North Carolina
Geographic Information Coordinating Council

Minutes
August 10, 2016

PRESENT
Stan Duncan (Chair), Bob Brinson (Vice Chair), Steve Averett, David Baker, Jon Beck, Marc Burris, Kathryn Clifton, Bob Coats, John Correllus, John Cox, Gary Thompson (for John Dorman), Ryan Draughn, Dianne Enright, John Farley, Kristian Forslin, John Gillis, Derek Graham, Joanne Halls, Matthew Helms, Bliss Kite, Sarah Koonts, Dan Madding, Elaine Marshall, Doug Newcomb, Josh Norwood, Anne Payne, Alex Rankin, Allan Sandoval, Joseph Sloop, Richard Taylor, and Ron York
Staff: Tim Johnson, CGIA

ABSENT
Allan Axon, Jay Bissett, Jr., Linda Millsaps, Kevin Parrish, and Sharon Rosado

PROCEEDINGS

A meeting of the Geographic Information Coordinating Council was held in the Board Room of the Department of Public Instruction in Raleigh, North Carolina. Chair Stan Duncan called the meeting to order.

Chair Announcements
Mr. Duncan welcomed the Council members and visitors. He reminded members that the GICC website has been revamped and invited members to comment to Tim Johnson or Jeff Brown. The format is based on a standard for the state.

Mr. Duncan announced that the NC GIS Conference 2017 has a new website, registration is open, and programming is in progress. The deadline for submission of ideas for presentations is August 12; contact Mr. Johnson for more information. The conference will take place February 22-24 at the Raleigh Convention Center.

Mr. Duncan recognized Council member John Dorman for his interview on WUNC public radio regarding new flood maps based on improved hurricane storm surge inundation models. It was reported that more than 31,000 properties in coastal North Carolina will have their flood risk reduced based on the revised flood zones.

Mr. Duncan invited Tom Morgan to the head of the table to be recognized and congratulated on his retirement from the Department of the Secretary of State, Land Records Management Program. Mr. Duncan recalled some of the history of the development of land records in North Carolina going back to the 1970s. When first meeting Mr. Morgan eight years ago, Mr. Duncan right away recognized Mr.

Morgan as a worker and a leader who wanted to see things get done thoroughly. Acknowledging a professional friendship, Mr. Duncan observed that Mr. Morgan's efforts achieved more consistency in land records practices from county to county and more understanding of the legal aspects of land records through case studies and examples, strengthening the land records program.

Mr. Duncan presented Mr. Morgan with a certificate of appreciation and read the cover letter to Mr. Morgan:

> "I would like to express my gratitude for the many ways you contributed to the Geographic Information Coordinating Council and the GIS community in North Carolina. Your value to the Council went far beyond your able representation of the Secretary of State and the Land Records Program. You played key roles in major GIS projects including seamless parcels and statewide orthoimagery. You shared your expertise and experience generously with working groups and standing committees and brought your cooperative, problem-solving, positive attitude to bear on more collaborative efforts than I could enumerate.
>
> Clearly, you made the Land Records Management Program more prominent and effective to the benefit of local, state, and regional GIS. Your workshops in partnership with the NC Property Mappers Association informed and benefited local government land records managers, GIS professionals, and private surveyors and engineers, literally from Murphy to Manteo.
>
> Please accept this Certificate of Appreciation honoring your service to the Council, the GIS community and the citizens of North Carolina. Of course, you are welcome to attend GICC meetings at any time in the future. The schedule is on the GICC website http://it.nc.gov/gicc.
>
> Please do not hesitate to contact me or CGIA staff with any suggestions, comments or concerns. We value your perspective, as always."

Secretary Marshall commented that she twice talked Mr. Morgan out of retirement, but not a third time. Her office honored Mr. Morgan with a retirement party last month during which Gary Thompson, NC Geodetic Survey, announced that a geodetic survey marker placed on an overlook along the Blue Ridge Parkway is named "Tom Morgan" in his honor.

Secretary Marshall introduced Rich Elkins, GISP, hired last week to serve as Land Records Program Manager, replacing Mr. Morgan. Mr. Elkins, a native of Wilson, has been very active in the NC Property Mappers Association and has 17 years of experience in local government GIS and land records. She emphasized the value of the Land Records Management Division and is pleased to have Mr. Elkins on board. Mr. Duncan welcomed him, as well.

