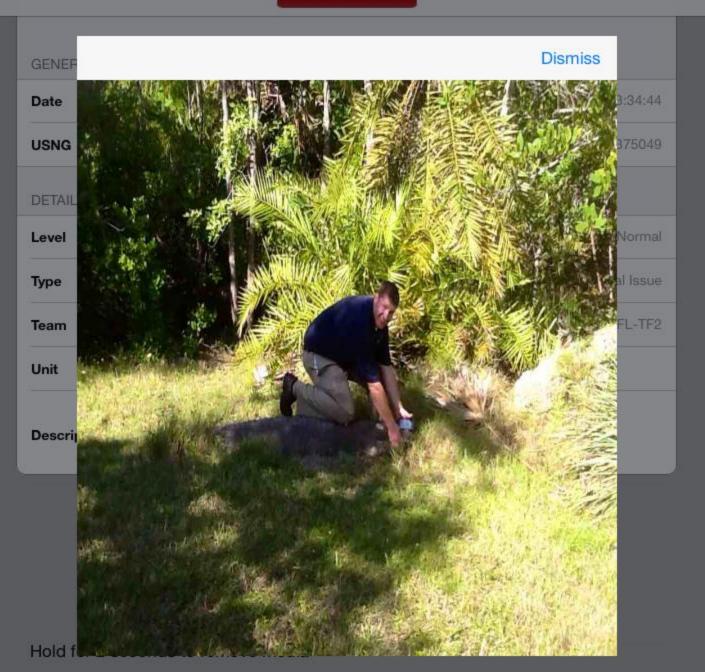
Dismiss

	Clear Observation
GENERAL	
GENERAL	
Date	04/03/2014 13:34:44
USNG	17RNJ80375049
DETAIL	
Level	Normal
Туре	Animal Issue
Team FL-TF2	
Unit	Squad 1
Description	Rich finds Wally



Dismiss

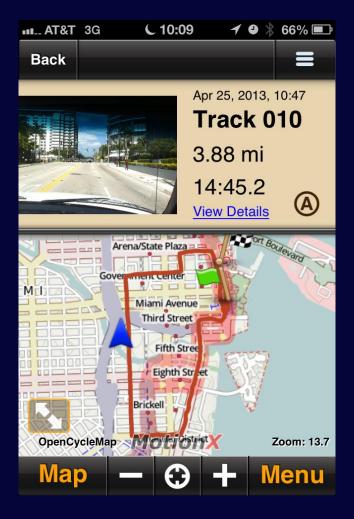






Smartphone Apps

••• AT&T 3G	C 10:08	🕇 🕘 ∦ 66% 🖃
= 1	Track Record	der 😡
		$\cap \cap]$
	0:0	0.0
Reset	Start	Save
		Care
Avg Pace(min		Pace(min/mi):
0' (00"	0' 00"
Distance(mi):	Ma	x Pace(min/mi):
0.	00	0' 00''
Мар		Menu





Geotagging Pictures on your iPhone

1 - Tap the "Settings" icon on the iPhone's home screen, followed by the "General" option.

2.Tap the "Location Services" option and tap the slider to the right of the "Location Services" heading to slide the slider to the "ON" position.

3.Scroll down to the "Camera" option and tap the slider to the right of the "Camera" heading to slide the slider to the "ON" position.

4.Press the "Home" button and tap the "Camera" icon to launch the Camera application.

5.Tap the "Camera" icon to take a picture with the device. The picture is automatically geotagged and saved to the device's memory.



Unit 4

Search Definitions and Standards



Terminal Objective

Upon completion of this unit, participants will be able to understand and utilize the search strategies and definitions necessary to accomplish the assigned search and rescue objectives.



Enabling Objectives

Successful participants will understand:

- **1.** Standard search definitions
- 2. Search modes
- **3.** Phases of disaster search operations



Unit 5

Search Marking Systems

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Terminal Objective

Upon completion of this unit, participants will be able to understand and utilize standardized disaster search and rescue marking systems.



