First Responder **Interoperability** Report 2014-2015

Presented to:

Senate Finance
Hugh K. Leatherman, Sr., Chairman

House Ways and Means Committee
W. Brian White, Chairman

Pursuant to proviso 93.23, the S. C. Department of Administration is directed to administer and coordinate First Responder Interoperability operations for the statewide Palmetto 800 MHz radio system to better coordinate public safety disaster responses and communications.

First Responder Interoperability funds provided a 10% match in funds to assist State and Local First Responders participating in the Palmetto 800 Statewide Radio Network. The Fund also provided 10% in matching funds for eligible equipment purchases to First Responder agencies that operate on existing city or county owned private 800 MHz radio systems.

The S. C. Department of Administration, as part of the proviso, shall provide an annual report on the status of the integration of the statewide Palmetto 800 MHz radio network which shall include, but not be limited to, a list of entities which are not integrated into the system as of the end of the fiscal year and the reason why they are not integrated.

Significant System Activities:

Division of Technology Operations (DTO) – Cut backs in the availability of Federal Grant funding, the loss of DTO's legislative funding for its Public Safety and Emergency Operations section and the Tower Proviso revenue being moved to ETV has limited the expansion abilities for the statewide radio system and statewide interoperability. DTO was able to secure limited non-state funding to install additional back-up radio repeaters for interoperability in several areas of the state.

Florence County – Florence County used revenue from a sales tax increase to complete the installation of its own private 800 MHz P-25 system this year. The system does share the Palmetto 800's operating core and will provide seamless interoperability between the Florence County system and the Palmetto 800 statewide system.

The public/private partnership of the Palmetto 800 Network and its interoperability capabilities continue to be a model for state and municipalities across the United States. Today the system has over 29,000 primary radio users, 10,000 shared interoperability users and 7,500 users that share the Palmetto 800 core (Charleston, Beaufort and Florence Counties).

Statewide Radio System Benefits - The benefits of South Carolina's Palmetto 800 Network are realized when seamless interoperability is provided to personnel working at events and responding to emergencies in the state. To maintain that high level of interoperability, the DTO public safety team, along with numerous state and local government agencies, work diligently to ensure that critical system components are properly programmed, maintained and operational at all times.

Major events that benefitted from Palmetto 800 interoperability this year include;

- Carolina and Clemson home football games.
- Dixie Little League World Series.
- World Para-Cycling Championships.
- Darlington Motor Speedway Race.
- SC Special Olympics.
- Lockhart Fire (State Firefighter Mobilization).
- Governor's Inauguration.
- Cooper River Bridge Run.
- North Myrtle Beach/Myrtle Beach Bike Week.
- North Charleston shooting.
- Martin, SC train accident.
- Charleston shootings and funerals.
- Protest of the State Capital grounds.

Other events included: PGA golf tournaments, the Peanut Festival, Poultry Festival, Okra Strut Festival, Striped Bass festival, numerous marathons and bike races, traffic enforcement initiatives, and parades across the state. The goal of Public Safety Communications is to ensure communications interoperability at all events where large crowds gather to ensure the safety of the citizens of South Carolina and its first responders and public safety officers.

Communications Strike Team – During the Graniteville disaster in 2005, South Carolina realized there was a significate need for a highly trained communications response team to manage communications issues during disasters, large emergencies, large events and to investigate and provide Public Safety communications support across the state. DTO manages this team which is made up of DTO, state and local government agency communications experts. DTO also maintains, manages and ensures the readiness of the State Strategic Public Safety Communications Cache which backfills communications equipment needs of the Strike Team, state agencies and public safety responders during emergencies and for special events.

PAlmetto **T**actical **CO**mmunications **N**etwork – (*PATCON*) – To enhance South Carolina's public safety communications capabilities, interoperability and to add statewide communications redundancy the Division of Technology Operations (DTO) has continued to build out a statewide conventional interoperable repeater network that overlays the state. DTO owns and maintains this statewide network. This system is accessible to all public safety agencies in South Carolina at no cost. Today the PATCON system has installed interoperable repeaters in every county in South Carolina (statewide 140 standalone transmitter sites). This system provides additional interoperability, back-up and capacity resources to the Palmetto 800 network.

