North Carolina
Geographic Information Coordinating Council

Minutes

November 4, 2020

PRESENT

Alex Rankin (Chair), Steve Averett, Paul Badr, David Baker, Amy Barron, Katie Bordeaux Kathryn Clifton, Bob Coats, John Correllus, Greg Cox, Stan Duncan, Dianne Enright, Sarah Wray (for John Farley), Kristian Forslin, Dean Grantham, Joanne Halls, Pokey Harris, Jason Hedley, Matt Helms, Sarah Koonts, Scott Lokken, Rich Elkins (for Elaine Marshall), Hope Morgan, Chris Nida, Allan Sandoval, Brooks Tate, Gary Thompson, Alice Wilson, and Ron York

Staff: Tim Johnson, Colleen Kiley, Center for Geographic Information and Analysis (CGIA)

ABSENT

John Cox, Seth Dearmin, Wesley Beddard, John Gillis, Chloe Gossage, and Tony Simpson

PROCEEDINGS

The Council held its third meeting via Webex due to Governor Cooper's COVID-19 stay at home order.

Welcome and Chair Announcements

Alex Rankin, Council Chair, called the meeting to order and welcomed Council members and visitors on the Webex call. Council staff conducted a roll call to ensure that a quorum was present; a quorum was confirmed with a simple majority of voting members of the Council in attendance. Mr. Rankin outlined some instructions for participating in this virtual meeting of the Council.

Mr. Rankin made several announcements about changes in Council membership since the last meeting. Governor Cooper made his appointments to the Council on October 5th. Katie Bordeaux of the Eastern Carolina Council of Governments representing Regional Organizations, Hope Morgan, representing the general public, and Christian Vose, designee for the Commissioner of Agriculture representing the North Carolina Department of Agriculture were introduced as new Council Members. The following members were reappointed for a three year term: Alex Rankin, Steve Averett from the City of Greensboro representing Municipal Government, Paul Bader with GPI, Katheryn Clifton with Davidson County representing County Government, Jason Hedley with Stewart Engineering, Scott Lokken with the National Geodetic Survey representing the Federal

Government, and Seth Dearman serving as designee for Josh Stein, North Carolina's Attorney General, representing an at large State Agency.

The GICC Annual Report for Fiscal Year 2018-2019 has been accepted by the North Carolina Department of Information Technology (NC DIT) and has been forwarded to Governor Cooper and the Joint Legislative Commission on Governmental Operations. Once the report has been approved, it will be posted to the GICC website. The CGIA support staff are already working on the GICC Annual Report for Fiscal Year 2019-2020 and expects to submit it to the Department for review by January 1st, 2021.

CGIA has been working with Duke Energy to integrate their easement data into NC OneMap, and they are 99% complete, hoping to complete the task by the end of this meeting.

GIS Day is coming up on November 18th and will be virtual. Geography Awareness Week is from November 15th to the 21st.

Approval of Minutes

The minutes of the August 12, 2020 meeting were approved for adoption with no changes.

Presentations

Community Mapping System and Environmental Justice Tool – Renee Kramer, North Carolina Department of Environmental Quality

Renee Kramer, the Department of Environmental Quality (DEQ) Title VI and Environmental Justice Coordinator, presented on the North Carolina Community Mapping System and Environmental Justice Tool, outlining the definition of Environmental Justice and the data behind the Community Mapping System. The federal Environmental Protection Agency (EPA) defines Environmental Justice as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environment laws, regulations, and policies." North Carolina looks at race and ethnicity, age and sex, disability, poverty, household income, and limited English proficiency as criteria when considering Environmental Justice using US Census data as a primary source. The Environmental Justice Tool compares local areas to broader areas in the state comparing resources and demographics.

Environmental justice has different meanings to different groups. For some, the first thing they will think of is distributional justice or equal distribution of environmental benefits and burdens. Others define environmental justice as procedural justice, or equal protection from rulemaking and enforcement. Finally, others may define environmental justice as process justice, or equal opportunities for meaningful engagement in decisions. DEQ focuses on trying to get tools to different communities to encourage participation in the process in ways that ensure that all have access. An example would be translations for those who do not speak English as a first language.

The Environmental Justice Tool began with academic focus groups, expanding to calls with other states, and moving into conversations with the EPA. The tool was then brought to public community meetings and small community organizations within North Carolina to ensure diverse stakeholder engagement.

