

Proviso 93.7:
First Responder Interoperability
2022-23 Report on Agency Compliance



REPORT OVERVIEW

Proviso 93.7 of the FY 2023-2024 Appropriations Act authorizes the South Carolina Department of Administration (Admin) to administer and coordinate First Responder Interoperability operations through the statewide Palmetto 800 radio system to better coordinate public safety disaster responses and communications. The following report serves as an overview of recent accomplishments and plans designed to support this proviso. The report also details those entities not yet integrated into the system as of the end of Fiscal Year 2022-2023, as required by the proviso.

Proviso 93.7

The text of the relevant proviso for the current fiscal year states:

“The Department of Administration is directed to administer and coordinate First Responder Interoperability operations for the statewide Palmetto 800 radio system to better coordinate public safety disaster responses and communications. First Responder Interoperability administration and coordination shall be funded as provided in this act. The cost-proportional funds shall be utilized for radio user fees of state agencies and public safety first responders (Fire, EMS and Law Enforcement) that participate in the statewide Palmetto 800 radio system (Palmetto 800 participants). The Department of Administration, in consultation with the State Law Enforcement Division, the Department of Public Safety, and the State Emergency Management Division, and a representative of the South Carolina Sheriffs Association, shall set a baseline number of radios used by each Palmetto 800 participant based on the technical aspects of the Palmetto 800 radio system and the jurisdictional requirements of the participant. If a Palmetto 800 participant reduces the baseline number of radios in use, the amount of funds allocated for the participants radio user fees shall be reduced in a proportional amount. The funds shall also be utilized to provide private county and city radio systems with grant funds to be used for purchases of equipment that support interoperability with the statewide Palmetto 800 radio system and its users. Grant funds shall be allocated to private county and city radio systems based on the criteria used for Palmetto 800 Participants and in amounts proportional to the amounts allocated to support the per-site radio user fees of Palmetto 800 participants. A matching share is required by a Palmetto 800 participant or by a private county or city radio system in order to qualify for receipt of funds pursuant to this proviso. Each fiscal year the Department of Administration shall establish the level of match required based upon funding provided by this act. These entities shall be required to furnish such documentation as may be required by the department to verify that the matching funds requirement is met. Upon funding state agency and public safety first responder user fees and private county and city equipment purchases, any remaining funds may be used to enhance and expand the statewide Palmetto 800 radio system. All funds shall be held in a separate account established by the department for the purposes set forth herein. Any unexpended portion of these funds may be carried forward and used for the same purpose. In the calculation of any across-the-board budget reduction mandated by the Executive Budget Office or General Assembly, the amount appropriated to the Department of Administration for First Responder Interoperability must be excluded from the departments base budget.

The Department of Administration shall provide a report on the status of the integration of the statewide Palmetto 800 radio system which shall include, but not be limited to, a list of entities who are not integrated into the system as of the end of the immediately preceding fiscal year and the reason why they are not integrated. The report shall be submitted by October first, of the current fiscal year to the Chairman of the Senate Finance Committee and the Chairman of the House Ways and Means Committee.”¹

SIGNIFICANT SYSTEM ACTIVITIES:

Funding to Assist First Responders

The First Responder Interoperability Proviso of the FY 2022-23 Appropriations Act funds in conjunction with a onetime additional appropriation of \$2,000,000 provided a 15% match to assist state and local first responders participating in the Palmetto 800 Statewide Radio Network. This funding also provided 15% in matching funds for eligible equipment purchases to first responder agencies on private county and city 800MHz systems to support interoperability between those systems and the Palmetto 800 radio network.

Palmetto 800 User Update

The Palmetto 800 radio network public/private partnership continues to be a model across the United States for its statewide adoption rate and its technical capabilities. The system currently serves a total of 87,600 users, with 66,350 primary radio users. Among these, 21,250 users share the Palmetto 800 core, mainly concentrated in Charleston, Beaufort and Florence counties. Additionally, there are 5,300 state agency users and 15,000 shared interoperability users on the system.

Network Expansion

Federal grant reductions and increased expenses serves to limit the expansion of the Palmetto 800 system into rural counties of the state. The 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. Many of the existing handheld radios have reached the end of their expected lifecycle and need to be replaced with models that support the technology now deployed across the Palmetto 800 radio sites.² This year Chester County and Motorola Solutions facilitated the incorporation of three sites into the network within the 2022-23 fiscal year. Motorola completed two additional site expansions during the fiscal year adding the St. Matthews site in Calhoun and the Tinker Creek site in Union to the network. Furthermore, the construction of four additional site expansions commenced in fiscal year 2022-23, projected for completion by fiscal year 2023-24. Moreover, two new wireline dispatch consoles were added bringing the total to 46.

