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## Useful Links:

### 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*

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## 2018 Goals and Objectives

The Minnesota Department of Public Safety, Emergency Communication Networks division (DPS-ECN) and the Minnesota Geospatial Information Office (MnGeo) would like to recognize all the outstanding work the counties, tribal communities, Public Safety Answering Points (PSAPs), vendors, and other 9-1-1 partners have accomplished since the Next Generation 9-1-1 (NG9-1-1) project launched in 2015. It is our goal to continue to work more closely with all of you in 2018 to advance the 9-1-1 systems and services that will ultimately support the citizens of Minnesota, PSAPs, and First Responders.

All eighty seven counties in Minnesota have completed the kick-off meetings as of January 2018. It is our goal to work with all PSAP and GIS partners to continue to move your GIS and 9-1-1 data through the required data preparation phases:

1. Community Name Validation – Due June 30<sup>th</sup>
2. Street Name Validation - Due August 30<sup>th</sup>
3. Address Validation – Due September 30<sup>th</sup>
4. Geospatial Validation – Due November 30<sup>th</sup>
5. Edge Matching – Due November 30<sup>th</sup>
6. Emergency Service Boundary Validation – Due December 30<sup>th</sup>

Thank you all for working through Phase 1 and Phase 2 of the PSAP Boundary Reviewer. Accurate statewide PSAP boundaries are critical for text-to-9-1-1. With nearly 80% of calls to 9-1-1 generated from wireless devices, it is essential we collectively remain diligent in preparing to migrate over to geospatial 9-1-1 call routing using the Emergency Call Routing Function (ECRF). The ECRF will ultimately route 9-1-1 calls to the correct PSAP based on the caller’s precise location.

We truly appreciate your continued efforts in working with DPS-ECN and MnGeo in moving towards the deployment of the Minnesota NG9-1-1 system and request you remain diligent in providing continued resources toward this initiative so we can meet our shared goal.

Best wishes,

Dana Wahlberg, Director, DPS-ECN

# NG9-1-1 GIS Standards – Update

The Minnesota NG9-1-1 GIS Standards Workgroup, Minnesota Geospatial Advisory Council (MGAC), Metropolitan Emergency Services Board (MESB), and MnGeo have made significant strides in developing geospatial data standards that will meet the needs of NG9-1-1 and can be used as multi-purpose geospatial standards for the GIS professional community. The schema-specific standards are being extracted into separate documents for the following geospatial datasets: Address Points (ADP), Road Centerlines (RCL), and Emergency Service Zones (ESZ).

## Minnesota Geospatial Advisory Council

The Standards Committee of the Minnesota Geospatial Advisory Council helps bring together strategies for incorporating geospatial data and business needs across all levels of government. It advises the state geospatial community about appropriate standards issues and facilitates the creation, stakeholder review and approval of geospatial standards within Minnesota. The MGAC represents a collection of organizations that include counties, cities, federal and state agencies, tribal governments, nonprofit organizations, universities, businesses, and other geospatial technology stakeholders. The MGAC Standards Committee meets on a quarterly basis.

## Address Point Standard for Minnesota

The Address Point Data Standard for Minnesota represents a merging of the Metro Address Point Standard (initiated in 2004) and the NG9-1-1 Address Point Standard (begun in 2015). This merged standard underwent a 60-day public review period, which produced a significant amount of stakeholder input and feedback. The MGAC Standards Committee thoroughly vetted the comments and revised the draft standard as needed. The committee then voted to approve the revised standard and advance it to the MGAC for approval. On December 6, 2017, Version 1.0 of the standard was adopted by the MGAC; a slight revision to standardize the widths of several attributes, Version 1.1, was approved by the MGAC on March 28, 2018 (see Figure 1).

