FIRST RESPONDERS AND GIS PROFESSIONALS:

SHARING FIRST-HAND EXPERIENCES AND SOLUTIONS

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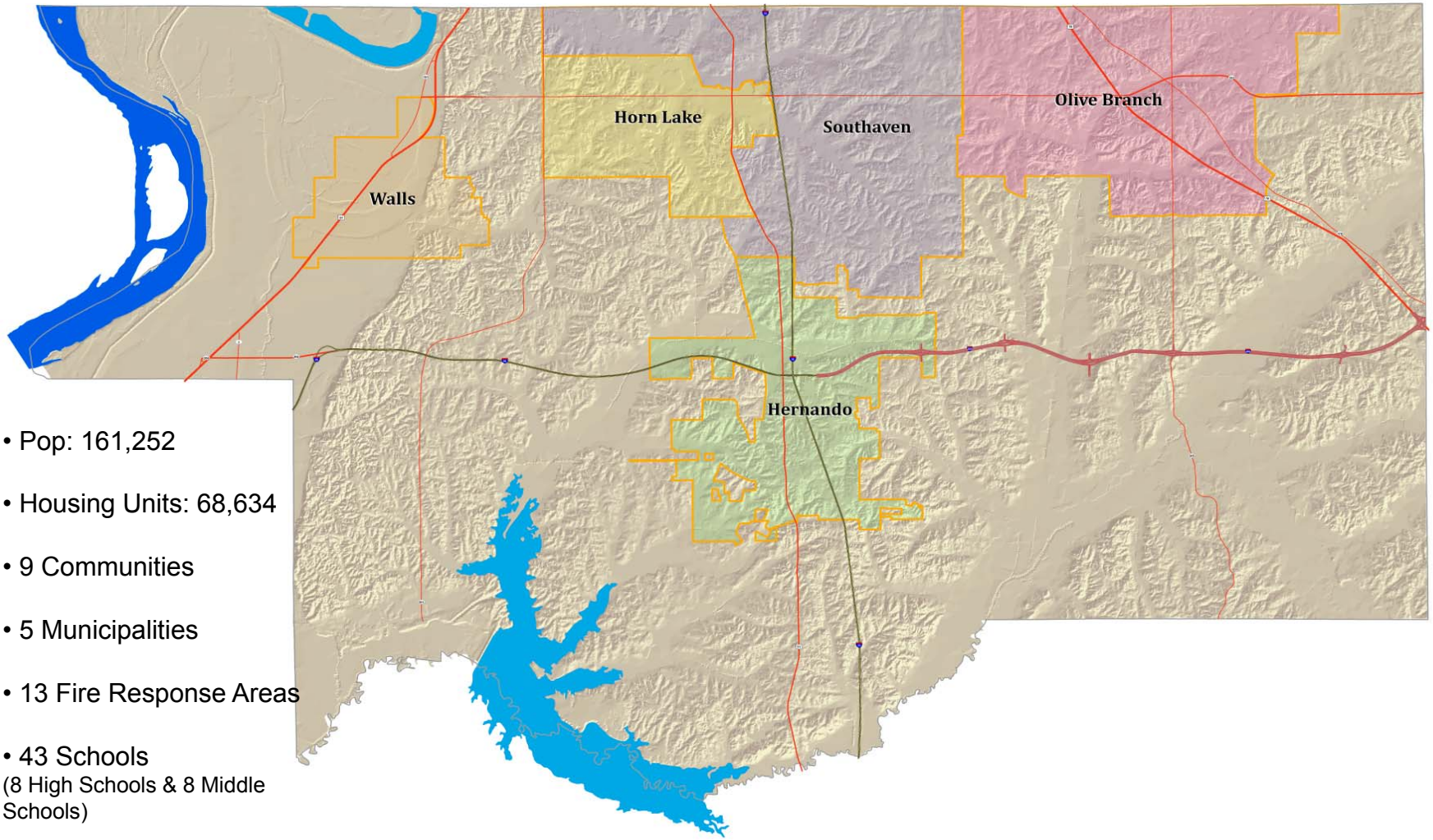
DeSoto County, Mississippi

