Minnesota Geospatial Advisory Council Meeting

September 28, 2016

Blazing Star Room, Ground Floor, Centennial Office Building

658 Cedar St., St. Paul, MN 55155

11:00 a.m. – 2:00 p.m.

Agenda

1.	Call to order (Chair) a. Introductions b. Approval of agenda c. Approval of meeting minutes from 6/1/2016	11:00	15 min
2.	Review and accept committee and workgroup summaries (All)	11:15	10 min
3.	Future of LiDAR/Hydro panel at conference (Sjerven & Ross)	11:25	5 min
4.	GIS/LIS Consortium conference update (Sjerven)	11:30	10 min
5.	Open data effort & survey update - Outreach Committee (Kne & Geurts)	11:40	20 min
6.	Break Networking	12:00	30 min
7.	Sector reports (Mackiewicz & Walchuk)	12:30	20 min
8.	Engaging and coordinating with regional user groups (Kotz)	12:50	15 min
9.	Parcel data standard update (Maas)	1:05	5 min
10.	Recognizing accomplishments and setting goals for the year (Kotz)	1:10	15 min
11.	Legislative update (Ross)	1:25	10 min
12.	MnGeo priority projects and initiatives	1:35	10 min
13.	Announcements or other business	1:45	15 min
14.	Adjourn	2:00	

Agenda Item 2. Review and Approval of Committee & Workgroup Summaries

Digital Elevation Committee

No report. Committee is being reevaluated.

Emergency Preparedness Committee

No report

Hydrography Committee

No report. Committee is being reevaluated.

Metadata Workgroup

No report. The workgroup is preparing the final report to sunset.

Outreach Committee

No report

Parcels and Land Records Committee

Report date:
09/12/2016

Person generating this status report and their contact information:
George Meyer, gmeyer@co.ottertail.mn.us

Dates of meetings that have taken place (if possible provide links to the meeting minutes)**:**
No meetings since last report, meeting to be scheduled at MN GIS/LIS. Meeting time yet TBD

Progress on work plan (cover any of the following as appropriate):

- Transitioning to George Meyer taking over chair duties
- We are Continuing work with the Standards Committee and putting latest data standard up for continuing review
- DNR Forestry has begun merging 20 counties data utilizing a python script and the latest attribute standard, will likely have an update from them at the next meeting.

Additional comments:

Standards Committee

Report date:
September 8, 2016

Person generating this status report and their contact information:
Geoff Maas, MetroGIS Coordinator
Standards Committee Chair

Dates of meetings that have taken place (if possible provide links to the meeting minutes):
Last Committee Meeting: August 31, 2016
Meeting minutes available here: http://www.mngeo.state.mn.us/committee/standards/

Progress on work plan (cover any of the following as appropriate):
Briefly describe activity;
Draft committee charter, standard workflow diagram and work plan for 2016-2020 submitted to Committee for review on August 31, as of this writing, we are still collecting feedback on these documents. First revision of these documents will be complete by Friday, September 16. Also, the development of a glossary of terms and concepts relevant to data standards development is underway. This will be published at the URL above as a resource for the entire Minnesota Geospatial Community.

What has been accomplished?
Development of a Version 2.0 of the Parcel Data Transfer Standard and approval of tasks and schedule for the Parcel Data Transfer Standard are underway. Public/stakeholder review period is set to begin on September 19 and end on December 23, with reporting and follow up tasks identified and scheduled. Approval of the proposed standard, barring serious recommended revision from the statewide stakeholder community, is anticipated in Spring 2017.

What progress has been made on achieving proposed goals?
A clear schedule of tasks, deliverables and responsible parties has been approved for the Parcel Data Transfer Standard for September 2016 through spring 2017.

Is the committee/workgroup on track to accomplish what was planned for the year or period?
Yes.

What problems or impediments have been encountered?
None.

What assistance does the committee/workgroup need?
Some additional messaging and assistance with outreach would be greatly appreciated by all involved with the Geospatial Advisory Committee.