This was a significant accomplishment for the geospatial community as address points are one of the key geospatial datasets for Minnesota. Maintaining the address point data layer to align with the Minnesota Address Point Data Standard will be critical in the NG9-1-1 system. For more information on the standard, we encourage you to visit the Standards Committee webpage which provides the Address Point Data Standard (Word document), the standard’s schema (Excel spreadsheet), along with a sample address point dataset and frequently asked questions. Also, there is a public review comment archive which groups comments and concerns by commenter and attribute as well as providing minutes from the MGAC Standards Committee meeting on October 25, 2017.

See: [http://www.mngeo.state.mn.us/committee/standards/address/address\\_standard.html](http://www.mngeo.state.mn.us/committee/standards/address/address_standard.html)

Element Group	Elem	Element Name	Data Field Name	Type	Width	Inclusion	FGDC	Domain Name	Lookup Table	Domain/AUT Update Date	
Identification Elements	1.1	Address Unique Identifier	ADD_ID	Text	35	Mandatory	2.3.1.1				
	1.2	Local Address Unique Identifier	ADD_ID_LOC	Text	50	Conditional	None				
	Address Elements	2.1	Address Number Prefix	ANUMBRPRE	Text	15	Conditional	2.2.1.1			
		2.2	Address Number	ANUMBR	Long Integer	10	Mandatory	2.2.1.2			
		2.3	Address Number Suffix	ANUMBRSUFX	Text	15	Conditional	2.2.1.3			
		2.4	Street Name Pre Modifier	ST_PRE_MOD	Text	15	Conditional	2.2.2.1			
		2.5	Street Name Pre Directional	ST_PRE_DIR	Text	9	Conditional	2.2.2.2	Street Directional		7/24/17
		2.6	Street Name Pre Type	ST_PRE_TYP	Text	35	Conditional	2.2.2.3	Street Pre Type		10/24/17
		2.7	Street Name Pre Separator	ST_PRE_SEP	Text	20	Conditional	2.2.2.4			
		2.8	Street Name	ST_NAME	Text	60	Mandatory	2.2.2.5			
		2.9	Street Name Post Type	ST_POS_TYP	Text	15	Conditional	2.2.2.6	Street Post Type		10/24/17
		2.10	Street Name Post Directional	ST_POS_DIR	Text	9	Conditional	2.2.2.7	Street Directional		7/24/17
	2.11	Street Name Post Modifier	ST_POS_MOD	Text	15	Conditional	2.2.2.8				
	2.12	Subaddress Type 1	SUB_TYPE1	Text	12	Conditional	2.2.4.1	Subaddress Type		10/24/17	
2.13	Subaddress Identifier 1	SUB_ID1	Text	30	Conditional	2.2.4.2					
2.14	Subaddress Type 2	SUB_TYPE2	Text	12	Conditional	2.2.4.1	Subaddress Type		10/24/17		
2.15	Subaddress Identifier 2	SUB_ID2	Text	30	Conditional	2.2.4.2					
Area Elements	2.16	ZIP Code	ZIP	Text	5	Mandatory	2.2.6.3				
	2.17	ZIP Plus 4	ZIP4	Text	4	Optional	2.2.6.4				
	3.1	CTU Name	CTU_NAME	Text	100	Mandatory	2.2.6.1, 2.3.8.4	CTU Name		10/24/17	
	3.2	CTU Code	CTU_ID_TXT	Text	8	Mandatory	2.3.8.5	CTU ID Text		10/24/17	
3.3	Postal Community Name	POSTCOMM	Text	40	Optional	2.2.6.1, 2.3.8.4		Postal Communities		10/25/17	
3.4	County Code	CO_CODE	Text	5	Mandatory	2.3.8.6	County Code		7/24/17		
3.5	County Name	CO_NAME	Text	40	Mandatory	None	County Name		10/24/17		
3.6	State Code	STATE_CODE	Text	2	Mandatory	2.2.8.3	State Code		7/24/17		
Functional Elements	4.1	Location Description	LOC_DESC	Text	254	Optional	2.3.7.8				
	4.2	Complete Landmark Name	LANDMARK	Text	150	Optional	2.2.5.2				
	4.3	Residence	RESIDENCE	Text	10	Optional	None	Yes No Unknown		7/24/17	

Figure 1: Address Point Standard Version 1.1 schema spreadsheet

## Road Centerline Standard for Minnesota

The Road Centerline Standard for Minnesota includes a merging of the Metro Regional Centerline Collaborative (MRCC) effort (begun in 2014) and the work on the NG9-1-1 Road Centerline Standard (begun in 2015). This proposed standard underwent a 60-day public review from April 9<sup>th</sup> to June 8<sup>th</sup>, 2018. The MGAC Standards Committee will review all the comments and address them individually at their next meeting on July 18, 2018.

