

North Carolina 911 Board
PSAP Managers Meeting
October 10-11, 2018
Embassy Suites Hotel
Greensboro, North Carolina



Opening Remarks

Eric Boyette

*Secretary and State Chief Information Officer
Chair, NC 911 Board*

Pokey Harris

Executive Director, NC 911 Board



The Circle of Life!!!

Virginia Strategic Planning for Statewide Interoperability

Focus Group 1



Wytheville, VA

April 7, 2004

Follow Up Report



Homeland
Security

2018 NC PSAP Managers Meeting

October 10, 2018

Office of Emergency Communications

Chris Essid

Today in the United States



657,500
emergency calls will
be made to 9-1-1

33,400
arrests will be
made by law
enforcement



1,000+
fires will be fought
by fire
departments

60,000+
patients will be
transported
by EMS



Millions of public safety personnel will rely on
emergency communications to protect property & save lives

OEC's Creation and Mission

OEC supports and promotes communications capabilities used by emergency responders and government officials to keep America safe, secure, and resilient



Sept. 11, 2001



Hurricane Katrina

- Lack of national and statewide plans
- Lack of governance
- Lack of standard operating procedures
- Limited training and exercises
- Limited technical standards



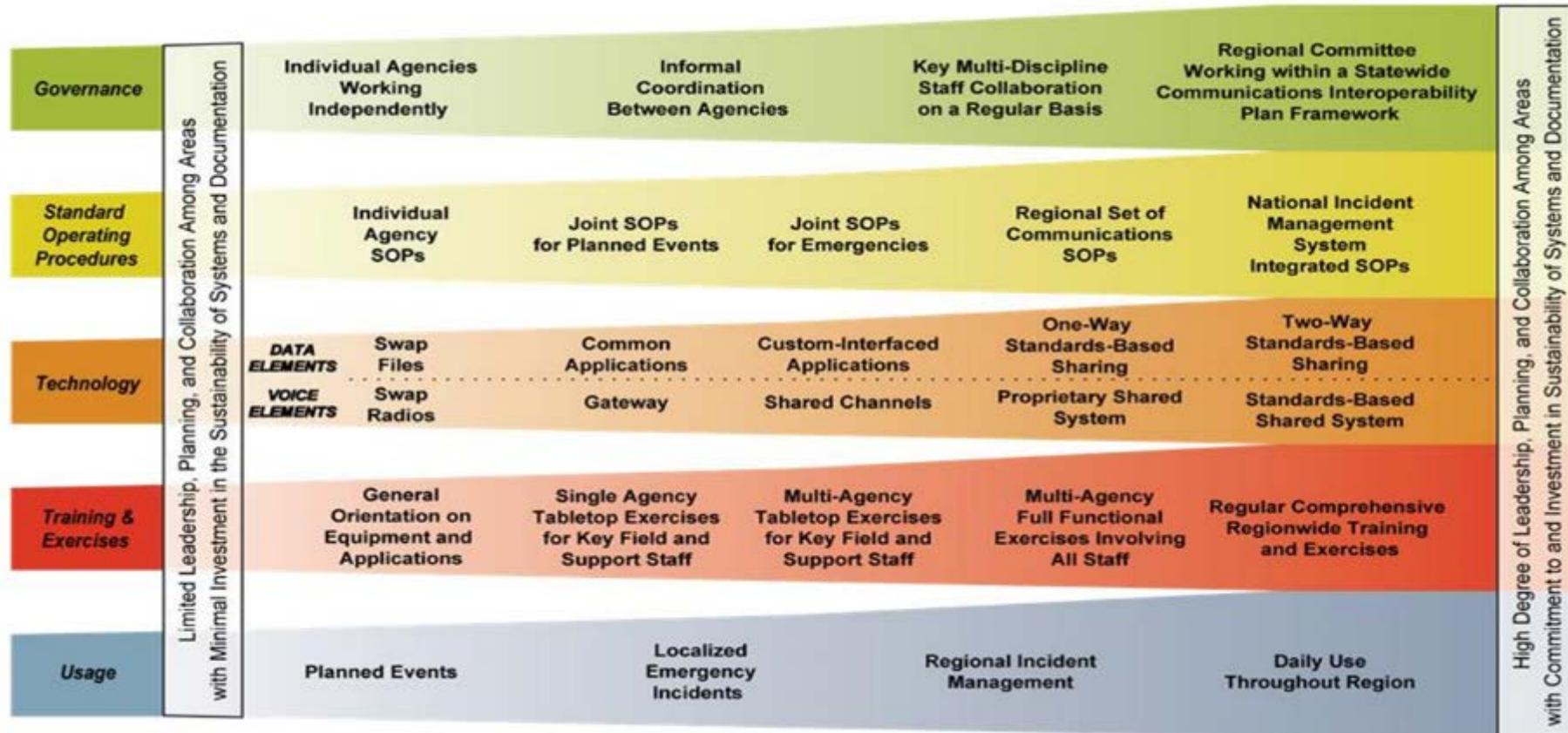
Office of Emergency Communications

Created in 2007 to address public safety interoperability gaps

Interoperability: Ability of emergency responders to communicate among disciplines, jurisdictions, frequency bands, and levels of government as needed and as authorized.

More Than Just Technology

Interoperability Continuum



2018 OEC Strategic Initiatives

- **National Emergency Communications Plan (NECP):** OEC has begun development of the 2019 NECP in coordination with Public Safety stakeholders. The NECP is a stakeholder-focused five-year strategic plan to guide the nations emergency communications.
- **National Governors Association (NGA) Policy Academy on Enhancing Emergency Communications Interoperability:** NGA, with support from OEC, conducted five policy academies in 2016 to assess and strengthen public safety communications and to identify strategies to achieve specific goals. Through a year-long partnership NGA and OEC will engage the nation's senior state officials and emergency communications leaders to improve interoperability across all existing and emerging Public Safety communications systems.
- **Communications Unit (COMU) 2.0:** OEC, through the SAFECOM Communications Section (COMM) Task Force, is in the process of developing a nationwide model for COMU governance. Additionally the task force is working to develop updated curriculum, position descriptions, and credentialing requirements.

Technical Assistance Overview

- OEC provides Technical Assistance (TA) to all 56 states and territories to support them in strengthening interoperable emergency communications capabilities
- TA support includes on-site training and exercises, facilitated strategic planning workshops, and automated tools
- A field force of OEC Coordinators works directly with state and local leaders to strengthen governing bodies, implement strategic plans, plan for emerging technologies, and inform OEC programs from the user perspective
- TA services support the nationwide vision for emergency communications as outlined in the NECP



**DHS OEC FY2018 TA/SCIP Guide
Highlights & Offerings**

TA/SCIP Guide version - 4.3

Department of Homeland Security
Office of Emergency Communications

August 2017



Technical Assistance Offerings

Some Technical Assistance offerings of interest may include:

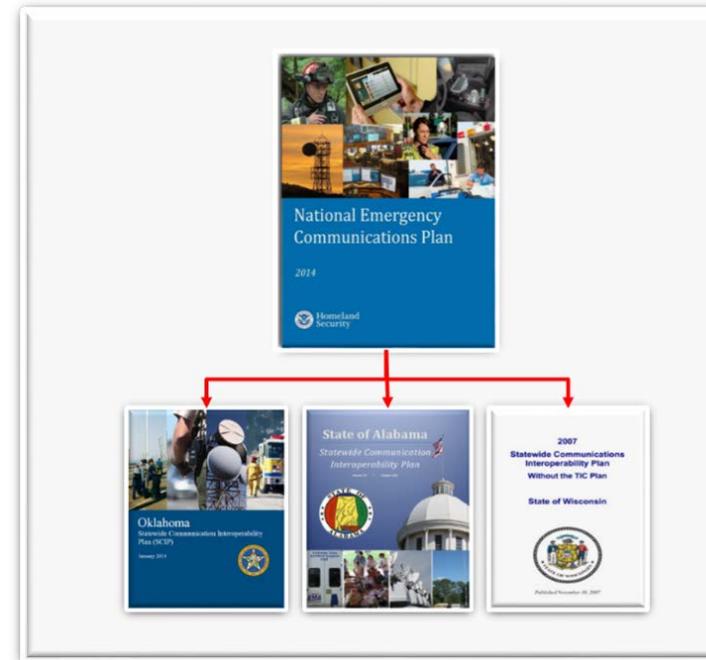
- **Next Generation 9-1-1/Strategic Planning Support:** NG9-1-1 is a system of hardware, software, data and operational capabilities and procedures which continue to evolve. This offering has been updated to include Computer-Aided Dispatch (CAD) to CAD and CAD to Records Management Systems (RMS) transition support.
- **Next Generation 9-1-1/PSAP Cyber Awareness and Assessment:** As the hub for communications between multiple public safety agencies and the public, PSAPs provide both 9-1-1 call answering and dispatch functions. The components making up this service can be exposed to numerous networks, devices, and actors and the cybersecurity vulnerabilities that come with them. In coordination with the DHS SECIR CSA, OEC provides cyber assessments for 9-1-1/PSAP dispatch and LMR Systems using the NIST 800-53 framework. The criticality of 911 and PSAP functions during an emergency response means cyber-attacks could result in large-scale impacts, making them a potential target.

Statewide Emergency Communications Planning

What OEC Provides

Facilitated workshops to develop a strategic emergency communications plan based on stakeholders' input to align with the National Emergency Communications Plan

- The Statewide Communications Interoperability Plan (SCIP) is a stakeholder-driven, multi-jurisdictional, and multi-disciplinary statewide strategic plan to enhance interoperable and emergency communications
- Workshops are customized to meet the State/Territory's needs
- OEC support continues after the workshop for updates and implementation through Technical Assistance



National Emergency Communications Plan



- The National Emergency Communications Plan (NECP) was released in 2008 as first national strategic plan for emergency communications
- Updated in 2014 to account for new technologies and a broader emergency communications community
- A new update is scheduled for release in 2019

DHS Priority Telecommunications Services

GETS

Government Emergency
Telecommunications Service



1994

WPS

Wireless Priority Service



2002

Who Should Have GETS and WPS?

Individuals	Organizations	Locations/Functions
<ul style="list-style-type: none">▶ Mayor, council members, supervisors▶ City manager and staff▶ CFO▶ Media relations▶ OEM mgmt and staff▶ Police/fire chiefs and staff▶ Police/fire field command▶ Dept heads and staff▶ SMEs and trained specialists▶ Individuals with an NS/EP role	<ul style="list-style-type: none">▶ Cities/counties/states/districts▶ Office of Emergency Management▶ Police/sheriff/fire water and power, telecom▶ Public works▶ Irrigation districts and flood control▶ Public health▶ Financial institutions▶ Hospitals and medical services	<ul style="list-style-type: none">▶ Transit agencies▶ Ports and airports▶ Utilities, transportation, and other industries▶ Search and rescue▶ School and college districts▶ Red Cross and volunteer agencies▶ Critical infrastructure suppliers▶ Other agencies included in county emergency management plans
<ul style="list-style-type: none">▶ EOC work stations▶ Back-up EOC▶ City and county operations centers▶ PSAPs (911 center)▶ Computer/IT center▶ Police/fire dispatch▶ City and county yards▶ Remote offices and stations▶ Power and pump stations▶ Shelters▶ Command vehicles		

Uses for GETS and WPS

- Maintain communications with leadership
- Contact personnel on their home/cell phones
- Communicate with response personnel that do not have radio access (e.g. partners)
- Discuss sensitive information that may not be appropriate for radio broadcast
- Access to teleconferencing

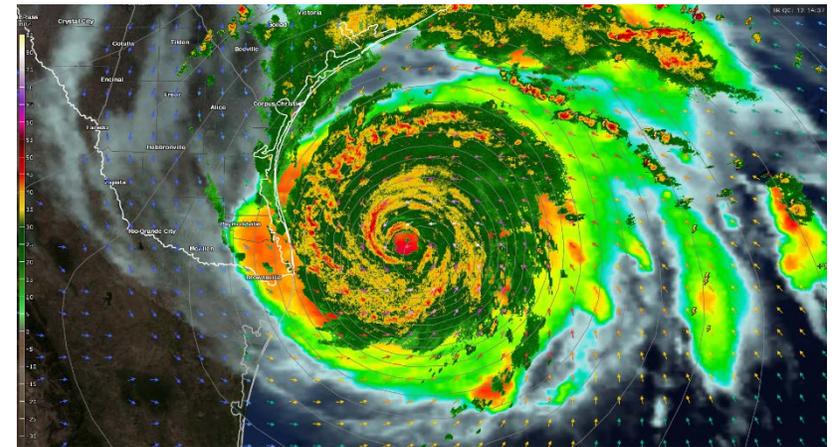
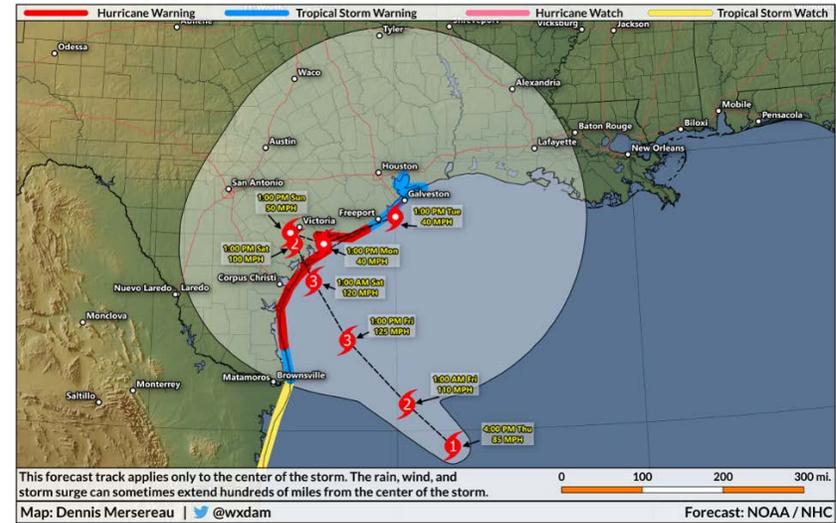


Hurricane Harvey ~ August 2017

GETS Calls	7,006
GETS Completion Rate	98%
WPS Calls	796
WPS Completion Rate	98%

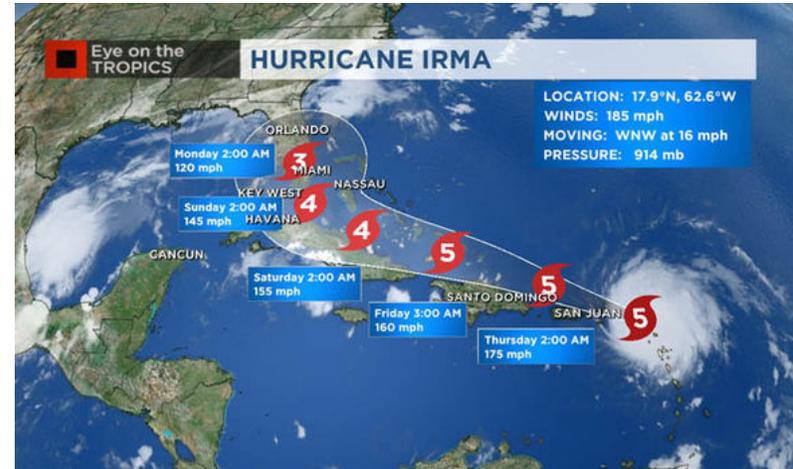
Hurricane Harvey
5:00 PM CDT Thu., August 24, 2017

