

CASE STUDY

Cumberland County needed to find a way to quickly make sense of complex information, then provide sharable analysis and support.



“On top of an accurate and dependable emergency locator, we can now strategically position crisis teams”

Mike Osbourn, Planning Coordinator, Cumberland County, NC

Challenge

Cumberland County Planners needed to provide an informed perspective—across multiple platforms and various agencies—of critical emergency data. They needed location, hazards and drive time data to be precise as they were related to an emergency, and needed them to be intuitively understood and immediately accessible to a firefighter, police officer or ambulance crew.

Solution

Cumberland County has deployed an E911 Planners team that takes advantage of the robust data sets and mapping capabilities of MapInfo solutions to optimize planning for any emergency situation.

Summary

Cumberland County, North Carolina, E911 Joint Planning and Emergency Services Group. This public sector agency supports more than 300,000 permanent residents and two major military bases with emergency services and countywide crisis management. This organization must analyze and respond to data from multiple platforms and agencies, from local authorities, to military police on the two bases.

In addition, it must quickly make sense of complex information from local, national and military sources, and then render analysis, support strategies and planning in easily-shared, clear, compelling visual presentations.

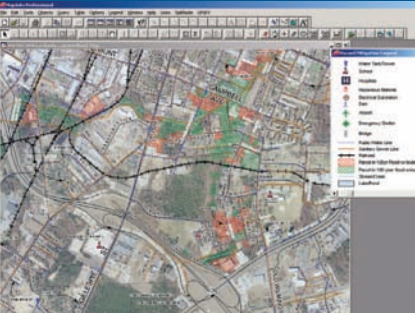
“Our primary function,” said Mike Osbourn, coordinator of Cumberland County’s E911 Planning, “is to support a fast and accurate response to any emergency. Thanks to MapInfo technology, we pinpoint problems and get crews on the scene as fast as humanly possible. Our secondary function, in support of Homeland Security, is to locate and map critical assets and infrastructures and then plan for their protection. This includes mapping water points, hazardous materials, military assets, schools and day care centers, and of course, fire and police bureaus, using street and address data.”

Cumberland County’s two public safety answering points (PSAPs) respond to about 10,000 calls each month. County E911 dispatchers utilize MapInfo Professional® and Discovery to dispatch ambulance and volunteer fire departments to a third of those and intermittently aid the sheriff’s department as well. Before MapInfo’s technology was in place, emergency crews relied on inaccurate and incomplete municipal records. These were imprecise and lacked important details, like whether an address was a home, farm, business or ammo dump.

According to Osbourn, dispatchers were once forced to make assumptions and approximations. “We had no maps and no network,” said Osbourn. “We would plug in a street and address, and the grid system would assume that every house on the street was equidistant from each other and that everyone lives on the street. This works well in the city but not in rural areas where driveways can be a mile long. The data needed to be able to answer these kinds of questions quickly.”

Cumberland County set out to gather more complete information, cataloging critical infrastructure, landmarks, and data on addresses and precise location of assets. “This is a key reason we chose MapInfo Professional®,” said Osbourn. “It made it easy to merge the data with the real world. And do it with staff members who knew the county but not much about mapping software.”

The MapInfo Advantage



Speed—quickly delivering emergency location information and real-time directions on the fastest response route.

Information on the location of an E911 call must immediately reach an emergency response crew. This is data that cannot wait. Cumberland County, NC, E911 personnel know that the response to the question “How do I get there” could be the difference between life and death. With MapInfo technology, emergency dispatchers immediately locate an E911 call and guide the emergency response team to that location in real-time.

“MapInfo technology provides the cornerstone to Cumberland County’s advanced, operator-friendly emergency response and Homeland Security system. On top of an accurate and dependable emergency locator, we can now strategically position crisis teams in case of countywide or national emergencies. That’s important when two of your biggest residents are the Pope Air Force Base and the Army’s Fort Bragg.”

Result

MapInfo’s ease-of-use significantly reduced county costs and the time required to program and integrate data. “I didn’t hire a third party for programming,” said Osbourn. “This saved me money and allowed me to make changes and updates (to maps) within two days. Staff members with no knowledge of mapping applications are able to do what they need to do without special training. That tells me a lot about how easy this system is and how good the support is.”

In collaboration with MapInfo partner JCH GeoInfo Solutions, Cumberland County combined raw, incomplete data, and data from many disparate sources into an invaluable, intuitive resource for emergency as well as countywide use.

JCH GeoInfo Solutions saw the opportunity to extend the usability of the information to other planning operations. Cumberland County was responding to a thousand requests a month for location data and maps. “With MapInfo ProViewer™,” says Osbourn, “I now share the information we have with businesses and organizations who need this information for their own planning.” Important new information such as tax data from a mainframe or a subdivision plan can be hot-linked to other data services or to images, plans and maps. “There is not a better or more cost-effective way for us to distribute this information,”

JCH GeoInfo Solutions, also helped Cumberland County respond to Homeland Security initiatives. The Federal Emergency Management Agency, the National Imagery and Mapping Agency, the Geological Survey and the new office of Homeland Security have asked municipalities to collect data on utilities: water, fire hydrants, gas lines, cell towers, military bases, hazardous materials, schools and day care facilities, clinics and pharmacies which could aid in emergency response.

To aid in this effort, the county was awarded a MapInfo Homeland Security and Continuity Government Grant in late 2002. With the grant of MapInfo Discovery™, the county shares map catalogs and viewer capability over the Internet.

Cumberland County E911 Planners once had to use an imprecise and incomplete grid system to field emergencies. MapInfo software now integrates GIS survey information with state and local data sets into a cohesive view of country roads and infrastructure. The county immediately pinpoints emergencies and accurately guides response teams to the scene. In addition, dispatchers can provide particularities of a location, such as a long driveway or a home located indirectly off a street—saving responders crucial seconds.

Osbourn and his team geocoded and mapped the 300,000 residents in the area, including data gathered from two military bases, collecting latitude and longitude for more than 95,000 county addresses, as well street signs, intersections and landmarks. Using MapInfo MapBasic®, other available data sets were integrated. Maps were created in MapInfo Professional and shared with MapInfo Discovery and MapInfo ProViewer. MapInfo Professional for SQL Server® handles database management.

Cumberland County planners now provides detailed maps for constituents, optimize planning for Homeland Security and respond immediately in case of emergencies. “We now lead (response teams) step-by-step to the scene,” said Doc Nunnery, communications director for Cumberland County and supervisor with one of the county’s PSAPs. “It was a world-changing event for us.”