Enabling Objectives

Successful participants will understand and be capable of utilizing the follow standardized disaster marking systems:

- Grid and Block Marking System
- Structure Hazard Evaluation Marking System
- Structure/Hazard Marking System
- Survivor and Human Remains Marking Systems



Marking System GENERAL BACKGROUND

- During the 2005 Hurricane season large areas (20,000+ structures) were searched
- Large amounts of spray paint were used with varying visual effect
- Inconsistent markings were found or missed due to multiple agencies making markings
- Outside agencies were doing incomplete searches and marking as complete when no entry was made.
- Spray paint did not allow for indicating areas searched on incomplete searches
- Multiple searches were done on structures due to inaccurate search information
- Search operations were redundant and had negative effects on task force members

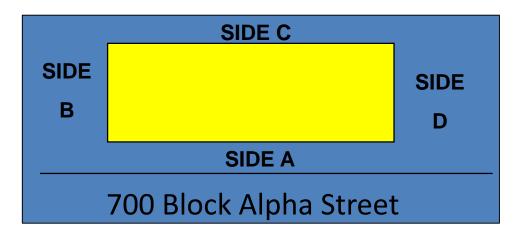






Side and Floor Identification

Street side is 'A'. Rotate clock-wise



Multi-story structures

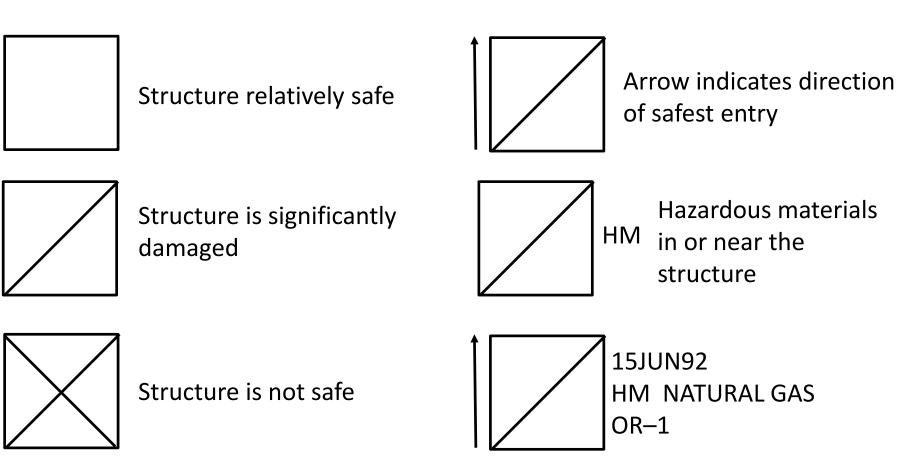
- Ground floor: Floor 1
- Second Story: Floor 2
- Basement, floors below ground: B-1

National Urban Search & Rescue Response System



FEMA

Structure Markings



Copyright 2009 FEMA



Search Markings— **Example of a Completed Search Date & Time Search Team** Left the Structure **Search Team Identifier Hazards** Date of Entry **Time of Entry Total Number of Victims STILL INSIDE the Structure**

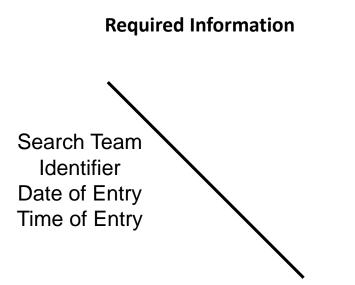
Copyright 2009 FEMA



Search Markings— **Example of a Completed Search** 2/24 1520 hrs **FL-TF2 Natural** 2/24/08 Gas 1150 hrs 2 L