This will be an exceedingly important effort for the geospatial community as road centerlines, like address points, serve as one of the crucial geospatial datasets for Minnesota. Maintaining the road centerline data layer to align with the new Minnesota Road Centerline Standard (MRCS) is also necessary for the NG9-1-1 system.

For more information on the proposed Road Centerline Standard for Minnesota, including the proposed standard Version 0.5 (Word document), proposed schema (Excel spreadsheet), along with a sample road centerline dataset and frequently asked questions, see:

<http://www.mngeo.state.mn.us/committee/standards/roadcenterline/index.html>

Minnesota Road Centerline Data Standard Version 0.5 - 4/9/2018 for Public Review								
Element Group	Elem#	Element Name	Data Field Name	Type	Width	Inclusion	Validation Checks	Domain Name
Identification Elements	1.1	Object ID	OBJECT_ID	Object ID	<NA>	Mandatory	Nulls Not Allowed	
	1.2	Route ID	ROUTE_ID	Text	16	Conditional	Nulls Allowed	
	1.3	Feature Unique ID	UNIQUE_ID	Text	36	Mandatory	Nulls Not Allowed	
Linear Reference Elements	2.1	Route System	ROUTE_SYS	Text	2	Mandatory	Nulls Not Allowed, Domain Check	St MnDOT Route System
	2.2	Route Direction	ROUTE_DIR	Text	1	TBD	Nulls Allowed, Domain Check	St Route Direction
	2.3	Directional Route ID	DIR_RTE_ID	Text	32	TBD	Nulls Allowed	
	2.4	Local to State	LOC_STATE	Text	10	TBD	Nulls Allowed, Domain Check	St Local To State
	2.5	Primary Status	PRIME_STAT	Text	10	TBD	Nulls Allowed, Domain Check	St Primary Status
Geocoding Elements	3.1	Street Name Pre Modifier	ST_PRE_MOD	Text	15	Conditional	Nulls Allowed	
	3.2	Street Name Pre Directional	ST_PRE_DIR	Text	9	Conditional	Nulls Allowed, Domain Check	Street Directional
	3.3	Street Name Pre Type	ST_PRE_TYP	Text	35	Conditional	Nulls Allowed, Domain Check	Street Pre Type
	3.4	Street Name Pre Separator	ST_PRE_SEP	Text	20	Conditional	Nulls Allowed	
	3.5	Street Name	ST_NAME	Text	60	Mandatory	Nulls Not Allowed	
	3.6	Street Name Post Type	ST_POS_TYP	Text	15	Conditional	Nulls Allowed, Domain Check	Street Post Type
	3.7	Street Name Post Directional	ST_POS_DIR	Text	9	Conditional	Nulls Allowed, Domain Check	Street Directional
	3.8	Street Name Post Modifier	ST_POS_MOD	Text	15	Conditional	Nulls Allowed	
	3.9	Street Name Full	ST_CONCAT	Text	150	Mandatory	Nulls Not Allowed	
	3.10	Alternate Street Name1	ST_NAME_A1	Text	150	Conditional	Nulls Allowed	
3.11	Alt1 Legitimate MSAG Value	A1_MSAG_V	Text	1	Conditional	Nulls Allowed, Domain Check	Alt Valid MSAG	
3.12	Alternate Street Name2	ST_NAME_A2	Text	150	Conditional	Nulls Allowed		
3.13	Alt2 Legitimate MSAG Value	A2_MSAG_V	Text	1	Conditional	Nulls Allowed, Domain Check	Alt Valid MSAG	
3.14	Alternate Street Name3	ST_NAME_A3	Text	150	Conditional	Nulls Allowed		
3.15	Alt 3 Legitimate MSAG Value	A3_MSAG_V	Text	1	Conditional	Nulls Allowed, Domain Check	Alt Valid MSAG	
Geocoding Side Features Elements	4.1	Left From Address	ADR_FR_L	Long Integer	10	Mandatory	Nulls Not Allowed	
	4.2	Left To Address	ADR_TO_L	Long Integer	10	Mandatory	Nulls Not Allowed	

