

Geospatial Advisory Council: Standards Committee Meeting

July 18, 2018, 1 pm – 4 pm

Metro County Government Center

2099 University Avenue, St. Paul, Minnesota 55104

Call In: 1-888-742-5095

Code: 380-454-1584



Standards Committee Meeting Minutes – July 18, 2018

Prepared and presented by Vice Chair Andra Mathews and Chair Geoff Maas

1 - Call to Order

Chair Maas called the meeting to order at 1:01 pm

2 - Welcome, Introductions, and Standards Committee Roll Call

Chair Maas welcomed the group, thanked them for their participation and had everyone introduce themselves.

Attendees included:

Victor Barnett, Ramsey County

Marcia Broman, Metropolitan Emergency Services Board

Mark Kotz, Metropolitan Council

Mike Koutnik, ESRI

Norm Anderson, MnGeo

Jim Krumrie, MnGeo

David Sajevic, MnGeo

Chad Riley, Carver County

Peter Morey, MnDOT

Alan Laumeyer, Goodhue County

Andra Mathews, Minnesota Center for Environmental Advocacy, Vice Chair

Geoff Maas, MetroGIS, Chair

3 - Approval of Meeting Agenda

Chair Maas asked for a motion to approve the minutes

Moved by Kotz; Second by Mathews, no discussion, unanimous approval, motion carries.

4 - Approve minutes from February 26, 2018 Standards Committee Meeting

Chair Maas asked for a motion to approve the minutes from February 26, 2018

Moved by Mathews, Second by Kotz, no discussion, unanimous approval, motion carries.

5 - Adoption of existing State Standards as Geospatial Advisory Council Standards

The State of Minnesota and GAC-precursor the Governor's Council on Geographic Information (GCGI) has already approved and adopted several geospatial standards on topics ranging from positional accuracy to identifier codes. Mark Kotz of the Metropolitan Council advocated for the support of the Standards Committee to support the approval by the GAC of the existing body of state standards that were adopted by the Governors' Council on Geographic Information. This would also help to serve consolidating all existing standards into one place for ease of use of the professional community.

Mathews: Do we need to vet the existing standards to meet our current standards process?

Kotz: No, we can ask them to be re-approved without reviewing them for procedural requirements of our current standards;

Barnett: Does it matter to the state agencies to have standards approved by state government or not?

Kotz: In the past it has, but that is out of the scope in relationship to the role of the GAC;

Koutnik: Could perhaps the GAC reach out to those organizations to be recognized as the standards approval body of the state

Kotz: We tend to call them "State Standards" but that can be confusing, we might want to rename them to something more specific

Group discussion regarding using the term 'Minnesota' and 'state'; yielded the following potential solutions upon their approval by the GAC:

Minnesota Geospatial Community Standards
GAC-Approved Standard (or some way of prefacing the standard with 'GAC')

Kota: Standards developed or adopted by GAC, would then be hosted on the GAC site (all standards would then be in one place)

Kotz advanced a motion to:

"Take the existing ten standards that have already been approved by the GCGI and ask the GAC to approve those, upon approval by the GAC, have standard documents prepared for each of these in the new Standards Committee standards document format and posted to the appropriate place on the GAC website with the other approved standards."

Second, Krumrie; no additional, discussion, unanimous approval, motion carries.

Chair Maas will work with Kotz to develop a formal submittal of



TASK 1: Prepare packet of GCGI Standards for GAC Approval at its meeting 9/5/2018
(Kotz/Maas)

6 - Standards Revision Procedure and Documentation Review

Maas advanced that at present, there is no formally documented or committee-approved method for the *modification* of an adopted geospatial standard. Effective governance and maintenance of geospatial standards would require a clear, repeatable and equitable model for potential revisions. As part of the agenda packet, Maas supplied a very early version of a draft for a Operational Procedures and Guidelines Document for the Standards Committee for managing petitions to change a standard, method for changing a standard, nomenclature for standards during their life cycle of development review and approval and a numbering system for tracking minor and major changes to a standard.

Maas pointed out to the group that Chapter 1 of the document is in draft form and can be ignored at this time. Chapter 2 provided details on the nomenclature and definitions of Draft Standard, Proposed Standard, GAC-Approved Standard, GAC-Revised Standard, what constituted a minor revision or major revision and schema for numbering standards as changes occur. Approved minor revisions would entail an increase of one decimal place (v. 0.2, v. 0.3, v. 0.4, etc.), while major revisions would entail an increase of one full number (v. 2.0, v. 3.0, v. 4.0)

Mathews: Does a certain excessive number of minor alterations ever results in a major change requirement?

