NG9-1-1 GIS Data Task List for Grant Reimbursement

Intended Audience: Minnesota Regional Grant Coordinators and Public Safety Answering Point's (PSAP) and PSAP GIS points of contact for NG9-1-1

Purpose: This document is intended to provide a more thorough explanation of the minimum data requirements required for NG9-1-1 as it pertains to the current 9-1-1 federal grant. Our goal is to provide as much information as possible to assist PSAPs who are submitting grant applications to determine what exactly they need to do and how to do it.

The tasks below have been identified as contributing to meeting Minnesota's minimum NG9-1-1 data requirements and are likely to qualify for grant reimbursement. These tasks may or may not be applicable to all PSAPs, as each are in different stages of data collection and development and have unique situations. An attempt at prioritization has been made with the understanding that this is a dynamic document. From this point forward, road centerlines will be addressed as 'RCL', address points as 'ADP', emergency service numbers as 'ESN', and emergency service boundaries as 'ESB'.

This list is not comprehensive; ECN will look to qualify any grant applications for NG9-1-1 GIS preparedness. If you feel you've met all the requirements listed below, please contact your regional NG9-1-1 GIS representative for reevaluation prior to the grant deadline. A separate validation document will be available upon request from MnGeo that specifically details the questions our validation checks ask of the data.

Data Structure/Schema: Pertinent data development tasks related to fulfilling the MN NG9-1-1 GIS data requirements are listed below. ECN directs PSAPs and GIS personnel to understand that there is currently not a one to one relationship between the MN GAC data standards and the NENA NG9-1-1 data model. *Federal grant funding for NG9-1-1 should not be used to propagate attribution for values that are in the GAC standard, but which are not present in the NENA model and therefore are not required for NG9-1-1 call routing.*

The last section of this document provides the cross-reference which establishes the correlation between the data field names and schema of the GAC RCL and ADP Standards and the NENA NG9-1-1 data model. As it relates to fulfilling the grant requirements, ECN requests:

1. Only data elements that have a "crosswalk" relationship to the NENA model from the MN GAC standard need to be propagated. These are identifiable by the presence of a NENA field name and NENA inclusion designation for that GAC data element.
    a. Use the MN GAC field name, type and field width in these instances.
    b. *Examples:* ADP: County Name, RCL: Left From Address
2. Data elements which are in the NENA standard but are **<u>not</u>** in the MN GAC standard can be propagated. These elements are listed toward the bottom of the crosswalk table below and are identifiable by the presence of NENA field names only – no GAC field name is supplied.
    a. *Examples:* ADP: Neighborhood Community, RCL: Legacy Street Name
3. Data elements which are found in the GAC schema only and do not crosswalk to the NENA requirements do not have a NENA field name or inclusion designation. These data elements are ineligible for reimbursement under this grant.
    a. *Examples:* ADP: CTU Code, RCL: Route ID

Data Validation: The following are some basic GIS data development tasks which must be completed as part of the data preparation phase. Please note – only MnGeo performed validations will be considered to fulfill project requirements.

- Fully parse out all street name elements in both the ADP and RCL datasets and propagated into the related attribute fields.
- Fully spell out all abbreviated street name elements in both the ADP and RCL datasets.
- Populate attribution of ESN fields on all RCL segments and ADPs.
- Populate attribution of Address Parity on all RCL segments.
- Populate attribution of MSAG Community Name on all RCL segments and ADPs.
- Adhere to state GAC domains
- Reconcile a MSAG to Centerline validation that includes all elements propagated above (ESN, MSAG community and address ranges)
- Pass all MnGeo validations as they relate to fully parsed out and spelled out street names in the validation steps listed below.
    - Community Name Validation
    - ESN Validation
    - Street Name Validation
    - MSAG Validation
    - Address Validation
    - Geospatial Validation

ECN will soon publish a NG9-1-1 GIS roadmap that will address the gaps between the MN GAC standards and NG9-1-1 system requirements in addition to other implementation milestones. The guidance in this letter supports that end-state goal.