The real value of GIS is NOT in the response phase, by then it's too late…

Focus

- Communication
- EMA Needs Assessment
- Collecting Critical Infrastructure Data
- Sharing Data and Maps

DeSoto County, MS



- Pop: 161,252
- Housing Units: 68,634
- 9 Communities
- 5 Municipalities
- 13 Fire Response Areas
- 43 Schools
  (8 High Schools & 8 Middle Schools)

Communication

Municipal, County, Regional... GIS Professionals have great connections and lines of communication.

BUT there is a disconnect in language between Emergency Managers and GIS Professionals.

Can you speak the Language?

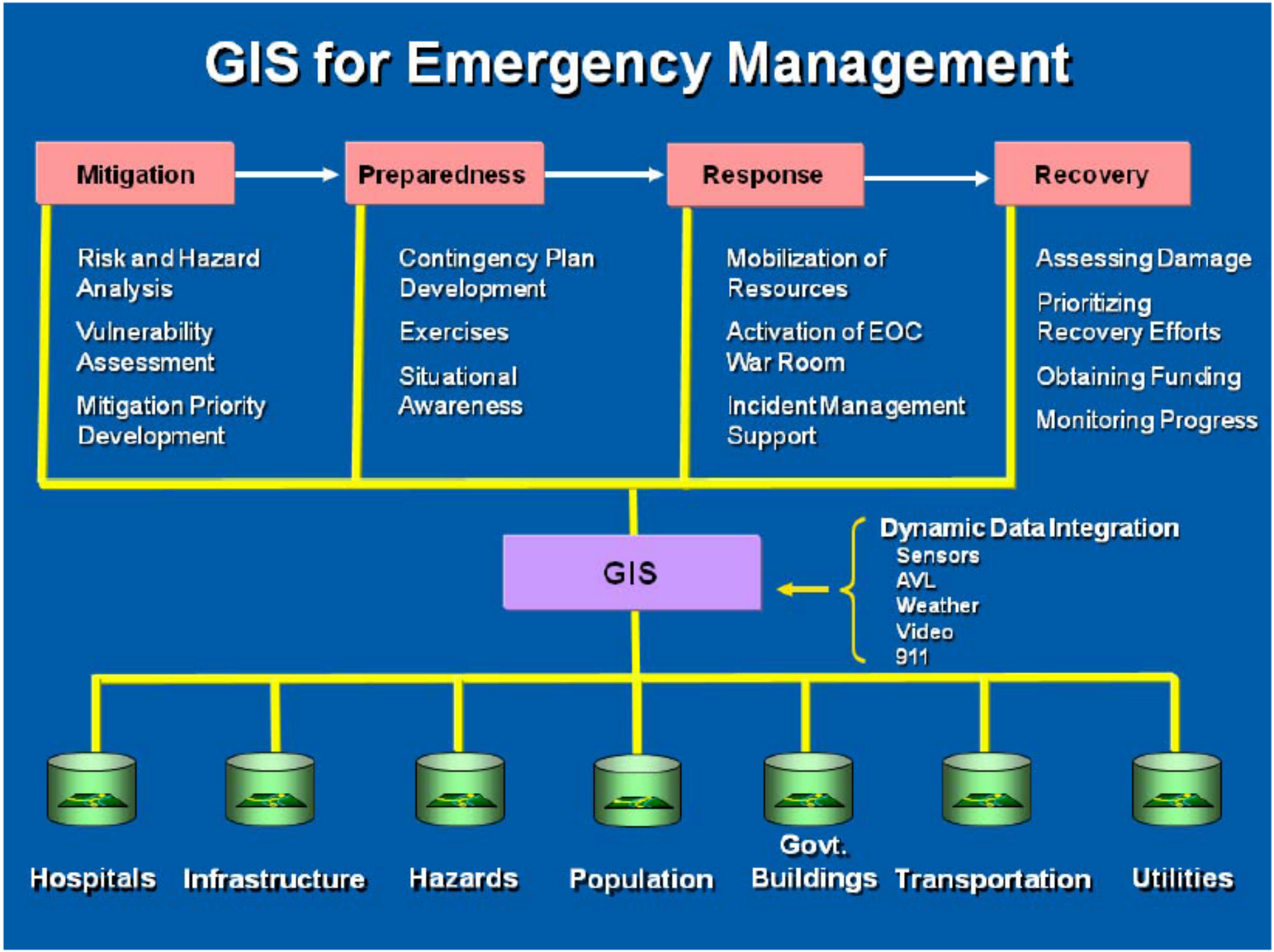
- ICS Courses on Command Structure and Terminology
- Emergency Incident and Response Training
- Working with first responders and emergency management individuals in your area can breakdown communication barriers and open new opportunities.
- Ask Questions