Provide any maps or graphics as appropriate.
All current information relevant to the Standards committee is available here:
http://www.mngeo.state.mn.us/committee/standards/

Agenda Item 10. Recognizing Accomplishments and Setting Goals for the Year

Proposed Plan

- Each year, create a short report of GAC accomplishments for the year, and goals for the next year.
- Much of the content would come from the committees/workgroups since they do so much of the work.
- Use the calendar year for reporting, not the state gov't fiscal year. It's more intuitive to stakeholders.
- Specifics:
    - For the last meeting of the calendar, each committee/workgroup will submit accomplishments for that year and goals for the next year. This will be in the format of an update to their committee/workgroup work plan.
    - The GAC Leadership Team will also prepare a list of additional GAC accomplishments and goals that are not part of a committee/workgroup = a GAC work plan
    - Both will be compiled into a short draft report for review, discussion and approval at the last GAC meeting of the year.

Example Content for 2016 Year End Report

Accomplishments from July 2015 to December 2016

- Created a small leadership team to work on GAC agenda and strategy between meetings
- Reviewed and updated mission and role of GAC
- Clarified committee/workgroup reporting relationships
- Update committee and workgroup reporting documents
- Approved metadata requirements for the Minnesota Geospatial Commons
- Sunsetted Geocoding Workgroup
- Sunsetted Geospatial Commons Workgroup
- Revived the Standards Committee and identified a new chair
- Launched the Outreach Committee

Goals for 2017

- Have an engaged and active Geospatial Advisory Council
- Strengthen our relationship with the state's regional GIS user groups
- Define the GAC's next steps for elevation and hydrography data and take action
- Have an approved MN parcel data transfer standard
- Have a clearly documented process for reviewing and approving proposed state geospatial standards
- Complete the free and open data survey effort and report on findings and any next steps
- Provide clear input to MnGeo on priorities for MnGeo projects. *Do we want some kind of annual prioritization process?*

Agenda Item 12. MnGeo Priority Projects and Initiatives

September 28, 2016

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:

DPS Crash Portal Project

Project Goal: A collaborative project between MnGeo and the Minnesota Department of Transportation (MnDOT) to provide the Minnesota Department of Public Safety (DPS) with web services and data to be used in their recently released crash system. This new system allows officers to map the locations of vehicle crashes and pull information from GIS data rather than having officers enter location information manually.

Project Status: Web services have been created and are currently being utilized by the MN Crash System. The system is also designed to work in a disconnected mode, so shapefiles have to be produced in a format so that the vendor can automate the updating for all the squads and keep in sync with the web services and map cache. The base map data is derived from the new MnDOT Linear Reference System (LRS) that was recently put into production. Processes are being created to automate the updating, verifying and validating of all the data coming into the DPS Crash data store. MnGeo will be automating the updating, verifying and validating of processes to export to shapefiles and update the basemap map cache to allow the officers to map crashes when not connected to the Internet.

Anticipated Completion and Milestones: The MN Crash application went live January 1, 2016 and is currently utilizing a draft version of the LRS data. MnGeo anticipates that the project will in spring 2017 and then become an ongoing program to support the MN Crash system by providing quarterly updates to the services and disconnected shapefile data.

Project Funding: The project is currently being funded by DPS and MnDOT.

Project Issues, Concerns and Risks: Clear requirements to the specific needs of DPS and MnDOT have not been definitively defined. The MnDOT LRS data production release date has yet to be determined.

Project Contacts: James Bunning (MnGeo) and Norm Anderson (MnGeo)

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: The contractor, Houston Engineering, Inc., is currently finalizing the *Guidelines* document and is working to complete the database template using feedback from pilot drainage authorities that are essentially beta-testing the template. MnGeo is starting work on a drainage records ArcGIS Online map viewer to be completed in time for the GIS/LIS Conference in October.

