North Carolina
Geographic Information Coordinating Council

Minutes

November 3, 2021

PRESENT

Alex Rankin (Chair), Steve Averett, Paul Badr, David Baker, Amy Barron, Kathryn Clifton, Bob Coats, Susan Coward, Seth Dearmin, Jason Dowdy, Dianne Enright, Kristian Forslin, Dean Grantham, Joanne Halls, Pokey Harris, Jason Hedley, Matt Helms, Sarah Koonts, Scott Lokken, Elaine Marshall, Hope Morgan, Chris Nida, Allan Sandoval, Bill Shankle, Allen Serkin, Brooks Tate, Gary Thompson, Christian Vose, Natalie Walton-Corbett, Melanie Williams, and Eric Wilson.

Staff: Tim Johnson, Colleen Kiley, CGIA

ABSENT

Stan Duncan and Tony Simpson

PROCEEDINGS

The council held its meeting via Webex.

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.

The GICC is required to submit a report annually to the Governor and the legislature, and Mr. Rankin announced that the 2019-2020 annual report has been sent to the legislature and posted on the GICC website.

Two statewide projects received national award for GIS excellence:

- The NCDOT Project ATLAS received a URISA Exemplary Systems in Government Award in the Enterprise Systems category in October.
- The NextGen 911 GIS Project received a NSGIC Geospatial Excellence Award in the Catalyst category in September.

New Appointments to the Council

Mr. Rankin made several announcements about changes in council membership since the last meeting.

Haley Pfeiffer-Haynes, Deputy Secretary for Service Operations, Department of Administration has joined the Council.

John Correllus retired from state service after our last meeting. During his time in state government, John was actively involved in promoting the value of GIS, serving as the GIS manager for the Department of Commerce, the Deputy State Chief Information Officer and Chief Data Officer, the SGUC chair, and representing the DIT Secretary on the GICC. Susan Coward, Senior Policy Advisor, is the new delegate for Secretary James Weaver.

Allen Serkin, Executive Director of Cape Fear Council of Governments has joined the council representing the Councils of Government.

Chairman Rankin welcomed the new members.

Approval of Minutes

The minutes of the August 11, 2021 meeting were approved for adoption with no changes.

Presentations

Update: Next Generation 911 Implementation (Pokey Harris, 911 Board)
The Next Generation 911 (Next Gen 911) program has won two national awards, one from the National Association of State Chief Information Officers and one from the National States Geographic Information Council for excellence in its Next Gen 911 program.

Ms. Harris recognized the successful partnership between the 911 Board and CGIA to provide orthoimagery to Public Safety Answering Points (PSAP) since 2010. The orthoimagery is an invaluable source of information for local governments and PSAPs. She recommended that it would be a good project to document the many ways that orthoimagery is used across the state.

AT&T owns the emergency services internet protocol network (ESInet) that all 911 traffic will traverse, and the program is on target for completion. By the end of December, nearly all PSAPs will have GIS data prepared. GeoComm and CGIA are partnering to complete the GIS data preparation with the PSAPs. Outreach and education provided by CGIA was instrumental in finalizing data for the majority of PSAPs by the end of 2021. The PSAPs are providing the following data:

- Road centerlines
- Address points
- Emergency services boundaries
- PSAP boundaries
- Provisioning boundaries
- Automated Location Information (ALI) database

A total of 4.4 million address points have already been provided to the i3 ready database. Eight hundred thousand road centerlines have been added to the i3 ready database with the help of regional meetings, GeoComm, and CGIA. The significance of the i3 network is that it is an IP-based network of networks shared by all emergency agencies. Calls are delivered to PSAPs with validated location information. In August 2020, only 25 PSAPs were i3 ready. As of this meeting, 105 PSAPs are ready with only 10 left to bring to completion.

The authoritative source of data in GeoComm's GIS Data Hub is the local producer, and GeoComm's GIS Data Hub is the authoritative source of data for Next Gen 911. Once local data has gone live as i3 on the ESInet, the need for current GIS data does not cease. It still must be updated regularly. Timely updates are critical to ensure 911 calls are routed to the correct PSAP. Quarterly updates are the minimum, but more frequent uploads are recommended. The data maintenance help guide can be found at the following link: https://it.nc.gov/media/1843/open and provides links to the GIS Data Hub User Guide, the Hub itself, and a how-to video.

When the floor was open for questions, Amy Barron asked whether there was a long-term vision for making the database something managed in house and not as a proprietary vendor managed system. Matthew McLamb assisted Ms. Harris in answering that while the database is managed by the vendor, it is accessible, and data can be downloaded at any time.