¹ 2022-23 Appropriations Act, Part 1B Section 93.7 D-500 Department of Administration.

² See Appendix A for a detailed list of these devices.

Completed Site Expansions:

- ▶ Woods Ferry – Chester County
- ▶ Cedar Grove – Chester County
- ▶ Carlisle – Chester County
- ▶ Chester Prim – Chester County
- ▶ St. Matthews – Calhoun County
- ▶ Tinker Creek – Union County

New Construction:

- ▶ Calhoun Falls – Abbeville County
- ▶ Draytonville – Cherokee County
- ▶ Limehouse – Jasper County
- ▶ Youngs – Laurens County

Wireline console additions:

- ▶ South Carolina Department of Transportation
- ▶ Chester County

New Users

Seven new customers were added to the system between July 1, 2022 and June 30, 2023, which include:

- ▶ Blackville Fire Department
- ▶ 8th Circuit Solicitor's Office
- ▶ US Fish and Wildlife Service
- ▶ Coast Regional Transport Authority
- ▶ MTC Medicare 3
- ▶ North Greenville University
- ▶ Dorchester County School District

FIRST RESPONDER INTEROPERABILITY OPERATIONS:

OTIS Public Safety Communications Team Mission Fulfillment

The Office of Technology and Information Services' (OTIS) Emergency Services team is tasked with the mission of ensuring communications interoperability and coordination between law enforcement, fire and emergency medical service responders working events throughout South Carolina. This mission also requires coordination with other state agency partners and with private sector service providers.

This mission required the team to provide communications interoperability support to a variety of events in 2022-23. Such events included:

- ▶ 2022 Hurricane Ian
- ▶ 2022 Darlington Labor Day NASCAR Race
- ▶ 2022 Harvest Festival
- ▶ 2022 South Carolina Firefighters' Association Conference
- ▶ 2022 Irmo Okra Strut Event
- ▶ 2022 Kershaw County Christmas Parade
- ▶ 2022 Operation Rolling Thunder
- ▶ 2023 Carolina Cup Event
- ▶ 2023 City of Greer Freedom Blast
- ▶ 2023 City of Spartanburg Spring Fling
- ▶ 2023 Chesterfield County Sheriff's Office DMR System Fault
- ▶ 2023 Darlington May Race Event
- ▶ 2023 Funeral of Mr. Muller Irmo Fire
- ▶ 2023 Interoperability Workshop
- ▶ 2023 Kinetic Derby Day
- ▶ 2023 Laurens Freedom Fest
- ▶ 2023 Myrtle Beach Country Music Festival
- ▶ 2023 South Carolina Poultry Festival
- ▶ Clafin University special campus events
- ▶ South Carolina State University special campus events
- ▶ University of South Carolina home athletic contests and special campus events
- ▶ Clemson University home athletic contests and special campus events

South Carolina State Strategic Technology Reserve (STR)

OTIS maintains strategic reserve of communications equipment for use by public safety during such events which serves as the state's Strategic Technology Reserve. This communications cache is used to backfill communications needs as agencies deploying their own resources exhaust their equipment inventories. The OTIS cache reserves include satellite resources, portable network and phone systems, mobile towers and handheld digital radios. These are provided at no cost to requesting agencies as needed and must be returned to the OTIS Emergency Services team when the event is closed out.

South Carolina Communications Unit (SCCOMU)

The aftermath of Hurricane Katrina and the Graniteville train wreck, both in 2005, caused South Carolina to realize the need for a highly trained communications response team to support public safety communications during disasters, large emergencies and significant events. The South Carolina Communications Unit is comprised of technically proficient communication expertise across public safety disciplines, who are familiar with both legacy and current communication technologies and who can deploy as county and state mutual aid resources. SCCOMU members are evaluated for credentialing by the Statewide Interoperability executive committee, and OTIS coordinates the SCCOMU deployments when it is called into action.

As the lead coordinating agency for the communications Emergency Support Function (ESF-2), OTIS in conjunction with the South Carolina Emergency Management Division's (SCEMD) state full-scale exercise, conducted an annual communications exercise with a focus on emergency communications restoration response and recovery operations. Representatives from both the private and public sector worked together to test plans and response capabilities during a dual threat scenario of a simulated fixed nuclear facility ingestion pathway release and a potential South Carolina landfall hurricane.

