North Carolina
Geographic Information Coordinating Council

Minutes
November 8, 2017

PRESENT
Stan Duncan (Chair), Bob Brinson (Vice Chair), Steve Averett, Nate Humphrey (for Wesley Beddard), Eric Boyette, Marc Burris, Kathryn Clifton, Greg Cox, Hope Morgan (for John Dorman), Dianne Enright, Kristian Forslin, John Gillis, Jason Hedley, Matt Helms, Debbie Joyner, Bliss Kite, Sarah Koonts, Dan Madding, Elaine Marshall, Chris Nida, Josh Norwood, Michael Pjetraj, Alex Rankin, Allan Sandoval, Tony Simpson (for NCDOR), Richard Taylor, Silvia Terziotti and Ron York.
Staff: Tim Johnson, CGIA

ABSENT
Paul Badr, John Correllus, John Cox, John Farley, Joanne Halls, Scott Lokken, Linda Millsaps, Joseph Sloop, and Lee Worsley

PROCEEDINGS

A meeting of the Geographic Information Coordinating Council was held in Training Room 240 of the Albemarle Building in Raleigh, North Carolina.

Welcome and Chair Announcements
Stan Duncan, Chair, called the meeting to order and welcomed Council members and visitors.

He welcomed new Council members appointed by Governor Cooper on November 6. Two were in attendance:

> Jason Hedley, Division 5 Locating Engineer, NC Department of Transportation
> Debbie Joyner, private citizen from Rocky Mount, NC

Three were not available to attend today because of earlier commitments:

> Paul Badr, President, Geospatial Division, GPI
> Scott Lokken, Mid-Atlantic Regional Advisor, National Geodetic Survey
> Lee Worsley, Executive Director, Triangle J Council of Governments

Mr. Duncan recognized the Governor's appointment of Kathryn Clifton of Davidson County to a new role on the Council, representing the NC Association of County Commissioners. Also, Steve Averett of the City of Greensboro was reappointed to the Council, representing the NC League of Municipalities.

Mr. Duncan also welcomed back Alex Rankin, Concord Engineering & Surveying, as a voting member of the Council. Mr. Rankin served a three-year term 2011-2014 followed by three years as an advisory member.

Mr. Duncan thanked Council members who continued to serve after their terms ended in May 2017.
> Joseph Sloop, Forsyth County and Statewide Mapping Advisory Committee Chair
> Silvia Terziotti, USGS Liaison for NC and Federal Interagency Committee Acting Chair
> Josh Norwood, GIS Administrator, Pender County

Mr. Duncan presented certificates of appreciation to Ms. Terziotti and Mr. Norwood in person and will mail certificates to other members whose terms ended in 2017.

Also, Jack Brinson has retired from the NC Department of Labor, leaving a vacancy in the at-large state agency slot. Mr. Duncan expressed appreciation for his service on the Council and wished him all the best in retirement. Governor Cooper is expected to appoint a new member in this slot soon.

Mr. Duncan also welcomed Nate Humphrey, sitting in for the Community College System. He is Director of Training Standards, Workforce and Continuing Education.

Mr. Duncan congratulated the City of New Bern, led by Alice Wilson, as recipient of an Urban and Regional Information Systems Association (URISA) Exemplary Systems in Government Award for a distinguished single process system. The application assisted the City in finding new uses for City-owned vacant lots and abandoned properties. This marks the second year in a row in which a GIS initiative from North Carolina has been recognized by URISA for an award (last year URISA honored the NC Parcels Project with a similar award).

Approval of Minutes
The minutes of the August 9, 2017 meeting were approved for adoption with no changes.

Department of Information Technology Update
Mr. Duncan welcomed Eric Boyette, Secretary of the Department of Information Technology (DIT) and State Chief Information Officer, to his first Council meeting. Mr. Boyette was appointed to this position in April 2017 and currently leads Statewide IT planning and operations. He brings more than 20 years of experience in state government in various roles, with responsibilities ranging from technical to financial practices. Prior to his current role, he held several roles in the NC Department of Transportation, including Chief Information Officer, Inspector General, and Division of Motor Vehicles Commissioner. He also served as the NC DIT Deputy State Chief Information Officer for Solution Delivery.

