

## Minnesota Geospatial Advisory Council Meeting

May 20, 2026  
10:30 a.m. - 1:30 p.m.

### Meeting Options

- **Virtual:** Online via Microsoft Teams
- **In-person:** Room 2000 (Skjegstad), [Stassen Building](#), 600 N Robert Street, Saint Paul, MN

### Agenda

1. Call to order <b>(Mayer)</b>	10:30	10 min
a. Roll call		
b. Approval of Agenda*		
c. Approval of <a href="#">Meeting Minutes from March 11, 2026*</a>		
2. Review and receive Committee Reports <b>(Mayer)</b>	10:40	5 min
3. Approve modified Committee Work Plans* <b>(Mayer)</b>	10:45	5 min
4. PLSS Point Data Standard proposal* <b>(Kotz / Carlson)</b>	10:50	10 min
5. PLSS Monument Grant Program update <b>(Thurnau / Veraguth)</b>	11:00	15 min
6. Imagery Committee proposal* <b>(Mayer / Albrecht)</b>	11:15	10 min
7. <i>Break and networking</i>	11:25	30 min
8. Committee presentations		
a. Outreach Committee <b>(Fendos)</b>	11:55	10 min
b. Standards Committee <b>(Kotz / Carlson)</b>	12:05	10 min
9. Sector reports		
a. County - Twin Cities metro <b>(Albrecht)</b>	12:15	10 min
b. City - Twin Cities metro <b>(Tumberg)</b>	12:25	10 min
c. At-Large <b>(Goodman / Maddox / Schute)</b>	12:35	20 min
10. Minnesota Geospatial Information Office updates <b>(Slaats)</b>	12:55	10 min
11. Executive Team updates <b>(Mayer)</b>	1:05	10 min
12. Round Robin / Announcements <b>(All)</b>	1:15	15 min
13. Adjourn* <b>(Mayer)</b>	1:30	

\* *Motion required*

# Committee Reports

These reports include updates on each committee's [FY2026-27 Minnesota Geospatial Advisory Council Priorities](#).

## 3D Geomatics Committee

### Responsible Priority Projects and Initiatives

- Culvert Data Standard
- Hydro-modified DEMs
- Lidar Data
- Lidar-derived Hydrography

### Most Recent Successes

- Hydrogeomorphology group reviewed the list of subgroups and provided an update on the Type of group, Leadership, Status and meeting schedule.
- Members of the Steering team continue to support the MnGeo effort and MnTopo 2.

### Next Activities / Tasks

- Complete a similar review of our other workgroups using the outline provided by the Hydrogeomorphology group.
- Finalize any plans for presenting at the MN GIS/LIS Consortium Conference and Workshops. Including potential workshops.
- Complete review and finalize workplan for the Steering committee.
- Discuss in June the next steps for the Acquisition workgroup and update its workplan.

### Barriers

*None*

### Additional Priority Projects and Initiatives Updates

*None*

### Request for Assistance

*None*

Content contributed by [Gerry Sjerven](#) on behalf of the committee.

## Archiving Committee

### Responsible Priority Projects and Initiatives

- Geodata Archive Implementation

### Most Recent Successes

- Determined the scope and form of our short-term deliverables.

### Next Activities / Tasks

- Produce a short report, with recommendations, to the GAC for discussion.

### Barriers

*None*

### Additional Priority Projects and Initiatives Updates

*None*

### Request for Assistance

*None*

*Content contributed by [Ryan Mattke](#) on behalf of the committee.*

## **Awards Committee**

### **Responsible Priority Projects and Initiatives**

*None*

### **Most Recent Successes**

*None*

### **Next Activities / Tasks**

Will be planning a kickoff meeting soon for nomination review.

### **Barriers**

*None*

### **Additional Priority Projects and Initiatives Updates**

*N/A*

### **Request for Assistance**

*None*

*Content contributed by [Ryan Stovern](#) on behalf of the committee.*

## Data Endorsement Committee

### Responsible Priority Projects and Initiatives

*None*

### Most Recent Successes

The Data Endorsement Ad-Hoc Committee has been meeting monthly since February 2025. We have developed a Data Endorsement Proposal Form as well as an Evaluation Form. Most recently, we invited the Standards Committee leaders to help review some of our work and share their thoughts with us. We gained some valuable insight from the Standards Committee that will help shape the outcome of our deliverables and our recommended process.

### Next Activities / Tasks

Our next task is to create process documentation/operational procedures that will likely be similar to the Standards Committee's operational procedures. We have also determined that a flow chart will be a helpful addition for visualizing the process.

### Barriers

*None*

### Additional Priority Projects and Initiatives Updates

*N/A*

### Request for Assistance

*None*

*Content contributed by [Kevin Trappe](#) on behalf of the committee.*

# Emergency Preparedness Committee

## Responsible Priority Projects and Initiatives

- Critical Infrastructure Data Workflow
- Options for a Fire Risk Assessment Tool
- US National Grid Map Availability

## Most Recent Successes

- Defined the work needed for the [Fire Risk Assessment Tool Workgroup](#).
- Education Workgroup is actively defining coursework guidelines for the different Geospatial Emergency Management Specialist (GEMS) levels.

## Next Activities / Tasks

- Recruit for the Fire Risk Assessment Tool Workgroup.
- Education Workgroup - continue defining the requirements for the GEMS levels and find a hosting platform for the GIS profiles. Then, work on outreach and education for GIS professionals on how to build their profile of expertise and emergency managers on how to access these resources.
- Critical Infrastructure Workgroup is sunsetting and redefining the needs surrounding critical infrastructure, specifically around the adoption gap and how to best address that.

## Barriers

- The only particular barrier we are facing at this time is limited bandwidth from our committee members to dive in deeply to the work of the groups.

## Additional Priority Projects and Initiatives Updates

*None*

## Request for Assistance

- The Fire Risk Assessment Tool, once the needs are defined by the workgroup, will be passed over to MnGeo and the State Fire Marshal's Office to develop and configure the Esri tool to meet those needs.
- US National Grid (USNG) is looking for a champion to learn from Randy.

*Content contributed by [Britta Maddox](#) on behalf of the committee.*

## K-12 Committee

### Responsible Priority Projects and Initiatives

- K-12 Curated Geospatial Datasets
- K-12 Minnesota Digital Atlas
- Statewide Educator Dataset

### Most Recent Successes

The K-12 Education Committee has joined with the GIS/LIS K-12 Committee. We are in process of identifying ways to do research with teachers about their needs and exploring options for creating data sets and curriculum. We are also planning Geofest, a teacher conference to be held in October.

### Next Activities / Tasks

We will be planning the GIS sessions for Geofest. After reviewing a few more options for content delivery, we'll make a decision of where to focus our efforts.

### Barriers

Time! GIS professionals don't get work time to do this, so many are doing this work on their own time. We would also like to have teachers involved, but they can't meet during the day. We are discussing some other ways to get input from educators.

### Additional Priority Projects and Initiatives Updates

*None*

### Request for Assistance

*None*

*Content contributed by [Shana Crosson](#) on behalf of the committee.*

# Outreach Committee

## Responsible Priority Projects and Initiatives

- GIS Advocacy Resources
- More Fully Attributed Statewide Parcel Data
- Statewide Address Points Data
- Statewide Parcel Data
- Statewide Road Centerline Data
- Success Stories for Geospatial Technology

## Most Recent Successes

In April 2026, the GAC Hub build team received feedback from the GAC Executive Team and MNIT Communications on the user interface, accessibility, and content organization for the GAC home Hub, Outreach Committee Hub, and Data Endorsement Committee Hub. MNIT Communications also provided graphics and color schemes validated through a WCAG 2.1 compliance lens to support the build team’s work.

The build team met on April 7, April 21, and April 30 to review and implement recommended changes, completing the first round of GAC Hub construction. Megan S. and Sally W. coordinated and facilitated these feedback loops and provided logistical support through MnGeo ArcGIS Online.

A new priority has been assigned to the Outreach Committee for FY 2026–2027: GIS Advocacy Resources - developing supporting materials to help communicate the Return on Investment (ROI) of GIS. The committee reviewed GIS ROI success stories including [The Value of the Indiana GIO story map](#), [King County ROI Study](#), and others.

## Next Activities / Tasks

- Present the first round of deliverables, including a demonstration of three GAC ArcGIS Hub sites, at the May 20, 2026 GAC meeting.
- The Open Data Subcommittee will collaborate with the Outreach Committee to develop an Open Data glossary and a web application to display county opt-in statuses.
- Align roles and responsibilities for the next phase of GAC Hub site construction and complete Round 2 by August 2026, in preparation for the MnGeo website migration cutover.
- Work with MnGeo to define, prioritize, and implement an Open Data ROI study at the county level to start.
- The Open Data Subcommittee will continue working on promoting data opt-in participation from counties.

## Barriers

- Competing demands consuming committee participants’ bandwidth to work on committee projects.
- Potential consulting funding is needed to conduct a GIS ROI study.

