



North Carolina Geographic Information Coordinating Council

Minutes

November 13, 2024

PROCEEDINGS

The Council held its quarterly meeting at the North Carolina Museum of Natural Sciences William G. Ross, Jr., Environmental Conference Center, 121 West Jones Street, Raleigh, North Carolina, and via virtual meeting connection.

Welcome and Chair Announcements

Ms. Hope Morgan called the meeting to order at 1pm.

The chair reminded everyone that the meeting was being held in accordance with open meeting laws, aligning the GICC with other statutory boards and commissions.

This meeting is being held in accordance with the Open Meetings law, Chapter 143, Article 33C (Meetings of Public Bodies).

Ms. Morgan read the ethics statement below to the council:

In accordance with the State Government Ethics Act, it is the duty of every Council member to avoid both conflicts of interest and the appearances of conflict.

If any Council member has any known conflict of interest or is aware of facts that might create the appearance of such conflict, with respect to any matters coming before the Council today, please identify the conflict or the facts that might create the appearance of a conflict to ensure that any inappropriate participation in that matter may be avoided.

If at any time, any new matter that raises a conflicts issue arises during the meeting, please be sure to identify it at that time.

Council members should exercise appropriate caution in the performance of their public duties should conflicts of interest or potential conflicts of interest related to issues that come before the Council. This would include recusing themselves to the extent that their interests would influence or could reasonably appear to influence their actions.

Ms. Morgan then reminded everyone about the attendance registration process, emphasizing the importance of registering using the displayed QR code to confirm their attendance. For those attending online, Ms. Morgan acknowledged their presence, noting that they were already registered and thanked them for joining virtually.

Ms. Morgan announced that the Management and Operations Committee (M&O) was working on getting the updates to the GICC bylaws signed and was one signature away from having them adjusted. Some changes have been postponed for the moment to ensure they have proper legal information to determine the viability of the bylaws. She noted that technical corrections had been made to ensure accurate reference to general statutes and current state agency names, and that there would be more conversations in the next year around adjustments to the bylaws.

Members were reminded of the upcoming 2025 NCGIS Conference scheduled for March 19-21 in Winston-Salem. The GICC meeting will be held on the morning of March 21st from 10:00 AM to 12:00 PM, continuing efforts to bring GICC meetings to broader audiences across the state. Ms. Morgan encouraged members to come forward with anything they would like to share in that larger venue, so it could be brought to the M&O and included in discussions on the agenda.

Mr. Tim Johnson provided an update on the National Spatial Data Infrastructure (NSDI), announcing that the draft strategic plan for national specialized infrastructure has been fully adopted by the Federal Geographic Data Committee (FGDC) and the National Geospatial Advisory Committee (NGAC). He outlined the plan's focus on three key areas:

- Governance
- Data and technology challenges
- Implementation strategies across private sector, public sector, and national stakeholders

Furthermore, Mr. Johnson noted that although there were still questions about the implementation of the strategic plan, the deputy executive director at FGDC, Ken Schaffer, would be one of the speakers at the conference in March and may share some next steps on implementation.

Approval of August 21st Meeting Minutes

The August meeting minutes were motioned to be approved as written. The motion carried unanimously. There were no recusals.

Lidar Business Plan

Mr. Paul Badr delivered a comprehensive presentation on the Lidar Business Plan from the Statewide Mapping Advisory Committee. The presentation began with a broad overview of lidar, the stakeholders that benefit from the data, and use cases such as flood studies, hazard analysis, identification of structures and assets, change detection, engineering studies, and mission-critical activities of state and local agencies.

Mr. Badr emphasized the substantial economic impact of lidar, noting that it generates estimated annual benefits exceeding \$60 million for North Carolina, and noted that a lack of dedicated yearly funding represented the biggest risk to the program.

