

CAPITAL REGION COMMUNICATIONS SYSTEM

Communications Summary

Other than the State, the only 24/7 dispatch operation centers within the central region of Vermont (specifically Washington County), are in the cities of Barre and Montpelier. Each communications center provides mutual aid and backup dispatching services for the other for continuity of operations. Combined, Barre and Montpelier cover an area of well over 775 square miles of mountainous topography for a population of over 75,000 people. Additionally, they provide first responder services for twenty-seven state-owned facilities (not including AOT resources) including assets in Waterbury, the Statehouse, and the Capitol Complex.

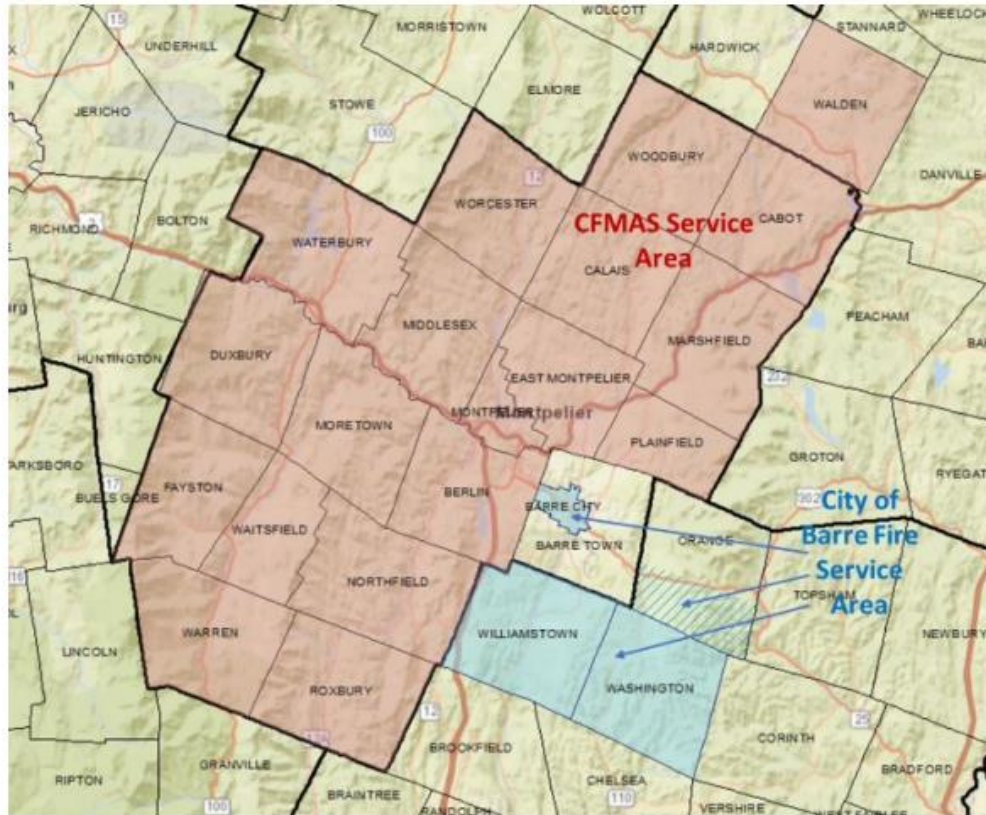


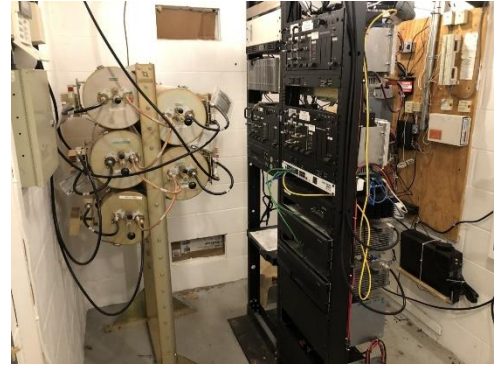
Figure 1: Central Vermont Towns Served by CFMAS. Barre City and Montpelier

Current Regional Customers Supported	
Barre City Police	Berlin Fire & Fast Squad
Barre City Fire & EMS	Cabot Ambulance
Barre Town EMS, Fire, DPW, & Police	Cabot Fire Department
Washington Fire Department Fast Squad	East Montpelier Fire & EMS
Williamstown Fire Department & Ambulance	Marshfield Fire Department
Washington County Sheriff's Department	Middlesex Fire & Fast Squad
Vermont State Police (Channel 2)	Moretown Fire Department
Randolph Center, Randolph Village, & East Randolph Fire	Northfield Fire Department
Montpelier Police Department	Northfield Ambulance Service
Montpelier Fire & EMS	Plainfield Fire & Fast Squad
Capitol Police	Roxbury Fire Department
Walden Fire & Fast Squad	Waterbury Fire Department
Waterbury Ambulance Service	Waitsfield Fire Department
Warren Fire Department	Woodbury Fire & Fast Squad
Worcester Fire & Fast Squad	

The Need

Current equipment and infrastructure are at a critical breaking point. The Land Mobile Radio (LMR) system is deteriorated and beyond the end of life with the age of towers and equipment ranging from five to over twenty years in age. LMR technology must be used for emergency communications in central Vermont due to terrain and topography and current cellular services are not reliable. In-Building communication coverage is also difficult or non-existent, and radio channels are crowded with limited available frequencies.

