Minnesota NG9-1-1 GIS News

March 2017 Issue #5

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DPS-ECN

Minnesota Department of Public Safety – Emergency Communication Networks GIS Information

MnGeo

Minnesota Geospatial Information Office

SECB

Statewide Emergency Communications Board

NENA

National Emergency Number Association

Contact Us:

Adam Iten, NG9-1-1 Project Manager

adam.iten@state.mn.us

or 651-201-7559

Minnesota Geospatial Information Office (MnGeo)

The Minnesota Department of Public Safety, Emergency Communication Networks division (DPS-ECN) is partnering with the Minnesota Geospatial Information Office (MnGeo) to collect, prepare, and maintain the required statewide Next Generation 9-1-1 (NG9-1-1) geospatial datasets. Specifically, MnGeo is assisting DPS-ECN with the following goals and objectives:

1. Actively engage Minnesota's Public Safety Answering Points (PSAPs), state and federal agencies, regional, local and tribal organizations in the collection, aggregation, and maintenance of geospatial data required for NG9-1-1 and related PSAP and emergency responder needs.
2. Collaboratively create, maintain, and update statewide data layers once and make high quality and current GIS data available to the Location Validation Function (LVF) and Emergency Call Routing Function (ECRF), along with other agencies including all 105 PSAPs using GIS data for public safety.
3. Improve response, reporting, and situational awareness by 9-1-1 call takers and first responders, which will help save lives.
4. Improve quality of emergency services to citizens and visitors in the State of Minnesota.

This issue's feature article shines a spotlight on MnGeo to give you a better understanding of who they are and what their role is in the state's migration to NG9-1-1. Cooperation between MnGeo and the local authoritative geospatial agencies has been tremendous thus far and is critical to the successful implementation of an NG9-1-1 geospatial repository for the State of Minnesota. We look forward to continuing this joint effort with MnGeo!

Best wishes,

Jackie Mines, Director, DPS-ECN

MnGeo's Mission and Role in NG9-1-1

The Minnesota Geospatial Information Office (MnGeo) was established in 2009 as the first state office with legislatively defined authority to plan, coordinate, and implement GIS within Minnesota. The office builds on the coordination activities of the former Land Management Information Center (LMIC), created in 1977.

MnGeo's primary roles can be seen in the accompanying diagram (Figure 1). The office's main emphasis is on geospatial coordination and collaboration. This involves outreach and communication between state agencies, with local and national government agencies, as well as with non-government organizations and citizens. It also involves data coordination efforts, especially stewardship of important statewide datasets, fostering use of data standards, and identification and prioritization of data gaps. These coordination efforts have led to MnGeo and several partners creating the Minnesota Geospatial Commons, a collaborative place for users and publishers of geospatial resources about Minnesota.

