Geographic Information Coordinating Council

MANAGEMENT AND OPERATIONS COMMITTEE

April 1, 2019
1:00 to 3:00 PM
Center for Geographic Information and Analysis
301 North Wilmington Street, 7th Floor
Room 770A

MINUTES

1. Chair Alex Rankin called the meeting to order, welcoming Scott Lokken, Hope Morgan, John Farley, Dan Madding, Jessica Middlebrooks, Tim Johnson, Jeff Brown and on the phone, Paul Badr and Jason Clodfelter.

2. Minutes of the December 17, 2018 meeting of the Management and Operations Committee were approved for adoption as submitted.

3. Access to Geospatial Data Representing Utility Infrastructure

   - Local government findings
     Jason Clodfelter summarized the findings of the Local Government Committee's survey of local governments. He has a full report from the 63 survey responses for more detail as needed. He did a presentation at the NC GIS Conference and referred to some of those slides. In brief, the majority of the respondents in local governments have geospatial representations of their public water, sewer, and/or electric power facilities. Most of those operations do not make the geospatial data available to the public. In some cases, data are not shared with other government entities within their own jurisdictions. The majority do not have a written policy to explain or justify their data distribution practices. Mr. Clodfelter explained that public works operations tend to point to homeland security concerns as reasons for not supplying the information. Other local government operations need infrastructure data to support economic development, planning, property tax administration, and to assist local real estate agents. He agreed with Mr. Rankin that data sharing practices are across the board from freely available to no access. Mr. Clodfelter noted comments from survey respondents indicated that some would welcome guidance for data sharing practices. He added that data access constraints may not be decided by municipal or county managers. Constraints may be set by utility managers or data managers individually.

   - Private utilities
     Hope Morgan has had conversations with utility companies (privately operated "public utilities" regulated by the State of North Carolina). The immediate answer is typically "no" to data sharing. She added that written data distribution policies are not evident. However, in emergency situations, utilities take a "need to know" approach to sharing geospatial data with the US Department of Homeland Security. She understands that many utilities are willing to have a conversation about when data are needed for

emergency management during an event. She will continue to reach out to utility companies to gather more information. Non-disclosure agreements may be required for some data sharing. Ms. Morgan suggested to Mr. Clodfelter that ElectriCities (a cooperative organization for local government power providers) would be a good contact for consultation on data sharing practices.

- Research on statutes, policies, and opinions
  Jessica Middlebrooks, DIT Counsel to the GICC, shared findings from her research using North Carolina statutes, federal documents, and publications of the UNC School of Government. Concerning state statutes, the Public Records Law includes a qualified exception for geographic information systems (G.S. 132-10) that allows local governments to charge a fee (reasonable cost) for a copy of data and to request agreement in writing not to resell the data. Case law interprets "reasonable cost" that is not "actual cost." This point has not gone to trial to clarify the terms.

  Another relevant statute is G.S. 132-1.7. on "sensitive public security information." The statute says that public records "shall not include information containing specific details of public security plans and arrangements or the detailed plans and drawings of public buildings and infrastructure facilities or plans…" She explained that "infrastructure facilities" has been interpreted broadly to include airports, roads and highways, parking decks, dams, communication lines, etc.

  This raised a question about publication of street centerlines as a geospatial dataset for wide public use and benefit. If a dataset is interpreted as not a public record based on G.S. 132-1.7., is publication permissible? Other laws layer on top. Interpretations may vary based on the specific data. The UNC School of Government has explained that detailed plans and drawings may be shared under agreements or contracts. This question about roads will be revisited.

  Ms. Middlebrooks pointed to another statute, G.S. 143B-1420 that defines a role for CGIA to include that CGIA "shall manage and distribute digital geographic information about North Carolina maintained by numerous State and local government agencies. It shall operate a statewide data clearinghouse and provide Internet access to State geographic information." Geographic information is needed to fulfill that role. This becomes important if a local government does not share data with CGIA.

  Ms. Morgan raised the question of data received by CGIA that comes with security concerns; what are implications for sharing that data with the public or restricting access to selected users only? Should data sources identify sensitive information before transfer or should that be a function of CGIA? Combinations of datasets representing transportation, energy generation and transmission, and other infrastructure could be used by someone intending harm to identify vulnerabilities. The category of Personally Identifiable Information (PII) is restricted in all instances of public data management and access.