## Additional Priority Projects and Initiatives Updates

*None*

## **Request for Assistance**

Continued support from MnGeo staff is needed to coordinate with MNIT Communications on branding and content approval for publications developed by the GAC Outreach Committee.

The GAC Outreach Committee and its Open Data Subcommittee strongly recommend that MnGeo initiate/sponsor an open data ROI study that can be used as a case study to promote GIS data sharing at the county level.

*Content contributed by [Jessica Fendos](#) on behalf of the committee.*

# Parcels and Land Records Committee

## Responsible Priority Projects and Initiatives

- Public Land Survey System Data Standard
- Statewide County Boundary Dataset
- Statewide Right-of-Way Data
- Updated & Aligned Boundary Data

## Most Recent Successes

- Standards Committee review and approval of the Public Land Survey System (PLSS) Point Standard which will be presented to the GAC for approval.
- On-going and continued effort to secure permanent funding of the PLSS Monument Grant Program. Land surveyors spent the day at the Capitol on April 7th to speak to legislators about the PLSS and the importance of restoration efforts.

## Next Activities / Tasks

The PLRC Committee will meet semi-annually starting the 2nd week of June. At the June meeting we will discuss:

- Boundary Alignment Subcommittee
  - Meeting cadence & priorities (TBD)
  - PLSS Point Standard
  - Government Boundary Alignment
- PLSS Legislative Subcommittee
  - Meets monthly
  - Pat coordinates
- Statewide Right-of-way data

## Barriers

- Capacity of volunteer members. Burn out to some extent.

## Additional Priority Projects and Initiatives Updates

- PLSS Point Data Standard will be presented to the GAC for approval during the May meeting.
- The Statewide County Boundary Dataset Phase 1 is complete ([single statewide dataset on the Commons](#)) and Phase 2 (county-derived, aligned boundaries) is still to be developed. Phase 2 work is unlikely to be completed this GAC term.
- The PLRC main committee will start to meet biennially starting in June 2026.

## Request for Assistance

- Kory Thurnau from MnGeo will assist with administrative tasks.

*Content contributed by [Kory Thurnau](#) on behalf of the committee.*

# PLSS Preservation Committee

## Responsible Priority Projects and Initiatives

- Remonumentation of all original federal Section Corners
- Statewide Survey Records Inventory

## Most Recent Successes

21 of 34 PLSS Monument Grants have been completed and final reimbursements made. 13 grants have been extended to fully utilize grant funds. We anticipate 4-5 additional grants to be completed by the end of June, 2026 and the remainder in FY27. Kory Thurnau plans to give a presentation on the grant success at the May GAC meeting.

## Next Activities / Tasks

We have completed a land survey records inventory survey of Minnesota counties and have received responses from all but 6 counties. 5 of those 6 counties were grant recipients so we did have information about their records and their contact information.

The committee plans to review the survey results and plan any additional plans concerning the land survey record inventory priority.

## Barriers

Permanent and ongoing funding of the PLSS Monument Grant program is prohibiting restoration of all PLSS section corners in Minnesota.

Most counties lack funding and capacity to complete a full land survey record inventory. Most cite needing additional grant money or funding to conduct such an inventory.

## Additional Priority Projects and Initiatives Updates

*None*

## Request for Assistance

We need a minimum of 5 constituents from each legislative district to write to their representatives and tell them why funding the PLSS Monument Grant Program is important.

*Content contributed by [Kory Thurnau](#) on behalf of the committee.*

# Standards Committee

## Responsible Priority Projects and Initiatives

- Bikeways Data Standard Expansion for Trails
- Public Land Survey System Data Standard
- Transportation Asset Standard

## Most Recent Successes

- Tweaked CTU ID Standard, fixing link.
- *Priority Project Update* - **Transportation Asset Standard** is going to be held off until the transportation asset standards have been complete at the federal level. We will reassess after that to see if we endorse it or want changes made to it.
- *Priority Project Update* - For the **Bikeway Data Standard** we have reached out to some interested parties to let them know the process. We have reached out to Subject Matter Experts on this to see who is interested in helping us out in this process.

## Next Activities / Tasks

- **PLSS Point Data Standard** update - A subgroup created draft responses to public review comments and associated changes to the draft standard. Both will be up for approval at the May 4 Standards Committee meeting. If approved, the standard will be submitted to the GAC for approval.

## Barriers

*None*

## Additional Priority Projects and Initiatives Updates

*None*

## Request for Assistance

*None*

*Content contributed by [Dennis Tumberg](#) on behalf of the committee.*

# Attachments

*The following pages include attached documents submitted for GAC approval:*

1. *Modified Committee Work Plans*
  - a. *Outreach Committee*
  - b. *Hydrogeomorphology Workgroup*
2. *Proposed PLSS Point Data Standard (public review comments also included for reference)*
3. *Proposed Imagery Committee Charter and Work Plan*

# Outreach Committee Workplan and Accomplishments

## Committee-Wide

### Goals for 2026

- Complete the buildout of MN GAC Committee Hub sites in compliance with content transfer standards and publication guidelines established by MnIT Communications.
- Support the outreach efforts of GAC Committees, including the Outreach Committee Open Data Subcommittee’s county opt-in participation initiative.
- Collaborate with the GAC Executive Team to develop and implement ROI advocacy strategies at the state and/or county levels.

### Successes since 2025

- Filled the Outreach Committee Chair position in 2025. The new chair recruited ten members, and the team began constructing GAC Hub sites for all GAC Committees. The first round of deliverables will be showcased at the May 2026 GAC meeting, with the second round scheduled for completion by August 2026.
- The Outreach Committee developed a write-up on GAC’s 2025 accomplishments, which was featured in the MnIT GovDelivery Newsletter in January 2026, titled Mapping Our Milestones: A Year in GIS.
- A GIS/LIS Conference presentation survey was distributed to GAC committee chairs, inviting them to submit GAC-related presentation topics for 2026.
- Open Data Subcommittee
  - Identified committee members to serve as points of contact for GAC/foundational datasets workgroups.
  - Coordinated outreach efforts and opt-in agreements, resulting in active county-level engagement and formal recognition of agreements with the GAC.
  - Clarified outreach methodology and presented recent developments at the GIS/LIS Conference.

### Barriers

- Potential consulting funding is needed to conduct GIS ROI studies at macro and/or micro scales.

## Next task

- Work with other GAC Committees to increase collaboration and coordination to promote outreach efforts
- Look for presentation opportunities to promote free and open data and recruit new members for the GAC
- Look for newsletters, blogs, and other forms of media to promote free and open data and Outreach Committee objectives
- Continue to collect success stories and share with stakeholders
- Develop branding for the resources we create, create one-page documents on the value of GIS and free and open data for stakeholder use

## Request for assistance

- Continued support for administration of the MN GAC Hub Sites
- MnGeo staff support is needed to coordinate with MnIT Communications for publications developed by the GAC Outreach Committee.

## Open Data Subcommittee

### Goals for 2026

- Mission: The Open Data subcommittee's mission is to promote public sharing of county parcels, address points, road centerlines, and emergency service zones data openly and shared to the state for cohesive statewide data. The committee is working with counties to opt-in to sharing data. Once an agreement is reached, the available data will be added to statewide feature classes accessible publicly on the MN Geospatial Commons.
  - We are asking counties to opt-in to the composite datasets to be a partner in the process, to maintain healthy relationships between the community, the GAC, and MnGeo, and to be respectful of the effort and intentions for those who do the work of producing the data.
  - Goal is for each committee member to contact/add at least one new county to the opt-in dataset each 6-week meeting cycle.

### Successes since 2025

- 18 active workgroup participants promoting Open Data sharing
- Session presentation promoting benefits of Open Data at the 2025 MN GIS/LIS Consortium Conference
- Out of 87 Counties in Minnesota, 59 contributed parcels. NG9-1-1 Data Opt-in (address points, road centerlines, and emergency service zones): 56 counties committed to sharing address points and ESZs. 55 counties opted in to share road centerlines.

### Barriers

Developing a new communications strategy targeting counties that remain reluctant to opt in to parcel data, including the use of case studies.

## **Next task**

- See Goals for 2026

## **Request for assistance**

Support from MnGeo and GAC leadership is appreciated to help define and prioritize the scope of GIS advocacy efforts, and to sponsor associated funding needs if external consulting services are required.

The Open Data Subcommittee will collaborate with MnGeo to develop an Open Data glossary and a web application to display county opt-in statuses.

## **Date approved by Geospatial Advisory Council**

May 20<sup>th</sup>. 2026

Minnesota Geospatial Advisory Council  
Workgroup Work Plan

**Hydrogeomorphology Workgroup**

**Work Plan date:**

April 28, 2026

**Co-chairs:**

Jamie Schulz, Rick Moore

**Steering Committee Liaison:**

Sean Vaughn

**Link to committee charter:**

[http://www.mngeo.state.mn.us/committee/3dgeo/3dgeo\\_committee\\_charter.pdf](http://www.mngeo.state.mn.us/committee/3dgeo/3dgeo_committee_charter.pdf)

This workgroup includes subject matter experts from the hydrography and water related sectors. The subgroups form or reconvene and operate as needed.