Search Markings Initial Entry

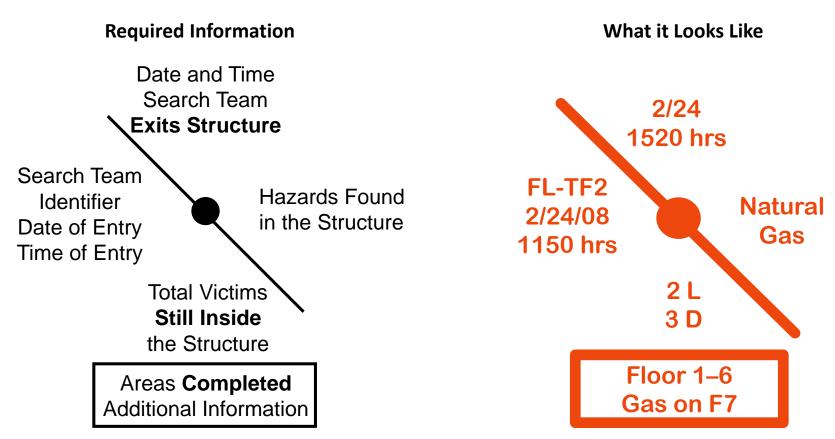


What it Looks Like

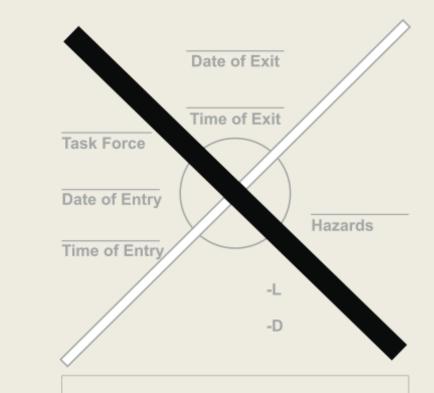




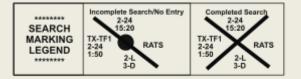
Search Markings Incomplete Search





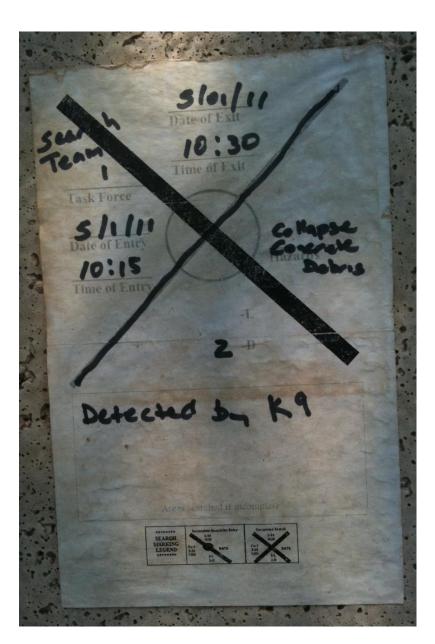


Areas searched if incomplete



Peel and Stick





Search Sticker on concrete building.

Note the additional information in the box below the search 'X'.





Interior Search Markings

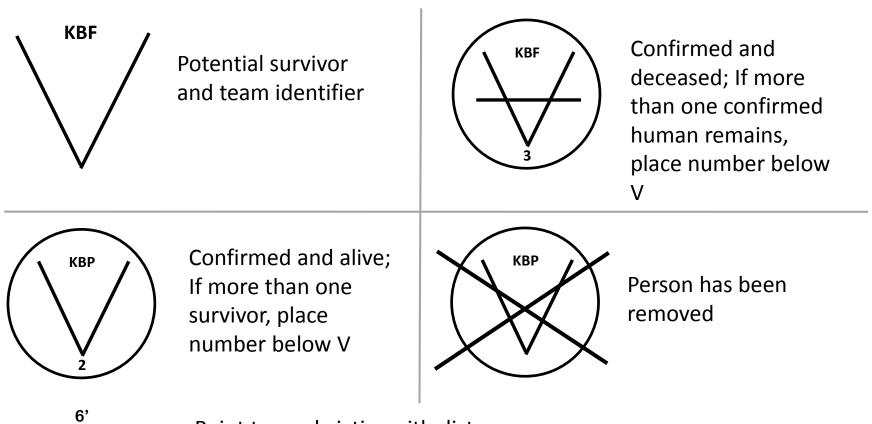
(each room or area)