Significant Network Future Planning:

Palmetto 800 (4.1) End Of Technology Life – In 1994 the Palmetto 800 system began operating on its current (4.1) technology platform. The production of this technology was discontinued in 2010, with the end of support scheduled to occur in 2017. The State is working with our Palmetto 800 vendor, to develop a timeline for upgrading the network's technology to the current national public safety digital P-25 technology platform. The migration timelines are: All subscriber radios reprogrammed and upgraded to support P-25 prior to December 31, 2016. Beginning January 1, 2016 the Palmetto 800 network will begin the replacement of the radio infrastructure with a projected completion date of no later than mid-2017.

York County – York County purchased its own private independent 800 MHz P-25 radio system several years ago. In 2016 as the Palmetto 800 system migrates to a P-25 system DTO would like to enhance interoperability by connecting the York private system into the Palmetto 800 network utilizing a P-25 technology called ISSI. This technology will allow each system to operate independently, but allow approved subscriber radios to seamlessly interoperate between the Palmetto 800 and York systems. This technology will significantly enhance communications capabilities for SLED, the South Carolina Highway Patrol and the counties adjacent to York County. The system will also provide York County agencies access to the Palmetto 800 network. Like all technology solutions there are onetime cost and recurring costs that will be needed to support this initiative.

NC Viper & Charlotte, NC Systems – Charlotte, NC and North Carolina (VIPER System) are also 800 MHz P-25 radio systems. State agencies and local government fire, EMS and law enforcement agencies respond across state lines on an almost daily basis for mutual aid or while trying to locate an emergency call received via cellular phone. In 2016 as the Palmetto 800 system migrates to a P-25 technology in support of interoperability with our neighboring states, DTO would like to connect to the Charlotte and NC VIPER system with the same ISSI P-25 technology utilized to connect to the York County system. This will significantly enhance communications during disaster, emergencies, law enforcement high speed pursuit, and fire department and EMS responses on and across state borders. This connectivity, like connecting into the York County system, has onetime and recurring cost to integrate the systems. The ISSI technology enhances interoperable capabilities and reduces the hours of programing required to manually create interoperability today.

First Responder Interoperability Report

The following is a list of State and Local Government Palmetto 800 network radio users. The Palmetto 800 Network and the private county 800 MHz systems have exchanged radio system IDs to enhance statewide interoperability. The State also has exchanged system ID's between North Carolina Highway Patrol, City of Charlotte, Brunswick, North Carolina, Augusta and Savannah, Georgia to enhance interoperability.

(*See the next page to begin review of the report*)

State Agency Interoperability

State Agency	800 MHz Interoperability	Comments
Adjutant General	National Guard Palmetto 800 network radios for interoperability	The agency has 100 radios but would like to have additional 800 MHz radios to support State emergencies
Department of Administration	Fully Palmetto 800 network	Maintains and deploys the state strategic cache of communications support and response equipment for public safety agencies statewide
Citadel	Fully Palmetto 800 network	
Clemson University	Fully Palmetto 800 network	
Coastal Carolina	Limited interoperability	Coastal Carolina utilizes the Horry County private 800 system. They have interoperability with local and state law enforcement
Corrections	Limited interoperability	Utilizes a local VHF system, has purchased some 800 MHz radios for interoperability
Emergency Management Department (EMD)	Fully Palmetto 800 network	Still maintains low band redundant system
Fire Marshal, State/LLR	Fully Palmetto 800 network	
Forestry Commission	All law enforcement officers have Palmetto 800 network	Non-law enforcement units still utilize the Forestry VHF radio system.
Gray, Wil Lou Opportunity School	Law enforcement	

	fully Palmetto 800 network	
Health and Environmental Control (DHEC)	Fully Palmetto 800 network	
Highway Patrol (DPS) State Transport Police Bureau of Protective Services	Fully Palmetto 800 network	
House Sergeant At Arms	Fully Palmetto 800 network	
Juvenile Justice, Dept. of (DJJ)	Fully Palmetto 800 network	
Law Enforcement Division (SLED)	Fully Palmetto 800 network	Continues to maintain and utilize VFH system for redundancy.
Medical University of South Carolina	Fully Palmetto 800 network	
Mental Health, Department	Law Enforcement fully Palmetto 800 network	
Natural Resources	Limited Participation	Only law enforcement command staff has 800 MHz radios, total of 40 (29 in use). Cost and user fees given as a reason for not fully participating.
Ports Authority	Fully Palmetto 800 network	Utilizing Charleston County P-25 system. Interoperable with State Palmetto 800 system.
Probation, Parole and Pardon Services (PPP)	Fully Palmetto 800 network	
Public Safety, Dept. see(DPS)	Fully Palmetto 800 network	