The website for the NC Community Mapping System is https://deq.nc.gov/outreach-education/environmental-justice/deq-north-carolina-community-mapping-system. The website contains resources including national and state mapping systems outside North Carolina for comparison. There is also a feedback survey for the website as well as help documents. From the website, the user can access the mapping tool. Ms. Kramer demonstrated how to use the mapping tool and displayed a selection of layers and visualizations from the tool. The mapping tool has DEQ permit layers, environmental layers such as flood zones and protected areas, and socio-demographic data from the US Census. Links from the map take the user to the Environmental Justice Tool where users are presented with a dashboard style view that includes a comparison of selected area demographics to state demographics, community, facility, and sensitive receptor maps with descriptions, and a health dashboard displaying county health statistics.

Ms. Kramer discussed future needs for the tool. Not all public requests from the planning phase of the project were feasible, and some of the layers within the tool are not adequate in certain areas. American Community Survey (ACS) has high margin of errors, so the data is not accurate enough in areas where the ACS has not collected enough data. The introduction of differential privacy into the 2020 Census data is a concern, as it has the potential to decrease the accuracy of the data presented in the Environmental Justice Tool. In discussions with Tribal leaders, the accuracy of Tribal boundaries as they relate to historical boundaries was raised as an area for additional research and improvement. Finally, the Environmental Justice and Inclusion Subcommittee of the Andrea Harris Task Force formed as part of Governor Cooper's Executive Order 143 has a short term goal of conducting an inventory of aging infrastructure and buildings, including schools and senior centers that have exposure to radon, asbestos, mold, etc., and the task force may have needs for additional data.

A question and answer period followed the presentation. Alice Wilson asked whether local governments would be able to update the tool with local data. Mr. Grantham, who assisted with the project development, answered that more local government data would be integrated in the future, and that local governments were encouraged to use the tool now. Paul Badr recommended the infrared imagery as an improved source of imagery. Dianne Enright asked if the ACS data was single year or multiyear data. Ms. Kramer said the data was provided through the EPA and was a 5-year estimate. Bob Coats asked whether differential privacy being applied to the ACS starting in 2025 would affect their choice of data in the future. He asked if increased margin of errors would cause DEQ to move away from the ACS data. Ms. Kramer answered that the differential privacy issue is an ongoing concern that is unknown at this point. Mr. Grantham added that the tool is flexible and can accommodate other sources of data, but that DEQ prefers to use a source of data that will not require in house maintenance. Tim Johnson stated that the need for data relating to aging infrastructure is an opportunity for the Council to support DEQ's work through improving the availability of infrastructure data layers. Joanne Halls asked whether the tool specified that the health data displayed was county level data, while the demographic data is block group data. Ms. Kramer answered that there is a description of the data resolution differences in the map description. Paul Badr asked whether an analysis of COVID-19 deaths as they relate to the data are presented in the tool. Jason Hedley followed up asking whether data on infection rates were being reviewed with the tool data. Ms. Kramer answered that COVID-19 data had not been incorporated into the tool because the tool was developed prior to COVID-19, but that others were expressing interest in the topic.

Technical Advisory Committee Infrastructure Working Group Update – Dean Grantham, TAC Chair

Mr. Rankin introduced Dean Grantham, Technical Advisory Committee (TAC) Chair, and stated that the infrastructure assessment is a priority of the Council. The objective of the TAC Infrastructure Working Group is to produce an infrastructure best practices document outlining what data can be shared easily (and how) and what data cannot be shared. To meet that goal, Mr. Grantham gathered a working group consisting of 4 municipalities and 4 counties ranging from rural to developing urban localities. The working group is comprised of additional GICC members to represent private utilities and land developers, state agencies, and local governments. GICC members on the working group include Kristian Forslin, Matthew Helms, Chris Nida, Stan Duncan, Amy Barron, Brooks Tate, and Greg Cox.

The working group began its work by identifying utility layers that may be produced by public or private utilities. The working group documented what layers were being shared, what layers were not being shared, and how the layers were shared. Additionally, the group began documenting the rationale behind data sharing including privacy concerns, data quality, and data availability. The working group moved on to the collection of use cases to document how consumer utilize the data, how they request it, and for what projects.

