When transitioning to Next Generation 9-1-1 (NG9-1-1), your Geographic Information Systems (GIS) data will have a mission critical role in the future. Making 9-1-1 GIS data management solutions a priority will help you prepare for NG9-1-1 while also achieving public safety grade GIS data.

Common Challenges when Examining your GIS Data

Whether you are undergoing a GIS data improvement project, taking part in a NG9-1-1 implementation project, or provisioning GIS data to an Emergency Call Routing Function (ECRF) and Location Validation Function (LVF), you may be finding:

- Education will be needed; GIS data is the core of an NG9-1-1 system and requires collaboration at all levels of government
- Different levels of GIS experience and/or lack of dedicated GIS public safety staff; staff training will be part of the NG9-1-1 GIS plan
- GIS data is not consistent; processes are different across jurisdictions
- Inconsistent processing is creating holes in GIS data
- Data needs to match NENA and CAD vendor standards and requirements

Understanding the GIS Requirements for NG9-1-1 Readiness

In order to solve your challenges, these are the requirements you should strive for:

- Public safety grade GIS data that meets the requirements of CAD and NG9-1-1 systems to ensure the responder is efficiently routed to the emergency
- Accurate, reliable GIS data because it is used to locate 9-1-1 callers
- On-going commitment to fund the resources needed to assess, improve, and maintain the GIS data
- Authority over your GIS data, so your users can take action with the data
- Flexible, streamlined workflows so your data can fit into many types of environments

Overcoming the Common Challenges

The approach an entity uses for GIS data management may vary across different systems, but regardless of the system, you will want to develop quality assurance processes for:

- Improving the GIS data
- Developing new data and datasets as needed for NG9-1-1 and CAD vendor requirements
- Ensuring Master Street Address Guide (MSAG), Automatic Location Information (ALI), and GIS data synchronization
- Executing automated Quality Control (QC) to review GIS data accuracy
- Maintaining the on-going quality, consistency, and integrity of the GIS data

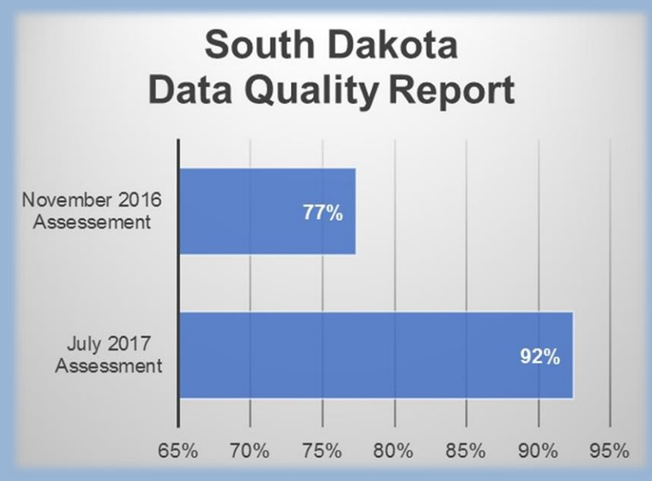
Achieving Public Safety Grade GIS Data for NG9-1-1

One entity that has actively been preparing their GIS data for NG9-1-1 is the State of South Dakota. In 2014, they began to formally transition to a GIS process and solution that was tailored to meet the rigorous demands of NG9-1-1.

The state set out to establish a seamless, gapless GIS dataset suitable for use within their NG9-1-1 system for 9-1-1 call routing and location validation. They wanted their system to also incorporate daily GIS data changes from a variety of disparate sources into the authoritative statewide GIS dataset, and provision those updates into a standards-based ECRF and LVF system.

To get to their final desired state of a robust NG9-1-1 system, South Dakota and GeoComm partnered together to analyze the locally-maintained GIS data to assess its suitability for use within the NG9-1-1 system. The state took the analysis results and the recommended improvement plan for eventual aggregation and transformation into a statewide dataset. South Dakota also recognized that a critical component of the long-term maintenance of the improved GIS data would be establishing a QA/QC plan. Therefore, a formal QA/QC plan was developed to document the overall approach to quality control, including regular communication of QC results to local GIS entities. South Dakota's approach to a complete end-to-end GIS solution for NG9-1-1 included some software management tools and use of those tools were included in their new maintenance workflows and QA/QC processes. User training was also a component of their maintenance plan.

South Dakota's most recent GIS data assessment shows continually GIS data improvement, and they are nearing their goal of meeting the NENA recommended (NENA 71-501, Version 1.1, September 8, 2009) minimum match rate of 98 percent prior to using the GIS data in an Emergency Routing Data Base (ERDB) or the Location to Service Translation (LoST) Protocol services.



"It was a big undertaking to get to the point of having a statewide GIS dataset that could be used for call routing in NG9-1-1; however, we knew we could get there with GeoComm through a collaborative and coordinated effort. In addition, to the essential public safety role this GIS dataset plays, local and state offices will also benefit from having a single, seamless, gapless GIS dataset."

~ Shawnie Rechtenbaugh, Deputy Secretary and State 9-1-1 Coordinator, South Dakota Department of Public Safety

LEARN MORE on how you can continually achieve public safety grade GIS data.

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