Revenue, Dept of	Fully Palmetto 800 network	Enforcement officers only
Santee Cooper	Limited Interoperability Law Enforcement Only	Santee Cooper has an independent radio system not compatible with Palmetto 800 System. Santee Cooper Law Enforcement officers have 800 MHz radios for interoperability.
SC State University	Police fully Palmetto 800 Network	
Senate Sergeant at Arms	Fully Palmetto 800 network	
Transportation Department (DOT)	Senior Staff , engineers and SHEP have Palmetto 800 network radios	Dispatch, SHEP and engineers involved in supporting hurricane evacuations and recovery have 800 MHz radios. Road work crews still utilizing low band system.
Transport Police (STP)(Also see DPS)	Fully Palmetto 800 network	
University of South Carolina	Fully Palmetto 800 network	
University of South Carolina Upstate	Fully Palmetto 800 network	University police

Local Government Interoperability by County

Note: *All County 911/Dispatch Centers and County Emergency Operations Centers (EOCs) have been provided with 800 MHz radios for interoperability between local government and state agency dispatch centers.*

County	800 MHz Interoperability	Comments
Abbeville	Have Palmetto 800 network radios for interoperability	All agencies (law enforcement, fire and EMS) have 800 MHz radios for interoperability (188 radios).
Aiken	County Sheriff and EMS fully Palmetto 800 network. Most police fully 800 MHz departments	County fire UHF, Aiken Police Department has (17) 800 MHz radios for interoperability only
Allendale	County Sheriff and most police departments have Palmetto 800 network	County fire is on VHF, Sheriff and most law enforcement agencies have 800 MHz radios for interoperability or primary use.
Anderson	Fully Palmetto 800 network	
Bamberg	Sheriff, EMS & Fire Departments have Palmetto 800 network radios for Interoperability	All public safety agencies have 800 MHz radios provided through grants for interoperability. Some agencies still utilize VHF and UHF for primary dispatch.
Barnwell	Sheriff & EMS have Palmetto 800 network radios, Fire has some 800 MHz radios for interoperability	Barnwell Co. purchased additional Palmetto 800 radios last year.
Beaufort	Completely 800 MHz	Private 800 MHz System connected to the Palmetto 800 P-25 Core.
Berkeley	Sheriff, Police and EMS have Palmetto 800 network radios	Only a few fire depts. have 800 MHz radios due to cost and recurring fees. County wide (500 Palmetto 800 MHz users)

Calhoun	Limited Interoperability	Sheriff's Department, St. Matthews PD and some FD's have a few radios for interoperability with 800 MHz radios due to equipment cost and user fees.
Charleston	Fully 800 MHz	Private 800 MHz system connected to the Palmetto 800 Core.
Cherokee	Limited Interoperability	Sheriff's Department and Gaffney PD are the only agencies with 800 MHz radios due to equipment cost and user fees.
Chester	Sheriff has Palmetto 800 network Radios For Interoperability	Police Departments have 800 MHz for interoperability, but not all equipment is activated. EMS and Fire not participating due to equipment cost and user fees.
Chesterfield	Sheriff and Police departments have Palmetto 800 network radios for interoperability	Fire and EMS not participating due to cost and coverage.
Clarendon	All agencies fully Palmetto 800 network	Fully 800 MHz county wide.
Colleton	All agencies Palmetto 800 network	
Darlington	Sheriff, Police and Hartsville FD utilizing Palmetto 800 network.	County Fire & EMS do not participate due to equipment cost and recurring cost. Darlington County Fire Department has several 800 MHz radios for interoperability.
Dillon	Sheriff & Police utilizing Palmetto 800 network	Fire & EMS not participating due to equipment cost and recurring cost.
Dorchester	All agencies fully Palmetto 800 network	Fire also use VHF
Edgefield	Limited Interoperability	Edgefield Sheriff, Police and EMS have some 800 MHz radios for interoperability. Cost given as the reason they are not participating.