For these tasks, the working group concentrated on cataloging data layers, seeking member feedback on data sharing, and asking why the data producers chose the distribution method they use. Infrastructure categories inventoried include water/sewer, stormwater, electric, gas, and telecommunications. Because transportation infrastructure is already collected statewide by the NC Department of Transportation (NCDOT), the working group excluded transportation layers from consideration, and instead concentrated on layers that have no statewide distribution and which are not as well understood. The working group is looking into what data producers consider sensitive data, what statutes they reference for limiting data distribution, and what concerns are raised when they discuss data sharing. In considering how users share data, the working group considered how users might share data if a secure method were developed. Currently, there is open sharing and sharing by request only. The working group considered which layers might be shared through a secure portal with authenticated users. They categorized the infrastructure inventory layers into one of three categories: open, secure website, or by request only. Mr. Grantham presented the initial results of the three categories. For open data sharing, service areas and above ground utilities such as manholes and stormwater infrastructure emerged as layers that are currently or could be shared openly. Easements are a type of data that could be shared openly, but many utilities do not have easements mapped and readily available to share. These data may be stored within property records only. Data that could be shared by a secure website emerged with the smallest list of data layers. Data providers expressed concerns over nefarious use of the data and appropriate accuracy for projects in sharing data in this manner as well as openly sharing data. The list of layers shared exclusively by request only was the longest and comprised the remainder of the inventory. Data users typically receive only a small area of data including the project area and possibly an additional buffer. Data producers cite homeland security and state regulations for securing data in this manner.

There were three conclusions from the inventory task. Most data layers are not currently shared in an open data type of environment and are shared at a project scale only. Data providers are reluctant to make infrastructure data openly available due to security and/or liability concerns. The current landscape is not likely to change without monetary investment in data development or data sharing security, changes to statutory interpretation, or changes to the statutes themselves.

The working group has reached out to private developers and has coordinated with the SGUC, LGC, and FIC to collect use cases from state, local and federal users. For private development use cases, the working group asked Greg Cox to discuss the needs for development and reviewed infrastructure availability and scale. NCDOT presented infrastructure needs relating to transportation planning and infrastructure location and discussed the impact to timing and cost when infrastructure data is not well defined. NC Emergency Management contributed a use case outlining the needs for stormwater infrastructure to better model urban stormwater flooding and define flooding risk not related to traditional riverine flooding. DEQ has a current project to define sanitary sewer and water service areas statewide. Broadband availability across the state is another important use case that will be submitted. Mr. Grantham urged the GICC members to think of use cases that they could contribute and to reach out to constituents to write use cases.

The working group is pursuing the following next steps. The working group will complete the documentation of use cases from data consumers and providers. Once use cases are complete, the group will compare the use cases and data inventories to determine which layers are most likely to be shared, which currently exist, and which could be generalized to meet the needs of data consumers. Additionally, the working group will document the risks and costs of not having data available. Finally, the working group will develop a broader understanding of local government approaches to data distribution by working closely with the LGC to poll local governments statewide in order to determine if the initial findings of the working group apply to the state as a whole.

Mr. Grantham concluded his presentation with a list of potential paths for the working group in the future. These possible actions include developing templates for data sharing to provide consistency and satisfy legal risk for data providers, template disclaimers, and guidance documents or recommendations. The group could focus on development of data layers most likely to be shared, or it could investigate the potential for developing derived/generalized datasets that would be more likely to be shared than the original more accurate data.

During the question and answer period, Paul Badr asked whether there was a minimum base map that utilities could comfortably share such as an easement map? Mr. Grantham stated that the group was exploring that question in asking the working group to classify data layers in how they would share them, but that in the case of easements, the group has discovered that easements may not be well mapped, but buffered utility lines could be created. Stan Duncan commented that this is the first time that he is aware of that the state has looked deeply at the infrastructure subject. Having this data available would go a long way toward property tax administration and being able to document services that are available on a parcel. Presumptions are made that are often not substantiated about access to utilities, and better information will assist local administrators in advising owners and buyers about true access and costs. Additionally, this topic is important for broadband with the number of children currently needing home based internet access for schooling due to COVID. Mr. Duncan thanked Mr. Grantham, Colleen Kiley, and Brett Spivey for their work on the topic, and stated that the working group has been a rewarding experience. David Giordano announced that the Duke transmission easements were finalized in NC OneMap during the meeting. Chairman Rankin asked if use cases were being submitted or if the group needed assistance in gathering them. Mr. Grantham answered that he needed additional use cases and that he would make the use case template available online for download. There are two use case templates available on the TAC website, a use case for data users, and a use case for data providers. Alice Wilson asked how companies that come into a county or city to do work discover where utilities are located. Mr. Grantham stated that the utility information is provided on a project basis per request, but that the working group discovered

that within their group, no request had been denied, so it was possible for a company to make multiple requests to infer an overall network. Ms. Kiley stated that as the TAC moves forward, it will need guidance from the GICC on which of the potential areas of exploration the working group should prioritize and focus on.