Figure 2: Portion of the Minnesota Road Centerline Standard Version 0.5 schema spreadsheet

## Statewide Emergency Communications Board (SECB) Standards

The Minnesota NG9-1-1 GIS Standards Workgroup, Metropolitan Emergency Services Board (MESB), and MnGeo have also been working on separate standards documentation that will focus on the roles and responsibilities of the key stakeholders in the Minnesota Next Generation 9-1-1 (NG9-1-1) system: the counties, MnGeo, DPS-ECN, and the 9-1-1 service providers. The SECB Standards documents will supplement the existing Minnesota Address Point Data Standard, proposed Minnesota Road Centerline Standard, and the future Emergency Service Zone (ESZ) Standard documents.

# Data Preparation – Update

## Kickoff Meetings

The county PSAP data preparation kickoff meetings were completed in early January 2018. At these meetings, each county was presented with a Minnesota Next Generation 9-1-1 Data Readiness Summary Report. The report was intended to help counties, PSAPs, and vendors assess and validate all their NG9-1-1 GIS-related data. The data readiness process provided general information as well as showed discrepancies among the corresponding datasets. Discrepancies related to full address (e.g., address numbers, full street name, and community) were highlighted in the report as the greatest areas of concern.

## Data Preparation Schedule/Milestones

It is key that our counties and vendors start advancing through the various data preparation phases in order to complete the NG9-1-1 project. With that in mind, we are asking the 9-1-1 GIS Points of Contact (POCs) and vendors to complete their GIS data preparation in the following order and by the completion dates listed below:

1. Community Name Validation - June 30<sup>th</sup>, 2018
2. Street Name Validation - August 30<sup>th</sup>, 2018
3. Address Validation - September 30<sup>th</sup>, 2018
4. Geospatial Validation - November 30<sup>th</sup>, 2018
5. Edge Matching - November 30<sup>th</sup>, 2018
6. Emergency Service Boundary Validation - December 30<sup>th</sup>, 2018

In an effort to help our PSAP and GIS partners through the various data preparation phases, MnGeo has created supporting process documentation for Community Name Validation, Street Name Validation, and Address Validation. This documentation will help PSAP and GIS partners understand the steps needed to move their GIS data closer to becoming NG9-1-1 ready. In addition, MnGeo has developed a Community Name Report, Street Name Report, and Address Range Report which are designed to help PSAPs and counties understand where the discrepancies are in their GIS-related data.

## Interactive GIS Status Map

MnGeo has developed an interactive GIS Status Map so our PSAP and GIS partners will be able to view the progress of counties throughout the state. The layers shown on the map are hosted on ArcGIS Online, but the information is derived from MnGeo's data preparation tracker, an internal tracking system that records data necessary for the NG9-1-1 system. For example, it would show that County A submitted their Road Centerline data on a given date or when County B completed a validation phase. The interactive GIS status map is available on the DPS-ECN website at <https://dps.mn.gov/divisions/ecn/programs/911/Pages/interactive-gis-status-map.aspx>

