

MnGeo Priority Projects and Initiatives

September 23, 2015

While there are many worthwhile geospatial projects and endeavors, MnGeo is focusing its efforts and its limited resources on a few projects in order to make meaningful progress. All of these projects are in collaboration with other organizations and are either underway or anticipated to be initiated in the coming months. In alphabetic order, MnGeo's priority projects are:

Planned

Master Services Contract for Aerial Imagery

Project Goal: To provide a list of experienced pre-approved vendors from which Cooperative Purchasing Venture (CPV) member organizations can contract for medium-to-high resolution orthoimagery and planimetric mapping services in a streamlined process through the issuance of individual work orders.

Project Status: MnGeo is working with the Department of Administration, DNR and MnDOT to prepare a Request for Proposals from which a preferred vendors list will be determined.

Anticipated Completion and Milestones: An RFP is currently under development and intended to be issued later this fall. Administration anticipates that the contract will be in place in time to issue work orders for Spring 2016 leaf-off imagery and will be in effect for five years (2016 through 2020 flying seasons).

Project Funding: TBD

Project Issues, Concerns and Risks: An RFP release deadline allowing for work orders for projects in early 2016 to be accepted is rapidly approaching. Coordinating the contract efforts, while simultaneously informing potential beneficiaries of this project, requires more resources than the project currently has available.

Project Contacts: Chris Cialek (MN.IT Services), Dan Ross (MnGeo)

In Progress

Drainage Record Modernization

Project Goal: Produce a GIS database template and accompanying data standards for Minnesota's public drainage system records. The database template will be available to interested parties statewide and its use will be required for drainage authorities to receive competitive drainage records modernization cost-share, when available. In addition, the Board of Water and Soil Resources (BWSR) publication, *Drainage Records Modernization Guidelines* will be updated to reflect the creation of the GIS template and standards.

Project Status: At the end of July three Focus Group Meetings were held around the state to obtain public input regarding the proposed database template. In August, an online questionnaire was also used to obtain public input on the template.

Anticipated Completion and Milestones:

Project Milestone	Target Completion Date
Project Start	10/1/2014
Specify template objectives & requirements	9/30/2015
Outline of template and metadata prepared by contractor	10/21/2015
Update <i>Drainage Records Modernization Guidelines</i> publication	3/21/2016
Disseminate information about the GIS database template and guidelines	3/29/2016

Project Complete	6/30/2016
------------------	-----------

Project Funding: \$230,000

Project Issues, Concerns and Risks: Because of the late start of the project it is behind by a couple months. However, there was some flexibility in the schedule so that it should still finish by the funding deadline of 6/30/2016.

Project Contacts: Greg Fetter (BWSR, Executive Sponsor), Tim Gillette (BWSR, Business Champion), Jim Krumrie (MnGeo, Project Manager), Brian Fischer (Houston Engineering Inc., Contractor), Al Kean (BWSR, State Consultant)

Geospatial Commons

Operations: The long-range objective of the Commons is to be the best source for the widest variety of geospatial data, services, information, ideas and news in Minnesota. Its initial design is finished, and it allows users to find, view and download data; publish metadata and data; and find and use web services and applications. The project is now closed and has moved into operations, headed by MnGeo’s Mike Dolbow. The majority of the project team remains in place to assist with operations, including MN.IT staff @ Agriculture, DNR, MnGeo, and MPCA.

Status: The second phase of this effort – enabling the addition of resources from major publishers – concluded on July 1, 2015. On July 23rd, the operations team resolved a small issue around unique URLs that enabled non-state agency publishers, such as the Met Council and Dakota County, to publish resources. Since then, almost 200 additional resources have been published. As of September 10, the count of published resources accessible through the Commons totals 414:

Organization	Published Resources
DNR	120
Met Council	103
MnGeo	64
Dakota County	27
MN Geological Survey	24
Agriculture	19
MPCA	18
MnDOT	11
MetroGIS	11
Health	5
BWSR	4
Education	3
Lake County	3
Revenue	2
U of M	0
Total	414

Anticipated Operational Tasks: The operations team continues to meet and define potential tasks that will enhance the operational sustainability of the site. As these tasks are defined and prioritized, they will be presented for funding discussions if they cannot be achieved under the team’s current time commitment. If

small tasks with large impacts can be uncovered and defined for the current time commitment, they will be pursued and presented to the Council. In the meantime, MnGeo is pursuing outreach opportunities and metadata training, both intended to increase the number of publishers participating in the Commons.