2020 Census Operational Update (Bob Coats, OSBM)
Bob Coats, Governor's Census Liaison, gave an update on 2020 Census. The first data release was in April 2021 and consisted only of total and resident population for the states, used to determine seats for the U.S. House of Representatives. As a result of the 2020 Census data, North Carolina gained one representative due to higher growth than average in the nation. Despite growing by over 900 thousand residents, half of NC counties lost population. Ninety percent of the state's residents live in a micropolitan or metropolitan area. The Census Bureau has resources for downloading data and visualizing it. Data stories specific to each state will be released as they are completed.

August 12th, data was released for local redistricting. This newer data release contains total population and voting age population by all race combinations possible in addition to group quarter populations and housing unit occupancy to the block level. Additional formats of the data were released in September. The August release was in delimited text files, and the September release allows for selected data downloads. Data with age group and household information will be released in 2022. The released Census data has been treated with a disclosure avoidance system or differential privacy to protect individual confidentiality. Only three data points are excluded from differential privacy and are reported as exact counts: state population, bloc level housing units, and block level group quarters.

The Count Question Resolution (CQR) program will begin on January 3rd, 2022 and run through June 2023. There are three challenges local governments can submit to the CQR:

1) A boundary challenge – ex. The Census Bureau used the wrong city boundary
2) A geocoding challenge - ex. Units were counted that were in or outside the official city boundary.
3) A housing unit challenge –Housing units or group quarters were not counted

Municipalities should begin gathering documentation to support a challenge now, so they can be prepared to submit a challenge in January. Only the highest elected official can submit a challenge,

but they can designate anyone to assist with preparation of the challenge. There is a Federal Register Notice that mentions software that the Census will make available to local governments called Geographic Update Partnerships Software (GUPS).

2020 Census geography geospatial data was released in January 2021. The 2020 Census Redistricting website has the GIS files, reference maps, block assignment files, name lookup tables and 2010 to 2020 block relationship files. The Census Bureau has also released an address count list, the final list used for the 2020 Census. This list goes to the block level and shows the number of housing units and group quarters in the blocks.

Public Use Microdata Areas (PUMAs) are statistical geographies drawn every 10 years that must maintain a population of 100,000 throughout the decade. PUMAs are to be delineated from each state, and the Census Bureau has invited the involvement of all stakeholders in the delineation process. The delineation process will begin in November and complete in January 2022. A training webinar will be held December 15th. The State Data Center is the only entity who can submit PUMAs to the Census Bureau.

Framework Data Layers: Priorities Plans and Needs (Colleen Kiley, CGIA)
Colleen Kiley presented an update on two priority framework datasets: Hydrography and Building Footprints. She summarized for the committee project histories, stakeholders involved, the importance of the dataset to major stakeholders, current status, and path forward.

Hydrography
Our beaches, rivers and streams are something we all enjoy, and having high quality resources attracts millions to vacation in our state each year. One way to protect these important resources is to know where they are, and how they are connected. NC lags behind other states in developing an updated hydrography layer and is one of only 9 states that does not have a stewardship agreement with the USGS. Hydrography is used widely and is a dataset that is critical to regulation, habitat and resource conservation, and flood risk management.

North Carolina has had multiple projects working on hydrography. Duplication of effort and business unit driven datasets developed in a silo are something the GICC targets to avoid. The goal of the Hydrography Working Group (HWG) is a single statewide layer with geometry that matches the federal layer that can be used by the NC Division of Water Resources for assessment and regulation, by the DOT for transportation planning and impact minimization, by the NC Floodplain Mapping Program for flood risk warning, and by local governments for planning, floodplain management, resource protection, recreation and other uses. A stewardship agreement with the USGS would better coordinate our data with the federal data.

Hydrography is a very big project, and the state has been trying to update the dataset for decades. The Studies Act of 2004 (Senate Bill 1152) directed that the GICC and the Department of Environmental Quality (DEQ) develop a plan to improve the mapping and digital representation of surface waters for the state. The project used the National Hydrography Dataset (NHD) model which is the federal standard adopted by most states. Only part of the state was funded for updates. DEQ began a Headwater Stream Spatial Dataset (HSSD) project, which became the hydrography layer for the Department of Transportation's (DOT) ATLAS project. The HSSD is an elevation derived project. It uses the lidar data to create a surface model from which a hydrography network is derived. There are two great things about this project: it provides new features such as networking, the ability

to trace up and down stream, and it uses methods that the HWG believes will allow it to move more quickly toward meeting new USGS specifications. ATLAS and the headwater stream project created a proof-of-concept layer that attributed DEQ assessment data on modeled streams.