Region	Grant Coordinator	Email
Northwest	Sarah Wilcox	swilcox@hrdc.org
Northeast	Lindsay VanGuilder	VanGuilderL@StLouisCountyMN.gov
Central	Shari Gieseke	shari.gieseke@ci.stcloud.mn.us
Metro	Tracey Fredrick	tfredrick@mn-mesb.org
South Central	Dan Davidson	Dan.Davidson@blueearthcountymn.gov
Southeast	Judy Indrelie	indrelie.judy@CO.OLMSTED.MN.US
Southwest	Randy Willis	rwillis@mnsheriffs.org

Next Generation 9-1-1 GIS Grant FAQ

GIS-Related Questions:

These are questions that can be answered by the regional Next Generation 9-1-1 (NG9-1-1) GIS representatives. Questions *not* related to NG9-1-1 data development, such as those pertaining to the grant application, reimbursement process, reimbursable purchasing/hiring, should be directed to the regional grant coordinator listed above or ECN.

1. *What is my NG9-1-1 current status?*

   Please refer to the NG9-1-1 interactive status map for your PSAP's status. The interactive status map is updated weekly on Friday morning and indicates the results from the most recent validation report.

   The Interactive status map does not yet represent progress layers for all validation tasks; this is being updated and the map will soon feature new project validation steps.

   If you wish to review copies of your most recent validation reports, to request documentation about a validation phase your PSAP is not yet on, or if you have further questions about your status, please reach out to your regional NG9-1-1 GIS representative.

2. *What GIS work do I have left?*

   Please review the above list of tasks and/or request the detailed 'NG9-1-1 Validation Overview' document to see what validations still need to be passed—this will signify remaining work. Please reach out to your regional NG9-1-1 GIS representative with any questions. If MnGeo has verified you have passed all the currently published validation phases (through Geospatial), final data validation steps are in final development and will be available in the ECN NG9-1-1 GIS implementation roadmap before the end of this year.

3. *What GIS tasks might be reimbursable under this grant proposal?*

   Please refer to the list above of NG9-1-1 GIS tasks that may be completed. If you have any other questions please ask your regional NG9-1-1 GIS representative.

4. *I want to hire a vendor to develop my NG9-1-1 GIS data—what vendors can I reach out to?*

   If you have questions about specific vendors, please reach out to your ECN regional grants coordinator or consult with PSAP/county leadership. Grant applications will be reviewed prior to approval and questions on the scope may arise if the deliverables are not evident. MnGeo would be happy to review any bids which you may have received from a vendor.

5. *What requirements should I communicate to my vendor?*

   The above punch list of tasks and/or details regarding each of the validation phases can be found in the 'NG9-1-1 Validation Overview' document which is available upon request from ECN or MnGeo.

6. *What level of compliance to state standards is required in order to receive grant reimbursement funds?*

   Refer to the NG9-1-1 GIS Data schema crosswalk GAC to NENA section below for a list of GAC fields as they relate to NENA requirements.

Grant-Specific Questions:

These are questions that should be answered by the regional grant coordinator or ECN. There are also FAQ's on the ECN NG9-1-1 Page.

1) Who is my regional grants coordinator?
   a) Refer to the region map and the list above to determine who is the appropriate contact for grant-specific questions.
2) Is this NG9-1-1 project a requirement? Yes.
   a) I required to do this work? Yes.

In order for all MN PSAPs to continue to remain interoperable, it is essential that all PSAPs participate in this project so their individual/local datasets may be stitched into the seamless statewide dataset. While the project is a requirement, participation in the grant is an optional process. Some PSAPs are funding the project independently of accepting the federal grant.

