

# Florida Broadband Coverage Objectives

*Coverage Workshop*

DHS Office of Emergency  
Communications

July 31, 2013



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# Today's Agenda

## **I. OEC Background and Public Safety Broadband Overview**

- I. OEC Technical Assistance
- II. NPSBN & FirstNet
- III. State and Local Implementation Grant Program (SLIGP)

## **II. State of Florida Overview**

## **III. Coverage Objectives**

- I. Assumptions/Ground Rules
- II. Defining Coverage Objectives
- III. Agency/Facility/Critical Infrastructure Objectives
- IV. Tribal/Federal Land Objectives
- V. Commercial/Unserved Area Objectives
- VI. Other?

## **IV. Prioritization**

- I. Users, Potential for Adoption (Cost), Interest/Involvement
- II. Other?

## **V. Next Steps**

# OEC Background and Public Safety Broadband Overview



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# Office of Emergency Communications

***Mission: OEC leads the coordination of interoperable emergency communications at the Federal, State, local, and tribal levels and supports national security/emergency preparedness communications.***

- **OEC expanded in Nov 2012 to include several National Communications System (NCS) functions.**
- **OEC now includes:**
  - **Architecture and Advanced Technology Branch**
  - **Communications Portfolio Management Branch**
  - **Policy and Planning Branch**
  - **Public Safety and National Security/Emergency Preparedness Partnerships Branch**
  - **Regional Coordination Branch**
  - **Technical Assistance Branch**



# Approaches to OEC TA

- **State-Requested TA**
  - Supports State/local interoperable communication needs in multiple areas
    - For example, operations, training, exercises, governance and SOPs; engineering; CASM
  - Supports State/local emergency communications strategies: SOP ; guidelines; TICPs; SCIPs
  - Furthers goals and objectives of NECP
  - Submitted via SWICs
- **National Priority TA Offerings**
  - Vary year to year
  - Special TA focused on specific capability or stakeholder group, for example, NPSBN/FirstNet, Tribal Nation outreach
- **Automated Tools ([www.publicsafetytools.info](http://www.publicsafetytools.info))**
  - Specially designed web-based tools assist stakeholder/agencies with ongoing emergency communications needs
  - Features OEC-developed tools and stakeholder inputs



## Technical Assistance Catalog

Department of Homeland Security  
Office of Emergency Communications

VERSION 2.1



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# OEC Technical Assistance Support for Broadband

## Planning Workshop:

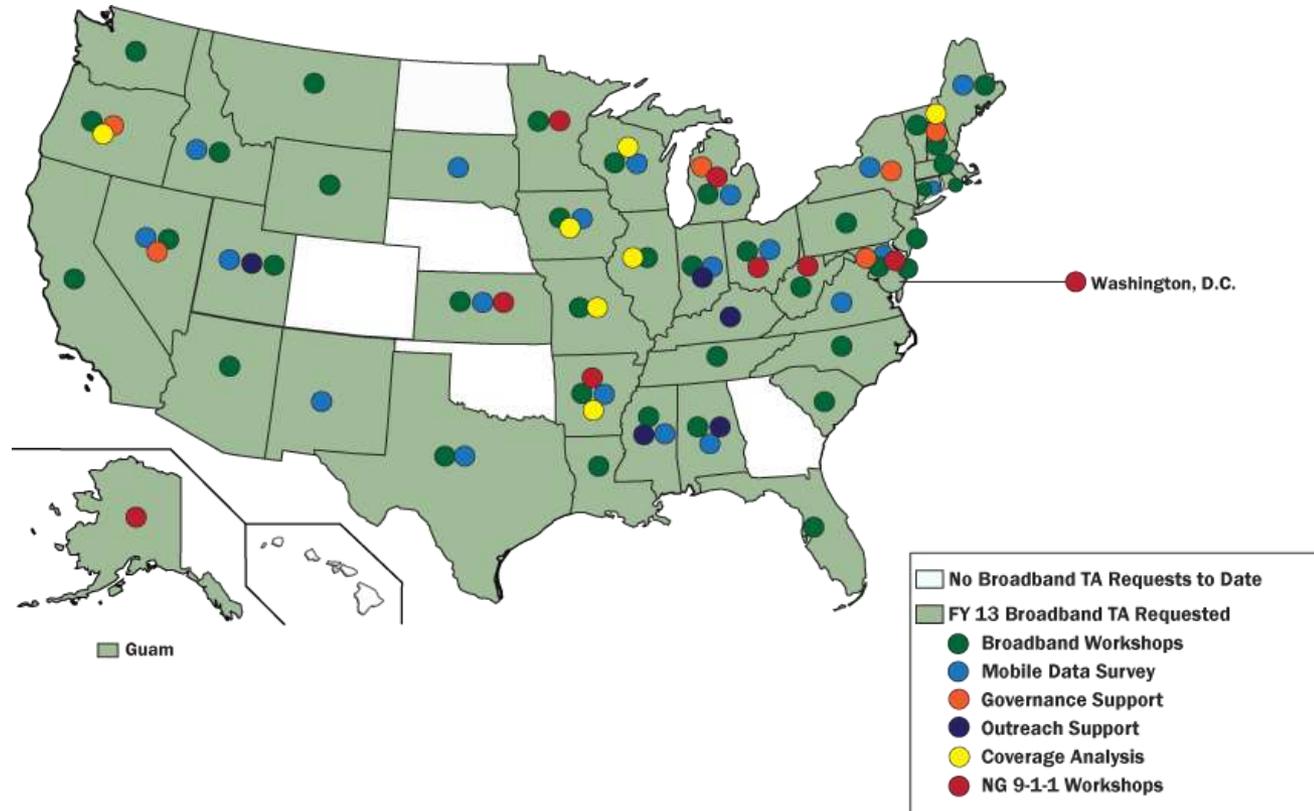
One day informational and planning workshop based on OEC developed State broadband plan template

## Mobile Data Survey:

Web-based survey to collect information on current use of mobile data and awareness of FirstNet and the NPSBN

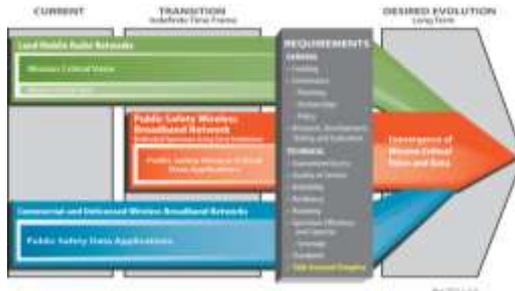
**Governance:** Support for the development or expansion of SIGB to the required single point of contact governance body for broadband

**Outreach:** Support for State website content or publications to help inform local and tribal agencies on broadband developments



# 2013 National Priority TA Offerings

## Broadband



- **NPSBN Awareness/Education:** Apprise stakeholders of current policies and direction for NPSBN/FirstNet
- **State Planning Template:** Development of a State Broadband Plan Annex to SCIP
- **Mobile Data Tool:** Web-based survey to document current state of mobile data use.
- **Customized TA:** Address specific broadband issues identified by State/Region

## Tribal Goal 2 Support



- **NECP Goal 2:** Data collection from 565 Federally-recognized tribes in the U.S.
  - Collection is government to government; entirely voluntary
  - Questions mirror NECP Goal 2 capability data from counties
- **Technical Assistance :** Limited number of TAs
  - Based on Tribes' interoperable communications capabilities

# FY2013 TA Requests

- Online TA Request and Evaluation Forms:

[www.publicsafetytools.info](http://www.publicsafetytools.info)

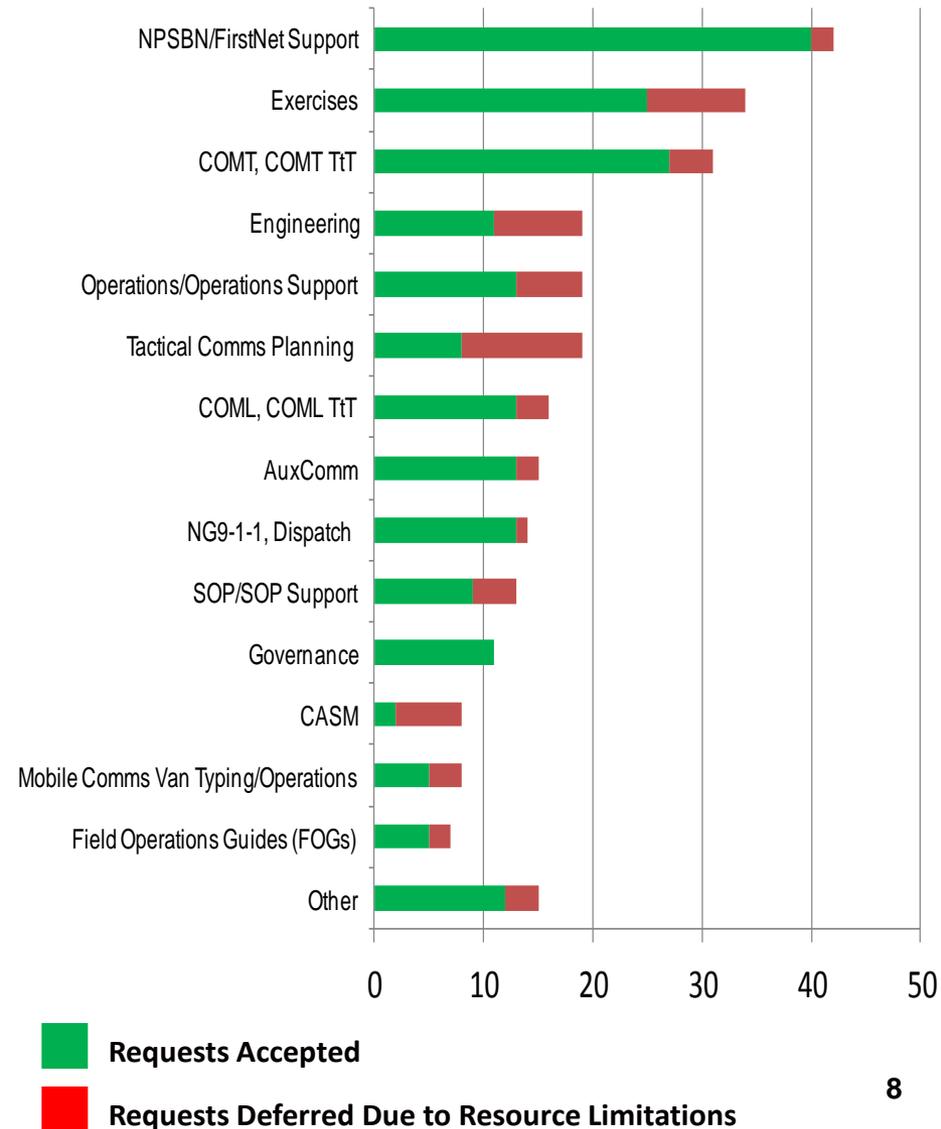
- New or Revised “Evergreen” Catalog Offerings:

- PSAP/Dispatch Operations/TERT Support
- Revised COMU Offerings
- National Public Safety Broadband Network Issues, FirstNet issues
- Next Generation 9-1-1
- Continuity of Operations Planning
- Mobile Communications Vehicles

- FY 2013 Requests

- 259 request received to date
- 221 accepted to date
- Deferred requests continuously reviewed

## FY2013 TA Requests



# Automated Tools

[www.publicsafetytools.info](http://www.publicsafetytools.info)

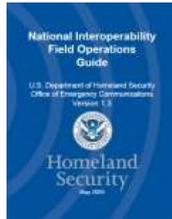


## Resources

**Broadband:**  
Clearinghouse of links/info related to public safety broadband and FirstNet



**NIFOG:** Order form, smart phone, tablet version of hardcopy NIFOG



**Guidance Docs:**  
OEC materials about interoperability issues



**Technical Assistance:** TA Catalog, request and feedback forms



## Training



### Computer Based Training:

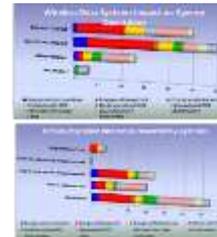
- *Audio Gateway Use*
- *COMU Overview*
- *Auxcomm Overview*
- *Program Management*
- *SAR Training*
- *Radio 101*

## Tools

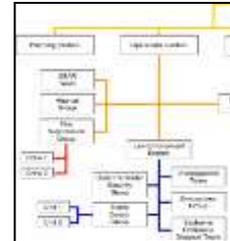
**CASM:** Inventory and mapping of LMR assets; over 48,000 agencies represented



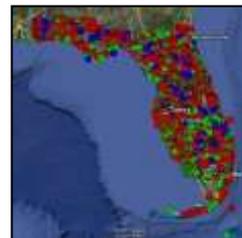
**Broadband/Mobile Data:**  
Survey collects information on mobile data and awareness of the NPSBN

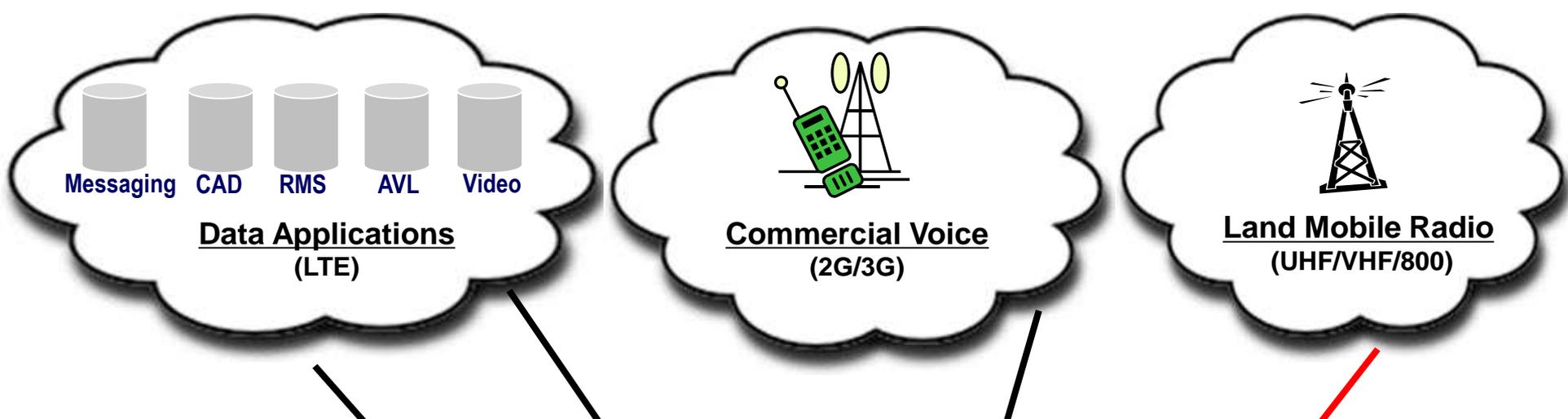


**Response-Level Communications Tool:**  
Supports development of communications-focused “data for real world planning through NECP Goal 2 data



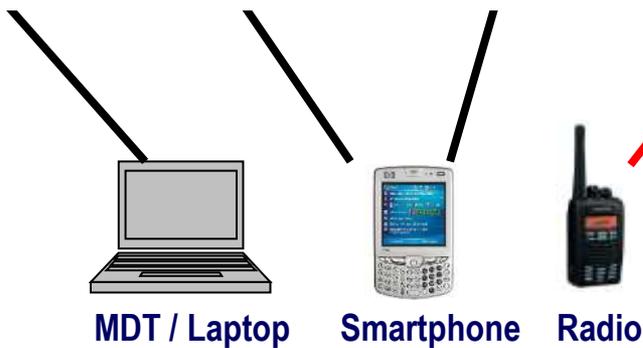
**Narrowband Tool:** Maps FCC licenses transitioned to narrowband required by January 2013 deadline



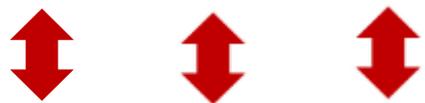


**Coverage**  
**Congestion**  
**Site Outage**

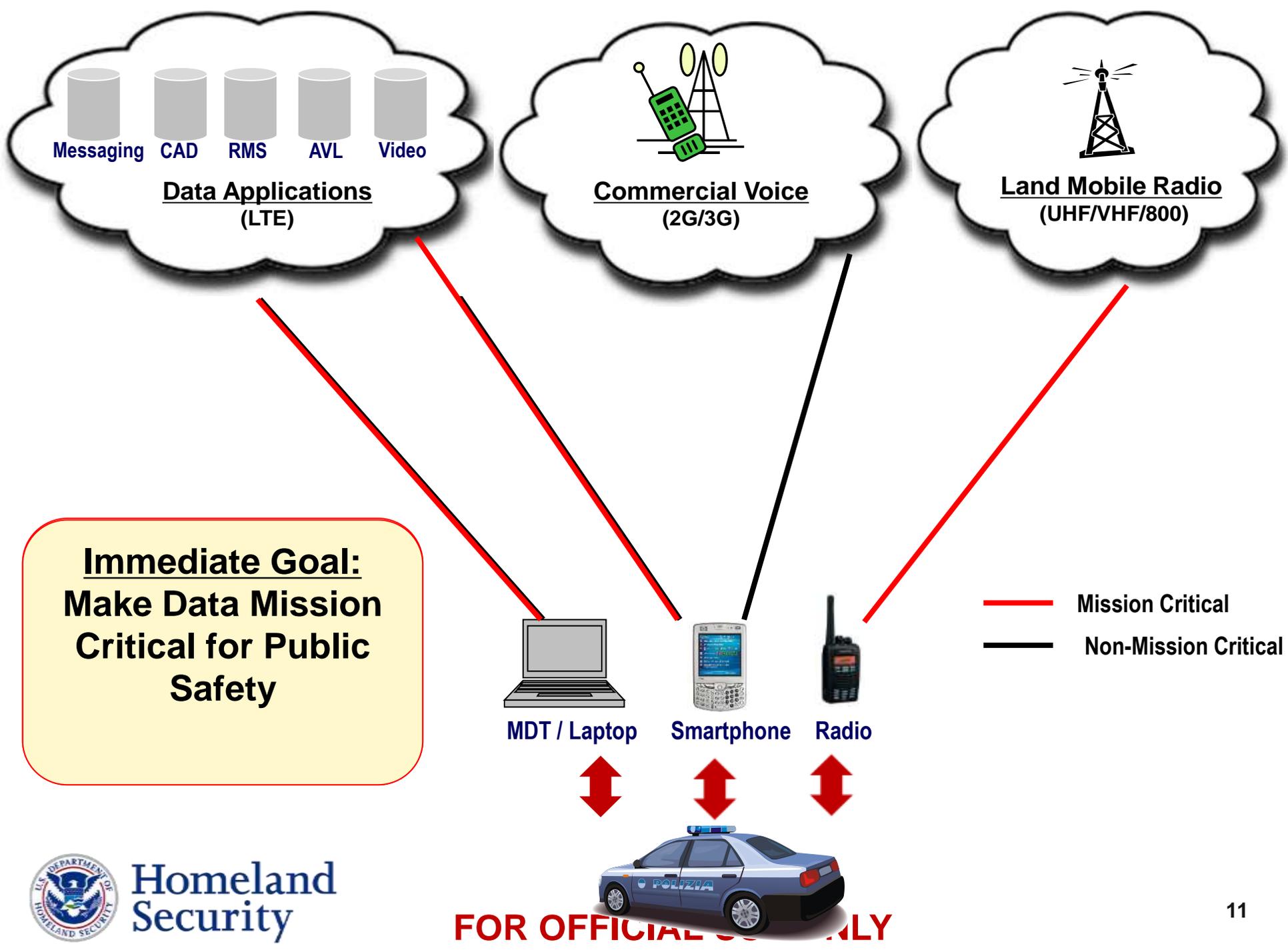
**Current State:  
 Public Safety  
 Competes with  
 Public for Priority**