The State's current communications infrastructure are also at a critical breaking point and must reduce its workload (possibly shed over 100 agencies) to regionalized centers to avoid system collapse.



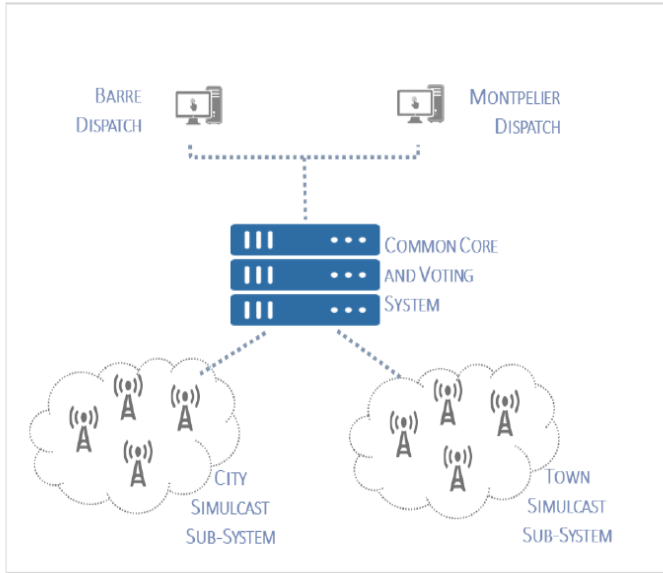
Shovel Ready

1. Both Barre and Montpelier have strong and stable workforces capable of providing dispatch services for other agencies to provide relief for the state, as well as the ability to attract potential new staff.
2. Both Barre and Montpelier have significant and proven communications experience, providing regional dispatch services since 1986. Additionally, dispatchers undergo a thorough Communications Training program and are APCO certified.
3. **This entire project is shovel ready:**
 - a) The Central Vermont Public Safety Authority (CVPSA) commissioned a needs assessment in 2021 from an independent (and outside) subject matter expert organization
 - b) There are already mutual aid agreements and long-standing memorandums of understanding in place with nearly thirty agencies and local governments
 - c) All estimations of technology, equipment, and costs are based on a verified study of needs and are not "ballpark" figures without technological consultation
 - d) The project working group has conducted internal reviews and consulted with communications centers in Williston VT., Chicago and Las Vegas to devise strategic operational plans and staffing estimates.
 - e) a focus was made on the expandability and interoperability of the proposed system with the State of Vermont and future technologies.

Project Team

Doug Brent, Fire Chief, Barre City, VT
Joseph Aldsworth, Deputy Fire Chief, Barre City, VT
Braedon "Brad" Vail, Police Chief Barre City VT.
Larry Eastman, Deputy Police Chief, Barre City, VT
Brian Peete, Police Chief, Montpelier, VT
Eric Nordenson, Deputy Police Chief, Montpelier, VT
Carrie McCool, Dispatch Supervisor, Montpelier, VT
Paul Cerutti, Capital Fire Mutual Aid System, Communications Chair

Project Summary



Based on the CVPSA Televate report, the project team has identified the new sites that are needed for the communications systems, as well the equipment necessary to update the existing sites. The project team will consult with the selected vendor to finalize sites and frequencies which guarantee effective range and coverage. “Skin in the Game” and long-term commitment as both Barre and Montpelier are in the final stages of purchasing the same dispatch consoles systems that will allow for redundancy and interoperability between both cities, adjacent municipalities, and as a backup for the state’s communication’s system. All infrastructure purchases will be upgradable for anticipated technological advances and need (e.g., P25, public safety broadband applications, Commercial Push-to-Talk, or Mission Critical Push-to-Talk).