Mr. Boyette thanked the Council for the invitation to speak. He understands how to use geospatial information and its importance from his work with transportation, supported by NCDOT's GIS Unit. He also emphasized the importance of cyber security in information technology. A strategic objective is to make sure we stay safe and stay vigilant every day. Training is part of the solution in protecting our data. Another objective is to improve broadband access, especially in rural areas to solve the "homework gap" where students lack the hardware and connectivity they need at home to keep up with classwork. An example of bridging the gap is a successful program in Charlotte by a nonprofit organization working with West Central Charlotte High School. The organization employs high school students at double the minimum wage to refurbish laptops donated by local vendors. Student

learn how to refurbish computers, and the program offers the computers to underprivileged students for $50 to help bridge the homework gap. Sprint donated MiFi cards to ensure connectivity for those computers.

Another key element in the strategic vision for DIT is customer service. The department named a Chief Customer Officer to work internally on communication and, in turn, improve communication with state and local governments. DIT is working on applying all the data it has to help solve the opioid epidemic, a priority initiative of the Governor. GIS can be used to help track prescriptions and patients and other data in collaboration with the Department of Health and Human Services to better understand problems and find solutions.

Concerning the value of GIS, Mr. Boyette pointed out the important role of GIS data in NCDOT's 20-year plan for transportation investments. Geospatial data informed strategic decisions.

Mr. Boyette thanked the Council for its important work. He acknowledged the contributions of those who have served on the Council and expressed appreciation for new members accepting the challenge of serving. He urged members to reach out to him with any questions or requests.

Committee Reports

Statewide Mapping Advisory Committee (SMAC). Jeff Brown reported on behalf of Joseph Sloop, SMAC Chair, who could not attend today. Regarding plans, priorities, activities and initiatives, SMAC emphasizes Geospatial Framework Datasets for investment of time and money as the foundation of base mapping in North Carolina: orthoimagery, elevation, transportation, hydrography, parcels, addresses, jurisdictional boundaries, and geodetic control. The Framework data needing the most improvement is hydrography – streams and water bodies lack a single representation that could better serve multiple business needs.

Priority applications of the Framework datasets include Next Generation 911 where geospatial data from local governments, integrated into statewide datasets, are vital for emergency communications. SMAC has developed an opinion paper that explains the role of geospatial data in Next Generation 911, the importance of a standard (National Emergency Number Association or NENA) for geospatial data, and the need for coordination in local data management. Kat Clifton, Local Government Committee Chair, will present the paper for Mr. Sloop after this report.

In another important application, Framework datasets have been shared with the Census Bureau to improve the geographic information tied to complete address lists and complete population counts.

SMAC also considers the quality of and value of other geospatial datasets important to stakeholders. For example, SMAC formed an ad hoc working group to report on business needs for land cover data to represent a surface classified by types of cover—forested, cultivated, and developed land for example. Work will include considerations of classification schemes, resolution, frequency, and use cases. Dr. Kenneth Taylor, State Geologist, is the chair of the working group.

In response to questions from Mr. Duncan to consider for this meeting, SMAC sees a need for the Council to support Next Generation 911 coordination for effective data sharing, valuable to state and local GIS data managers. SMAC promotes continued coordination between state and local governments for sharing Framework datasets, especially relating to addresses, roads, and parcels

where authoritative datasets are managed by local governments and are aggregated and standardized into statewide datasets.

Regarding Council programs and initiatives that benefit SMAC and the geospatial practitioners it represents, *NC OneMap* is an essential Council initiative that benefits statewide mapping. Finding, getting, using and trusting common datasets enables users to focus efforts on analysis and decision support.

Opportunities for communicating the value of GIS within the greater scope of enterprise data management include products that demonstrate the value of GIS. It is challenging to quantify the benefits in many cases. Opportunities to communicate value include the NC GIS Conference, GIS Day (November 15), Council member presentations on the Value of GIS, LGC's story map – "Are you on the map?" Mr. Sloop recommends promoting products and successes to upper management in brief descriptions at every opportunity. Considering visual products, linking applications to social media can be effective. The goal is to get an application used, whether the role of GIS is apparent or not.

