



*North Carolina*  
Geographic Information Coordinating Council

Minutes  
May 13, 2009

PRESENT

Chair, Dr. Lee Mandell. Members: Dr. Jerad Bales, Jay Baucom, Bob Brinson, Michael Brown (for Kenneth Lay), John Correllus, John Cox, Dr. Hugh Devine, John Dorman (for Reuben Young), Ryan Draughn, John Farley, John Gillis, Bill Gilmore, Derek Graham, Bliss Kite, Kelly Laughton, Dan Madding, Elaine Marshall, Herb McKim, Joe McKinney, Anne Payne, Jeremy Poss, Stephen Puckett, Colleen Sharpe, Julie Stamper, Richard Taylor, Mary Penny Thompson, Dr. Billy Willis, and Ron York

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. Dr. Lee Mandell, Chair, called the meeting to order. He welcomed new member Jay Baucom, Chief Information Officer, Department of Community Colleges.

The Minutes of the February 11, 2009 meeting were approved.

Status and Discussion of Council Priorities

*Priority #1—GIS Implementation Plan and Appropriation of Funds (HB 719)*

Dr. Lee Mandell said this bill has been rolled into the Senate budget bill, SB 202, which is now in the House. Unfortunately, the bill does not include funds for refreshing NC OneMap, but does include funds for seven FTE positions at CGIA. Dr. Mandell said that since no funding is included, the Council needs to think creatively about the NC OneMap refresh, and involve the GIS Technical Advisory Committee.

*Priority #2—Surveyors' Model Law Working Group*

Mr. Herb McKim, Chair of the Working Group, reported that they met March 12 to review a response from the NC Board of Engineers and Land Surveyors. A report was sent to Council members. Mr. McKim said rather than try to list all possible local government data sets and get an NCBELS determination for each one, the focus should be on the primary use of the data which determines the mapping accuracy requirements. For example, a street centerline needed for a trip does not require the same accuracy as for engineering a DOT right-of-way. He highlighted two issues that should go to the Attorney General for an informal opinion: whether

“a local government can conduct GIS work for another local government” under the industrial exemption clause; and whether a Council of Government is also considered a local government under the General Statutes. He said that the NCBELS legal counsel has agreed to seek an informal opinion from the Attorney General on the Council of Government issue. Mr. McKim suggested that the Local Government Committee should address the local government-to-local government data collection issue with the Attorney General. Mr. McKim said there needs to be a better definition and interpretation for “authoritative location,” which requires a surveyor for data collection. Dr. Mandell said the definition of “authoritative” is crucial. He also agreed that the Attorney General’s office should be consulted for an “informal opinion,” but the wording of the questions should be phrased carefully so that our issue is specifically addressed. Per the Working Group’s report, the NCBELS board representatives will encourage the Board to seek rule changes that address the “authoritative” location of data as the guiding language in lieu of a list of data layers.

*Action #1:* The Local Government Committee to frame an inquiry on local government-to-local government data collection and seek an informal opinion from the Attorney General.

*Action #2:* Council staff will work with all parties represented on the GICC to obtain a definition for “authoritative.”

#### *Priority #3—NC OneMap Implementation*

Mr. Tim Johnson said 15 new data layers have been added to NC OneMap, including 2007 or 2008 imagery for Edgecombe, Tyrrell, Caldwell, Graham, Cherokee, Pamlico, Henderson and Stokes counties. Public School location data has been updated by the Department of Public Instruction. North Carolina Congressional Districts from Census TIGER/line product have been added as well as three statewide data sets that were verified by the Homeland Security Infrastructure Program (HSIP). Those three are colleges and universities, emergency medical services, and fire stations. Street centerlines for Randolph and Iredell counties that were collected for NC StreetMap are now available on NC OneMap.

#### *Priority #4—Update on Efforts to Archive NC GIS Data*

Ms. Kelly Eubank, North Carolina Division of Archives, said there was a telephone conference with the Local Government Committee and the local government members of the Council’s Archival Committee, which sunset last year. There will be an information session for the Executives of the State Government GIS Users Committee in June. Ms. Eubank said there are discussions with the NC Board of Elections to establish a geospatial archive. The Library of Congress is happy with the work in North Carolina and is discussing an extension until 2011.

#### Presentation: Using GIS to Streamline Public Health Response

Dr. Mark Smith, epidemiologist with Guilford County Department of Public Health, noted that Public Health is a first responder in a disaster. After the September 11, 2001 national tragedy, the North Carolina Office of Public Health Preparedness and Response established seven (7) regional preparedness teams, hosted by the largest metropolitan in each area. One of the disaster challenges is the need to get data quickly and analyze it. The problem with collecting paper-based field data is its slowness and need to convert it to the digital environment, resulting in double entry.