The business plan proposed a continuation of statewide lidar collection (including data acquisition, access, distribution, program management, and investment in geodetic control) with a diversified funding approach, recommending partnerships with multiple stakeholders. These include the United States

Geological Survey (USGS) 3DEP program, federal agencies like the National Oceanographic and Atmospheric Administration (NOAA), Federal Emergency Management Agency (FEMA), and United States Department of Transportation (USDOT), state and local governments, and public private partnerships, particularly with energy companies that frequently utilize lidar data. While discussing the lidar program goal of “obtaining sustainable yearly funding for keeping high resolution statewide lidar data current and accessible”, Mr. Badr took care to clearly define the terms “sustainable”, “current”, and “accessible”, which are also defined in the business plan document.

One of the plan's most significant recommendations involved a strategic shift in data collection methodology. Mr. Badr detailed the proposed transition from the current five-phase collection process to a more streamlined four-phase approach, scheduled to begin in 2026 after the completion of the current collection cycle. This new approach was specifically designed to align with the state's orthoimagery program, ensuring that recent digital elevation models would be available to support orthoimagery development.

Technical specifications received careful attention during the presentation. The plan stipulated that future lidar data must meet or exceed QL1 standards, requiring eight points per square meter to comply with USGS and ASPRS requirements, and that collection will use the 2022 State Plane Coordinate System and datums. Mr. Badr explained the importance of conducting data collection during leaf-off conditions to achieve optimal results and outlined the necessity of comprehensive planning that accounts for terrain variations. The plan also established specific requirements for metadata creation, intensity image development, and the implementation of a 1200-meter buffer zone extending into bordering states. Quality control measures were thoroughly addressed, including the requirement for independent verification processes and professional certification of deliverables.

Following Mr. Badr's presentation, the Council engaged in a discussion about the role of different stakeholders in the plan, particularly as it relates to funding. Mr. Gary Thompson, NCGS Chief and GICC Vice Chair, shared that increased participation from NC state agencies would improve the program's funding outlook, and described how they approached private sector partners to secure additional resources. The SMAC formally recommended adoption of the business plan, leading to a motion for its approval, and the Council voted unanimously to adopt the North Carolina Lidar Business Plan.

NSGIC Update

Ms. Morgan introduced the council to John Jordan from NSGIC (National States Geographic Information Council). Mr. Jordan shared several brief updates from his organization, including their support for the FGDC's National Spatial Data Infrastructure strategic plan and NSGIC's role in its implementation. Furthermore, Mr. Jordan mentioned that their 2025 Midyear conference will be in Colorado Springs at the Cheyenne Mountain Resort this upcoming February 23rd- 27th, and that the board of directors would meet later this month, which was open to all members listening in. Next, Mr. Jordan shared the new 501(c)(3) designation for the National Geospatial Collaborative (NGC), which provides more opportunities for NSGIC to get grants.

GIS Disclaimer

The Council engaged in a detailed discussion regarding the implementation of Senate Bill 355's GIS disclaimer requirement, which is scheduled to take effect in January 2025. Hope Morgan and Tim Johnson led this conversation, building upon previous discussions at the August meeting and subsequent developments, noting that due to recent changes in the legislature, the council has not been able to get in touch with the bill's sponsors since the last council meeting; however, Mr. Johnson shared that Dylan

Frick, the council's legislative liaison, intended to seek an audience with Senator Jackson or his staff when the legislature is back in session to explain the council's position.

The discussion continued with a review of concerns gathered from local governments, focusing on potential implementation challenges. The council created a short, comprehensive list of potential issues to share with the legislature, which reiterated that no one is against the requirement, provided there is clarity around the implications and an understanding that some local governments will not have the capacity to accommodate the requirement within the requested time frame. A significant contribution to this list of potential issues came from Council member Steve Averett, who compiled specific examples and concerns from multiple municipalities, including Greensboro and Wilmington, to illustrate the practical challenges of implementation.

Several key issues emerged as central to the discussion. The council examined the fundamental question of how to define "tools" within the context of the legislation, particularly regarding its application to various web applications, REST services, and data hosted on third party platforms. Additionally, local government GIS professionals needed more guidance on what data needed a disclaimer. The timeline for implementation emerged as another concern, especially for local governments operating with limited resources.