3) How much grant money should I apply for?
   a) The task list provided in this document should be used as the guide when preparing the grant request. Your GIS partner or vendor will determine costs based on the items in the task list that must be completed for your county.
4) I don't understand the application process.
   a) PSAPs should reach out to their regional grant coordinator for more guidance on the regional application process.
5) Can a PSAP submit a grant application on their own?
   a) No. Each region is identified as being a sub-grantee for the federal grant. Individual PSAPs must complete their application and submit it through their regional grant coordinator to be eligible for funding.
6) How do I submit my application?
   a) Applications must be completed by each PSAP individually and returned to the regional grant coordinator. Each regional grant coordinator will submit a single application on behalf of all PSAPs within their region. Please reach out to your regional grant coordinator to obtain the application or with questions about this process.
7) What if I need more funds than my PSAP has been allocated?
   a) There is a capped dollar amount provided by the federal grant for this project. However, since the date on which ECN applied for the grant, many PSAPs have made significant progress with their data preparation. It is possible that some PSAPs will not need the amount they were designated, allowing those PSAPs who may fall short in completing the project with their designated amount an opportunity to receive additional funding.
8) What if I apply for a set fund amount, but then unexpectedly need more?
   a) Reach out to your regional grant coordinator if you determine you may need additional funding. While there is not a guarantee more may be available, we do not want to turn back any unused funding.
9) Can I use grant funds for a GIS work station?
   a) No. This is an implementation grant and not an equipment grant. Funds must be used for the creation of NG9-1-1 geospatial data.
10) Who can I hire to do my NG9-1-1 work?
    a) A PSAP or county can hire a vendor, a temp employee, a part-time employee, or have an intern complete the NG9-1-1 work. If you are looking at other options for completing the data, please reach out to your regional grant coordinator.
11) I already have funds for NG-9-1-1. Do I still qualify for grant funds?
    a) If a PSAP has funding already earmarked for NG9-1-1 GIS data, they can still use new grant funds as long as it augments work that will already be done.
12) I work on NG9-1-1 but am not a part of the PSAP – should I be compensated with grant funds?

a) In order for salaries to be reimbursed by this grant, the staff completing the work must be performing work above and beyond what they are currently being compensated for during the normal course of work business. In other words, the work must AUGMENT, or be in addition to, what they are being paid for with their normal workload. If the staff is completing the same work they are currently being compensated to perform with general fund dollars, then to accept grant funding is identified as supplanting, which is strictly prohibited. Keep in mind the funding must supplement (increase the level of services) and not take the place (supplant) the current funds.

13) What dates for NG9-1-1 GIS work are eligible for grant reimbursement?
    a) After the regional application has been approved, GIS work can begin. Work can be done through the end of the grant period. The end of the grant period will be December 31st, 2021.
14) When can we expect grant reimbursement funds to be available?
    a) After the regional applications have been approved and the regional contracts have been signed, PSAPs can begin to be reimbursed for work completed going forward.
15) Can my GIS staff begin performing NG9-1-1 GIS work eligible for reimbursement even though there has been an additional delay in the grant application deadline?
    a) No, PSAPs should wait until the regional application is approved by ECN. The grant is currently going through the final approval process in the MN legislature. This process is expected to be completed by mid-November. No funding can be spent prior to this approval.
16) Can reimbursement funds be spent for conversion fees from a vendor's proprietary format into an ESRI GIS data format?
    a) The vendor should be using an ESRI GIS data format. If your vendor will only provide data in a proprietary format, choose a new vendor.
17) What do I do if a GIS Services vendor expects payment in advance or payment before a reimbursement is expected?
    a) Contact your regional grant coordinator for assistance in this instance.
18) What do I do if I'm having difficulty with the application process?
    a) Contact your regional grant coordinator for assistance.
19) How often do I or my vendor have to deliver GIS data?
    a) No less frequent than on a quarterly basis. The recommendation is to deliver data and report upon completion of a milestone or a validation task step. Each MnGeo validation report includes a percentage completion statistic for the current validation step. Data must be delivered in advance of requesting reimbursement. To this end, deliver data in a cadence that meets how often you desire reimbursement. This should be discussed with and be acceptable with your regional grant coordinator. If your vendor is requesting payment in advance of work being completed, please reach out directly to ECN for additional vendor options. Milestones must be met in advance of payment being made in all cases.
20) What is the absolute last date that I can submit data reimbursable under this grant?
    a) The end of the grant period is December 31st, 2021. All data must be submitted by that date to be eligible for reimbursement. However, please refer to Question 19 above.