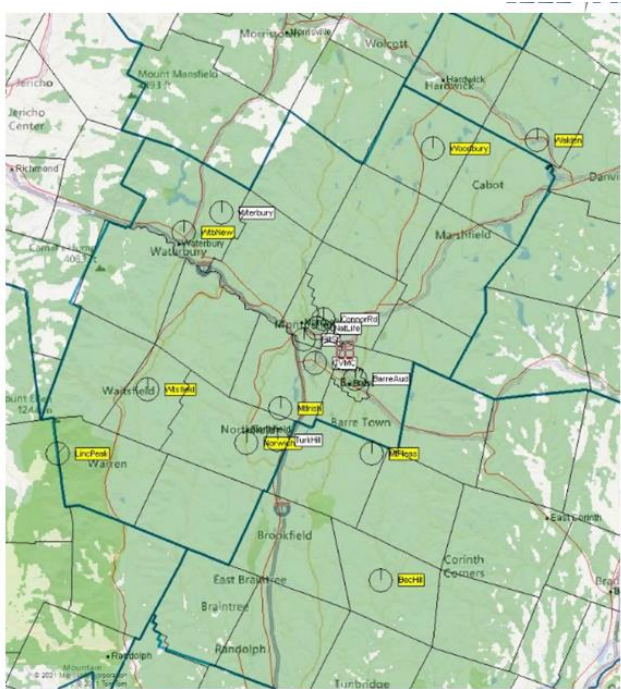


Figure 13: Proposed Towns Sub-System Predicted Mobile Coverage from Simulation

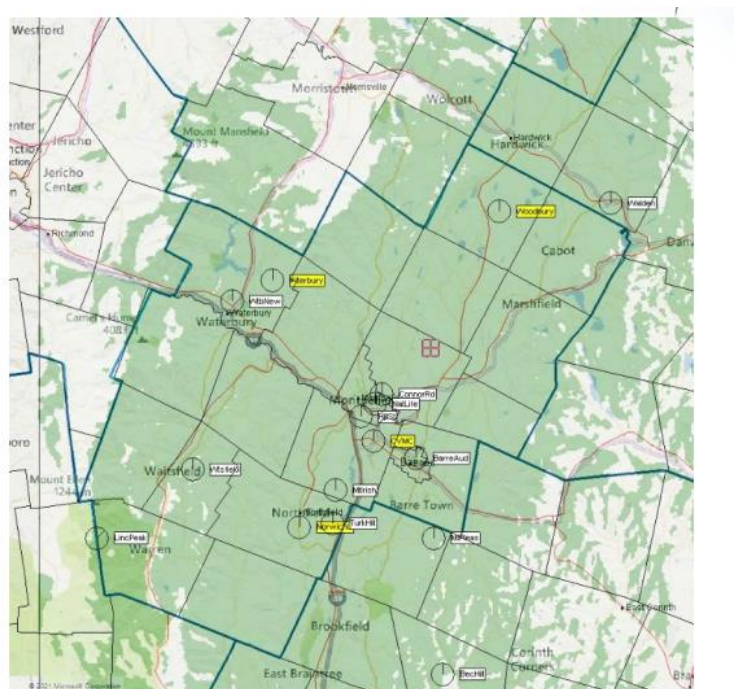


Figure 16: Predicted Coverage for Ambulance to Hospital Communications with Additional Receive Sites

The Televate assessment has broken down the infrastructure needs into a ranking of priority items from 1 to 3. The Televate project estimates a total of \$6,464,000. However, to meet the immediate need to become a regional center capable of providing services in central Vermont and essentially anywhere in the state at a moment's notice, the Priority 1 items estimates must be procured. Those costs are estimated at \$3,230,000 (see "Priority 1 Items" chart below).

Primary Upgrade	Priority	Estimated Cost
Regional Radio System Infrastructure, Procurement, PM, Governance, Construction	1	\$2,900,00
Tower upgrades and reinforcement / Radio equipment shelters (if and where required)	1	\$330,000
Radio Consoles for Montpelier and Barre City dispatch	1	\$700,000
TAC Channel Receivers (supports TAC fire ground radio transmission to dispatch)	2	\$300,000
VMED Receivers (expands VMED coverage and interoperability)	3	\$95,000
Mobile and portable radios: P25 capable (assume 200)	1	\$700,000
Vehicular Repeater Equipment and installation (20 units)	2	\$285,000
Redundant fiber link between dispatch facilities	2	\$100,000
Implementation of public safety broadband applications	2	\$150,000
Commercial Push-to-Talk (PTToC) or Mission Critical PTT	2	\$154,000
Computer Aided Dispatch (CAD) system	2	\$750,000
TOTAL COST ESTIMATE		\$6,464,000

Priority 1 Items	
<i>Item</i>	<i>Cost Estimate</i>
Regional Radio System Infrastructure, Procurement, PM, Governance, Construction	\$2,900,000 <i>(need funding)</i>
Tower Upgrades and Reinforcement/Radio Equipment Shelters (if and where required)	\$330,000 <i>(need funding)</i>
Radio Consoles for Barre and Montpelier	\$700,000 <i>(Self-funded)</i>
Mobile and Portable Radios	\$700,000 <i>(funding has been applied for through the current DHS grant)</i>
Total	\$3,230,000

How We Ensure Future Sustainability

Costs for additional personnel to provide dispatch for new agencies will be factored into any fees to towns and municipalities utilizing the existing negotiated contract for current agencies and Capital Fire Dispatching Formula.

With The adoption of a Capital Improvements plan by the Capital Fire Mutual Aid System will also be made for an annual contribution to be made by the 22 municipalities' in the effort to plan to pay for the next Regional systems upgrade which is in an estimated 10 years.