Funding: There are no dedicated funds for this effort. MnGeo is providing a quarter time Operations Manager, technical and administrative support. Staff members from several State agencies (most notably: DNR, Agriculture and MPCA) have committed to assisting with operational support. Other resources are expected to be made available by MN.IT Services as needed.

Issues, Concerns and Risks: Several issues that will likely require future input from leadership and advisory Councils/Committees have arisen, including a precise definition of *how* those decisions are made, and *when* leadership input is required. These issues include, but are not limited to:

- Scope of allowable data formats (such as CAD data)
- Stewards for federal agency datasets (customized for MN) and datasets that do not have an “obvious” steward
- Large data set replications to multiple GDRS nodes
 - Related: do we continue to store/serve/host “purely local” data, or do we aggregate first?

Contacts: Dan Ross (Executive Sponsor), Mike Dolbow (Operations Manager)

Next Generation 9-1-1

Project Goal: NG9-1-1 implementation will depend on current and accurate GIS data. Geospatial data will be used for location validation, call routing and emergency response. With the Minnesota Department of Public Safety serving as the lead state agency for NG9-1-1, MnGeo will identify, inventory and collaborate with the public-safety answering points (PSAPs) and 9-1-1 entities to obtain, develop and distribute core geospatial data required to support the program. To succeed, this effort will require several critical, statewide data sets:

- Street centerlines, with address ranges (described below)
- Address points (described below)
- PSAP boundary polygon(s)
- Emergency response – law enforcement, fire and EMS boundary polygon(s)
- Authoritative boundary polygon(s) – GIS data authority for a given area

All GIS data will need to be validated with legacy E9-1-1 data.

Project Status: The Minnesota Geospatial Office (MnGeo) project team held its internal kickoff in early July. Two additional GIS Analysts have been hired to assist with the project.

- The PSAP Request for Information Summary Report was finalized and distributed to PSAP and GIS stakeholders in late August. The RFI summary report is also available on the ECN website: <https://dps.mn.gov/divisions/ecn/programs/911/Pages/gis-information.aspx>
- MnGeo is collecting PSAP and Emergency Service boundary data from every county and PSAP in Minnesota on behalf of the FirstNet project. The data are being inventoried and aggregated into a single “Public Safety Entities” map layer that will be used by FirstNet to display and query their User Population data.
- MnGeo is also collecting all required NG9-1-1 GIS datasets from counties in the Metro and Northeast regions to begin assessing their data for use in NG9-1-1. The Metro and NE are considered to be pilot regions for developing the necessary data assessment and preparation plans.
- Development is underway for the MN NG9-1-1 GIS Standards, which will serve as a guide for preparing and maintaining GIS data for NG9-1-1 in Minnesota. The Standards Workgroup held its first meeting at the beginning of September. The Standards WG has been tasked with developing a

definition of complete for each required NG9-1-1 GIS dataset, along with creating the full standards document.

- Finally, the repeatable NG9-1-1 GIS data workflow is currently being planned and designed. This workflow includes accepting GIS data uploads from local GIS sources, standardizing and aggregating the local datasets into the statewide NG9-1-1 schemas, running QA, creating and distributing error reports, and provisioning the Emergency Call Routing Function (ECRF) and Location Validation Function (LVF).

Anticipated Completion and Milestones: Although an official completion date has yet to be established, it is anticipated that geospatial data will need to be ready for NG9-1-1 deployment in 2018. Below is a list of current project tasks with estimated completion dates.