The HWG began looking integrating North Carolina data with the NHD. During that time period, the USGS came out with what they initially called (Elevation Derived Hydrography) EDH, which morphed into the 3D Hydrography Program (3DHP). This new federal model is elevation derived and the Headwater Stream mapping project is very similar, so the HWG is confident that North Carolina is moving in the right direction.

Currently, the HWG has at least four projects ongoing:

1. Network Development by HSSD program, this includes modeling and scripting methodologies.
2. Conflation of current DEQ tables by the ATLAS Program; testing the success of moving current attributes to the new geometry.
3. Schema and requirement refinement from stakeholders.
4. Coordination with USGS to respond to its latest 3DHP call to action in coordination with other states.

During the next year, the HWG plans to finalize a draft Hydrography Schema for wider community review and adoption, investigate the path forward to a stewardship agreement with the USGS, create a plan for state to federal data sharing, and stay involved in the national discussion around the 3DHP program. Identification of funding mechanisms will be critical to implementation of final plans.

<u>Building Footprints</u>

During a needs assessment earlier this year with other state agencies, CGIA realized that building footprints was a widely used database and was an at-risk database, that is, there is no maintenance plan, funding source, or official steward. However, NC Emergency Management (NCEM) has been the de facto steward thus far. The need for building footprints reaches far outside of NCEM, and one of the state offices that stands to gain the most from an update is the NC Broadband Infrastructure Office.

Because broadband expansion and digital equity is one of the governor's priorities, building updates are an important part of realizing that success. We need to know customer addresses and buildings, knowing where the residences, schools, and businesses that would need high speed internet are located. Enhancing the building footprint layer has the opportunity to have an incredible impact on all of these stakeholders, and the combination of building footprints with addresses is one of the overarching needs.

More accurately determining building type or use is another major need for this layer. The existing building footprint layer is so important to emergency management that it is used to estimate storm damage and provide advanced warning of flooding events. The layer was first used to justify a federal disaster declaration in Hurricane Matthew, the fastest in history. Building footprints provide a solid source of information on housing units, can provide a basis for change analysis on properties for tax purposes, and provide valuable information for community planning or economic development.

The history starts with NCEM, and it was developed for risk modelling, especially in relation to flood risk. The layer was started in the 2009-2012 time period and spent multiple years going through conflation, adding first floor elevations, being moved to the Flood Risk Information System website and then being released on the NCEM Spatial Data Download site. Now that 5-10 years have passed since portions of the dataset were completed, geometry updates are needed, and NCEM has started that process. This year, the needs assessment referenced earlier revealed a need for updated geometry and better attribution, and the stakeholders expressing that need to the Council led to a call for a working group. The working group is in the early stage of formation. Stakeholders will be identified within the next month or two, and a charter has been drafted for consideration.

Going forward, the working group will evaluate what attributes are needed, what standards already exist for this kind of layer, what kind of effort it will take for update, what business unit impacts there would be to schema changes, create a schema, and maintenance plan. CGIA hopes to make this a fast-moving group similar in timeline to the AddressNC steering committee. There are very immediate needs from groups like NC Broadband and CGIA staff is ready to provide leadership of the working group to meet the urgent need for the data to support the governor's priorities. Stakeholders for the working group are needed and should contact Colleen Kiley or David Giordano for more information.

Committee Reports

Statewide Mapping Advisory Committee (SMAC). The SMAC reported progress made on these important issues:

1. Orthoimagery
PSAPs can expect delivery of imagery in mid-November, which is almost one month earlier. A key difference in the 2021 imagery, as compared to four years ago, is that the military compounds of Camp Mackall and Fort Bragg will be unredacted. The 2022 Northern Piedmont and Mountains project is well underway. Five firms have been selected to perform the work. "True orthos" are being collected for Greensboro and Winston-Salem. Local government agreements for buy-ups must be in place with vendors before the start of imagery acquisition (early February 2022). Those interested should contact Ben Shelton at ben.shelton@nc.gov .

2. Cadastral
Fall updates for seamless parcels has begun. So far in 2021, 99 counties have updated their parcel data. Eighty-seven of those counties have updated their data in the last 30 days.

3. Hydrography
ATLAS hydrography contractors are currently working on version 2 of the headwater streams dataset. The use of 10 ft. DEMs has improved the geometry and increased the density of the stream network. The Hydrography Working Group and the contractors hope to have the new version complete by June 2022.

4. Building Footprints
The NC GIS community has a great need for an update to the statewide building footprints data set. The current data is approximately eight years old. A working group will be established to address the needs of the stakeholders across the state.

5. NextGen 911
Out of the 115 PSAPs in NC, 104 have had their data pass all the necessary checks to consider it i3-ready. This means the data can now be used for call-routing across the state. Several agencies and projects have identified a need to use this data. Among them are the AddressNC project, NCDOT, Broadband Infrastructure Office, DPS, and DHHS.