NG9-1-1 GIS Data schema crosswalk GAC to NENA

The following two tables provide a data field name and schema cross-reference between the State of MN GAC Address Point Data Standard and Road Centerline Data Standard and the NENA NG9-1-1 Data Model. The NENA data model represents the minimum essential data sets and data elements to support NG9-1-1 call routing; the schemas are data transfer standards but are NOT multi-purpose. Cardinality between the MN GAC schemas and the NENA schemas does not exist.

Populating the MN GAC fields that have a NENA equivalent does qualify for reimbursement under the federal grant. A separate table is shown for the fields in the NENA Site Structure Address Points and Road Centerlines schema that do *not* have an equivalent in the MN GAC standard schema. MnGeo will accept data submissions that include all MN GAC fields and data submissions with additional fields from the NENA data model. For a full list of field names and/or descriptions please refer to the GAC Road Centerline Data Standard, the GAC Address Point Data Standard, or the NENA Standard for NG9-1-1 GIS Data Model. GAC fields that are not listed below do not qualify for grant reimbursement and are not required for the NG9-1-1 Program.

Minnesota NG9-1-1 Address Point Schema

GAC Descriptive Name	GAC Field Name	GAC Inclusion	NENA Descriptive Name	NENA Field Name	NENA Inclusion
Address Unique Identifier	ADD_ID	M	Site NENA Globally Unique ID	Site_NGUID	**M**
Local Address Unique Identifier	ADD_ID_LOC	C			
Address Number Prefix	ANUMBERPRE	C	Address Number Prefix	AddNum_Pre	**C**
Address Number	ANUMBER	M	Address Number	Add_Number	**C**
Address Number Suffix	ANUMBERSUF	C	Address Number Suffix	AddNum_Suf	**C**
Street Name Pre Modifier	ST_PRE_MOD	C	Street Name Pre Modifier	St_PreMod	**C**
Street Name Pre Directional	ST_PRE_DIR	C	Street Name Pre Directional	St_PreDir	**C**
Street Name Pre Type	ST_PRE_TYP	C	Street Name Pre Type	St_PreTyp	**C**
Street Name Pre Separator	ST_PRE_SEP	C	Street Name Pre Type Separator	St_PreSep	**C**
Street Name	ST_NAME	M	Street Name	St_Name	**C**
Street Name Post Type	ST_POS_TYP	C	Street Name Post Type	St_PosTyp	**C**

Street Name Post Directional	ST_POS_DIR	C	Street Name Post Directional	St_PosDir	**C**
Street Name Post Modifier	ST_POS_MOD	C	Street Name Post Modifier	St_PosMod	**C**
Subaddress Type 1	*SUB_TYPE1*	C	*Can be used for multiple NENA fields:* 'Building', 'Floor', 'Unit', 'Room' and 'Seat'		**O**
Subaddress Identifier 1	*SUB_ID1*	C			
Subaddress Type 2	*SUB_TYPE2*	C			
Subaddress Identifier 2	*SUB_ID2*	C			
ZIP Code	ZIP	M	Postal Code	Post_Code	**O**
ZIP Plus 4	ZIP4	O	ZIP Plus 4	Post_Code4	**O**
CTU Name	CTU_NAME	M	Incorporated Municipality	Inc_Muni	**M**
CTU Code	CTU_ID_TXT	M			
Postal Community Name	POSTCOMM	O	Postal Community Name	Post_Comm	**O**
County Code	CO_CODE	M			
County Name	CO_NAME	M	County	County	**M**
State Code	STATE_CODE	M	State	State	**M**
Location Description	LOC_DESC	O			
Complete Landmark Name	LANDMARK	O	Complete Landmark Name	LandmkName	**C**
Residence	RESIDENCE	O			
Mailable Address	MAILABLE	O			
Parcel Unique Identifier	STATE_PIN	O			
Placement Location	PLACE_LOC	O	Placement Method	Placement	**O**
Centerline Geocodable	CEN_GEO	M			
Unique Without Subaddresses	UNI_WO_SUB	O			