- **Outreach to PSAPs and GIS Sources** – ongoing
- **Project Scope and FY15 Work Plan** – completed March 2015
- **Regional Kickoff Meetings** – completed early June 2015
- **FY16 Work Plan** – completed late June 2015
- **PSAP Request for Information and Summary Report** – completed late August 2015
- **MN NG9-1-1 GIS Standards** – complete by early 2016
- **Metro and NE Region GIS Data Assessment** – complete by July 2017
- **Develop SIF/ELT** (Spatial Information Function/Extract Load Transform) – complete by July 2017

Project Funding: TBD

Project Issues, Concerns and Risks: Issues, concerns and risks will be identified during the first phase of the project.

Project Contacts: Dan Ross (Executive Sponsor), Adam Iten (Project Manager), John Hoshal (GIS Project Lead)

Parcels, Street Centerline and Address Point Collection

Project Goal: To collect, standardize and aggregate county parcel, street centerline and address point data into statewide datasets for use by NG9-1-1 as well as for other state agency purposes.

Project Status: The [parcels project](#) has been underway for several years. While significant progress has been made (e.g., survey of all 87 counties, development of a Parcel Business Plan, generation of a proposed parcel attribute data exchange standard, and passage of legislation in May 2013 for the exchange of geospatial data between governmental entities at no cost) much work remains to be completed. MnGeo has begun to acquire parcel, centerline and address point data from counties and is in the process of reviewing and comparing data in preparation for standardization and aggregation. MnGeo will make both interim and standardized data available to all State agencies. MnGeo continues to work with the MN Department of Revenue to determine how the Parcels Project complements Revenue’s [PRISM \(Property Record Information System of Minnesota\) Project](#); however, based on timing and the need to move forward, the Parcels and Land Records Committee has recommended proceeding with an updated version of the [DCDATS proposed standard](#) in the interim.

Anticipated Completion and Milestones:

Milestones	Anticipated Due Date
Collect all available data	September 2015
Standardize the three layers	December 2015
Aggregate the three layers into single statewide datasets	March 2016

While we do not expect to be able to obtain complete statewide coverage, we do anticipate we will be able to obtain and aggregate many counties. It is hoped that complete statewide parcel, centerline and address point data layers will be available in 2 years.

Project Funding: There are no dedicated funds for this project although an FGDC CAP grant provided funding to assist in developing the Business Plan.

Project Issues, Concerns, and Risks: Project success is dependent on counties developing and sharing both spatial and attribute data. Issues include: some counties may be reluctant to share their data, data content and quality can vary between counties (and in some cases within counties), no established standard for parcel, address or centerline data in MN, and time/personnel needed to complete collection, standardization and aggregation processes.

Project Contacts: Dan Ross (Executive Sponsor)

Street Centerlines

Project Goal: Create an authoritative, multi-purpose, public-domain centerline spatial dataset representing the entire state of Minnesota that can be relied upon to accurately represent (to the best extent possible) the actual roadway assets of the state. This data layer is to be collaboratively built and maintained to reduce cost, eliminate redundant efforts, facilitate better data capture, provide inter-agency reporting and address a variety of needs from roadway data consumers.

Project Status: The MnDOT tools were recently put into production internally. MnGeo is working with MnDOT to set up an external version of the editing tools and associated data for partner use. The project team is currently working on implementing a database model within the MnGeo instance of the software that will meet the needs of non-state participants. The team has agreed to use the data model created from the Metro Regional Centerline Collaborative as the base model. Some event attributes will be added as well to support MnDOT needs. MnDOT has brought a vendor on board to assist with defining and documenting data workflows and business rules that will be needed to obtain and accept data from the authoritative source.

Anticipated Completion and Milestones: The goal is to have the data model set up within the MnGeo instance of the tools by December. Anticipated dates for a pilot will depend on getting the new data model into the tools that have been delivered.

Project Funding: MnGeo and MnDOT are providing part-time staff; MnDOT is providing project funding.

Project Issues, Concerns and Risks: The project is heavily dependent on tools being provided for the MnDOT LRS project. Project resources are limited due to competing priorities and will affect the timing of the project. The project scope needs to be well defined. Concrete goals and objectives are developed; more specific dates must be determined.

Project Contacts: Peter Morey (MnDOT); Dan Ross (MnGeo)