On behalf of Mr. Sloop, Ms. Clifton presented an opinion piece from SMAC on the topic of geospatial datasets for Next Generation 911. Local government geospatial data managers are responsible for compiling and maintaining datasets that are required by Next Generation 911. The National Emergency Number Association (NENA) Next Generation 911 GIS Data Model, though not yet finalized, is an important standard for the North Carolina GIS community. The standard should be achievable by even the smallest local government GIS operations. The LGC reviewed the standard and found it to be a useful tool for local governments. The document includes survey findings about local government data management for road centerlines, Public Safety Answering Point (PSAP) boundaries, and emergency service area boundaries. Strongly recommended datasets for Next Generation 911 include address points, county boundaries, and municipal boundaries. These datasets are widely used in local government departments as well. With Next Generation 911, geospatial datasets are essential no matter what computer aided dispatch software is used locally. Standards and consistency will be of great importance as Next Generation 911 is implemented across the state.

Richard Taylor commented, speaking on behalf of the NC 911 Board and 117 PSAPs across the state, that he is pleased the GICC has recognized the need for the NENA standard. He expressed concerns of which the GICC should be aware. The NENA GIS standard is not final and adopted; it has been in draft form for many years. This is disappointing. The lack of an adopted standard leaves a lot of room for contractors to format data in different ways. He expressed appreciation that the SMAC report includes information from the NC 911 Board's Next Generation 911 Committee and that CGIA has participated on that committee. Data starts locally and response starts locally. However, without a standard, lives can be and have been lost. Mr. Taylor emphasized the need for a standard to be adopted and implemented in all 100 counties and the Eastern Band of Cherokee Indians. North Carolina has contracted with AT&T to build the network, and it will rely on consistent geospatial data for routing calls. There is a financial cost for a contractor to convert local data to a standard. He encouraged the Council to communicate the SMAC opinion to NENA with emphasis on the need to adopt and implement the GIS standard. He added that a Request for Proposals for technical services including geospatial will be issued by the Department of Information Technology for Next Generation 911. The plan is to implement Next Generation 911 completely in North Carolina by 2020. GIS is the key to Next Generation 911 and without standards in place, implementation will be costly.

Mr. Duncan confirmed Mr. Taylor's recommendation that the Council send a letter to NENA as soon as practical to encourage adoption of the GIS standard. Mr. Duncan thanked SMAC for the timely paper.

Mr. Duncan was glad to learn of SMAC's working group to analyze business needs for land cover. He pointed out the value of land cover data to agriculture, forestry, horticulture, and commerce.

Local Government Committee (LGC). Kathryn Clifton, LGC Chair, reported the committee met on November 1 and discussed questions posed by Mr. Duncan. On the question of high-level policy and direction for which LGC sees a need for the Council to consider and support, the LGC reviewed and concurred with the Next Generation 911 opinion paper produced by the Statewide Mapping Advisory Committee. LGC recognizes the importance of creation, maintenance and sharing of locally managed geospatial data. LGC also recognizes that local governments have a variety of work flows and specifications for street centerline and address data, datasets that are vital for Next Generation 911. Direction to coordinate integration of local data into statewide datasets will continue to be valuable to local governments, for example the approach used for regular maintenance of the statewide parcels dataset.

LGC recommends Council support for extending the functionality of statewide roads and addresses to enable vehicle routing and geocoding services, for example, to make the data even more valuable. Ms. Clifton noted that local governments purchase third party products related to address validation and vehicle routing; those functions could be provided as a common state and local government resource.

Looking ahead, review of Council priorities included attention to the new 2022 Reference Frame and how it might be implemented by local governments.

Professional development opportunities are valuable to local government GIS practitioners. The biennial NC GIS Conference is highly valued. LGC members were thrilled by the plan to add a third day to the conference and expressed appreciation for the online videos of conference presentations. LGC does not expect the Council to offer training opportunities, but communicating opportunities will continue to be important, including but not limited to workshops by the Department of the Secretary of State, Carolina URISA, NC Arc User Group, and other professional organizations.