Palmetto Tactical Communications Network (PATCON)

To enhance South Carolina's public safety communications and interoperability capabilities and to add statewide communications redundancy, OTIS continues to operate and maintain the Palmetto Tactical Communications Network (PATCON), a statewide conventional interoperable repeater network supporting traditional 700/800MHz radio communications. The PATCON network is comprised of 130 standalone transmitter sites providing additional interoperability, redundancy and capacity resources to the Palmetto 800 statewide network. This system is free to use for all public safety agencies in South Carolina. PATCON interoperable repeaters are deployed in every county in the state.

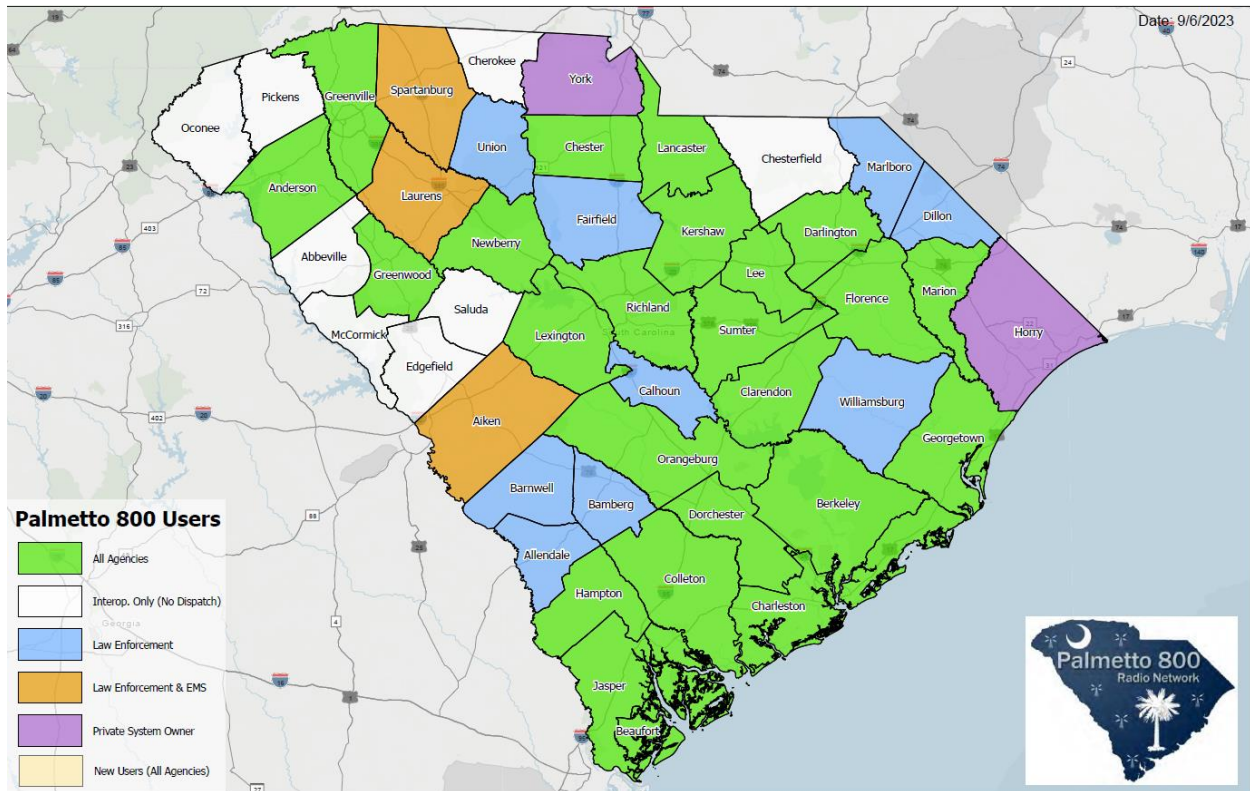
In FY23, proviso funding was used to replace the core network infrastructure of the PATCON system. Funding allowed for the replacement of all 126 end-of-life PATCON repeaters. The new equipment has been received, replacement schedule created, and installations have begun with a focus on those systems that are the oldest and serve the greatest population densities. The PATCON network continues to evolve to meet demands upon the system.

