



CASE STUDY

Empowering statewide dispatch for first responders

North Dakota State Radio | *North Dakota*



Industry

- Public Safety

Solutions

- Octave OnCall Dispatch

Challenges

- 70K-plus square miles, rural
- 300-plus agencies in 26 counties
- Extreme winters

Results

- Improved statewide situational awareness, coordination
- Enabled cross-county, cross-jurisdiction collaboration
- Real-time communication, mapping and resource management

North Dakota is one of the most sparsely populated U.S. states, with just under 800,000 residents spread across a little more than 70,000 square miles (approximately 181,300 km²). Its lands are mostly rural, boasting large farms and ranches, but it's also home to the rugged Badlands. The state is steeped in rich Native American history and has a storied past, enriched by former President Theodore Roosevelt's love for the area. Seated in the northern Great Plains, just south of Canada, North Dakota is also known for its harsh winter weather.

Headquartered in the state capital of Bismarck is [North Dakota's Division of State Radio](#), which coordinates 911 services for more than 300 local and tribal agencies in 26 of the state's 53 counties, as well as two state agencies: North Dakota State Highway Patrol and North Dakota Game and Fish. A longtime Octave customer that used Octave I/CAD (formerly Intergraph I/CAD) for years, the department needed a next-generation CAD solution to manage the size and scope of its operations. Recently, North Dakota State Radio migrated to Octave OnCall Dispatch (formerly HxGN OnCall Dispatch), an integral part of Octave's public safety platform.

Robust coordination and communication

North Dakota State Radio – named such because of the towers in each county that connect lower population areas to vital services – fields more than 280,000 calls each year from its 24/7 communications center. Responders include fire and law enforcement personnel and emergency medical services, as well as state highway patrol and game and fish wardens.

Coordinating emergency response in rural areas can be tricky, especially in the area's brutal winter months.

"There's a lot of accidents with snow and ice," said North Dakota State Radio Deputy Director of Operations Miranda Jangula. "When we have a large blizzard, we can have up to 200 vehicles sitting along the side of the road."

For years, North Dakota State Radio relied on and was happy with Octave's workhorse I/CAD solution, but it needed a more modern system to provide improved situational awareness and better coordinate dispatching statewide.

"We're having positive experiences with it. It just makes things much more efficient and quicker for our dispatchers."

Miranda Jangula
Deputy Director of
Operations
North Dakota State Radio

Its implementation of OnCall Dispatch allows the agency to coordinate across county and jurisdictional lines, including volunteer organizations in more rural areas. The technology not only improves coordination and response times in emergency situations, but also provides a seamless communication system, mapping, resource management tools and real-time situational awareness for the statewide network of emergency response agencies.

The migration has improved dispatch and emergency response coordination for events of all sizes, according to the department, which said it allows them to understand the size and scope of events and keep information clean – minimizing clutter on screens. Another big plus is the organization got to preserve some functionality similar to what it had been accustomed to in I/CAD, and benefit from all the advantages of OnCall Dispatch, which are especially helpful in a sometimes unforgiving climate.

Handling life-threatening conditions

When blizzards hit North Dakota, emergency dispatch operations can become chaotic. In a state that averages 10,000 motor vehicle crashes annually, and where snow and ice can leave hundreds of vehicles on roadways in temperatures below zero – temperatures have reached 60 below (-51 C) – timing is critical.

Said Jangula, "When you get dumped on with 4 feet (1.2 meters) of snow overnight, it's hard to move people around."

By migrating from I/CAD to OnCall Dispatch, North Dakota State Radio has been able to streamline dispatch operations, decreasing response times by getting responders where they're needed most in a more coordinated way.

"With OnCall Dispatch, our typing has been cut in half," said one dispatcher. "It has been really, really awesome just to be able to type in a couple commands and hit enter and it's done."

Clearer incident details

Since the migration, according to Dispatch Lead Breana Hoynes, dispatchers can also better coordinate multiple units responding to a single event, shortening the active events list.

A feature she finds especially advantageous is pins. Pins identify each incident's exact location, saving valuable time for everyone involved. When a dispatcher pins a location where someone needs help, responders can see the exact place to go and get a brief description of the incident in real time. Pins help foster improved visualization of incidents and a better user experience.

"They're seeing exactly what we're seeing," said Hoynes. "They can see that event pop up. They're able to click on it, read our events or our notes that we're putting in there exactly as we're putting them in there. It saves that time and that delay."

According to Jangula, migrating to OnCall Dispatch was the right move. "We get the support we need if we have an issue. It's working how we like it, and we're having positive experiences with it. It just makes things much more efficient and quicker for our dispatchers," she said. "We're sitting pretty at the moment, I think."

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property and assets – for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.

©2026 Intergraph Corporation and/or its affiliates. All rights reserved.