Anticipated Completion and Milestones:

Project Milestone	Target Completion Date
Project Start	10/1/2014
Specify template objectives and requirements	1/29/2016
Template created by contractor	10/31/2016
Update *Drainage Records Modernization Guidelines* publication	9/30/2016
Disseminate information about template and guidelines	12/30/2016

Project Complete	12/30/2016

Project Funding: $230,000
Project Issues, Concerns and Risks: A condition for use of the template by local drainage authorities is that they share a hydrographic subset of their data publicly on the Geospatial Commons. Some may be unwilling to agree to this.
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. Now fully operational, it allows users to find, view and download data; publish metadata and data; and find and use web services and applications. Operations are headed by MnGeo and supported by MN.IT staff who serve Agriculture, DNR, MnGeo, and MPCA.

Status:
MnGeo and the support team are moving to implement operational improvements that:

1. Stabilize the system's ability to respond to increased demand (completed)
2. Add capacity for new publishers and resources (completed)
3. Reduce excessive or unwanted duplication and replication to agency file servers ("GDRS nodes") (in progress)
4. Diversify available methods for publishers to provide resources (pending)

These improvements will take place over the nine months, and are slated behind other projects in terms of timing and priority. During that time, the team continues to focus on governance issues and adding content from new and existing publishers.

Fifty-seven resources have been published since our last report, two new publishers implemented (Waseca County and Ramsey County), and another very close to implementation (Rice County). As of September 13, the count of published resources accessible through the Commons totals 577:

Organization	Resource Count
Natural Resources Department	154
Metropolitan Council	145
Geospatial Information Office	75
Dakota County	60
Agriculture Department	30
Minnesota Geological Survey	26
Pollution Control Agency	20
MetroGIS	17
Transportation Department	12
Ramsey County	8
Health Department	5
Board of Water and Soil Resources (BWSR)	4
University of Minnesota, Twin Cities	4
Itasca County	4
Waseca County	4
Education Department	3
Lake County	3

Revenue Department	2
Minnesota Valley Transit Authority	1
Rice County	0

Funding: Agencies currently provide funding for the operations of the MN Geospatial Commons. Currently there are no dedicated funds for enhancements to the site, although a small amount of project funding may be provided this biennium for a series of small improvements. 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. A draft governance model has been created and is expected to be shared soon. It addresses issues including, but not limited to:

- Scope of allowable data formats
- 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?

Contact: Mike Dolbow (Operations Manager)

Master Contract for Aerial Imagery
Project Goal: To provide a list of experienced pre-approved vendors from which State Agencies and Cooperative Purchasing Venture (CPV) member organizations can contract for medium-to-high resolution orthoimagery and planimetric mapping services in a streamlined process through individual custom work orders.
Project Status: Nine vendors were selected and master contracts were executed in January 2016. A website providing program details and forms, managed by the Minnesota Department of Administration, was made public in mid-May (visit: http://www.mmd.admin.state.mn.us/AerialImagery/AerialImagery.htm).

The Metropolitan Council issued the first Work Order Solicitation associated with the Aerial Imagery Master Contract in January. The Surdex Corporation was awarded the work order to acquire Metro-wide 4-band, 30-cm imagery this spring. Since then, four Metro counties – Anoka, Carver, Dakota and Scott – executed additional contracts through the program to buy-up to 15-cm (6-inch) imagery.

Raw imagery was acquired in April, processed May through July and reviewed for edits by stakeholders in August. Edit corrections are currently wrapping up and data delivery is anticipated in early October.

Anticipated Completion and Milestones: This master contract is in force for two years, with an option to extend those contracts for three additional years. Any number of specific Work Orders are permitted during that time. Two new work orders have been issued since the Metro Project mentioned above, leaf-on imagery for Dakota County and fall color imagery for the DNR.