Approval of Minutes

The minutes of the May 11, 2016 meeting were approved for adoption with no changes.

Progress on Statewide IT Activities

John Correllus, Deputy State Chief Information Officer and Chief Data Officer shared recent developments in statewide IT activities. On the first floor of the Education Building a new Data Visualization Studio for North Carolina is taking shape, with a focal point on geospatial data and

geospatial collaboration. The Governor's vision is to make doing business with the state as easy as checking scores on your mobile device. With much improvement needed, significant investments in technology include the Innovation Center that focuses on testing and evaluating devices and technologies and collaborating on projects to show value before spending a lot of money. Taking that concept to data visualization, the goal is to leverage data assets to inform business decisions for the state. The Data Visualization Studio is scheduled to open in the fall of 2016.

The plan is to highlight open and transparent government through the use of our data, and understand how to leverage data to improve decision making and services to citizens and businesses. Geospatial is a key area to meet business needs for state agencies, local governments, and private businesses. There is a good story for geospatial data and Mr. Correllus is looking forward to the Council getting involved. This is a State space, but content can go beyond State managed data. The studio can show the value of what we are doing. Also, Mr. Correllus pointed out that many parts of the Department of Information Technology, including the Government Data Analytics Center (GDAC) and CGIA, have moved downtown to be closer to partners and customers.

Technical Presentation 1
AddressNC and Census 2020 (Joe Sewash and Bob Coats)
(See - https://it.nc.gov/event/gicc-quarterly-meeting-8102016)

Mr. Duncan introduced the speakers by commenting on preparation for Census 2020 that is building on past efforts and developing data that can be used for many purposes on a regular basis in addition to supporting the Census. Joe Sewash of CGIA and Bob Coats of the Office of State Budget and Management (OSBM) and the Governor's Census Liaison are working collaboratively on address data and Census-related geospatial data in North Carolina. The National Address Database Summit, attended by Mr. Duncan and Mr. Sewash, highlighted issues around the country with addresses. Mr. Duncan noted that we have data we should be proud of and we are highly regarded by the Census Bureau. Mr. Duncan thanked Mr. Coats and colleagues at OSBM, Mr. Sewash, Mr. Johnson, and Mr. Correllus for their roles in achieving appropriations for *AddressNC* in the adopted budget in the amounts of $520,000 in non-recurring and $180,000 in recurring funds.

Mr. Sewash reminded the Council of his previous presentations related to (1) the initial master address database in 2009 with one-time funding in support of Census 2010 and (2) the *AddressNC* 2014 version of an aggregation of statewide address points, partnering with NC Broadband project and their Phase 2 funding, again creating a snapshot based on authoritative source data from local governments. Those two datasets have been available through *NC OneMap*. However, they were one-time projects with no support for maintenance, missing out on continuity of the statewide resource and opportunities to engage local governments. Over time, Mr. Sewash has observed a lot of awareness, effort and initiative by local governments to improve their address data management and implement master address datasets, meaning there are a lot of improvements to take advantage of in partnership with local governments. In addition, *AddressNC* will leverage address data in geospatial format to support services.

A key element of *AddressNC* is its ability to support the Local Update of Census Addresses (LUCA) in preparation for Census 2020. The opportunity is to update the Census Bureau's Master Address File by jurisdiction ahead of the Census. The process is protected by Title 13 that provides security for the privacy of residents, but limits the availability of the data for local

government purposes. *AddressNC* will be able to partner with local governments and provide address data to the Census Bureau and be able to look at feedback on the statewide database and eventually from a national scale as well.

There are two key factors in counting residents. First, Census population affects the national apportionment of congressional seats; a growing state like North Carolina has an opportunity to gain seats in the House of Representatives after Census 2020 contingent on good enumeration. Second, apportionment of federal funding is tied to population. As calculated after the 2000 Census, approximately $1,000 in federal funds were apportioned per resident per year. After Census 2010, the estimate was that each additional resident translated to $1,500 in federal funds. In estimating progress and benefits of *AddressNC*, a threshold was set such that if the *AddressNC* program finds 15 additional subdivisions across the state to add to the address database, the nominal subdivision having 50 homes with 4 individuals per household on average, that would gain 3,000 residents. Although 3,000 people in a state with 10 million residents is 0.03 percent of the total, the additional federal funds estimated at $1,500 per person per year amount to a net benefit of $45 million over ten years. Those estimates are conservative considering the per person per year factor is likely to be higher in 2020.