**Work Plan for 2026 - 2027**

**Planned activities and deliverables:**

1. The lidar-derived hydrography (LDH) GAC priority is a primary initiative for this workgroup. Work for the LDH GAC priority is outlined in this work plan.
2. Education and Outreach
  - a. Look for opportunities to connect with hydrography related committees and workgroups within the Agencies to build awareness for lidar derived hydrography (LDH) and education
  - b. Update needs statement to guide lidar derived hydrography products
3. Coordination across 3D Geomatics Workgroups
  - a. Connect with other workgroups to coordinate collaborative efforts
  - b. Attend 3D Geomatics Steering Team Meetings to present workgroup updates
4. LDH & 3DHP
  - a. Stay up to date on the process of creating 3DHP through participation in the NSGIC 3DHP for the Nation Initiative meetings
    - i. Scope out how 3DHP will meet Minnesota hydrography needs.
  - b. Work to promote a possible pilot project.
    - i. Scope out feasibility to make a 3DHP proposal to USGS as a way to fund a possible pilot project in Minnesota.

# Minnesota Geospatial Advisory Council

## Workgroup Work Plan

- c. Create a list of Agency programs that fund projects related to LiDAR and hydrography development to identify support and potential funding partners for LDH, share with 3D Geomatics Steering Team
  - d. Recognizing DNR as the state agency defined by statute ([Minnesota Statutes, Chapter 103](#)) for creating official maps of hydrography (and digital representations), this Workgroup will provide guidance (education and outreach) to DNR and DNR Division of Ecological and Water Resources managers to build support for DNR sponsorship of LDH at DNR.
5. DEM Hydro-modification Subgroup
  - a. Maintain centralized authoritative map of current breachline datasets
  - b. Explore and Develop a Digital Dam Breachline Database in coordination with members of the Subgroup.
  - c. Explore the role of a modified version Breachline Inventory and Update App for digital dam breachline mapping and dissemination
  - d. Collaborate with the GAC and provide an advisory role on GAC Priorities.
6. Data Catalog Subgroup
  - a. Currently on standby
7. Lidar-derived Hydrography (LDH) Subgroup
  - a. Currently on standby
  - b. The LDH Subgroup conveys the priorities of the broader hydrography community set by the membership of the 3DGeo Hydrogeomorphology Workgroup, strengthening the development of a robust statewide LDH dataset.
  - c. Activity and membership of this subgroup has been rolled up into the Hydrogeomorphology Workgroup until there is movement on creation of LDH under the guidance of DNR's authority, listed in Minnesota Statutes, Chapter 103.
  - d. The Lidar-derived Hydrography Subgroup built a foundation of LDH for Minnesota. This Workgroup will draw heavily from all the work accomplished by the LDH Subgroup in recent years to build support for LDH and bring a USGS 3DHP funded project to Minnesota.
8. Foundational Hydrography Data Stewards Subgroup
  - a. Finalizing Basin ID Standard updates for GAC Standards Committee
  - b. Watershed ID Standard updates for GAC Standards Committee
  - c. Quarterly meetings
9. Culvert Data Standard Subgroup
  - a. Restart subgroup and expand membership recruitment
  - b. Develop web page for Culvert Data Standard efforts
  - c. Develop Mission Statement and Work Plan
  - d. Establish meeting schedule
  - e. Collaborate with MNGeo on administration and project assistance.
  - f. Collaborate with the GAC and provide an advisory role on GAC Priorities.

# Minnesota Geospatial Advisory Council

## Workgroup Work Plan

10. Broaden scope/mission to include relationship to soils
  - a. Establish a subgroup to incorporate concepts of how landforms and water create soil types
  
11. Maintain ongoing support duties
  - a. Work with MNGEO to maintain workgroup web page
  - b. Maintain web pages for each active subgroup (DEM Hydro-modification, LDH)
  - c. Identifying and Recruiting Membership
  - d. Maintain SharePoint site – current and relevant content
    - i. Focus on using SharePoint for collaboration, such as documents for DEM Hydro-modification subgroup
    - ii. Identify SharePoint steward for the Workgroup pages

### **Roles and Responsibilities:**

Membership will include diverse users and stewards of hydrography and soils data. Provide guidance to data stewards and users on initiatives that relate to LiDAR derived end products.

### **Resources:**

The Hydrogeomorphology Workgroup will use the work and accomplishments of the former [Hydrography Committee](#) and collaborate with other current 3D Geomatics Committee Workgroups.

### **Workgroup needs:**

The Hydrogeomorphology Workgroup will depend on guidance from the 3D Geomatics Steering Committee.

### **Dependencies and interrelationships:**

The workgroup will work with the 3D Geomatics Steering committee to coordinate LiDAR acquisition standards.

### **Risks:**

- Taking on too much responsibility and underestimating the amount of commitment to the workgroup.
- Inaccuracies in historical data will be incorporated into future derived hydrography data.
- Lack of standards for data development and data application of hydrography data. Bad data will translate into lost time and money.
- Lack of communication between government agencies at all levels and private sector partners pertaining to hydrography data.

### **Additional Comments:**

### **Date approved by the 3D Geomatics Steering Committee:**

Minnesota Geospatial Advisory Council  
Workgroup Work Plan

04/29/2026

Minnesota Geospatial Advisory Council  
**PLSS Point Data Standard**

**DRAFT** Version 1.0

DRAFT Version 1.0 approved by the Standards Committee on 5/4/2026.

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## About the GAC

The mission of the Minnesota Geospatial Advisory Council (GAC) is to act as a coordinating body for the Minnesota geospatial community. The GAC is authorized by legislation passed in 2009 and reauthorized in 2014 Minnesota Statutes (16E.30, subd. 8). It represents a cross-section of organizations that include city, county, regional, state, federal and tribal governments as well as education, business and nonprofit sectors.

As part of this mission, the GAC works with the Minnesota geospatial community to define and adopt standards needed by the community. GAC standards are developed and proposed by geospatial community subject matter experts. The GAC's Standards Committee administers a process to ensure community-wide public review and input for any proposed standards.

The GAC does not mandate or enforce standards. It offers the standards as a resource to the community. Organizations may choose to adopt the standards and require their use internally.

## Introduction

**The Public Land Survey System (PLSS)** established corners which form the framework for many geospatial datasets. In Minnesota, the responsibility for maintaining the PLSS is placed on county surveyors and their private sector counterparts. MN Statutes 381.12 provides the requirements for PLSS corner certification. There is no statute which governs standards for coordinate determination and maintenance of the related geospatial data.

## Purpose of this Standard

The purpose of this standard is to provide a single, commonly accepted set of attribute specifications (field name, type, length, and order) for transferring and aggregating Public Land Survey System (PLSS) point data in Minnesota. It may also be used for other cadastral point data, such as local control points. It is intended to be used when data is being transferred between organizations. Use of the standard will improve the ability to share data resources by reducing incompatibilities when acquiring, processing and disseminating PLSS point data.

**The points and associated data contained within this standard are to be a summarization of the most current corner certificate on file for the associated PLSS point.** They are not to be considered authoritative data for the location of the PLSS point. The monument in the ground and associated corner certificates are the authoritative data for the PLSS corner.

## Applicability

Data producers may have unique methods, definitions, and criteria for capture and storage of PLSS point data that satisfy their own business requirements. This standard seeks to establish attribute specifications for data exchange purposes. It does not attempt to define internal data capture or storage specifications for data producers, though some may find benefit in storing data in this format. Organizations within Minnesota are encouraged to adopt this standard for purposes of data exchange.

## Sources of this Standard

In response to a need to share data across jurisdictional boundaries, a precursor to this standard was developed and implemented by the Arrowhead Geospatial Collaborative in Northeastern Minnesota. This group included St. Louis County, Itasca County and the Superior National Forest.

This group also participated in a pilot project where the US Bureau of Land Management (BLM) integrated the compiled local data into a comprehensive dataset which can be found at this website (<https://gbp-blm-egis.hub.arcgis.com/>). This data will be used by the US Forest Service to update their land ownership layers, and in turn these layers should now better align with other jurisdictional land ownership layers.

The Parcel and Land Records Committee (PLRC) of the GAC is tasked with facilitating the GAC's "Updated & Aligned Boundary Data" priority. The committee concluded that standardized PLSS point data will facilitate this priority. In short, if PLSS Point Data is standardized and PLSS points are certified and located across the state then the data authorities can be confident in adjusting associated data to these points. The PLRC worked to modify the Arrowhead Standard to meet the needs of other regions of Minnesota.

The Cadastral Data Content Standard for the National Spatial Data Infrastructure (CadNSDI) was reviewed prior to the development of this standard. These standards were determined to be overburdensome in some areas and did not include some of the specific needs of Minnesota PLSS data maintainers. The CadNSDI standard was used as a basis for many fields, and the proposed standard was modified to meet the needs of Minnesota. A relationship between the CadNSDI and the proposed PLSS Point Standard is maintained via the BLM\_PNT\_ID field. This way, the local data can be harvested by the BLM and vertically integrated.