  Ms. Middlebrooks also reviewed Federal laws and directives. Public Law 107-296 of

November 25, 2002 (The Homeland Security Act, 116 STAT. 2146) requires the Department of Homeland Security to "develop a comprehensive national plan for securing the key resources and critical infrastructure of the United States…" and lists categories.

Homeland Security Presidential Directive 7, December 17, 2003, "establishes a national policy for Federal departments and agencies to identify and prioritize United States critical infrastructure and key resources and to protect them from terrorist attacks." The Directives uses the term "State or local governments" twelve times in the eight-page document. The definition section cross-references the Homeland Security Act in defining "State" and "local government." This means the Directive applies to States and county and municipal governments including regional councils of government.

The Homeland Security Act defines "critical infrastructure information" as "information not customarily in the public domain and related to the security of critical infrastructure or protected systems…" (212 (3). "Key resources" is another general term that has related categories. In general, the Homeland Security Act applies to North Carolina's state and local governments.

Taking the state and federal laws and directives together, a specific formula is not available to guide data sharing of infrastructure data. Ms. Middlebrooks pointed out the value of making data requests to local governments as specific as practical, and to ask for specific reasons for not sharing requested data regarding the CGIA role. Data sharing has mutual benefits for state and local governments.

She added that the UNC School of Government is a go-to legal resource for many local governments. Also, North Carolina does not have significant case law on this topic. There are other laws related to underground infrastructure and the NC 811 process before digging.

In discussion, the committee observed that definitions of "critical infrastructure information" and "key resources" are relevant to the GICC concerns. The available definitions are general and have been interpreted differently by local government data providers as noted in the results of the Local Government Committee survey.

Publication of road centerlines is the state practice and makes sense for countless public and private applications. There would be much value to economic developers, engineers, and planners to have access to data that represent the distribution of public water and sewer services with respect to locations of interest. Visible structures, e.g., fire hydrants and manhole-covers, indicate where underground infrastructure is in place; what does withholding geospatial information achieve if someone intending harm can see related above-ground structures? Are sources of water, e.g., reservoirs, more vulnerable to harm, but visible in imagery and maps?

Where is the balance? What are best practices for data sharing and for constraints to data access? In the absence of case law, consideration of what is a public record and what

should be published depends on judgment on a case-by-case basis. Another factor is the accuracy of geospatial data that may affect willingness to distribute copies that may be used in unintended ways.

Discussion about alternative ways to represent infrastructure, e.g., a service extent as an area instead of line locations is another topic to consider. Also, utility location information from NC 811 is available on a case-by-case basis, not as statewide data that would have more value to transportation planning.

The committee discussed additional resources to consider for more information, including NC Water Warn (a group of utilities helping each other in emergency response and recovery operations for water and wastewater) and the UNC School of Government. Concerning NC Water Warn, there are regions with individual contacts. Hope Morgan will follow up.

Mr. Clodfelter urged follow-up with the School of Government. Ms. Middlebrooks will summarize what the School has published regarding infrastructure facilities. She will reach out to sources there for related information and consider if inviting someone from the School for a discussion with the committee would be beneficial.

Mr. Rankin thanked Ms. Middlebrooks for her report and time this afternoon.

In a related development, Mr. Farley reported that NCDOT is consulting a vendor for an initiative to put together utility data and locations. The vision is to provide state and local governments a common database and system that would inform all users when and where a government is digging, enabling other governments to coordinate digging in those locations. The vision ties in economic development. The managers were apparently unaware of NC OneMap as a portal for statewide data. Mr. Farley told NCDOT managers that the GICC is analyzing the current situation, and he will update the M&O Committee as he learns more.

The Committee noted that geospatial data discoverable through NC OneMap includes only old datasets for public water and/or sewer data. The NC Rural Economic Development Center developed data twenty years ago for water and sewer facilities in rural counties. Service area polygons were mapped statewide by the Center in 2003-4.

4. Working Group for PLS/GIS

Mr. Johnson reported that a panel discussion at the NC GIS Conference was informative with good questions and comments from the people in attendance. He is currently preparing a background section in the use case summary to give the full Working Group for PLS and GIS more context for the use case descriptions and discussions. He plans to send the final use case document to the full working group, then schedule a conference call to hear comments.