Committee Reports

Statewide Mapping Advisory Committee (SMAC). Paul Badr, SMAC Chair, briefed the Council on activities of the committee and the last SMAC quarterly meeting held on October 14. The primary points are summarized below:

Orthoimagery
The 2020 Coastal Plain imagery project continues. False-color imagery will be delivered to county PSAPs in mid-November for the first time since the ortho program began in 2010. This deliverable is in addition to the typical true-color product that PSAPs receive. Of the over 11,500 image tiles that were quality checked, only 165 issues were found. This is a testament to the project contractors and the better elevation data used to create the orthoimagery.

The 2021 Eastern Piedmont project is underway. The contractors have been selected. If local governments in the project area are interested in any buy-up opportunities (e.g. 3-inch orthoimagery or true orthos), now is the time to contact the vendors.

Cadastral
Current, updated parcels continue to be publicly available from NC OneMap. Eighty-four counties have uploaded their updated parcel data in Q3 2020. Overall, in 2020, 97 counties had updates.

Addresses
Last updated in 2014, the AddressNC team is looking to create new address points, using data coming from the Next Generation 911 project. The team is collaborating with the 911 Board on a data governance strategy and documentation. A project steering committee has been established to help advise the team through the project.

Metadata
The SMAC Metadata Committee will be reinvigorated. Since the adoption of the metadata standard by the GICC in 2014, GIS technology has changed. The committee will update the documentation and tools used to create metadata given that change in technology.

Technical Advisory Committee (TAC). Dean Grantham, TAC Chair, shared the recent work of the committee. The team is concentrating on the infrastructure working group and will convene a meeting of the entire committee in the next quarter.

Local Government Committee (LGC). Alice Wilson, LGC Chair, briefed the Committee on the progress of the Local Government Committee.

The LGC last met on August 26th and received updates on the WGEER from Hope Morgan, Colleen Kiley, and Brett Spivey. They explained how local government GIS staff can request access to the emergency response tool and explained the benefits of joining the WGEER group. Bob Coats and Mike Cline discussed the 2020 Census, spending time to discuss the need for local governments to

document housing unit and boundaries as of April 2020 in preparation for Census data review and possible challenges. The LGC also received an update on the Next Generation 911 project. All PSAPs across the state have been onboarded into GeoComm's GIS Data Hub and have received training on the GIS requirements. Regarding LGC Outreach, there is a new LGC Teams site for enabling communication and collaboration outside of the quarterly LGC meetings. A training channel was established on this Teams site for anyone to share relevant training opportunities. The meeting included round-robin updates for committees and working groups: WGEER, Parcels, Orthoimagery and Elevation, Hydrography, SMAC, Census 2020, and the TAC Infrastructure Working Group.

Since the August LGC quarterly meeting, three LGC Members participated in a panel session on September 3rd at the NCAUG Fall Conference showcasing the GICC, LGC, and related working groups. A few of the topics of discussion related to the member's participation in the GICC, LGC and the working groups and subcommittees as well as highlighting the use of ArcGIS software throughout local government. The LGC has established executive committee meetings that will be held a month ahead of each of the LGC quarterly meetings. The eight LGC members will meet regarding LGC business that is best handled outside of the quarterly meetings. The first executive meeting was held on October 15th. The group reviewed and finalized the 2020-2021 work plan as well as the agenda for the November 18th meeting. Four LGC Members and another local government GIS representative (Joe Ausby with the City of Wilson) participated in a LGC Panel Session at the NCLGISA Fall Symposium on October 22nd. A few of the topics of discussion related to the member's participation in the GICC, LGC and the working groups and subcommittees as well as highlighting the relationship between GIS and IT. Six local government GIS personnel (including 2 LGC members) volunteered to assist in the review and testing of a local government survey on the creation and maintenance address data.

The next quarterly meeting is November 18. Current topics slated for the agenda are an update from the Hydrography Working Group, Orthoimagery project color infrared, a summary of the GICC meeting topics, and an update on the Next Generation 911 project.

Federal Interagency Committee (FIC). Scott Lokken, FIC Chair, shared updates from the October 26th general membership meeting.