North Carolina VIPER and Charlotte (N.C.) System Interoperability

The state of North Carolina's P25 radio system, called the VIPER System, is compatible with the South Carolina Palmetto 800 network. There are a total of 15,000 mutual aid IDs on the system designated to support North Carolina agencies. Because of the compatibility between systems, state agencies and local government, first responders in both states can respond across state lines in support of one another as needed. This interoperability provides invaluable mutual aid during events and in emergency situations. During 2022-23, South Carolina, North Carolina, Kentucky and Tennessee participated in a multi-state communications exercise sponsored by Federal Emergency Management Agency (FEMA) Region IV where all states were able to successfully communicate across borders utilizing patches that were facilitated by each state's system. Also, during FY 2022-23 the technologies used to facilitate inter-system connections between North Carolina and South Carolina were upgraded to allow more reliable connectivity, centralized management and monitoring.

PALMETTO 800 USER INTEGRATION REPORT

The Palmetto 800 Users map, which lists the system’s users by agency type, is featured below.



The following table lists the state, county and city government Palmetto 800 network radio users. The Palmetto 800 Network, private county and private city 800 MHz systems have exchanged radio system IDs to enhance statewide interoperability. The Palmetto 800 system has also exchanged system IDs with participating jurisdictions in South Carolina’s neighboring states to enhance public safety mutual aid through communications interoperability across state lines. These include the North Carolina Highway Patrol, the City of Charlotte, City of Pineville, Union, Polk and Brunswick counties in North Carolina, and the Cities of Augusta and Savannah, Georgia.

State Agency Interoperability		
<u>State Agency</u>	<u>800 MHz Interoperability</u>	<u>Comments</u>
Adjutant General	National Guard has Palmetto 800 network radios for interoperability	This agency has 195 radios but would like to have additional 800 MHz radios to support state emergencies.
Department of Administration (Admin)	Fully Palmetto 800 network	Maintains and deploys the state's strategic cache of communications radio and response equipment for public safety agencies statewide
The Citadel	Fully Palmetto 800 network	Fully Palmetto 800 network
Clemson University	Fully Palmetto 800 network	Utilizes local 800 MHz conventional resources to augment communications needs during sporting and special events.
Coastal Carolina University	Limited interoperability	Utilizes Horry County's private 800 system. They have interoperability with local and state law enforcement.
Department of Corrections (DOC)	Limited interoperability	Utilizes a local VHF system in prisons. DOC has Palmetto 800 radios for other operations and interoperability
Emergency Management Division (SCEMD)	Fully Palmetto 800 network	Maintains its own low band redundant system.
Department of Labor, Licensing and Regulation (LLR) and State Fire Marshal	Fully Palmetto 800 network	Fully Palmetto 800 network
Forestry Commission	All law enforcement officers have Palmetto 800 network	Non-law enforcement firefighting units still utilize the Forestry VHF radio system.

Wil Lou Gray Opportunity School	Law enforcement is fully Palmetto 800 network	Fully Palmetto 800 network
Department of Health and Environmental Control (DHEC)	Fully Palmetto 800 network	Fully Palmetto 800 network
S.C. Department of Public Safety <ul style="list-style-type: none"> • S.C. Highway Patrol • State Transport Police • Bureau of Protective Services 	Fully Palmetto 800 network	Fully Palmetto 800 network
S.C. House of Representatives Sergeant-at-Arms	Fully Palmetto 800 network	Fully Palmetto 800 network
Department of Juvenile Justice (DJJ)	Fully Palmetto 800 network	Fully Palmetto 800 network
S.C. Law Enforcement Division (SLED)	Fully Palmetto 800 network	The agency maintains and utilizes VHF system for redundancy.
Medical University of South Carolina (MUSC)	Fully Palmetto 800 network	Fully Palmetto 800 network
Department of Mental Health (DMH)	Law enforcement is fully Palmetto 800 network	Fully Palmetto 800 network
Department of Natural Resources (DNR)	Law enforcement is fully Palmetto 800 network	DNR still maintains and utilizes its own VHF radio system in areas of the state where Palmetto 800 coverage is unavailable.
Ports Authority	Fully Palmetto 800 network	The agency is interoperable with State Palmetto 800 system, utilizing the Charleston County P25 system.
Department of Probation, Parole and Pardon Services (PPP)	Fully Palmetto 800 network	Fully Palmetto 800 network

