

1. *What are the objectives of the National Highway Traffic Safety Administration's (NHTSA) and the National Telecommunications and Information Administration's (NTIA) Ensuring Help Arrives Near Callers Employing 9-1-1 Act (ENHANCE 9-1-1) grant awarded to the State of Michigan?*

Geographic Information Systems (GIS) plays a much more critical role within the Next Generation 9-1-1 (NG 9-1-1) environment. Within NG 9-1-1, all calls will be routed based on location using GIS datasets to determine the proper routing to Emergency Service IP Networks (ESInet) and Public Safety Answering Points (PSAP). There are a number of steps that agencies can take today to not only prepare their data for NG 9-1-1 but also improve existing GIS datasets for today's 9-1-1 environment. The ENHANCE 9-1-1 grant awarded to the state of Michigan has the following objectives:

- Provide NG 9-1-1 GIS data readiness assessment to all participating counties.
- Systems and database architecture will be implemented to allow counties to push updates to a statewide database repository on a regular basis. This architecture will allow the data to be replicated to, and coalesced at the state level. A statewide database repository will then allow data to be then replicated to any Emergency Call Routing Functions (ECRF) that are implemented within ESInets. Having this architecture designed and implemented, including data quality control checks and balances, is an integral part of preparing data for the call routing and call validation databases of the future. Coalescing local 9-1-1 entity datasets is a key step in preparing for NG 9-1-1, but also benefits 9-1-1 and emergency management during large emergency events having current statewide datasets to access. The integrated statewide map will also provide participating PSAPs with the opportunity to receive a copy of the statewide or regional datasets in the statewide data standards.
- Note – Although not part of the grant project, the datasets could enhance existing CAD systems to have GIS addressing data that extends into neighboring counties. PSAPs will need to discuss integration with their CAD vendors to determine if the CAD system can implement a regional addressing dataset to include surrounding counties. These datasets will only include data from the participating entities.
- Provide gap fills to improve addressing data in some jurisdictions. Gap fill in participating jurisdictions will be determined through the GIS data readiness assessment process.

- Develop and review a statewide PSAP boundary layer.
- Collaborate with and assist local 9-1-1 entities, through workshops, to educate on necessary workflows and standards developed as part of the project.

2. *Is the State going to sell my data to third parties?*

No. The state will honor the county or PSAP's ownership of the data and any requests for data will be directed back to the county. The addressing data will not be published in any data clearinghouse or web application that would allow third parties to derive information that they currently pay a fee for from the counties.

3. *Why do we need to start thinking about GIS now?*

GIS data is paramount to the 9-1-1 call routing process in NG 9-1-1. It is important that all GIS addressing layers are complete and being maintained. By assessing GIS datasets right now, it will provide a good timeline to prepare data in parallel to planning and design of NG 9-1-1 networks. It is not a matter of "if" but "when" NG 9-1-1 will be implemented and by addressing issues with GIS data across jurisdictions today, it will assure that it is ready to implement within the NG environment. Without early planning for system and GIS data development, state's risk the chance of not having accurate or complete data for call routing within NG 9-1-1 or delays to implementation that could create additional long-term costs.

4. *Why should I participate in grant now?*

The grant will fund the data readiness assessments for 9-1-1 entities that volunteer to participate. To prepare data for the Emergency Call Routing Function (ECRF) to route calls to the appropriate ESNets and PSAPs, 9-1-1 entities are going to have to assure that their datasets are NG 9-1-1 data ready and that there is a regular maintenance plan in place. This grant is an opportunity for 9-1-1 entities to voluntarily participate and have a NG data readiness assessment performed and to be a partner to establish the needed architecture and workflows to implement a statewide data repository and replication for regular updates. Without participating in the grant, costs for these services performed under the grant would have to be incurred by non-participating 9-1-1 entities at a later time.

5. *Will I receive copies of any data created as part of the grant?*

Yes. Wherever portions of the 'gap fill' is undertaken to create addressing data that is missing across large areas of jurisdictions, that data will be provided back to those local 9-1-1 entities to implement within their operations. As mentioned under question 1, the entire statewide

dataset or portion of the dataset that is collected can be exported back out to local 9-1-1 entities for integration into any existing 9-1-1 system. Improved datasets will be an immediate benefit to current call dispatching for wireline and wireless call locating.

1. Why is there a need to develop an integrated statewide road centerline layer along with the statewide PSAP boundary layer?

Road centerlines are used today in 9-1-1 as the minimum GIS layer required for geocoding civic address locations (i.e. city style addresses such as 123 Main St) during 9-1-1 calls. It is important today, and also in a future Next Generation 9-1-1 (NG9-1-1) environment to have accurate road name and address range information on these centerlines. For NG 9-1-1, the minimum GIS datasets that will be required to route and validate location information are the PSAP boundaries and the road centerlines. There are two types of location information that can be associated with a call, geodetic or civic address. Geodetic information is coordinate based information (i.e. latitude, longitude) that would query service area boundaries, such as the PSAP boundary layer to determine where to route the call. Civic address locations will need to query GIS addressing information. Road centerlines will be needed, at a minimum, for geocoding a civic address location. NENA working groups such as the Provisioning and Data Maintenance of GIS data to ECRF/LVF working group and the Functional and Interface Specification for i3 working group have documented these requirements in standards that are being developed.