LGC continues to have interest in to both GIS and Professional Land Surveying issues as they affect local and regional governments and private contractors who work for local governments.

Concerning the value of GIS, LGC took notice of the use of social media related to the 2017 NC GIS Conference. LGC recommends exploring opportunities with social media to promote the GIS community, *NC OneMap*, and the GICC. Outreach to educational institutions should be included to benefit students but also promote the work of the Council. Also, LGC recognizes disparity in GIS capacity among local governments across the state and would like to find ways to better support those with the least resources.

LGC continues to manage the Story Map – "Are You on the Map?" to display the value of GIS. LGC seeks more content for the map.

State Government GIS Users Committee (SGUC). Dianne Enright, SGUC vice chair, reported that the committee has a work plan that includes the following tasks:
- Continue to collaborate with the Department of Information Technology as state agency IT staff transitions to DIT.
- Share information and knowledge with DIT in support of enterprise data management.
- Develop an enterprise strategy to manage GIS licenses for efficiency and effective application of GIS technology and practice.
- Assist DIT in administering procurement of GIS software and services. This includes the Enterprise License Agreement with Esri for GIS software, due for renewal in the next fiscal year, and the DIT contract for limited GIS services that was established this year.
- Share knowledge among state GIS professionals regarding geospatial data, applications, and practices.

SGUC members contribute to review of proposed standards (e.g., road centerlines update), implementation of standards (e.g., metadata), development of recommended practices, and evaluation of technical solutions (e.g., open source software as part of the Technical Advisory Committee). SGUC also supports GIS professionals by managing software training and participating on the Working Group for PLS and GIS.

Concerning policy, the SGUC Executive Committee has discussed the value of local government data sharing for statewide datasets (roads, parcels, address points and more) and acknowledged the need for requests for local data to be coordinated in ways that make local data sharing efficient, predictable, and reliable.

Geospatial data has value within the scope of enterprise data management and could have more value with more structured geospatial data governance. Stakeholders in geospatial enterprise data management are well represented on the Council. Determining a role for the Council in geospatial data governance will be important.

GIS plays a vital role in numerous applications that communicate issues and solutions such as transportation investment options, hazard risk, disaster recovery, land conservation in the vicinity of military installations, and hunting and fishing opportunities, to name a few. For a general audience, online thematic maps and story maps help communicate the value of GIS.

Federal Interagency Committee (FIC). Silvia Terziotti, Acting FIC Chair, reported that this has been a transition year for federal agencies. Yet, collaboration between federal agencies has been strong related to geospatial data development and sharing. FIC spent time considering how to best collaborate on geospatial data for emergency response and disaster recovery, and to clarify various federal datasets available to local and state emergency management operations. FIC will share more information about GIS applied to wildfires in western North Carolina by federal agencies and the Eastern Band of Cherokee Indians.

Collaborative developments in federal geospatial data include hydrography and elevation to serve many business needs in federal, state, and local governments. The approach is to develop data that meet many needs across agencies. Also, Federal agencies have done a lot of work and shared information about classified land cover. NOAA, USGS, US EPA, and US Fish and Wildlife have much technical knowledge and experience to share about satellite technology, imagery, and image analysis.

The National Hydrography Database (NHD)-Plus high resolution dataset is being developed nationally by river basin. USGS continues work on Ele-Hydro, generating hydro line work from the same data used to represent elevation.

The data dictionary for streams integrated with elevation will be an optional part of the new LiDAR specifications to be released soon. An appendix will focus on capturing streams when flying LiDAR for integrated products to meet multiple needs.

USGS completed studies of hydrography requirements and benefits for states and the nation. Likewise, the 3-D Nation study is kicking off soon. Like the USGS study a few years ago that found value in specific types of elevation data that justified investment in LiDAR, this study seeks state and local participants to provide current information about elevation data needs. Interviews of selected state and local contacts in North Carolina will be included.

As part of FIC's work plan for 2017-2018, FIC members continue to serve on various Council committees and working groups to share knowledge and information.

