



North Carolina Geographic Information Coordinating Council

Minutes

February 10, 2021

PRESENT

Alex Rankin (Chair), Steve Averett, Paul Badr, David Baker, Amy Barron, Katie Bordeaux, Kathryn Clifton, Bob Coats, John Correllus, John Cox, Greg Cox, Stan Duncan, Dianne Enright, Sarah Wray (for John Farley), Kristian Forslin, Dean Grantham, Pokey Harris, Jason Hedley, Matt Helms, Sarah Koonts, Scott Lokken, 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

Seth Dearmin, Wesley Beddard, John Gillis, Joanne Halls, Chloe Gossage (no longer the with the Department of Public Instruction), and Tony Simpson

PROCEEDINGS

The Council held its fourth 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 began the meeting with recognitions for two individuals who have contributed to the work of the Council. Keith Johnston, after a long, distinguished career, has retired as the State Photogrammetric Engineer with the NC Department of Transportation. Gary Thompson and Tim Johnson spoke about his contributions to framework datasets in North Carolina including orthoimagery and Lidar. They presented him with a gift and a certificate of appreciation from the Council. The second certificate of recognition was presented to Anna Verrill who will be leaving her role at CGIA, where she contributed greatly to the advancement of the NextGen 911, NC Seamless

Parcels, and AddressNC projects and provided staff support to the Local Government Committee (LGC).

Approval of Minutes

The minutes of the November 4, 2020 meeting were approved for adoption with no changes.

Presentations

Recent Federal Legislation Relevant to the GIS Community – Tim Johnson, Gary Thompson

Three bills were passed recently in the U.S. Congress relevant to the GIS community. The Geospatial Data Act of 2018 (GDA) is beginning to show progress at the federal level. The NSDI strategic plan was approved by the Federal Geospatial Data Committee (FGDC), and Mr. Johnson recommended that the GICC review the plan in detail, particularly in reference to opportunities for collaboration and partnerships. Deputy Director of the FGDC, Ken Shaffer, will be presenting at the NC GIS conference February 17th. Gary Thompson serves on the National Geospatial Advisory Committee (NGAC), and they have been tasked with reviewing GDA documents as well as the reporting component. He said there should be more activity in the near future.

The Digital Coast Act (Public Law 116-223) was recently passed and covers integration of data with importance to North Carolina including land use/land cover, imagery, and critical infrastructure. Mr. Thompson serves on the Hydrographic Service Review Panel and learned that the act will promote partnerships, decision support tools, and a concentration on filling in data gaps. Ms. Wilson voiced her support for the Act and her hope that it will promote partnerships and avoid redundancies.

The National Landslide Preparedness Act (HR8810) allocates \$40 million to the federal 3DEP program. There are two key portions including a landslide advisory committee that presents an opportunity for the NC Geological Survey to collaborate. Mr. Thompson added that there will be a 3DEP subcommittee of the NGAC, and he hopes to become part of it. The 3DEP program is known to be a successful program which now will be funded.

The Safeguarding Tomorrow through Ongoing Risk Management (STORM) Act (S3418) has \$100 million tied to it to provide a revolving fund for hazard mitigation. It will benefit the hazard mitigation group in the NC Division of Emergency Management and provide for more resilient communities.

Update: 2020 Census – Bob Coats

Bob Coats, NC Census Liaison, presented an update on newly delivered census products. The 2020 Census Apportionment data, total state populations used for determining apportionment of Congressional seats, was originally planned for release in December 2020, but will now be released in April 2021 for all states at once. Redistricting data, demographic information including voting age population at the block level, originally planned for April 1, 2021 release has been delayed until after August 1, 2021. The geographic data used in redistricting was released at the end of January and includes all geographies used for redistricting including blocks, block groups, and tracts. Shapefiles are available online now, and Mr. Coats encourages all local governments to download the files. A Federal Register Notification for recommended changes to the 2021 Census Standards for Delineating metropolitan and micropolitan statistical areas was released on January 19, 2021 and includes a recommendation to change the threshold for a metropolitan area from 50,000 to 100,000 in

population. Three statistical areas, Goldsboro, New Bern, and Rocky Mount would be moved from metropolitan to micropolitan statistical areas.