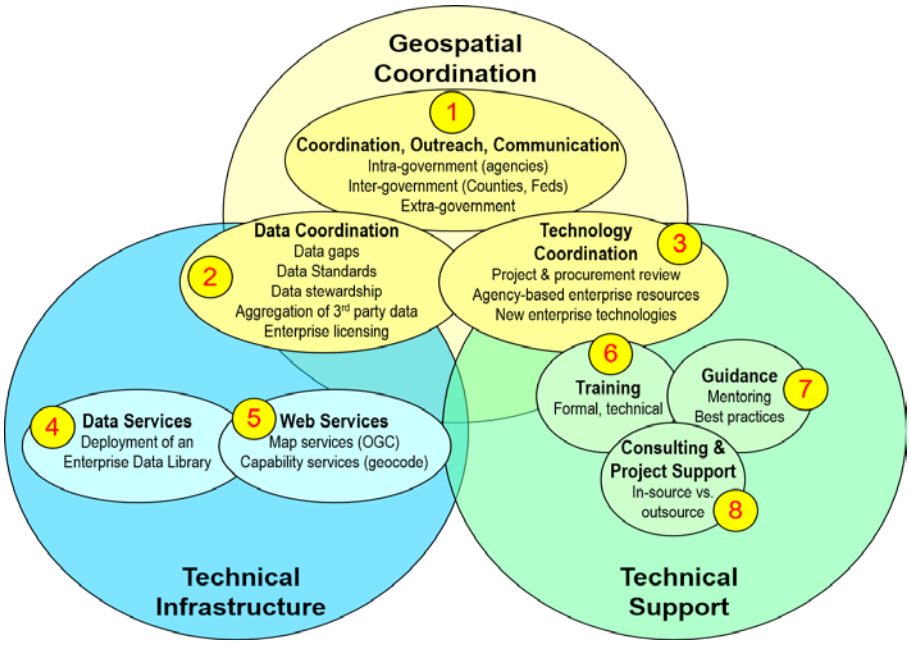


Figure 1: MnGeo's primary roles

MnGeo also oversees and manages the framework for state agency GIS infrastructure, helps establish and monitor standards and guidelines for GIS processes, and facilitates participation and collaboration among stakeholders across Minnesota. It is MnGeo's responsibility to serve as an enterprise aid for geographic spatial technology within the state government for agencies with established GIS resources as well as agencies with more limited resources.

MnGeo is advised by the Statewide Geospatial Advisory Council, whose members represent a cross-section of the Minnesota geospatial community.

MnGeo's experience is a natural fit for coordinating the effort to collect, standardize and aggregate the data needed to fuel NG9-1-1. The project's benefits will extend beyond NG9-1-1, since many of the resulting data layers, such as address points and street centerlines, are considered foundational information for spatial projects. With MnGeo building sustainable processes to aggregate this data for NG9-1-1, organizations in Minnesota will be able to leverage high-quality, updated data to make better decisions.

NG9-1-1 GIS Standards – Update

The Minnesota NG9-1-1 GIS Standards Workgroup is making major strides with its efforts to establish GIS data standards for NG9-1-1. The data standards, which are being drafted based on National Emergency Number

Association (NENA), Federal Geographic Data Committee (FGDC), and other metro/state standards, are being reviewed by the NG9-1-1 GIS Standards Workgroup that consists of GIS managers and staff representing each DPS-ECN region (Northwest, Northeast, Central, Southwest, South Central, Metro, and Southeast).

PSAP and GIS managers from across the state were recently asked to review and comment on the draft Minnesota NG9-1-1 GIS Data Standards. Around 50% of the state's PSAPs responded, submitting more than 250 comments or questions. All comments and questions have been compiled and are being reviewed by the NG9-1-1 GIS Standards Workgroup, DPS-ECN, MnGeo, and MESB.

The draft standards are now being prepared for a third review and comment period, which will include Minnesota's PSAPs, GIS managers, NG9-1-1 vendors, ECRF and LVF vendors, and surrounding states. The third review and comment period is anticipated to begin in March 2017 (Figure 2). From there, formal approval of Version 1 will be sought from the MESB, NG9-1-1 GIS Subcommittee, NG9-1-1 Committee, Statewide Emergency Communications Board (SECB), and Minnesota Geospatial Advisory Council.