GIS Technical Advisory Committee (TAC). Dan Madding, TAC Chair, reported progress on a document intended to be a guide to understanding current open source GIS software. Mr. Madding acknowledged contributions from Doug Newcomb, US Fish & Wildlife Service; Scott Madry, UNC Chapel Hill; Ed Shipman, NCDOT GIS; Jeff Essic, NC State University; Tobin Bradley, Mecklenburg County, and CGIA staff.

The document starts with two use cases. At the federal level, National Geospatial Intelligence Agency (NGA) has implemented open source GIS software for security reasons, not for financial reasons. Open source software features open code that is suitable for the extensive security measures required by NGA. In North Carolina, the State Board of Elections is transitioning to open source solutions to replace proprietary software. The document is brief but offers a lot of information. In the absence of a detailed online comparisons of software of greatest interest for this report, the group developed a matrix showing desktop GIS software functionality by three software packages (ArcGIS, QGIS, and GRASS). The document is 98 percent complete. TAC is requesting final comments from the group, will do final formatting, and will ask for review and comment by LGC, SGUC, and FIC. Council members may request a draft copy from Mr. Madding. The final document will be accessible from the TAC portion of the GICC website before the end of the year.

In response to a question from Mr. Duncan, Mr. Madding commented that he has noticed instances of open source GIS software in small companies. He expects more interest in local and state agencies for specific functionality. Advisory Member Marc Burris (State Board of Elections) confirmed there are lots of options for software and possibilities for mixing and matching components in hybrid commercial/open source solutions to meet business needs. Allan Sandoval commented that the Department of Commerce began using the open source QGIS desktop software for cost considerations and found the performance to be excellent for some complicated tasks. Commerce is considering QGIS for field staff to meet a need to make simple maps.

2017 Annual Report – Data Driven Collaboration

Mr. Duncan described the intent to look long term, beyond annual accomplishments, and highlight the Council's opportunities to add value to Next Generation 911 and Census 2020. Priority geospatial datasets for those efforts, including addresses, have value for many other state and local business needs on a regular basis long term. In the absence of Bob Coats, the Governor's Census Liaison, who is participating in regional workshops, Mr. Duncan emphasized the value of local government participation in the Local Update of Census Addresses. He tells counties they cannot afford to miss participating, even if time and resources are limited. He expects North Carolina to gain one or two congressional seats, meaning defendable population counts will be essential.

The Annual Report is being reviewed by DIT before it is submitted to Secretary Boyette and then the Governor and the leadership of the General Assembly. DIT's Nate Denny, Senior Advisor for Legislative Affairs, has assisted with review, editing and distribution in the department.

Mr. Brown continued on the topic of the Annual Report by initiating a discussion of Council Direction 2017-2018 and beyond. As background, he commented that "data driven collaboration" has been a focus of the council, centered around statewide datasets that offer a framework for base mapping and geospatial analysis (orthoimagery, elevation, roads, address points, parcel boundaries, jurisdictional boundaries, streams and water bodies, and geodetic control). The intent is to add value to a wide range of applications (economic development, emergency management, transportation planning, forest management, precision farming, state and local taxation, recreation and many more. The Council and its committee strive to make statewide geospatial data complete, consistent, current, well documented, and easy to discover and use. Other words that describe statewide geospatial data include authoritative, trusted, and curated.

To frame a discussion, Mr. Brown posed four questions for consideration.
1. How can we collaborate to improve or expand statewide geospatial data?
2. How can the Council support more applications of geospatial data to meet business needs and to meet the challenges ahead?
3. What are ways to collaborate for more integration of geospatial data in information technology for expanded benefits?
4. How can the Council benefit your part of the GIS community in North Carolina?
5. How can the Council do more to increase the value of geospatial data to the public?

Mr. Brown asked Council members what they are perceiving from their organizations and/or professional associates, what guidance they can offer, what opportunities they see, and what issues need attention. He reminded members of the availability of committees and working groups and staff that can accept assignments and inform the Council.