Longitude	LONGITUDE	M	Longitude	Long	**O**
Latitude	LATITUDE	M	Latitude	Lat	**O**
US National Grid Code	USNG_CODE	O			
911 GIS Point-of-Contact	GIS911POC	M	Discrepancy AgencyID	DiscrpAgID	**M**
Emergency Service Number	ESN	M	ESN	ESN	**C**
PSAP Code	PSAP_CODE	M			
MSAG Community Name	MSAG_C	M	MSAG Community Name	MSAGComm	**C**
911 Validation Error	VERROR_911	O			
Lifecycle Status	STATUS	O			
Effective Date	EFF_DATE	C	Effective Date	Effective	**O**
Retired Date	RET_DATE	C	Expiration Date	Expire	**O**
Source of Data	SOURCE	O			
Address Authority	AAUTHORITY	M			
Editing Organization	EDIT_ORG	O			
Edit Date	EDIT_DATE	M	Date Updated	DateUpdate	**M**
Comments	COMMENTS	O			
			Country: "US"	Country	**M**
			Additional Code	AddCode	**C**
			Additional Data URI	AddDataURI	**C**
NENA Site Structure Address Points fields not mappable to the MN GAC Address Point Data Standard			Unincorporated Community	Uninc_Comm	**O**
			Neighborhood Community	Nbrhd_Comm	**O**
			Legacy Street Name Pre Directional	LSt_PreDir	**C**
			Legacy Street Name	LSt_Name	**C**

	Legacy Street Name Type	LSt_Type	**C**
	Legacy Street Name Post Directional	LSt_PosDir	**C**
	Building	Building	**O** *(Can be derived from GAC subaddress fields)*
	Floor	Floor	
NENA Site Structure Address Points fields not mappable to the MN GAC Address Point Data Standard	Unit	Unit	**O** *(Can be derived from GAC subaddress fields)*
	Room	Room	
	Seat	Seat	
	Additional Location Information	Addtl_Loc	**O**
	Mile Post	Mile_Post	**C**
	Place Type	Place_Type	**O**
	Elevation	Elev	**O**

Minnesota NG9-1-1 Road Centerline Schema

GAC Descriptive Name	GAC Field Name	GAC Inclusion	NENA Descriptive Name	NENA Field Name	NENA Inclusion
Road Segment Unique Identifier	ROADSEG_ID	M	Road Centerline NENA Globally Unique Identifier	RCL_NGUID	**M**
Route ID	ROUTE_ID	O			
Route System	ROUTE_SYS	M	Road Class	RoadClass	**O**
Route Direction	ROUTE_DIR	O			
Local to State	LOC_STATE	O			
Primary Status	PRIME_STAT	C			
Street Name Pre Modifier	ST_PRE_MOD	C	Street Name Pre Modifier	St_PreMod	**C**
Street Name Pre Directional	ST_PRE_DIR	C	Street Name Pre Directional	St_PreDir	**C**
Street Name Pre Type	ST_PRE_TYP	C	Street Name Pre Type	St_PreTyp	**C**
Street Name Pre Separator	ST_PRE_SEP	C	Street Name Pre Type Separator	St_PreSep	**C**
Street Name	ST_NAME	M	Street Name	St_Name	**M**
Street Name Post Type	ST_POS_TYP	C	Street Name Post Type	St_PosTyp	**C**
Street Name Post Directional	ST_POS_DIR	C	Street Name Post Directional	St_PosDir	**C**
Street Name Post Modifier	ST_POS_MOD	C	Street Name Post Modifier	St_PosMod	**C**
Street Name Full	ST_CONCAT	O			
Alternate Street Name 1	ST_NAME_A1	C			
Alt 1 Legitimate MSAG Value	A1_MSAG_V	C			
Alternate Street Name 2	ST_NAME_A2	C			
Alt 2 Legitimate MSAG Value	A2_MSAG_V	C			