Project Funding: No dedicated funding has been identified for this master contract. Each organization creating specific Work Orders is expected to fund its own individual projects.
Project Issues, Concerns and Risks: 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)

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)
- NG9-1-1 Data Maintenance 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 fourth issue of the NG9-1-1 GIS project newsletter was distributed in August to all project stakeholders. The newsletter is also available on the ECN website: https://dps.mn.gov/divisions/ecn/programs/911/Pages/gis-information.aspx
- MnGeo is collecting and assessing all required NG9-1-1 GIS datasets statewide 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. The assessment findings are being compiled into Data Readiness reports for each County/PSAP, which will be shared back with each County/PSAP during upcoming onsite Data Preparation kickoff meetings.
- MnGeo conducted the initial Data Preparation kickoff meetings in Cook, Lake, St. Louis, Carlton, and Aitkin counties in August and early September. These kickoff meetings will be conducted in the remaining NE region counties over the coming month. From there, MnGeo will proceed with counties in the Central and SE regions.
- The Data Preparation projects involve six phases of NG911 GIS data cleanup, including Community Name Validations, Street Name Validations, Address Validations, Geospatial Validations, Emergency Service Boundary Validations, and Edge Matching. The primary objectives of these Data Preparation projects are to improve and qualify the local GIS data for mission critical use in NG911.
- 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 has been meeting weekly since the beginning of September 2015. The Standards WG has been tasked with recommending and developing standards needed to integrate locally collected and maintained GIS data into statewide layers deemed critical for the Emergency Call Routing Function (ECRF) and Location Validation Function (LVF) of NG9-1-1. The MN PSAP and GIS stakeholders completed their first review of the DRAFT MN NG9-1-1 GIS Data Standards in May. MnGeo has compiled all comments/questions and worked with the Standards WG to provide necessary responses and revisions to the standards. The MnGeo team is currently preparing the draft standards and associated documents for the second stakeholder review, which will occur late September/early October. The second stakeholder review and comment period will include neighboring states, as well as, ECRF, LVF, and other NG9-1-1 vendors.
- Finally, the NG9-1-1 GIS data portal, repository, and workflow are currently being planned, designed, and placed into production. The workflow includes accepting GIS data uploads from local GIS sources and then standardizing, validating, and aggregating the local datasets into the statewide NG9-1-1 datasets. Other workflow tasks include generating and distributing condition/error reports, and provisioning the ECRF and 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
- **FY17 Work Plan** – completed late June 2016
- **MN NG9-1-1 GIS Standards** – complete and approve by early 2017
- **GIS Data Assessment and Data Readiness Profiles** – complete by late 2016
- **Spatial Information Function (SIF) and Extract Load Transform (ELT) Requirements and Workflow** – complete by late 2017

Project Funding: $600K per year for 3 years
Project Issues, Concerns and Risks: Issues, concerns and risks are being identified and logged throughout the project.
Project Contacts: Dan Ross (Executive Sponsor), Adam Iten (Project Manager)

OSA Portal Project
Project Goal: A year-long project to provide the Minnesota Office of the State Archaeologist (OSA) an OSA-branded web application that allows it to maintain a digital, secure, and up-to-date inventory of archaeological sites, surveys, and associated forms. This system streamlines internal administrative tasks for OSA and also those of tiered external users in an effort to better preserve historical cultural resources across Minnesota. This project is made possible through an inter-agency agreement between MnDOT and MnGeo on behalf of OSA and in consultation with the Minnesota State Historic Preservation Office (SHPO).