## Compliance Notes

Organizations in Minnesota are encouraged to adopt and comply with this standard for purposes of data exchange. A PLSS points dataset that fully complies with this standard will consist of geospatial points with all attribute fields specified in this standard. It will also comply with the inclusion and domain specifications of this standard. Some data producing organizations that choose to comply with this standard do not collect all data included in the standard. Such organizations may choose to work toward full compliance over time. It is understood that each data producing organization will make compliance decisions based on their own business needs.

## Inclusion

Inclusion is a term used to explain the requirement for a field to be populated in a dataset to comply with the standard. Three types of inclusion are possible: Mandatory, Conditional and Optional.

### Mandatory

Field must be populated for each record to be fully compliant with the standard. Null values are not allowed.

*Example: Local Point Identifier is a Mandatory field in this standard. If Point ID values are missing, the dataset does not comply with the standard.*

### Conditional

Field must be populated with a non-null value for each record that is applicable to the feature or for which a specified condition exists.

*Example: Corner Status is a conditional field in this standard. A point which is certified will have a status from the associated domain. A point which has not been certified will not have a known value in this field.*

### Optional

Field is not required to be populated.

## Mixed Case

Like other GAC standards, all field values in this standard will use a mixed case format. Some end users may want an all-caps format for a specific purpose. Data may be converted to all caps by end users if desired. It is more difficult to automatically convert all caps back to mixed case.

## Abbreviations

All field values in this standard must be spelled out unless specifically defined otherwise in the field description. This is done to remove ambiguity and better align with other existing standards.

## Domains

Several domain tables accompany this standard in a [spreadsheet available at this link](#). To comply with this standard, a cadastral points dataset must use the codes from specified domains but does not need to include the domain tables with the data. If a local value exists that is not included in a domain (e.g., a monument type), it may be submitted to the MN Geospatial Advisory Council, [Standards Committee](#) to be included in the domain. Domains will be updated on a periodic basis, as needed. The date of the most recent change to each domain table is included in the spreadsheet.

# Data Element Details

## Appendix A: MN GAC PLSS Point Data Standard Schema

Appendix A is a spreadsheet [available at this link](#) showing the schema for this standard. It includes all data elements in the standard, with field name, type, width and other important information about each data element.

**Note: The points and associated data contained within this standard are to be a summarization of the most current corner certificate on file for the associated PLSS point.**

### 1. General Elements

#### 1.1 Local Point Identifier

Database Name	LOC_PNT_ID		
Data Type	Text	Inclusion	Mandatory
Width	36	Domain	
Examples	1, 1000, 16987		
Description	This is to be a unique point identifier used by the local data owner. This ID will only be unique to the local data owner and not necessarily unique statewide.		

#### 1.2 BLM Designation

Database Name	BLM_DESIG		
Data Type	Text	Inclusion	Mandatory
Width	22	Domain	
Examples	MN040540N0190W0_240500		
Description	BLM designation of corner. This is the BLM's unique identifier for the point constructed of PLSS information. See example and also the standard <a href="#">CadNSDI content</a> .		

#### 1.3 Corner Category

Database Name	COR_CAT		
Data Type	Text	Inclusion	Mandatory
Width	30	Domain	CornerCat
Examples	PLSS Corner, Ground Control, Local Non PLSS Corner		
Description	Generalized category for corner type.		

#### 1.4 Corner Type

Database Name	COR_TYPE		
Data Type	Text	Inclusion	Mandatory
Width	60	Domain	CornerType
Examples	Section Corner, 1/4 Section Corner, Angle Point, Judicial Landmark		
Description	Describes the use for the corner.		

#### 1.5 Corner Status

Database Name	COR_STATUS		
Data Type	Text	Inclusion	Conditional
Width	20	Domain	CornerStatus
Examples	Existent, Obliterated, Lost, Undetermined		
Description	Status describes whether corner is existent, obliterated or lost using the technical definitions from the Manual of Surveying Instructions. If no corner certificate exists, this data element may be null.		

### 1.6 Corner Alias Name

Database Name	COR_ALIAS		
Data Type	Text	Inclusion	Mandatory
Width	40	Domain	
Examples	NW 02-56-17, MC#12-65-02		
Description	Name of the corner based on local conventions. Names will vary based on county. Data stewards are encouraged to standardize a local convention.		

### 1.7 Additional Alias Name

Database Name	ALIAS_ADD		
Data Type	Text	Inclusion	Optional
Width	22	Domain	
Examples	WCMC#12-65-02		
Description	Supplemental corner name based on local conventions. Names will vary based on county. Data stewards are encouraged to standardize a local convention.		

### 1.8 Corner Note

Database Name	COR_NOTE		
Data Type	Text	Inclusion	Optional
Width	255	Domain	
Examples	Witness Corner to Meander Corner (MC#42), When using this Corner, See "Report of Survey" Document no. 571758 for additional information.		
Description	Additional notes regarding corner position or record status.		

### 1.9 Surveyor Category

Database Name	SURV_CAT		
Data Type	Text	Inclusion	Optional
Width	30	Domain	SurveyorCategory
Examples	Private, Government, Other		
Description	Generalized category of surveyor's employer.		

### 1.10 Surveyor Identification

Database Name	SURV_ID		
Data Type	Text	Inclusion	Mandatory
Width	255	Domain	A <a href="#">list is available here</a> .
Examples	[Jill Johnson, 78256], [John Doe, 65789], [Bobby Plumb, 96874]		
Description	Surveyor name and Professional Land Surveyor Identification Number per the State of Minnesota. A <a href="#">list is available here</a> . This is the surveyor that made the final determination on the corner. If multiple signatories exist, add a note in the corner notes field.		

### 1.11 Surveyor Agency

Database Name	SURV_AGENCY		
Data Type	Text	Inclusion	Optional
Width	255	Domain	
Examples	Koochiching County Bolton & Menk, Inc., State of Minnesota DOT		
Description	Employer of Surveyor. Your data will be most useful if you develop a local domain so that a particular employer is spelled the same way every time.		

### 1.12 Field Book Name

Database Name	FB_NAME		
Data Type	Text	Inclusion	Optional
Width	20	Domain	
Examples	255, B-65, Corner ties 57-12		
Description	Survey Field Book name or number.		

### 1.13 Field Book Page Number

Database Name	FB_PAGE_NO		
Data Type	Text	Inclusion	Optional
Width	20	Domain	
Examples	15, 255A, 16-25		
Description	Survey Field Book page number.		

### 1.14 Project Name

Database Name	PROJ_NAME		
Data Type	Text	Inclusion	Optional
Width	255	Domain	
Examples	35698, Highway 252, Silver Creek Twp		
Description	Primary Project or Survey Number representing the work action which included the location of the point.		

### 1.15 Project Notes

Database Name	PROJ_NOTES		
Data Type	Text	Inclusion	Optional
Width	255	Domain	
Examples	Under contract with the State of Minnesota PLSS Monument Grant program.		
Description	Additional project information.		

### 1.16 Filing Date

Database Name	FILE_DATE		
Data Type	Date	Inclusion	Optional
Width		Domain	
Examples			
Description	Date Certificate was recorded in the County Recorder's office or filed in the County Surveyor's Office.		

## 2. Coordinate Elements

The purpose of this section is to capture the located coordinates of the corner. Most corner certificates in Minnesota list coordinates using local county coordinate systems, but some list latitude and longitude. The conditional inclusion shown for these data elements means that one or the other must be included to comply with this standard. Including both is optional.

### 2.1 Northing

Database Name	LOC_Y		
Data Type	Real	Inclusion	Conditional
Width	Double	Domain	
Examples	4658860.04		
Description	Located northing of the point in the local coordinate system specified in 2.5 Coordinate System.		

### 2.2 Easting

Database Name	LOC_X		
Data Type	Real	Inclusion	Conditional
Width	Double	Domain	
Examples	3788352.16		
Description	Located easting of the point in the local coordinate system specified in 2.5 Coordinate System.		

### 2.3 Elevation

Database Name	LOC_Z		
Data Type	Real	Inclusion	Optional
Width	Double	Domain	
Examples	1156.32		
Description	Orthometric height of the point using the same units as defined for the Northing and Easting.		

### 2.4 Coordinate Units

Database Name	LOC_UNITS		
Data Type	Text	Inclusion	Conditional
Width	50	Domain	HorizontalUnits
Examples	U.S. Survey Feet		
Description	Indicates units used in the local coordinate system specified in 2.5 Coordinate System		

### 2.5 Coordinate System

Database Name	LOC_COORD		
Data Type	Text	Inclusion	Conditional
Width	255	Domain	
Examples	Ramsey, St. Louis County Transverse Mercator Coordinate System 96		
Description	Local planar coordinate system zone designation per the MnDOT Map Projections and Parameters definitions. <a href="https://www.dot.state.mn.us/surveying/toolstech/mapproj.html">https://www.dot.state.mn.us/surveying/toolstech/mapproj.html</a>		

## 2.6 Observation Date

Database Name	OBS_DATE		
Data Type	Date	Inclusion	Mandatory
Width		Domain	
Examples			
Description	Date of the last verifiable and documented visit to the monument in which coordinates were determined.		