Also, the *AddressNC* program plans to leverage the address data by offering geospatial services and more traditional services. Geocoding and reverse geocoding from an authoritatively maintained statewide dataset on a continuous basis would be a fantastic resource for state agencies and local governments. Address verification and validation services would support data entry in a state or local government application, e.g., verifying that a citizen-entered address matches a valid address for a map location and for postal communication, and following up if a specific location needs to be added to the statewide dataset. Also, a centralized statewide dataset can support generating bar codes for better mailing rates as well as a registry for tracking return mail, sharing correct addresses, and reducing postage costs.

In addition, CGIA's new home in the Government Data Analytics Center provides an opportunity for *AddressNC* to support traditional analytics, for example, in fraud analysis and longitudinal analysis where standardized data will produce better results in matching addresses and analyzing records. Authoritative address locations will provide advanced opportunities to bring geospatial data to analytics. Geospatial datasets can be leveraged into IT services that are integrated into solutions to create more benefits in the context of enterprise data management. *AddressNC* is at a "whiteboard" stage with partners to clarify requirements and design concepts that will support a commitment to data quality and continuity and result in returns on investments.

North Carolina participated in the National Address Database Summit last year. NC and CGIA have been strongly engaged and represented in the national realm for address dataset development. The Federal Geographic Data Committee has recognized address data as a new them for the National Spatial Data Infrastructure. Address data at the national level will be co-led by the Census Bureau and the US Department of Transportation. Address points are a "highly recommended" dataset for emergency communications and response. Also, CGIA and others in North Carolina participate in various groups working on standards, e.g., the National Emergency Numbering Association (NENA) and the Census Bureau's Geographic Support System Initiative (GSSI).

Mr. Sewash recognized Dr. Luis Carrasco who will be CGIA's lead for the *AddressNC* program. CGIA will finalize the project charter, establish a steering committee, develop a schedule and project plan, and develop a system for gathering requirements for the database and the services.

Mr. Coats continued with an update on preparation for Census 2020. Much work has already been done for the Census that will benefit North Carolina. He explained that we care about the decennial census because it is foundational for representation, funding, and planning. Getting the count correct is vital considering the estimated $1,500 in federal funding per person per year (General Accounting Office 2009). The Census Bureau's planning is complete, and testing is underway. The Bureau will release a partnership plan in the fall. Better preparation and better participation will result in better data. As the cost of a decennial census increases over time, the Census Bureau is looking to technology and innovations to control costs. Address canvassing is being reengineered to reduce time in the field by applying aerial imagery to verify addresses except in locations of new residential development. The Bureau will work to optimize self-response, including online options, and reduce paper. Administrative and third party data will be requested to help fill gaps and avoid undercounts of population. Field operations have been reduced by about half.

Mr. Coats displayed a geographic information timeline. Census redistricting is in progress to establish the geographic components that will be used in creating voting districts, including block boundaries. Census liaisons will be working with boards of elections. There will be an opportunity for GICC input when census geographies are released prior to Census 2020.

Concerning the Boundary and Annexation Survey (BAS), all local governments have opportunities to verify their boundaries for use in annual census surveys and estimates. For NC, the BAS coordinator is the Land Records Management Division in the Department of the Secretary of State. Statewide response on behalf of all jurisdictions is an option and may be a topic of discussion for the Council. Census blocks, block groups, and tracts are the product of BAS, and those boundaries are stable throughout the decade following the census.

Residential addresses within those boundaries are updated and verified in the LUCA process referred to by Mr. Sewash. The 120-day review process may be challenging for some jurisdictions. How the reviews are handled may be determined by the jurisdictions, and the Council may have a role in the process where collaboration is the favored option. Participation is subject to Title 13 confidentiality. LUCA notifications will go out to local governments this year. North Carolina's participation in GSSI, making it one of the best-practice states, will make LUCA easier.

Census Bureau will reach out to tribal and local governments to consider how census blocks might be grouped to best support local planning, e.g., to represent neighborhoods, planning districts, or development zones. This offers an opportunity to define a "Census Designated Place: that is not incorporated but qualifies as a place for reporting statistics. This voluntary Participant Statistical Areas Program will occur in late 2016 and early 2017. Cooperation among local and state organizations is encouraged.