The Census Bureau began the Boundary and Annexation Survey (BAS) to collect changes to municipal boundaries as of January 1, 2021. If updates are submitted by March 1, they will be incorporated into this year's data. Mr. Coats stressed that the BAS is separate from the State Demographer's annual review, and all changes must also be submitted to the Secretary of State's office in addition to the BAS. Local governments should review boundaries on [TigerWeb](#) to verify they are correct.

The timeline for the Count Question Resolution (CQR) program, during which local or tribal government can challenge their census counts, will now occur between October 1, 2021 and June 30, 2023. Because of the short timeline between the August redistricting data release and the beginning of the CQR, Mr. Coats encourages all local governments to prepare early with newly downloaded Census geography data and local housing units and group quarters in place and occupied as of April 2020. Because differential privacy will be applied to population counts, challenges during the CQR period will only be accepted based on housing unit and group quarter counts as of April 1, 2020.

Mr. Rankin opened the floor for questions. Secretary Elaine Marshall mentioned that she sits on the Local Government Commission which has taken over various degrees of authority for municipalities with shrinking populations and governments that are not adequately serving their populations. She inquired what entity would be responsible for the BAS and CQR. Mr. Coats said that the State Demographer will be organizing virtual meetings to explain the process, and that CGIA could serve as a resource for communities lacking GIS capability. The challenge window is two years, so there is time to seek assistance. The Municipal Boundary Working Group should create a path for responding to the BAS and relieve burden from the local municipalities. Secretary Marshall expressed concern that resources in these small communities are tied to head counts in the Census. Ms. Alice Wilson stated that the Local Government Committee (LGC) has created an information sharing Teams site and will be reaching out to local governments to offer assistance. Mr. Coats stressed that it is important to make communities aware that this challenge opportunity exists and that they must be prepared with the proper data.

Ms. Wilson inquired about the redistricting process and how the delays may affect those running for office. Mr. Coats said that originally the data was supposed to be released first to states with elections this year, but that it will be released all at once to ensure the data is accurate. It may pose challenges for states with 2021 elections.

Presentation: The Problem with Indeterminate County Boundaries – Stan Duncan, Gary Thompson, David Baker

Council members Stan Duncan, David Baker, and Gary Thompson presented on the issue of indeterminate county boundaries with assistance from Nancy Ferguson from Chicago Title Insurance. The presentation covered many topics including the impact of indeterminate boundaries on individual property owners, county tax departments, and registers of deeds. Most local programs flow from the accurate location of the parcel in relation to relevant districts including addressing, planning and permitting, property taxes, public school districts, voter registration, fire protection, emergency response, and census counts. The presenters offered multiple examples of how indeterminate county boundaries affect property owners and discussed the process for surveying and correcting county boundaries.

The first example involved a property owner on the border of McDowell and Burke counties. The property owner had been paying Burke County taxes for 30 years, but was told his land was in McDowell County. The area in question was an example of an indeterminate county boundary.

As more homes are built along county boundaries, more homeowners become impacted by uncertain boundaries. Historically, counties would enter into multiple agreements that resulted in properties located in one county being taxed by the adjoining county. A second example of how uncertain boundaries affect property owners involved a property owner who bought property in what he thought was Orange County and was issued a building permit by Orange County. The owner noticed a county boundary sign on a nearby road that led them to believe their property was actually located in Alamance County, where property taxes were lower. The property owner tried repeatedly over the course of 7 years to prove to Orange County that his property was located in the adjacent county, and finally took the County to court, winning back taxes with interest. This incident spurred the counties to work together to establish their county boundary. During the process, the counties identified many properties that were impacted and mutually agreed to seek a change that would mitigate some of the impact. N.C.G.S. §153A-17 requires action by the General Assembly for changes to county boundaries. The counties worked with the General Assembly and citizens to establish the boundary.