## 2.7 Collection Method

Database Name	METHOD		
Data Type	Text	Inclusion	Mandatory
Width	40	Domain	HorizontalMethod
Examples	Geodetic GPS Survey, Calculation, Unknown		
Description	The methodology or system used to determine the coordinate value.		

## 2.8 Longitude

Database Name	LONG_X		
Data Type	Text	Inclusion	Conditional
Width	15	Domain	
Examples	92 30 36.1549		
Description	Located longitude, format D M S.SSSS, do not include west designation.		

## 2.9 Latitude

Database Name	LAT_Y		
Data Type	Text	Inclusion	Conditional
Width	15	Domain	
Examples	47 32 45.7029		
Description	Located latitude, format D M S.SSSS, do not include north designation.		

## 2.10 Horizontal Datum

Database Name	H_DATUM		
Data Type	Text	Inclusion	Mandatory
Width	30	Domain	HorizontalDatum
Examples	NAD83, IGLD 1955		
Description	Horizontal Datum for the point as referenced to an establish ellipsoid model.		

## 2.11 Vertical Datum

Database Name	V_DATUM		
Data Type	Text	Inclusion	Optional
Width	30	Domain	VerticalGeopotentialDatum
Examples	NAVD88, Mean Low Water		
Description	Vertical Datum for the orthometric height.		

## 2.12 Horizontal Accuracy

Database Name	H_ACC		
Data Type	Text	Inclusion	Mandatory
Width	30	Domain	AccuracyLevel
Examples	5 Centimeter +-, 2-Meter +-, Unknown		
Description	Estimated horizontal accuracy of reported position.		

### 2.13 Vertical Accuracy

Database Name	V_ACC		
Data Type	Text	Inclusion	Optional
Width	30	Domain	AccuracyLevel
Examples	10 Centimeter +/-, Unknown		
Description	Estimated vertical accuracy of reported position.		

### 3. PLSS Elements

It is up to each organization to determine a local referencing convention for which township, range, section they want to use to denote a corner. Different counties may use different conventions. It is desirable to be consistent within a county.

Note: If a corner certificate uses a different referencing convention for the corner than is used by the county, it is expected that these PLSS elements will use the county convention.

#### 3.1 Township

Database Name	TWP		
Data Type	Integer	Inclusion	Optional
Width	Short	Domain	Township
Examples	56, 132		
Description	PLSS Township Number.		

#### 3.2 Township Direction

Database Name	TWP_DIR		
Data Type	Text	Inclusion	Optional
Width	10	Domain	TownshipDir
Examples	North, South		
Description	PLSS Township Direction.		

#### 3.3 Range

Database Name	RANGE		
Data Type	Integer	Inclusion	Optional
Width	Short	Domain	Range
Examples	9, 43		
Description	PLSS Range.		

#### 3.4 Meridian

Database Name	MRDN		
Data Type	Integer	Inclusion	Optional
Width	Short	Domain	PrincipalMeridian
Examples	4, 5		
Description	PLSS Meridian.		

#### 3.5 Meridian Direction

Database Name	MRDN_DIR		
Data Type	Integer	Inclusion	Optional
Width	Short	Domain	RangeDirection
Examples	1		
Description	Direction from PLSS Meridian.		

#### 3.6 Section

Database Name	SECTION		
Data Type	Integer	Inclusion	Optional
Width	Short	Domain	Section
Examples	6, 35		
Description	PLSS Section.		

## 4. Monument Elements

### 4.1 Monument Status

<b>Database Name</b>	MON_STATUS		
<b>Data Type</b>	Text	<b>Inclusion</b>	Optional
<b>Width</b>	20	<b>Domain</b>	MonumentStatus
<b>Examples</b>	Found, Set, Calculated		
<b>Description</b>	Indicates whether a monument was found, set, etc.		

### 4.2 Monument Photo

<b>Database Name</b>	MON_PHOTO		
<b>Data Type</b>	Text	<b>Inclusion</b>	Optional
<b>Width</b>	1000	<b>Domain</b>	
<b>Examples</b>			
<b>Description</b>	Link to photo of monument. Can be a hardcoded hyperlink or a reference to a file.		

### 4.3 Context Photo

<b>Database Name</b>	CNTX_PHOTO		
<b>Data Type</b>	Text	<b>Inclusion</b>	Optional
<b>Width</b>	1000	<b>Domain</b>	
<b>Examples</b>			
<b>Description</b>	Context photo. Can be a hardcoded hyperlink or a reference to a file.		

### 4.4 Monument Type

<b>Database Name</b>	MON_TYPE		
<b>Data Type</b>	Text	<b>Inclusion</b>	Mandatory
<b>Width</b>	50	<b>Domain</b>	MonumentType
<b>Examples</b>	Iron Pipe, Sandstone, Calculated		
<b>Description</b>	Physical description of the type of monument and material it is made of.		

### 4.5 Cap Type

<b>Database Name</b>	CAP_TYPE		
<b>Data Type</b>	Text	<b>Inclusion</b>	Optional
<b>Width</b>	30	<b>Domain</b>	MonumentCap
<b>Examples</b>	Aluminum, Plumber		
<b>Description</b>	Material/style of monument cap.		

### 4.6 Monument Diameter

<b>Database Name</b>	MON_DIAM		
<b>Data Type</b>	Real	<b>Inclusion</b>	Optional
<b>Width</b>	Double	<b>Domain</b>	MonumentDiameter
<b>Examples</b>	0.5, 4		
<b>Description</b>	Exterior diameter of monument in decimal inches. Note any inconsistencies or clarifications in the Monument Notes field.		

#### 4.7 Cap Diameter

<b>Database Name</b>	CAP_DIAM		
<b>Data Type</b>	Real	<b>Inclusion</b>	Optional
<b>Width</b>	Double	<b>Domain</b>	MonumentDiameter
<b>Examples</b>	0.5, 4		
<b>Description</b>	Exterior diameter of cap in decimal inches. Note any inconsistencies or clarifications in the Monument Notes field.		

#### 4.8 Monument Length

<b>Database Name</b>	MON_LENGTH		
<b>Data Type</b>	Real	<b>Inclusion</b>	Optional
<b>Width</b>	Double	<b>Domain</b>	MonumentLength
<b>Examples</b>	5.5, 8		
<b>Description</b>	Length of monument in decimal feet.		

#### 4.9 Monument Notes

<b>Database Name</b>	MON_NOTES		
<b>Data Type</b>	Text	<b>Inclusion</b>	Optional
<b>Width</b>	255	<b>Domain</b>	
<b>Examples</b>	Found 4"x4"x24" granite monument 3' below road surface with a 0.625" rebar on the south side of stone monument. Placed a cast iron monument at the road surface.		
<b>Description</b>	Note field for other pertinent info regarding the monument, e.g., depth, height, relation to centerline.		

## 5. Reference Elements

### 5.1 Reference File Name

<b>Database Name</b>	REF_FILE		
<b>Data Type</b>	Text	<b>Inclusion</b>	Optional
<b>Width</b>	255	<b>Domain</b>	
<b>Examples</b>	01253649, 6312C25.tif		
<b>Description</b>	The name of a scanned. filed or recorded reference document.		

### 5.2 Certificate URL

<b>Database Name</b>	REF_URL		
<b>Data Type</b>	Text	<b>Inclusion</b>	Optional
<b>Width</b>	1000	<b>Domain</b>	
<b>Examples</b>			
<b>Description</b>	Hyperlink to corner certificate document.		

### 5.3 Related Record

<b>Database Name</b>	REL_REC		
<b>Data Type</b>	Text	<b>Inclusion</b>	Optional
<b>Width</b>	100	<b>Domain</b>	RelatedRecord
<b>Examples</b>	Corner Certificate with known geodetic coordinates		
<b>Description</b>	Description of type of record that may be related to a point. Used to differentiate record quality.		

### 5.4 Data Authority

<b>Database Name</b>	DATA_AUTH		
<b>Data Type</b>	Text	<b>Inclusion</b>	Mandatory
<b>Width</b>	255	<b>Domain</b>	CountyName
<b>Examples</b>	Itasca, Douglas		
<b>Description</b>	Identification of primary county data authority.		

## **Appendix A: MN GAC PLSS Point Data Standard Schema**

Appendix A is a [spreadsheet available at this link](#) showing the schema for this standard. It includes all the data elements in the standard, with field name, type, width and other important information about each data element.

## **Appendix B: MN GAC Standards Domains**

Appendix B is a [spreadsheet available at this link](#) showing all the domain tables used in Minnesota Geospatial Advisory Council standards. It includes a tab showing when each domain table was last updated.