North Carolina is likely to gain at least one seat in the House of Representatives based on population growth since 2010, depending on the number of residents actually counted in 2020. Promotion of Census 2020 begins this fall. Mr. Coats urged the Council to think about what we

want the Census 2020 outreach to be, what are expenses and how do we pay for them, what will be the specific message for North Carolina and its localities, are there products needed, are there partnership opportunities, are grants available, and are there events that will help communicate the message?

Mr. Coats emphasized that preparation for Census 2020 is not just about the census; all should be done for the sake of serving our communities, and to benefit the state over the decade. Resources like NC Parcels and *AddressNC* serve the census but should be done for many other applications.

In a discussion, Mr. Coats explained that the Census Bureau is required to notify the highest elected official in each county and municipality for programs including LUCA. The Census Bureau maintains a list of contacts who responded to the program last time, and a contact list for the BAS program. Mr. Draughn confirmed that follow-up communication from the NC League of Municipalities (NCLM) may be needed for small municipalities to promote participation. Mailing lists from the League and others will be valuable in communications in the months ahead.

Secretary Marshall encouraged a steady drumbeat of promotion that may include, for example, speaking to the NC Association of County Clerks and/or the NC Association of Municipal Clerks. Also, it can be effective to notify a legislator about a jurisdiction in a particular district that is nonresponsive.

Regarding the national map of states participating in the Geographic Support System Initiative, Mr. Duncan observed that among the few states fully participating, statewide parcel data is common between North Carolina, Montana and Utah. Mr. Coats added that the Census Bureau is working with North Carolina and other states with the highest quality geographic data in the Boundary Quality and Reconciliation Process (BQARP) to improve census geography. He shared that North Carolina's reputation within the Census Bureau is very high.

Mr. Duncan thanked Mr. Sewash and Mr. Coats for their informative presentations and ongoing efforts.

As background for a presentation by Richard Taylor, Mr. Duncan observed that North Carolina is involved in national efforts regarding priority geographic data. Last year Mr. Duncan and Mr. Sewash attended the National Address Database Summit, and this June Mr. Duncan (along with John Bridgers and Jeff Brown) attended the National Parcel Data Summit. Federal agencies including the Census Bureau and the Department of Homeland Security are very interested in parcel data. In both summits, a key concern at the federal level is emergency response. Mr. Duncan observed that, since 2013, meetings involving Richard Taylor and several agencies represented on the Council (including NC Department of Revenue, NC Department of Transportation, OSBM, Department of the Secretary of State, NCLM, NC Association of County Commissioners, and CGIA) have considered ways to take advantage of investments in statewide imagery, street centerlines, address points, and parcels that serve many purposes including emergency communications and response. Mr. Duncan emphasized that he wants to be sure the Council has provided everything Mr. Taylor needs for Next Generation 911.

Technical Presentation 2
NextGen 911 in NC (Richard Taylor)

Mr. Taylor shared his passion for 911 and observed that he has spoken to the Council numerous times and is pleased to do so again. He expressed appreciation for the activities of the Council. Mr. Taylor explained that, as local officials are realizing, successful 911 call answering is now a statewide issue, not merely a local issue. It is statewide, in part, because of changes in technology. Last month, 76 percent of 911 calls in North Carolina came from wireless devices. 911 calls are now very mobile; calls from a house over a land line are becoming less common. This heightens the need for Next Generation 911. Using video examples of news reports, Mr. Taylor illustrated the problem of a wireless call from a resident near a county boundary being transmitted from a cell tower in the adjacent county to the adjacent county's emergency communications center. Ensuing confusion during the call about the caller's street address and county of origin wasted valuable time before dispatching emergency responders. Why can technology support a virtual game like "Pokemon Go" anywhere in the state but we cannot locate a 911 call quickly and accurately all the time?

The better way to locate a call from a wireless device is Next Generation 911. First, Mr. Taylor explained what Next Generation 911 is not. It is not a Voice Over Internet Protocol (VOIP) telephone system, it is not receiving text messages, it is not connecting to a third party provider. Next Generation 911 is very simple. It is going from an analog telephone system to a digital system. Next Generation 911 requires standardized interfaces from call and messaging systems, and processing of all calls including multimedia messaging and automatic crash data from car devices. Crash data can inform 911, responders, trauma centers, and agencies for coordinated incident response.