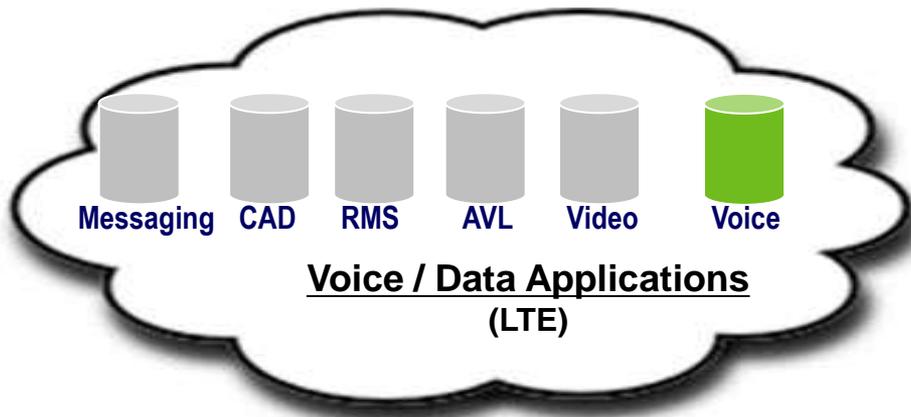
**— Mission Critical**  
**— Non-Mission Critical**



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**Long-Term Goal:  
Develop Mission  
Critical Voice  
over LTE**



MDT / Laptop



Smartphone



Radio

— Mission Critical  
— Non-Mission Critical

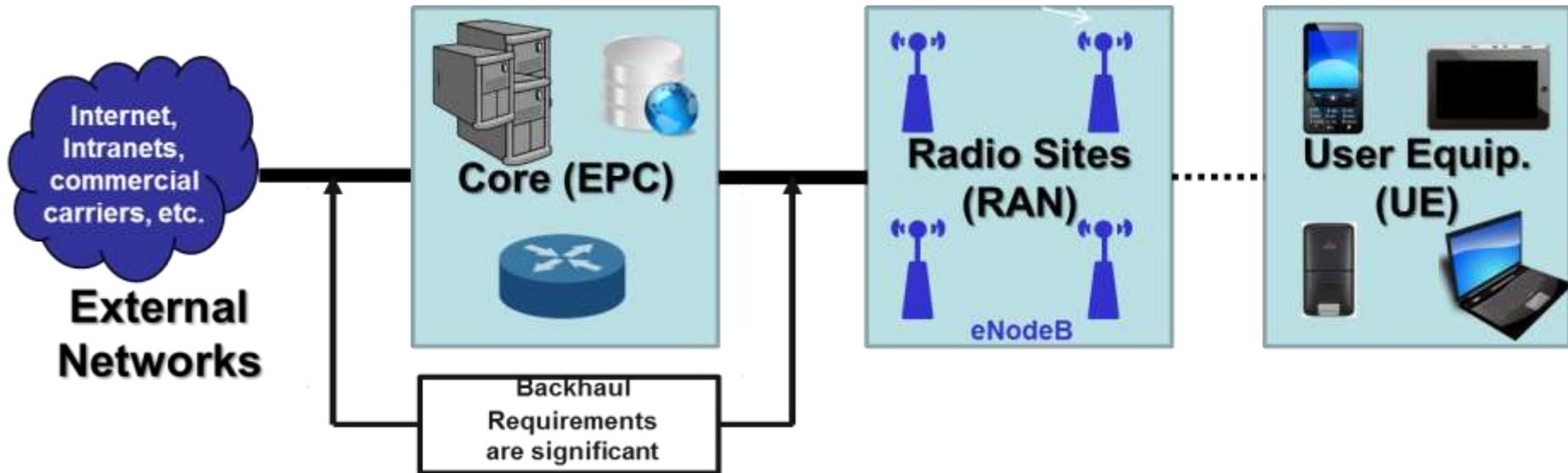


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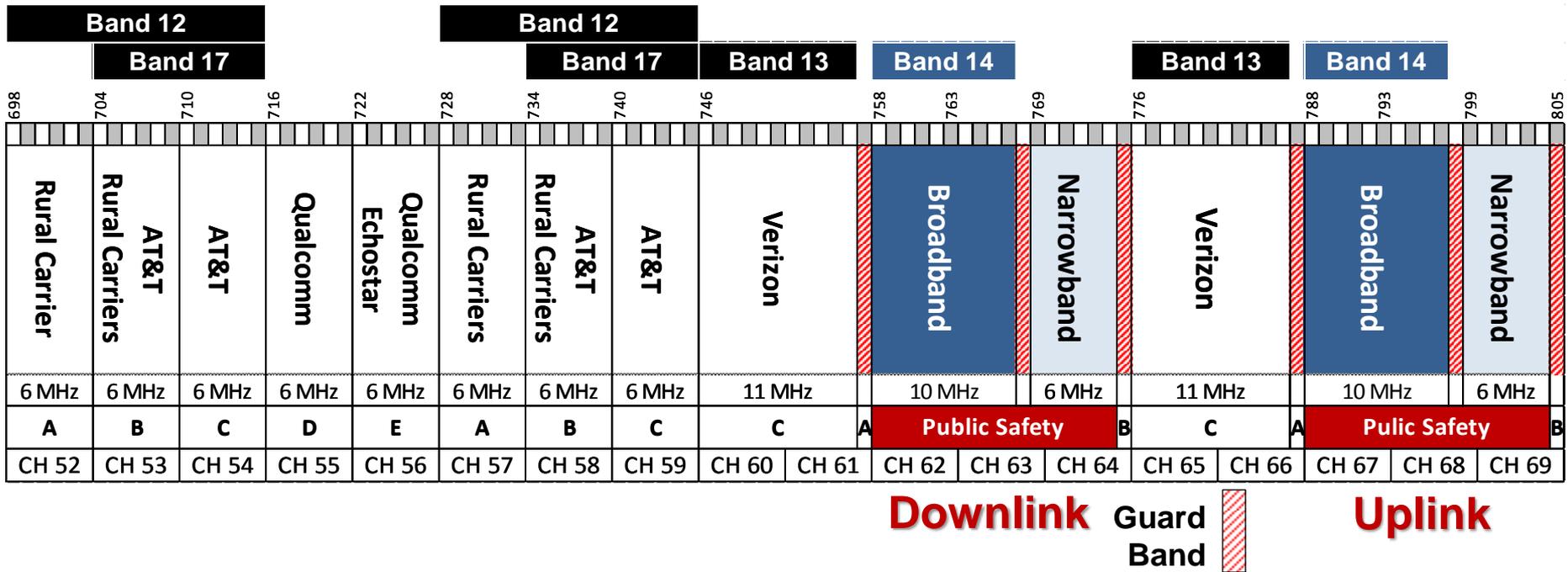
# The Proposed Solution

- Create next generation (4G LTE) nationwide public safety wireless network
- Leverage commercial equipment economies of scale while maintaining public safety unique requirements
- Provide high data rates (“broadband”) to enable advanced applications
- Use industry standards to enable interoperability for public safety



# 700 MHz Band Allocation

- Frequencies, TV channels, auction blocks (letters), 3GPP bands
- Public Safety's Broadband allocation is "**Band 14**"
- Major carriers operate in Bands 13 and 17 as well as other bands outside of 700 MHz



# LTE Technical Highlights

- Considered to be one of two **3G+/4G** standards (the other is Wi-Max)
  - Interoperable with 2G and 3G networks
- Cellular standard that was designed for **data first** and not voice
  - Inclusion of LTE standardized voice is a work in progress
- **All-IP** (Internet Protocol) architecture designed for low latency
- Potential for **economies of scale** by leveraging commercial market
- Inter-network **mobility and interoperability** with commercial carriers
- **Flexible** channel bandwidths of 1.4, 3, 5, 10, 15 and 20 MHz
- **High user data rates** to support new applications
- **Security and authentication** mechanisms
- **Priority and Quality of Service** mechanisms
- **Modern antenna techniques** to support improved performance

*Middle Class Tax Relief and Job Creation Act of 2012*  
Title VI: Public Safety Communications and  
Electromagnetic Spectrum Auctions



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# NPSBN Legislation

## *Middle Class Tax Relief and Job Creation Act of 2012*

**Public Safety Priority:** Passage of legislation to reallocate spectrum was top legislative priority of every public safety association in the United States

**D Block:** D Block 700 MHz spectrum was reallocated to public safety

**Nationwide Approach:** License for public safety broadband given to “FirstNet,” which is an independent authority within the Department of Commerce to develop and implement the nationwide network

**FirstNet Funding:** FirstNet provided \$2 Billion upfront and a total of up to \$7 billion for network construction

**State Planning Funds:** Up to \$135 million State and Local Implementation Grant program (SLIGP) is provided by the NTIA to help State planning efforts in support of FirstNet consultation

**Opt In/Out Provision:** States have the opportunity to opt-out of the nationwide build-out and develop its own interoperable system with FCC approval

# FirstNet Consultation with State

- The single officer or governmental body is expected to consult with FirstNet on several policies, including:
  - Construction of a Core and RAN build out
  - Placement of towers
  - Coverage areas of the network
  - Adequacy of hardening, security, reliability, and resiliency requirements
  - Assignment of priority to local users
  - Assignment of priority and selection of secondary users
  - Training needs of local users
- SLIGP funding is intended to support State consultation

# SLIGP Activities (NOT YET AWARDED)

- **Governance:** Establish or enhance a governance structure to consult with FirstNet;
- **Representation:** Ensure local and tribal representation when the State is consulting with FirstNet;
- **Education:** Conduct education and outreach for all relevant stakeholders that will be involved in the PSBN;
- **Users:** Identify potential public safety users for the PSBN;
- **MOU:** Develop a standard Memorandum of Agreement appropriate for the State to facilitate the possible sharing of infrastructure with FirstNet;
- **Staffing:** Develop staffing plans to involve local and tribal stakeholders in a future data collection in consultation with FirstNet; and
- **SCIP:** Prepare a comprehensive plan as part of the Statewide Communications Interoperability Plan (SCIP), or a plan complementary and similar to the SCIP, describing the public safety needs that the grantee expects FirstNet to address, plus relevant milestones.
- **Infrastructure Data Collection (Phase 2)** - Maximize use of existing public/private assets to reduce cost and speed deployment.

# State Participation – Opt In/Out Option

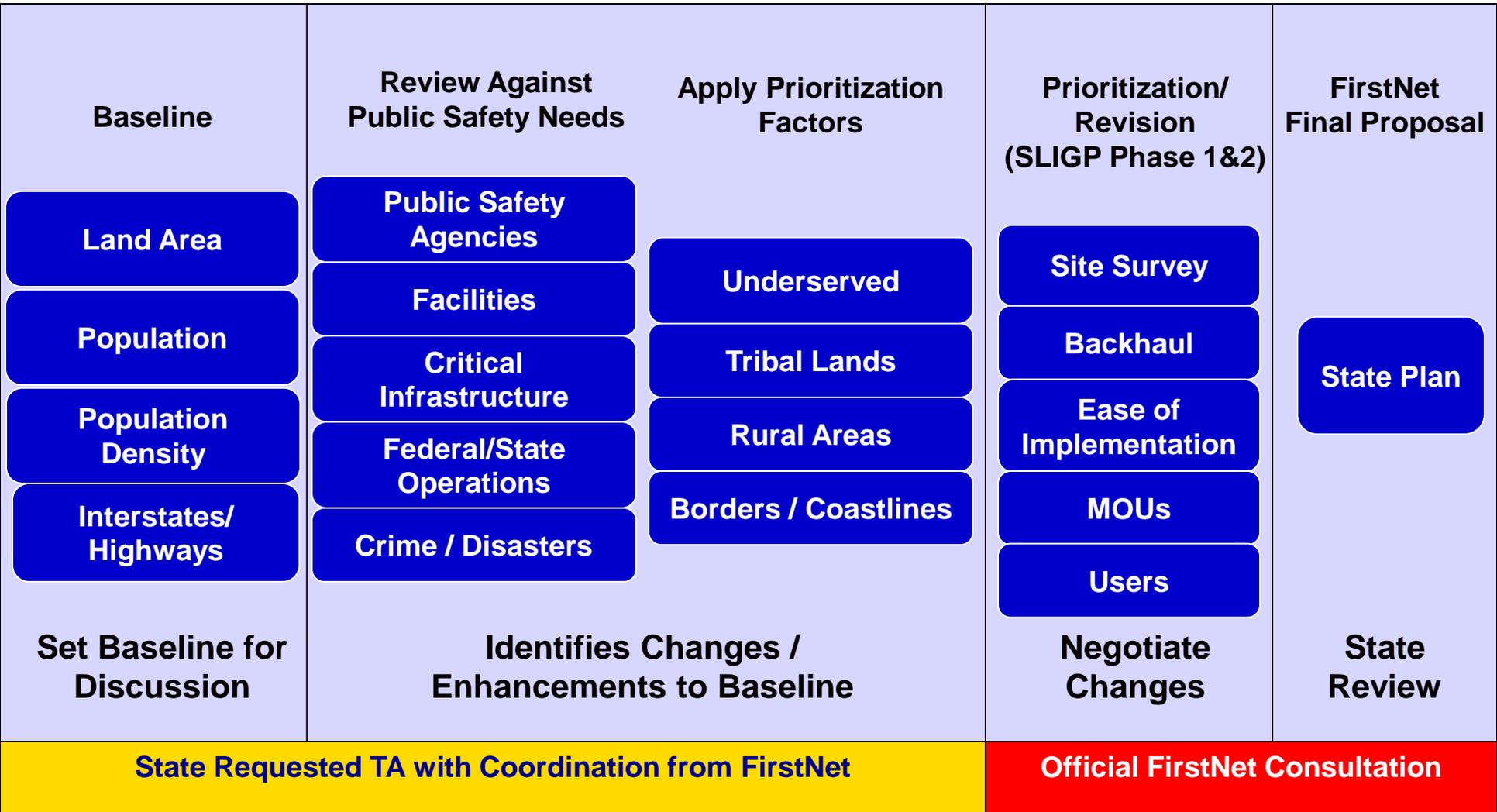
- FirstNet will initially provide a plan/RFP to States including their proposed allocation of network construction funding.
- Within 90 days, each State can decide if they want to participate in the NPSBN deployment, or they can opt out and build out their own individual State network.
- States opting out have 6 months to submit a plan to the FCC to show that they are interoperable with the nationwide network.
- State Plans must demonstrate:
  - Technical and fiscal capability to operate the State radio access network
  - Ability to maintain ongoing interoperability with the nationwide network
  - Capacity to complete the project within specified comparable FirstNet timelines
  - Cost-effectiveness
  - Comparable security, coverage, and quality of service to that of FirstNet
- If FCC approves the plan, the State may apply to the NTIA for a construction grant and lease spectrum capacity from FirstNet.
- If FCC disapproves the plan, the FirstNet plan will move forward in the State.



# Proposed Coverage Process / Approach

*TA Supported (No SLIGP Reimbursement)*

*SLIGP Funded Activity*



# Data Sources

Layer Name	Source	Classification
<b>Initial Layer</b>		
Basemap	Commercial	Open-source
Population Density	Commercial	Open-source
National Highway Network	Commercial	Open-source
USA Major Rivers	Commercial	Open-source
USA Railroads	Commercial	Open-source
Federally Recognized Tribes	Commercial	Open-source
<b>Hazards</b>		
FEMA Evacuation Routes	Commercial	Open-source
Hurricanes 1951-2004	Commercial	Open-source
Tornado Tracks 1950-2008	Commercial	Open-source
Landslide Incidence and Susceptibility	Commercial	Open-source
Seismic Hazard	Commercial	Open-source
Earthquakes	Commercial	Open-source
FEMA 100 Year Flood Zones	Commercial	Open-source
FEMA Disaster Declarations	Commercial	Open-source
<b>Critical Infrastructure</b>		
Public Venues (except for Amusement and Theme Parks)	Commercial	Open-source
Amusement and Theme Parks	Private	FOUO
Dams	Commercial	Open-source
Energy (except for Coal Power and Nuclear Plants)	Private	FOUO
Coal Power Plants	Commercial	Open-source
Nuclear Plants	Commercial	Open-source
Manufacturing (except for Hazardous Material Routes)	Private	FOUO
Hazardous Material Routes	Commercial	Open-source

Layer Name	Source	Classification
<b>Facilities</b>		
Major State Government Building	Private	FOUO
Court Houses	Private	FOUO
Prison Areas	Private	FOUO
Corrections	Commercial	Open-source
Airport Boundaries	Private	FOUO
Airports	Commercial	Open-source
Local EOCs	Private	FOUO
State EOCs	Commercial	Open-source
Urgent Care Facilities	Private	FOUO
Hospitals	Private	FOUO
PSAP	Commercial	Open-source
Schools	Commercial	Open-source
Ports	Commercial	Open-source
Amtrak Stations	Commercial	Open-source
Air National Guard (ANG) Sites	Private	FOUO
Army National Guard (ARNG) Installations	Private	FOUO
Canada and Mexico Border Crossings	Private	FOUO
<b>Agencies</b>		
EMS Departments	Commercial	Open-source
Federal	Commercial	Open-source
Military	Commercial	Open-source
Emergency Management	Commercial	Open-source
Law Enforcement	Commercial	Open-source
Fire Departments	Commercial	Open-source
<b>Final Coverage</b>		
In-Building	Commercial	Open-source
Portable	Commercial	Open-source
Mobile	Commercial	Open-source
Mobile	Commercial	Open-source
Satellite	Commercial	Open-source
<b>USA Federal Lands</b>		
USA Federal Lands	Commercial	Open-source
<b>Commercial Coverage</b>		
Commercial Coverage (for each state)	Commercial	Open-source
<b>State</b>		
State outline	Commercial	Open-source
State counties	Commercial	Open-source
State LTE	Commercial	Open-source
State Public Safety Users	Commercial	Open-source