WINDS: 85 MPH || MOVEMENT: NNW @ 10 MPH || MIN. PRESSURE: 976 mb



Hurricane Irma ~ September 2017

GETS Calls		3,719
GETS Completion Rate		98%
WPS Calls		3,859
WPS Completion Rate		93%

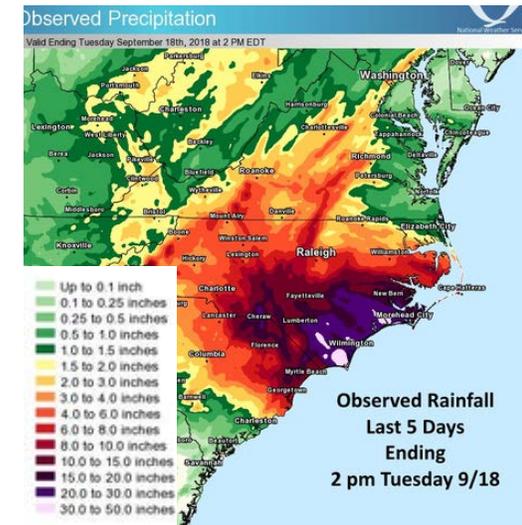
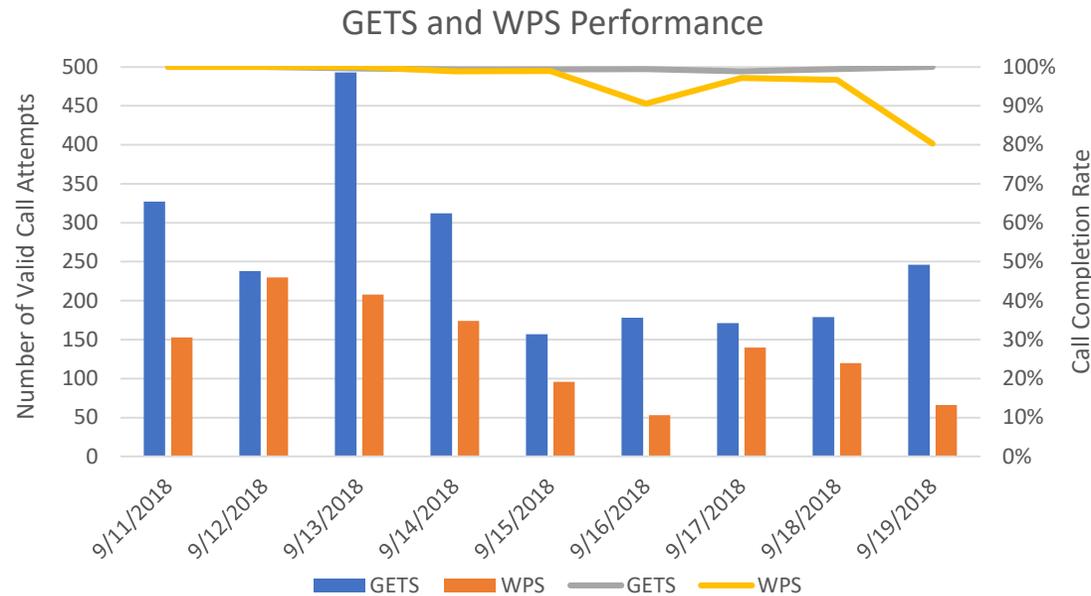


Hurricane Florence, September 11-19, 2018

- Landfall: September 14, 2018, Wrightsville Beach, NC as Category 1
- Area of impact: North Carolina, South Carolina, Virginia
- Completed user calls
 - GETS: 2,292 (99.6% completion rate)
 - WPS: 1,121 (97.7% completion rate)

Expedited requests:

- GETS: 142
- WPS: 2,849



By US National Weather Service Eastern Region Headquarters - <https://commons.wikimedia.org/w/index.php?curid=72868357>

DHS Priority Telecommunications Services

Recent Enhancements in Cost and Convenience

Most Carriers now waiving WPS Fees for Public Safety Organizations

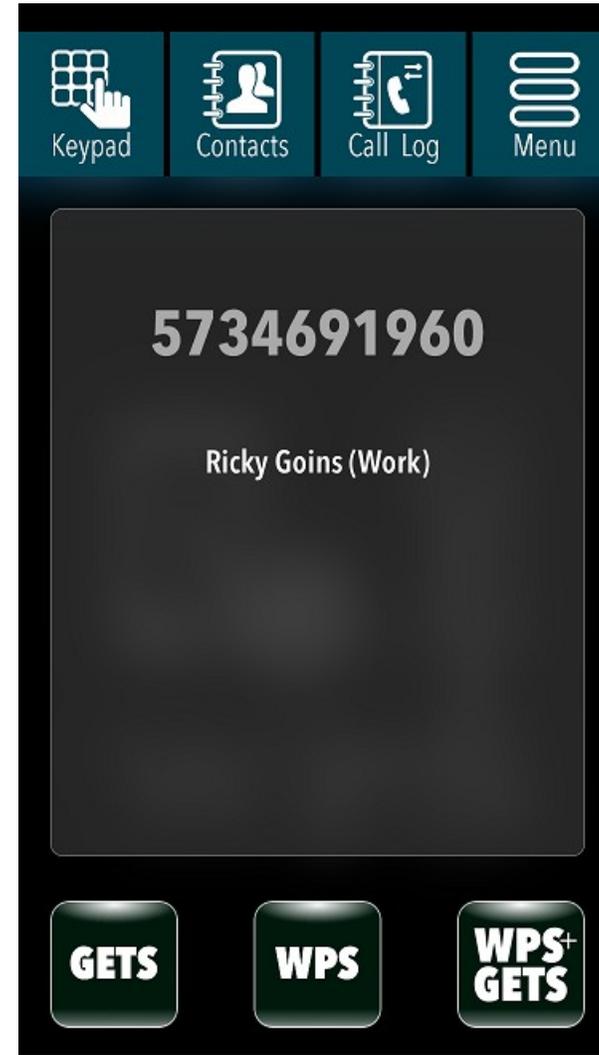
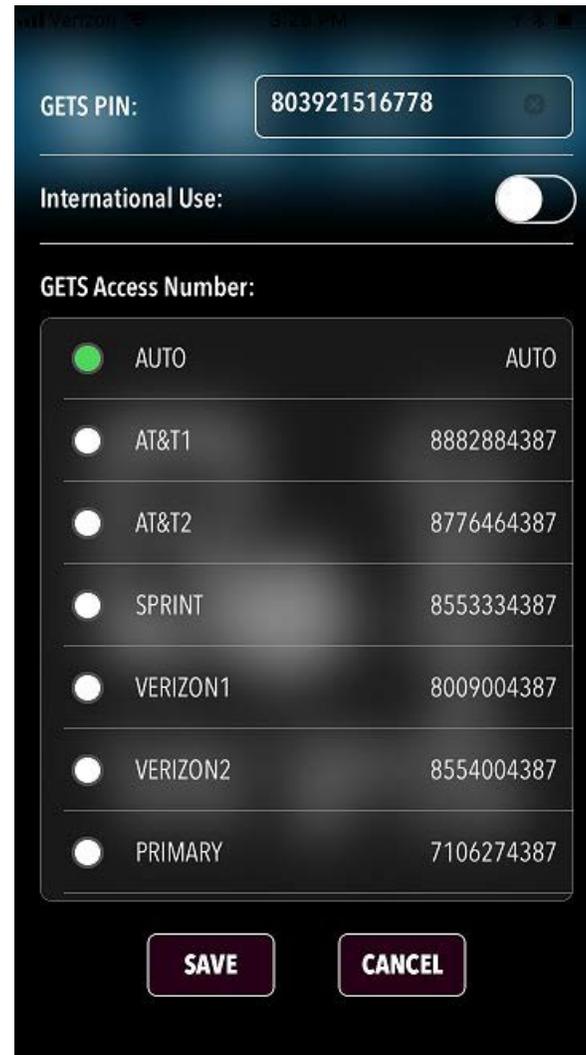
PTS Dialer App Stores GETS PIN and Integrates WPS to Contact List

iPhone available at the Apple APP Store

Android available at <http://gets-wps.csgov.com/apps>

DHS Priority Telecommunications Service Center: 866-627-2255

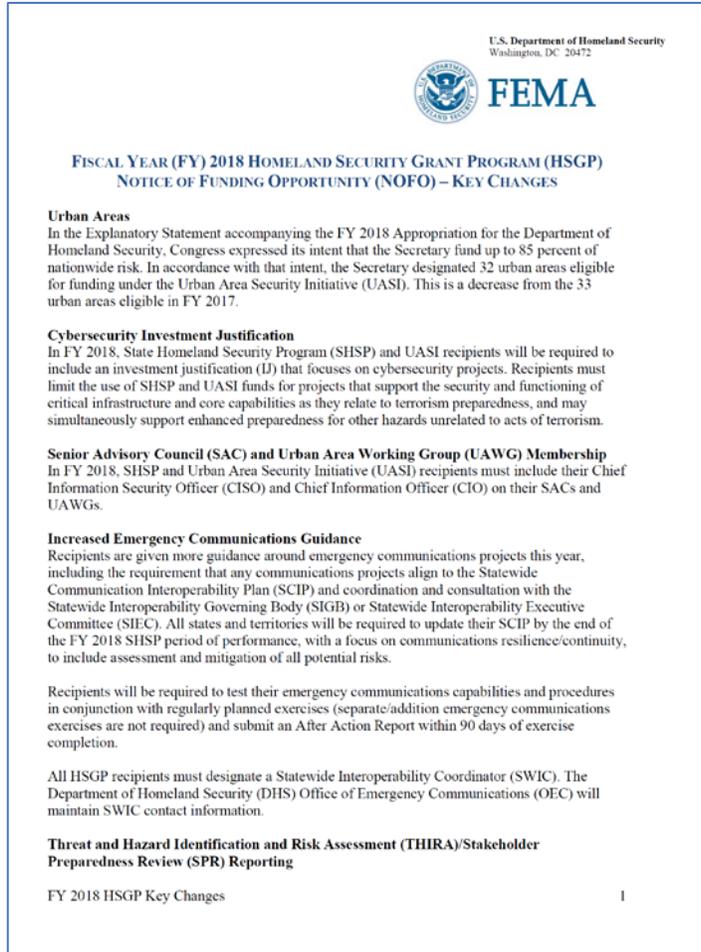
Now Available: GETS / WPS Integrated Dialer



Homeland
Security

Office of Emergency Communications

2018 Homeland Security Grant Program



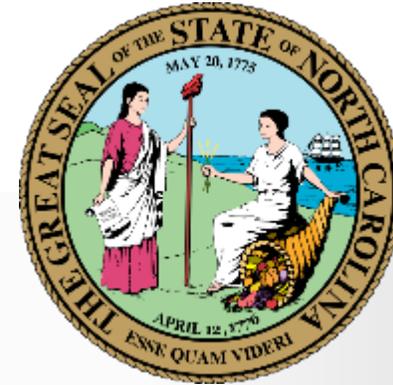
- States, as the primary grantees, must:
 - ✓ Designate a full-time SWIC
 - ✓ Update SCIPs within three years with a focus on resilience/continuity with assessment and mitigation of risks identified in the SCIP
 - ✓ Test communications in conjunction with regularly planned exercises and submit an after-action report (AAR)
- Investment justifications must:
 - ✓ Be precoordinated with the SWIC and/or SIGB/SIEC
 - ✓ Describe how investments align to the SCIP and how potential risks are assessed and mitigated
 - ✓ Comply with SAFECOM Grant Guidance

North Carolina: Assistance Provided to Date

OEC's support to North Carolina to date has included:

- **Training:** 125 COML, 66 COMT, and 99 AUXCOMM personnel trained on public safety incident communications
- **Technical Assistance:** 46 on-site deliveries (e.g., AUXCOMM, COMMEX, COML, NG9-1-1)
- **Planning:** SCIP updated September 2017
- **Priority Service:** 6,033 (GETS) /

2,273 (WPS)



Questions?