The N.C. Geodetic Survey (NCGS) is the official state agency charged with locating and recording an accurate county boundary. The General Statute addressing uncertain or disputed boundaries is N.C.G.S. §153A-18 and directs the NCGS to “*assist counties in defining and monumenting the location of the uncertain or disputed boundary as established in accordance with the law.*” County boundary surveys usually begin when two counties recognize a boundary issue and request a resolution from the NCGS in written form. Counties can appoint a special commission to work with the NCGS. Ron Harding and David Ferraro, professional land surveyors with the NCGS, research the boundary line with assistance from the county staff. They then survey it. A preliminary report/plat will be provided to the counties for review. NCGS will attend public meetings if requested. Once the final plat is provided to the counties, the counties must adopt a resolution to approve the plats and then record the plat in the county Registers of Deeds. If the counties do not ratify the reestablished boundary within one year, the survey plat will be recorded in the Register of Deeds in each affected county by NCGS and submitted to the Secretary of State’s office by NCGS. Affected property owners are notified of actions taken.

Prior to a revision in §153A-18 to allow the one-year resolution period, some counties had not mutually approved reestablished boundaries, and Mr. Thompson shared a list of county boundaries that have been surveyed but have not been finalized. These counties are not subject to the one-year approval period because survey occurred prior to the statute revision. In some cases, one county has adopted the re-established county boundary, and one county has not. This case can leave property owners open to being taxed by both counties and put the property owner in a position of filing an appeal in both counties to resolve the boundary and tax claims, a process that can lead to the N.C. Property Tax Commission and possibly to the N.C. Court of Appeals to resolve and finalize the boundary.

In many cases of uncertain county boundaries, each county may use a different county boundary line for county business, and the final NCGS surveyed line may not match either original county boundary line. Property owners are affected when they are notified that their property is located in a different county than they believed they resided. For the resolution of the Wake/Harnett county line,

the counties scheduled public meetings to inform impacted property owners about the process and the changes. The success of the project could be tied to the transparency and communication with the impacted property owners. At the completion of the project, properties were taxed by the county in which they were located, and in the case of split parcels, were taxed by the portion of their property located in each county.

Historically, county boundaries were established in rural reaches, away from development. The boundaries lacked specific descriptions of where the boundary was located unless marked by reference to a natural feature or established landmark. Over the years, the Land Records Program established by the General Assembly in 1977 began to identify where uncertainties in county boundaries were located. As recently as the mid 1980s, some counties had no mapping, and established agreements with adjacent counties regarding which county would tax a property along an uncertain boundary. In some cases, if a split parcel had an improvement, the county in which the residence was located would tax the entire property. These historic practices are still in use today and pose many legal issues.

Mr. Duncan outlined the role of the County Assessor. A deed or plat is recorded in the county registry. The information is communicated to the assessor's office land records staff. The land records staff create an inventory record. The county assessors have statutory charge for all property having taxable situs within the borders of the county they serve. County assessors have no authority to assess property having taxable situs outside their county borders.

"The county assessor shall have general charge of the listing, appraisal, and assessment of all property in the county in accordance with the provisions of law." N.C.G.S. §105-296(a)

Unless someone brings an issue to the attention of counties, they may not actively seek to resolve the county boundary location and may continue to tax properties based on old established agreements. An example was given from 1962 regarding a property split by the boundary of Iredell and Rowan counties. Thomas Wade Bruton, Attorney General at the time, issued an opinion to the affected property owner that *"Each county is entitled to tax the property lying on its side of the county boundary line."* This opinion leaves no option for counties to make agreements for one county to tax entire parcels split by a mutual county boundary. Mr. Duncan gave other examples of legal opinions that uphold the provision that boundaries dictate the limit of taxation, and there is no discretion allowed.

Historically, cities went to the county tax office to get a copy of the roll and did their own billing. Currently, approximately 90 percent of cities allow counties to do billing for them so that the county can determine the tax obligations based on county and city boundaries.

