

October 1, 2017

The Honorable Hugh K. Leatherman, Sr.
Chairman, Senate Finance Committee
111 Gressette Building
Columbia, South Carolina 29201

The Honorable W. Brian White
Chairman, House Ways and Means Committee
525 Blatt Building
Columbia, South Carolina 29201

Dear Chairman Leatherman and Chairman White:

Pursuant to Proviso 93.22 – D500 (DOA) of the 2016-2017 Appropriations Act, I have enclosed information regarding First Responder Interoperability with the statewide Palmetto 800 Network and Private County 800 MHz radio systems. As directed by the proviso, the report identifies all State Agencies and Local Governments participating in the statewide 800 MHz radio interoperability project.

If you have questions regarding this report, please feel free to contact me.

Sincerely,

Marcia Adams

Enclosure

**First
Responder
Interoperability
Report
2016-2017**

Presented to:

Senate Finance

Hugh K. Leatherman, Sr., Chairman

House Ways and Means Committee

W. Brian White, Chairman

State of South Carolina
First Responder Interoperability Report
FY 2016-2017

As required under Legislative Proviso Part 1B Section 93 D500 - S. C. Department of Administration, 93.22 (DOA: First Responder Interoperability), 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 Proviso 2016-2017 funds provided a 7% match to assist State and Local First Responders participating in the Palmetto 800 Statewide Radio Network. The Fund also provided 7% 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 required by the proviso shall provide an annual report on the status of the integration of the statewide Palmetto 800 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) – Federal Grant reductions, and increased expenses continue to limit expansion of the Palmetto 800 system into rural counties of the state. Increased cost in insurance, operations and maintenance of the State’s Cache of Emergency Communications Equipment and portable towers also limits funds for expansion of the statewide radio system. DTO was able to secure funds one (1) additional site in Oconee County and one (1) additional airborne repeater to support hurricane evacuations.

Sumter County – Sumter County completed its transition from a Private County Radio System to the Palmetto 800 statewide radio system July 10, 2016. This migration included all public safety agencies Fire, Law Enforcement, EMS and Emergency Management

Lancaster County – Lancaster County continued its transition from its Private County Radio System to the Palmetto 800 statewide radio system. The transition is scheduled to be complete in October of 2017. This transition includes all public safety agencies Fire, Law Enforcement, EMS and Emergency Management.

Greenwood County – Greenwood County has purchased 800 MHz radios for its public safety agencies; Fire, Law Enforcement, EMS and Emergency Management to switch to the Palmetto 800 system in the 4rd quarter of 2017.

Newberry County – Newberry County signed an agreement to migrate from its UHF/VHF Private Radio System, to become part of the Palmetto 800 statewide radio system. The transition is scheduled to be complete in the first quarter of 2018. This migration includes all public safety agencies in Fire, Law Enforcement, EMS and Emergency Management.

Greenville County – Greenville County council has approved funding for its in Fire, Law Enforcement, EMS and Emergency Management agencies to transition to the Palmetto 800 statewide radio system. The agreement has been completed and will include additional tower sites and system capacity in Greenville County. The transition will be completed in 2018.

Berkeley County – Berkeley County has put out an RFP to enhance its radio service coverage in the county. Proposals include, becoming part of the Palmetto 800 statewide system, purchasing their own independent radio system like Horry County and a blended private system utilizing the Palmetto 800 system core. A final decision is expected by December 2017. The Berkeley Sheriff Office is currently a primary user of the Palmetto 800 system.

Horry County – Horry County completed its transition to a Private County Radio System. The State will work to insure interoperability, but will need to maintain the three (3) Palmetto 800 radio sites in Horry County with little revenue to support the operational cost.

Palmetto 800 User Update - The public/private partnership of the Palmetto 800 Network and its interoperability capabilities continue to be a model across the United States. The system today has over 32,430 primary radio users, 10,000 shared interoperability users and 8,500 users that share the Palmetto 800 Core (Charleston, Beaufort and Florence Counties).