NC is still pre-Next Generation 911 without all the functionality in place. NC has "NG911 lite" with some counties having capable systems (e.g., Johnston and Durham) but not being able to communicate with each other. Today's analog system is simple. Adding in digital signals from wireless carriers and unregulated VOIP makes it difficult to interface all the signals.

Mr. Taylor observed that there has been a lot of work and a lot of talking over a long time but NC is still not where it needs to be. He quoted Walt Disney: "the way to get started is to quit talking and begin doing." The "doing" accomplished to date includes a Request for Information in 2014 for the network, hiring technical consultants in 2015, completing a Concept of Operations and a cost analysis in 2015, and this year, completing a conceptual design for the emergency service network, a design for call handling, and a design for a network assistance center. Requests for Proposals (RFP) are in progress: RFP responses were received for the emergency service network with design completion expected December 2016; RFP for the network assistance center was approved at the last NC911 Board meeting, to be issued soon, with design completion expected January 2017; and RFP for GIS call routing to be issued this year with design completion expected April 2017. Implementations of these systems are planned for 2017, followed by intensive testing. By 2018, the first Public Safety Answering Point (PSAP) will be connected, and all 119 PSAPs will be connected by 2020. The 911 Board is working very hard and fast on an aggressive schedule.

There is a $13 million cost displacement (current costs incurred by PSAPs) as the cost of Next Generation 911 ($27 million) will be absorbed by the NC 911 Board, not by local governments. Also, the 911 Board is forming new partnerships with information technology and GIS; the GICC is part of the work going on "behind the curtain" in Next Generation 911.

As explained on clips from television programs, the current analog system cannot locate 100 percent of emergency calls, with tragic consequences in some cases. The story of a caller in Cary whose call was answered across the county line in Chatham County led Mr. Taylor to consult with CGIA staff about geographic data across county boundaries. For example, the Statewide Orthoimagery Program now delivers county imagery products seven miles beyond the recipient county's boundaries to cover cell tower ranges into neighboring counties. After learning that Chatham County 911 lacked geographic information for neighboring Wake County, Mr. Taylor called Mr. Sewash as the subject matter expert on geographic information for the 911 Board. Mr. Sewash found and downloaded an online copy of the Wake County address database within 90 seconds. Mr. Taylor concluded by stating that the data and technology are available for Next Generation 911, and lives are at stake; we need to be partners to make the system work.

A discussion followed. Mr. Duncan observed that the time frame for implementing Next Generation 911 has advanced to 2017. He commented that Council members have experience in required and recommended datasets and standards, and some are uniquely familiar with address data including Mr. Sewash, Mr. Coats, and Mr. Baker.

In response to questions from Allan Sandoval and Dan Madding, Mr. Taylor explained that receipt of a text message in a Next Generation 911 system is not based off an IP address. Text messaging operates on a different network than voice on a cell phone. The voice network can get clogged up, but the text network does not. There is no location information that goes with a text message; it is routed to the nearest cell tower. Also, on a VOIP phone, the user can change its address instead of defaulting to the geographic center of the country which happens to be a farm in Kansas.

Steve Averett commented that local governments have non-standardized addressing models that complicate 911 addressing; local governments need assistance to standardize their addressing models. Among different jurisdictions, addressing models may have been designed for different purposes that may not have included emergency response. Mr. Taylor responded that a requirement for standardized addressing may need to come from the General Assembly; the Council may have a role in this. He explained that without standardized addressing, Next Generation 911 will need a third party to take (for example) address data from High Point, Greensboro, and Guilford County and integrate it into a dataset that supports routing for that region. Routing will no longer be done by a Master Street Address Guide (MSAG), it will be geospatial routing. In the absence of a national requirement to adopt a specific standard, North Carolina may or may not adopt the forthcoming standard from NENA.

Mr. Taylor further explained that the simplest way to determine the county of origin of an emergency call is to display the call location transmitted by a wireless 911 call as a latitude/longitude point, along with orthoimagery and county boundaries. If a point falls outside the jurisdiction of the PSAP, communication with the appropriate PSAP can be initiated. This determination should not depend on the 911 caller's street address or the caller's knowledge of PSAP jurisdiction.