In another example of development within an area of boundary uncertainty, Ms. Ferguson discussed how property titles are impacted by not knowing exactly where the county line is. Titles must be filed in the county in which the property is located. This action becomes difficult when the location of the boundary is unknown. Two of the concerns are as follows. If the boundary has been "wrong" historically, the title documentation may be in the wrong county, thus there is no record title. If the boundary was correct and the counties are now agreeing to a change, something they cannot do by agreement as a legal title matter, ongoing titles are at risk because of suddenly only recording in the "new" county. Surveyors and attorneys are placed in a difficult position when two counties disagree on how much of a parcel to display on a deed. Asking a surveyor to show an indeterminate county

boundary on a survey is difficult. Some counties have attempted to mitigate the problem of splitting parcels by a reestablished county boundary by changing the boundary to follow parcel boundaries. However, this solution can also lead to new problems. Mr. Thompson related an example on the Gaston/Lincoln boundary where an attempt was made to follow property boundaries as the new county boundary, but while surveying was in process for the new county boundary, parcels were being combined. The new parcels were split by the county boundary, the exact problem the counties were trying to solve by changing the boundary line. Ms. Ferguson shared a similar story where a developer purchased a property and subdivided it based on the county line, only to discover later that the line was in the legal process of being moved by mutual county agreement, and property owners bought homes expecting to be in a school district and county only to find they were not.

The presenters concluded with possible paths forward. With new technology, counties have the ability to accurately site county boundaries, so arguments of boundaries being “good enough” or determining the correct boundary being “too much work” are not acceptable. Not fixing boundary issues can:

- Impede future development,
- Call into question validity of some land titles,
- Pose obstacles for conveyances of family land, and
- Place unnecessary burden on property owners.

Mr. Duncan posed the following question to the group to stress the importance of fixing boundaries now. “Are there any government programs or private enterprise endeavors that would not benefit from accurate boundaries?”

In a review of other states, South Carolina has addressed this issue by passing legislation to allow the South Carolina Geodetic Survey to clarify disputed or unclear boundaries. The presenters posed that North Carolina consider language in Session Law 2016-23 for North Carolina/South Carolina boundary reconciliation as appropriate for county and municipal boundaries and recognize the NCGS as the appropriate state authority to resolve boundary issues.

Chairman Rankin opened the floor for questions. Mr. Baker stated that eliminating silos and tying together parcels, municipal boundaries, other boundaries, and county boundaries would benefit the citizens of the State. Paul Badr asked whether it was possible to move from a reactive mode to a proactive mode where we actively review boundaries for uncertainty. Mr. Greg Cox suggested that high growth areas could be prioritized as they may have greater resources. Mr. Thompson stated that there is no cost to the counties to clarify a boundary unless they decide to make a change. Mr. Hedley expressed support for the NCGS being the authority for resolving issues as an independent entity. He asked Mr. Thompson what example would justify a change in county boundary. Mr. Thompson offered the example of an Orange/Alamance boundary parcel that was not accessible by the county in which it was originally located, so the decision was made to change the boundary and place it within the county that emergency operations could access. Ms. Clifton asked whether the NCGS knows which of the county boundaries that have not been officially surveyed have problems. Ms. Harris offered her assistance in resolving issues since the NextGen 911 project is dealing with county boundaries in implementing the statewide project.

Committee Bylaws Updates – Colleen Kiley

Colleen Kiley of CGIA presented updates to the State Government GIS Users Committee (SGUC), Local Government Committee, and Statewide Mapping Advisory Committee (SMAC) bylaws. The

bylaw updates concentrated on four areas; updating General Statute references, standardizing language across the bylaws of all committees, updating language to reflect current committee operation, and making committees more inclusive of the represented community. The SGUC added language to add members to their executive committee from agencies not currently represented. The LGC added at-large members to allow the Committee to add expertise for current projects and included new language to allow the LGC to meet as an executive committee to conduct the Committee's business separately from the general meetings. The Bylaws updates were presented, and the Council unanimously voted to approve them for the SGUC, LGC, and the SMAC.

Update: Municipal Boundaries Working Group – Bob Coats

Mr. Coats reported on the progress and plans for updating the Municipal Boundary framework dataset. The goals of the Municipal Boundaries Working Group (MBWG) are to maintain a single municipal boundary layer that serves the needs of state agencies, emergency management, the Census Bureau, and other stakeholders, to streamline the boundary change process and reduce burden on local governments, and to provide a regular review and quality control process. There are boundary reporting requirements to the Office of the Secretary of State as well as to the BAS, so a single layer would reduce redundant reporting and avoid incomplete reporting. An initial successful pilot test occurred at the end of 2019 with a small number of counties.