Department of Revenue (DOR)	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.
South Carolina State University	Police are fully Palmetto 800 Network	Enforcement officers only
S.C. State Senate Sergeant-at-Arms	Fully Palmetto 800 network	Fully Palmetto 800 network
Department of Transportation (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 are utilizing low band system.
State Transport Police (STP) (See also S.C. Highway Patrol)	Fully Palmetto 800 network	Fully Palmetto 800 network
University of South Carolina	Fully Palmetto 800 network	Fully Palmetto 800 network
University of South Carolina - Upstate	Fully Palmetto 800 network	Fully Palmetto 800 network

Local Government Interoperability by County

Note: All county 911 dispatch centers and county emergency operations centers (EOC) statewide have been provided with 800 MHz radios for interoperability between local government and state agency dispatch centers.

Local Government Interoperability by County		
<u>County</u>	<u>800 MHz Interoperability</u>	<u>Comments</u>
Abbeville	Limited interoperability	Has Palmetto 800 network radios for interoperability. Abbeville has opted to migrate from Palmetto 800 to a non-P25 compliant commercial system due to coverage and costs.
Aiken	County Sheriff and EMS are fully Palmetto 800 network. All police are fully 800 MHz departments	County fire is on UHF, all others are fully Palmetto 800.
Allendale	County Sheriff and most police departments utilize Palmetto 800 network for interoperability	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	County fire utilizes VHF but has Palmetto 800 radios for interoperability.
Bamberg	Law enforcement is fully Palmetto 800 network	County Fire and EMS have Palmetto 800 radios for interoperability only, both utilize VHF and UHF systems for primary dispatch.
Barnwell	Sheriff & EMS have Palmetto 800 network radios, Fire has some 800 MHz radios for interoperability	Fire agencies utilize VHF for primary dispatch. EMS is provided by private contractor Med Shore who have Palmetto 800 network radios.
Beaufort	Private 800 network that shares Palmetto 800 core. School District has joined	Beaufort uses a private 800 MHz System connected to the Palmetto 800 P25 core for interoperability.

	the Palmetto 800 system as of 2021.	
Berkeley	Fully Palmetto 800 network	Fully Palmetto 800 network
Calhoun	Sheriff's Department is fully Palmetto 800	Sheriff's Department, St. Matthews PD and some fire departments have radios for interoperability with 800 MHz radios. EMS and fire have limited participation on the in Palmetto 800 due to equipment cost and user fees.
Charleston	Private 800 network that shares Palmetto 800 core	Charleston utilizes a private 800 MHz System connected to the Palmetto 800 P25 core for interoperability.
Cherokee	Limited interoperability	Sheriff's Department, Gaffney PD and some fire departments have 800 MHz radios. Limited participation due to equipment cost and user fees.
Chester	Fully Palmetto 800 network	All agencies completed their migration to the Palmetto 800 network in FY23
Chesterfield	Sheriff and police departments have Palmetto 800 network radios for interoperability	Primary dispatch is VHF and UHF for law enforcement. Fire and EMS are not participating due to cost. Due to concerns with their current county DMR system, Chesterfield is considering a partnership with Palmetto 800 to migrate to the system.
Clarendon	Fully Palmetto 800 network	Fully Palmetto 800 network
Colleton	Fully Palmetto 800 network	Fully Palmetto 800 network
Darlington	Fully Palmetto 800 network	Fully Palmetto 800 network. County owned VHF system in place for backup.
Dillon	Sheriff and police are utilizing Palmetto 800 network	Fire and EMS not participating due to startup equipment cost and recurring participation cost.

Dorchester	Fully Palmetto 800 network	Fire uses VHF and Palmetto 800. All others are fully Palmetto 800.
Edgefield	Limited interoperability	Edgefield Sheriff, police and EMS have some 800 MHz radios for interoperability. Edgefield has opted to utilize a non-P25 compliant commercial system. Cost is given as the reason they are not participating fully.
Fairfield	Sheriff and police are fully Palmetto 800 network	Fire and EMS have some 800 MHz radios for interoperability. Equipment cost and coverage given as the reason they are not participating fully. Fairfield has opted to utilize a commercial business system for fire and EMS.
Florence	Private 800 network that shares Palmetto 800 core	Florence utilizes a private 800 MHz System connected to the Palmetto 800 P25 core for interoperability.
Greenville	Fully Palmetto 800 network	Fully Palmetto 800 network
Georgetown	Fully Palmetto 800 network	Fully Palmetto 800 network
Greenwood	Fully Palmetto 800 network	Fully Palmetto 800 network
Hampton	Fully Palmetto 800 network	Fully Palmetto 800 network
Horry	All Agencies are fully 800 MHz on the county's own private system.	Private County 800 System. Horry County decided to install an independent radio system in 2016. Horry County and Palmetto 800 have exchanged mutual aid IDs for interoperability.
Jasper	Fully Palmetto 800 network	Fully Palmetto 800 network
Kershaw	Fully Palmetto 800 network	Fully Palmetto 800 network
Lancaster	Fully Palmetto 800 network	Fully Palmetto 800 network
Laurens	Sheriff, police and EMS are fully Palmetto 800 network	Fire is not participating due to startup equipment cost and recurring cost. Laurens is in the process of