In response to question 1, members described collaborative work that can be done to improve or expand statewide data.
- Steve Averett pointed out the emergence of "smart cities" where geospatial datasets play a key role related to sensors for tracking traffic flows, pedestrian patterns, water usage, and public services. He sees value in finding ways for municipalities to discover solutions and share knowledge, experience and data for mutual benefits.
- Marc Burris emphasized the value of discovery of geospatial data on an enterprise level, including data managed by state and local government entities in the enterprise. More

knowledge of what is available could inform collaboration on creating, expanding or improving datasets. His particular interest is in current residential address data.

- Josh Norwood explained his greatest challenge as a county GIS coordinator is addressing—what to address, when to address, how to address, getting upper management support for addressing, and operating in the absence of a statewide addressing standard. Consistency within jurisdictions as well as consistency across jurisdictions are challenges. Local governments have their own ordinances that can be dynamic and specific business needs can vary from place to place. He acknowledged the challenge of the Local Update of Census Addresses (LUCA) by the Census Bureau especially for small jurisdictions, again in the absence of a standard approach to addressing. Review of addresses is complicated, also, by new Census requirements for recording housing units at multi-unit addresses. He expects there are more efficient solutions for address data management that would benefit managers and consumers of geospatial address data.

- Greg Cox observed that commercial operations successfully deliver packages to commercial and residential addresses. Vehicles are going to correct addresses every day. What are their sources of addresses and what can public address data managers learn from private sector success? What is the disconnect between public and private address data?

- Mr. Sandoval commented that improving and expanding geospatial data will involve enterprise data management. Data managers need to think long term and more broadly about their data and its value to a range of potential applications. For example, a new grant program gathering information about service delivery needs to include location for later spatially enabled analytics about impacts. There will be value in planning ahead on what is collected and standardizing core fields that should be collected for any dataset.

- On the topic of water and sewer service areas, Mr. Cox explained the difficulty in obtaining copies of geospatial representations of public water and sewer facilities from local governments. Local governments' caution about data sharing is related to homeland security concerns. Prior to September 11, 2001, "as-built" data showing locations of facilities were furnished on request. Since then, data are available piecemeal on a need-to-know basis if at all. What is the cost? Are the benefits of security greater than the benefits of better planning and more efficient data sharing? He pointed out that public water sources, hydrants and manhole covers are visible features on the ground. If someone intended to harm the water supply, local government geospatial representations of facilities would not be needed. Mr. Rankin echoed the frustration for surveyors and engineers doing private design work; withholding the digital data is counterproductive. As a geospatial community, we are hiding the data from ourselves. We need to see where the systems are, including infrastructure underground. Mr. Cox added an example of a consultant working for a county to model a sewer system. The consultant could get only little pieces of the puzzle from local government data managers. Design and cost estimates for the project were unrealistic until more work with raw data corrected the model and arrived at much lower estimates. Complete information can lead to cost savings and avoid unintended bad results.

- Dan Madding commented that NC Department of Agriculture & Consumer Services assists in site selection for agriculture-related manufacturing, for example a bio-energy facility. Geospatial data would be valuable for answering questions about distance to certain infrastructure, but where the data are not available, the department cannot provide answers.

- Mr. Brown reminded the Council that the NC Rural Economic Development Center funded geospatial data development projects that produced representations of public water and sewer facilities (pipes, pump stations, treatment plants, etc.) in the late 1990s and representations of

the boundaries of water and sewer service areas in 2003. There have been no statewide data development efforts since.