Ms. Heather Freeman advised that to meet the upcoming deadline, local governments should assume a limited definition of "tool" and do what they can to ensure compliance while the council continues to get more information and engage with the legislature; while encouraging them to reach out to the council with issues, concerns, or roadblocks with implementation so the council could provide additional resources to help them reach compliance.

Environmental Justice Mapping Tool

Matt McLamb presented the newly launched Environmental Justice (EJ) Hub and mapping tool, which was developed in response to Executive Order 292 from October 2023. Mr. McLamb explained that Section 8 of the Executive Order specifically called for the development of an EJ Hub and mapping tool. Earlier this year, CGIA was contacted by the governor's office to support this effort, with the goal of creating a comprehensive environmental justice platform that brings together data and information from various agencies into one application.

Mr. McLamb detailed the development process, noting that CGIA worked closely with DIT's Project Management Office and the Environmental Justice Council throughout the project. The team identified and integrated over 100 data layers from various state agencies including DHHS, DEQ, and DOT, as well as federal partners and Esri's Living Atlas. The development process, which included extensive public feedback and testing through Environmental Justice Council meetings and community outreach programs, captured input from the community to help refine the tool's functionality. All features were approved by the Environmental Justice Council at the end of September. The hub, which went live approximately three weeks prior to the council meeting, successfully met its one-year implementation deadline as specified in the Executive Order.

During his demonstration, Mr. McLamb showcased the hub's primary features, including comprehensive environmental justice resources, grant information, disbursement data, and Council reports. The mapping tool incorporates categorized data layers covering climate, demographics, geographic data, and environmental health. While demonstrating the tool, he took questions from the audience relating to specific data layers and sources, and emphasized several key technical features, including real-time data

updates through direct source connections rather than republished data, detailed metadata access, and mobile-friendly design.

Looking ahead, Mr. McLamb shared that future enhancements are being considered, including additional analysis and reporting capabilities, improved mobile functionality, and expansion of data layers. He noted that enhancement requests are being collected for potential future phases, pending the upcoming administration's decisions on continuing the initiative. The hub can be accessed at ejhub.nc.gov, where users can find detailed information about the environmental justice effort, links to the executive order, instructional videos, and contact information for submitting questions or suggestions for additional data layers.

Hurricane Helene Response: Initial Thoughts

The Council engaged in a comprehensive discussion of agency responses to Hurricane Helene, an unprecedented weather event that resulted in widespread loss of power, water, communications, infrastructure, and roads in western North Carolina. Ms. Morgan opened the discussion by acknowledging that while after-action reviews often focus on challenges and frustrations, this session would highlight the collaborative successes and positive outcomes of the response efforts. She noted that a more detailed after-action review focused on improvement opportunities would be conducted at the March meeting.

Gary Thompson detailed Emergency Management's response efforts, which included coordinating emergency lidar flights in seven affected counties scheduled for January 2025. These flights will assess damage, identify potential landslides, and utilize change detection capabilities to gain additional insights. The agency maintained daily coordination calls with FEMA to identify priority areas for imagery collection, while also coordinating with Civil Air Patrol and National Geodetic Survey (NGS) imagery for rapid damage assessment purposes, noting that the latter's imagery has the advantage of very quick turnaround for processing and sharing with the public, allowing individuals to make informed decisions on where it was safe to drive. Ms. Morgan noted that these flights were the first NOAA had ever flown outside the coast.

Next, Mr. Jeremy Baynes shared with the council the response efforts of federal agencies. The Fish and Wildlife Service shared canopy data layers through USGS ScienceBase, while USGS established a landslide observation dashboard, which was able to be connected to recent imagery through open data services. The EPA coordinated closely with state agencies primarily regarding emergency operational status of public drinking water infrastructure, made possible through access to NC DEQ's ArcGIS Online map services.

Discussing the local government response, Natalie Walton-Corbett explained how efforts were coordinated through the Working Group for Enhanced Emergency Response (WGEER) and highlighted the benefits of utilizing the WGEER data hub, starting conversations early, and travelling to support each other in person, as exemplified by Sally Vaughn's experience of traveling from Person County to Madison County to aid affected areas. Ms. Vaughn expressed gratitude for the availability of statewide GIS data, emphasizing how standardized parcel and address data was invaluable in making immediate response work possible in unfamiliar jurisdictions, and cited other resources like the SARCOP (Search and Rescue Common Operating Platform) dashboard, land fund information, and road closure information as vital to the response effort. She also shared the belief that future expansion of WGEER to contractors and volunteers could make a more powerful response impact, noting the crucial role that those groups play in emergency response.