The proposed process to create a statewide layer will begin with the NCDOT Powell Bill municipal boundaries. Because the Powell Bill layer does not include approximately 200 municipalities, those boundaries would be filled in with locally provided boundaries. If locally provided boundaries are not provided, the BAS data from 2020 will complete the layer. The foundational layer for municipal boundaries will then go to the local governments to approve as accurate. Once the layer is approved, it will enter the maintenance phase which will involve counties submitting municipal boundary changes for approval to the Land Records Management Office, an update to the municipal boundary layer, a quality control process, and finally release of the updated layer to the public. The statewide municipal boundary layer would be the single source for the BAS, eliminating the need for local governments to submit changes through two different processes.

The working group plans to finalize the specifications for the statewide boundary layer and submit it to the SMAC for approval with the goal of a final database design in the summer of 2021. The remainder of the year will be devoted to creation of the comprehensive statewide layer. Finalization of the layer will depend on staffing resources and communication with the local governments for review.

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 January 20th, 2021. The primary points are summarized below:

NC Orthoimagery – All data was delivered to county PSAPs during the first week of December 2020. The same data is available from NC OneMap as 5,000ft. x 5,000ft. image tiles, county mosaics, and web services.

Vendor contracts for the 2021 Eastern Piedmont flights have been completed. The first vendor meeting was January 20th. Flights over the project area will begin February 1st with imagery delivery to PSAPs sometime in November 2021.

Cadastral project – Anna Verrill, the NC Parcels project manager, has sent out quarterly reminders to counties to update their parcel data. There are only 2 counties that have not updated their data at least once since Q4 2019 (Anson and Madison).

Transportation – The NC DOT GIS Unit is undertaking a review of the roadway centerlines at DOT. The goals are to understand the current needs of the centerline data, ensure that the centerlines are being created to support state and federal statutes and mandates, and to update the dataset to support NCDOT business needs. This will also result in a possible updating of the GICC transportation roads data content standard.

Addresses – The AddressNC project team is working on a data governance strategy with the 911 Board staff. This strategy document will apply to all data, including addresses, that come out of the NextGen 911 project.

Metadata – The committee recently reviewed their current charter, a list of software applications that can be used for metadata editing, and the status of the GICC metadata standard. The committee will meet later in the year to develop their working plan and begin assignments for metadata tool and standard review.

Technical Advisory Committee (TAC). Dean Grantham, TAC Chair, shared the recent work of the committee. Since the last GICC meeting, the TAC has maintained its biweekly meeting schedule. They have collected 15 use cases from both data providers and data users to document user needs and data provider practices. TAC members have contributed many of the data provider uses cases thus far and we are continuing to coordinate with the LGC, SGUC, and FIC to solicit use cases. They also have produced a summary document that outlines and clarifies the goals and path forward for the working group. The document can be found on the [TAC web page](#) of the Council's website.

Currently, they are concentrating on collecting statutes, industry standards and best practices that affect data sharing. The goal for this task is to provide links to relevant documents in our final report, so data producers can have references in a single place for inclusion in internal policies and data sharing agreements. The TAC will be reaching out to additional industry representatives to solicit these documents, because for some utilities, the existing working group lacks expertise in the subject area.

Once they have completed our document collection, they will be ready to begin outlining our draft report and assigning sections to the working group.

Local Government Committee (LGC). Alice Wilson, LGC Chair, briefed the Council on the progress of the Local Government Committee. The LGC last met on November 18, 2020, and the following represents a summary of the meeting and committee work.

1. A status update of the Orthoimagery Program was given by Ben Shelton. He reviewed the various deliverables and timeline for deliveries for the 2020 Coastal Project. He also gave an update on where things are with the 2021 Eastern Piedmont project.