FEMA

Survivor Markings



Point toward victim with distance on arrow



Summary

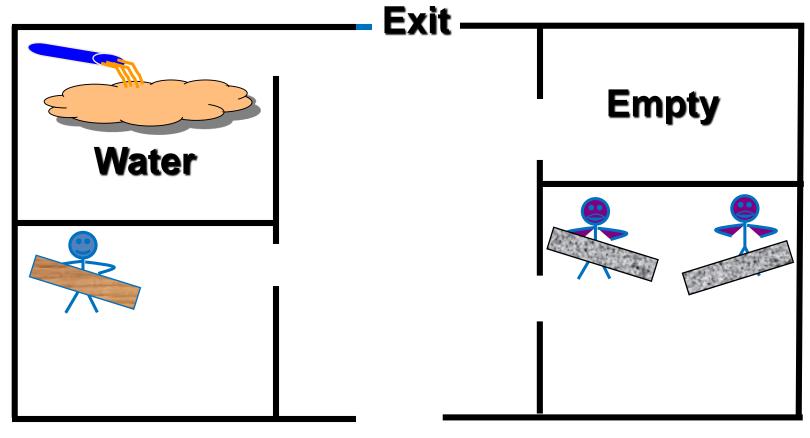
- SAR responders must have uniform standardized system for marking buildings or other structures to indicate the status of searched structures.
- Having a common search marking system reduces the possibility of redundant searches.

National Urban Search & Rescue Response System



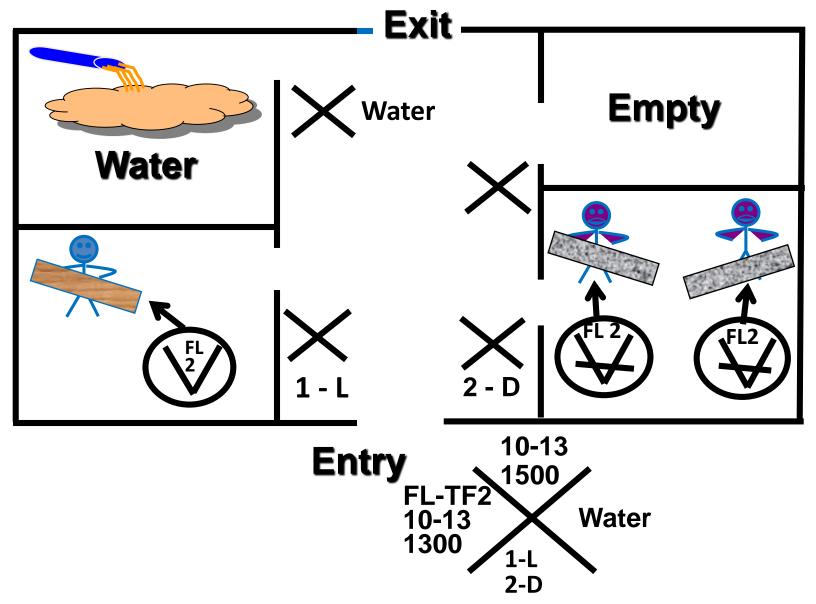
Exercise





Entry







Unit 6

Final Exercise

National Urban Search & Rescue Response System





Final Exercise Scenario



Review Findings

Operation Key Rescue Florida Task Force 2 Full Scale Exercise (FSE)

U.S.