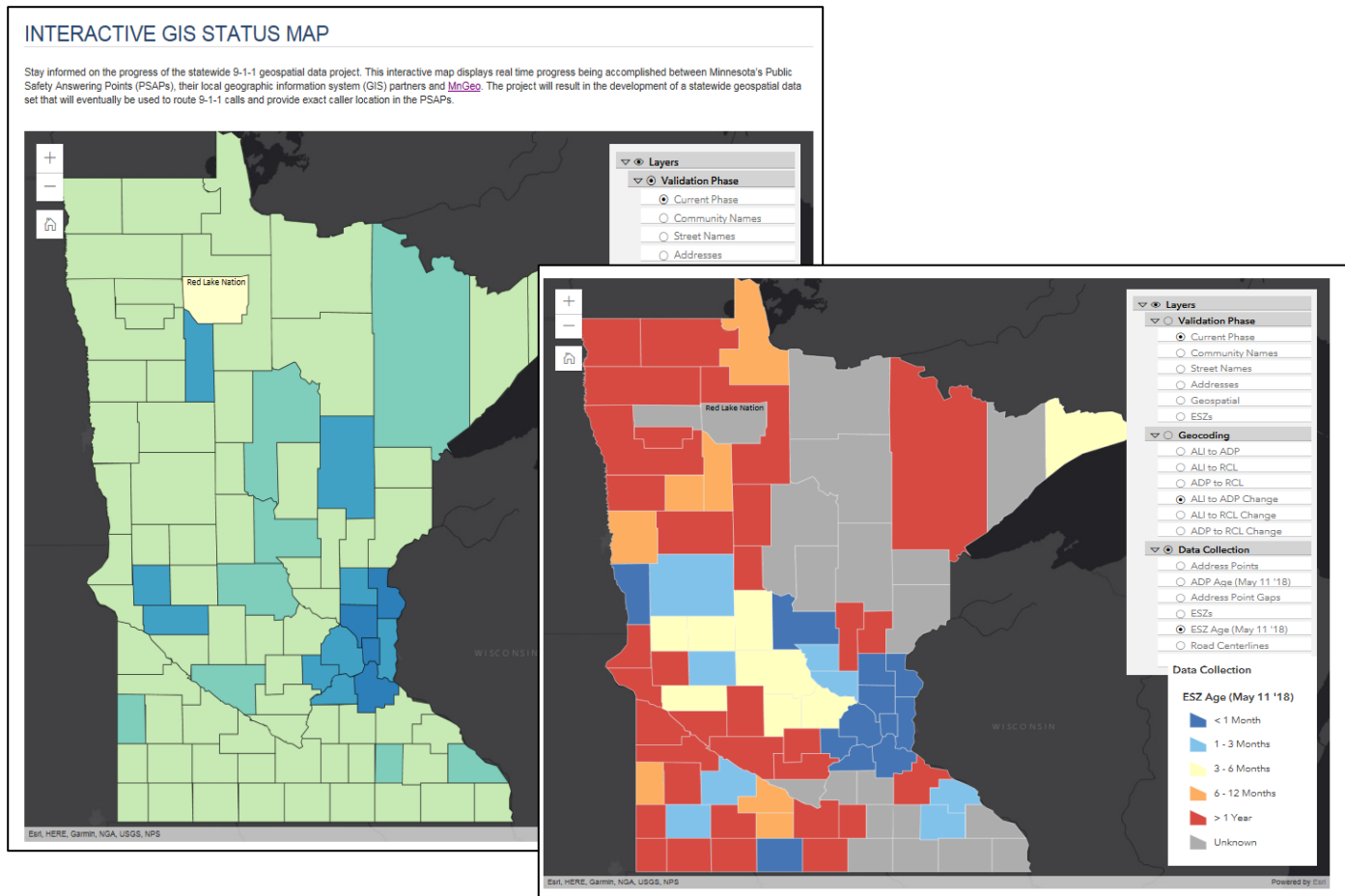


Figure 3: Interactive Status Maps show current phase and the age of their ESZs as of May 11, 2018. Please note that the status of counties changes frequently