## **Appendix C: MN GAC Standard Lookup Tables**

Appendix C is a [spreadsheet available at this link](#) showing all the lookup tables used in Minnesota Geospatial Advisory Council standards. It includes a tab showing when each table was last updated.

# Public Review Comments and Responses for the Proposed Minnesota Geospatial Advisory Council PLSS Point Data Standard V0.4



The Standards Committee of the Minnesota Geospatial Advisory Council (GAC) held a 90-day public review period ending February 27, 2026, for proposed version 0.4 of the PLSS Point Data Standard. Below is a table showing the comments received and responses approved by the Standards Committee on 5/4/2026. Responses include changes to the standard and other actions.

## Preface:

GAC data standards seek to improve data sharing by reducing incompatibilities during data acquisition, processing and dissemination. These standards are not intended to define internal data capture or storage specifications for producers, nor does the GAC mandate their use. However, organizations within Minnesota are encouraged to adopt these standards to facilitate data exchange and aggregation.

Based on many comments, this standard will be edited to more clearly describe that the points and associated data contained within this standard are to be a **summarization of the most current corner certificate on file for the associated PLSS point.**

#	Comment	Submitter	Standards Committee Response
	<b>Section 1. General Elements</b>		
1	1.1 Local Point Identifier: Could this be Global ID?	Chelsey Bagent, Swift County Christy Christensen, McLeod County	Yes. Each organization can determine what to use as an identifier.
2	1.2 BLM Designation: For counties without this currently designated, can there be a tool or script created to assign these? If not, change to Optional	Mark Sloan, Clay County Chelsey Bagent, Swift County Jared Baloun, Jackson County Christy Christensen, McLeod County	The GAC Parcels and Land Records Committee is working on adoption guidelines for this standard and will make available a spreadsheet cross reference table between the BLM designation for corners and other popular corner descriptions.
3	1.2 BLM Designation: Mandatory field that we do not have in our data. High level of effort. Could be a lot of work depending on whether we can figure out a way to calc these values in batches.	Kevin Trappe, Beltrami County	See response above.
4	1.3 Corner Category: Mandatory field that we do not have in our data. Medium level of effort. Would take a bit of time, but we could populate this.	Kevin Trappe, Beltrami County	Thank you for this insight.

5	1.4 Corner Type: I noticed a small error in the CornerType domain list. The code and value for Ammended Monument should be spelled Amended Monument.	Brett Forbes, Sherburne County	This will be corrected. Good catch.
6	1.4 Corner Type: Domains differ from what is currently in our data.	Chelsey Bagent, Swift County Christy Christensen, McLeod County	Understood. Thank you for this insight.
7	1.4 Corner Type: Would need to convert our values to match the domain. Level of effort low.	Kevin Trappe, Beltrami County	Understood. Thank you for this insight.
8	1.5 Corner Status: How to keep current? Monuments can be obliterated soon after occupying. Our current Status data is unique to our needs to help track our remonumentation efforts and does not match the domains.	Chelsey Bagent, Swift County Christy Christensen, McLeod County	Edit standard to clarify that the data contained within the standard is to be a summarization of <b>the most current corner certificate</b> on file for the associated PLSS point. Within the context of this standard, the data would only be updated when a new corner certificate is created.
9	1.6 Corner Alias Name: Change to Optional. 3.1-3.6 are all elements of this and can be generated from those values if populated. For some counties, this may be covered with 1.1 or 1.2. Also, is 22 characters enough?	Mark Sloan, Clay County Chelsey Bagent, Swift County Jared Baloun, Jackson County	We feel it is important for every corner within this standard to have a logical, human understandable name based on local conventions. Data maintainers can choose what that is. For this reason, we feel this should be a mandatory field.  Increase field width to 40 characters.
10	1.6 Corner Alias Name: We should be able to use our Name or Index Number field for this	Kevin Trappe, Beltrami County	Thank you for this insight.
11	1.7 Additional Alias Name: We should be able to use our Name or Index Number field for this	Kevin Trappe, Beltrami County	Thank you for this insight.
12	1.9 Surveyor Category: Don't have but wouldn't be too hard to calc.	Kevin Trappe, Beltrami County	Thank you for this insight.
13	1.10 Surveyor Identification: Change to Optional. This information is available on recorded corner certificates and should be referenced accordingly. There is no current business need to populate this element, and implementation would require significant resources.	Mark Sloan, Clay County Jared Baloun, Jackson County	Because the standard is intended to be a summarization of the most current corner certificate on file for the associated PLSS point, we feel this data element should be mandatory in the standard. An organization that has no business need to capture this data may choose to not to comply with the standard for this data element.
14	1.10 Surveyor Identification: Change to Optional. No business need & would require heavy lift to populate. Document contains this detail and should be referenced.	Chelsey Bagent, Swift County Christy Christensen, McLeod County	See response above

15	1.10 Surveyor Identification: *We have name and number separated. Doesn't it make more sense to parse this out so there's one field for RLS No. and one field for Name?	Kevin Trappe, Beltrami County	Because these items are typically reported together, we feel there is value in having them combined in a shared or aggregated dataset. We understand that data maintainers would likely store them separately in their local database.
16	1.14 Project Name: How is the project name determined? Internally by GIS? By the Surveyor?	Chelsey Bagent, Swift County	This is up to each organization to determine. If a project name is listed on the corner certificate, that should be used.
17	1.16 Filing Date: What's the guidance if there are multiple documents?	Mark Sloan, Clay County Chelsey Bagent, Swift County Jared Baloun, Jackson County Christy Christensen, McLeod County	Use date for the most current corner certificate.
18	Can we add a field for the corner location in the Section. This could be Optional. We have the BLM designation, but you would need a chart to find which corner it is. I have added it to my data, and it makes it easier to sort data.	Pat Veraguth, Douglas and Grant Counties	Elements 1.6 and 1.7 can be used for this purpose.
<b>Section 2. Coordinate Elements</b>			
19	2.1 Northing and 2.2 Easting: Change to Optional. Some counties do not use their county coords, but rather the Lat/Long (2.8 & 2.9) so this data element is not documented on recorded corner certificates and therefore cannot be populated from existing recorded survey records. Also, some counties do not want to share this specific data publicly.	Mark Sloan, Clay County Jared Baloun, Jackson County	Change the coordinates section to require northing and easting OR latitude and longitude.  Local data sharing practices are outside the scope of this standard. It is understood that each organization will determine its own practices.
20	2.1 Northing and 2.2 Easting: Change to Optional. Some counties do not use their county coords, but rather the Lat/Long (2.8 & 2.9). Also, some counties do not want to share this specific data publicly.	Chelsey Bagent, Swift County Christy Christensen, McLeod County	See response above.
21	2.4 Coordinate Units: Mandatory field we do not have. Would not be hard to calc.	Kevin Trappe, Beltrami County	Thank you for this insight.
22	2.5 Coordinate System: Mandatory field we do not have. Would not be hard to calc.	Kevin Trappe, Beltrami County	Thank you for this insight.

23	2.6 Observation Date: Change to Optional. What's the guidance on multiple documents? Most recent? Would you accept YEAR or DATE?	Mark Sloan, Clay County Jared Baloun, Jackson County	Because the standard is intended to be a summarization of the most current corner certificate on file for the associated PLSS point, we feel this field should be mandatory.  The standard specifies this data element as a date field. If a data producer only has a year available and not month and day, a local convention could be created to denote that, like using the first day of the year.
24	2.6 Observation Date: Change to Optional. Change date to YEAR.	Chelsey Bagent, Swift County Christy Christensen, McLeod County	See response above.
25	2.6 Observation Date: Mandatory field we do not have. We only track the date of the last recorded cert, not the date someone visited the monument. Is this supposed to be updated any time we get a new COS that indicates that a surveyor found the monument? Also, it seems like this field doesn't belong in the "Coordinate Elements" section of the schema. Maybe should be Element # 1.17?	Kevin Trappe, Beltrami County	See response above.  Update description in standard to say: "Date of the last verifiable and documented visit to the monument <u>in which coordinates were determined.</u> "
26	2.7 Collection Method: Change to Optional. This information is available on recorded corner certificates and should be referenced accordingly. There is no current business need to populate this element, and implementation would require significant resources.	Mark Sloan, Clay County Jared Baloun, Jackson County	Because the standard is intended to be a summarization of the most current corner certificate on file for the associated PLSS point, we feel this data element should be mandatory in the standard. An organization that has no business need to capture this data may choose to not to comply with the standard for this data element.
27	2.7 Collection Method: Change to Optional. No business need & would require heavy lift to populate. The document contains this detail which should be referenced instead of GIS having to research every doc.	Chelsey Bagent, Swift County Christy Christensen, McLeod County	See response above.
28	2.7 Collection Method: Would need to convert our values to match the domain.	Kevin Trappe, Beltrami County	Understood. Thank you for this insight.
29	2.8 Longitude and 2.9 Latitude: Change to Optional. Some counties do not use Lat/Long, but rather the Northing & Easting (2.1 & 2.2) so this data element is not documented on recorded corner certificates and therefore cannot be populated from existing recorded survey records. Also, some counties do not want to share this specific data publicly.	Mark Sloan, Clay County Jared Baloun, Jackson County	Change the coordinates section to require northing and easting OR latitude and longitude.  Local data sharing practices are outside the scope of this standard. It is understood that each organization will determine its own practices.