Fairfield	Sheriff & Police are fully Palmetto 800 network	Fire & EMS have limited 800 MHz radios for interoperability. Equipment cost and coverage given as the reason they are not participating. Fairfield is looking at updating their radio systems for interoperability
Florence	All Agencies 800 MHz	Private County 800 MHz system is connected to the Palmetto 800 P25 Core for interoperability.
Greenville	Greenville City fully Palmetto 800 network, Sheriff has 82 Palmetto 800 radios active for interoperability	Greenville Sheriff has some 800 MHz radios active on the system. Greenville City Police and Fire Departments are fully equipped with 800 MHz radios. Simpsonville and Travelers Rest Police primary Palmetto 800 users. Most municipal Police Departments have 800 MHz radios for interoperability. Greenville County EMS has no 800 MHz equipment, seven (7) of the County's (34) Fire Departments have Palmetto 800 radios for interoperability. Greenville is putting out an RFP for a new radio system.
Georgetown	All Agencies Fully Palmetto 800 network	
Greenwood	All agencies have Palmetto 800 network radios for Interoperability	Greenwood Sheriff and Police, EMS and Fire have some 800 MHz radios for interoperability.
Hampton	Hampton County is fully Palmetto 800 network	
Horry	All Agencies fully 800 MHz	Private County 800 System. Horry County is currently evaluating upgrading their system
Jasper	All agencies Palmetto 800 network	
Kershaw	All agencies fully Palmetto 800 network	

Lancaster	Limited Interoperability	All law enforcement, EMS and fire services have 800 MHz radios for interoperability. Lancaster Co is currently in negotiations to switch all Law enforcement, Fire & EMS to the Palmetto 800 system.
Laurens	Sheriff, Police and EMS fully Palmetto 800 network	Fire not participating, due to equipment cost and recurring cost.
Lee	Sheriff and Police fully Palmetto 800 network	EMS and Fire are migrating to the Palmetto 800 MHz radio system.
Lexington	All agencies fully Palmetto 800 MHz	Still maintain VHF network for County fire paging and volunteer use.
Marion	All agencies 800 MHz	Private County 800 MHz system.
Marlboro	Sheriff and Police have Palmetto 800 network for interoperability	EMS and Fire have some 800 MHz radios for interoperability. Would like some additional radios.
McCormick	Limited Interoperability	All law enforcement and EMS services have some 800 MHz radios for interoperability. Fire Service not participating due to cost.
Newberry	Sheriff, Police and EMS have Palmetto 800 network radios for interoperability	Sheriff & EMS use 800 MHz regularly, only a few Fire depts. Have Palmetto 800 radios. Fire not participating due to equipment cost and recurring cost.
Oconee	Limited Interoperability	All Law Enforcement and EMS services have some 800 MHz radios for interoperability. Primary dispatch is UHF for all Oconee agencies.
Orangeburg	Sheriff, Police Fire and EMS utilize Palmetto 800 network.	City of Orangeburg Police and Fire do not participate in the Palmetto 800 MHz network.
Pickens	Limited Interoperability	Sheriff, Police, EMS and a few Fire have 800 MHz radios for interoperability. Not participating due to cost and coverage.

Richland	All Agencies fully Palmetto 800 network	
Saluda	Limited interoperability	Sheriff, 911 Center & County EMD have active 800 MHz equipment. Police have non-active equipment due to recurring fees.
Spartanburg	Sheriff, Police & EMS fully Palmetto 800 network	Spartanburg City Police & Fire and county fire do not participate in the Palmetto 800 MHz system. Some agencies have a few radios for interoperability. Recurring cost given as the primary reason for not participating.
Sumter	All Agencies fully 800 MHz, migrating to the Palmetto 800	Private County 800 MHz system. Sumter County is currently moving to the Palmetto 800 system
Union	Limited Interoperability	Sheriff's, Police and EMS have some 800 MHz radios for interoperability. Cost, fees and better coverage given as reason for not fully participating.
Williamsburg	Sheriff, Police and EMS fully Palmetto 800 network	Fire has 800 MHz equipment for interoperability. Need additional funding.
York	All Agencies fully P-25 800 MHz	Private County P-25 800 MHz system. DOT plan to develop an interface to the York system to enhance interoperability