Concerning other professions and boards related to GIS practice, Mr. Johnson prepared a list of contacts related to architecture, landscape architects, geologists, foresters, and wildlife

resources. The working group may wish to engage those groups of professionals at an opportune time. This could start with a letter or email with background information and a request to discuss concerns, if any, about GIS related to their respective practices.

The working group needs to recommend what information to put online and what information needs to be revised. The next step is to have a conference call with the full working group in April to finalize the use case document and make recommendations to the GICC.

5. Working Group for Enhanced Emergency Response

Hope Morgan reported that the group will have its first meeting in person on April 8. Consistent with the draft charter for the working group, reviewed by the M&O Committee, each member will describe how geospatial data are applied in emergency response and specific data needs during an event. A better understanding of who is doing what work in what areas will be valuable as a starting point. A secondary piece will be agreements enabling state agencies to assist in emergencies. She requested approval of the charter.

> Decision: The Management & Operations approved the Charter for the Working Group for Enhanced Emergency Response

Regarding state employees assisting, with agency agreements in place, NC Emergency Management (NCEM) can put out a request for a certain number of people with certain skills and agency employees can be assigned to locations in need. Subject to process requirements, employees will be put in contact with local government contacts in need, and NCEM can reimburse costs to agencies via emergency funding through the Federal Emergency Management Agency (FEMA). Also, counties need to know that help is available. A process for North Carolina Local Government Information Systems (NCLGISA) has been in place and applied as well. Requests come through NCEM. A process to organize assistance on the requester side is essential.

6. NC OneMap 2.0 Standards and Best Practices for Supplying Data and Services

David Giordano joined the meeting to describe a document prepared by CGIA's NC OneMap team in consultation with the State Government GIS Users Committee. His presentation of the document is for the committee's information. He also intends for committee members to be aware that CGIA will reach out to state agency data managers to go over the practices.

This approach is in preparation for the migration of NC OneMap from Geoportal software to Esri's Open Data platform. The goal is to make statewide geospatial data in Open Data/ArcGIS Online easy to discover and access by guiding state agency data hosts to achieve consistency in web service formats and descriptions of data.

Items in the document include recommendations for tagging datasets, indicating authoritative data, minimum requirements for web map services, and metadata. The document also describes how items managed by an agency data custodian can be shared with NC OneMap in Open Data. Mr. Giordano added that the NC OneMap team plans to consult with each agency

to help make the data consumer experience consistent no matter where the data and services reside.

He explained that "authoritative" in the Esri ArcGIS Online sense as it applies to NC OneMap means that the data has validity as a reliable statewide dataset. For example, North Carolina has Framework datasets that are tracked by the Statewide Mapping Advisory Committee. State agencies, in collaboration, recognize authoritative representations of statewide roads, parcels, elevation, etc. Likewise, local governments publish authoritative datasets for their respective jurisdictions. Data publishers in ArcGIS Online may mark "authoritative" as they wish, which could mislead consumers. Mr. Giordano explained that NC OneMap is a curated collection of data, not a wide-ranging search engine. Data custodians will be engaged to discuss the best use of the "authoritative" indicator. Data producers may mark data as authoritative improperly, but the indicator has potential to be invaluable for selecting available data in emergency situations.

A working dataset, e.g., a selection of soil types, may be the best available data for a business purpose even though it is not the full authoritative source data (e.g., US Department of Agriculture soils). The subset may be indicated as authoritative for that selection and purpose.

Consumers will be able to see the authoritative indicator in the data properties. This applies to ArcGIS Online even if the data reside in ArcGIS Server.

Regarding projections, 2022 Reference Frame conversion tools are not yet available. A placeholder in the document would be useful.

7. Council Meeting Follow-up from GICC Meeting on February 13

Committee members discussed the presentation on the Advancing Transportation through Linkages, Automation and Screening (ATLAS) project and enterprise data. John Farley explained that NC DOT is going live with the ATLAS system May 29 as an internal resource. Some data have restricted access, but many source datasets will be accessible via NCID login. Mr. Farley agreed to supply a list of the 136 new datasets and which will be accessible.