Maas: That is a great question and will need to be explored as it occurs, I suspect a number of small changes occurring at once could impact the utility and status of the standard and could be considered, on aggregate, a major revision if all were accepted.

Barnett: Minor changes could have significant effects as well. An example would be if the If the data content requirement affects the use of the standard, such as reducing the field width, where values could become truncated.

Maas: It would stand that any change that prevents data submission under previous version requirements would be considered a major change, this would include removing a value for example the guide would evolve as we encounter situations and can codify our decisions to add value and utility to the standard.

Sajevic: Is there a timeframe for minor revisions to keep it from being an on-going process?

Maas: Since 2016, the Standards Committee has typically met three times per year. For newly incoming minor revisions, we could use an electronic meeting approach and then handle major revisions as we are meeting. I suspect we will evolve a process as our knowledge of what is needed increases and petitions for changes begin coming in. In light of that, I have offered a procedure by which the community can petition for a change to a standard, perhaps a petition template would be a helpful resource as well.



TASK 2: Prepare a Standards Change Petition Template (Maas)



TASK 3: Complete a first draft of the Operational Guidelines and Procedures (Maas)

7 - Revisit of the purpose and content of the definitions of 'Mandatory', 'Conditional' and 'Optional' as they refer to elements within standards

In each standard that is developed, each element is placed in an Inclusion category for compliance with the standard. The inclusion categories generally in use are Mandatory, Conditional and Optional. In some standards, additional variations of Conditional are used, such as Conditional – If Applicable and Conditional – If Available. The word 'compliance' refers only to **compliance with the standard**. There is no legal requirement for an agency to submit data in a standard, to comply with, or even use the standards approved and advanced by the Standards Committee or Geospatial Advisory Council. The goal is, however, for agencies to *voluntarily* participate in the creation, review and usage of these standards as a way of working more efficiently with one another. An agency may still provide data that is not fully compliant with the standard (*e.g. they are providing the data as best as they have it, even if some fields are missing*) that is still useful and relevant for geospatial uses. Data that is out of compliance with the standard can still be used.

Definitions currently in use for these categories are as follows:

A **Mandatory** field must be populated for each record to be *compliant with the standard*. In a Mandatory field null values would not be allowed (e.g. null fields in a mandatory field would not pass validation if being collected by a regional or state agency for an aggregated dataset). If a value is assigned the Mandatory classification and its values are missing, the data would not comply with the standard.

A **Conditional - If Applicable** must be populated with a non-null value for each record *that is applicable to the feature*. For example, when using parcel data, the Lot, Block and Plat values must be populated for all platted properties; however, they will be null for non-platted properties. Another example using address point data: An address on "West Seventh Street" has a Pre- Directional of "West". All addresses on this street are required to have the Pre-Directional field populated, but not the Post Directional field. The Pre-Directional field applies to this feature.

A **Conditional - If Available** field must be populated if the data exists in the data provider's database. Example: The Effective Date indicates the earliest date the address was known to exist. It must be populated for new addresses and where the data exist to populate it for existing addresses. However, many cities and counties do not have data indicating when older addresses first came into existence. In such cases, the field is not required to be populated.

An **Optional Field** is not required to be populated, however, populating that data provides additional value to the dataset.

Maas: My adding this piece to the agenda is for us as a Committee to agree on the definitions that are out there and in use. As the Chair, I field a large number of questions each week on what these categories mean, and I want us to ensure that we are clear.

Kotz: Mandatory is one of those words that tends to trip the community up, essentially "*if you choose to comply, it is mandatory to populate the attribute*" but it is not mandatory to comply with the standard.

Barnett: One of the more confusing aspects is that definitions such as Mandatory in a 9-1-1 context have a different meaning than how the GAC and this Committee are using them.

Koutnik: Let's get back to what the purpose of a standard is, I think we can agree it is to create comprehensive regional and statewide datasets across sectors and boundaries and to facilitate sharing data. An example would be the mandatory inclusion of the Parcel ID number for datasets in use for real estate purposes, that piece of information is essential (mandatory) for all the other data that links to it. We should make the definitions in use as clear as possible, even if it means writing a few extra paragraphs or pages to clarify what expectations are in place for data in a given standard.