There were two presentations, the first of which was from Steven White of the National Oceanic and Atmospheric Administration, National Geodetic Survey (NGS) on the Topobathy LiDAR project along the Eastern coastline, flown in early 2020 covering over 6,500 shoreline miles. The goal was to collect elevation data in the near shore environment along the coastline and intertidal zone to a depth of approximately 4 meters. Imagery was flown within 30 days of LiDAR collection. The target release date for this data on the Digital Coast Application will be April or May of 2021.

The second presenter was Megan Lang of the US Fish and Wildlife Service (FWS), and she presented on the future of the National Wetlands Inventory. Ms. Lang updated the group on their New Mapping Technologies Project (NMT), which has a goal of leveraging new technologies and data to enhance and update existing datasets as well as fill in areas of the country that were not previously mapped with limited resources.

Member reports from the committee: Doug Newcomb, FWS, is working on sea level rise estimates using species status with 5-foot digital elevation models. The US Geological Survey (USGS) has

completed collection of QL1 LiDAR data to be released in the spring of 2021. They are also collecting LiDAR data over the Sparta, NC earthquake area. The USGS is integrating post-wildfire hydrology into StreamStats to review how changes in vegetation and soils due to wildfire will affect streams. There is a solicitation for USGS grants for LiDAR data due in November. Matt Duvall of the Natural Resources Conservation Service (NRCS) reported that they will begin remapping the subaqueous coastal soils in North Carolina in the next couple of years, and they are seeking partners for the project. The data from pre- and post- storm imagery from the 2020 hurricane is available on the NGS website. The National Spatial Reference System (NSRS) update has been delayed until at least 2024, but the deprecation of the US Survey Foot which will be retired December 31st, 2022. Support will continue in NAD83, but officially the US Survey Foot will be retired for new data.

The FIC is working on year end reports and updating its workplan.

State Government GIS Users Committee (SGUC). Dianne Enright, SGUC Vice-Chair, reported for the committee.

The SGUC Executive Committee met twice since the last Council meeting: September 21st, and October 5th. Two topics were discussed during the meetings: ESRI licensing and use cases for the TAC infrastructure working group. As part of the ESRI Enterprise License Agreement (ELA), the State must provide an inventory of license usage, and the Executive Committee discussed the process required to collect the license inventory. The group is using Teams to collect the inventory information, because it provides a resource where users can go and edit data in a single location and avoid sending files through email. An inventory process for documenting ESRI license usage was set up. A similar process could be used for the upcoming ELA order, and the group discussed any changes that needed to be made to the collection spreadsheet for the ELA order as well as presentation ideas for the general meeting relating to new software and features.

Dean Grantham explained the goal of the TAC Infrastructure workgroup and told the group how the use cases fit into the overall project. Committee members were encouraged to reach out to other groups in their agencies to collect use cases.

The SGUC had a general meeting on October 21 and will hold a second later this month. NCDOT presented how they were integrating Tableau and geographic data into their business practices. ESRI presented on products based on questions raised by the Executive Committee in preparation for the next ELA. User education will continue at the next SGUC meeting with presentations by state agencies on how they are using mobile and cloud based ESRI products.

Management and Operations Committee (M&O). Chairman Rankin delivered the update for the M&O, stating that the last meeting occurred on October 8th. The Committee discussed the Governor's appointments to the Council relayed earlier in the meeting. There were updates on the NC Parcels project, Next Generation 911, Orthoimagery, WGEER, and the US Census including the Count Question Resolution (CQR) Program including changes to the challenge process limiting local governments to challenges on housing units only. This change will place a heavier burden on local governments to have good spatial data to support challenges, and there has been a request to allow the state to assist local governments in the CQR process. Local governments can designate another entity to assist them, and CGIA could be requested to assist.

The Committee also discussed the agenda for the current meeting as well as the first quarterly meeting of 2021 including an interest in having a presentation on COVID 19.

Member Announcements

Chairman Rankin opened the floor for announcements. Tim Johnson announced that the NC GIS Conference would be held virtually February 15- 19, 2021. Abstracts are due November 25th. The conference planning committee is pivoting from an in-person conference to a virtual conference, so they are reaching out to other groups such as the NCAUG who have held successful virtual conferences for lessons learned and tips for success. Pokey Harris thanked Alice Wilson for her report and thanked Tim Johnson and his team at CGIA for their collaboration with GeoComm for a great partnership.

The next GICC meeting will occur on February 10th, 2021. Additional meetings will be on May 19th, August 11th, and November 3rd, 2021.

ADJOURNMENT

There being no other business, the Chair requested and received a motion and a second to adjourn the meeting. The meeting adjourned at 2:50 PM.

Presentations given at this meeting are on the Council website.