Discussion of the 2022 Reference Frame introduction recognized the depth of the information presented. Hope Morgan and Scott Lokken suggested a future topic on the 2022 Reference Frame should be what it means to data producers and consumers. User scenarios and impacts will be of interest. Algorithms and transformers will mitigate impacts to some extent. Jason Clodfelter is assisting Gary Thompson by getting information from the Local Government Committee.

8. NC GIS Conference Polling Results / GICC Priorities

Jeff Brown shared polling results captured during the conference. Questions posed at the beginning of the conference found that 22 percent of the 441 respondents were the one and only GIS staff in their department. Note: this is by attendee, not by jurisdiction. Other

departments in a jurisdiction may have GIS staff outside of the GIS department. However other jurisdictions may have one GIS person who has other responsibilities as well. The question "how long have you been in your current position?" was answered by 442 participants. The responses were:

- 52 percent were in their positions less than five years
- 25 percent were in their positions 15 or more years
- 23 percent were in their positions 5 to 15 years.

In a question about contractors, 41 percent of the respondents were in a department that used one or more contractors for GIS technical assistance. Regarding data distribution, 64 percent of respondents were in an organization that provides geospatial datasets through online public access, 25 percent were not, and 11 percent were "not yet." The percentages reflect the experience in the NC Parcels program according to Mr. Brown.

On the last day of the conference, attendees were asked to rank five GICC priorities for 2019. 85 people responded (1 is the highest rank and 5 the lowest). The mean rank for each priority was within 0.2 of 3.0, the middle. The differences were not enough to suggest a clear emphasis among the five priorities.

9. Quick Updates

a. Census Geospatial Data

Mr. Brown summarized the following information supplied by Bob Coats who was not available today.

John Bridgers and Bob Coats have been conducting non-response follow-up for the 2019 Boundary and Annexation Survey. There were about 90 non-responding jurisdictions in the state.

The 2020 New Construction Program begins outreach on April 1. This is the final address outreach to local governments before the 2020 Census.

The 2020 Census relies on an accurate address list to connect questionnaires with every household in the nation. Local governments were invited to participate in the Local Update of Census Addresses (LUCA) program to verify the Census Bureau address list for their area, but new addresses have been added since this local address review. To add these new residential and group quarters addresses, the US Census Bureau will conduct the New Construction Program.

Similar to LUCA, the state, counties, and incorporated places can participate in New Construction. Also, the Highest Elected Official (HEO) has to commit the government to the program. The US Census Bureau will send invitation emails to all HEOs that have an email addresses in the Census Bureau database beginning the week of April 1st. If there is no email address in the database, the Census Bureau will mail the invitation to the HEO. Governments are encouraged to register via the online registration form. The New Construction Program registration deadline is June 14, 2019.

The Working Group for Municipal Boundaries is assessing the level of effort to produce an improved baseline statewide dataset for municipal boundaries. From a baseline, maintenance could be achieved from a consistent data flow from local governments to the State for annexation digital boundaries and documents. Proposed methods to improve digital boundaries in annexation plats would enhance the quality of municipal boundaries. The working group is testing methods before recommending process changes, using guidance and promotion to achieve improvements before recommending changes in rules or statutes, and seeking ways to utilize available geospatial resources before considering funding needs to support statewide municipal boundaries. The working group is also determining the most useful data fields for municipal boundaries.

Ms. Morgan offered to share examples of boundary discrepancies found in the Floodplain Mapping Program. Mr. Johnson added that the Office of State Budget and Management asked Bob Coats about the status of the working group, with interest in recommendations that may affect budgets or legislation. April 11 is the next meeting of the working group.

b. NC Parcels

Mr. Brown reported that the spring update is in progress now through June. CGIA has applied for a contract extension with the Carbon Project Inc., for operation and maintenance of the cloud application. Cost share is in place for the third year of a three-year agreement with NCDOT, and annual cost share is anticipated from NC Department of Agriculture & Consumer Services. In the absence of an enterprise solution for multiple statewide datasets, an extension is the recommended approach again this year.