Operation Key Rescue - Participating Agencies (in alphabetical order)

- **City of Miami Division of Emergency Management**
- **City of Miami Fire Department**
- **City of Miami Information Technology**
- **Planning (GIS) Department**
- FEMA Urban Search and Rescue Florida Task Force 2
- **Key Biscayne Fire Department**
- **Key Biscayne Police Department**
- **National Geospatial Agency**
- **United States Coast Guard**
- **Verizon Wireless**



EXERCISE, EXERCISE



Operation Key Rescue Scenario

On December 5th, five days after hurricane season concludes, Hurricane Gilbert, a category 5 storm devastates the Village of Key Biscayne. The Fire, Police and well as other city departments have evacuated the island according the established procedure. A mandatory evacuation order has been given for the residents of Key Biscayne but not everyone has evacuated. After weather conditions allow a safe re-entry, selected Key Biscayne first responders and FL-TF2 members will be transported to the island using FL-TF2 water assets to conduct a Rapid Needs Assessment (RNA) and begin Reconnaissance (Recon) of the island. Simultaneously, FL-TF2 engineers will be evaluating the structural stability of the bridges allowing access to the key. When cleared, Key Biscayne and FL-TF2 crews will begin to filter in to complete recon of the entire island as well as rescue of surface victims. Separately, a Logistics component begins a Base of Operations (BoO). Crews will work in concert to complete RNA, Recon and other drills and exercises as are deemed appropriate, finally reporting to unified command (Chief Lang and Police Chief).



Operation Key Rescue Tentative Time Line

- 0800 Florida Task Force 2 is activated
- 1000 Setup of Base of Operations at Miami Seaquarium is started Breakfast on site.
- 1100 Meeting with IC, crews begin to be transported to Key Biscayne and Cape Florida
- 1100 1600 crews conduct Recon missions and evacuation of injured residents. Lunch of MREs
- 1700 1800 Crews are reassembled at Miami Seaquarium BoO and communal dinner with all participants
- 1800 Hot wash
- 1900 Begin teardown of BoO
- 2100 All personnel and equipment back at warehouse Closeout comments, team is released



Google Earth

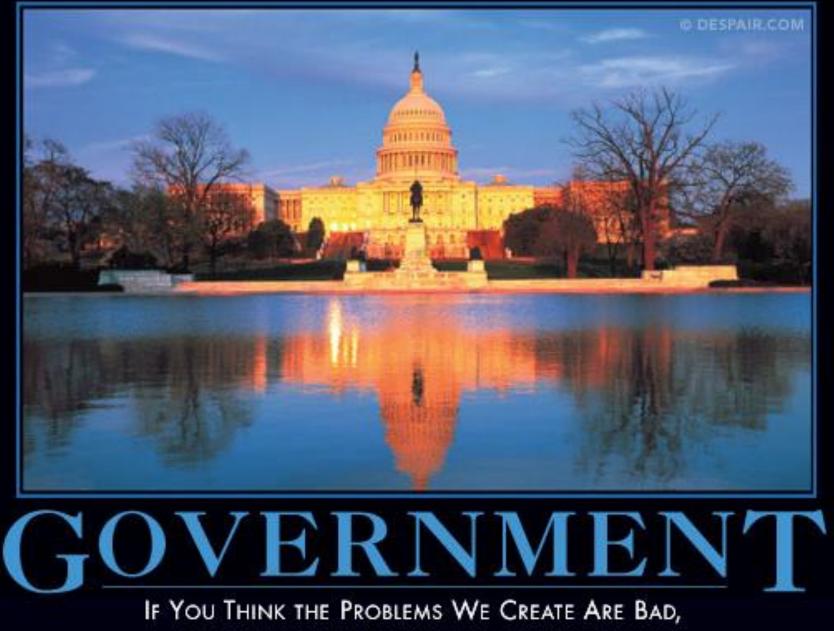


Conclusion

- Recent US&R responses (Sandy, the Colorado floods and the Washington State mudslides) have focused on the Search (and evacuation or recovery) versus the Heavy Rescue aspect of our job. The exercise is designed to have task force members practice some of those skills.
- All members were encouraged to attend both the classes and the exercise.



Operation Key Rescue Interview with FL-TF2 Capt. Scott Dean



JUST WAIT UNTIL YOU SEE OUR SOLUTIONS.



Questions?