Office of Emergency Communications

www.dhs.gov/oec

www.dhs.gov/SAFECOM

Chris Essid

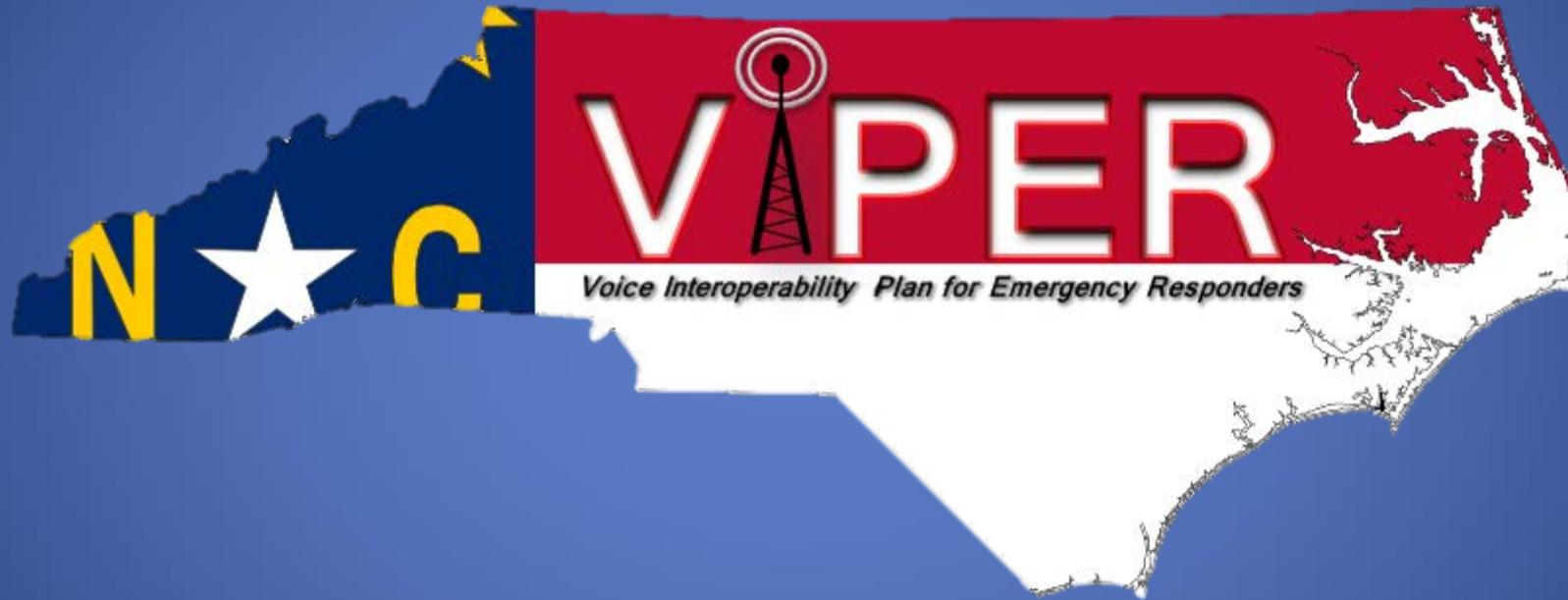
U.S. Department of Homeland Security

Office of Emergency Communications

Central Sector Chief

Chris.Essid@hq.dhs.gov

North Carolina Voice Interoperability Plan for Emergency Responders (VIPER)



2018 PSAP Managers Meeting

Wednesday, October 10, 2018

VIPER Overview

- Statewide P25 interoperable voice communications system
 - ✓ Planned for approximately 241 sites statewide
 - ✓ Available to all federal, state and local emergency responders
 - ✓ Compatible with multiple radio vendors
 - ✓ No user fees to operate radios on the system
 - ✓ NCSHP tasked with operations and maintenance of the system

System Statistics

- 115,590 Active radio ID's on the system
- 3,971 Talk groups
- 34 Console sites; 196 console positions
- 1,567 Channels
- 176 Federal, State and County agencies on the system; does not include local agencies
- 8.7M average Push-to-Talks monthly
- 2,200 average Busies monthly (0.02%)

Construction

- To date, 222 sites constructed and operational
- Sites in progress
 - 5 sites in **construction process**: Creedmoor Road (**Wake County**), Fairview (**Union County**), Rich Hill (**Ashe County**), Hap Mountain (**Madison County**), Pittsboro (**Chatham County**)
 - 4 sites **pending lease approval**: Rocky Top (Georgia), Scotland Neck (**Halifax County**), Richlands (**Onslow County**), and Triad Park (**Guilford County**) are pending lease approval.

Ongoing Challenges.....

- Construction
 - Lack of exemption for State owned property , thereby increasing the construction schedule and at times stopping the construction of a possible tower site.
 - Finding suitable property to build a tower site
 - Timeliness of getting fully executed leases
 - ✓ State Property Office
 - ✓ State Construction Office
 - ✓ Council of State
 - ✓ Government Ops

Challenges (cont.)

- Funding
 - Sufficient recurring funding to provide for maintenance and support of system itself
- Capital funding to provide for technology upgrades and to refresh aging equipment such as:
 - Quantar base station replacements to GTR
 - Alcatel MDR8000 Microwave upgrade
 - The system continues to increase in number of user daily

Approved Radios

- **Motorola** – XTS/XTL 1500/2500 and 5000 series, APX 1000/4000/6000/7000/8000 series portables and APX 1500/4500/6500/7500/8500 mobiles
- **EF Johnson** – 51SL/53SL series, VP400/VP600/VP900/VP5400 series portables and VM400/600/900 series mobiles.
- **Harris** – Unity XL-200 portables, XG100P/XG100M series, XG75P/XG75M series XG25P/XG25M and XG15 series portables.
- **Kenwood** - TK-5410/5910 series and NX series portables and mobiles
- **BK-RELM** – KNG-P800/M800 series.
- **TAIT** – TP9400/TM9400 series.

PSAP & VIPER



PSAP Integration

- Currently 21 County owned PSAPs (Primary, Backup or City Owned) directly connected to VIPER.
- In addition to those PSAPs, there are 12 State Owned Dispatch Centers and 1 Private University (Duke) directly connected to VIPER.
- Through permissions in the zone controller, any of these facilities could backup any other facility or any VIPER talk groups from counties not directly connect to VIPER.
- Through Site Access Profiles, sites could be allowed to have access to other counties talk groups to provide talk group backup with hand-held radios or consolettes.

PSAP Integration (cont.)

- There are many other options that could be implemented between VIPER and PSAPs that would allow for better interoperability and redundancy for PSAPs.
- One example would be paging over VIPER. There have been some test done with Catawba County in regards to paging over VIPER. More will be put out later this year about the results of this testing.
- When developing a backup plan for your PSAPs, if you have a question about if something could work on VIPER, please contact us and we will work with you on a possible solution. Contact information provided at end of presentation.

SHP Secondary PSAP Challenges

- The State Highway Patrol operates five (5) Communication Centers across the State which receive and dispatch Emergency calls for service from the public while lacking basic 9-1-1 features introduced in the 1980's such as ANI and ALI data and a modern CAD system.
- Currently, neither the number nor the location from which the call originates is available to the Patrol. Therefore the telephone caller is dependent on being able to provide their location so that help can be dispatched. Without a modern CAD to integrate the information into a GIS database which includes the nearest Emergency Responders, precious time is lost while the information is processed and relayed appropriately.
- This is the reason for our desire to become a true "Secondary PSAP". At the end of the day, its our duty to provide that vital life-link.

Steps Being Taken to Resolve Issue

- We are currently in the process of researching CAD/RMS vendors as well as planned visits to various PSAP Centers across the State.
- The selected CAD system should allow public safety operations and communications to be augmented, assisted, or partially controlled by an automated system. It should include such capabilities as:
 - Computer-controlled vehicle dispatching, vehicle status, incident reporting and management information
- The ultimate goal is to have a system that optimizes rapid response time but more importantly, reliability.
- We welcome and solicit any assistance from your department in our search.

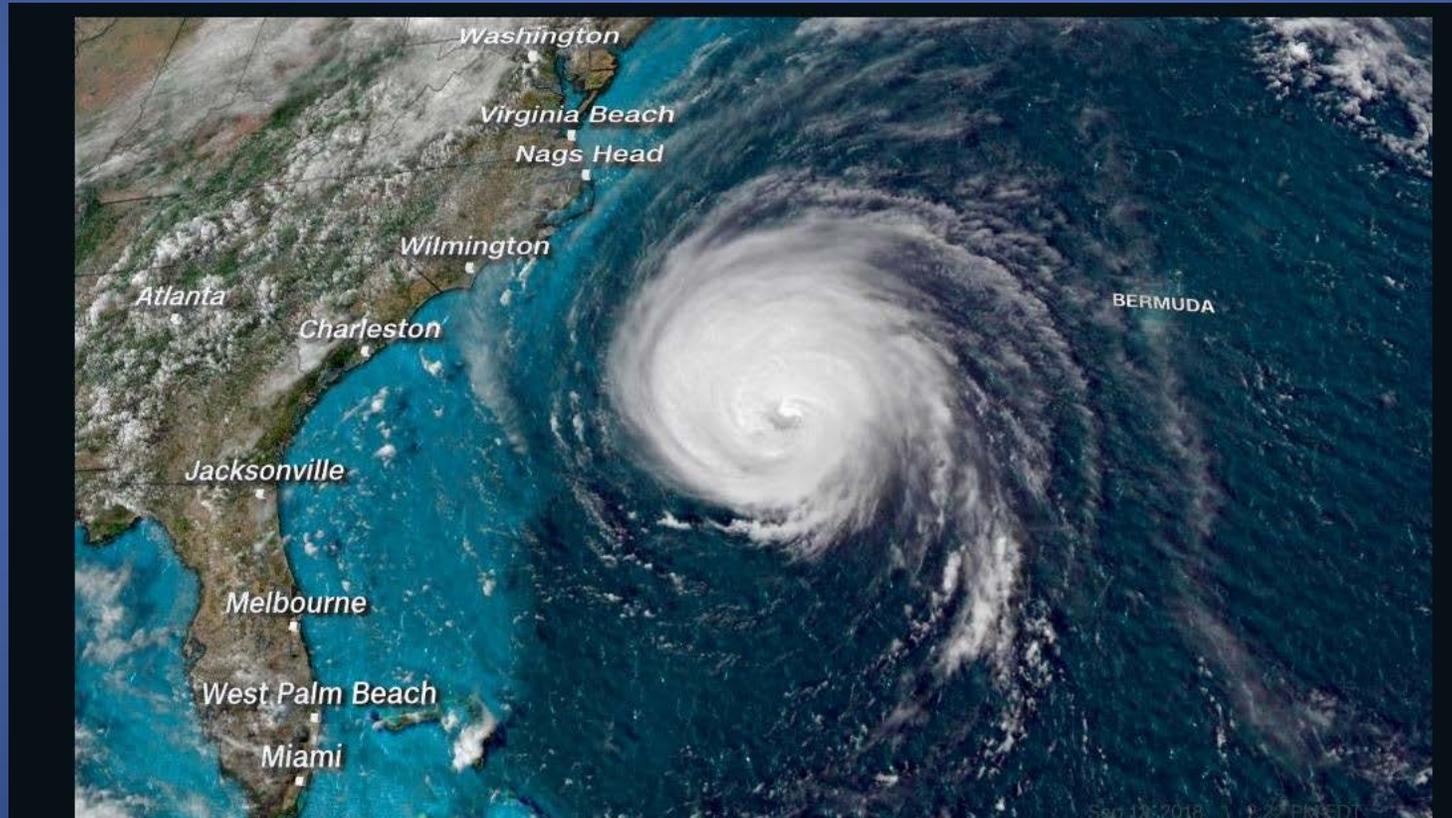
FirstNet & VIPER



VIPER vs. FirstNet

- Both support public safety but have distinct differences in function and services
 - VIPER is **MISSION CRITICAL VOICE** communications, while FirstNet is **DATA** communications.
 - VIPER is a closed system while FirstNet is an open system.
 - User devices for the systems are also different with VIPER using Land Mobile Radios (**LMR**) and FirstNet using cell phones, tablets and laptops.
 - Although different in nature, both can and will complement each other in today's world

VIPER vs. Hurricane Florence





- Beginning on September 5th, VIPER Field Staff and TSU Members started making preparations and checking site conditions ahead of a possible landfall from Hurricane Florence.
- Landfall occurred overnight between September 13th and 14th. Hurricane Florence stalled upon landfall and the effects were felt throughout North Carolina well into September 16th.

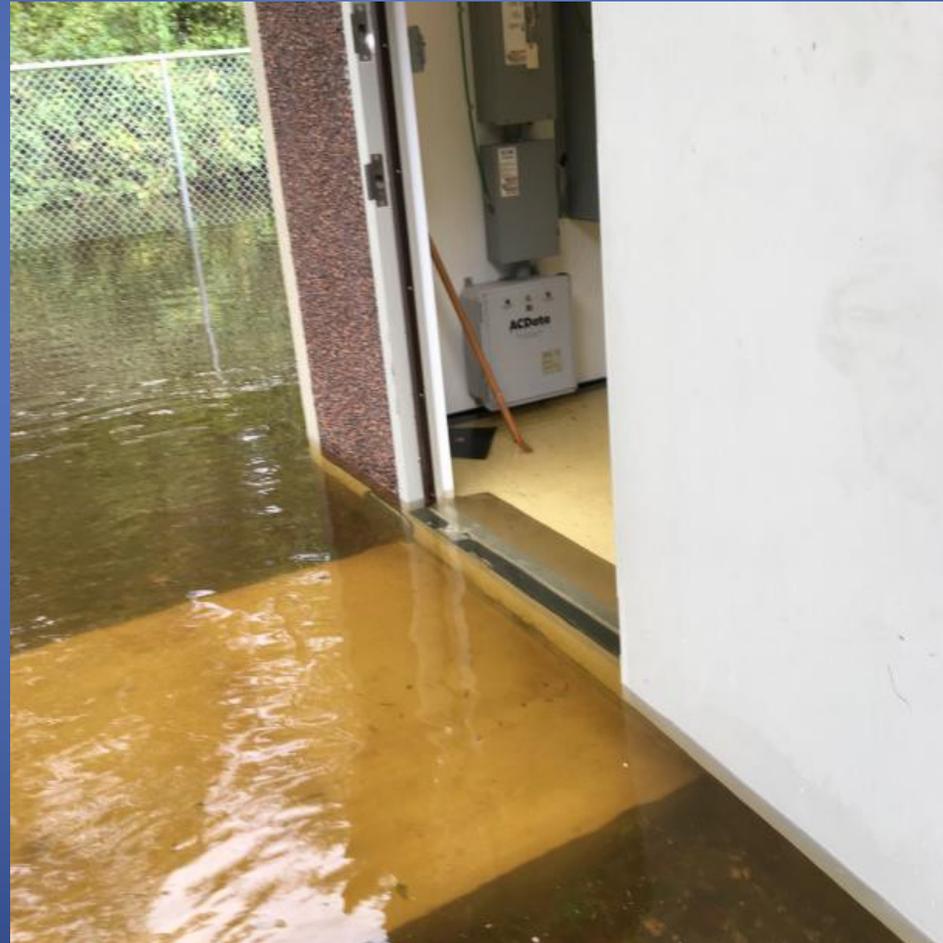
Jacksonville Site

Suffered damage to the site generator and a portable unit was brought in to keep the site in service until commercial power was restored



Laurinburg Site

Remained online throughout the storm; however, some electrical components were disconnected to prevent further damage to them.



Chinquapin Site

Suffered 42 inches of water in the building and equipment

While the Chinquapin site was off line, a portable tower trailer with satellite back haul was put in place to provide wide area coverage in the affected area



VIPER Response (cont.)

- Between September 10th and September 23rd, the VIPER System handled **4,644,869 push to talks** on the system. During the same time, there were 25,140 busies. Most busies and push to talks occurred from September 14th to 18th during rescue and recovery operations. The **average number of push to talks** during these 5 days was **385,000**, during a normal day on the system the average is 280,000.
- VIPER sites ran on **generator power** for a combined **3,640 hours, 40 mins and 41 seconds**.
- **VIPER Staff** put in over **2,100 man-hours** in preparation and response to Hurricane Florence.
- During the storm, VIPER **added over 5000 total radios to the system**, bringing the total in excess of 115,000 radios on the network.
- Of the 222, **only three VIPER sites suffered damage** from flooding in the buildings: Jacksonville, Laurinburg and Chinquapin.
- Only one site remained off line when the storm passed.