2. A debrief of the GICC November 4th meeting was given highlighting the Environmental Justice and Accessibility to Infrastructure Data topics.
3. The LGC also received an update on the Next Generation 911 project.
4. Regarding LGC outreach, there was a quick demo of the LGC Teams site which is intended to be used by anyone in the local government GIS community to enable communication and collaboration outside of the quarterly LGC meetings.
5. The Local Government Story Map was also showcased seeking contributions for the local government GIS community.
6. The LGC received updates for committees and working groups: WGEER, Parcels, Orthoimagery and Elevation, Hydrography, SMAC, Census 2020, and the TAC Infrastructure Working Group.
7. The LGC submitted the 2019-2020 LGC Accomplishments to the GIS Program Coordination Manager for inclusion in the GICC Annual Report.

The LGC Executive Committee met on January 20, 2021. They approved the edits to the LGC Bylaws, reviewed the progress on the current LGC workplan as well as drafted the agenda for the February 24th LGC General Meeting.

The next quarterly meeting is February 24, 2021. Current topics slated for the agenda are an update on the Hydrography Data Update, 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 December 12th, 2020 Executive committee meeting. The committee reviewed the bylaws and discussed membership needs and officers. With members near retirement, the committee is making a recruitment effort. The workplan was updated as well. The meeting dates for 2021 were established.

Chrissy Hopkins with the USGS in Raleigh has co-authored “*Piloting Urban Ecosystems Accounting for the United States*,” which estimates the value of urban trees to the ecosystem. Doug Newcomb is working on sea level rise along the coast, and he is looking for partners and others working in the same field of study. Mr. Lokken has published a revised document guiding working on the modernized NSRS that will be available soon. The document contains use cases for how to transition to the new datum.

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

The SGUC executive committee met on December 9th and January 9th. The following items were addressed at the meetings:

The SGUC is working on collecting use cases to support the TAC Infrastructure Working Group. A portion of the December meeting was devoted to sharing how agencies use infrastructure data, and each member shared ideas for use cases that they will contribute.

ESRI ELA order collection began and recently concluded. Sam Perkins of ESRI fielded questions from the executive committee on the ordering process in December, and the committee discussed the process and progress in January.

The SGUC sent out a survey to better prioritize ESRI training classes to offer in the remainder of the fiscal year. There were over a hundred responses and the SGUC expected to schedule classes beginning in March.

The SGUC bylaws were amended and presented to the executive committee for their review. Other than minor changes to make the bylaws more consistent with other committees, the SGUC bylaws were updated to include representation from state agencies not currently represented on the executive committee.

Meeting dates for 2021 were set.

The SGUC held a general meeting on November 15. The following topics were presented:

1. NCDOT presented SAML integration of NCID with AGOL.
2. DOT and DEQ presented lessons learned with ESRI field data collection tools.
3. CGIA updated the group on the AddressNC project.
4. Dean Grantham discussed the TAC Use Case collection effort.
5. Training survey results were narrowed and presented to the group.

Management and Operations Committee (M&O). Chairman Rankin delivered the update for the M&O, stating that the last meeting occurred on December 14th, 2020. There were updates on the NC Parcels project, NextGen 911, Orthoimagery, and the 2020 Census. The M&O discussed GICC meeting topics for 2021 including indeterminate county boundaries, resiliency, COVID 19, smart cities, GIS for redistricting, state highway asset inventory projects, Digital Coast Acct, Geospatial Data Act, land use/land cover, hydrography working group updates, and unmanned aerial vehicles. The committee received a special status report from the Municipal Boundary Working Group.

CGIA is working on the 2019-2020 annual report, and the 2021 NC GIS conference.

Member Announcements

Chairman Rankin opened the floor for announcements. The first NC GIS virtual conference will be held February 16-19. Over 700 attendees and 30 exhibitors are expected. Ms. Wilson shared that the Federal ESRI GIS Conference is free for federal employees and only \$100 for all others.

ADJOURNMENT

There being no other business, the Chair requested and received a motion and a second to adjourn the meeting. The meeting adjourned at 3:07 PM.

Presentations given at this [meeting](#) are on the Council [website](#).