30	2.8 Longitude and 2.9 Latitude: Change to Optional. Some counties do not use Lat/Long, but rather the Northing & Easting (2.1 & 2.2). Also, some counties do not want to share this specific data publicly.	Chelsey Bagent, Swift County Christy Christensen, McLeod County	See response above.
31	2.8 Longitude and 2.9 Latitude: Mandatory field we do not have. We would need to add and calc this field, which wouldn't be too hard.	Kevin Trappe, Beltrami County	Thank you for this insight.
32	2.10 Horizontal Datum: Mandatory field we do not have. If this is the same for all points, it wouldn't be hard to calc. If it varies, then it would be hard to calc.	Kevin Trappe, Beltrami County	It should be the same across the dataset
33	2.12 Horizontal Accuracy: Change to Optional. This data element is not documented on recorded corner certificates and therefore cannot be populated from existing recorded survey records.	Mark Sloan, Clay County Jared Baloun, Jackson County	Where this data is not recorded on a corner certificate, the value "Unknown" may be used.
34	2.12 Horizontal Accuracy: Change to Optional.	Chelsey Bagent, Swift County Christy Christensen, McLeod County	See response above.
35	2.12 Horizontal Accuracy: We would need to convert our values to match the domain.	Kevin Trappe, Beltrami County	Understood. Thank you for this insight.
<b>Section 3. PLSS Elements</b>			
36	3.1 Township, 3.2 township Direction, 3.3 Range and 3.6 Section: Guidance needed on how to handle border monuments.	Mark Sloan, Clay County Chelsey Bagent, Swift County Jared Baloun, Jackson County Christy Christensen, McLeod County	Update standard to include the following language at the beginning of the PLSS Elements section:  "It is up to each organization to determine a local referencing convention for which township, range, section they want to use to denote a corner. Different counties may use different conventions. It is desirable to be consistent within a county.  Note: If a corner certificate uses a different referencing convention for the corner than is used by the county, it is expected that these PLSS elements will use the county convention."
37	3.2 Township Direction: What if the map attribute does not match the certificate information? (ex: west of Sect 1 vs. east of Sect 2)	Chelsey Bagent, Swift County	See comment above.
<b>Section 4. Monument Elements</b>			

38	4.2 Monument Photo: Some counties use a related table utilizing the Global ID	Mark Sloan, Clay County Chelsey Bagent, Swift County Jared Baloun, Jackson County Christy Christensen, McLeod County	Understood. Thank you for this insight.
39	4.4 Monument Type and 4.5 Cap Type: Domains differ from what is currently in our data.	Chelsey Bagent, Swift County	Understood. Thank you for this insight.
40	4.4 Monument Type: Would need to convert our values to match the domain.	Kevin Trappe, Beltrami County	Understood. Thank you for this insight.
41	4.4 Monument Type: Domain should have option for None. Staff described scenarios where we have a cert but the surveyor didn't set a monument.	Kevin Trappe, Beltrami County	Use the value "Calculated" in this scenario.  Update standard to add "Calculated" to the list of examples.
42	4.5 Cap Type: Currently is captured in our Monument Type field (e.g. "Iron Pipe with Plug")		We intentionally broke them apart to make sure that there were not infinite monument types
43	Consider adding an optional field that indicates monument depth below the ground. This gives a surveyor an idea how far down to dig from the surface in the field to expose the monument.	Mark Sloan, Clay County Jared Baloun, Jackson County	This can be captured in 4.9 Monument Notes
44	Consider adding ground to monument depth as optional due to not all data being filled in. This gives surveyor an idea how far down to dig or utilize to calculate dig depth from surface in the field.	Chelsey Bagent, Swift County Christy Christensen, McLeod County	See response above.
45	Think about adding field for year monument was originally set (we have this and find it helpful - makes it easy to show a map of when all the original monuments were set, which is pretty interesting)	Kevin Trappe, Beltrami County	While this sounds like interesting local data to capture, we do not feel it is within the context of this standard.
<b>Section 5. Reference Elements</b>			
46	5.2 Certificate URL: What's the guidance if there are multiple documents?	Chelsey Bagent, Swift County	The intention of this standard is to capture a summary of the most current corner certificate. We understand that data producers may store data for multiple corner certificates for a corner, which would appear within the context of this standard as multiple records.
47	5.4 Data Authority: Mandatory field that we do not have. Would not be hard to add and calc.	Kevin Trappe, Beltrami County	Thank you for this insight.

48	I do not see anywhere for a Recorded Document Number. In Douglas County we do not record corner certs anymore. They are filed in our office, but it would be good for other counties without a full time County Surveyor.	Pat Veraguth, Douglas and Grant Counties	This is intended to go in element 5.1 Reference File Name. We updated the description of that element for clarity.
49	I would like to add an optional choice for a Statement of Evidence (SOE) URL. I have a SOE word file for every corner in the county. We add to these files every day. It is a good place to find current information on a corner.	Pat Veraguth, Douglas and Grant Counties	That could be added by a local data producer.
50	Think about adding field for recorded document number (we have this but it isn't populated for all records yet)	Kevin Trappe, Beltrami County	This is intended to go in element 5.1 Reference File Name. We updated the description of that element for clarity.
<b>General Comments</b>			
51	<p>Our primary recommendation is that only data elements explicitly documented on a recorded corner certificate be designated as mandatory within the standard. The recorded corner certificate serves as the official and authoritative record for PLSS corner information. Requiring mandatory inclusion of elements not contained within the recorded corner certificate would necessitate interpretation, supplemental research, or independent data creation beyond the documented survey record. In our view, mandatory fields should align strictly with information formally recorded and preserved in the official corner certificate.</p> <p>For data elements not included on recorded corner certificates, we recommend classification as Optional unless a clear statutory or operational business requirement justifies mandatory inclusion. Expanding mandatory requirements beyond the official record would impose significant resource demands for data backfill, validation, and long-term maintenance without a corresponding business need.</p>	Mark Sloan, Clay County	<p>Agreed. Note the domains for some fields include the value "Unknown" to accommodate situations where a corner certificate does not include the information. We have added these values to the examples in the standard to make that more apparent.</p> <p>We want to stress that GAC standards are tools intended to help the MN geospatial community support data transfer and aggregation, including describing the specifications of such shared or aggregated datasets. There are no compliance requirements associated with any GAC standards. It is understood that local data producers will choose if and how they want to capture, store and export any data described in GAC standards based on their own business needs. We added a sentence to the compliance language in the standard to help clarify this.</p>

<p><b>52</b></p>	<p>I recommend that only data elements that are explicitly documented on a recorded corner certificate be identified as required fields within the standard. The recorded corner certificate constitutes the official and authoritative record for PLSS corner information. Requiring mandatory inclusion of data elements that are not contained within the recorded corner certificate would necessitate interpretation, supplemental research, or independent data creation beyond the documented survey record. Required fields should be limited to information that is formally recorded and preserved on the corner certificate.</p> <p>For data elements not included on recorded corner certificates, I recommend classification as Optional unless a clear statutory or operational business need supports mandatory inclusion. Expanding required data elements beyond the official record would result in substantial resource impacts related to historical data population, verification, and ongoing maintenance without a corresponding business justification.</p>	<p>Jared Baloun, Jackson County</p>	<p>See response above.</p>
<p><b>53</b></p>	<p>I have been looking forward to adopting and promoting a standard for PLSS points. Having 100% of McLeod County corners completed, I wanted to be that “first county” to adopt the standard. Unfortunately, after reviewing the proposed standard, I will not be able to be that first county, and I doubt I will be able to adopt this anytime soon. The primary reason is that it does not meet our business needs.</p> <p>Of the 48 proposed components, there are only 7 of them needing to be modified from mandatory to optional.</p> <p>I did reach out to local surveyors who agreed with me. I then discussed this with a few counties who also agree and are hopeful the 7 will be changed to optional.</p>	<p>Christy Christensen, McLeod County</p>	<p>See response above.</p>

<p><b>54</b></p>	<p>Cass County GIS and Surveyor’s office have taken the time to review the proposed MN PLSS Point Data Standards. Similar to what other counties have expressed, Cass wants to adopt the standard but after looking at it, feel they won’t be able to do so due to the mandatory requirements of a few fields.</p> <p>It is my understanding that Clay County was kind enough to aggregate the comments and provide them in a separate email, please accept this as confirmation that our agency is in agreement with their submission.</p> <p>Of the 48 proposed components, we are only asking that 7 of them be modified from mandatory to optional.</p>	<p>Jessica Watts, Cass County</p>	<p>See response above.</p>
	<p>Several counties provided tables showing their current PLSS point databases for reference. These were useful references but are not included here.</p>		

*Comments and responses approved at GAC Standards Committee Meeting May 4, 2026*

# Imagery Committee Charter

## Justification

Aerial imagery is a critical foundational dataset supporting planning, natural resource management, emergency response, infrastructure development, and many other public services in Minnesota. Currently, imagery acquisition is largely decentralized, with state agencies, counties, and regional partnerships acquiring imagery independently. Creating an Imagery Committee will allow the Geospatial Advisory Council to guide development and stewardship of a coordinated statewide imagery strategy, beginning with a statewide needs assessment and leading to recommendations for sustainable acquisition, governance, and funding models.