The VIPER Team



NCSHP VIPER Network Team





Questions & Answers

VIPER Contact

For all questions relating to VIPER, please contact the North Carolina State Highway Patrol:

Technical Services Unit/VIPER Director

Captain Jeff Gordon – Jeff.Gordon@ncdps.gov

919-662-4440 (office)

24 Hour VIPER Network Operations Center

1-888-92-VIPER

(1-888-928-4737)

VIPER Website: www.ncdps.gov/Our-Organization/Law-Enforcement/VIPER

BREAK

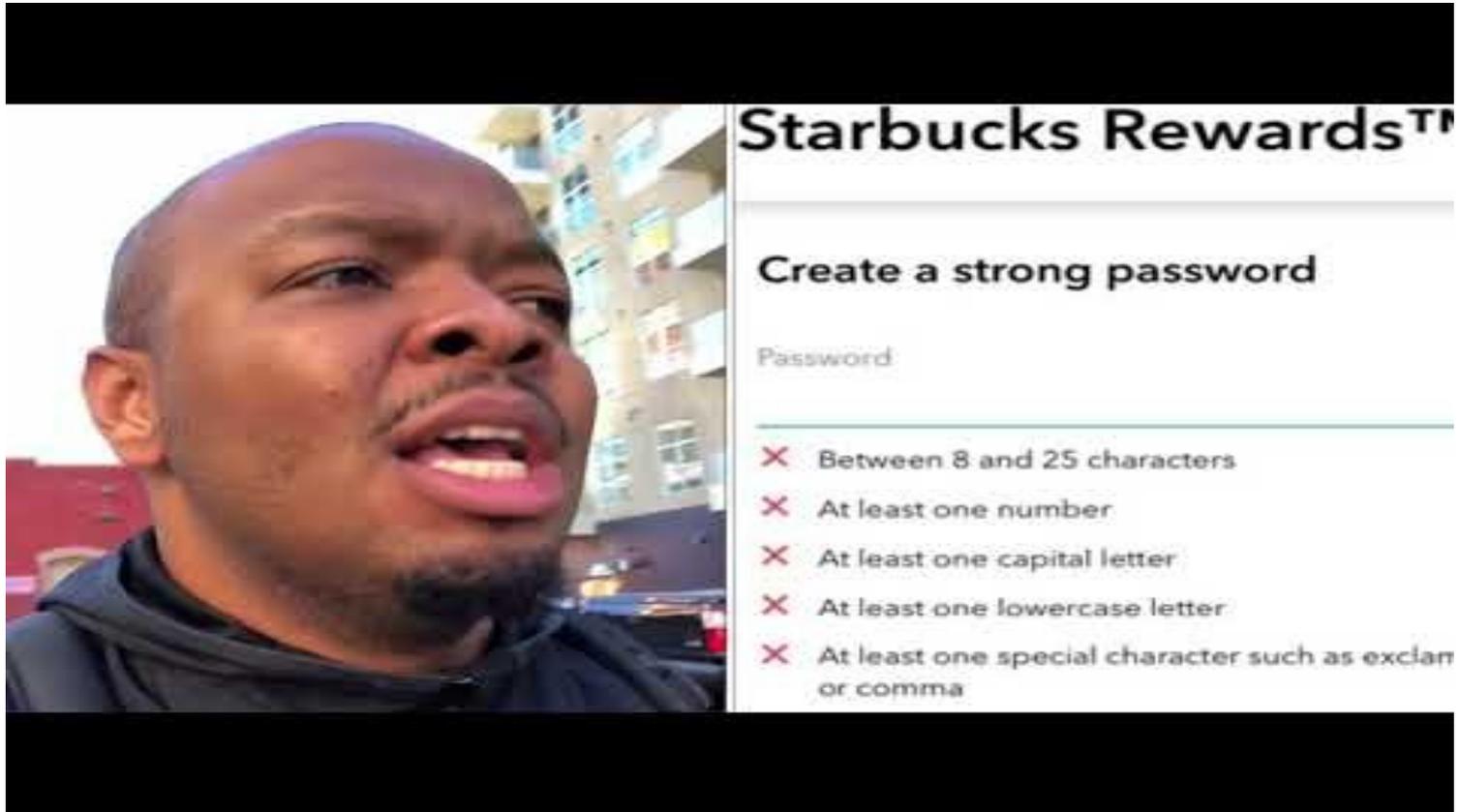


**Cyber Awareness
Month
PSAP Threats,
Vulnerabilities and Best
Practices**

Maria S. Thompson
State Chief Risk Officer



WHY STRONG PASSWORDS?



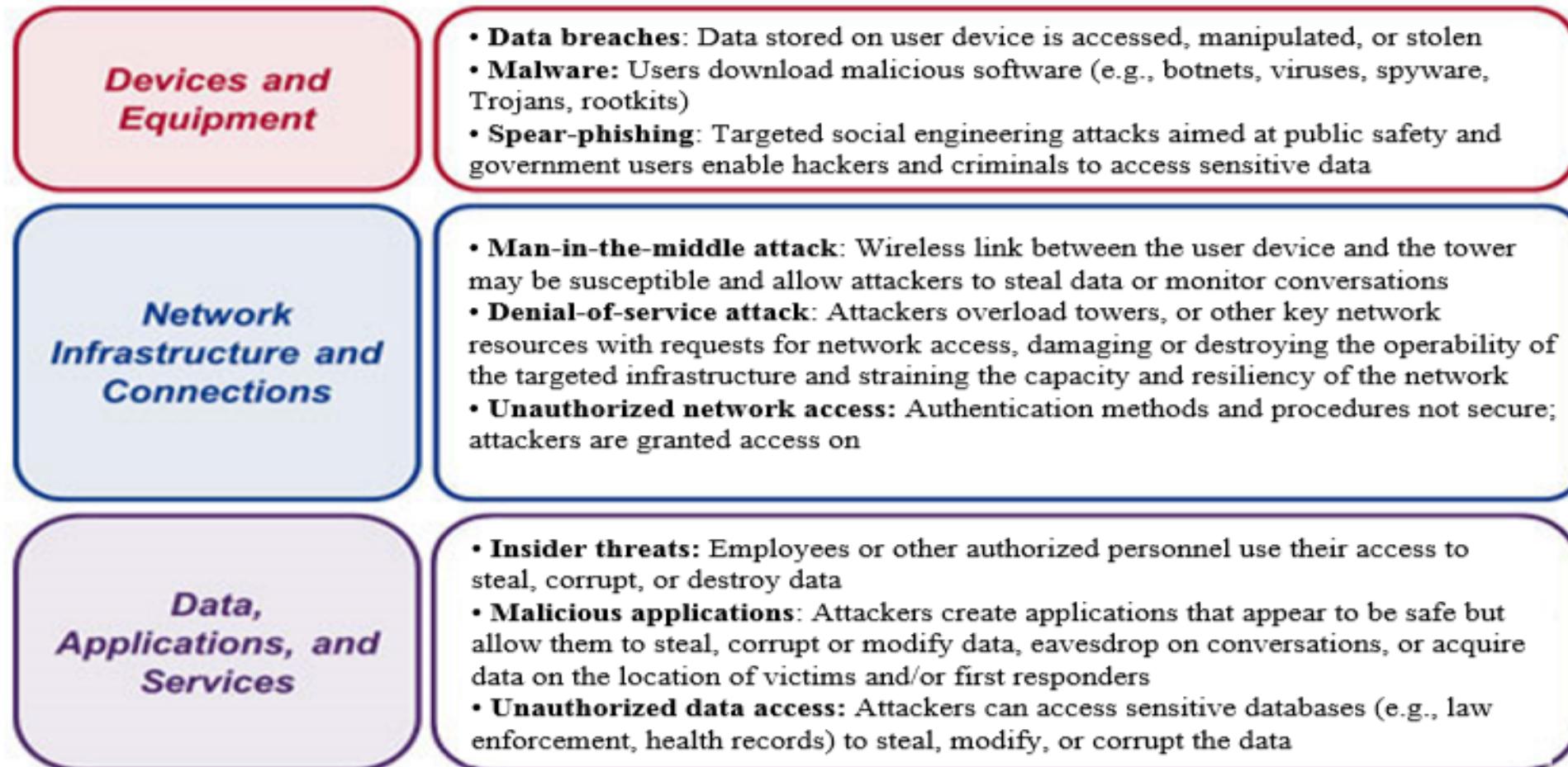
TOPICS

- ❖ Current State Threat Landscape
 - ✓ Phishing
 - ✓ Denial of Service / TDOS
 - ✓ Internet of Things
 - ✓ Cyber Hygiene
- ❖ Strategic Plans & Best Practices
 - ✓ Interoperability
 - ✓ Risk / Security Assessments
 - ✓ Continuous Monitoring
- ❖ Free Cyber Training Resources
- ❖ Cybersecurity Incident Reporting Requirements
- ❖ Questions?



Current State Cyber Threat Landscape

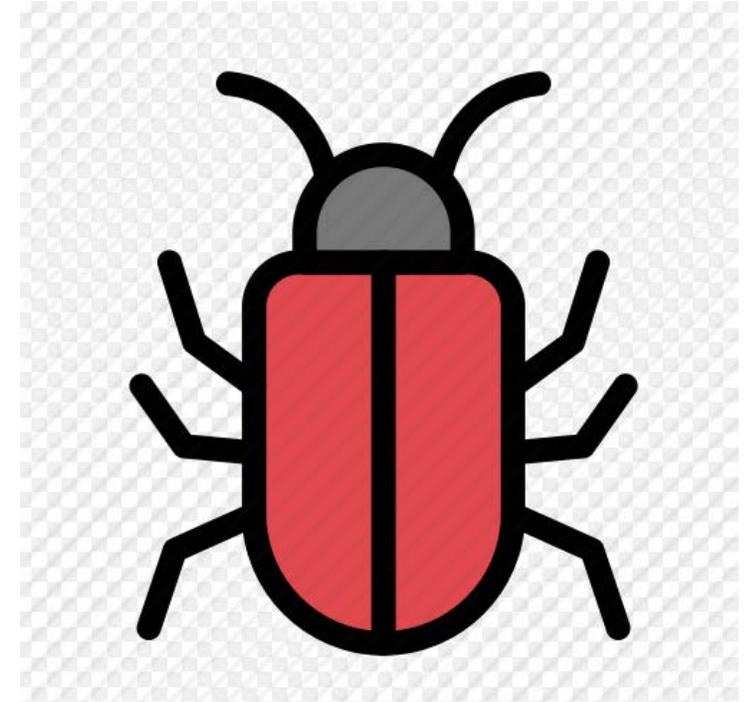
Today's cyber risks are increasing. New technologies bring greater capabilities at a trade off. Convergence of traditional systems and IT networks create more risks to be mindful of.



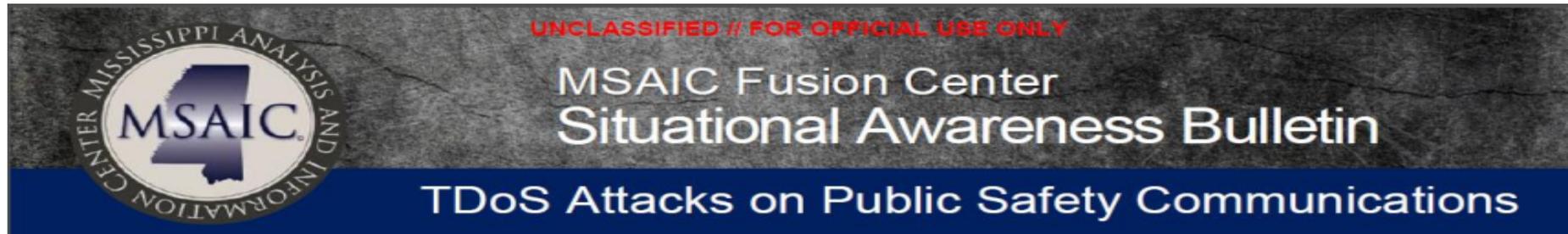
Current State Cyber Threat Landscape

...You are only as strong as the weakest link!

- ❖ Between 50 – 70% of incoming emails are identified as Phishing, SPAM or Virus
- ❖ The past couple of years, local counties have reported an uptick in ransomware
- ❖ Distributed Denial of Service (DDoS) attacks are low hanging fruit for cyber criminals. For PSAPS, TDOS or DDoS is a very real problem
 - ✓ Can disrupt operations by overwhelming the system
 - ✓ Leverage natural disasters



Current State Cyber Threat Landscape



The Department of Homeland Security (DHS) NCCIC - National Coordinating Center for Communications – the DHS-Office of Emergency Communications, DHS - Office of Infrastructure Protection, Federal Communications Commission, the National Cyber and Forensics Training Alliance, the FBI-National Cyber Investigative Joint Task Force working in coordination with the Association of Public Safety Communications Officials (APCO) International, the National Emergency Numbers Association (NENA), Louisiana Fusion Center, Mansfield Police Department and telecommunications service providers to identify and mitigate the effects of a criminal Telephony Denial of Service (TDoS) against public safety communications, hospitals and ambulance services. **This is for immediate dissemination to public safety answering points (PSAPs) and emergency communications centers and personnel.**

Background: Information received from multiple jurisdictions indicates the possibility of attacks targeting the telephone systems of public sector entities. Dozens of such attacks have targeted the administrative PSAP lines (not the 911 emergency line), The perpetrators of the attack have launched high volume of calls against the target network, tying up the system from receiving legitimate calls. This type of attack is referred to as a TDoS or Telephony Denial of Service attack. These attacks are ongoing. Many similar attacks have occurred targeting various businesses and public entities, including the financial sector and other public emergency operations interests, including air ambulance, ambulance and hospital communications.

Strategic Plans & Best Practices

Effective cybersecurity practices, governance policies and risk assessment methods. Standardized approach ensures interoperability and secure operations.

- 918A Contract to select cybersecurity vendor for risk assessments
 - ✓ Identify new and evolving risks
 - ✓ Assess and prioritize risks
 - ✓ Develop and prioritize mitigation strategies based on cost-benefit analysis and other factors
 - ✓ Evaluate the impacts of mitigation implementation
- Continuous Monitoring – 24 X 7 X 365 cyber monitoring and incident response
- Develop Incident Response Plans
- Conduct cyber resiliency exercises



Strategic Plans & Best Practices

- Vulnerability Management
- FIPS 140-2 Encryption
- Cybersecurity Governance
- Implement NIST Security Controls
- Vendor Risk Management
- Continuity of Operations and Disaster Recovery



Free Cybersecurity Training Resources

Federal Virtual Training Environment (FedVTE)

- ❑ Course proficiency ranges from beginner to advanced levels. Several courses align with a variety of IT certifications such as Certified Information Systems Security Professional (CISSP), CISA, CEH, Pen Testing etc.

- ✓ <https://niccs.us-cert.gov/training/fedvte>

- ❑ National Initiative for Cybersecurity Careers and Studies

- ✓ <https://niccs.us-cert.gov/formal-education>



Cybersecurity Incident Reporting Requirements

- ✓ Contact DIT Customer Support Center 800-722-3946.
- ✓ Use the incident reporting website <https://it.nc.gov/cybersecurity-situation-report>
- ✓ Contact a member of the Enterprise Security and Risk Management Services staff directly



Let's Connect!