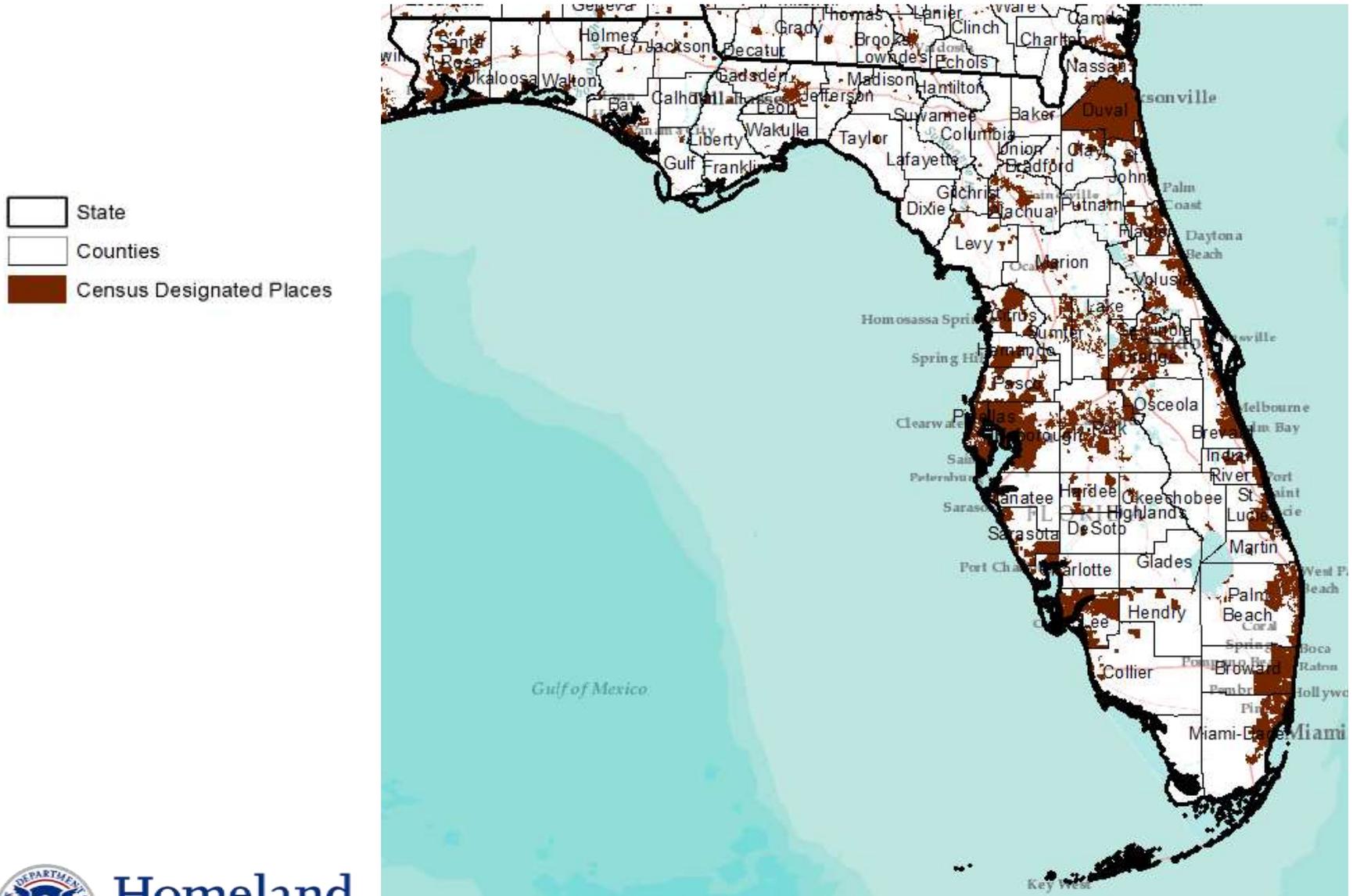
# Florida Overview



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# Boundaries



# Boundaries & Roads



- State
- Counties
- Federally-Recognized Tribes
- USA Railroads
- USA Major Rivers
- Census Designated Places
- National Highway Network**
  - Interstate
  - US Highway

# Agencies

## Agencies

- EMS Departments
- Federal
- Military
- Emergency Management
- Law Enforcement
- Fire Departments



\*Several agencies may overlap on the map

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# Facilities



- Facilities**
- Major State Government Building
  - Court Houses
  - ▨ Prison Areas
  - Corrections
  - Airport
  - + Airports
  - Local Emergency Operations Centers
  - State Emergency Operation Centers
  - Urgent Care Facilities
  - Hospitals
  - PSAP
  - Schools
  - ± Ports
  - Amtrak Stations
  - Air National Guard (ANG) Sites
  - ▨ Army National Guard (ARNG) Installations
  - Canada and Mexico Border Crossings

# Critical Infrastructure

## Legend

### Manufacturing

- ◆ Phosphatic Fertilizer Plants
- ◆ Nitrogenous Fertilizer Plants
- ◆ Explosives Manufacturing
- ◆ Biological Products Manufacturing
- Hazardous Materials Routes

### Energy

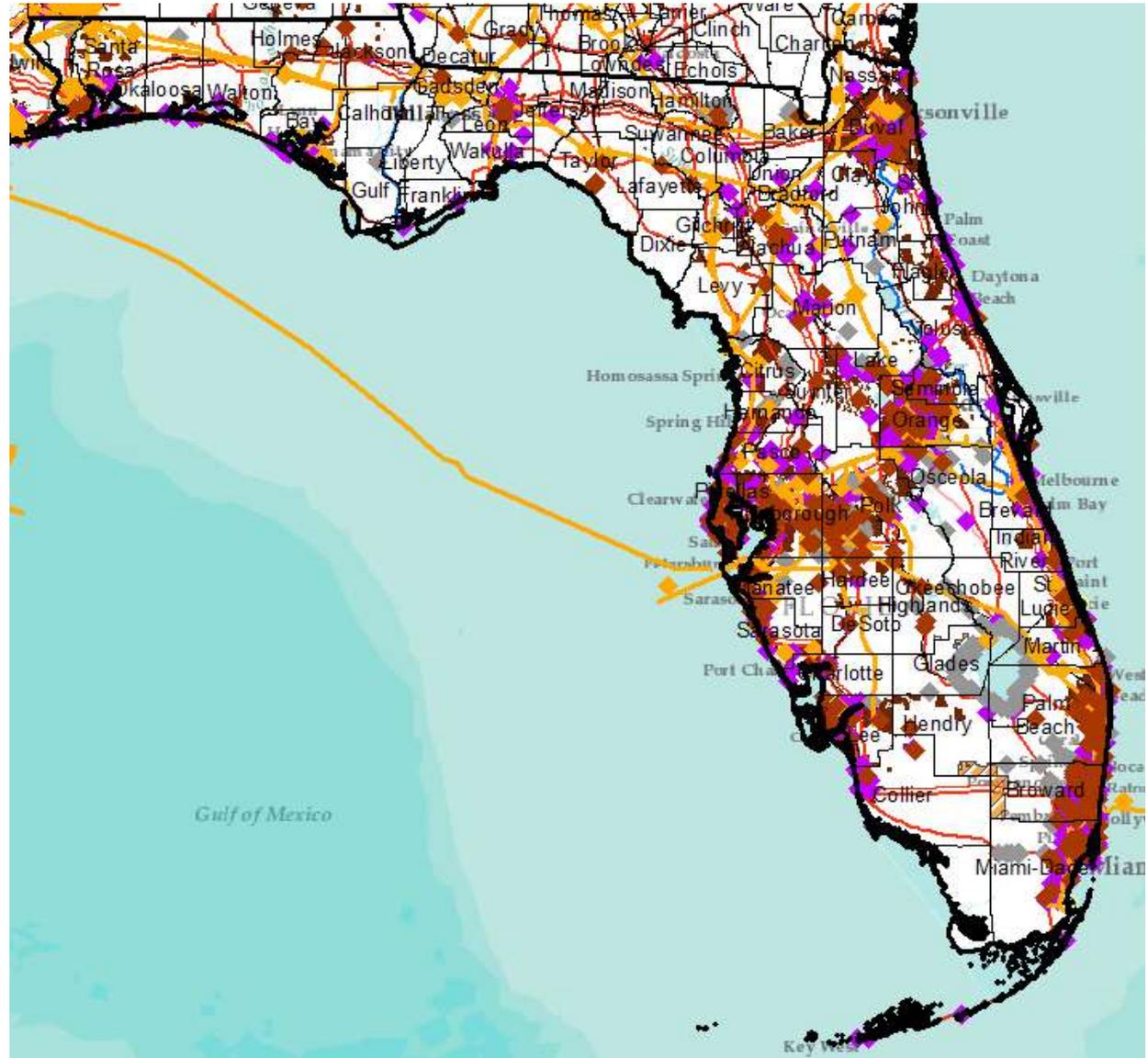
- ◆ Petroleum Pumping Stations
- ◆ Oil Refineries
- Oil and Natural Gas Pipelines
- ◆ Oil and Natural Gas Interconnects
- ◆ Natural Gas Storage Facilities
- ◆ Natural Gas Processing Plants
- ◆ Natural Gas Compressor Stations
- ◆ Natural Gas (LNG) Import Terminals
- ◆ Ethanol Plants
- ◆ Coal Power Plants
- ◆ Nuclear Plants

### Dams

- ◆ Dams

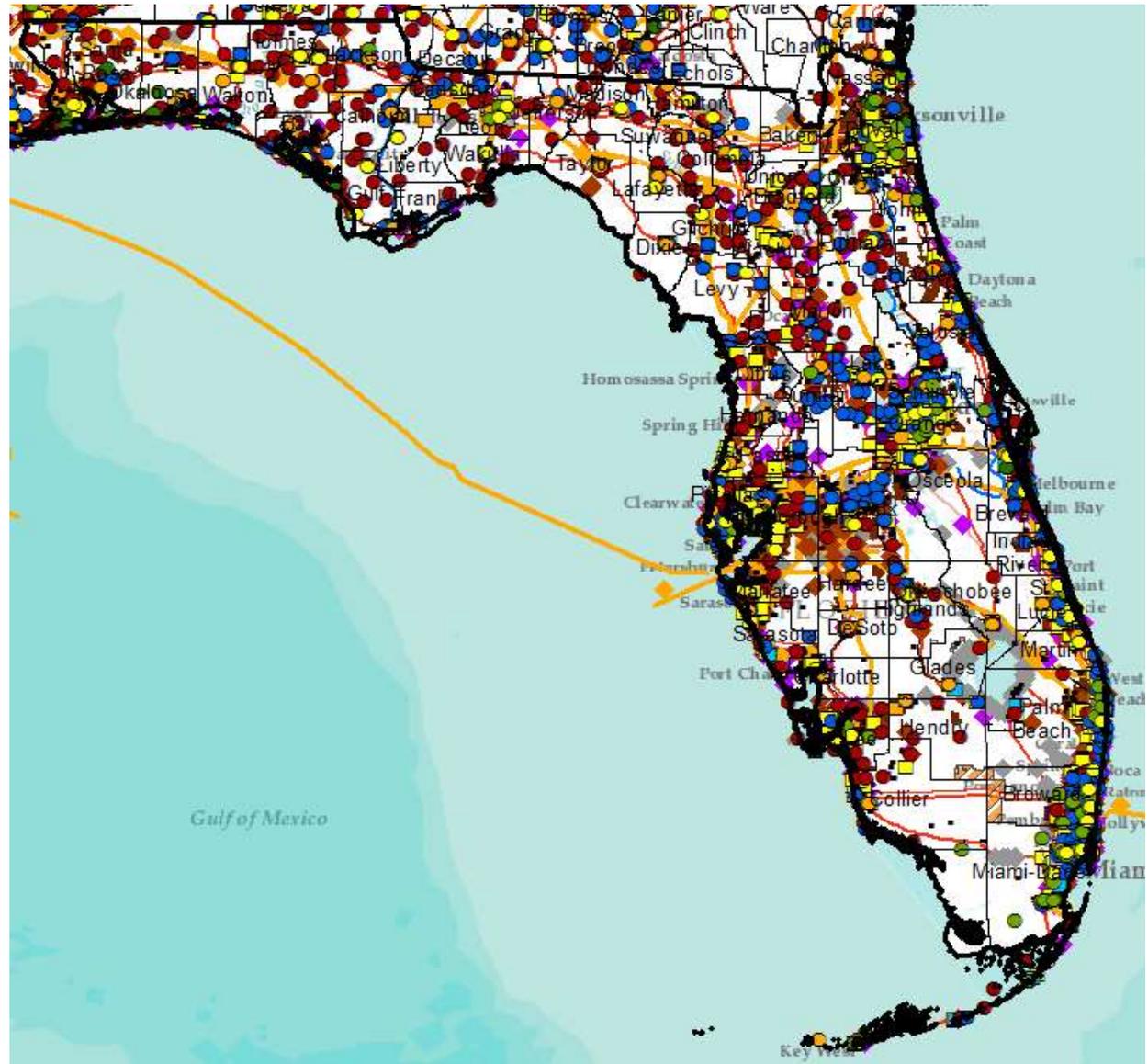
### Public Venues

- ◆ State Fairgrounds
- ◆ NCAA Division I Football Stadiums
- ◆ National Hockey League Arenas
- ◆ National Football League Stadiums
- ◆ National Basketball Association Arenas
- ◆ NASCAR Auto Raceways
- ◆ Major Thoroughbred Horse Racing Tracks
- ◆ Major League Baseball Stadiums
- ◆ Indy Racing League Racetracks
- ◆ Amusement and Theme Parks



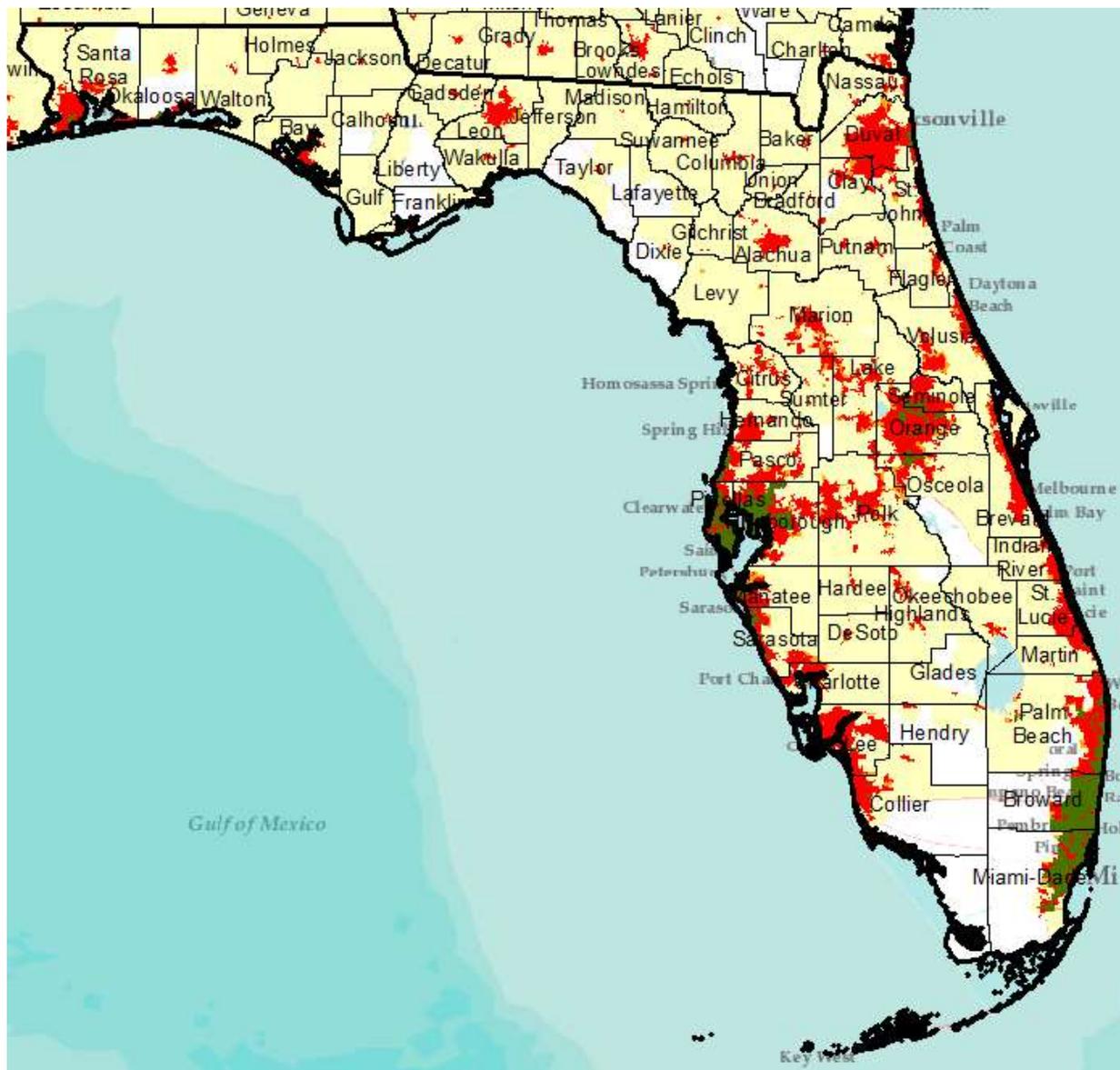
# Agencies / Facilities / Critical Infrastructure

- Agencies**
  - EMS Departments
  - Federal
  - Military
  - Emergency Management
  - Law Enforcement
  - Fire Departments
- Facilities**
  - Major State Government Building
  - Court Houses
  - Prison Areas
  - Corrections
  - Airport
  - + Airports
  - Local Emergency Operations Centers
  - State Emergency Operation Centers
  - Urgent Care Facilities
  - Hospitals
  - PSAP
  - Schools
  - ± Ports
  - Amtrak Stations
  - Air National Guard (ANG) Sites
  - Army National Guard (ARNG) Installations
  - Canada and Mexico Border Crossings
- Manufacturing**
  - ◆
- Energy**
  - Hazardous Materials Routes
  - ◆ Oil and Natural Gas Pipelines
  - ☢ Nuclear Plants
  - ◆ Dams
- Public Venues**
  - ◆



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# Population Density



## Population Density

- Population Density 2,500+ ppsqmi
- Urban Areas & Clusters (1,000+ ppsqmi)
- Population Density 500+ ppsqmi
- Population Density 5+ ppsqmi