## Mission Statement

The Imagery Committee exists to recommend and guide the development and stewardship of a coordinated statewide imagery program for Minnesota. The Committee will advise the Geospatial Advisory Council (GAC), the Minnesota Geospatial Information Officer (GIO), and the Minnesota Geospatial Information Office (MnGeo) on strategies, standards, partnerships, and governance needed to support a sustainable statewide imagery program.

The Committee will work with public and private stakeholders to identify statewide imagery needs, evaluate current imagery acquisition practices, and develop recommendations that support coordinated, cost-effective imagery acquisition and access across Minnesota.

The committee will primarily focus on leaf-off and leaf-on aerial imagery, while also considering related imagery products and infrastructure necessary to support statewide imagery access and distribution.

## Objectives

The Imagery Committee will support the GAC, GIO, and MnGeo by developing recommendations related to the creation and stewardship of a statewide imagery program. Activities may include:

- Assess current aerial imagery acquisition practices across Minnesota state agencies, counties, regional planning organizations, and other partners.
- Identify statewide business needs and use cases for aerial imagery and derived products.
- Assist MnGeo in developing a Request for Proposals (RFP) for a statewide imagery needs assessment.
- Review and provide input on results of the statewide imagery needs assessment.
- Evaluate opportunities for coordinated statewide or regional imagery acquisition programs.
- Recommend standards and specifications for imagery acquisition, processing, and distribution.
- Consider infrastructure needs related to imagery hosting, services, and data access.

- Identify and evaluate potential governance and funding models for a sustainable statewide imagery program.
- Consider existing imagery coordination efforts such as regional collaborative programs and state agency initiatives.
- Evaluate opportunities to coordinate imagery with other statewide geospatial datasets where appropriate.

Based on the findings of the needs assessment, the Committee may develop recommendations including:

- A Statewide Imagery Strategy
- Recommended imagery acquisition cycles and specifications
- Recommended governance and coordination structure
- Potential funding and cost-sharing models
- Guidance on imagery hosting, access, and distribution

The Committee will update the GAC quarterly and submit formal recommendations as it achieves its objectives and completes key deliverables.

## Resource Requirements and Timing

The majority of the resources required for the operation of the Committee will consist of the volunteer time. Members will participate in meetings, research, outreach, and development of recommendations related to statewide imagery coordination.

MnGeo staff may provide administrative and technical support to the Committee as available.

By acceptance of this charter, the GAC authorizes the Committee to work with the GIO and MnGeo to develop recommendations regarding the creation and stewardship of a statewide imagery program.

Committee recommendations will be reported at regular GAC meetings.

The Committee will meet monthly or as needed.

## Participants and Roles and Responsibilities

### Chair/Co-Chair:

GAC Member

### Co-Chair/Vice Chair:

GAC Member or Subject Matter Expert

The Chair and Vice Chair will coordinate committee activities, organize meetings, and communicate recommendations to the GAC.

## Membership

The Committee Chair and Vice Chair shall ensure the committee includes a diverse group of subject matter experts representing the geospatial community across Minnesota.

Membership should include individuals with expertise in areas such as:

- Aerial imagery acquisition
- Photogrammetry and remote sensing
- GIS data management
- Imagery processing and analysis
- Data hosting and geospatial services
- Program development and governance

Members should represent a broad geographic distribution across Minnesota and reflect the diversity of imagery users and producers throughout the state.

Participation from state agencies, counties, municipalities, tribal governments, academia, regional planning organizations, and private sector partners is encouraged.

Members will be expected to attend committee meetings and participate in discussions and committee activities. For consistency, the recommended commitment for committee members is two years.

Members of the Committee shall serve without compensation.

## Conflict of Interest

Committee members must avoid participating in recommendations in which they have a direct or indirect financial interest. Members shall disclose potential conflicts related to imagery acquisition contracts, vendor relationships, or other financial interests.

Members may be required to complete conflict-of-interest documentation when participating in recommendations that could influence procurement or funding decisions.

## Stakeholders

Stakeholders in the Imagery Committee include, but are not limited to, the following:

- Minnesota counties

- Municipal governments
- Regional Planning Organizations
- State agencies
- Tribal governments
- Federal agencies operating in Minnesota
- Geospatial professionals and organizations
- Surveying, photogrammetry, and remote sensing professionals
- Private imagery and geospatial data vendors
- Academic and research institutions
- Utilities and infrastructure organizations
- Members of the general public who utilize geospatial data

The Committee will consider existing imagery acquisition programs including municipal, county, regional, and state agency programs when developing recommendations.

## **Prepared by**

Minnesota Geospatial Advisory Council

## **Date Approved by the Geospatial Advisory Council**

Anticipated May 20, 2026

# Imagery Committee – Work Plan

*GAC Term FY2026/27: July 2025 - June 2027*

## Committee Chair(s) and Vice Chair(s):

- **Co-Chair:** Tanya Mayer, GAC member
- **Co-Chair:** Heather Albrecht, GAC member

## GAC Priorities Owned by Committee

*GAC priority projects and initiatives that the committee is to be responsible for during the upcoming term – these may be subject to change based on results of the term’s priorities survey.*

- Statewide Imagery Program
  - A long-term effort dedicated to optimizing the acquisition inspection documentation distribution and archiving of statewide imagery.
- Priority Owners: Christy Christensen, Jennifer Murphy
- Executive Sponsor: Alison Slaats, MnGeo

## Purpose

The Imagery Committee will recommend and guide the development and stewardship of a coordinated statewide imagery program for Minnesota by assessing current imagery practices, identifying statewide needs, and recommending strategies for sustainable imagery acquisition and access.

## Year 1 Planned Activities and Deliverables

### 1. Develop Statewide Imagery Needs Assessment RFP

Assist MnGeo in preparing a Request for Proposals (RFP) to conduct a statewide imagery needs assessment.

Tasks may include:

- Identify key stakeholder groups to be included in the assessment.
- Develop questions and evaluation criteria for the assessment.
- Review of the Geospatial Maturity Assessment from NSGIC, other NSGIC resources, and other State imagery programs.
- Recommend scope elements including:
  - Business use cases
  - Preferred acquisition cycles, including single year vs. multi-year structure

- Resolution and other specification requirements
- Licensing vs. Ownership analysis
- Seasonal considerations
- Buy-up and enhancement considerations
- Delivery formats and hosting needs
- Governance and funding models. (e.g. NG911 funding)

**Deliverable:**

- Recommendations and supporting materials for a Statewide Imagery Needs Assessment RFP.

## **2. Support Needs Assessment Process**

Following release of the RFP and completion of the needs assessment, the committee will:

- Review findings from the assessment.
- Evaluate statewide imagery priorities and business needs.
- Identify opportunities for coordinated acquisition and shared infrastructure.

**Deliverable:**

- Committee recommendations based on assessment results.

## **Year 2 Planned Activities and Deliverables**

### **3. Develop Statewide Imagery Program Recommendations**

Using the results of the needs assessment, develop recommendations for a coordinated statewide imagery program.

Recommendations may include:

- Imagery acquisition strategies
- Suggested imagery cycles (leaf-off and leaf-on), including single year vs. multi-year structure
- Technical standards and specifications
- Data access and hosting approaches
- Governance structure
- Funding and cost-sharing models

## 4. Imagery Stewardship

Review and add the Image Service Sustainability Committee work in to the Imagery Committee work plan.

### Deliverable:

- Statewide Imagery Strategy and Program Recommendations

## Roles and Responsibilities

Chair(s) and Vice-chair(s): call meetings, prepare agenda with input from the committee, submit reports to the GAC, and maintain content on the GAC Imagery Committee web site and Committee SharePoint site.

Committee Members: participation expectations as outlined in the Committee Charter

## Existing Resources

- Existing resources include committee member and subject matter expert time and talent and MnGeo staff time.
- Geospatial Maturity Assessment from NSGIC
- Imagery Service Sustainability Committee documentation

## Committee and Subgroup Needs

- The committee has no outstanding needs at this time.

## Dependencies and Interrelationships

- Image Sustainability workgroup of the GAC Archiving Committee

## Risks

- Many partner needs that may not be met by a minimum viable product.
- Timeline
- Funding models may be complex

## Additional Comments

None.

**Date Approved by the Geospatial Advisory Council:** Anticipated May 20, 2026