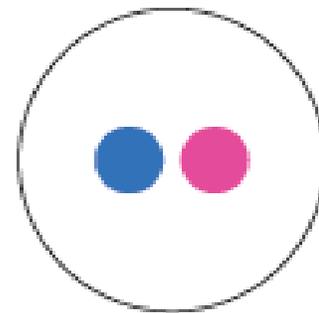
@NCDIT
@BroadbandIO
@ncicenter



**NC Department
of Information
Technology**



NCDIT



NC DIT



@NCDIT

it.nc.gov



LUNCH

Located in the Atrium



PSAP MANAGER'S CONFERENCE, N.C.

Wednesday, October 10, 2018

Presenters: Mark & Journee

**9-1-1 THERAPY DOGS MAKING A
POSITIVE DIFFERENCE**



WHY?

THIS. RIGHT. HERE.



AND THIS...WOW!

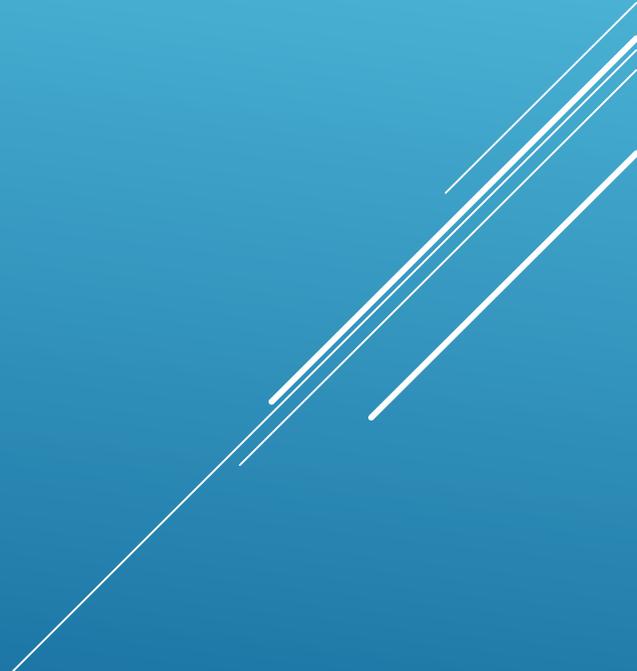
“The rate of PTSD across Telecommunicators is somewhere between 18-24%, as this percentage of individuals report enough symptoms of PTSD that they would likely receive a diagnosis if they were seen by a psychologist and were formally evaluated.” - The Journal of Emergency Dispatch

Dr. Michelle Lilly,

Associate Professor of Clinical Psychology

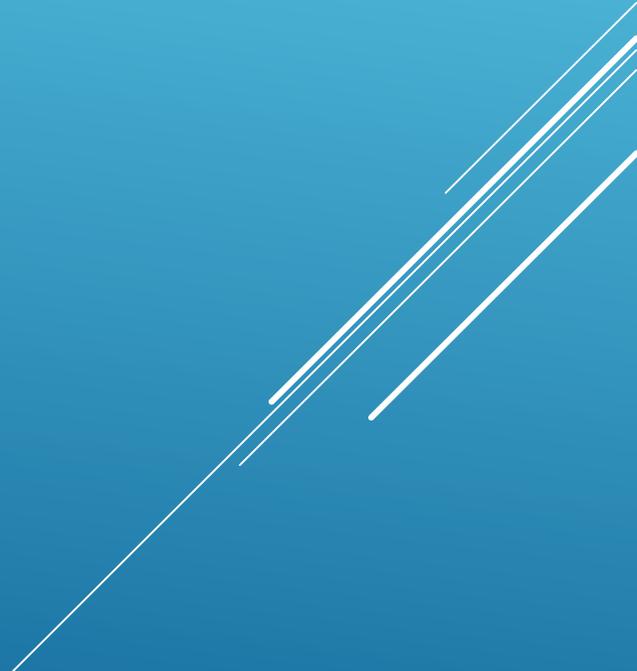
TYPES OF WORKING DOGS

There are **HUGE** differences!

Decorative white lines consisting of several parallel lines of varying lengths, slanted upwards from left to right, located in the bottom right corner of the slide.

POLICE K-9 (DRUG, BODY RECOVERY, SEARCH & RESCUE, BOMB)

These are most often seen and we're familiar with most of these.

A decorative graphic consisting of several parallel white lines of varying lengths, slanted diagonally from the bottom right towards the top right, set against a blue background.

SERVICE DOG

AKA – ASSISTANCE DOGS

SPECIFICALLY TRAINED TO HELP SOMEONE WITH A DISABILITY, SUCH AS VISUAL/HEARING IMPAIRMENT, MENTAL ILLNESS, SEIZURES, MOBILITY IMPAIRMENT, DIABETES



IMPORTANT!

SERVICE DOGS CAN GO ANYWHERE AT ANYTIME! YES! ANYWHERE!

PROTECTED BY AMERICAN WITH DISABILITIES ACT. CAN ONLY ASK HANDLER/OWNER TWO QUESTIONS...

- 1. IS THIS DOG REQUIRED FOR A DISABILITY?**
- 2. WHAT IS THE DOG TRAINED TO DO TO MITIGATE THE DISABILITY?**

IF YOU GO BEYOND THIS,

YOU ARE IN VIOLATION OF FEDERAL LAW!

YOU CANNOT ASK FOR ANY TYPE OF DOCUMENTATION!

NONE!

OWNER/HANDLER DOES NOT HAVE TO PROVIDE ANY PROOF AT ALL!

NEVER PET/INTERACT – THEY ARE DEVOTED TO THEIR MASTER.



THE TEAM CAN BE REQUIRED TO LEAVE IF, AND ONLY IF:

- 1.) DOG IS AGGRESSIVE, THREATENS SAFETY OF OTHERS.
- 2.) DEFECATES/URINATES INSIDE.

NOTE: ANY AND ALL BREEDS ARE ALLOWED AS SERVICE DOGS.

YOU WILL KNOW IF IT'S GENUINE! A TRUE SERVICE DOG IS THE EPITOME OF A TRAINED DOG.

EMOTIONAL SUPPORT DOG (ESD/ESA)

CAN TAKE TO SOME PLACES BUT NOT ALL.

MOST AIRLINES AND BUSINESSES REQUIRE:

LETTER FROM LICENSED MENTAL HEALTH PROFESSIONAL/MEDICAL DOCTOR STATING THE DOG IS USED BY YOU FOR A MENTAL OR EMOTIONAL DISABILITY.

THEY CAN BE REFUSED BY MANY BUSINESSES, EMPLOYERS, ETC.!

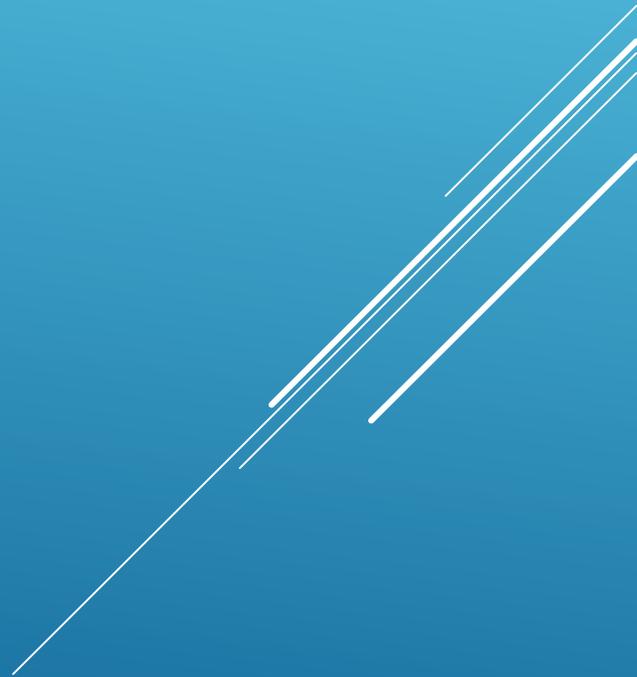
THErapy DOGS/ 😊 COMFORT DOGS

MUST BE REGISTERED AND/OR CERTIFIED WITH A PROFESSIONAL
GROUP/ORGANIZATION:

Alliance of Therapy Dogs

Therapy Dogs International

Canines for Christ Ministries



WHAT DOES A THERAPY DOG LOOK LIKE...

EXCELLENT TEMPERAMENT (CALM, EASY TO PET)

MUST BE TRAINED WELL!

KNOWS MULTIPLE COMMANDS/CUES, I.E. SIT, STAY, COME, DOWN, WAIT, HEEL



DOG FRIENDLY PLACES NEAR MY HOME:

HOBBY LOBBY
TRACTOR SUPPLY
RESTAURANTS (OUTSIDE)
PET SMART
PETCO
LOWE'S
PARKS



BENEFITS/PHYSICAL

LOWERS BP

IMPROVES CARDIOVASCULAR HEALTH/RESPIRATORY

RELEASES CALMING ENDORPHINS (OXYTOCIN)

LOWERS PHYSICAL PAIN



BENEFITS/MENTAL

LIFTS SPIRITS/LESSENS DEPRESSION
LOWERS FEELINGS OF ISOLATION/ALIENATION
ENCOURAGES COMMUNICATION
COMFORT
INCREASES SOCIALIZATION
LESSENS BOREDOM
REDUCES ANXIETY
REDUCES LONELINESS

***PUTS SMILES ON MANY FACES! 😊**

//

PEOPLE DON'T CARE HOW MUCH YOU KNOW
UNTIL THEY KNOW HOW MUCH YOU CARE

//

John C Maxwell

Allowing therapy dogs into your 9-1-1 Centers is
a win-win for all!

We all know it – when our people are happy,
they are much more efficient and productive!



Dr. Turbyfill



Allen & Barbara Simpson



Anne Masters

Acknowledgements

MARK REAVIS

(252)-955-3819 – Wireless

(252)-459-1036 – Office

Mark.reavis@nashcountync.gov



NC PSAP Managers

Red Grasso

First Responder Emerging Technologies

FirstNet SPOC

October 10, 2018



PERMISSION MUST BE GRANTED BEFORE TAKING A THERAPY DOG
ANYWHERE! YES, ANYWHERE!

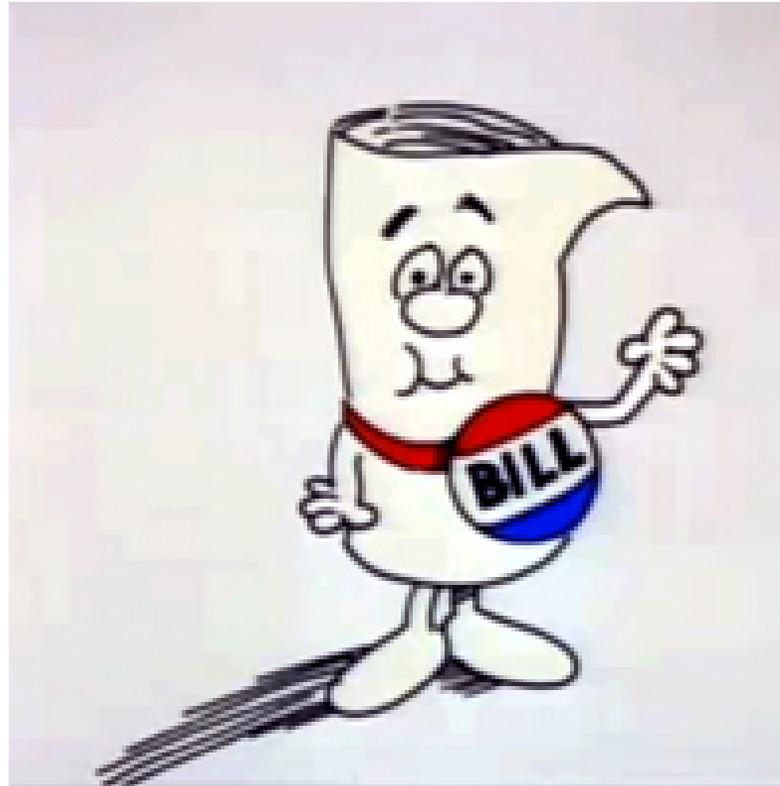
MOST OFTEN USED IN NURSING HOMES, HOSPITALS, SCHOOLS, LIBRARIES,
COLLEGE CAMPUSES.

**THERE IS NO BETTER PLACE FOR THESE DOGS TO BE THAN IN YOUR
9-1-1 CENTERS!**



FirstNet created by law

The First Responder Network Authority created by the Middle Class Tax Relief and Job Creation Act of 2012



Priority on the information highway



Separated from civilians



Preemption on the information highway



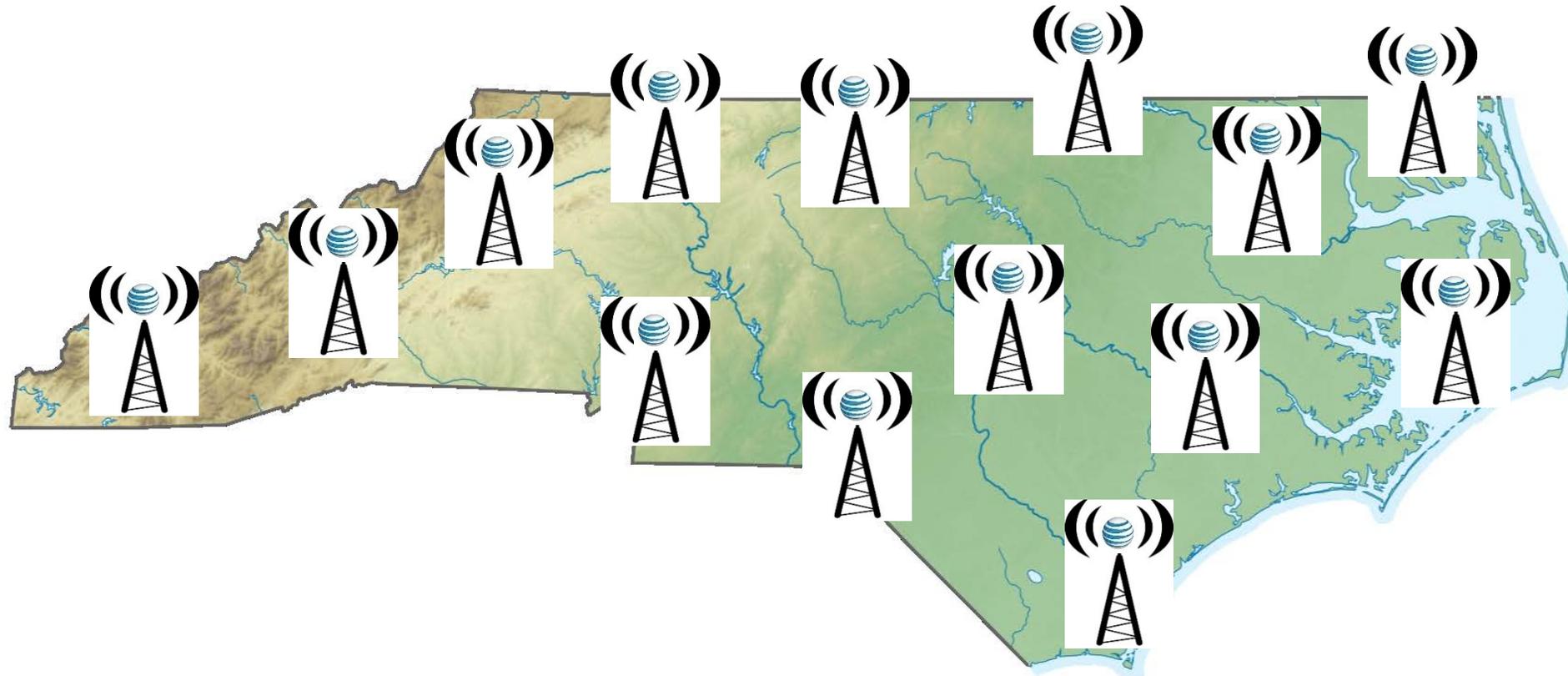
Government document

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FirstNet service delivered by AT&T

AT&T is deploying the infrastructure



More than just Cellular



- Dedicated customer service
- Special App Store for public safety

FirstNet Summary

Cellular for Public Safety

- Cellular service with AT&T
- Priority and preemption for public safety
- Dedicated customer service
- Special app store for public safety
- Cybersecurity focus on network and Apps
- No mandate to sign up for service
- Will not replace two-way radios
- Verizon is offering a separate competing service



Let's Connect!