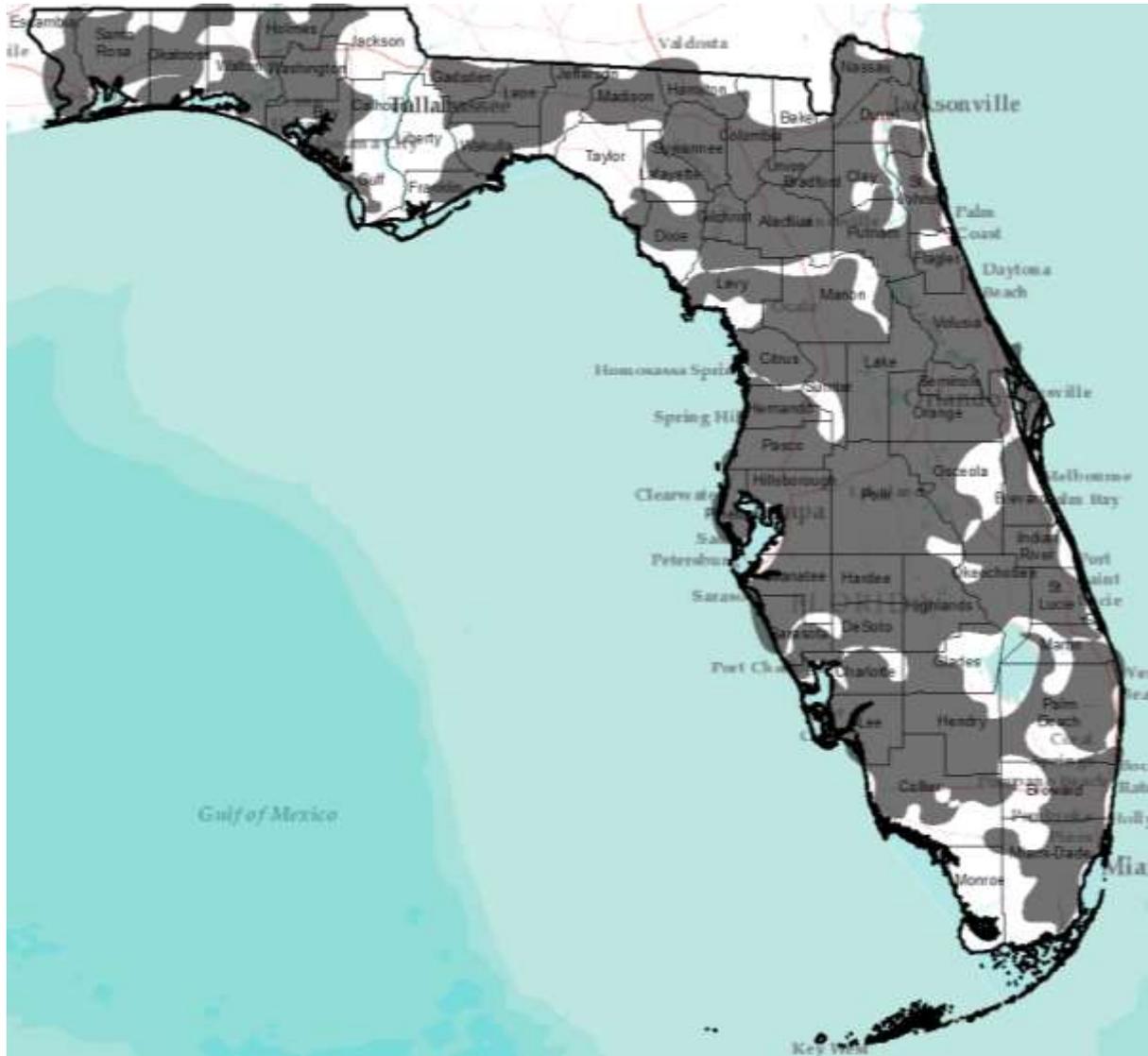


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# Current Commercial Coverage

# All Providers – LTE Coverage



Providers include:  
AT&T, Verizon,  
Sprint, T-Mobile,  
and U.S. Cellular.

\*Coverage as of June 2013  
Source: Coverage? App

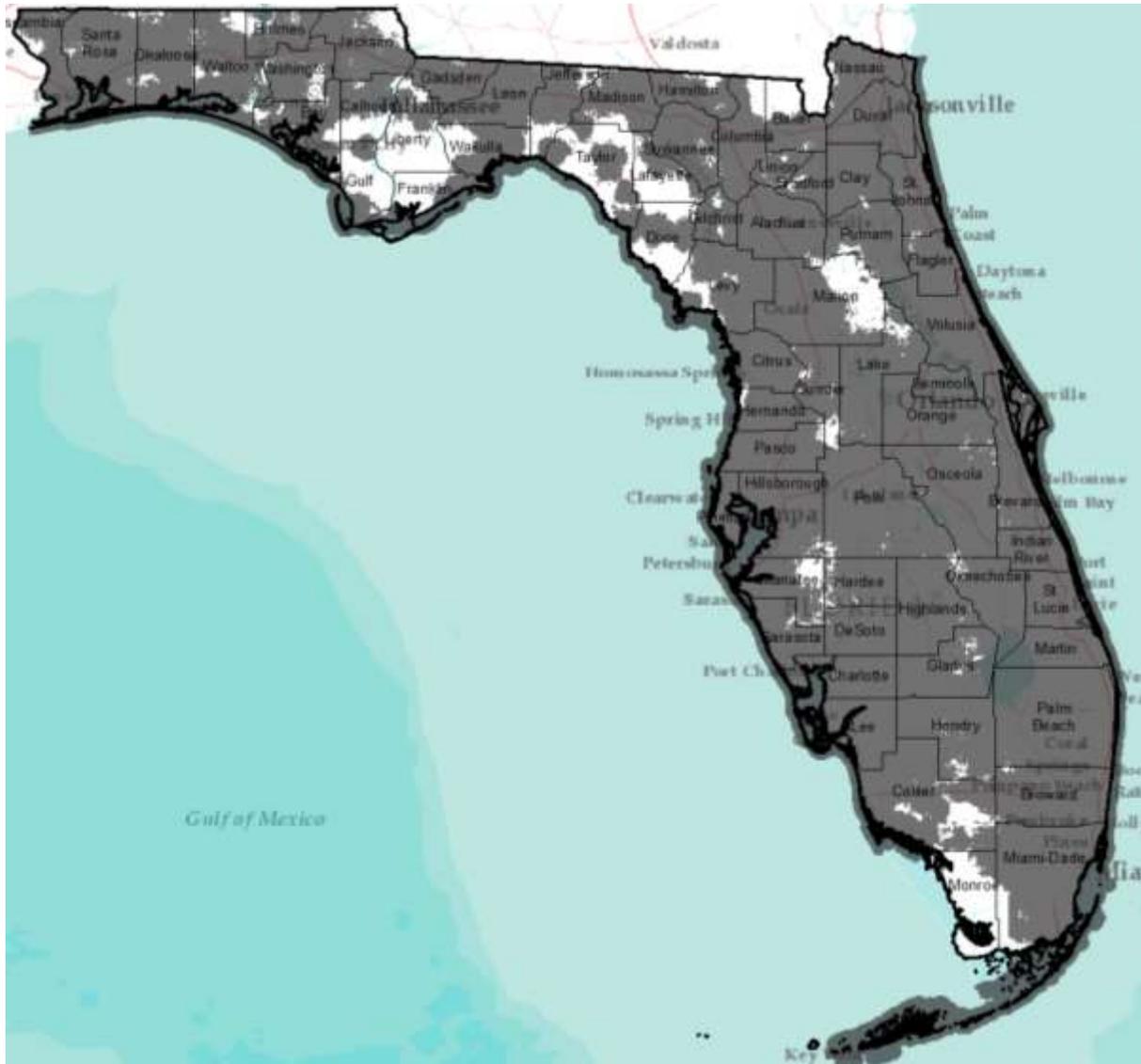


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# AT&T – 2G, 3G, 4G Coverage



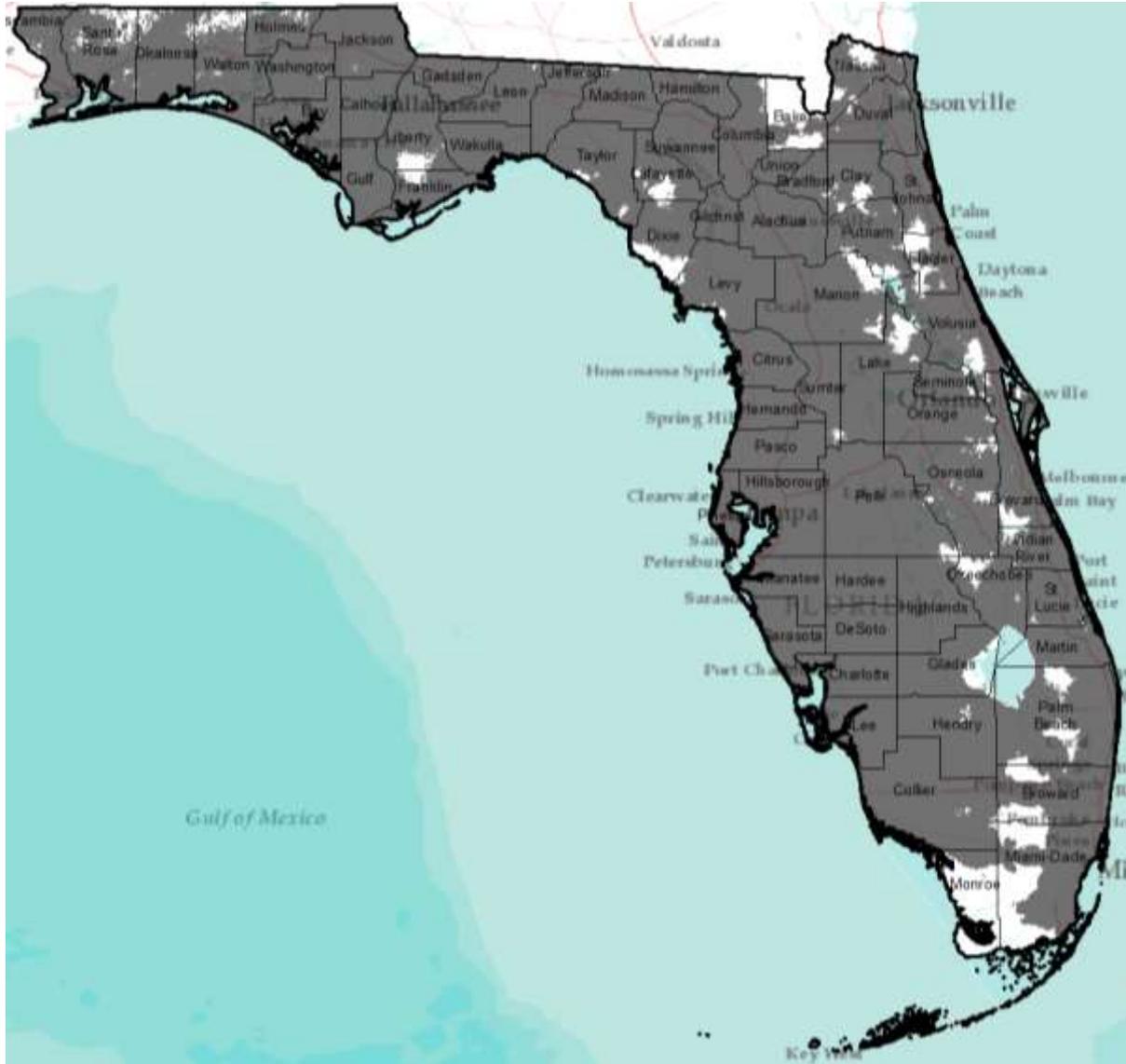
\*Coverage as of June 2012



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# Verizon – 2G, 3G, 4G Coverage



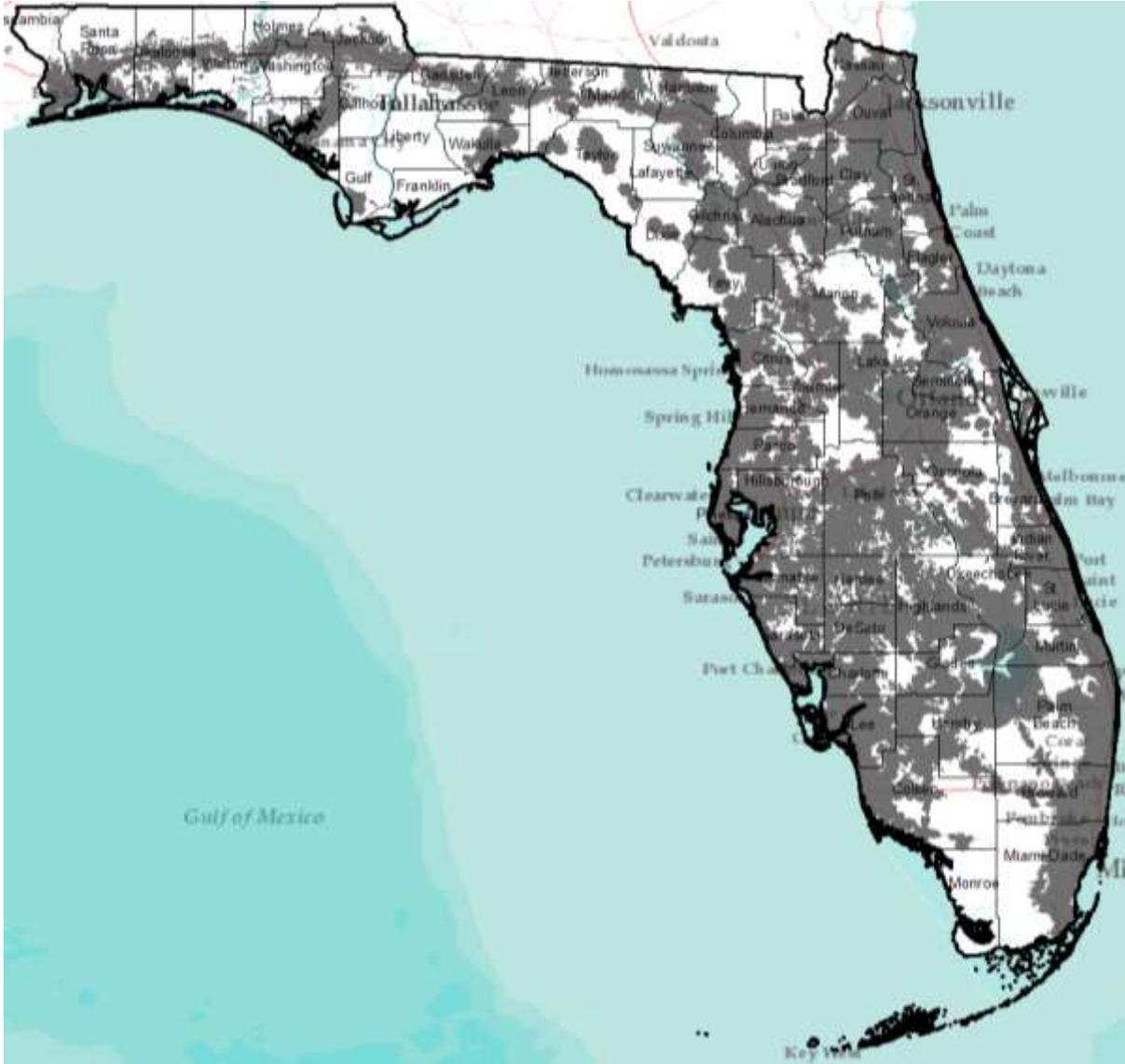
\*Coverage as of June 2012



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# Sprint – 2G, 3G, 4G Coverage



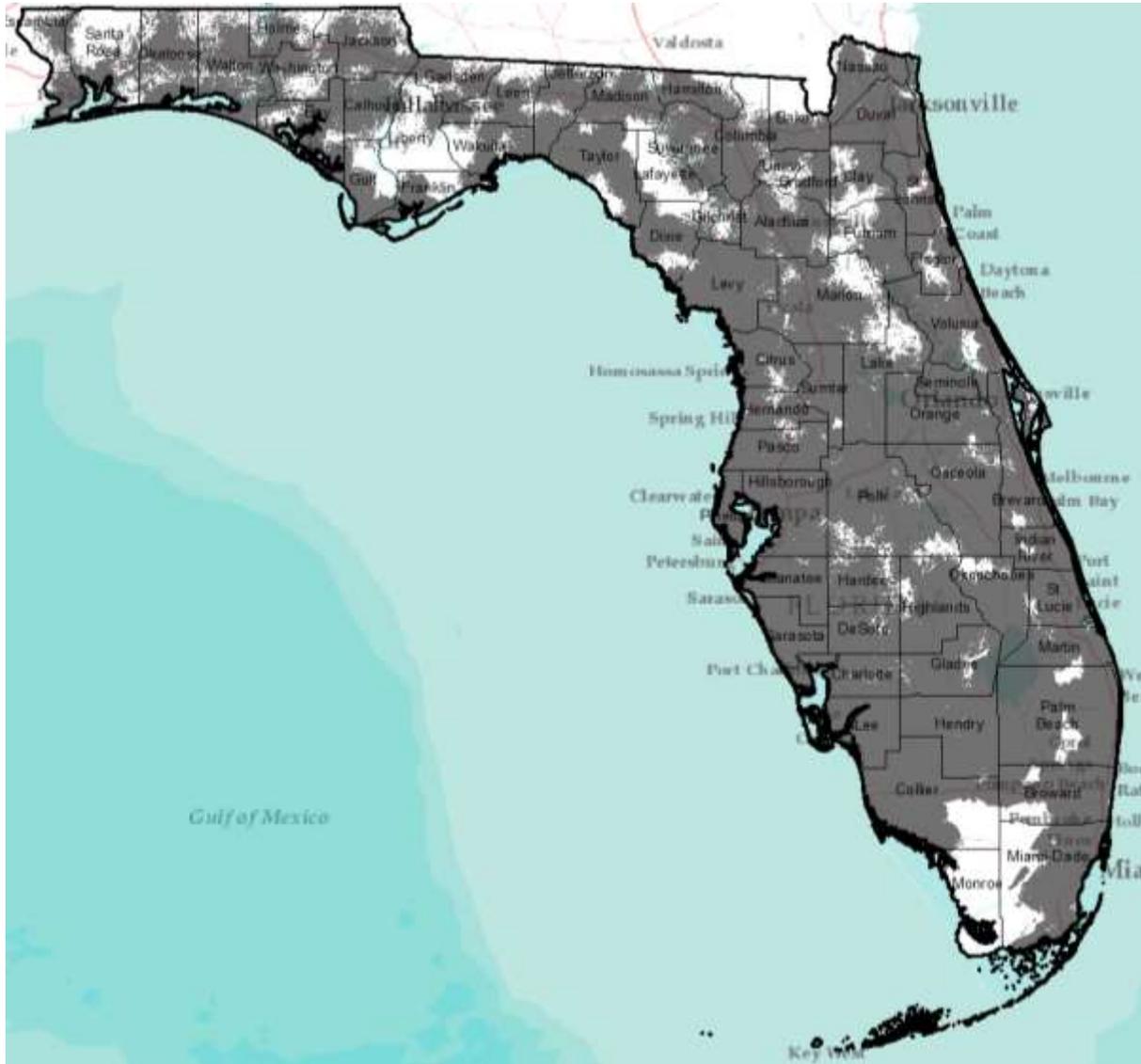
\*Coverage as of June 2012



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# T-Mobile – 2G, 3G, 4G Coverage



\*Coverage as of June 2012



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# Coverage Objectives

# Guidelines

## **Focus on coverage....not infrastructure**

- The goal is to define and prioritize operational coverage needs
- RAN site selection, backhaul, hardening requirements, etc. are for a later discussion
- These site selection factors will be addressed through SLIGP funding

## **This is a starting point.....nothing is final**

- The maps provided by OEC are to help States identify its own coverage objectives
- Many coverage factors/approaches that the State develops can/will adjust throughout the consultation process

## **LTE is a mobile data solution first.....mission critical voice is yet to come**

- NPSBN will initially support mission critical data and (potentially) supplementary voice
- System will not replace need for land mobile radio systems (based on current technology)

# OEC Baseline

The following is OEC's proposed approach to coverage levels, NOT FirstNet's requirements.