State government response involved numerous agencies working in concert to address the crisis. Melanie Williams highlighted the collaboration and data sharing between the various agencies and praised the USGS landslide dashboard for its utility to the NC geodetic survey team. Eric Wilson highlighted NCDOT's data sharing efforts, which included over 8,500 damage reports—twenty-one times the normal volume—and 265 roads remaining closed at the time of the council meeting. NCDOT's "do-not-drive" boundaries received significant public usage (over 2.4 million hits in the first several weeks), helping to manage traffic flow in affected areas. ArcGIS Online provided a valuable platform for data sharing for DOT, and Mr. Wilson recounted that the assistance they received from ESRI was timely and helpful. Dianne Enright shared that the Department of Health and Human Services provided crucial information relating to hospitals, pharmacies, and grocery stores, and tracked vulnerable populations, to help get resources and assistance to populations like individuals with intellectual or developmental disabilities. Bob Coats reported that the Office of State Budget and Management (OSBM) completed their damage assessment in just four weeks, estimating total damages at \$54 billion.

Ms. Morgan paused the conversation around state response to give a brief background history of the storm, reiterating that a disaster event of this scale had never happened in the memory of people working for the state, and that an unprecedented number of infrastructure systems (power, water, communications) failed. However, Ms. Morgan reflected the amount of cooperation and information sharing between different groups in such a short time was remarkable.

The 911 system response proved remarkably resilient despite significant infrastructure damage. Through Next Generation 911 capabilities, the system maintained call routing capability and successfully managed alternate routing for 19 affected PSAPs (Public Safety Answering Points). Ms. Pokey Harris detailed how the implementation of a new real-time visualization map for call routing helped manage the crisis, with some calls being routed across the state to ensure continuous emergency service coverage. She noted that at the height of the impact, 19 PSAPs in western North Carolina could not receive their own nominal calls due to infrastructure destruction, yet the emergency services Internet Protocol network enabled successful call routing to operational centers. Ms. Harris reminded the council that the work they do affects individual human beings. She shared emotional stories of 911 calls from people in crisis, calls that were received because of the systems put in place prior to the storm.

Ms. Amy Barron detailed Duke Energy's response, which involved coordinating 18,000 crews from regions including Canada, Missouri, Montana, and Mississippi across 27 base camps to address impacts to nearly 400 substations. She emphasized how GIS technology proved essential in communicating the storm's impact both internally and externally, particularly highlighting the value of DOT data for routing crews around major closures on I-40 and I-26. She noted that their storm response presentation had already received 1,300 views since its launch that morning.

The discussion concluded with the reminder that recovery efforts remain ongoing, with significant focus on long-term rebuilding and congressional funding requests. The Office of State Budget and Management has updated their damage assessment for the General Assembly, revising the congressional funding request from an initial \$7 billion to \$24 billion to better reflect the scope of recovery needs. All participants emphasized the unprecedented nature of the event and the importance of maintaining cross-agency collaboration as recovery work continues.

State GIO Report

Ms. Morgan opened the final agenda item by recognizing Tim Johnson's 36 years of service to the state of North Carolina and his leadership of CGIA since 2000. She emphasized his pivotal role in making the

GICC a national example, noting the challenge of supporting one of the country's largest councils, with its numerous committees and working groups. Ms. Morgan highlighted Mr. Johnson's decades of work providing policy recommendations and strategic direction to the GIS community, helping to overcome various obstacles to develop critical framework datasets including parcels, orthoimagery, and addresses.