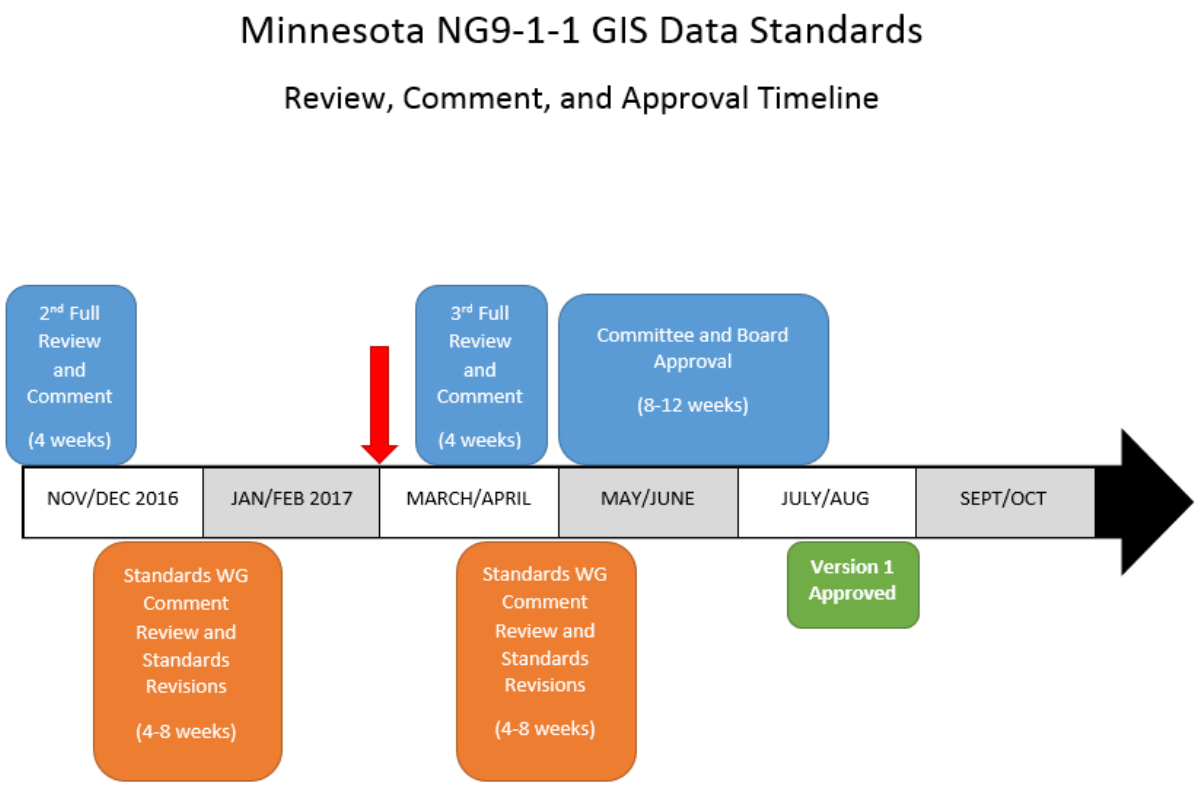


Figure 2: NG9-1-1 standards timeline

Data Preparation – Update

Data preparation is a significant, high-level program activity needed to support the NG9-1-1 geospatial operations. As discussed in Issue #4 of *Minnesota NG9-1-1 GIS News*, the data preparation effort will involve six phases, which are Community Name Validation, Street Name Validation, Address Validation, Geospatial Validation, Edge Matching, and Emergency Service Boundary Validation. This issue highlights the Street Name Validation phase.

Street Name Validation

The second phase of NG9-1-1 data preparation involves analyzing all street names in three input data sets. Similar to the Community Name Validation, the datasets to be evaluated for each PSAP are the Road Centerlines (RCL), Address Points (ADP), and MSAG. This process has been intended to address the following questions:

1. Is each and every street name in the MSAG represented in the road centerline geospatial data files? This is a requirement.

2. Is each and every street name in the address point geospatial data file represented in both the MSAG and road centerline geospatial data set? This is a requirement.

3. Under what conditions should a change to a street name in any of those input data sets be required?

4. Who should determine when and how a change should be made?

5. What process should the affected stakeholders take to assure a change is permanently reflected in their source data?

MnGeo is identifying street name discrepancies in the geospatial data sets by using street name comparison reports and deciphering which areas need improvement in the MSAG, road centerline, and address point files. In addition, MnGeo will be enforcing street name consistency across data sets by ensuring that street name standards and conventions are used in each MSAG, road centerline, and address point data files. The end goal is to have MSAG, road centerline, and address point geospatial data files that contain accurate, synchronized, and error-free street names.