- Mr. Sandoval pointed out the value of geospatial data for all utilities, including water, sewer, natural gas, electricity, and broadband for site selection and economic development. Work is in progress on broadband service areas by NC Broadband in DIT.
- Matt Helms, Charlotte Water, echoed the value of knowing where gas distribution is located, for example, to avoid conflicts between gas lines and sewer lines.
- Mr. Brown heard concerns from the State Government GIS Users Committee and the Local Government Committee in recent meetings about data requests from state agencies and data sharing by local governments and ways to make it more efficient. Such data are vital for statewide datasets (e.g., roads, parcels, addresses).
- Mr. Cox observed the variety of data distribution methods and policies by local governments. Design work, for example, requires copies of geospatial datasets for processing and analysis. Methods range from easy download to in-person CD hand-off. Available files and formats vary greatly. These comments apply, also, to datasets managed by municipalities that are not aggregated by counties.
- Ms. Clifton echoed the value of an inventory by jurisdiction for available data. She emphasized the value of aggregated, standardized statewide datasets, including roads, parcels, and addresses, and recommended continued support for those efforts. These enable work across jurisdictions.
- Mr. Gillis pointed out the risk of personnel changes in local government geospatial data operations, particularly those that depend on one or two people, where specific data knowledge may be lost and hard to replace. Documentation is valuable in that regard. Mr. Cox added that knowledge sharing related to best practices would help some jurisdictions meet expectations for data management and sharing.
- Hope Morgan pointed out the challenge of standardization of data and methods for local governments. Local systems are in place that evolved to meet business needs; applying a standard may break databases and applications that are essential to daily operations, and staff capacity to solve problems varies. Some jurisdictions use a contractor for data management and do not have direct access to databases and applications to make changes. Smaller tax base counties would need assistance to standardize.
- Mr. Gillis observed that innovation in businesses and universities will continue to challenge state and local government geospatial data management to stay current and take advantage of new opportunities.

Mr. Duncan concluded that the Council has been collaborative in considering viewpoints and reaching consensus on issues and initiatives over many years. He acknowledged a slow process to improve and expand statewide geospatial data in the context of historical challenges, but progress has been made. He requested part two of the discussion at the next Council meeting.

Working Group for PLS and GIS

Bob Brinson, chair of the working group, gave new members a brief recap of the work over the last year. In 2016 the Council noticed new languages in legislation pertaining to the NC Board of Examiners for Engineers and Surveyors (NCBEES). The language related to the government exemption from licensing requirements for geospatial data development performed for a public employer. Mr. Duncan called for a working group to analyze the changes in the statute and prepare for a conversation with NCBEES to clarify interpretations of the language, definitions of GIS practice

and surveying, and what requires a license. The Council has responsibilities for geographic information and technology statewide, including governments as well as GIS in private businesses, with the goal of good practices serving the citizens well. This was an opportunity for a dialogue for the first time in years. The working group spent a year preparing, analyzing and documenting use cases that help clarify GIS practice and professional land surveying. With a better understanding of issues and opportunities, and with a summary of findings and use cases to share, the working group was ready to start a conversation.

Selected members of the working group and the surveying committee of NCBEES have met twice to review materials. The use cases have prompted discussion and advanced understanding of solutions. Discussion includes purposes of data creation, quality of metadata, disclaimers, guidance for using data, what is authoritative, what crosses a line from GIS practice into surveying, and other concerns about good practice. Another half-day meeting is needed to finish reviewing the use cases and begin developing work products suitable for respective websites to inform the Council, the Board, and practitioners.

Mr. Duncan expressed appreciation for the thorough approach and his expectation for valuable results, and thanked Mr. Brinson for his leadership.

Ms. Clifton added that it has been helpful to gain understanding of GIS and surveying terminology and to identify instances where a term has different meanings in the two professions. Alex Rankin commented that it has been a rich and fruitful discussion for both sides.

National States Geographic Information Council

Tim Johnson shared highlights of the annual meeting of the National States Geographic Information Council (NSGIC). State GIS coordinators gathered in Providence, Rhode Island in late September to collaborate and share stories about coordination. Historically there has been great participation, and this year most states were represented, and more than 200 people attended. North Carolina has attended since its formation. Mr. Johnson was asked to serve on a panel with Utah and Oregon on the topic of collaborative governance. NSGIC wanted to know how the councils function, who is represented, types of organizations in the membership, and authority under which councils operate. He noted that our Council is one of the better examples of collaboration, reinforced by the ideas shared in today's meeting.

Mr. Johnson described the "roll call of states" where each state representative gets three minutes to summarize the year's activities, accomplishments and challenges as the clock at the podium counts down. In general, the challenges to states are centered around legislative and budgetary issues. More interesting are accomplishments. For example, Georgia and Oregon passed legislation to establish a state coordinating council. They previously had coordination activity, but without statutory authority.

