Background

In 2018, the State of Michigan applied for a grant through the 911 Grant Program funded through the National Telecommunications and Information Administrations (NTIA) and the National Highway Traffic Safety Administration (NHTSA).

With support and input from the 911 community in Michigan, the NG911 grant was awarded on Friday, August 9, 2019. The grant award is administered through the Michigan State Police, 911 Administrative Office, which is housed in the Field Support Bureau of the Michigan State Police. The grant request consists of three projects, which are:

- Call Processing Equipment (CPE) for PSAPs in need of NG911 CPE
- Update the code in the 911 GIS Repository
- Statewide Address Points Gap Fill for the updated GIS Repository

The period of performance for this grant project ends on March 31, 2022, and the above projects must be completed by that time. To assist with programming, proper use, and equitable sub-granting of the grant funds, a NG911 Grant Technical Advisory Committee (TAC) has been formed. The NG911 Grant TAC will function as the primary TAC to the grant administrator. The TAC will provide administrative and technical oversight of the funding received through the 911 Grant Program.

The TAC members are:

Joni Harvey – MSP, State 911 Administrator …………………………………HarveyJ6@michigan.gov
Mark Holmes – DTMB, Geospatial Services Manager ……………………HolmesM3@michigan.gov
Lyndsay Stephens – MSP, State 911 Office ……………………………………StephensL5@michigan.gov
John Clark - DTMB, GIS Solutions Architect …………………………………..ClarkJS@michigan.gov
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Scott Ambs - Jackson County GIS ………………………………………………..sambs@mijackson.org

In December 2019, a survey about address points was released out to the 911 and Geographical Information Systems (GIS) communities across the State to get an initial status of address point availability across jurisdictions. This provided a general overview of potential gaps as not every jurisdiction completed the survey.

The next phase of determining gaps across the state is to complete a more detailed assessment of where potential funding could be applied to gaps in coverage. The TAC is requesting that jurisdictions provide a copy of their current address point file and/or other data sets listed below. An assessment will be undertaken by the TAC to review the data against specific checks to determine gaps against an established baseline of standards.

To ensure the grant funds are utilized in the most appropriate areas and to prevent duplication of efforts, it is necessary to obtain as much existing GIS data as possible. The TAC is requesting the following data sets, if available in your jurisdiction:

1. GIS address points
2. GIS tax parcel data
3. List of addresses (in spreadsheet or comma delimited text format)
4. GIS Emergency Service Zone (ESZ) Boundaries

If you can also provide your GIS road centerlines, it will enable the data assessments to include additional advanced validations between GIS data layers and these results provided back to you.

The TAC will be utilizing the latest versions of the National Emergency Number Association (NENA) GIS Data Model 2.0 guidelines to establish baselines and best practices for address point gap fill. These guidelines include the Development of Site/Structure Address Point GIS Data for 911 information document and the NENA Standard for NG911 GIS Data Model 2.0 document.

Data Assessment Process

The Department of Technology Management and Budget's (DTMB) Center for Shared Solutions (CSS) will support the TAC for this assessment phase and will run the following steps in each of the three scenarios listed below.

Scenario 1

If a jurisdiction provides address points for the assessment, the following steps will be included for this scenario.
1. Review the data for the minimum required fields and data values according to NENA standards
2. Review the location of point locations – i.e. rooftops, parcel centroid, driveway access point
3. Review for the completeness of address points across the geographic area of the jurisdiction
4. Process addresses through address validation tools to compare to United State Postal Service (USPS) addresses
5. Send assessment report and address validation results back to data assessment participant
6. Address validation results will list out all addresses that matched USPS addresses and also list out which ones did not

Scenario 2

If a jurisdiction does not have address points but provides GIS tax parcels (with addresses) for the assessment, the following steps will be included for this scenario. DTMB has a version of statewide building footprints extracted from a national open dataset made available by Microsoft in 2017. DTMB generated building centroid points from the building footprints. There are no addresses associated with that data set.
1. Perform spatial join to attach GIS tax parcel attributes to the building centroid points.
2. Run query to identify the number of duplicate addresses in the new building centroid points
3. Review for the completeness of address points across the geographic area of the jurisdiction

4. Process addresses through address validation tools to compare to USPS addresses
5. Send assessment report and address validation results back to data assessment participant
6. Address validation results will list out all addresses that matched USPS addresses and also list out which ones did not

Scenario 3

If a jurisdiction does not have address points and does not have GIS tax parcels (with addresses) for the assessment, the following steps can be completed if a master list of addresses can be provided in spreadsheet or comma-delimited file format.
1. Review address file for minimum required fields to be able to geocode effectively
2. Geocode locations of addresses using local road centerline file (if participant has a compete road centerline file they should upload or DTMB can use the Michigan Geographic Framework road centerlines)
3. Review for the completeness of address points across the geographic area of the jurisdiction
4. Use geocoded points to test a possible conflation process to the nearest building centroid from the Microsoft building footprints
5. Process addresses through address validation tools to compare to USPS addresses
6. Send assessment report and address validation results back to data assessment participant
7. Address validation results will list out all addresses that matched USPS addresses and also list out which ones did not

Emergency Service Zones (ESZ)

NENA outlines in their NENA Standard for NG911 GIS Data Model 2.0 that Emergency Service Zone (ESZ) Boundaries are a required GIS data layer. The upgrade to the Michigan 911 GIS Repository will include import functionality to integrate local ESZ boundaries into a statewide layer within the repository to delineate the fire, law enforcement and emergency medical service boundaries across the state. By providing your current GIS ESZ data as part of the data assessment, it will allow the TAC to review the status of these service zones across the jurisdictions and determine the methodology for integrating them via the 911 GIS Repository.

Referenced NENA Standards and Guidelines

The following are links to standards and guidelines that have been mentioned in this document.

NENA Standard for NG9-1-1 GIS Data Model
https://cdn.ymaws.com/www.nena.org/resource/resmgr/standards/nena-sta-006.1.1-2020_ng9-1-.pdf

NENA Information Document for Development of Site/Structure Address Point GIS Data for 9-1-1
https://cdn.ymaws.com/www.nena.org/resource/resmgr/Standards/NENA-INF-014.1-2015_SSAP_INF.pdf

Data Upload Instructions

Please provide the most recent version of your data sets so the evaluation can include the most recent information available.

When you are ready to upload your data, please send an email to:

Ulrika Zay
Geospatial Outreach
DTMB Center for Shared Solutions
zayu@michigan.gov
517-242-2027

Ulrika will send you the link to a secure OneDrive site to place the data. Your data will only be visible to your organization and Ulrika on the OneDrive.

Phases Beyond Data Assessment

Based on the assessment results, the TAC will determine the baseline to be achieved through the available funding and eligible uses of funds to complete the gap fill. Jurisdictions submitting letters of interest and participating in the data assessment will be given first priority to any potential funding provided for gap fill based on eligible uses of potential funding to be determined by the TAC.