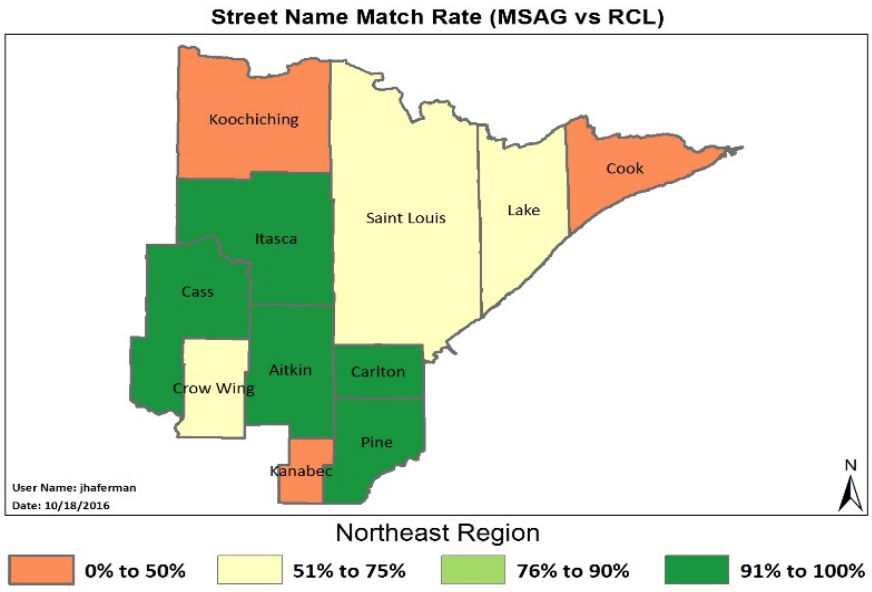
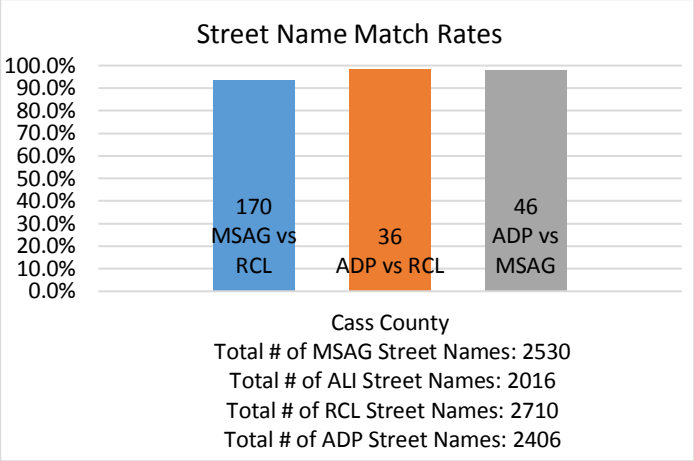


Figure 3: Northeast Region Street Name Match Rates

Figure 4: County Street Name Match Rates



The MnGeo NG9-1-1 team is assisting county partners with reviewing and correcting street names, while also tracking progress within each region (Figure 3). Street name condition reports are also being generated and shared with each county (Figure 4).

Please note that the street name match rates depend on accurate community name data, so street name match rates will improve significantly via the Community Name Validation process.

Upcoming Events

Notable upcoming DPS-ECN NG9-1-1 events:

- March 15: NG9-1-1 Committee Meeting
- March 22: MN Geospatial Advisory Council Meeting
- March 20-23: Annual MN PSAP 911 Communications Conference
- March 23: SECB Meeting

Neighboring States

For more information about NG9-1-1 efforts in the states surrounding Minnesota, visit:

Iowa Enhanced 9-1-1
North Dakota ND911
South Dakota 9-1-1
Wisconsin: In planning phase. See NENA status map.

If you have a news item pertaining to NG9-1-1 that you would like to share in future issues of this newsletter, please contact:

Adam Iten, NG9-1-1 Project Manager
Telephone: 651-201-7559
E-mail: adam.iten@state.mn.us

David Sajevic, Project Manager
Telephone: 651-201-2797
Email: david.sajevic@state.mn.us