## PSAP Boundary Reviewer- Phase 1 and Phase 2

Phase 1 of the PSAP Boundary Reviewer was completed by our PSAP and GIS partners in December 2017. The counties and PSAPs were able to add comments to their PSAP boundary in order to eliminate all significant gaps and overlaps. The MnGeo team closely examined all edits and comments and did their best to make corrections as instructed. However, some of the comments were subject to interpretation. For Phase 2 of the PSAP Boundary Reviewer, we asked all GIS partners and PSAPs to review and confirm their PSAP boundary corrections made by the MnGeo team. There was an option to set the Approval Status to “Approve” or “Reject.” Phase 2 of the PSAP Boundary reviewer also tracks edits so MnGeo can confirm who is making the PSAP boundary approval or rejection.

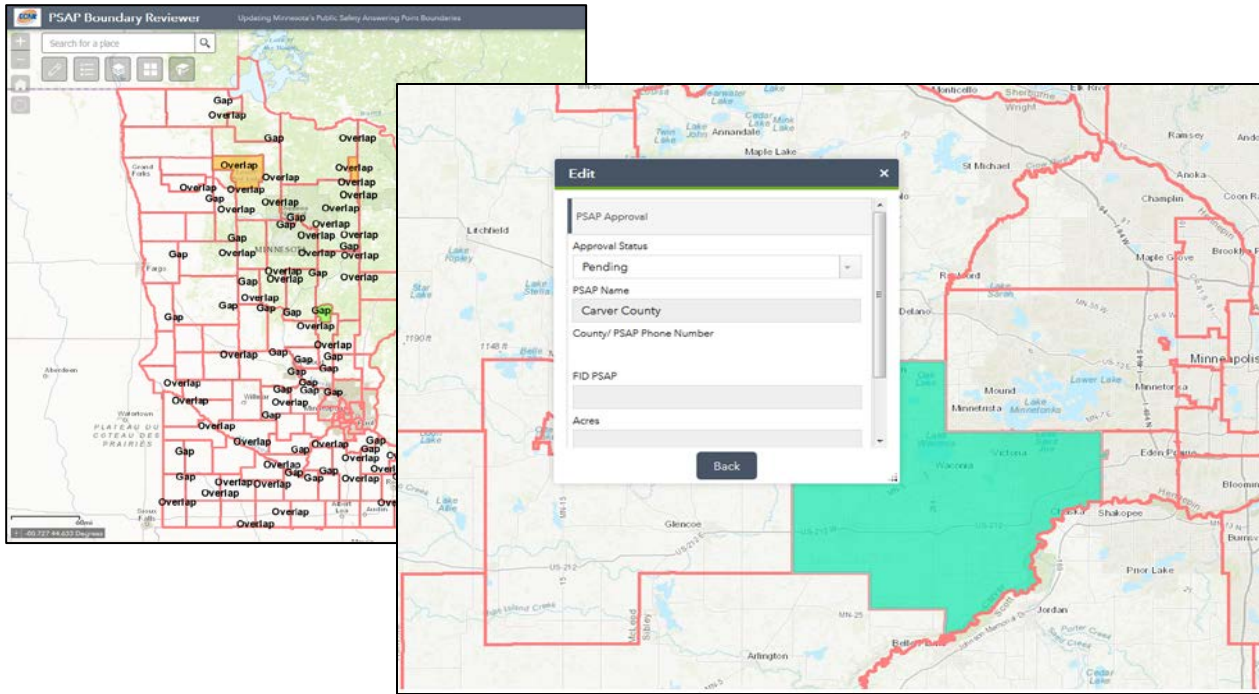


Figure 4: First graphic shows gaps and overlaps from the beginning of Phase 1. Second graphic shows PSAP Approval Status from Phase 2

## Upcoming Events

Notable upcoming DPS-ECN and MnGeo NG9-1-1 GIS events:

- ❖ July 18: Minnesota Geospatial Advisory Council (MGAC) Meeting
- ❖ August 9: NG9-1-1 GIS Subcommittee meeting
- ❖ September 5: MGAC Meeting
- ❖ September 13: NG9-1-1 GIS Subcommittee 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:

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