Kotz: A further example of this would be that MetroGIS has chosen to apply the validation schema and uses these classes to flag the content for compliance in the collection of data from metro counties and creating regional datasets.

Maas: Also, we have two 'flavors' of Conditional presently in use (*Conditional If Available* and *Conditional If Applicable*), I'd like us to ensure our uses and definitions of these are sound and track with what we are working to accomplish.

Broman: The difference between applicable and available appears to simply be in their existence or use. These standards encourage attributing values if they exist, so conditional if applicable is still a form of 'mandatory'. Also, it would appear that an optional categorization doesn't affect standard compliance

Kotz: Correct the Optional field explicitly states that you do not need this at all to be in compliance with the standard. Getting back to the earlier point, Conditional – If Available and Optional are different – in some cases the data does not exist or is too difficult to compile, perhaps we should consider adding another designation of expanding the definition of an existing designation to accommodate this.

Mathews: Could we call it "Existential"? (in that either it exists or not)

Barnett: Or using the term: "Mandatory if Available" in place of Conditional, that would be clearer.



TASK 4: Research how other standards (NENA, etc.) use these terms and assess those definitions for their applicability to the work of the GAC.

(Barnett/Broman/Kotz/Maas)



TASK 5: Prepare a more detailed FAQ document that can be used to communicate the meaning of Mandatory, Conditional and Options for standards for the review and approval of the Standards Committee and for use in outreach. (Kotz/Maas)

8 - Requested Schema and Domain changes to the Address Point Data Standard v. 1.1 (p. 15)

Jim Krumrie, on behalf of MnGeo and the 911 Standards Workgroup has submitted a series of requested revisions for the Address Point Data Standard v. 1.1 (APDS v. 1.1). The set of proposed changes advanced represents a *major revision* to the APDS v. 1.1. The standard was originally adopted on December 6, 2017 as Version 1.0 and modified (*minor revision*) by the Geospatial Advisory Council on March 28, 2018 to v. 1.1

Element 2.16 – ZIP code

It was requested to change the inclusion of Element 2.16 (ZIP Code) from Mandatory to Conditional as many counties in Greater Minnesota lack this data.

Kotz: We should make sure we don't change this if it defeats the purpose of the use of the data; It might be a worthwhile business case to establish the missing data and populate that information (i.e., mailable addresses), if the data does not apply to the use of the data (non-mailable address), then an exception should be offered.

Krumrie: Many outstate counties do not have the resources to compile the information;

Kotz: Having some things mandatory and encouraging all bodies using the standard to comply with it might help to justify a use case to resolve the issue of missing data

Krumrie: Sometimes to address this mandatory (missing) data, we can flag them to quantify and notate them through validation;

Phasing through a gradual improvement of the data by identifying the areas of need

Koutnik: How does this apply to the data existing, being available but is missing from the database?

Krumrie: It is scattered but substantial for locations outside of cities, mostly townships.

Barnett: If resource limitations are driving the request to drop the mandatory need, then no, it should remain Mandatory, and as Mark says address the gap, the data is needed.

Kotz: This standard assumes the addressing authority is determining the information; the process for creating addresses and assigning ZIP Codes is not our role, however, we could try to understand how they are to be formally assigned in rural areas.



TASK 6: More information on the status and availability of authoritative ZIP Code information in Greater Minnesota (no person assigned to the task)

Element 3.1 – CTU_Name and Element 3.2 CTU ID Text

There was a proposal to replace the domains in use in the APDS v. 1.1 domains with those in use in the MRCS v. 0.5, to foster alignment between the standards.

The domains for the MRCS v. 0.5 were poured over and corrected and reflect a 'more improved' version than those in the adopted APDS v. 1.1 standard.

Group discussion on how to handle the Unorganized Territory attribute.

Kotz: Cities and township are *legally defined* entities, other areas such as Unorganized Territories are given names and codes by interests like the Census Bureau and then carved them up along Census block lines and given names to meet their specific business need. These naming conventions often don't align with local or state uses; they are not locally recognized as official places. Our example in the metro, the Unorganized Territory of Fort Snelling area is a bit different, in that, it is known and acknowledged widely by that name locally as well. We could potentially remove them all or add in an 'unorganized territory' value as a valid placeholder indicator

Morey: This is a challenge for MnDOT as well, we are working with Census personnel to get the GNIS values to match;

Solution agreed to by the group: Retain the value 'Unorganized Territory' as a valid entry until more information about definitive names is available.