**In-Building Handheld Coverage:** Coverage provided to a handheld device through minimum one wall

- ***OEC Starting Point*** – Urban Areas and Clusters (1,000 people per square mile) as defined by US Census

**Handheld / Partial In-Building Coverage:** Coverage provided to a device outdoors or “on the street” including some in-building coverage

- ***OEC Starting Point*** – Rural/Suburban Census Designated Places (CDPs) with more than 5 people per square mile

**Vehicular Modem / Partial Handheld Coverage:** Vehicle-based user equipment, as well as some handheld coverage

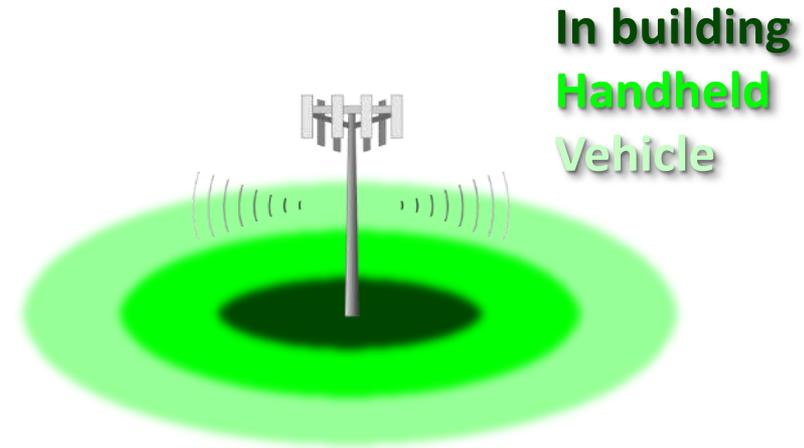
- ***OEC Starting Point*** – Interstates, major state highways / non-CDP rural areas with more than 5 people per square mile

**Satellite / Deployable Coverage:** Outside of fixed terrestrial coverage, mobile or satellite connectivity only

- ***OEC Starting Point*** – All areas with less than 5 people per square mile

# Coverage Objective Levels

- Coverage objective levels (**in-building**, **handheld**, **vehicle**, etc.) does not mean that coverage will only be provided at that level
- It means that level of coverage will be provided **reliably** and at a **minimum data rate**
- A lower reliability and/or minimum data rate would result in greater coverage from the same site



## **Video, Voice, Data**

Min. ~~768~~ 256 kbps downlink

Min. ~~256~~ 128 kbps uplink

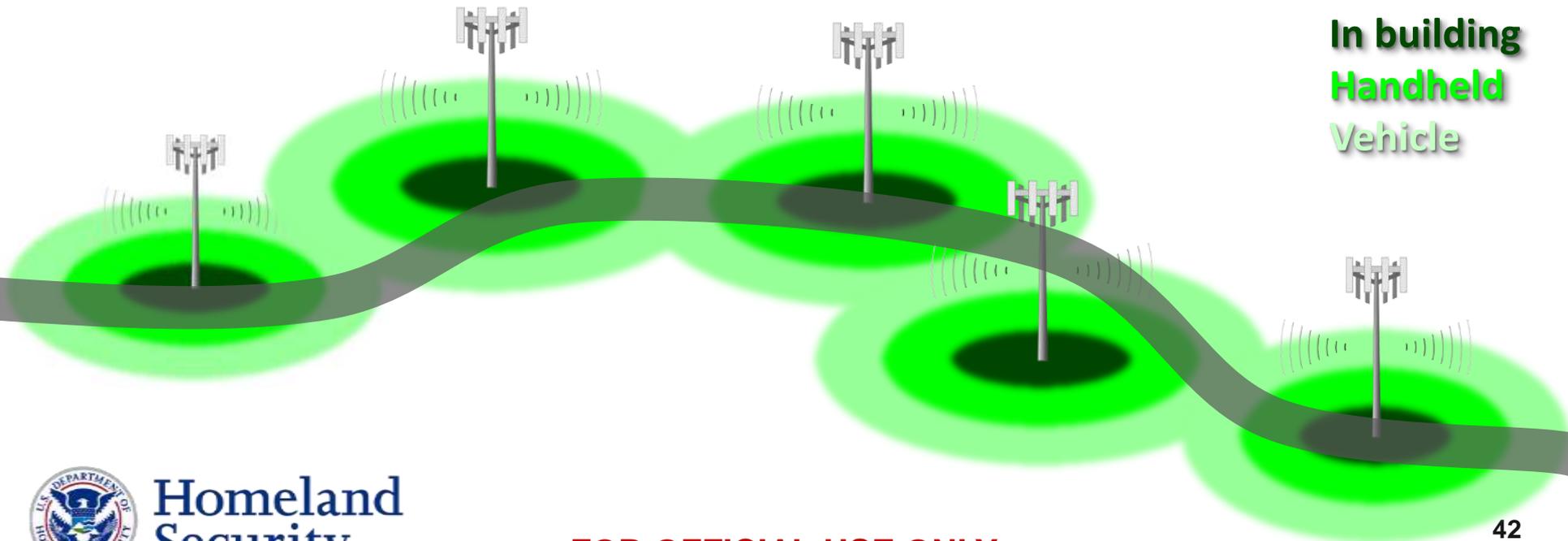
~~95%~~ 90% reliability

Service doesn't necessarily stop at the coverage level



# Coverage Objective vs. Coverage Map

- Coverage objectives display the State's coverage goals.
- Coverage maps display actual coverage after network build out.
- Once the towers are placed to satisfy the coverage objectives, the resulting map may yield greater coverage.
- Highway example: The objective is to cover the highway to a mobile device, but the resulting coverage will be much greater.



# In-Building Coverage

In-Building Coverage to Urban Areas and Clusters are shown in this map.

 In-Building



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# Handheld Coverage

CDPs would have Handheld/Partial In-Building coverage.

-  In-Building
-  Handheld/Partial In-Building

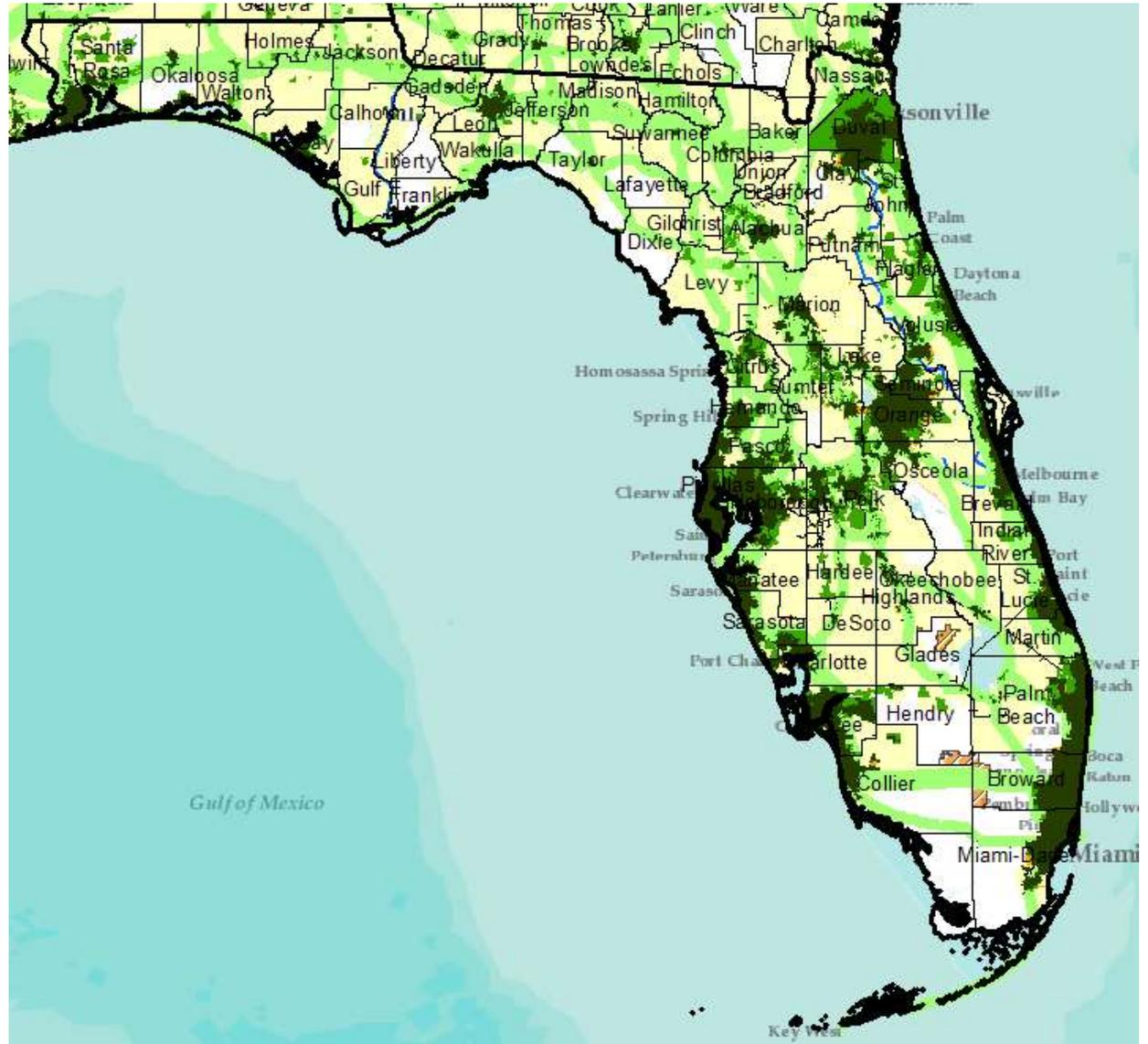


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# Vehicular Coverage (Roads)

Interstate and State Highways would have the Vehicular Modem/Partial Handheld coverage.



-  In-Building
-  Handheld/Partial In-Building
-  Vehicular Modem/Partial handheld



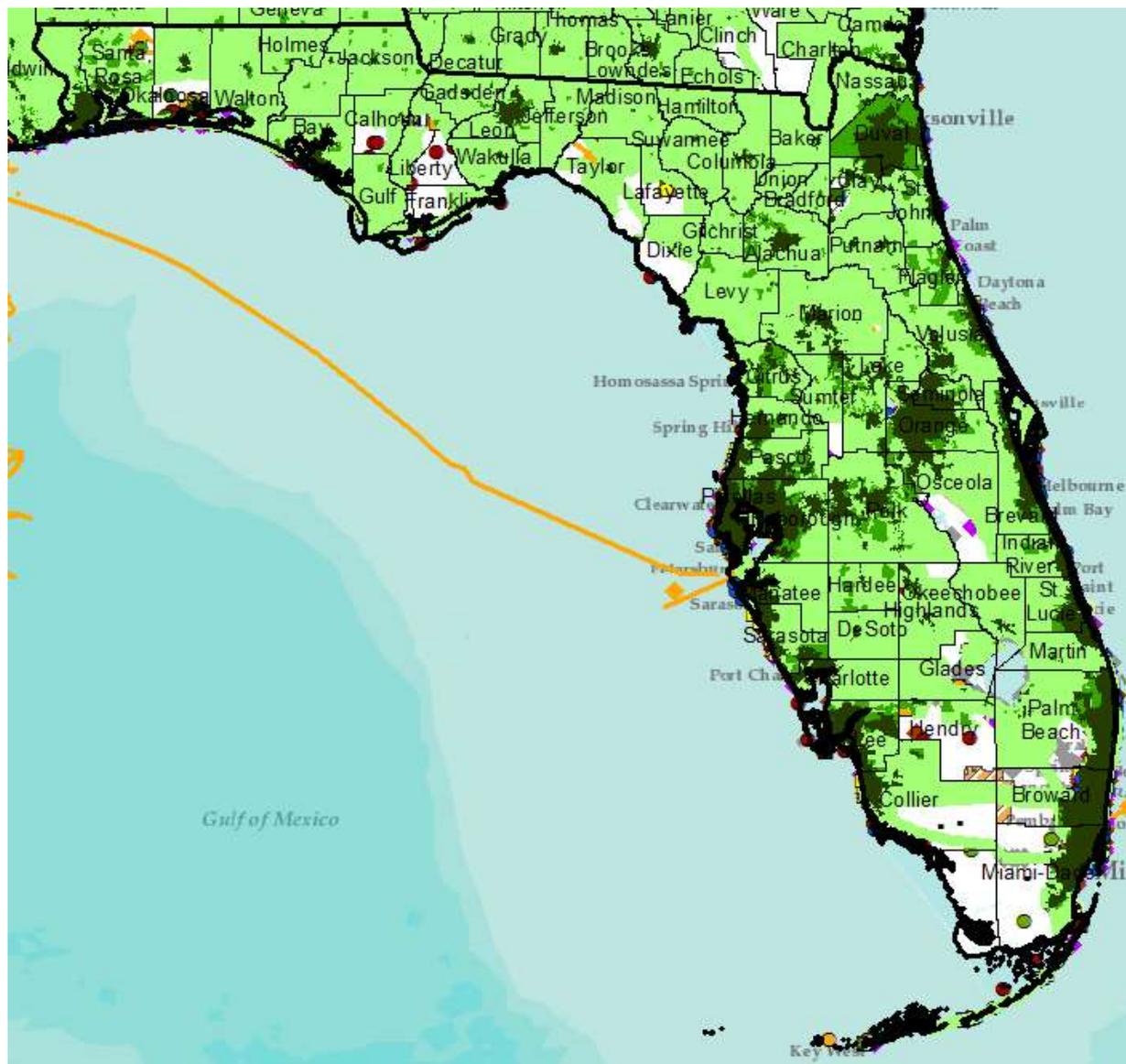
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# All Coverage Levels

All areas with a population greater than 5 ppsqmi would have Vehicular Modem/Partial Handheld coverage. All other areas would use Satellite/Deployable coverage.

-  **In-Building**
-  **Handheld/Partial In-Building**
-  **Vehicular Modem/Partial handheld**
-  **Satellite/Deployable**

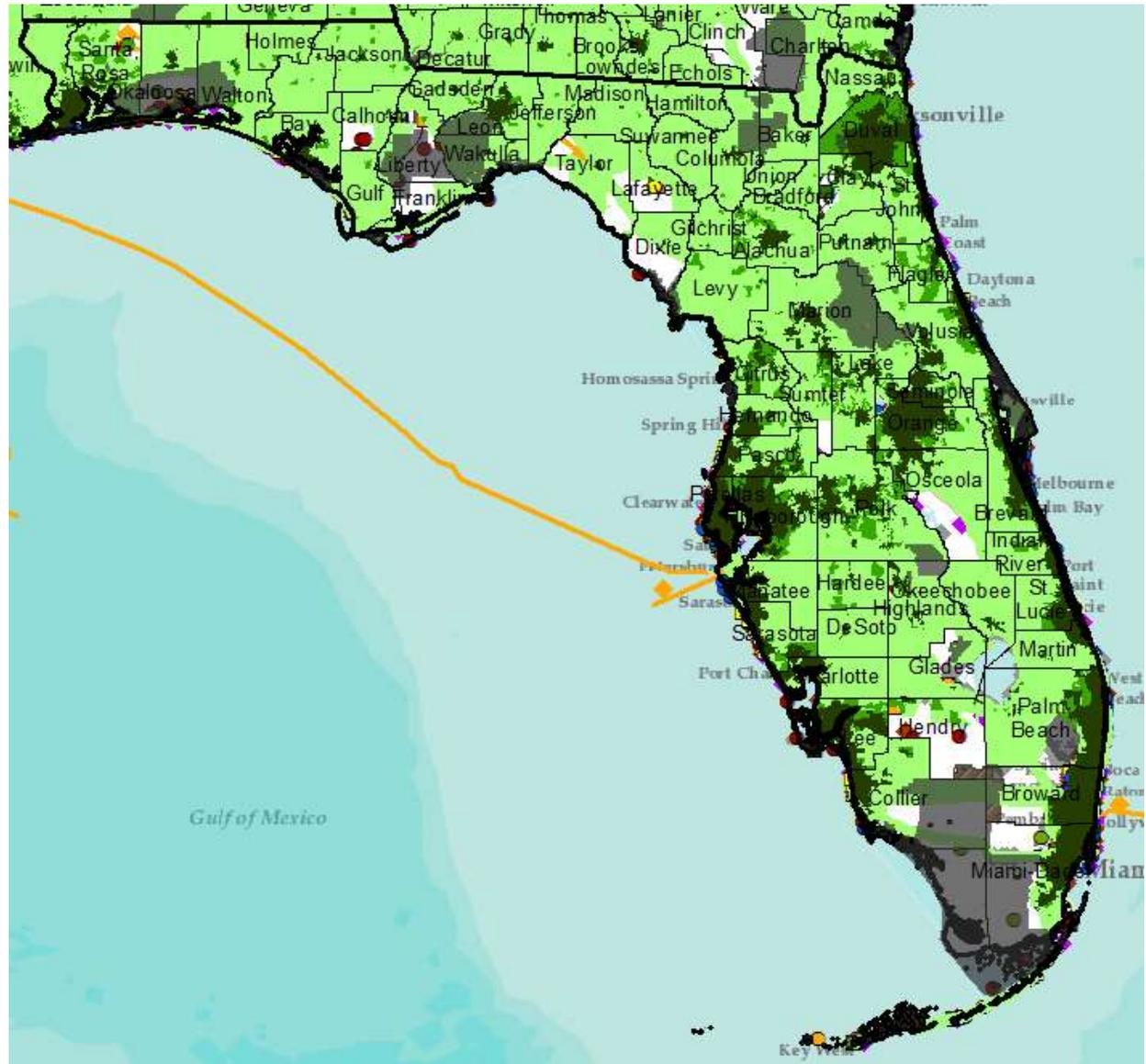


# Coverage with Federal Overlay

This map shows the proposed coverage levels with the Federal Lands in the State.

How do Federal Lands affect the State's Coverage Objectives?