Key Elements of a GIS

- How to create a Needs Assessment and Implementation Plan:
  - Emergency Support Functions (ESF's)
  - Pre-Planning Workflows and Incident Action Plans (IAP's)
  - What information is Available and What needs to be collected?
  - Focus on Applications (Not Data Driven)

Emergency Support Functions (ESF)

- ESF #1 – Transportation
- ESF #2 - Communications
- ESF #3 - Public Works and Engineering
- ESF #4 - Firefighting
- ESF #5 - Emergency Management
- ESF #6 - Mass Care, Housing, and Human Services
- ESF #7 - Resource Support
- ESF #8 - Public Health and Medical Services
- ESF #9 - Search and Rescue
- ESF #10 - Oil and Hazardous Materials Response
- ESF #11 - Animals, Agriculture and Natural Resources
- ESF #12 - Energy
- ESF #13 - Public Safety and Security
- ESF #14 - Long-Term Community Recovery
- ESF #15 - External Affairs


GIS for Emergency Management
Mitigation
Preparedness
Response
Recovery
Risk and Hazard Analysis
Vulnerability Assessment
Mitigation Priority Development
Contingency Plan Development
Exercises
Situational Awareness
Mobilization of Resources
Activation of EOC War Room
Incident Management Support
Assessing Damage
Prioritizing Recovery Efforts
Obtaining Funding
Monitoring Progress
GIS
Dynamic Data Integration
Sensors
AVL
Weather
Video
911
Hospitals
Infrastructure
Hazards
Population
Govt. Buildings
Transportation
Utilities

Data Collection

- Define key data that will need to be accessed
  - Address Points
  - Street Centerline
  - Fire Hydrants
  - Critical Infrastructure Layers

How do we collect this data?

- Pay an engineering firm to collect it…

  (no money in the budget)

- Collect it ourselves…

  (we don't have the manpower)