TASK 7: More information on the current status and resolution of the Unorganized Territory value is needed (no person assigned to the task)

Element 3.4 – County Code

Replace the domain of the APDS v. 1.1 with those of Elements 4.11-4.12 of the MRCS v. 0.5 so they are identical.

Morey: Perhaps instead of using OOJ, we should simply include the names of neighboring counties if they are the appropriate value. State code included with county name at border counties in outstate neighbors

Kotz: OOJ should be excluded from the APDS v. 1.1 as a valid value.

Barnett: Address points are not centerlines, they are not the same data, they have different needs and the domains do not need to be the same.

Krumrie: They are intended to be closely comparable, and should be as closely aligned as possible;

Group Discussion: Need for a set of standardized domains with range of acceptable values and indicators for what is acceptable in which standard and in what context.



TASK 8: Creation of a set of GAC-approved domains that can be used by the standards. (Kotz/Krumrie)

Element 4.8 – Unique w/o Subaddress from Schema

There was a proposal to remove Element 4.8 from the standard advanced by the 911 Standards Work Group.

Barnett: Let me provide some examples of use that defend keeping it in the standard: multiple address points within a park, routing to the park has multiple address points in the same location – gives public agencies control over which to select for the dispatch destination.



TASK 9: Rework the description to clarify the business case for Element 4.8 Unique w/o Subaddress, with poignant examples (e.g. multiple parcels with same address)
(Barnett/Kotz)



TASK 10: Add case example of the use of Element 4.8 Unique w/o Subaddress to the forthcoming Addressing Resource Guide document.
(Maas)

Elements 6.2 – ESN; Element 6.3 – PSAP; Element 6.4 – MSAG Community

There are concerns with how these variables align between the APDS v. 1.1 and the MRCS v. 0.5 domains;

Maas: As a starting point, probably need to determine who authoritatively assigns the boundaries and specific names and numbers for these variables. In the Metro, the MESB handles this as part of its duties in working with the counties. My understanding is that is unclear in Greater Minnesota

Broman: Correct, we maintain that data for our nine-county service area. In Greater Minnesota, would they address this one domain attribute value at a time as it arises? Do they go to the PSAP or to a local authority to get the formal values?

Kotz: The updates will need to be updated periodically so we make note of the version of the standard to reflect the domain change;

Replace LUT – USPS Default City Look Up Table in the APDS v.1.1 with Elements 4.19 and 4.20 Postal Communities domain from MRCS v. 0.5

Krumrie: Our idea is to treat them both as domains, we don't need the Look Up Table.

Kotz: One of our key rationales for maintaining a Look Up Table is that some cities do not use the same names for mailings as the Postal Service (USPS). The purpose of maintaining the Look Up Table is to allow that field to be populated where there are duplicate names from USPS and the local government; a look up table is different from a domain; if you have one related attribute you can run a process to put the ZIP code in default mode then you're done. Its an associated file, not necessarily a geodatabase relational table schema, it is an ancillary resource that adds value and functionality. They can be provided or 'branded' differently but still remain available with the standard. (Other notes: adjust spelling of 'LeRoy')



TASK 11: Development of re-usable domains and look up tables to be ancillary references to the standard.

(Krumrie/Kotz)

9 – Review and discussion of the stakeholder comments received on the proposed Minnesota Road Centerline Standard (v. 0.5) from the 60-day public review session (April 9, 2018 – June 8, 2018)

Element 1.1 – OBJECT ID

This is to be removed; it is ESRI-specific and was carried over from the MRCC.

Element 1.2 – ROUTE ID

This is simply a concatenation of other fields, recommended for removal.

Morey: We can generate it at the time of aggregation (we presume the local counties will know what their value for Element 2.1 Route System is), this can be changed to Optional based on the need to aggregate it. It is a necessary field within the work of MnDOT.

Krumrie: It is generally easier to maintain the constituent fields rather than to maintain a concatenated field.

Barnett: I see it as useful to keep this in the standard

Maas: In the context of this standard, we seem to agree on keeping it, expanding the field to 18 character and letting the data user and producer communities know they are no responsible for populating it, that this is part of the MnDOT Work Flow.



TASK 12a: Develop outreach materials for better communication what this is to the statewide community.

(Maas, Morey, et. al.)

Element 1.3 – Feature Unique ID

Change 'centerline' to 'segment' in the description

Element 2.1 – Route System

CODE 09 = VALUE 'Unorganized Territory Road'

Morey: We [MnDOT] would be looking to the local regencies to tell us what these values are in most cases.