Major Communications Support this year includes;

- Hurricane Matthew October, 2016, extensive use of the state cache radios for National Guard and out of state resources, mobile satellite trailer and mobile tower deployed to Nichols, SC Palmetto 800 system managed over 2,950,000 radio transmission during the first week.
- Pinnacle Mountain Fire November & December, 2016, use of the state cache radios and DTO's mobile generator.
- Executive Protection – provided a mobile satellite trailer to support Bureau of Protective Services for (3) months until Governor McMaster was able to move into the Governor's Mansion.
- Carolina and Clemson home football games
- Dixie Little League World Series
- Dixie Youth Baseball State Tournament (Clemson)
- Darlington Motor Speedway Race
- Search and Rescue Operations
- SC Special Olympics
- Numerous State Exercises
- Cooper River Bridge Run
- North Myrtle Beach/Myrtle Beach Bike Week

Other events include: PGA Golf tournaments, the Peanut Festival, Poultry Festival, Okra Strut Festival, Striped Bass festival, numerous marathons, runs and bike races, traffic

enforcement initiatives, and parades across the state. The goal of DTO's Public Safety Communications section is to ensure communications interoperability and coordination at all events where large crowds gather in case the unthinkable occurs.

Communications Strike Team – Hurricane Katrina and the Graniteville Train wreck in 2005 helped South Carolina realize there was a significant need for a highly trained communications response team to support public safety communications during disasters, large emergencies and significant events. The Communications Strike Team is made up of state and local government communications experts from across South Carolina. DTO coordinates the Strike Team and Strategic Public Safety Communications Cache which backfills communications needs (satellite, mobile towers, and cache radios) for the state.

Palmetto Tactical Communications Network – (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. This system is FREE to all public safety agencies in South Carolina. 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 statewide network.

Palmetto 800 Upgrade to P25 Digital Radio Technology:

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 2011, with the end of support in 2017. The State signed a contract with Motorola, to upgrade the network's technology to the current National Public Safety P25 standard. Palmetto 800 has requested that All Palmetto 800 radios be reprogrammed and upgraded to P25 prior to December 31, 2016. In July, 2017 the Palmetto 800 network began the replacement of the radio infrastructure with a projected completion date of no later than the fall of 2017.

NC Viper & Charlotte, NC System Interoperability – Charlotte, NC and North Carolina (VIPER System) are also 800 MHz P25 radio systems. State agencies and local government fire, EMS and law enforcement agencies respond across state lines on almost a daily basis for mutual aid or while trying to locate an emergency call received via cell phone. In 2017 as the Palmetto 800 system migrates to a P25 technology in support of interoperability with our neighboring states DTO would like to connect the Palmetto 800 system to the Charlotte and NC VIPER systems This will significantly enhance communications during disasters, emergencies, law enforcement chases, fire and EMS responses on and across state borders. This connectivity has onetime and recurring cost to connect the systems. The ISSI technology to interconnect the systems enhances interoperable capabilities and reduces the hours of programming 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 has 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 radio and response equipment for public safety agencies statewide
Citadel	Fully Palmetto 800 network	Fully Palmetto 800
Clemson University	Limited interoperability	Uses local VHF and UHF radio system
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 in prisons, have Palmetto 800 radios for other operations and interoperability.
Emergency Management Department (EMD)	Fully Palmetto 800 network	Still maintains low band redundant system
Fire Marshal, State/LLR	Fully Palmetto 800 network	Fully Palmetto 800
Forestry Commission	All law enforcement officers have Palmetto 800 network	Non-law enforcement firefighting units still utilize the Forestry VHF radio system.