-  **In-Building**
-  **Handheld/Partial In-Building**
-  **Vehicular Modem/Partial handheld**
-  **Satellite/Deployable**

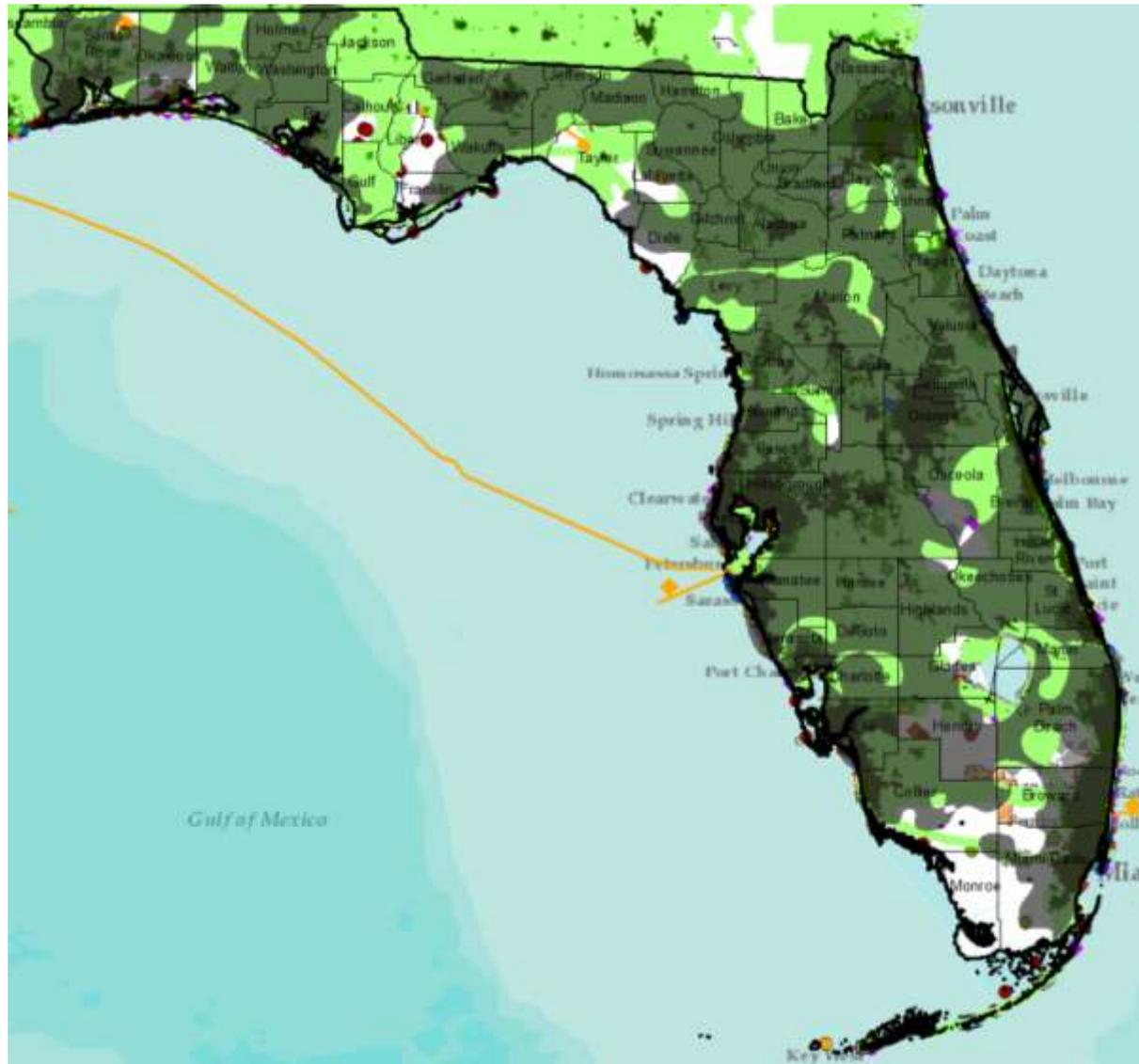


# Coverage with LTE Overlay

This map illustrates advertised Commercial LTE coverage.

Providers include:  
AT&T, Verizon, Sprint,  
T-Mobile, and U.S.  
Cellular.

-  **In-Building**
-  **Handheld/Partial In-Building**
-  **Vehicular Modem/ Partial handheld**
-  **Satellite/Deployable**

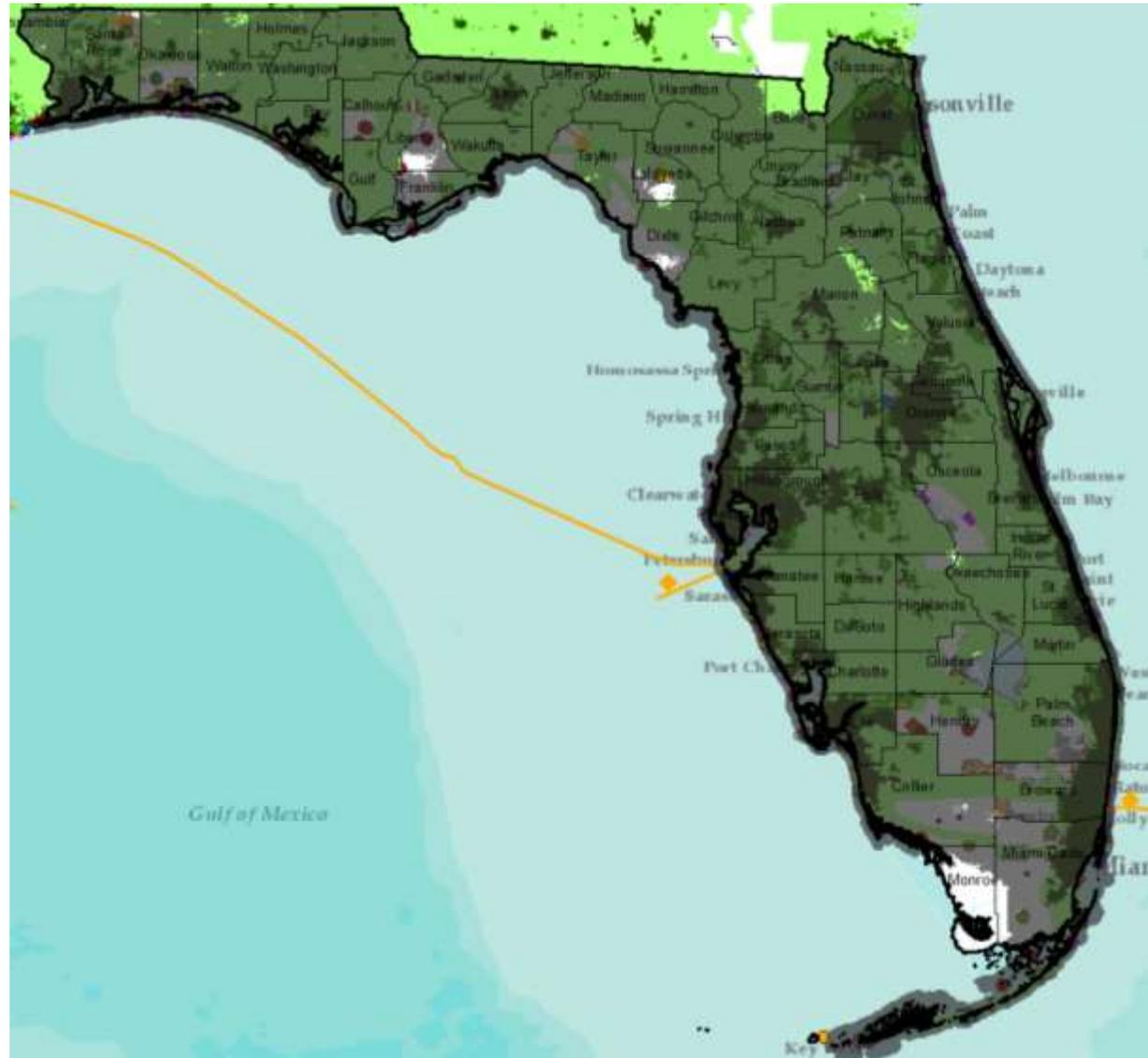


\*Coverage as of June 2013

# Commercial Provider Overlay

This is a map of advertised Commercial 2G, 3G, and 4G service. Providers include: AT&T, Verizon, Sprint, T-Mobile, U.S. Cellular, and other regional carriers.

-  **In-Building**
-  **Handheld/Partial In-Building**
-  **Vehicular Modem/Partial handheld**
-  **Satellite/Deployable**



\*Coverage as of June 2012

# Florida Baseline

*What are the State's objectives for each of the following coverage levels?*

**In-Building Handheld Coverage:** Coverage provided to a handheld device through minimum one wall

*Please insert your coverage objectives for In-Building Coverage.*

**Handheld / Partial In-Building Coverage:** Coverage provided to a device outdoors or “on the street” including some in-building coverage

*Please insert your coverage objectives for Handheld/Partial In-Building Coverage.*

**Vehicular Modem / Partial Handheld Coverage:** Vehicle-based user equipment, as well as some handheld coverage.

*Please insert your coverage objectives for Vehicular Modem/Partial Handheld Coverage.*

**Satellite / Deployable Coverage:** Outside of fixed terrestrial coverage, deployable, or satellite connectivity only

*Please insert your coverage objectives for Satellite/Deployable Coverage.*

# Prioritization



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# Approach to Prioritization

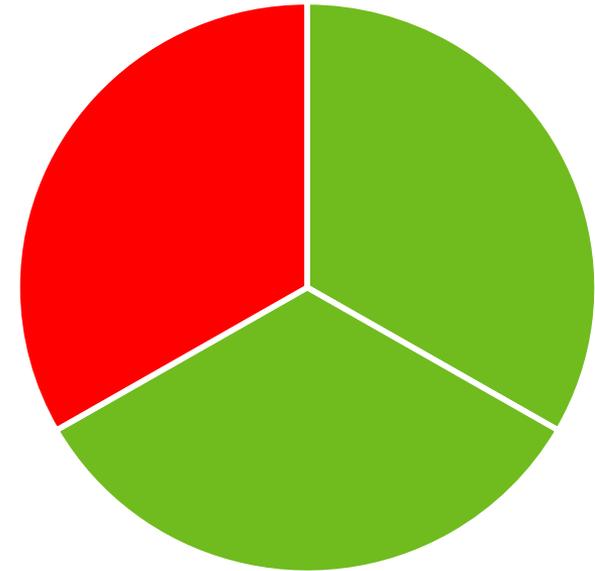
Prioritization should be based on a number of factors:

1) **User Base:** What agencies are likely users of the NPSBN?

- 1) Total number of potential users
- 2) Current mobile data users
- 3) Available budget
- 4) Impact by cost level

2) **Need:** What areas have the greatest “need” for public safety coverage?

- 1) Crime data (CAD)
- 2) Natural disasters
- 3) Critical Infrastructure / manmade threat?
- 4) Other factors?
- 5) Un-served / underserved?
- 6) Coverage level?

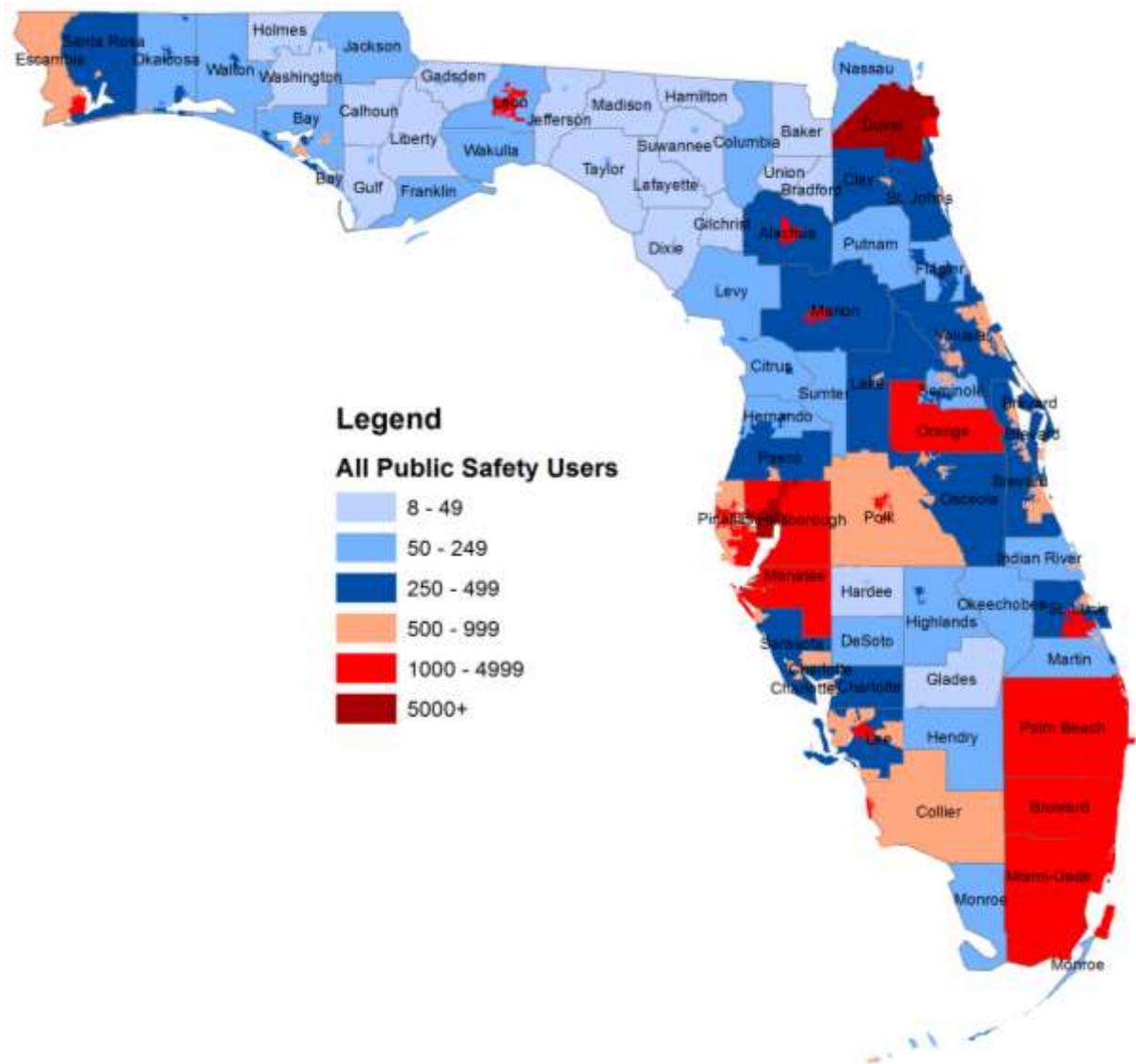


■ User Base ■ Need ■ Infrastructure



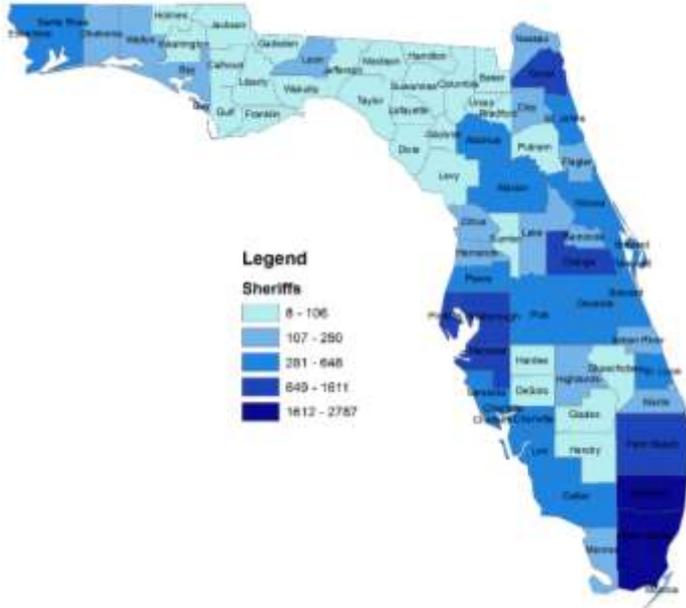
# Public Safety Population (Sworn Personnel)

Agency Type	Total Agencies	Total Sworn
Police (Local Law Enforcement)	270	31,563
Sheriff (County Law Enforcement)	65	41,614
State Police (State Law Enforcement)	1	1,606
Fire Departments (All/Most Career)	240	26,725
Fire Departments (All/Most Volunteer)	239	6,395
Emergency Medical Services (partial)	73	2,981
<b>TOTAL</b>	<b>888</b>	<b>110,884</b>