Barnett: There are some of these values that don't come from the local, an example would be MnDOT designation of an MSAS (Municipal State Aid Street)

Mathews: But that doesn't determine *ownership*, it just determines maintenance (funding);

Kotz: The field definition for this attribute should be expanded to clarify the necessary field attribute definition and figure out its inclusion requirement.

Maas: Additionally, there was some concern over the term 'trunk' being removed in the comments we received.

Morey: That's ok, it's just another term for 'highway', it can be absent.

Krumrie: Instead of removing those fields, leave them in and leave out the concatenated field.



TASK 12b: Develop outreach materials for better communication what this is to the statewide community.

(Maas, Morey, et. al.)

Element 2.2 – Route Direction

Increasing and decreasing is on all routes is needed by MNDOT
Provide some resource for understanding MNDOT route assignments



TASK 12c: Develop outreach materials for better communication what this is to the statewide community.

(Maas, Morey, et. al.)

Element 2.3 – Route Direction

This is redundant, remove from standard.

REMOVED FROM STANDARD

Elements 2.4 Local to State and Element 2.5 – Primary Status

Need to have an Inclusion category assigned to these attributes;
MNDOT assigns the value; locals may be assigning attributes to this;
Provide some resource for understanding MNDOT route assignments



TASK 12d: Develop outreach materials for better communication what this is to the statewide community.

(Maas, Morey, et. al.)

Element 3.9 – Street Full Name

redundant with constituent elements

REMOVED FROM STANDARD

Elements 3.11, 3.13, 3.15 – Alt 1/Alt2/Alt3 Legitimate MSAG Value

Group consensus: Use Left, Right, Both, Neither instead of single letter values
Expand the field widths appropriately to accommodate the spelled-out values

Element 4.1, 4.2, 4.3, 4.4 – Left From/To; Right From/To; Address

Remove the word 'actual' and replace with a supplemental explanation to describe that addresses could be either theoretical or actual;



TASK 13:

**Develop materials which clearly explain assigned and theoretical
Develop materials which clearly explain right and left designations and clarity
describing the direction of digitizing)**

(Take from Addressing Resource Guide when ready)

Element 4.5, 4.6 Left/Right ZIP Code

Maintain as 'Mandatory'

Modify description to say: The ZIP Code on the left (right) of the road centerline;



TASK 14

Develop materials which clearly explain ZIP Code origin, application and use;

(Take from Addressing Resource Guide when ready)

Element 4.7, 4.8 Left/Right CTU Code

Maintain as 'Mandatory'

DeGraff (without a space) in value domains;

The data entry should be based on the real-world most practical split where needed in cases of boundary error potential;



TASK 15

**Develop Best Practice recommendations for line splits and managing CTU
codes/names in split conditions**

(Barnett, Maas)

Element 4.9, 4.10 Left/Right CTU Name

DeGraff (without a space) in value domains;

Apply definition change suggested by Kotz

Element 4.11, 4.12 Left/Right County Code

Maintain as 'Mandatory'

Hyphenate "two-character" in description

Elements 4.17, 4.18 – Left/Right Parity

Broman: According to NENA, this is a Mandatory field.

Convert to 'Optional' for MRCS;

Use spelled out versions: 'Odd, Even, Both, Zero' instead of single-letter codes (O, E, B, Z)

Adjust field widths to accommodate spelled

Move Elements 4.17/4.18 closer to Elements 4.1-4.4 in the standard as organized



TASK 16

Develop Best Practice recommendations for explaining Parity;

(Barnett, Maas)

Elements 4.19, 4.20 – Left/Right Postal Community Name

Align/organize the Postal Community Name in MRCS in same order as is found in the APDS;

Elements 5.1, 5.2, Elevation From/Elevation To

This attribute is vital for routing and should stay Mandatory

Maas: At this point, we are coming up on 4:00 p.m. and we are out of time for our work today. We will need to work through the remainder of the comments at a later meeting. We have a large number of tasks to attend to prior to our next meeting which will hopefully provide clarity. Thank you all very much for your contributions and your time.

10 – Other Business (*no other business was advanced*)

11 – Next Meeting (*no next meeting date or place was assigned; Chair Maas will work with the group to get another date on the calendar once many of the key tasks have been satisfactorily addressed*)

12 – Adjournment

Chair Maas adjourned the meeting at 4:00 p.m.