2. What happens if a PSAP has more than road centerlines, do they need to downgrade their data for NG9-1-1 and only have PSAP boundaries and road centerlines?

No. PSAP boundaries and road centerlines are the minimum data layers required for geodetic locations and civic address location. More detailed address information such as site structure address location, and emergency service zones will provide more accurate and granular location information to help pinpoint locations and are desired where available. The 9-1-1 GIS database design for the GIS grant project will include database standards for additional 9-1-1 layers such as site structure locations that participating entities could provide with their data uploads. For NG 9-1-1 call routing and validation, the ECRF/LVF queries will be configured to use a hierarchy of data queries based on the data available for a jurisdiction. Therefore, if a jurisdiction has site structure locations, the ECRF/LVF will know to query that GIS layer first for a civic address match before querying the road centerlines ranges. If a jurisdiction does not have site structure points developed yet for their area, then the query for that jurisdiction would default to geocoding on the road centerlines address ranges.

The long term vision of NG 9-1-1 i3 is to get to what is being called sub-parcel polygon features, which can be divided down to building, floor, seat, etc. Realizing the costs associated with the development of data to that level of detail might be somewhat prohibitive, the development of site structure address points by jurisdictions that currently do not have that GIS layer is a good next step to increase the granularity of the data for civic address locations.

3. How is the project going to fix local addressing issues related to centerlines?

Through the survey, it will be determined the status of GIS at the local level for 9-1-1. The 9-1-1 GIS Grant Technical Advisory Committee (TAC) will review the survey results to determine the tasks that can be accomplished with the grant project budget, including centerline gap fill areas the system will provide robust quality control and reporting tools that will assist participating PSAPs with GIS data, including road centerlines, in error detection ensuring the quality level of the Statewide 9-1-1 GIS database. The TAC will also look at the types of standard addressing guidelines and best practices to assist all participating local PSAPs in dealing with local addressing issues and data maintenance processes.

4. How will this project be paid for and how much will it cost to maintain?

This is a grant project funded through an ENHANCE 911 grant with matching funds from the CMRS Fund under P.A. 248 of 2010. The grant has a fixed budget to be used to establish the statewide 9-1-1 GIS database system. The budget covers the development of the product but not the maintenance of the system after the grant period has expired on September 30th, 2012. The 9-1-1 GIS Grant Technical Advisory Committee will be reviewing alternative funding methods and sustainability models for FY2013 and FY2014 maintenance costs, which will be dependent upon system requirements and design.

Pursuant to MCL 484.1408, no funds from the current 9-1-1 distributions additional CRMS funds will be used in the construction, administration, or maintenance during the course of the current act. The cost of the maintenance of the project beyond the December 31, 2014 sunset of the current ETSEA is yet to be determined.

The project is being implemented with the objective of utilizing the GIS database for NG9-1-1 in Michigan, of which costs are not yet fully known as the project plan is underway. It is expected that the costs of the GIS database will be migrated into the cost of the NG9-1-1 network.

5. Will any of these funds be used for CAD or Phone System technology?

No.

6. Are there any plans for a central CAD system?

That is not the position of DTMB, SNC, or MSP.

7. What prevents data from being passed out to other agencies beyond 9-1-1

Data sharing and non-disclosure agreements will be established prior to any data sharing. These agreements will clearly define the policies relating to use and distribution required by the local agencies and the state of Michigan. To assure that the 9-1-1 data is protected from inappropriate re-sale or distribution, these agreements will be executed before any data sharing occurs beyond the agreed upon parties and permitted uses of the data. These tasks are to be provided as part of the coordinated effort planned within the grant project.

8. If a PSAP currently has completed GIS data, what benefits are there to this project?

By participating in the GIS grant project, a PSAP will be provided with an additional layer of quality assurance and quality control on the GIS datasets being replicated into the 9-1-1 GIS database. The

quality control measures built into the system will include discrepancy reporting which will be sent back to PSAPs for error resolution. The GIS grant project will integrate the GIS datasets across neighboring boundaries and will provide the opportunity for PSAPs to receive data extracts of seamless GIS layers that extend beyond their boundaries that they can integrate into their existing operations. By participating in the GIS grant project, it will also provide PSAPs with additional data redundancy whereby their current GIS datasets can be accessed remotely or provide to neighboring 9-1-1 jurisdictions during a large emergency event. The 9-1-1 GIS database would provide redundancy and data interoperability for participating PSAPs. This increased data interoperability would enhance public safety efforts and emergency response to citizens during emergency events where a PSAP might need to be evacuated or local systems or not in operation.

For NG 9-1-1, the integrated datasets, standardization and quality control within the 9-1-1 GIS database system will prepare the datasets for the replication of the datasets to the providers of future Emergency Call Routing Functions (ECRF) and Location Validation Functions (LVF) within any Emergency Services IP Network (ESInet) within the State. The GIS data that is provisioned from the 9-1-1 GIS database will be protected under data sharing and non-disclosure agreements that are executed as part of this project.