Local Government Committee (LGC). The LGC executive committee met on October 20th. The executive committee reviewed the recent GICC goals and its workplan to make sure their work is aligned with the GICC goals. The LGC reviewed its 2020-2021 accomplishments for the GICC annual report and discussed at-large member vacancies and potential member organizations that would benefit ongoing projects. The Committee also discussed education and outreach needs. The LGC fall general meeting was held on August 25th. The content included an update on framework datasets including AddressNC and Municipal Boundaries as well as an update on the recent GICC goals and priorities. Most of the meeting was a lengthy presentation and question-and-answer session with Bob Coats and Mike Cline on redistricting data, census data releases and timelines, challenge process, and requirements. Outreach activities included a panel discussion at the NC ArcGIS Users Group about LGC participation in GICC committees and working groups to support GICC priorities and initiatives.

State Government GIS Users Committee (SGUC). The SGUC executive committee met on September 14th and reviewed the recent GICC goals and its workplan to make sure that the work is aligned with the GICC goals. The executive committee also reviewed its 2020-2021 accomplishments for the GICC annual report. In addition, the committee held an open discussion about hydrography needs from the state agencies and also reviewed the training classes offered this spring to state agencies and discussed fair allocation methods for training in the future.

The SGUC fall general meeting will be held tomorrow, November 4th. The agenda includes planning for a new round of ESRI training classes and a prioritization of class offerings. ESRI will give a presentation on how to obtain software and support. This topic was brought about by feedback from agencies who were unsure about how to find support and who to contact for software included in the enterprise license agreement. A final agenda item will be a round table update from each agency on what GIS projects they are working on. The goal is to spark great conversation, peer to peer learning, and presentation ideas.

Technical Advisory Committee (TAC). The TAC Infrastructure Working Group has been collecting text from members for the draft final report. The working group plans to have a first draft available for the M&O Committee at its mid-December meeting. A survey was sent out on behalf of the working group to GIS contacts to better define the following: data layers identified by the TAC working group; how many utilities produce each layer; and how the data layers that are produced shared. The survey also serves to fill the following gaps in our research thus far: examples of data sharing agreements and examples of data disclaimers. Because the working group received only a couple dozen responses from its county and city contacts, the survey has been sent out to additional listservs. Other lists/groups are being identified that may target the right audience.

Federal Interagency Committee (FIC). The FIC recently held both its general membership and executive committee meetings. During the general membership meeting the committee heard from David Carter with the Department of Interior who presented on the GeoPlatform which will be the authorized source for the official national geospatial data assets as guided by the FGDC. Kitty Kolb

gave a presentation on the different definitions of resiliency which include both ecological and engineering resiliency. Being aware of the targeted audience and expectations can be important in discussing resiliency. The FIC executive committee is recruiting a member for the open seat and concentrating on finding a member from either the tribal nations or FEMA.

Management and Operations Committee (M&O). The M&O heard progress updates on framework datasets and noted that 98 counties provided updates in 2021. The committee also considered plans for priority framework datasets including building footprints and hydrography. Finally, the committee discussed meeting topics including elections, boundary issues, and unmanned aerial vehicles and reviewed important topics to bring before the full council.

GeoEnabled Elections (Tim Johnson, CGIA)
Tim Johnson gave a preview of a future presentations on GeoEnabled Elections. The Board of Elections will elaborate on the subject at a future meeting, so Mr. Johnson provided a brief introduction to the subject. Data is critically important to the administration and management of elections and has implications in ensuring that each voter receives the correct ballot. The GeoEnabled Elections project has been going on nationally over the past few years and has highlighted the value of geospatial data and the need across the country for having accurate data provide the foundation for enabling better management and administration of elections. The National States Geographic Information Council (NSGIC) has been meeting frequently to discuss and review the importance of good data and the value of GIS technology in elections. NSGIC has been working on model statutes to provide states with language to support their further work. Other lessons learned across the nation have included: (1) collaboration between the State Board of Elections and GIS managers; (2) production of an accurate precinct data layer; (3) geocoding voter addresses using accurate and up-to-date data; (4) accurate contextual layers including municipal and county boundaries; and (5) data validation

The State Board of Elections system was a case study for the GeoEnabled Elections project and has many successes that it shared nationally.

ADJOURNMENT

There being no other business, the Chair requested and received a motion and a second to adjourn the meeting. The meeting adjourned at 3:00 PM.

2022 GICC Quarterly Meeting Dates

- February 23
- May 18
- August 17
- November 16

Presentations given at this meeting are on the council website.