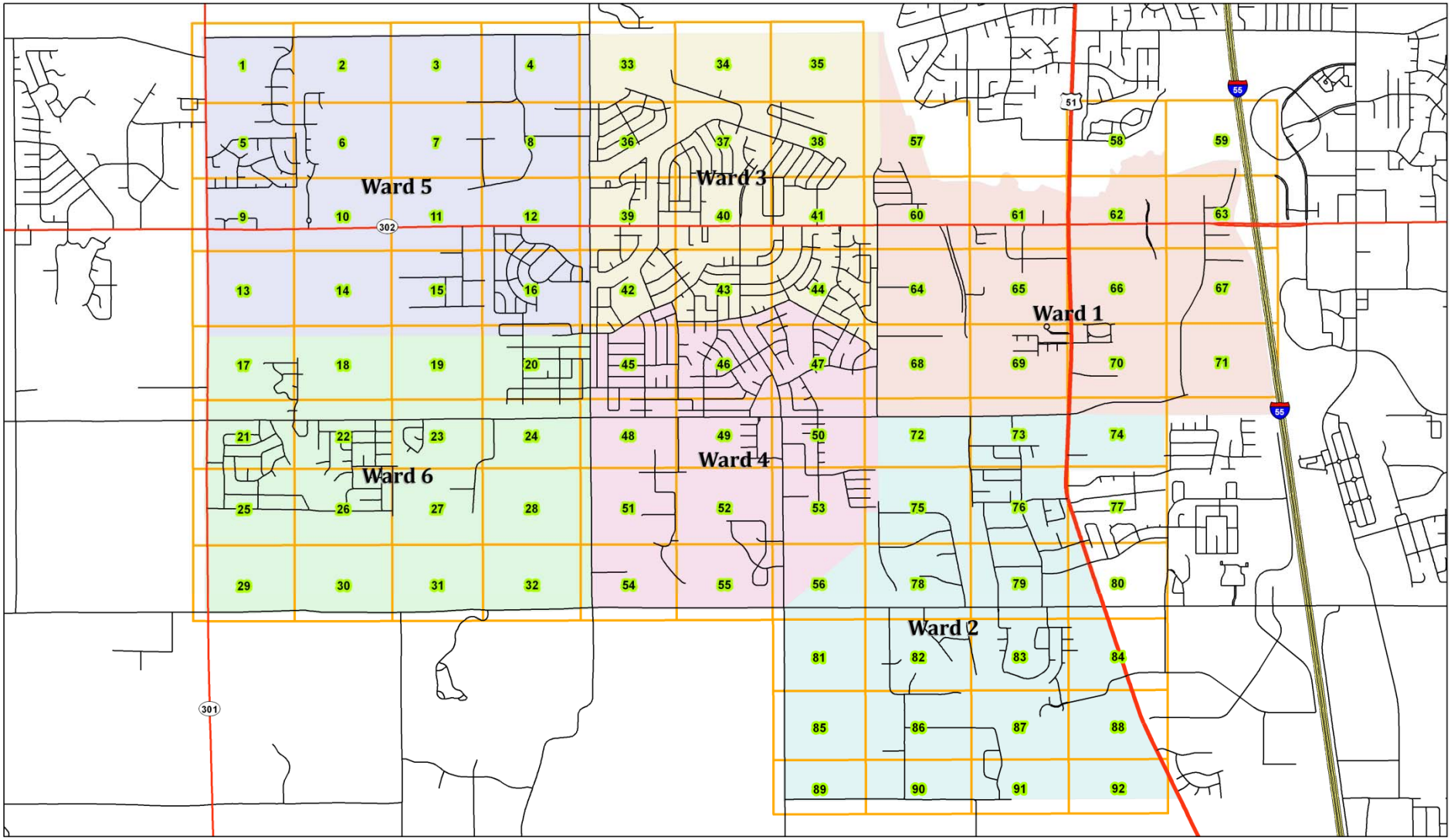
- Let's get everyone involved…

  (Police Officers, Fire Fighters, Community Volunteers, Schools, etc.…)

Creating Field Maps

- Technology Constraints
- What is the easiest data collection method?
- PAPER MAPS…..