Gray, Wil Lou Opportunity School	Law enforcement fully Palmetto 800 network	Fully Palmetto 800
Health and Environmental Control (DHEC)	Fully Palmetto 800 network	Fully Palmetto 800
Highway Patrol (DPS) State Transport Police Bureau of Protective Services	Fully Palmetto 800 network	Fully Palmetto 800
House Sergeant At Arms	Fully Palmetto 800 network	Fully Palmetto 800
Juvenile Justice, Dept. of (DJJ)	Fully Palmetto 800 network	Fully Palmetto 800
Law Enforcement Division (SLED)	Fully Palmetto 800 network	Maintains and utilize VHF system for redundancy.
Medical University of South Carolina	Fully Palmetto 800 network	Fully Palmetto 800
Mental Health, Department	Law Enforcement fully Palmetto 800 network	Fully Palmetto 800
Natural Resources	Limited Participation, utilize VHF radio system	Law enforcement command staff have Palmetto 800 radios, total of 40 (32 in use). Cost and user fees given as a reason for not fully participating.
Ports Authority	Fully Palmetto 800 network	Utilizing Charleston County P25 system. Interoperable with State Palmetto 800 system.
Probation, Parole and Pardon Services (PPP)	Fully Palmetto 800 network	Fully Palmetto 800
Public Safety, Dept. see(DPS)	Fully Palmetto 800 network	Fully Palmetto 800

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	Fully Palmetto 800
Senate Sergeant at Arms	Fully Palmetto 800 network	Fully Palmetto 800
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	Fully Palmetto 800
University of South Carolina	Fully Palmetto 800 network	Fully Palmetto 800
University of South Carolina Upstate	Fully Palmetto 800 network	Fully Palmetto 800

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 have Palmetto 800 radios for interoperability.
Aiken	County Sheriff and EMS fully Palmetto 800 network. All police fully 800 MHz departments	County fire on UHF, all others fully Palmetto 800.
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	Fully Palmetto 800.
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. Agencies 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 P25 Core for interoperability.
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	Sheriff's Dept fully 800 MHz radios	Sheriff's Department, St. Matthews PD and some FD's have a 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 for full interoperability.
Cherokee	Limited Interoperability	Sheriff's Department, Gaffney PD and some Fire Depts. have 800 MHz radios. due to equipment cost and user fees.
Chester	Sheriff Dept. fully Palmetto 800	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	Primary dispatch is VHF and UHF for law enforcement Fire and EMS due to cost and coverage.
Clarendon	All agencies fully Palmetto 800 network	Fully Palmetto 800 county wide.
Colleton	All agencies Palmetto 800 network	Fully Palmetto 800 county wide.
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 on VHF and Palmetto 800, all others fully Palmetto 800.
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 opted to is utilize a commercial business system for Fire and EMS.
Florence	All Agencies 800 MHz	County 800 MHz system and Palmetto 800 system will merge in July of 2017.
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 Palmetto 800. 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 County has approved funds to become part of the Palmetto 800 system.
Georgetown	All Agencies Fully Palmetto 800 network	Fully Palmetto 800.
Greenwood	All agencies have Palmetto 800 network radios for Interoperability	Greenwood Sheriff and Police, EMS and Fire have some 800 MHz radios for interoperability. County has purchased 700 radios to go fully Palmetto 800 in 2018.
Hampton	Hampton County is fully Palmetto 800 network	Fully Palmetto 800.
Horry	All Agencies fully 800 MHz	Private County 800 System. Horry County has decided to install a new independent radio system.
Jasper	All agencies Palmetto 800 network	Fully Palmetto 800
Kershaw	All agencies fully Palmetto 800 network	Fully Palmetto 800

Lancaster	Fully Palmetto 800 Fall 2017	Has signed a contract to go Fully Palmetto 800 in the Fall of 2017.
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	Fully Palmetto 800.
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	Newberry Sheriff and Police, EMS and Fire have some 800 MHz radios for interoperability. County approved a referendum to go fully Palmetto 800.
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.	Fully Palmetto 800.
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	Fully Palmetto 800.
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 Palmetto 800 radios for interoperability. Recurring cost given as the primary reason for not participating.
Sumter	All Agencies fully Palmetto 800	Fully Palmetto 800
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 P25 800 MHz	Private County P25 800 MHz system. Interoperability through ID exchange.