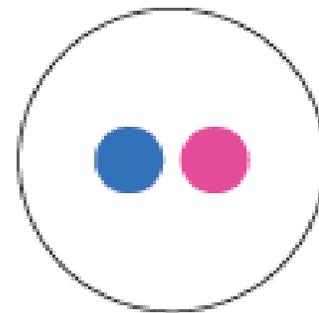
@NCDIT
@BroadbandIO
@ncicenter



**NC Department
of Information
Technology**



NCDIT



NC DIT



@NCDIT

Red Grasso
FirstNet SPOC
919.961.1131
Red.Grasso@nc.gov

it.nc.gov





NCEM

Communications Branch

Awareness and Resources Briefing



Communications Branch Manager

- Statewide Interoperability Coordinator
- Emergency Support Function #2
- Alerts and Warnings State POC
- 24 Hour Operations Center (State EOC)
- Other duties as assigned



Strategic Chain of Info Sharing (SWIC)





Emergency Support Function (ESF) 2

- State Emergency Response Team (SERT) lead –
ESF2
 - SERT Group
- Coordinates response to and/or restoration of degraded critical communications systems, as requested
 - 911 circuits, data, LMR, etc



ESF2 – Roles/Responsibilities

- Tactical Communications Equipment Readiness
 - Ensuring deployable equipment is ready to go
- Tactical Communications Personnel Readiness
 - Ensuring deployable personnel is ready to go
- Training
- Coordination between local/state/federal agencies

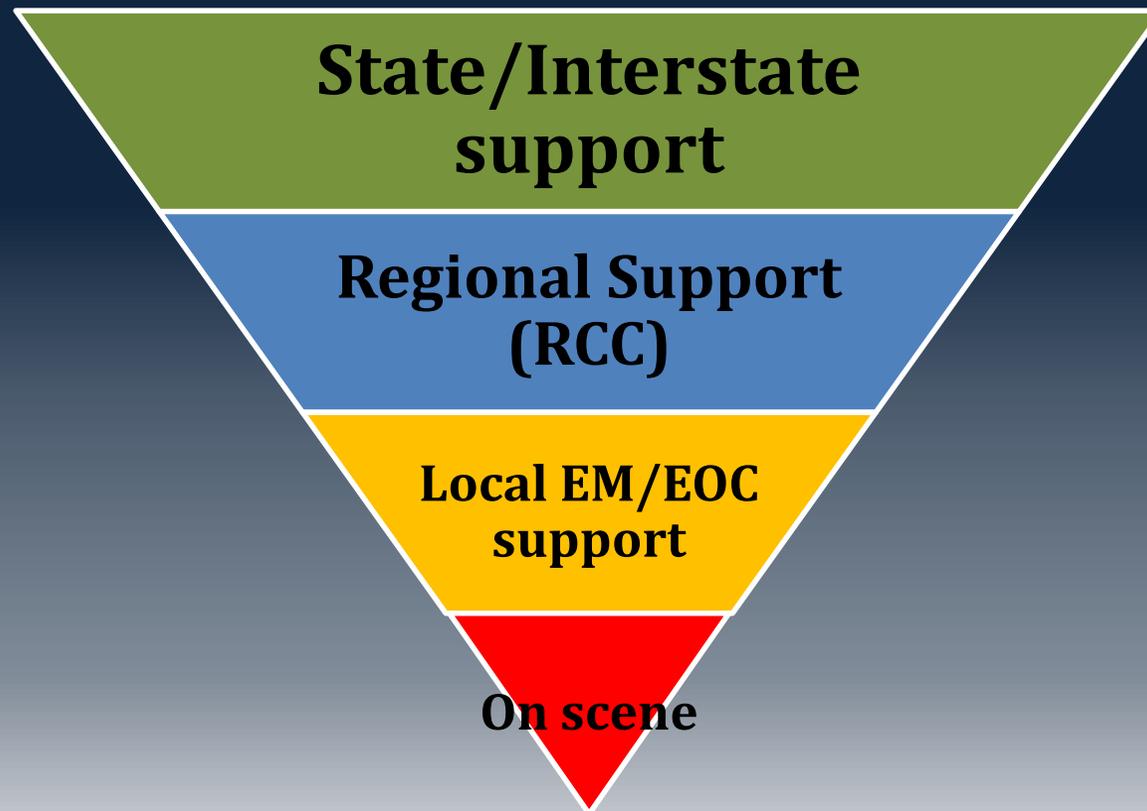


ESF2 – Roles/Responsibilities

- Liaison with private sector communications entities to ensure public safety priority
- Ensure that communications is considered for all operational aspects of planning, response and recovery.



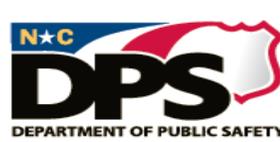
Communications Unit formation, support and information flow





ESF#2 SERT Members

- NCSHP – TSU/VIPER
- NC AUXCOMM Coordinator
- NC911 Board
- NC TERT (Telecommunicator Emergency Response Task Force) Coordinator
- NC AHIMT Type III credentialed COML



ESF#2 SERT Members-Expansion

Looking to include representation in:

- Business EOC
- Air Operations Cell
- Infrastructure



Reporting Communications Problems

Focus on what capability is degraded

- Report specifics, if possible.

Good: “The County PSAP is not taking 911 Calls”

Not so Good: “The County PSAP is down”



Reporting Communications Problems

Try not to request specific resources

- The resource you think you need may not solve your problem.

Good: “Our ICP does not have WiFi or cell coverage”

Not so Good: “Send us a COW”



Resources available to you

Personnel:

- Communications Unit Leaders (COML)
- Communications Technicians (COMT)
- Tactical Dispatchers/TERT (INTD)
- Amateur radio operators (AUXCOMM)
- Cache Managers



Resources available to you

Equipment:

- Radios, Radios, Radio, and more Radios
- Tactical communications vehicles
- Satellite Communications (vendor partners)
- Broadband/Cellular vehicles/equipment



Resources available to you

VIPER

- **Statewide Calling Test**
- **Do you have access to VIPER? Are you a primary VIPER user?**



Resources available to you

Equipment:

- Mobile Radio Towers
- Tactical MSATs units
- Mass radio battery charging
- Everything else



Closing thoughts

- **You don't have to plan communications in a vacuum.**
- **Statewide VIPER events talkgroups will run out.**
- **Without Comms...You're just camping.**



QUESTIONS?

BREAK





AT&T ESInet™

The best of today built for tomorrow.

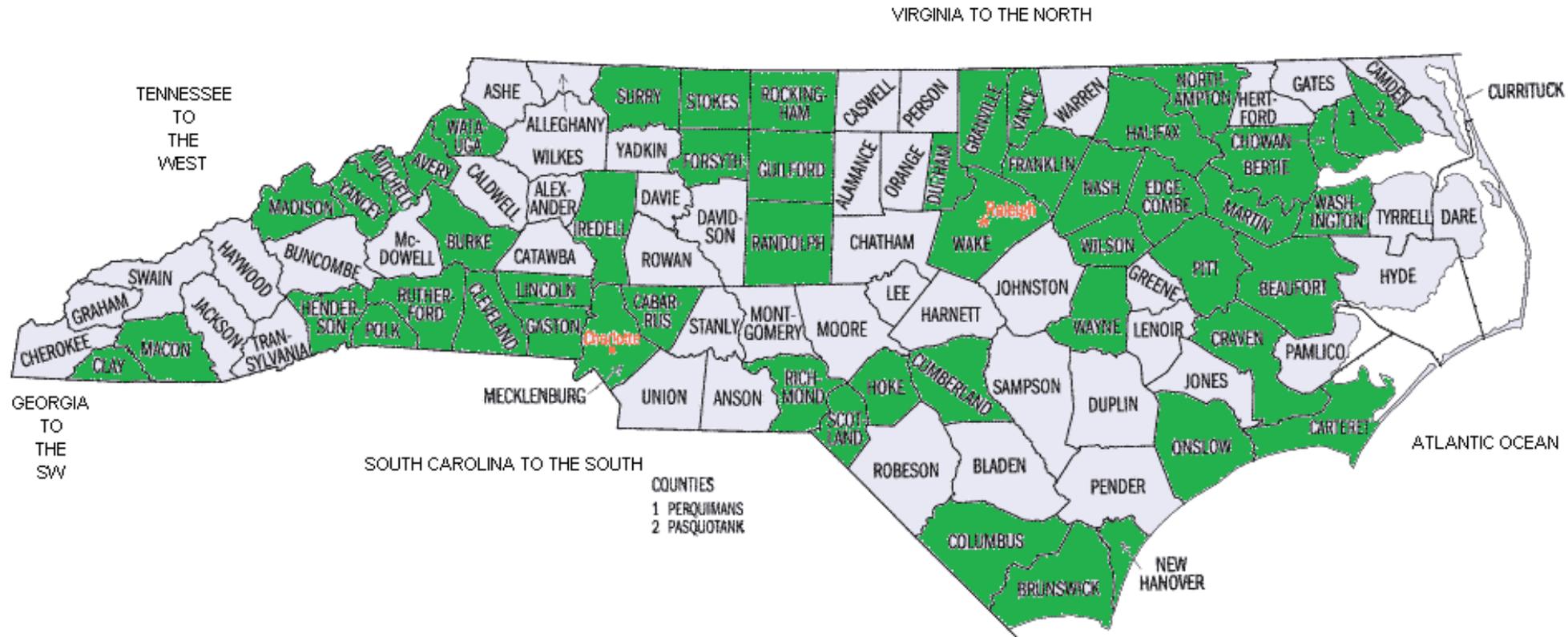
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NC NG911 ESInet & Hosted Call Handling Program Management

Active PSAP Projects and Activity

- 66 Total PSAPS Approved for onboarding and in progress



NC NG911 ESInet & Hosted Call Handling Program Management

Onboarding Process

- NC 911 Board Staff Approves
- Introductory call followed by email with Brian Smith
- PSAP receives WebEx with Technical Consultant to review onboarding documents
- Final Networking and Cost Approval received by NC 911 Staff
- Project Manager assigned for ESInet and Hosted Call Handling (if applicable)

NC NG911 ESInet & Hosted Call Handling Program Management

Active PSAP Projects and Activity

- 22 Active PSAP Projects

PSAP	SERVICE
BRUNSWICK CO	ESINET
CARY PD	HOSTED VESTA
CITY OF DURHAM	HOSTED VIPER
CITY OF LUMBERTON	HOSTED VIPER
CLEVELAND CO	HOSTED VESTA
CUMBERLAND CO	HOSTED VIPER
GASTON CO	ESINET
GUILFORD METRO 911	HOSTED VIPER
IREDELL CO	HOSTED VESTA
KINGS MOUNTAIN COMMS.	HOSTED VESTA
LINCOLN CO	HOSTED VESTA

NC NG911 ESInet & Hosted Call Handling Program Management

Active PSAP Projects and Activity

PSAP	SERVICE
MARTIN CO	HOSTED VIPER
NASH CO	HOSTED VIPER
POLK CO	HOSTED VIPER
RICHMOND CO	HOSTED VIPER
ROCKINGHAM CO	ESINET
RUTHERFORD CO	ESINET
SCOTLAND CO	HOSTED VIPER
SHELBY PD	HOSTED VESTA
VANCE CO	HOSTED VIPER
WILSON CO	HOSTED VIPER
WINSTON SALEM PD	ESINET

NC NG911 ESInet & Hosted Call Handling Program Management

2018 GO LIVE PSAPS

PSAP	GO LIVE DATE
CITY OF DURHAM	11/13/2018
GASTON CO BACK UP	NOV/DEC 2018
ALL OTHER PSAPS PROJECTS	THROUGH Q3 2019

**Next Generation 911 Project
Network Management
Assistance Center (NMAC)**

Jesus Lopez
Project Manager



Next Generation 911

Network Management Assistance Center (NMAC)

NMAC Overview: The NMAC will serve as a customer (PSAP) focused support and service center.

The NMAC will provide many essential services including:

- Overseeing the network and service performance of the ESInet and Hosted CPE
- Providing a Help Desk function to support customers experiencing technical issues
- Serving as a single point of contact for all vendor provided services and systems
- Monitoring (in Real Time) all vendor provided core services
- Providing a Security Operations Center (SOC) Function

NMAC Project Planning: The planning, design and implementation involves multiple project tracts including:

- Physical Construction and Fit-Out of a new facility
- Planning and Provisioning of network connectivity
- Development of NMAC Policies and Procedures
- Recruitment and Hiring of NMAC technical personnel



Next Generation 911

Network Management Assistance Center (NMAC)

Physical Construction Planning and Fit-Out Status:

Several meetings were held with facilities, DIT Hosting Services and DIT procurement personnel on the space requirements for NMAC which will reside in the Eastern Data Center. An Invitation for Bid (IFB) was issued on 9/25.