Horn Lake Police Department: Addressing Map Book



NORTH

REFERENCE PAGE

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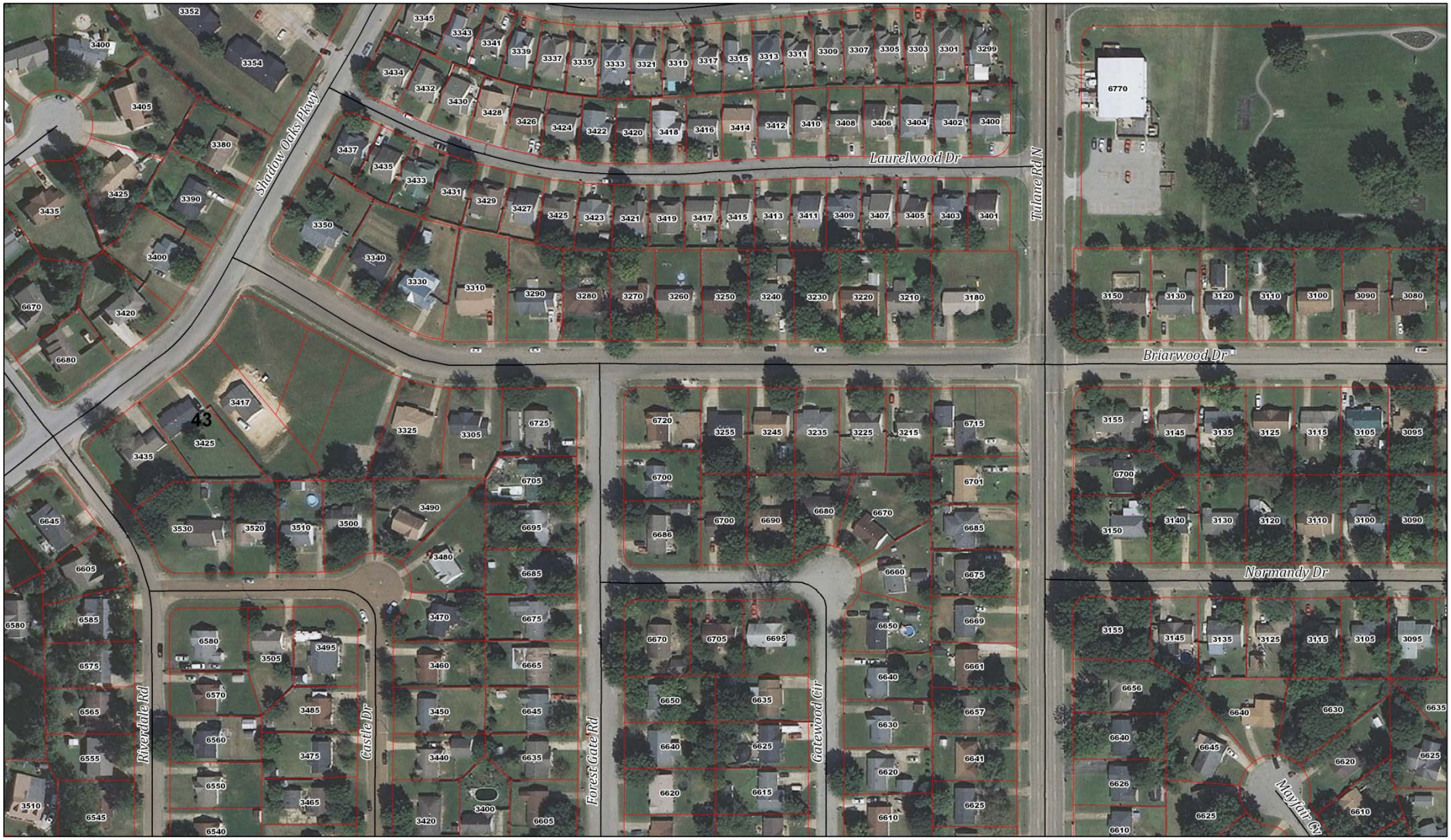
Horn Lake Police Department: Addressing Map Book

Ward 3



NORTH

0 0.025 0.05 0.1 0.15 0.2 0.25 Miles

0 200 400 800 1,200 1,600 2,000 Feet

1:1,477

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DeSoto County Geographical Data Committee