The Working Group for Seamless Parcels met in March to review standard fields for statewide parcels. With statistics from Mr. Madding, the group identified fields that are mostly unpopulated by counties and could be excluded in published versions of NC Parcels and/or NC OneMap applications using parcels. More research is planned on how to make the data more convenient for consumers. NC Parcels web services were hit 740,000 times last month; it is the most popular vector data served by NC OneMap.

c. Statewide Orthoimagery

Tim Johnson reported that imagery for 2019 Southern Piedmont and Mountains has been acquired, with one re-flight planned to replace some images that had snow cover in high elevations. With the re-flight expected this week, the collection will be complete. On March 29, CGIA submitted a proposal for the next four-year cycle to the NC 911 Board, starting on the coast in 2020. The proposal includes an optional line item for color infrared imagery as an additional product for each phase. Ms. Morgan plans to prepare descriptions of how color infrared has value for emergency management. CGIA will make a case for the value of color infrared for a small additional cost, but it will be up to the NC 911 Board to approve that option.

Regarding elevation data, Hope Morgan added that the quality control of Phase 5 of 5 is complete and the LiDAR data have been delivered to funding partner USGS for final review. The data release is expected this month.

10. Committee Status Reports

a. Local Government Committee

Jason Clodfelter reported that the committee met on March 13. Most of the discussion was on topics covered in this meeting. Feedback was supplied to Gary Thompson on the 2022 Reference Frame issue. Mr. Clodfelter, Alice Wilson and Sallie Vaughn will participate in the new Working Group for Enhanced Emergency Response. LGC is also contributing to the TAC's document on smart cities.

b. State Government GIS Users Committee

John Farley reported that the focus has been on the Enterprise License Agreement (ELA) with Esri. He and Matthew McLamb of CGIA are scheduling interviews with individual state agencies to assess software needs in the interest of right-sizing the ELA. Meetings with Esri and work on cost allocation among state agencies are forthcoming. He is targeting the end of April to have the information in place.

c. Federal Interagency Committee

Scott Lokken reported that FIC met during the NC GIS Conference and will hold a meeting in Asheville on May16 for various technical presentations. There were several federal presenters at the conference and at Coastal GeoTools conference earlier in February. The 3DEP work group is meeting in Charleston in April where Mr. Lokken will present on the 2022 Reference Frame. The USGS 3D Nation report is in progress. Geoid 18 is now available from National Geodetic Survey (NGS) in beta format. Impacts in North Carolina are minimal. The Geospatial Summit by NGS will take place May 6-7, available by webinar. In another development, NGS is considering replacing US Survey Feet with International Survey Feet. North Carolina uses US Survey Feet. South Carolina and three other states use International Survey Feet.

d. Statewide Mapping Advisory Committee

Since the last Council meeting, SMAC has made progress on a range of tasks. Most have been covered already today—the 2022 Reference Frame, hydrography, municipal boundaries and LiDAR. Other efforts include the Working Group for Land Cover, chaired by Kenneth Taylor. The group found a few more survey respondents and is updating its report on business needs for land cover data. Also, the Metadata Committee led by Sarah Wray has a new workbook to guide editing of metadata. Guilford County is applying the methods to create valid metadata for county datasets. The next SMAC meeting will take place on April 17.

e. Technical Advisory Committee

Dan Madding gave an update on the Smart Cities document. A conference call was productive, and sections are being filled out by volunteers, including Greg Cox and Tobin Bradley.

11. Council Meeting Agenda for May 8

The committee discussed topics for the next GICC meeting. A presentation by Pokey Harris on GIS and Next Generation 911 was proposed for February but was postponed. Tim Johnson will check on her availability. Hope Morgan suggested USGS and the 3DEP program as it pertains to North Carolina, perhaps for the August GICC meeting. Mr. Johnson will consult with Silvia Terziotti of USGS. A progress report on public access to infrastructure data in brief could include local government utilities, private utilities by Mr. Clodfelter and Ms. Morgan, respectively, findings by Jessica Middlebrooks, and next steps. CGIA will work on the agenda in the next few weeks. The location will be Room 245 in the Department of Insurance building. Ms. Morgan offered the large meeting room in the Division of Emergency Management for the August GICC meeting. A short tour of the Emergency Operations Center could be part of the afternoon.

12. Future Meeting Dates: June 24, October 14, December 16

The meeting adjourned at 3:05 PM.