Project Status: A secure, enterprise database environment is being prepared for the OSA's Archaeological Sites Database with content and design improvement recommendations being submitted by MnDOT's Cultural Resources Unit (CRU) and the Minnesota Historical Society's SHPO. The new database model has been designed and implemented, and migration from the old Access database is underway. Functionality to interactively manage sites and propose new site entries is undergoing user acceptance testing. A geospatial data entry application is nearly complete, as are complimentary map services that will be utilized for browsing and querying the database at a variety of levels based on user role.
Anticipated Completion and Milestones: The interagency agreement under which this project is being governed calls for the project to be completed by December 14, 2016.
Project Funding: $180,000 through a federal grant managed and administered through MnDOT.
Project Issues, Concerns and Risks: Confining requirements to the specific needs of OSA, SHPO and CRU while engaging other prospective stakeholders in a structured future development and expansion strategy.
Project Contacts: Michael Bergervoet (MNDOT/CRU), Christopher Cialek (MN.IT Services)

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. MnGeo asks for parcel, centerline and address point data in a single request to counties.
Project Status:

Parcels

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) there is much work yet to complete. MnGeo is well underway collecting data from local partners and has collected parcels for 82 counties to date *(see full-size map)*.

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 and the Standards Committee are proceeding with standards review for an updated version of the DCDATS proposed standard in the interim.

Anticipated Completion and Milestones:

Milestones	Anticipated Due Date
Collect all available data	September 2016
Standardize the three layers	October 2016
Aggregate the three layers into single regional or statewide datasets	December 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.

Project Issues, Concerns, and Risks: Project success is dependent on counties developing and sharing both spatial and attribute data. Issues include: Some counties have been reluctant to share their data, data content and quality varies between counties (and in some cases within counties), no established standard for parcel, address or centerline data in MN currently exists (although we are working toward the DCDATS standard), and time/personnel needed to complete collection, standardization and aggregation processes. **While the data will be available to government agencies many counties have asked the state not to share parcels obtained for their counties. With that approach it is likely we will never achieve a statewide shared parcel layer.**

Project Contact: 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 LRS tools were put into production internally earlier in 2016. MnDOT has been working to update the data that was frozen during the project. MnGeo is working with MnDOT and has defined data workflows that provide data updates from both non-state road authorities and state agencies to a single repository where the data will be standardized and aggregated. The project team is currently working on implementing a database model within MnGeo that will meet the needs of NG9-1-1 that can be shared with non-state participants. The statewide team has agreed to use the data model created from the NG 9-1-1 effort for centerlines which used

the Metro Region Centerline Collaborative work as a starting point. MnGeo will be responsible for bringing data together from MnDOT, other state and non-state road authorities.
Anticipated Completion and Milestones: The draft of the standard is being vetted by stakeholders and should be available by February 2017. A secure repository, data model and database has been set up within MnGeo and the metro counties are currently submitting their centerlines. The goal is to have the two pilot areas (Metro and NE regions) submitting data for validation and aggregation by the end of 2016.
Project Funding: DPS and MnGeo are covering staff time and infrastructure to build out the repository, data model, and work flow as the data and system will be used for NG9-1-1.
Project Issues, Concerns and Risks: The project is heavily dependent on requirements, tools, standards and timelines being provided for the NG9-1-1 project.
Project Contacts: Dan Ross (Executive Sponsor), Adam Iten (Project Manager)

Address Point Collection
Project Goal: Create an authoritative, multi-purpose, public-domain address point dataset representing the entire state of Minnesota that can be relied upon to accurately represent (to the best extent possible) the actual location of addresses in Minnesota. 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 address data consumers.
Project Status: MnGeo is working with PSAP (Public Safety Answering Points) and local authorities to define data standards that will be used to build out a standard statewide data set. In August the NG9-1-1 draft standard was compared to the Metro Address Standard. The two teams are working together to come up with a crosswalk between the two.
Anticipated Completion and Milestones: The first draft of the standard and data model are available for review by stakeholders. The data flow and repository to support moving data from partners into the NG9-1-1 repository have been put in place and the two pilot areas should be submitting address data by the end of 2016.
Project Funding: DPS and MnGeo are covering staff time and infrastructure to build out the repository, data model, and work flow as the data and system will be used for NG9-1-1.
Project Issues, Concerns and Risks: The project is heavily dependent on requirements, tools, standards and timelines being provided for the NG9-1-1 project.
Project Contacts: Dan Ross (Executive Sponsor), Adam Iten (Project Manager)