Street Address Data Standard

Field	Field Type	Character Length	Example	Description	Standard
LOCATION	Text	60	Laurelwood, Pizza Hut, Civic Center Apts.	Name of location (Business, Apartment, Subdivision)	DeSoto
NUMBER	Long Integer	10	5589, 1255 1/2, 5787 A	Location address number	NENA
PREFIX_DIR	Text	2	N, S, E, W, NE, NW, SE, SW	Leading Street Direction	NENA
STREET_NAM	Text	60	Lake Forest	Only the Street Name (NO Direction or Type)	DeSoto
STREET_TYPE	Text	5	DR, CV, ST, PKY	Street Type	NENA
SUFFIX_DIR	Text	2	N, S, E, W, NE, NW, SE, SW	Trailing Street Direction	NENA
FULL_ADDR	Text	100	6718 Lake Forest DR W	Full Address	FGDC and NENA
ZIP_CODE	Long Integer	5	38632	Only Five Digit Zip Code	NENA
ESN	Long Integer	10	100-123,	Emergency service number associated with structure.	NENA
COMMUNITY	Text	60	SOUTHAVEN, INDEPENDENCE, HERNANDO	Municipality or Community	DeSoto
SITE_TYPE	Text	60		Type of Structure - (Classification Guide?)	DeSoto
HAZ_MAT	Text	250	Phosphorus trichloride, Phosphine, Bromine	Hazardous Materials Stored in Building (If none, classify "NO")	DeSoto
BLDG_NO	Text	20	1, 2, 3, A, B, C, 12B,	Unique Identifier for buildings containing Multiple Residents, Suites, Multiple Addresses	DeSoto
BLDG_UNITS	Text	20	A-D, 1-4, Multiple floors (A-D, E-H, I-J)	Address ranges by floor in multi-residential buildings	DeSoto
ADDR_RANGE	Long Integer	10			
X_LAT	Double	20	34.960922	Latitude Coordinates in Decimal Degrees	FGDC and NENA
Y_LONG	Double	20	-90.033417	Longitude Coordinates in Decimal Degrees	FGDC and NENA

Warrington Dr
Heathcliff Dr
Southbrook Dr
Kensington Rd
Walnut Gro
Carroll Cv W
Carroll Cv E
Cornwall
6330 3880 3860 3840 3820 3800 3780 3760 3750 3730 3720 6335
6300 3885 3865 3845 3825 3805 3795 3775 3755 3735 3725 6295
6290 6285
6280 3880 3860 3840 3820 3800 3780 3760 3750 3730 3720 6275
6250 3885 3865 3845 3825 3805 3795 3775 3755 3735 3725 6245
6230 6235
6220 3880 3860 3840 3820 3800 3780 3760 3750 3730 3720 6225
6200 3895 3875 3845 3825 3805 3795 3775 3755 3735 3725 6195
6190 6185
6180 3880 3860 3840 3830 3800 3780 3760 3740 3730 3720 6175
6330 6315 6310 6305 6300 6295 6290 6285 3690 3680 3670
6310 6325 6300 6305 6290 6295 6280 6287 6285 3630 3620 3600
6310 6325 6300 6305 6290 6295 6280 6285 6270 3560 3550
6260 3675 3665 3655 3635 3625 3605 3585 3565 6255
6240 6235 6230 6245
6220 6225 6220 6225 6220 6225
6210 6215 6210 6275 6210 6205
6200 6205 6200 6195 6198 6195
6190 6195 6190 6185 6186 6185
6180 3670 3660 3630 3610 6175 6174 3560 3550

5205
Forrest Park Cv
3774
3773
3973
3939
3903
3867
3831
3793
THESE CONDEMNED
5100
3 HOUSES
5060
3950
3850
3810
Church Rd W
3823

DeSoto Rd
5225
5307
5285
5225

TAKE ME TO YOUR LEADER
69
69
51

Sharing Data and Maps

- Mobile Maps
  - Avenza PDF Maps
  - TerraGo GeoPDF's
  - Arc Reader and Arc Explorer

iPad
10:18 AM
97%
Maps
Love_Fire_District
34.80538, -89.98991
Bad Elf
BE-GPS-1000
GPS
Land. Sea. Air. Everywhere!
Instantly add GPS location support to your iPad Wi-Fi or iPod touch
SEA
AIR
LAND
Made for iPod iPhone iPad
GPS
Bad Elf GPS
BE-GPS-1000
bad-elf.com