Mr. Farley commented that maintaining a statewide aggregation of geographic information, e.g., street centerlines, may be more challenging than aggregating the data the first time. A system needs to capture 100 percent of changes and integrate changes with correct and consistent attribution with a turnaround as short as 48 hours to support 911. For example, there are changes in the statewide roads network every day. NCDOT is behind on edits to its new statewide dataset by two to three months. Mr. Taylor commented that maintenance of data on the local level occurs daily and is a massive undertaking.

Mr. Madding raised questions for further consideration. If NC 911 Board delivered standardized street centerlines and standardized address points along with orthoimagery in the county-plus-seven-mile area, could those be used in Computer Aided Dispatch (CAD) systems? Would CAD systems be capable of using/translating those datasets that extend beyond a PSAP boundary?

Mr. Duncan thanked Mr. Taylor for the presentation. As Chair of the Council, Mr. Duncan explained that his bottom line is to make sure that we leverage what we have already—the resources we spent time, money, and effort to create, especially regarding *AddressNC* and NC Parcels—to serve the NC 911 Board and serve the citizens of this state in a much better way. Mr. Duncan suggested the Council could work on developing a standard to take to the General Assembly. Discussions in the past centered on getting good roads, parcels, situs addresses in parcel data, and address points. Mr. Duncan thought implementation would be in a few more years, but the 911 Board is planning implementation for next year. He asked if there is anything else the Council needs to be doing in this accelerated schedule to leverage our geographic data and knowhow to meet needs of the NC 911 Board in 2017? Mr. Duncan offered to meet with Mr. Taylor in the next two weeks to consider that question and make sure the partnership is alive and well. Mr. Taylor concurred and commented that Mr. Johnson and his team have done an outstanding job for which Mr. Taylor is grateful. He also thanked the Council and Mr. Duncan for being very responsive and helpful.

Report

Working Group for Professional Land Surveying (PLS) and GIS (Bob Brinson)

Bob Brinson, chair of the working group, explained the origin of the group. The Council, in its May 11 meeting, commissioned the working group. Legislation had passed in 2014 and 2015 that the Council had missed, relating to the licensing board for surveyors and engineers. Specifically, General Statute 89C-25(7), until 2014, included exemptions from engineering and surveying for state and local government employees. That section was replaced with a new Section 7a that did not include language that would exempt government employees. A change in Section 7a in 2015 added "public utility service" as an exempt activity.

There was good discussion at the last Council meeting about the legislation and about GIS and surveying and what the changes mean and their impact. The Management and Operations Committee created a charter for a working group and appointed 20 members from state and local government and private GIS service providers. The first meeting of the working group took place on August 2 with 17 of the 20 members. Visitors to the meeting included representatives of the NC Board of Examiners for Engineers and Surveyors (NCBEES) and the NC Society of Surveyors. Prior to the meeting, there were communications concerning when and how to engage NCBEES in the working group process. Mr. Brinson's approach is to commit to having a discussion with NCBEES after the

working group clarifies language, definitions, concerns and impacts on its own to prepare for a cogent discussion. During the working group meeting, the members reviewed the statute changes and agreed to organize information and examples in the format of use cases in the practice of GIS. The group will document examples of specific practices and how each relates to GIS and licensed surveying. There will be some hypothetical cases and actual cases documented. The objective is to prepare for a meeting with NCBEES that is structured around use cases and a set of shared documents.

The meeting on August 2 was a good opportunity for members to speak and identify "touchstone" documents that are pertinent for discussions. For awareness of some of the documents identified, one is "Inclusions and Exclusions" from the National Council of Examiners for Engineering and Surveying (NCEES). This is in a new version of the Model Law (2015, see page 4). Previously, a "Data Layer Inclusions and Exclusions" list was developed by the Surveyors Model Law Working Group (2006-2008) in cooperation with NCBEES. A third document is the Geographic Information Science and Technology Body of Knowledge (University Consortium of Geographic Information Science) that describes GIS practices.

The next actions will include John Farley leading the effort to develop use cases. The group will use templates and look for common patterns in practices. Referring to the advisory letter from the Attorney General in 2010 concerning the exemption for government employees, Mr. Brinson reported that the working group may ask for the advisory opinion to be refreshed in reference to the changes in the statute in 2014 and 2015. The next meeting of the working group will be scheduled after development of use cases.