Action	Responsibility	Date and Time
Issue IFB	State	September 25, 2018
Hold Pre-bid Meeting/Site Visit	State	October 10, 2018 9:30am
Submit Written Questions	Vendors	October 12, 2018 2:00pm
Provide Responses to Questions	State	October 15, 2018 4:00pm
Submit Bids	Vendors	October 18, 2018 2:00pm
Award Contract	State	TBD



Next Generation 911

Network Management Assistance Center (NMAC)

Planning and Provisioning of network connectivity Status:

A meeting was held on Friday September 28th with AT&T, DIT Hosting Services and Federal Engineering to review the connectivity (AT&T to NMAC) requirements.

Key areas covered:

- Hosting Services to provide a standard “networking package” with circuits dropped in the DIT Telecomm facility and then connected to the NMAC
- Lead Times for Circuit Orders (60 days)
- Portals and Services to be Provided by AT&T (including: Transport Portal, Managed Router Services Portal, Business Direct Portal, West Customer Management Port and Advanced Ticketing Portal)
- Adaptability and Customization Capability



Next Generation 911

Network Management Assistance Center (NMAC)

NMAC Policies and Procedures Development Status:

Jim Lockard of Federal Engineering has been tasked with the development of the first draft of the NMAC Policies and Procedures. Mr. Lockard was integral in the development and writing of the NMAC Concept of Operations as well as the NMAC Technical Specifications. AT&T and DIT Hosting have offered to assist in the development of this document. Target for initial Draft is 10/10.

Recruitment and Hiring of NMAC technical personnel:

Gerry Means is in the process of recruitment and hiring of the personnel that will man the NMAC. The current focus is on hiring a manager who will take the lead in the recruitment and hiring of the tier 1 personnel as well as contribute to the development of the NMAC policies and procedures.



Statewide Orthoimagery Program

Northern Piedmont and Mountains
2018

Southern Piedmont and Mountains
2019

Ben Shelton

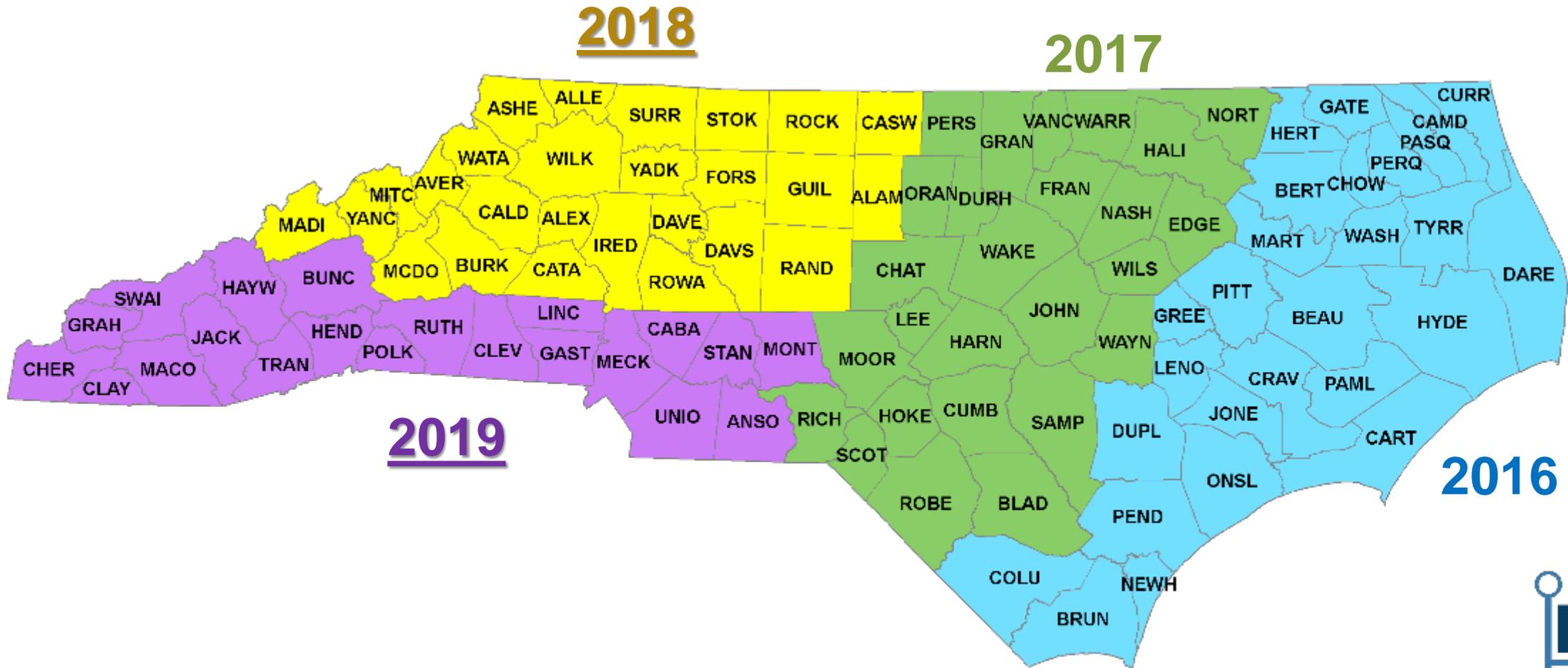
NC Center for Geographic Information and Analysis

October 10, 2018



NC Statewide Orthoimagery Program

4-Year Cycle



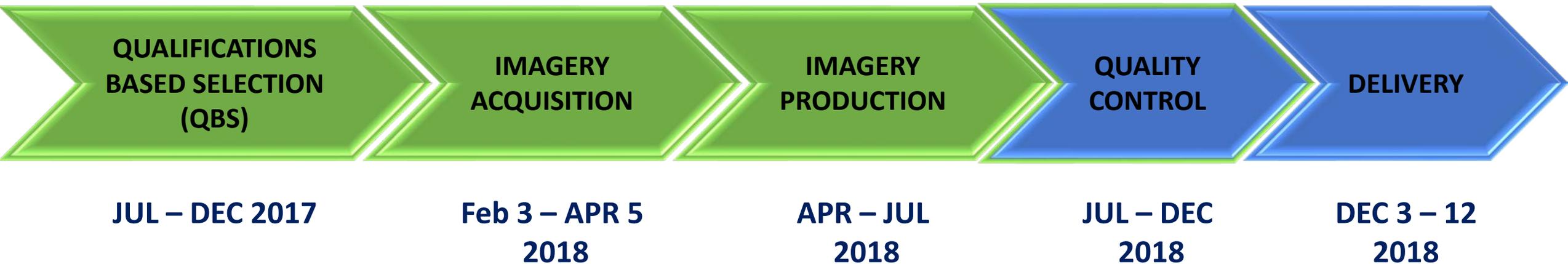
Statement of Need: Ortho Business Plan

- Cap turnaround at maximum of 4 years
- Eliminate patchwork collection of county imagery sets of varying quality, resolution, and age
- Administer a Proactive approach to project delivery rather than engage in Reactive measures to quality issues



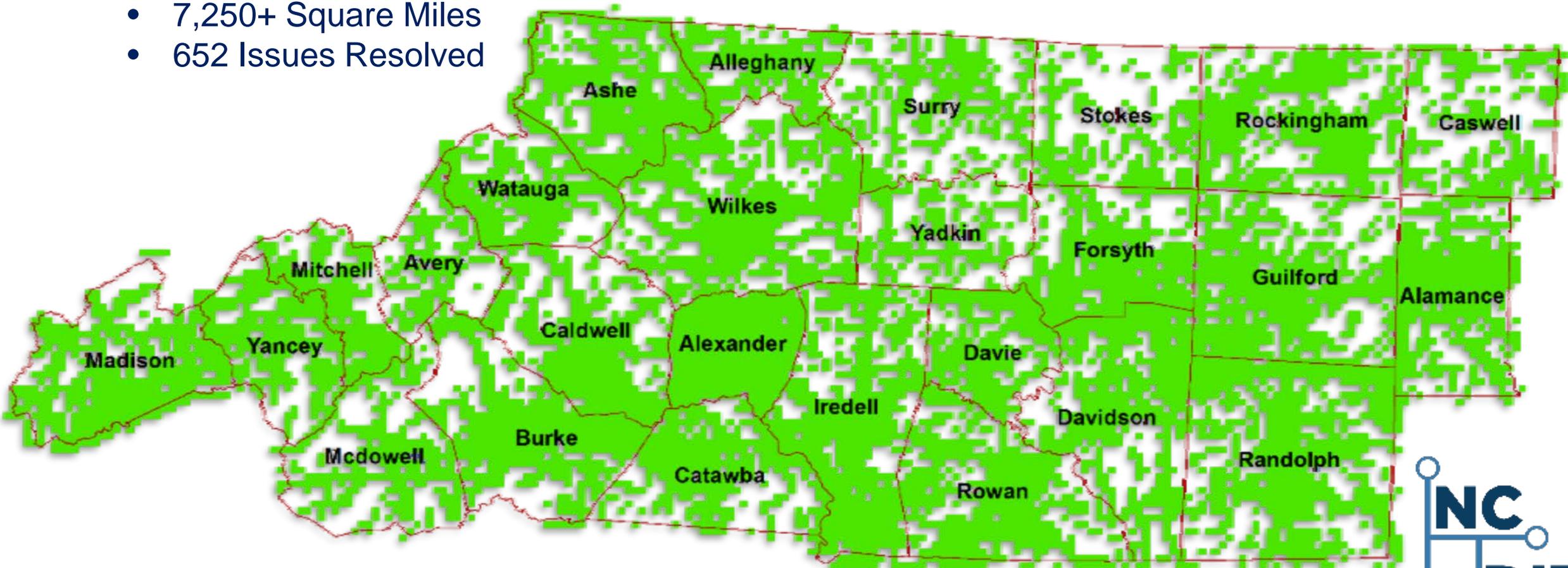
Northern Piedmont and Mountains 2018

- 7/21 – 9/21: VOICE Quality Review
- 10/4 – 11/1: Drive delivery from contractors
- 12/3 – 12/12: PSAP Deliveries

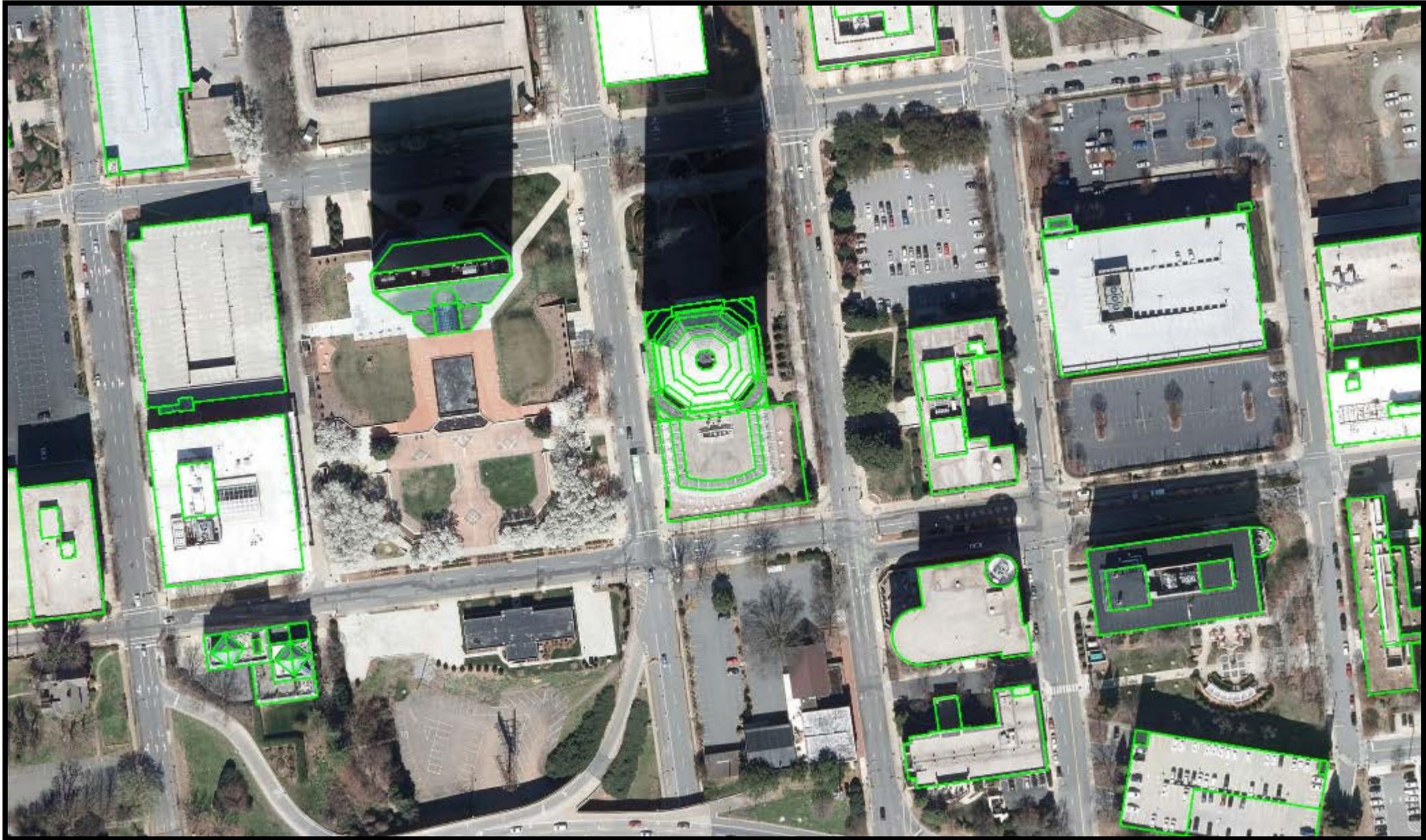


Northern Piedmont and Mountains 2018

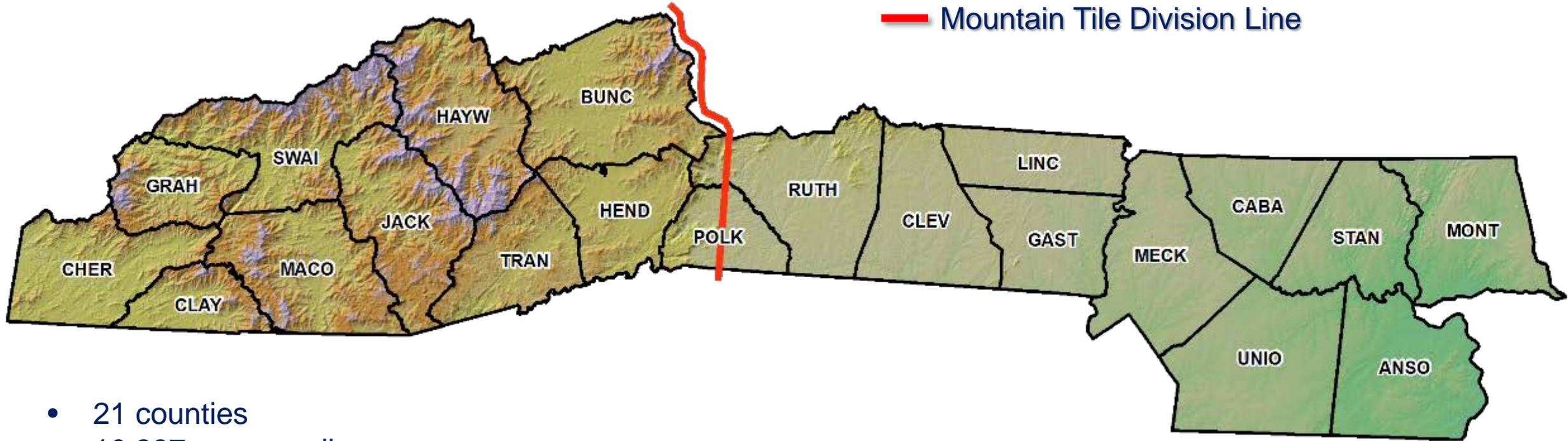
- 7/21 – 9/21: End-User Quality Review (VOICE)
 - 59% Reviewed
 - 7,250+ Square Miles
 - 652 Issues Resolved