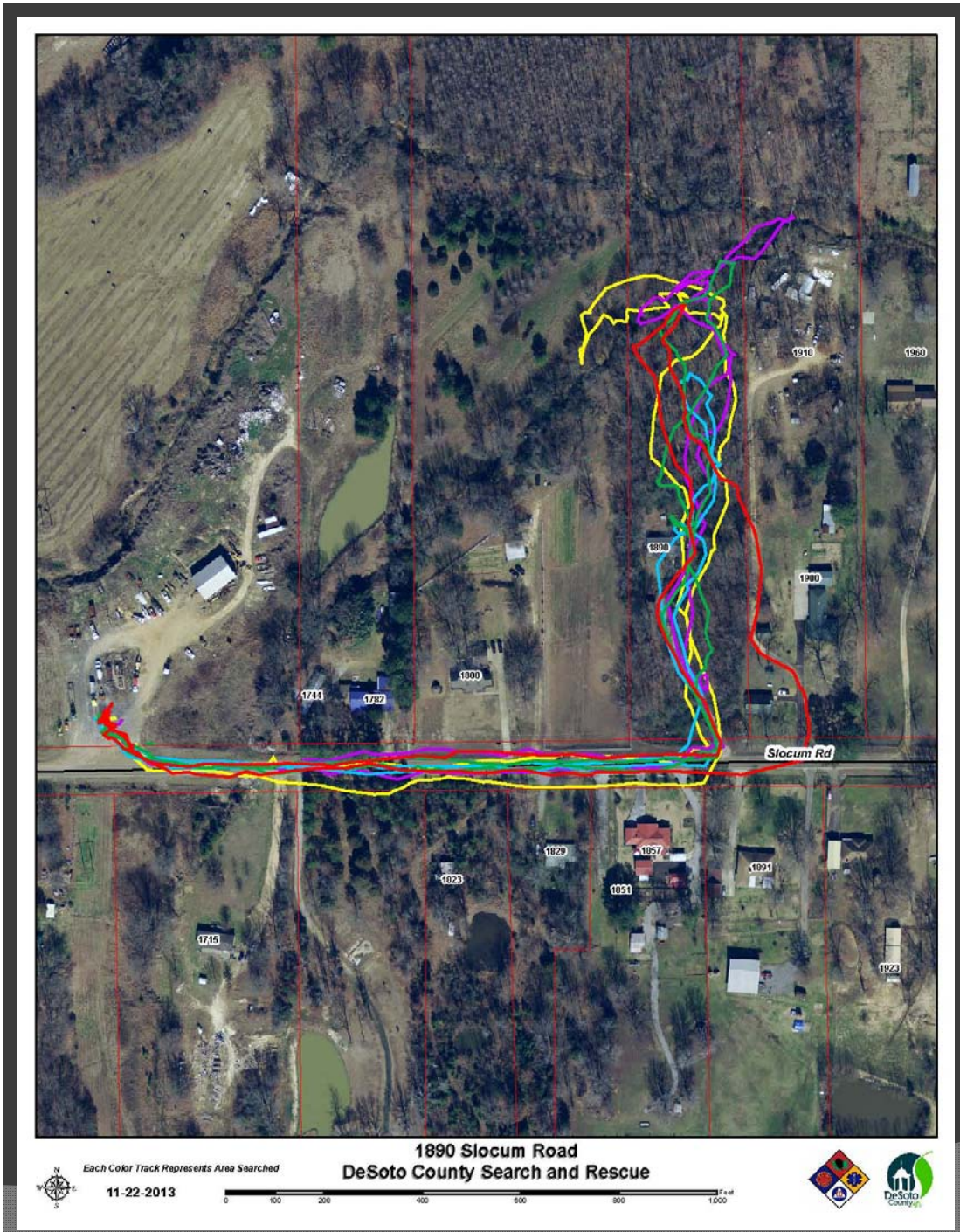
N206ES

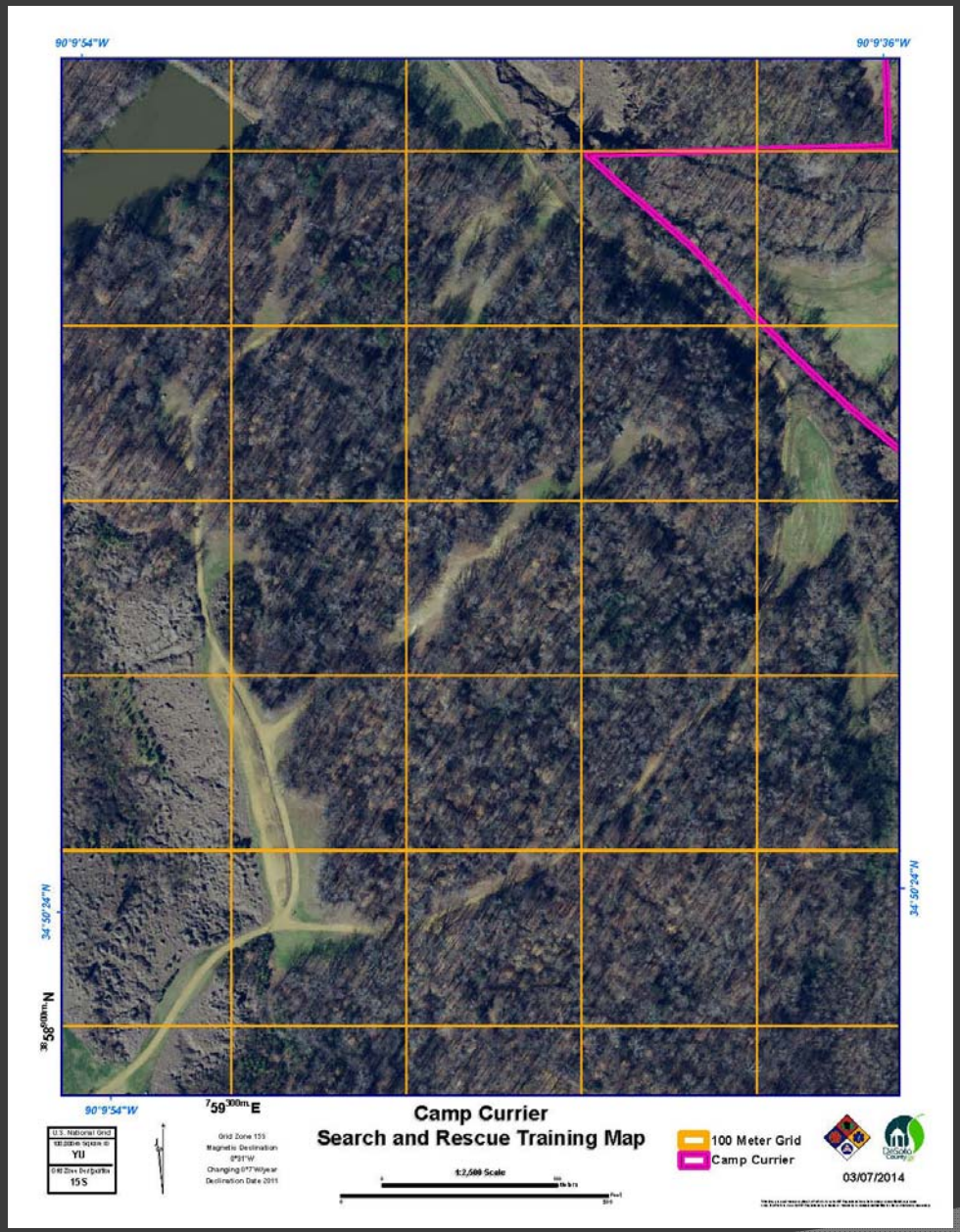
GlobalSat
BU-353 USB
GPS NAVIGATION RECEIVER
USB Requires No External Power
Waterproof Housing
Built-in Magnet Mount
Supports Major Operating Systems
Compatible With Most NMEA Compliant Software Titles
SÉRIE 7
SLATE PC

ENGINE 66

Panasonic

Accountability





Create Templates for Fast Map Production….

NW1RT

2011 Mississippi River Flooding
Tunica County, Mississippi

MEMA

GIS at the State Level

Questions?

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