Next Generation 911 accomplishments were reported by Indiana, Iowa, Massachusetts, Virginia and Wisconsin. LiDAR and elevation accomplishments were listed by 14 states—Alabama, Colorado, Kansas, Kentucky, Louisiana, Maine, Michigan and more. The State of Alaska now has 90 percent of the state captured by Interferometric Synthetic Aperture Radar (IFSAR) imagery—a big accomplishment for which the state is rightfully proud given its huge land area and sparse population. North Carolina was a trail blazer in statewide LiDAR acquisition and now many states are doing it, aided by cost share from 3DEP digital elevation program by US Geological Survey. Regarding

parcels, representatives from Texas approached North Carolina on the first day with questions about implementing a statewide program to inform their new effort. Massachusetts, North Dakota, and Wisconsin shared information about their approaches to parcels as well. Wisconsin is working on their third version of statewide parcels. On the topic of orthoimagery, a number of states are doing their first, second or third iteration of statewide orthoimagery. Ground resolution varies from 1-foot to 6-inch (as in NC).

Mr. Duncan commented on the attendance of the lead GIS coordinator from Georgia at the 2017 NC GIS Conference. Georgia invited Mr. Johnson to share knowledge with the founders of a new coordinating council in Georgia. They are in the process of selecting members of their council. Mr. Duncan reminded the Council that North Carolina has been a leader in land records and GIS for decades.

Geospatial Data Act

Tim Johnson reported on the Geospatial Data Act of 2017, discussed at the last Council meeting. At that time, the act was stalled by opposition by some geospatial organizations. National States Geographic Information Council (NSGIC) continued to be involved in seeking a solution. Last night, Mr. Johnson received a notice from NSGIC that new companion bills in the Senate and House will be introduced to replace the version that could not advance. NSGIC expects the new version to drop all the procurement language and perceived restrictions on developing geospatial data that would have affected universities and any federally funded efforts. Introduction of the new bill is expected on November 15, coincident with GIS Day.

Mr. Johnson offered to distribute the bill text when available, and he suggested actions by the Council: (1) read the bill (2) send comments to Mr. Johnson and/or Mr. Duncan, (3) agree on a Council position, (4) write a letter to bill sponsors (and copy NSGIC) expressing the Council's position. Meanwhile, Mr. Johnson will research and share information about bill sponsors and members of committees that are likely to hear the bill.

GICC Member Announcements

Ms. Enright announced the Capital Area GIS Day event on Wednesday, November 15 at the City of Raleigh Museum on Fayetteville Street. Council members are invited to drop in any time 9:00 AM to 3:00 PM. There will be a map gallery and computer displays, with participation by state agencies, Wake County and the City of Raleigh.

Ms. Clifton will present at the GIS Day event hosted by MapForsyth in Winston-Salem, 10:00 AM to 4:00 PM.

Hope Morgan announced she is starting a chapter of the American Society of Photogrammetry and Remote Sensing (ASPRS) in North Carolina. It is a technical group related to standards and specifications. The first meeting will be held December 5 simultaneously in Charlotte and Raleigh joined by WebEx with the intent of signing petitions to start the chapter. The goal is to have technical experts in remote sensing that can help other organizations work through standards for orthoimagery, LiDAR and other remotely sensed data. This will end a seven-year period without a chapter in the state.

Mr. Johnson announced the 2019 NC GIS Conference, to be held in Winston-Salem at the Benton Convention Center, February 26 through March 1, 2019. The four-day event will feature URISA workshops on the first day and three days of conference proceedings. Agreements are in progress and rates to be determined. Winston-Salem has invested and improved its facilities in recent years and the site selection team is excited about the location.

ADJOURNMENT

There being no other business, the Chair adjourned the meeting at 2:58 PM.

The dates for Council meetings in 2018 are February 14, May 9, August 8, and November 14.

Presentations and reports for this meeting are on the Council Website:
https://it.nc.gov/gicc-quarterly-meeting-1182017