NPM 2018 – True Ortho Deliverables



Southern Piedmont and Mountains 2019



- 21 counties
- 10,397 square miles
- 50% of project are considered Mountain Tiles
- True Orthoimagery Areas Of Interest:
 - Charlotte
 - Asheville

2019 Project Timeline

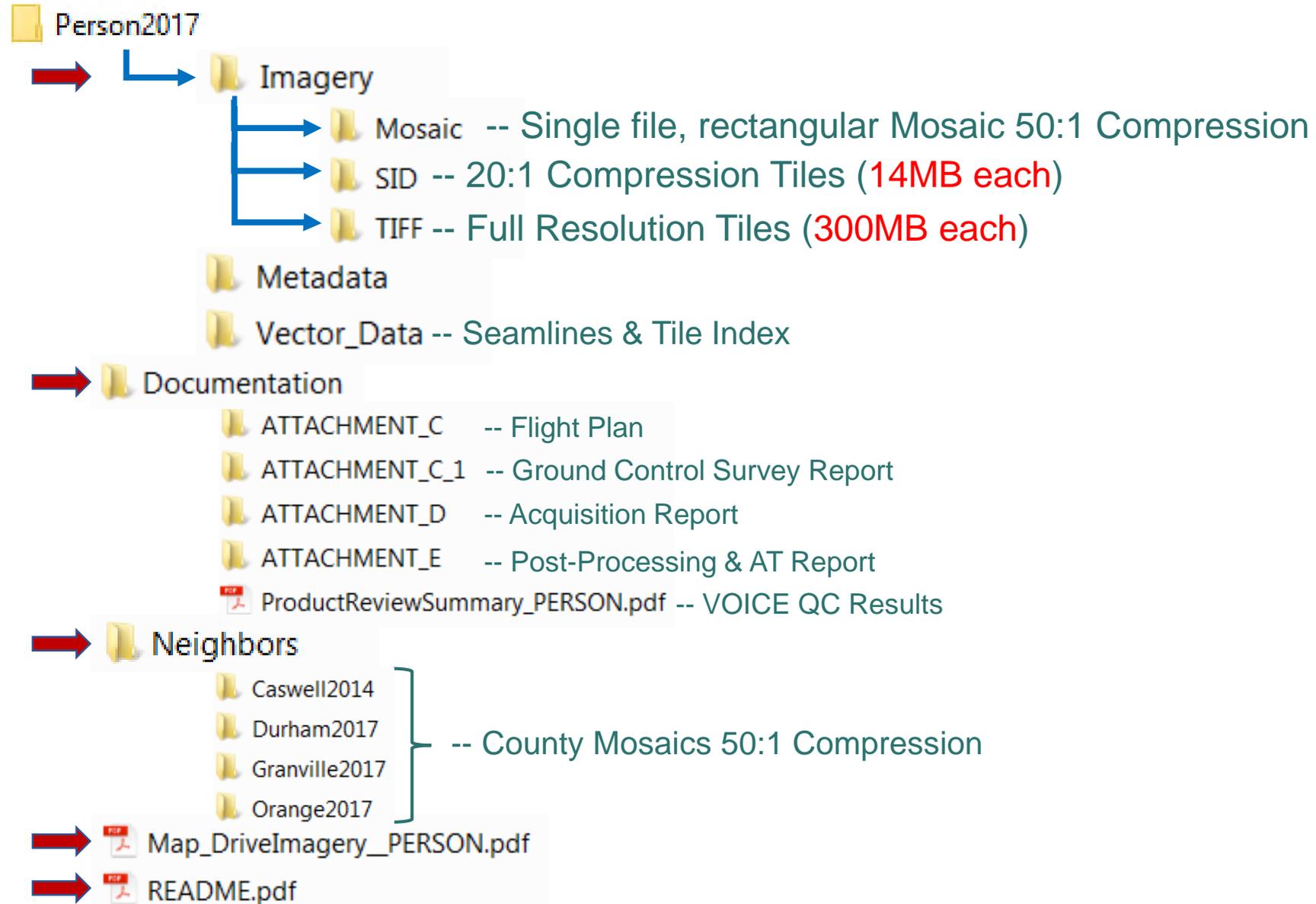


The selected firms are:

1. Atlas Geographic Data, Inc.
2. The Sanborn Map Company, Inc.
3. Spatial Data Consultants, Inc.
4. Surdex Corporation



Delivered Products



Delivered Products

 TIFF -- Full Resolution Tiles (300MB each)

 SID -- 20:1 Compression Tiles (14MB each)



Delivered Products

 TIFF -- Full Resolution Tiles (300MB each)

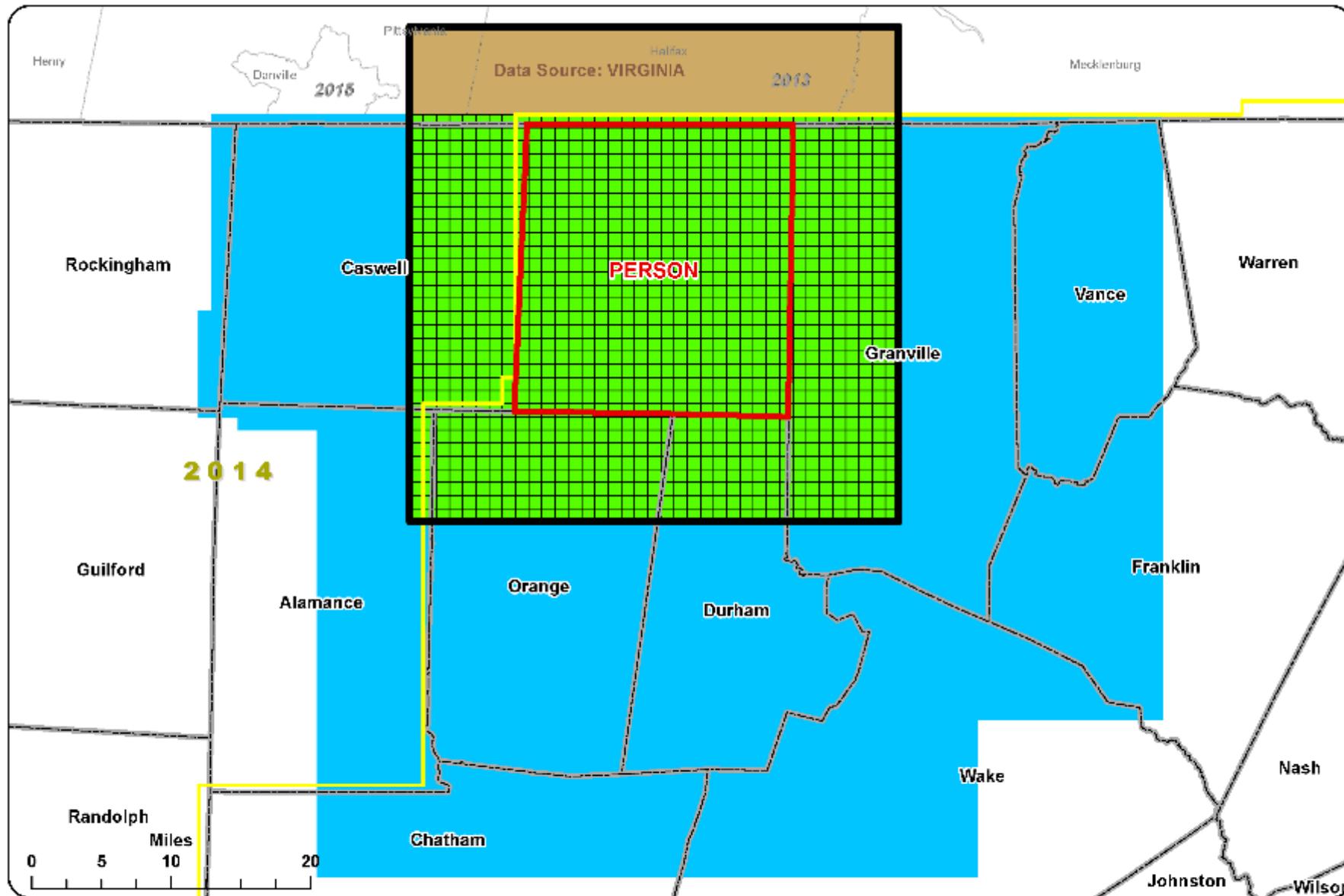
 SID -- 20:1 Compression Tiles (14MB each)



Delivered Products

 Mosaic -- Single file, rectangular Mosaic 50:1 Compression





PERSON COUNTY 2017 HARD DRIVE CONTENTS

- TIF & SID (20:1) IMAGERY TILES
- NEIGHBOR COUNTY MOSAIC EXTENTS (50:1)
- EXTERNAL STATE IMAGERY INCLUDED IN PRIMARY MOSAIC
- 2017 IMAGERY PROJECT BOUNDARY
- PRIMARY COUNTY SINGLE FILE MOSAIC EXTENT (50:1)



Ortho Program Website

- <http://nconemap.gov/orthoimagery.aspx>

NC Orthoimagery Program

Overview | 2012-2015 | 2016-2019 | Imagery Discovery | Cooperative Products | NEWS

Statewide 2016 - 2019

Statewide 2016 - 2019

In February of 2015, the NC 911 Board approved the next four-year update cycle to the previous 2012-2015 cycle. A four-year update cycle is critical for providing accurate and current ground conditions to aid in 911 emergency response.

2016 - Coast

- Tiles: 17,463
- Square Miles: 19,678
- Counties: 77
- PSAM: 29

Acquisition was done by four contractors:

- Atlas Geographic Data, Inc.
- Sanborn Map Company
- Spatial Data Consultants
- Suntek Corporation

[Join our Contractor Study Area](#)

Fields for imagery acquisition occurred between January 28 and March 13 of 2016. The map to the right displays the acquisition dates for each segment used for the project. Zoom in and click on a location to pull up the exact date of acquisition for a specific image.

2016 Quality Review

ESRI, NC DIT, Primary PSAM, and GIS and Local Government. Available to 387 local government. 54% percent of the study.

ESRI, HERE, DeLorme, NAVTEQ, Swatch, NOAA, IGN, IGC, Esri, Inc.



Ortho Program Website

- <http://nconemap.gov/orthoimagery.aspx>

NC Orthoimagery Program

Overview 2012-2015 2016-2019 Imagery Discovery Cooperative Products NEWS

County Mosaics

Click any county to display the extents of imagery delivered to 911 Primary Safety Answering Points (PSAP) across the state. This includes a link to download the county mosaic imagery file that was delivered.

To create the mosaic imagery files for each county, the associated imagery is combined into a single Mosaic file with a compression ratio of 20:1. Projects since 2013 have extended this mosaic file to a minimum of 7 miles outside the county boundary.

Click any county to display the extents of imagery delivered to 911 Primary Safety Answering Points (PSAP) across the state. This includes a link to download the county mosaic imagery file. The download is limited to imagery developed as part of the North Carolina Program.

Person
County Mosaic Year: 2017
For other years: NC.OrthoPortal

State of North Carolina DOT, Esri, HERE, DeLorme, NGA, USGS, NPS, Esri



Future Considerations

Your System,
Your Requirements:

- File Format
- File Size
- Imagery Speed
- Tiles vs. Single File
- Coordinate System
- CAD Software Vendor
- Staffing
- Data loading



Questions?

Ben Shelton

919.754.6377

Ben.Shelton@nc.gov

www.nconemap.gov/orthoimagery.aspx



Hurricane Florence ESF2 PSAP Coordination September 12 – 23, 2018, and Ongoing

PSAP Reroutes That Occurred During Event

Beaufort County → Randolph County
 Brunswick County → Haywood County
 Columbus County → Bladen County
 Columbus County → Brunswick County
 Columbus County → Fayetteville
 Columbus County → Surry County (Multiple Days)
 Lumberton PD → Robeson County
 Moore County → Hoke County
 New Hanover County → Brunswick County
 New Hanover County → Raleigh Wake Back Up (New Hanover Sent Personnel to RW)
 Onslow County → Johnston County
 Pamlico County → Beaufort County
 Robeson County → Lumberton PD
 Robeson County and Lumberton PD → Richmond County

PSAP Reroute Pre-Planning Established Early During Event

Beaufort County → Randolph County
 Carteret County → Iredell County
 Fayetteville County → Durham County
 New Hanover County → Raleigh Wake Backup Center
 Washington County → Stokes County

PSAP Backup Plans Implemented (Others to be Confirmed)

Bladen County Used Primary and Backup
 Duplin County Staff on Standby at Backup Location
 Greene County
 Jones/Lenoir Staff on Standby at Backup Location
 Lumberton County
 Nash County
 Pender County Staff on Standby at Backup Location
 Robeson County

TERT National Assistance (911 Board Staff Coordination)

Beaufort County:	Brunswick County:
Tennessee TERT (Team 2)	Tennessee TERT (Team 1)
Cumberland County:	Sampson County:
Florida TERT	Georgia TERT

Telecommunicator In-State Assistance (911 Board Staff Coordination)

Carteret County:
 Chatham County
 Granville County
 Johnston County
 Richmond County

Telecommunicator In-State Assistance Coordination with NC Sheriff's Association

911 Board staff coordinated with the Sheriff's Association to also fill requests for in-state assistance. Sheriff's Association has complete list of assistance provided.

911 Board Staff Assistance – EOC ESF2 Staffing and Ancillary Efforts

Approximately 430 staff hours to date (to be confirmed/finalized)



(A later snapshot in time.)



(An early snapshot in time.)

*All information assumed accurate at the time of this report. Revisions and additions will be made as all incident information is reviewed and validated.

Closing Remarks

Pokey Harris

Executive Director, NC 911 Board

Dinner at 6pm