		submitting a proposed penny tax to acquire the funding for the fire departments.
Lee	Fully Palmetto 800 network	Fully Palmetto 800 network
Lexington	Fully Palmetto 800 network	Fully Palmetto 800. Batesburg-Leesville PD is utilizing UHF but has some 800 radios for interoperability.
Marion	Fully Palmetto 800 network	Fully Palmetto 800 network
Marlboro	Sheriff and police have Palmetto 800 network for interoperability	EMS and fire have some 800 MHz radios for interoperability. Fire and EMS would like additional radios but are not fully participating due to costs.
McCormick	Limited interoperability	All law enforcement and EMS services have a few 800 MHz radios for interoperability. Fire service not participating due to cost.
Newberry	Fully Palmetto 800 network	Fully Palmetto 800 network
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	Fully Palmetto 800 network	Fully Palmetto 800 network
Pickens	Limited interoperability	Sheriff, police, EMS and a few fire have 800 MHz radios for interoperability. Others are not participating due to cost and poor regional coverage.
Richland	Fully Palmetto 800 network	Fully Palmetto 800 network
Saluda	Limited interoperability	Sheriff, 911 Center, County EMD and Ridge Spring have active Palmetto 800 radios for interoperability. Saluda has opted to utilize a non-P25 compliant commercial system. Equipment costs and recurring fees given as the primary reason for not participating.

Spartanburg	Sheriff, police and EMS fully Palmetto 800 network	City and county fire do not participate in the Palmetto 800 MHz system. Some fire departments have Palmetto 800 radios for interoperability. Recurring cost given as the primary reason for not participating.
Sumter	Fully Palmetto 800 network	Fully Palmetto 800 network
Union	Limited interoperability	Sheriff's Office, police and EMS have some 800 MHz radios for interoperability. Cost, fees and need for better coverage given as reasons for not fully participating. County would like to switch to the Palmetto 800 if funding becomes available.
Williamsburg	Sheriff and police are fully Palmetto 800 network	Fire and EMS have 800 MHz equipment for interoperability. County Fire and EMS need additional funding to fully participate.
York	All Agencies are fully 800 MHz on the county's own system	Private County 800 System. York county decided to install an independent radio system in 2007. York County and Palmetto 800 have exchanged mutual aid IDs for interoperability.

ADDITIONAL INFORMATION

For questions or additional information regarding the South Carolina Department of Administration's compliance efforts with Proviso 93.7 of the Fiscal Year 2022-2023 Appropriations Act, please contact Brooke Bailey (brooke.bailey@admin.sc.gov).

For a presentation of the Palmetto 800 system and the other communications interoperability missions of the OTIS Emergency Communications section, please see the agency website at: <https://admin.sc.gov/sites/default/files/flipbook/PalmettoRadioNetwork/>.

APPENDIX A

The Palmetto 800 Advisory Committee has decided to implement TDMA across the Palmetto 800 P-25 network beginning in Fiscal Year 2025-26. All radios on the Palmetto 800 network must be TDMA compliant by July 1, 2027. To control technology creep, it was decided to limit the number of radios in the strategic cache to a total of 500 units. The Motorola XTS series radios which comprise a portion of the current strategic cache of radios are end-of-life as of December 2018. Negotiating a \$195,000 discount from Motorola Solutions allowed OTIS to replace 90 of the 245 end-of-life radios in the STR. In addition to the end-of-life replacements, OTIS was able to work with PPP to acquire 50 of the newer APX model devices which the agency had replaced with tri-band capable radios. This partnership provided a cost savings of \$380,000 and reduced the number of radios requiring replacement to 34. However, lifecycle replacement continues to be an increasingly urgent need since much of the state's STR equipment is coming up on end-of-life dates.