

Sedro-Woolley School District deploys MOTOTRBO™ for Wide Area Emergency Communications



Executive Summary: Having experienced what can happen when landline and cell phone circuits become jammed during emergencies, Sedro-Woolley School District wanted a system that would ensure reliable communications throughout the district. MOTOTRBO digital portable radios and a mountaintop repeater provided the school district with a redundant communications system that enabled consistent communications throughout the district's 395 square miles.

Situation: Keeping students, faculty, and staff safe throughout the district

Known as the gateway of the North Cascades Mountains, Sedro-Woolley is located in the western part of Washington State about 40 miles from the Canadian border. The Sedro-Woolley School District encompasses 395 square miles and places the safety and security of its students, teachers and staff on an equal priority with education excellence.

Several years ago, the district issued cell phones to its maintenance staff and to each of its nine schools to use for emergency communications. However, the 50+ phones created a burdensome amount of additional work each month to track who had what phone, as well as auditing phone records to ensure they were being used only for school business. In addition, the monthly service fee for that many phones strained the district's budget. Also, there was always the fear that on occasions when the school did need them for emergency communications, the circuits for both cell and landline phones could become overloaded and communications would be jeopardized.

"I remember awhile back, there was a gas pipe leak in Whatcom County," recalls Stewart Mhyre, executive director of business and operations for the district. "Thousands of gallons of gas were dumped into Whatcom Creek and eventually caught fire, creating a wall of flames that stretched for a mile. I was at the district office about ten miles from the fire and the explosion shook the entire building."

Whatcom County's Director of Emergency Management was able to get through to his emergency team with his cell phone but then was forced to keep the call open for over three hours. "In a panic situation, people tend to jam the lines," Mhyre said. "The director knew that if he hung up, he'd never get another line."

Products

- MOTOTRBO XPR™ 6550 portable radios
- MOTOTRBO XPR™ 8300 repeater

Benefits

- Emergency communications between all district schools
- Expanded coverage throughout the district
- Cost effective communications for maintenance staff



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- Stewart Mhyre, Executive Director of Business and Operations, Sedro-Woolley School District

Solution: MOTOTRBO radios

Mhyre wanted a reliable communication system that would offer wide area emergency coverage between all the district’s schools throughout the entire 395 square mile area. Steve Bolton from Day Wireless Systems, a local Motorola channel partner, met with Mhyre to discuss potential options.

“The first thing we did was to test a UHF analog radio system,” says Bolton. “However, due to the wide range it had to cover and also because there are 2,000 foot mountains in the region, the analog system didn’t reach all the way through the district. Digital was clearly the answer.”

District proposes unique, cost effective solution

Sensitive to the school district’s budget, Day Wireless proposed a unique solution. Bolton recommended that the district purchase MOTOTRBO digital two-way portable radios and Day Wireless would install a MOTOTRBO repeater atop one of its own existing mountaintop towers and the district could then lease monthly airtime space.

“That would give them coverage throughout the entire district with a radio at each school office, one at the district, one at the transportation department, and the rest deployed to the Maintenance staff because they service the entire district,” Bolton says.

The MOTOTRBO repeater runs off a system that has a backup generator, so even if all traditional communication lines went down, the digital portable radios would continue to operate. With that scenario, the district office would be able to communicate with each of the schools without relying on terrestrial phone lines or cell towers. In addition, the repeater would boost the power, sending radio signals throughout the 395 square mile school district.

Results: Reliable emergency communications, expanded coverage, reduced cost

The Sedro-Woolley School District wanted the best technology available to them to provide their schools with the most reliable communications system possible. The MOTOTRBO system was designed with backup power to ensure that communications were always available in the event of an emergency. The radios include the All Call feature that enables the district supervisor to communicate with all schools simultaneously while the Private Call feature allows him to speak discretely with a specific school. The maintenance staff also uses those features as well as text messaging for quick communications to increase the efficiency of day-to-day operations.

“With the MOTOTRBO radios, the school district is ready for any situation. Whether it’s a day-to-day problem like a water pipe break or an emergency situation that requires medical or security assistance, we can get someone to that location quickly and easily.”

– Stewart Mhyre, Executive Director of Business and Operations, Sedro-Woolley School District

Coverage throughout the district with crystal clear audio

Needing coverage across hilly terrain and inside buildings, a MOTOTRBO repeater was installed on a nearby mountaintop to help expand coverage throughout the district. However, Stewart Mhyre was taking no chances. After the system was installed, Mhyre took a digital portable MOTOTRBO radio to each of the schools to ensure there were no communications gaps.

“When we got the system set up, I drove out to Lyman Elementary, which is at the far east end of the district and located in a river valley with high hills on each side,” says Mhyre. “I wanted to test the radios in the most extreme condition possible.”

Mhyre took the radios down into the basement boiler room and keyed the radio, first calling the district’s maintenance office to ensure that communications would reach to that office.

“When the administrative assistant responded, the audio quality was crystal clear,” he says. “She sounded like she was standing right next to me even though I was underground and she was 12 miles away. To be standing below ground, next to a boiler, and still have that kind of coverage and quality means that the MOTOTRBO radio system works. It’s as simple as that.”



Motorola MOTOTRBO XPR Digital Radios

Reliable communications even through a windstorm

On November 16, 2009, a huge windstorm hit the town of Sedro-Woolley. During the storm, one of the elementary schools, located about 13 miles away from the school district office, lost power leaving students and staff in the dark with no electricity. Using the school’s MOTOTRBO radio, office staff was able to immediately report the problem to the district office.

“With the push of a button, they were communicating with us and with the maintenance team,” says Mhyre. “With the MOTOTRBO radios, the school district is ready for any situation. Whether it’s a day-do-day problem like a water pipe break, or an emergency situation that requires medical or security assistance, we can get someone to that location quickly and easily.”

Cost effective

Because the Motorola channel partner was willing to work with the district’s budgetary concerns, not only did the district save the upfront cost of purchasing additional repeaters, they are also paying much less per month for the tower airtime than the monthly cell phone charges had cost. Currently, savings have resulted in an operational cost decrease of about 50 percent.

The district also now has fewer cell phones to track and audit, enabling district staff to turn their attention to more productive and value-added activities.

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About Day Wireless

Since 1969, Day Wireless has provided professional radio services for commercial, government and mission critical public safety systems. Today, the company has more than 30 locations and 175 trained technicians to support and service all their customers' voice, video, and data communication needs. Day Wireless was also the first in Washington State to be recognized as a Certified Service Center (CSC) by the Electronic Technicians Association, International. The Consortium of Certified Service Centers program is an initiative backed by leading electronics industry associations and major product manufacturers.

To learn how you can benefit from the MOTOTRBO's digital capabilities visit motorola.com/mototrbo



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