Mr. Brinson invited comments from working group members. Mr. Rankin added that there is overlap between the practices of GIS, surveying, and engineering in the context of evolving tools and technology; there is a lot to digest. He urged collaboration between the Council and NCBEES and regular conversations to develop understanding between respective leadership. Mr. Brinson agreed that ongoing discussions are valuable given the gray areas between professional practices. Mr. Thompson observed that direct communication between the Council and the Board is valuable. Mr. Johnson will send documents to the working group.

Committee Reports

Statewide Mapping Advisory Committee (SMAC). Ryan Draughn, SMAC chair, reported that the committee met July 20. Committee members reported on development, maintenance, opportunities, and issues for Geospatial Framework datasets for North Carolina. SMAC updated its Work Plan for 2016-2017 and will finalize this month. Working groups are active and making progress including the Stream Mapping Advisory Committee, the Metadata Committee, and the new Working Group on the 2022 Reference Frame. Mr. Draughn called on Tom Morgan, one last time, to report on the Working Group for Seamless Parcels with a request for action by the Council.

Mr. Morgan reported that the Working Group for Seamless Parcels led the update of the Council's data content standard for parcels, adopted in 2005. The group took advantage of the research and analysis of the NC Parcels grant project and the master schema applied by NC Parcels since 2014. That schema is consistent, also, with the core parcel data standard of the Federal Geographic Data Committee. The working group looked at what fields were not being populated in the NC Parcel

Transformer and considered what additional fields would add value to statewide parcel data. The group's revisions to the parcel content standard were completed in June.

Mr. Draughn explained that SMAC reviewed and approved the update in June, and Mr. Johnson distributed the revision to the Council on July 14 for review and comment. Council members had no proposed changes to that version. Therefore, SMAC recommends adoption of the revised parcel data standard by the Council.

Mr. Brinson moved that the Council adopt the revised parcel standard. John Cox seconded the motion. There being no further discussion, the Council voted.

DECISION: The Council approved adoption of "Content Elements for Statewide Publication of Core Geospatial Parcel Data, Version 2"

Secretary Marshall directed members to the many papers completed by Mr. Morgan, available from the Secretary of State's Land Records Management Division website.

Mr. Morgan added that the last document he completed before retirement is a "Best Practice Manual for Digital Cadastral Base Mapping in North Carolina." This is not a standard; it explains practices including steps to ensure that land records management is consistent with NC statutes. This is a living document: contact Rich Elkins or John Bridgers with suggestions, comments, and questions to keep the document current. Finally, Mr. Morgan added that the spring update of NC Parcels resulted in new parcel data for 94 of 100 counties to date.

Mr. Draughn completed his report by explaining that SMAC has put a lot of work into refining its guidance document for the NC Board on Geographic Names and obtained valuable advice from the US Board on Geographic Names during the last SMAC meeting.

Anne Payne commented that having both a standard and related best practices for parcels is wonderful. It has been done for some of the standards over the years, and she would recommend that SMAC consider including a document on practices as a companion to any standard adopted by the Council to help make the standard operational.

Local Government Committee (LGC). Kathryn Clifton, LGC chair, reported that the committee met on May 18, and the main topic of discussion was the statutory changes related to PLS and GIS. County and municipal governments and lead regional organizations all rely heavily on GIS and development of geospatial data for business processes and making informed decisions. LGC is grateful to have representation on the working group and looks forward to continuing the conversation.

LGC continues to work on ways to communicate the value of GIS. Instead of an e-book as envisioned previously, an online "story map" is a more practical solution in terms of time requirements. A story map is in progress that displays projects that won the Herb Stout Award and other examples of GIS-based solutions that are innovative, save time and money, and enable local governments to do more. This can be a crowd-sourced tool that can help tell our story. Asking local GIS managers "are you on the map?" may be an incentive to add examples with brief descriptions and images linked to their respective location in North Carolina. The LGC work plan for 2016-2017 is in progress and will be finalized at the next meeting on August 24.

For the purpose of strengthening the committee and its representation at meetings of the Council and the Management and Operations Committee, LGC proposed revisions to the LGC Bylaws that add one additional member to be appointed by the Council Chair; clarify the election of the LGC Chair; establish a Vice Chair elected by LGC members; and update the Council's statutory reference. The M&O Committee reviewed and approved the changes. LGC recommends Council approval of the revised LGC Bylaws.