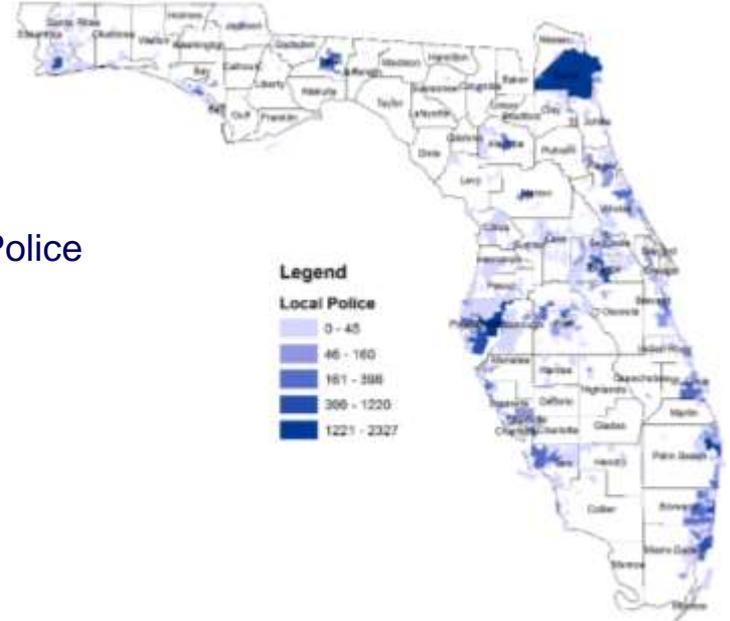


# Public Safety Users

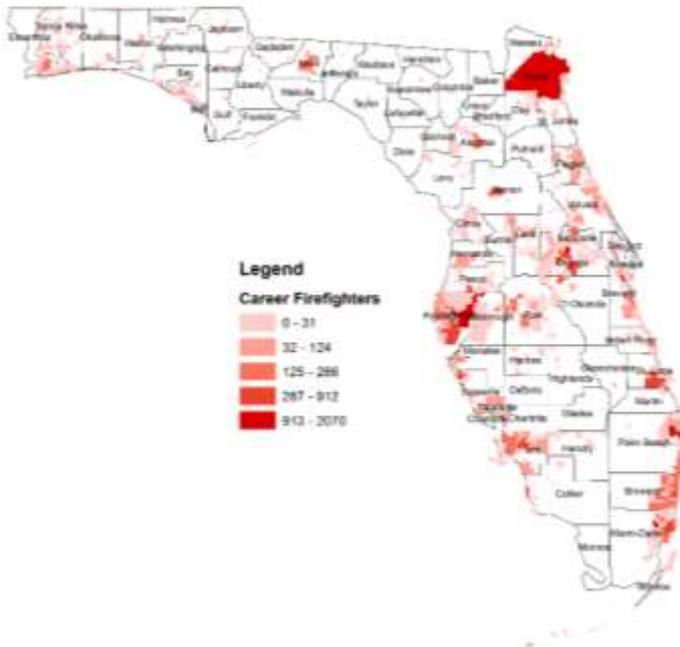
Sheriffs



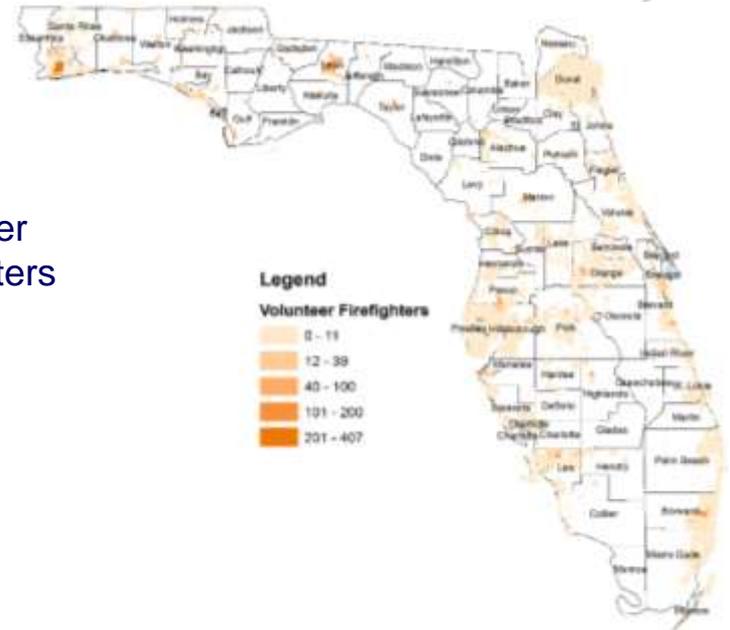
Local Police



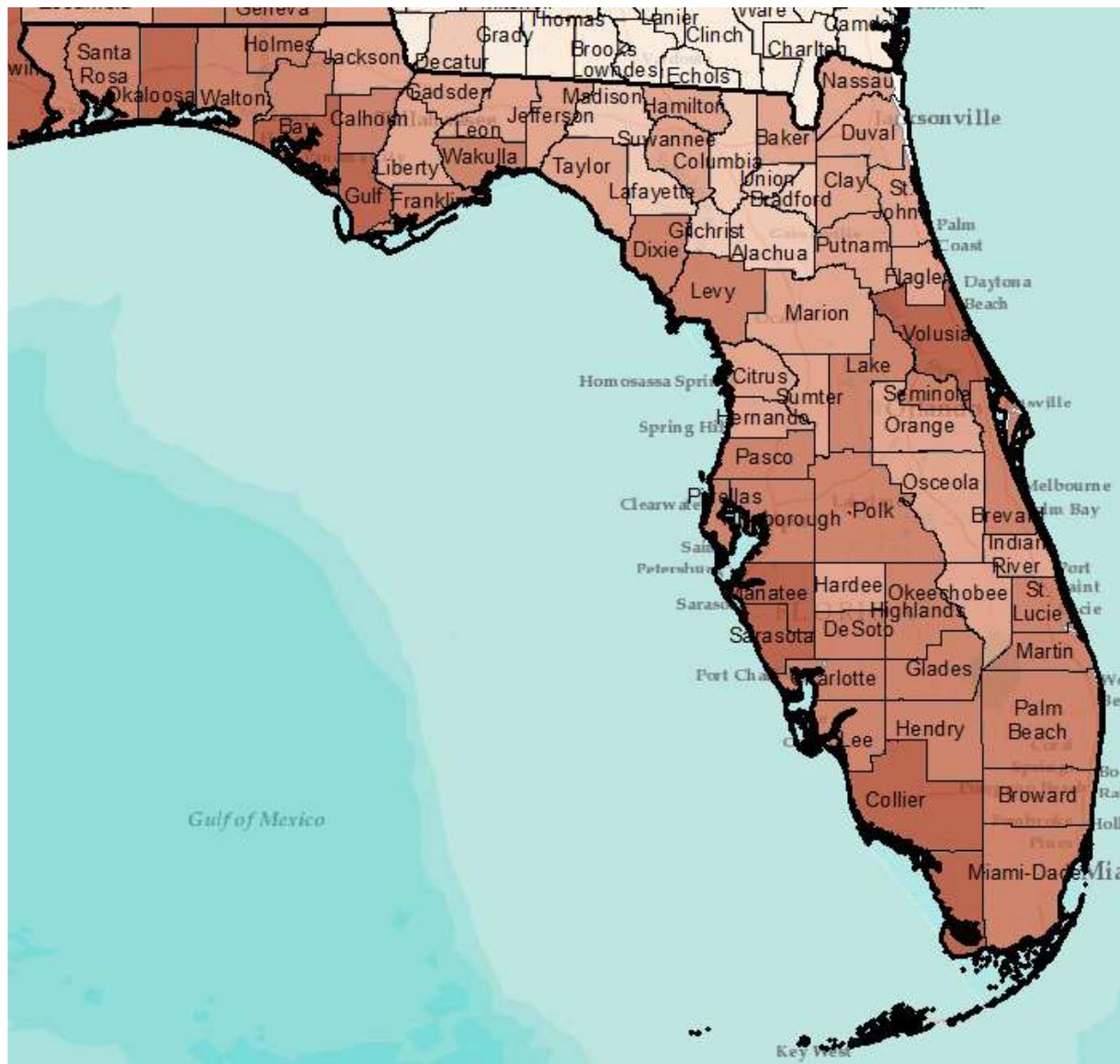
Career Firefighters



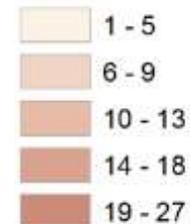
Volunteer Firefighters



# FEMA Disaster Declarations 1964-2011



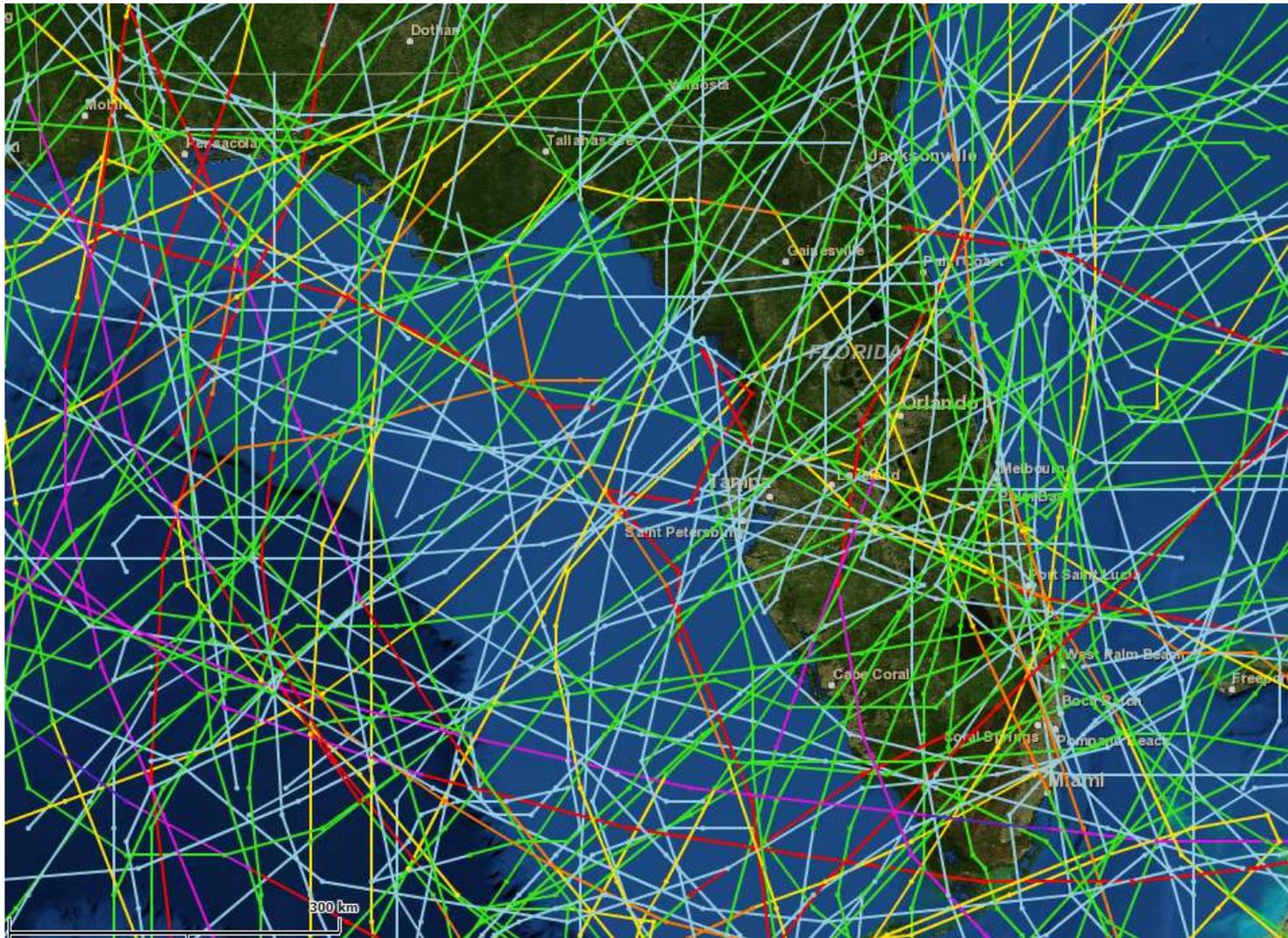
## Disaster Declarations



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# Hurricanes (1950 – 2012)



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# Evacuation Routes



## Hurricane Evacuation Routes

- INTERSTATE HIGHWAY
- FEDERAL HIGHWAY
- STATE HIGHWAY
- STREET



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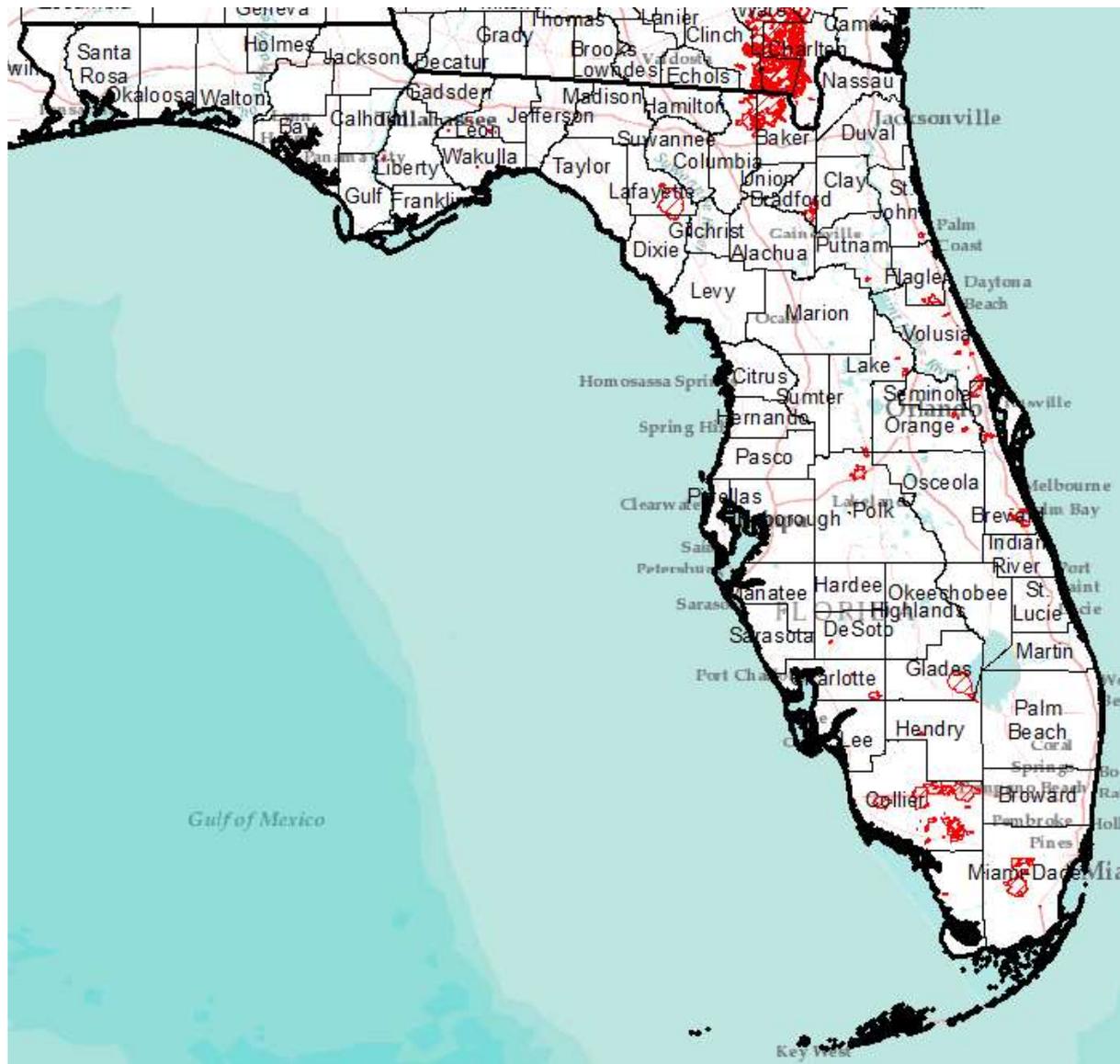
# Tornado Tracks 1950-2008



**Tornado Tracks 1950-2008**

-  F5
-  F4
-  F3
-  F2
-  F1
-  F0

# Fire and Fire Perimeters



Fire Perimeters



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# Landslides



## Landslide Incidence and Susceptibility

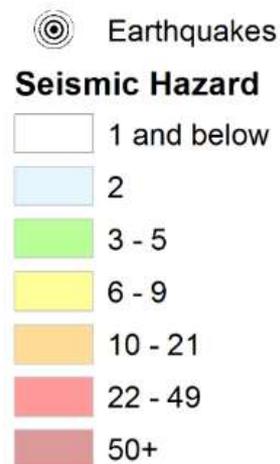
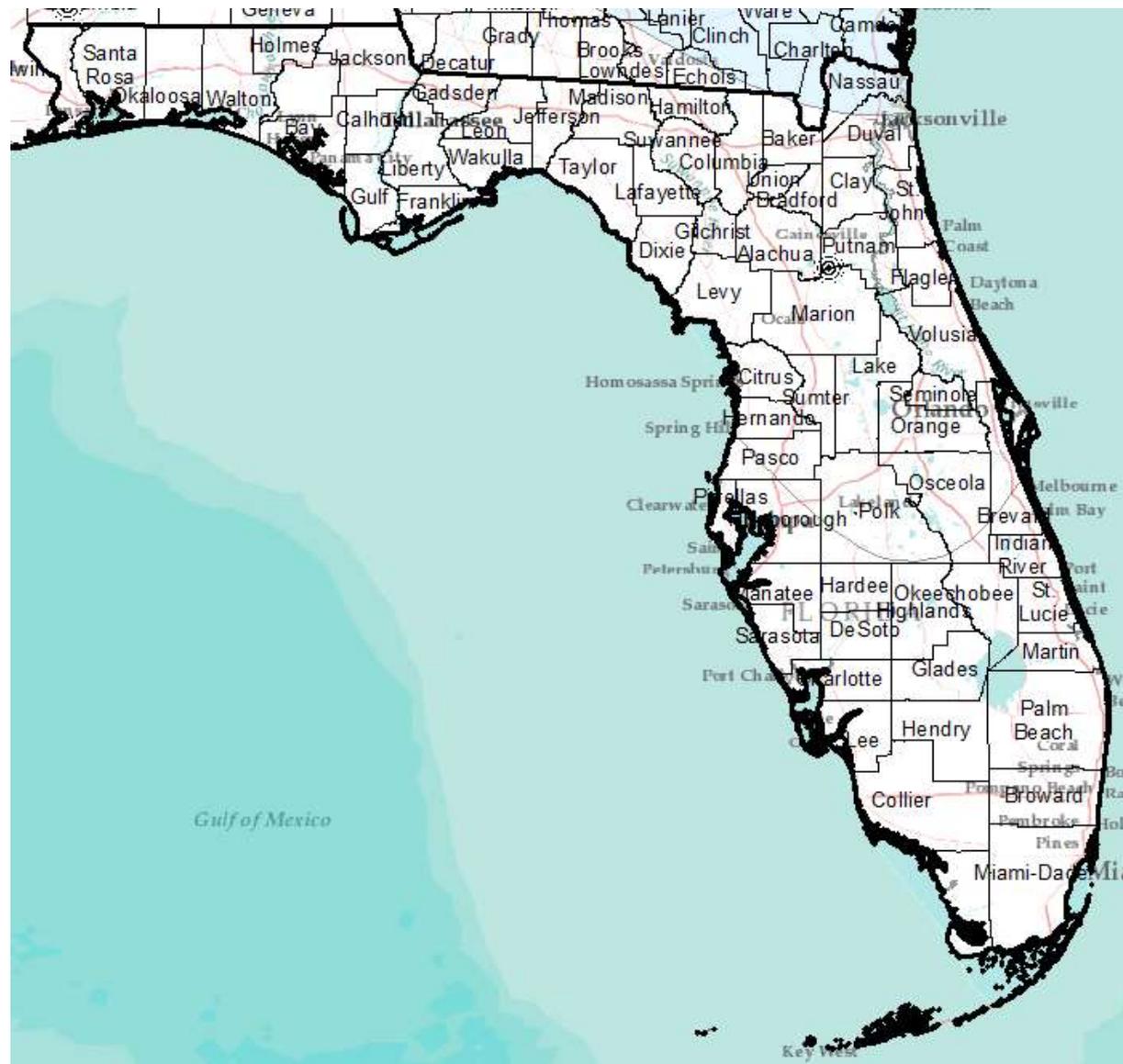
- High susceptibility/moderate incidence
- High susceptibility/low incidence
- High incidence
- Moderate susceptibility/low incidence
- Moderate incidence
- Low incidence
- No Data