Mr. Johnson began his final report by providing a historical perspective of the Council's evolution, starting with the January 1991 GIS Planning Task Force. He explained how the Information Technology Commission (ITC) tasked OSBM with creating this task force in response to concerns about potential duplication of effort and expenditure as GIS technology was being widely adopted. The initial group of 11 state government leaders included representatives from Transportation, Natural Resources, Commerce, Agriculture, Cultural Resources, and CGIA, with consideration given to local government involvement through both CGIA and the Land Records Management office.

Mr. Johnson detailed how the task force's recommendations, presented to the ITC on March 5, 1991, led to Governor Jim Martin's executive order on July 30 of that year, which moved CGIA to the Office of State Planning and created the Council. The first Council meeting was held on March 31, 1992, under the leadership of DOT Secretary Thomas Harrelson. The Council expanded from its initial 10 members to 17 under Governor Jim Hunt's Executive Order in May 1993, and was ultimately placed into statute by Senate Bill 895 in August 2001, growing to its current 34 members.

Before concluding his final meeting, Mr. Johnson encouraged Council members to strengthen their connections with each other and to identify future leaders who will maintain the Council's commitment to excellence. He announced his plans to continue contributing at the national level while stepping back from direct Council responsibilities, finishing with a statement that it was a pleasure of his career in state government to serve the Council.

Adjournment

Ms. Morgan thanked the Council members for their participation and adjourned the meeting at 3:00 PM.

2025 GICC Quarterly Meeting Dates

March 21(Winston –Salem at NC GIS Conference)

May 14th (Raleigh)

August 20th (Raleigh)

November 12th (Raleigh)

Member Attendance

| Last | First | Present | Proxy | Agency/Organization |
|----------------|--------------|----------------|------------------|---|
| Averett | Steve | Yes | | City of Greensboro |
| Badr | Paul | Yes | | GPI, Geospatial Division |
| Baker | David | V -Yes | | NC Association of County Commissioners |
| Barron | Amy | Yes | | Duke Energy |
| Baynes | Jeremy | Yes | | US EPA |
| Clyburn | Lee | No | | |
| Coats | Bob | Yes | | Office of State Budget & Management |
| Dowdy | Jason | No | | CACI, Inc |
| Duncan | Stan | Yes | | Retired, State and Local Government |
| Enright | Dianne | Yes | | Department of Health & Human Services |
| Grantham | Dean | V -Yes | | Department of Environmental Quality |
| Halls | Joanne | No | | UNC Wilmington |
| Harris | Pokey | Yes | Tom Rogers | NC 911 Board |
| Hedley | Jason | Yes | | Stewart Engineering |
| Helms | Matthew | Yes | | Charlotte Water |
| Kempton | Dan | Yes (P) | Christie Burris | Department of Information Technology |
| Koonts | Sarah | V-Yes (P) | Asheley Yandle | Department of Natural and Cultural Resources |
| Marshall | Elaine F. | Yes (P) | Rich Elkins | Office of Secretary of State |
| McCracken | Marty | No | | Department of Justice |
| Morgan | Hope | Yes | | AECOM |
| Nida | Chris | Yes | | NC League of Municipalities |
| Cox | John | V -Yes | | Department of Administration |
| Sandoval | Allan | V -Yes | | Department of Commerce |
| Shankle | Bill | | | Tri South Commercial Realty |
| Serkin | Allen | V -Yes | | Cape Fear Council of Governments |
| Simpson | Tony | V-Yes (P) | Michael Connolly | Department of Revenue |
| Spitler | Ed | No | | NC Community College System |
| Tate | Brooks | | | NC Utilities Commission |
| Winstead | Ann | No | | NC Utilities Commission |
| Thompson | Gary | Yes | | Department of Public Safety |
| Thurman | Linda | Yes | | UNC Charlotte |
| Vaughn | Sallie | Yes | | Person County |
| Vose | Christian | Yes | | Department of Agriculture and Consumer Services |
| Walton-Corbett | Natalie | Yes | | Greenville - LGC representative |
| Williams | Melanie | Yes | | NCDEQ - SGUC Chair |
| Wilson | Eric | Yes | David Chrest | Department of Transportation |
| Wrenn | Vanessa | V-Yes (P) | Jeremiah Jackson | Department of Public Instruction |

V- Virtual attendee

(P) Proxy attendee