Ms. Payne made a motion to approve the revised LGC Bylaws, seconded by Mr. Taylor. There being no discussion, the Council voted.

DECISION: The Council approved adoption of the revised Local Government Committee Bylaws.

State Government GIS Users Committee (SGUC). John Farley, SGUC Chair, reported that the Executive Committee discussed the Enterprise License Agreement and the Master Purchasing Agreement with Esri. For the latter, it is extended through February 2017 while negotiations resume between DIT and Esri to specify terms and conditions. Meanwhile, the committee has advised the Department of Information Technology on a GIS services contract that will enable state agencies to engage GIS technical services to meet short term, specific needs from selected vendors on a task order basis. A draft RFP is in progress.

SGUC continues to discuss issues relating to PLS and GIS. Also, SGUC members continue to share knowledge and experience about open source software solutions for GIS applications and GIS license management. The next general meeting for these and other topics will be held on August 25. SGUC's draft work plan for 2016-2017 will be finalized in the coming weeks.

Mr. Farley added that NCDOT's statewide street centerlines project is no longer engaging Esri; work is being done by NCDOT in-house. The expectation is to go live and start processing the backlog of roads in October, and achieve full publication of statewide roads in March 2017. There are centerlines that can be used in the interim as needed; attribution may not be complete but geometry will be updated on schedule.

***Federal Interagency Committee (FIC*).** Doug Newcomb, FIC chair, reported that FIC will have a meeting on August 25 at USGS in Raleigh. Presentations will feature recent land cover classification projects: NOAA's Coastal Change Analysis Program, US EPA and urban land cover for the *EnviroAtlas*, and US Fish and Wildlife Service for vegetation mapping.

GIS Technical Advisory Committee (TAC). Dan Madding, TAC chair, reported that the mobile GIS practices document is complete and on the GICC website. He explained that additional information about open source solutions for mobile GIS are welcome. He also invited technical questions or tasks from the Council for TAC this fiscal year.

Management and Operations Committee (M&O).
Mr. Duncan summarized work of the Management and Operations Committee. Work on the Council's annual report is underway. Instead of a report with typical sections on who we are, what we are, why we are, what we have done, and goals for the next year, Mr. Duncan recommends a different format for the annual report. The approach will focus on resources developed over the years under the Council, how those resources can be leveraged, particularly

for Census 2020 and Next Generation 911, and how the Council is integral to practical applications of geographic data. He expects to have a draft completed before the next Council meeting.

Statewide Orthoimagery Program Update

(See - https://it.nc.gov/event/gicc-quarterly-meeting-8102016)

Tim Johnson provided a brief update on the Statewide Orthoimagery Program. He introduced key CGIA staff on the project team, Darrin Smith and Ben Shelton, and welcomed Rich Elkins to the project team. Currently, the team is focused on visual quality control for imagery in the 2016 project in the 27 coastal counties. Quality control is on schedule. Nine counties have been released for local quality review to date including Pender, Bertie, Martin, and Onslow this week. Hertford, Pitt, Green, Lenoir, and Duplin will be released next week. The team has sent Camp Lejeune the imagery within its footprint for the Marine Corps' internal review. The next phase is the Eastern Piedmont including all of Fort Bragg and Camp Mackall. The Qualifications-Based Selection process will take place this summer, preceded by a team meeting this Friday. The goal is to get contracts in place in December well before the leaf-off flying season in early 2017.

NC OneMap Update

(See - https://it.nc.gov/event/gicc-quarterly-meeting-8102016)

Brett Spivey, *NC OneMap* Application Developer, reported on data updates since the last Council meeting. Two additions to the NC OneMap Geospatial Portal: (1) orthoimagery is now available as a county-based mosaic in MrSID compressed format; this give consumers an even larger area to get in a single download as needed (search on "mosaic" and navigate to a list of county files); and (2) statewide parcels are now downloadable as a statewide file geodatabase refreshed weekly to supplement web services and county downloadable parcel datasets (search on "parcels" and navigate to a list of county downloadable files).

GICC Member Announcements

None.

ADJOURNMENT

There being no other business, the meeting was adjourned at 3:10 PM. The remaining Council meeting for 2016 is scheduled for November 9 (a revised date).

Presentations and reports for this meeting are on the Council Website:
https://it.nc.gov/event/gicc-quarterly-meeting-8102016