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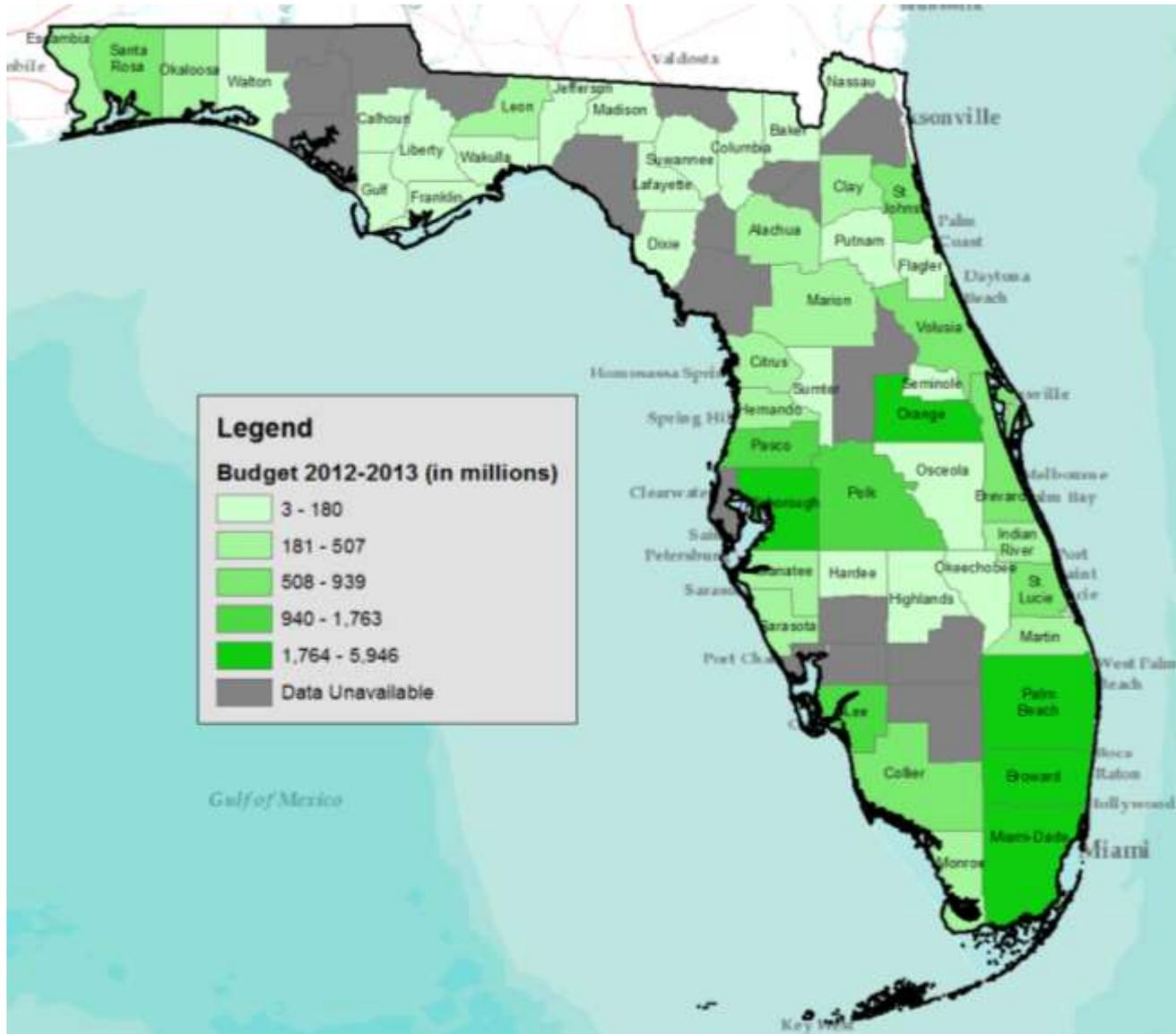
# Earthquakes and Seismic Hazard



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# 2013-2013 County Budgets

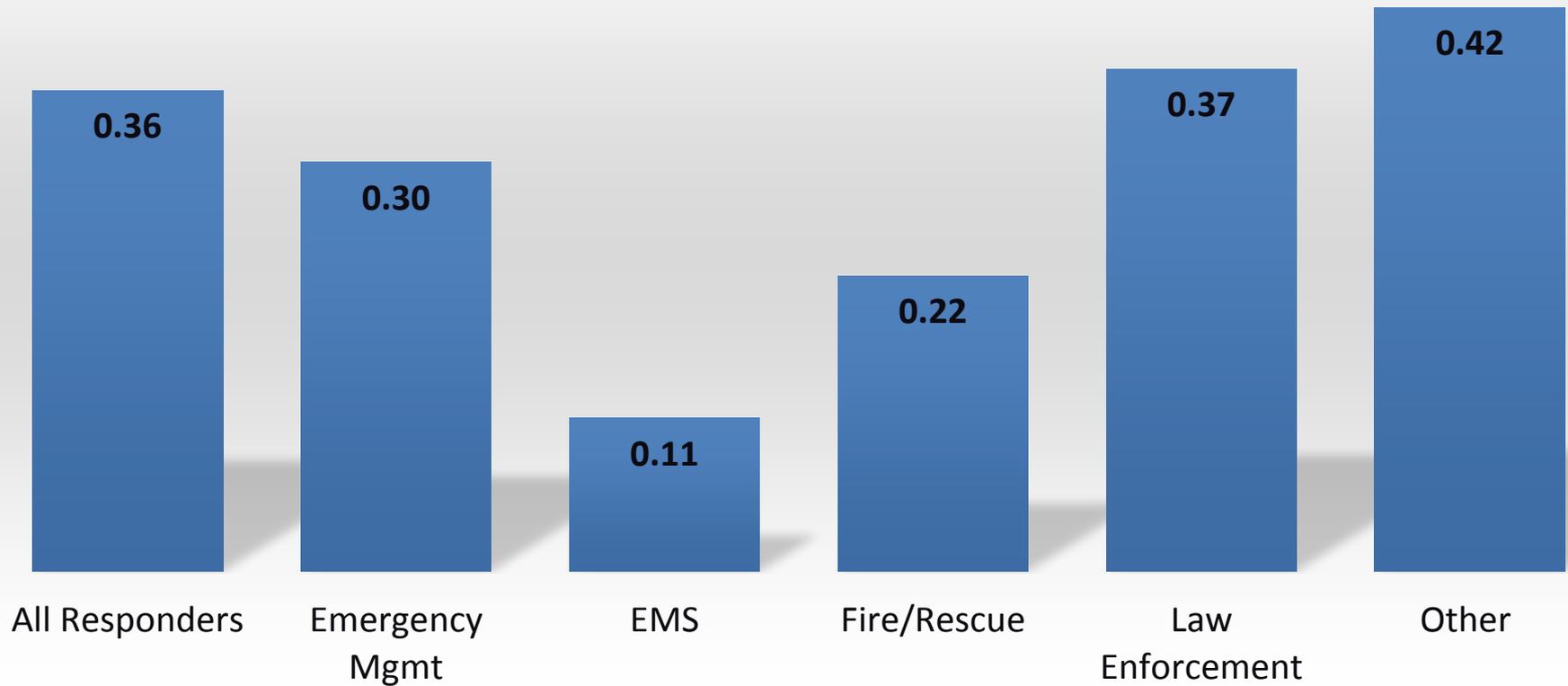


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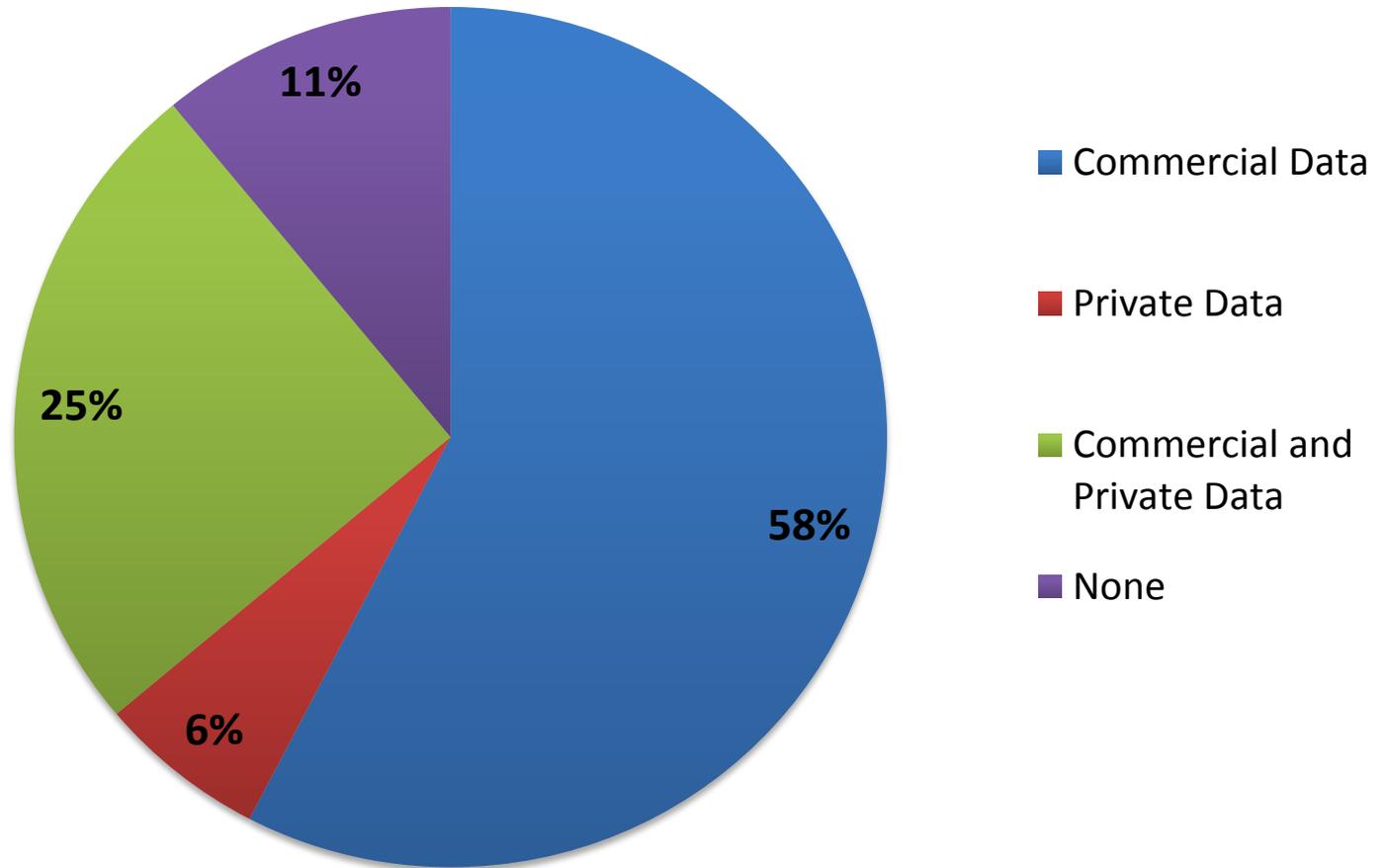
# National Mobile Data Survey Results

**Average Number of Wireless Data Devices per Responder  
(does not include LMR)**



# National Mobile Data Survey Results

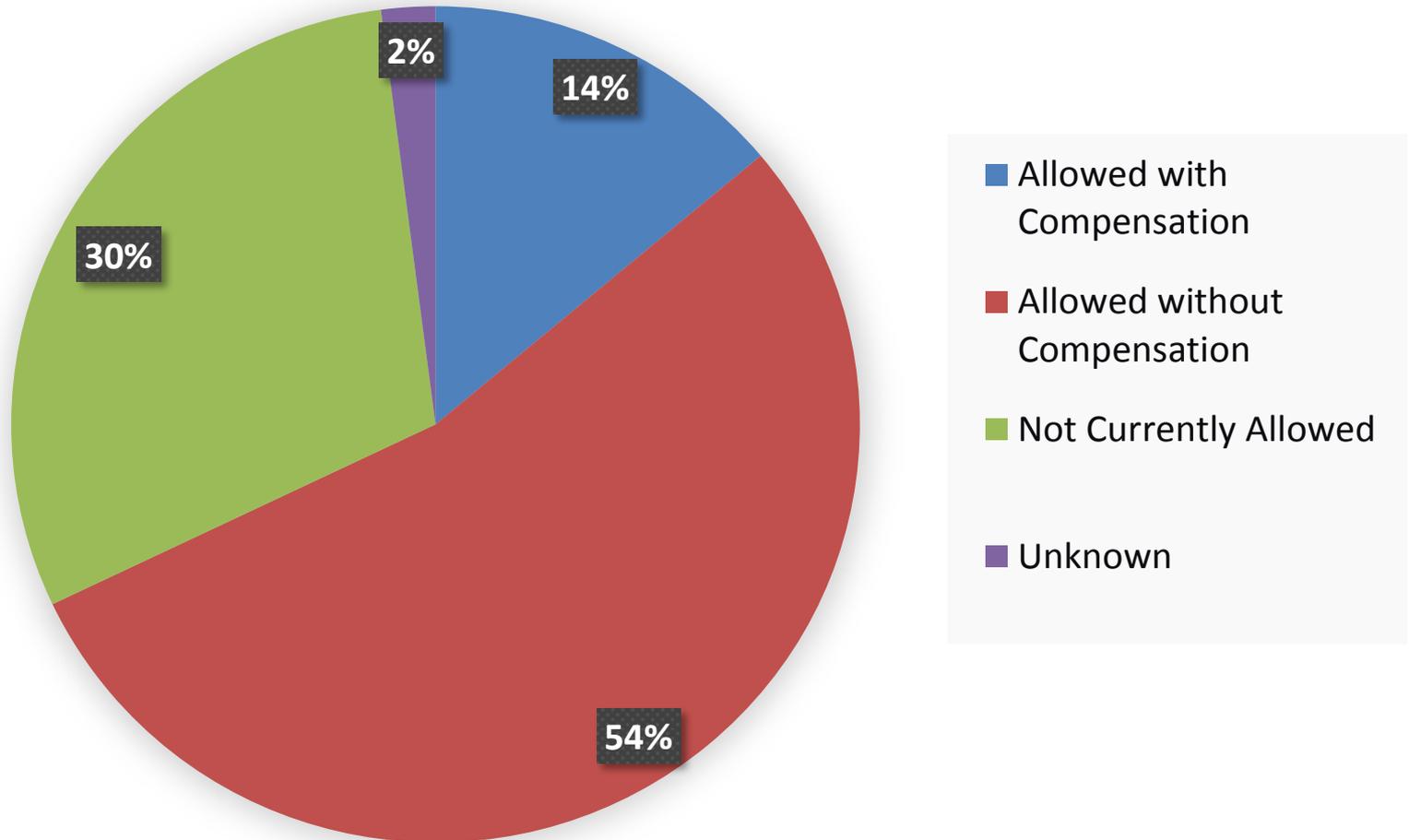
## Wireless Data Systems (All Agencies)



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# National Mobile Data Survey Results

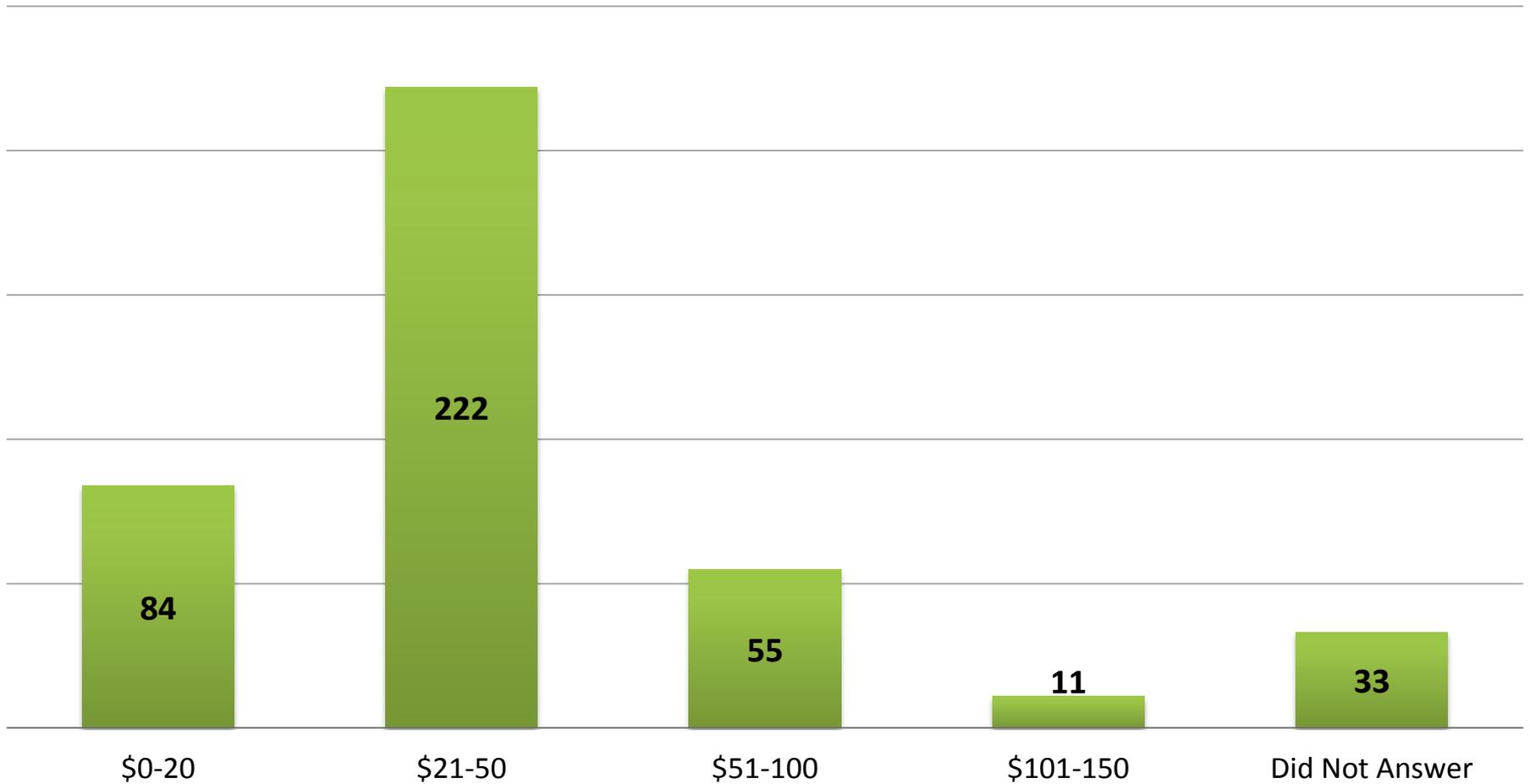
## Use of Personal Devices (All Agencies)



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# National Mobile Data Survey Results

## Average Monthly Device Costs for Commercial Systems



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# Florida Baseline

*What are the State's priorities for each of the following phases?*

## **Phase 1:**

*Please insert your priorities for Phase 1.*

## **Phase 2:**

*Please insert your priorities for Phase 2.*

## **Phase 3:**

*Please insert your priorities for Phase 3.*

# Next Steps / Discussion



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# Possible Next Steps

- OEC will provide updated coverage objectives with today's input
- OEC can provide all layers for Florida's continued use
- How would Florida propose to update and provide this to FirstNet for consultation?
- Are there additional layers that should be added?
  - OEC base levels?
  - State specific information?
- How will Florida collect potential user information?
  - State survey?
  - Mobile Data Survey Tool?



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