



OUTCOME

“Now we’re in a position to win, to beat the bad guys and be ready for natural disasters.”

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CASE STUDY: MACC 9-1-1, GRANT COUNTY, WASHINGTON

THE CLIENT

MACC 9-1-1 is the sole Public Safety Answering Point (PSAP) in Grant County, WA. In 2013, MACC 9-1-1 received 63,831 emergency and non-emergency calls.

Dean Hane manages the MACC 9-1-1 radio communications infrastructure and system, dispatch console system and first responder subscriber equipment: “We’re situated in rural America with a large area to cover. We serve over 30 agencies and about 1,300 subscribers which includes law enforcement, fire and emergency medical services across a 3,000 square mile jurisdiction.”

SITUATION

Poor communications coverage and capabilities were affecting the work of first responders across Grant County. Dean Hane explains: “Like most other public safety agencies, we were very tightly funded. The ageing radio communications system that we were operating was under-built. We didn’t have enough sites, channels, frequencies and we certainly didn’t have enough feature sets. We had numerous complaints from our first responders about interference, not enough channels and poor coverage. We also had to address the 2013 narrowband deadline.”

MACC 9-1-1 was using a VHF wideband analog system. The VHF frequency pairs were clearly inadequate, yet acquiring additional frequencies to work with neighboring counties was proving difficult.

“Our Tait system is the ‘full P25 meal deal’ with LSM, P25 encrypted radios, network management, console integration, services and support.”

Dean Hane
Emergency Radio Communications Manager
MACC 9-1-1



THE DECISION

MACC 9-1-1 began the search for a critical communications solution partner to address:

- poor radio coverage,
- interference,
- inadequate critical infrastructure,
- too few channels and radio feature sets,
- Federal Communications Commission (FCC) 12.5 kHz narrowband compliance,
- agency interoperability and multi-jurisdiction pursuits.

Mr Hane says, “We wanted a solutions partner that would provide several values such as expertise, professionalism and the ability to deliver. With a huge investment like this we wanted to make sure the vendor we chose was going to be a long-term partner. With these decision points in mind, we chose Tait.”

MACC 9-1-1 wanted a standards-based, digital system that was commonly accepted in the public safety industry. “We certainly didn’t want a proprietary system, so we chose the P25 open standard technology. Based on the issues with our existing system, we decided a P25 trunked simulcast network with Linear Simulcast Modulation (800 MHz) would be the best platform.”

RESPONSE

MACC 9-1-1 and Tait Communications worked closely together on a complex and innovative network design. There were several hurdles that had to be addressed before installing the TaitNet P25 Trunked Simulcast Network including:

- the transition time from VHF to 800 MHz extended beyond the narrowband deadline,
- the need to ensure interoperability with state agencies and neighboring counties on VHF analog systems,
- two-tone analog pager integration for fire agencies

The Tait solution comprised a parallel VHF narrowband analog simulcast system to meet the narrowband deadline, assure interoperability and allow enough time to make a smooth transition from analog to digital.

“We did consider multi-band radios but not all vendors offer Linear Simulcast Modulation. We also found certain feature sets were limited with multi-band radios across vendors so this option was ruled out quickly.”

The final phase of the project was the delivery of an 11-site TaitNet P25 Trunked Simulcast Network (800 MHz). Mr Hane says, “We got the ‘full P25 meal deal’ with Linear Simulcast Modulation (LSM), P25 Phase 1 Operation with the option to upgrade to P25 Phase 2, 1,300 Tait P25 TP9100 and TM9100 AES encrypted Radios, nine Avtec Consoles for Dispatch Integration, services including Project Management, Design, Installation, Commissioning and Training.”



MACC 9-1-1 WITH 34 USER AGENCIES



IN PARTNERSHIP WITH TAIT



OPERATE A TAIT P25 TRUNKED SIMULCAST NETWORK.



OUTCOME

The strong partnership between MACC 9-1-1 and Tait Communications has greatly benefited public safety for first responders and the citizens in Grant County. Mr Hane says, “Tait is the best partner I’ve ever worked with on a project of this nature; I’ve been in the industry for over 20 years and have dealt with many multi-million dollar, contractual projects like this one. It’s certainly not a vendor-customer relationship, we have a true partnership.”

Improving officer safety was a key driver for the project. Mr Hane says, “The transition from analog to digital has significantly improved our officer safety with better communications coverage and better audio quality across from the new digital system.”

Public safety systems designed by Tait experts are, by nature, resilient and robust. Scott Quintavalle, Chief Technical Officer, Tait Communications, comments, “In an emergency or disaster, cellular technology is typically overloaded and emergency radio communications must perform. We designed the MACC 9-1-1 network to withstand multiple failures.”

Mr Hane continues, “The conservative design process with Tait has paid off. We can handle multi-point network failures now and continue to provide communications for our first responders in times of crisis. Since the system has been online, we’ve had multiple incidents such as lightning storms, rain storms, hail storms and wind storms where we’ve taken multiple failures and our system continues to perform!”

Inter-agency events can be easily coordinated with the new communications system according to Mr Hane. “Multi-jurisdictional coordination is much smoother. We have more advanced feature sets on our emergency communications system than we’ve ever had before. For example, we implemented Advanced Encryption Standard (AES) for law enforcement so they can conduct covert operations in a secure environment. We work with the Department of Justice and U.S Marshals often. With the new system, there have been instances where there have been so many bad guys apprehended and arrested that the jails in Grant County are full. Without encryption or without working collaboratively on our system there’s no way that would have ever happened in the past.”

Mr Hane concludes, “When I look back, Tait provided a very robust design. We now have an emergency radio communications system that has been designed around our functionality and critical communications requirements. I am very happy with Tait and what the partnership has achieved for public safety in Grant County.”

MORE INFORMATION

For news, product specifications, comprehensive technical information and contact details of your nearest Tait service facility, please visit www.taitradio.com

CUSTOMER PROFILE

MACC 9-1-1 is the single consolidated Public Safety Answering Point (PSAP) in Grant County, WA. They serve 34 agencies or 1,300 users which includes law enforcement, fire and emergency medical services across a 3,000 square mile jurisdiction.

APPLICATIONS

- ▶ TaitNet P25 Trunked Simulcast Network (800 MHz)
- ▶ Linear Simulcast Modulation
- ▶ P25 Phase 1 Operation with the option to upgrade to P25 Phase 2
- ▶ 1,300 Tait P25 TP9100 and TM9100 AES Encrypted Radios
- ▶ Avtec Console System
- ▶ Services: Project Management, Design, Installation, Commissioning and Training

BUSINESS BENEFITS

- ▶ 98% county-wide coverage
- ▶ Officer safety
- ▶ Agency interoperability
- ▶ Highly secure communications for covert operations
- ▶ Smooth coordination of multi-jurisdictional events
- ▶ Business continuity during natural disasters and emergencies
- ▶ Long-term partnership

Tait is a global leader in designing, delivering and managing innovative communication solutions that help utilities and public safety organizations to keep the lights on and communities safe.

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