Alternate Street Name 3	ST_NAME_A3	C			
Alt 3 Legitimate MSAG Value	A3_MSAG_V	C			
Left From Address	ADD_FR_L	M	Left FROM Address	FromAddr_L	**M**
Left To Address	ADD_TO_L	M	Left TO Address	ToAddr_L	**M**
Right From Address	ADD_FR_R	M	Right FROM Address	FromAddr_R	**M**
Right To Address	ADD_TO_R	M	Right TO Address	ToAddr_R	**M**
Left Parity	PARITY_L	M	Parity Left	Parity_L	**M**
Right Parity	PARITY_R	M	Parity Right	Parity_R	**M**
Left Zip Code	ZIP_L	M	Postal Code Left	PostCode_L	**O**
Right Zip Code	ZIP_R	M	Postal Code Right	PostCode_R	**O**
Left CTU Name	CTU_NAME_L	M	Incorporated Municipality Left	IncMuni_L	**M**
Right CTU Name	CTU_NAME_R	M	Incorporated Municipality Right	IncMuni_R	**M**
Left CTU Code	CTU_ID_L	M			
Right CTU Code	CTU_ID_R	M			
Left Postal Community Name	POSTCOMM_L	O	Postal Community Name Left	PostComm_L	**O**
Right Postal Community Name	POSTCOMM_R	O	Postal Community Name Right	PostComm_R	**O**
Left County Code	CO_CODE_L	M			
Right County Code	CO_CODE_R	M			
Left County Name	CO_NAME_L	M	County Left	County_L	**M**
Right County Name	CO_NAME_R	M	County Right	County_R	**M**
Left State Code	STATE_L	M	State Left	State_L	**M**
Right State Code	STATE_R	M	State Right	State_R	**M**
Elevation From	ELEV_FROM	M			

Elevation To	ELEV_TO	M			
One Way	ONEWAY	M	One-Way	OneWay	**O**
Impedance Speed	SPEED_IMP	*If available*			
Emergency Access	EMERG_ACC	C			
Routing Speed	ROUTESPEED	M	Speed Limit	SpeedLimit	**O**
Route Number	ROUTE_NUM	C			
911 GIS Point-of-Contact	GIS911POC	M	Discrepancy AgencyID	DiscrpAgID	**M**
Left Emergency Service Number	ESN_L	M	ESN Left	ESN_L	**C**
Right Emergency Service Number	ESN_R	M	ESN Right	ESN_R	**C**
Left PSAP Code	PSAP_L	M			
Right PSAP Code	PSAP_R	M			
Left MSAG Community Name	MSAG_C_L	M	MSAG Community Name Left	MSAGComm_L	**C**
Right MSAG Community Name	MSAG_C_R	M	MSAG Community Name Right	MSAGComm_R	**C**
Validation Left	VALID_L	C	Validation Left	Valid_L	**O**
Validation Right	VALID_R	C	Validation Right	Valid_R	**O**
911 Validation Error	VERROR_911	O			
Lifecycle Status	STATUS	O			
Effective Date	EFF_DATE	C	Effective Date	Effective	**O**
Retired Date	RET_DATE	C	Expiration Date	Expire	**O**
Editing Organization	EDIT_ORG	O			
Edit Date	EDIT_DATE	M	Date Updated	DateUpdate	**M**
Functional Class - Federal	FUNCLS_FED	O			
Functional Class - Metro	FUNCLS_MET	O			

Surface Type	SURF_TYPE	M			
Number of Lanes	NUM_LANES	O			
Comments	COMMENTS	C			
NENA Road Centerlines Standard fields not mappable to the MN GAC Road Centerline Data Standard			Left Address Number Prefix	AdNumPre_L	**C**
			Right Address Number Prefix	AdNumPre_R	**C**
			Legacy Street Name Pre Directional	LSt_PreDir	**C**
			Legacy Street Name	LSt_Name	**C**
			Legacy Street Name Type	LSt_Type	**C**
			Legacy Street Name Post Directional	LSt_PosDir	**C**
			Country Left "US"	Country_L	**M**
			Country Right "US"	Country_R	**M**
			Additional Code Left	AddCode_L	**C**
			Additional Code Right	AddCode_R	**C**
			Unincorporated Community	UnincCom_L	**O**
			Unincorporated Community	UnincCom_R	**O**
			Neighborhood Community Left	NbrhdCom_L	**O**
			Neighborhood Community Right	NbrhdCom_R	**O**