In 2000 Guilford designed a rapid response system that is easy to understand and use on handheld computers equipped with GPS and GIS that can transmit digital data from the field to a central database. In 2003 the State conducted a bioterrorism exercise using the handheld computers. Later that same year the Guilford PHRST/5 Team (Public Health Regional Surveillance Teams), in conjunction with the Centers for Disease Control and Prevention, was involved in the investigation of an outbreak of Legionnaire's disease in Murphy. Using geospatial data, the source of that outbreak was tracked to a manufacturer's cooling tower. Although the Centers for Disease Control and Prevention still used paper maps for their assessment methodology, the PHRST/5 Team was able to show how the handheld computers with GPS/GIS could improve the process for a rapid needs assessment.

In fall 2004, Hurricane Charlie provided an opportunity to use handheld computers to conduct the first and second stages of a sample assessment area in three southeast coastal counties. The team identified 30 Census block groups, and then identified seven survey locations in each block group and downloaded that information to the handheld computer survey teams so they can directly route to the survey homes and gather information. Dr. Smith said the Centers for Disease Control and Prevention learned about the North Carolina methodology and asked them to assist in Florida in 2005 for Hurricane Wilma. In 2005 all seven regional PHRST teams received the handheld computers, provided by the Centers for Disease Control and Prevention, and a training session using a simulated chemical spill. That demonstrated the versatility of the tool and the ability to mobilize for massive responses, if needed. In 2006 the North Carolina team was invited to Mississippi after Hurricane Katrina. In 2006 the equipment and training was distributed to 200 health personnel in municipalities across the state. Dr. Smith mentioned that this tool can be used for other public health uses, such as a chili recall because of botulism that was handled by the NC Department of Agriculture. Using their handheld computer system, Guilford County was able to conduct more inspections than any other county. He said the rapid needs assessment system has won numerous awards and generated national interest.

Dr. Mandell said this is a versatile model for interagency cooperation and data collection, beyond public health. He suggested that this resource has a potential for future applications and partnerships, especially with the current pressure for government to do more with less. Mr. McKim asked how many handheld computers they had and how often they were used. Dr. Smith said they have 25 to 30 Trimble Recon units. The units are in use about 25 percent of the time. Dr. Billy Willis asked how difficult it was to set up another survey instrument. Dr. Smith said they are building a library now and the software exists to create a survey instrument on the handheld computers. He said funding is being requested for a phone application as well. Mr. Bob Brinson mentioned that the First Responders could use Twitter to see where outbreaks are, and could geocode tweets as points.

#### Presentation: Metadata Training and Winston-Salem State University

Mr. Tim Mulrooney, GIS Research Associate at Winston-Salem State University (WSSU), spoke about metadata: the need for cataloging GIS data to include information on who created the data, what time period the data covers, what does the data represent, what software was used to create the data, the horizontal and vertical accuracy of the data and projection, what distribution policies are attached to the data, and who is in charge of distributing that specific data. He said data developers need to treat their GIS data as an investment, and create the metadata. Metadata facilitates data sharing and transfer and validates the organization and people that create a map. Metadata should

be a continuous process and revised when something changes. The Federal Geographic Data Committee awarded the Transforming Communities Research Laboratory at WSSU a competitive grant to conduct this metadata training. Mr. Mulrooney said the free workshops are open to anyone who creates or manages North Carolina GIS data. Mr. Zsolt Nagy mentioned that templates for FGDC compliant metadata for some local government data sets, such as orthophotography, are available on the NC OneMap website. Mr. Mulrooney said the templates would be consulted. Dr. Mandell said the Council recognizes the importance of metadata and offered to help advertise with various associations, such as the North Carolina Local Government Information Systems Association (NCLGISA) and on the web. Mr. Mulrooney said it would help. Participants will be encouraged to bring their GIS data to the workshop so they can create their metadata records.

*Action #3:* Council staff to promote WSSU metadata workshops to appropriate listservs and through NC OneMap website.

### Committee Reports

Council committee representatives reported on their group's activities.

#### ***Statewide Mapping Advisory Committee (SMAC)***

Ms. Anne Payne, Chair, said the SMAC met on April 8 and heard updates from the various committees. The Stream Mapping Advisory Committee is working on a white paper on stream naming procedures in collaboration with the NC Board on Geographic Names. The Stream Mapping Advisory Committee is participating in discussion with US Geological Survey to align NHD (streambed) maintenance with watershed boundary maintenance. The SMAC was asked to investigate oblique imagery standards and data sharing after the oblique imagery presentation at the February Council meeting. The Working Group for Orthophotography has been assigned this task.

Working Group for Orthophotography Planning. Mr. Keith Johnston, NC DOT, discussed the revised orthophotography standard that was emailed to Council members. The standard was approved by the SMAC and has been vetted by the Secretary of State, US Geological Survey, the National Agriculture Imagery Program (NAIP), American Society for Photogrammetry and Remote Sensing Association (ASPRS), the private mapping community, NC Department of Transportation, the Center for Geographic Information and Analysis, the Division of Emergency Management, and the NC Department of Agriculture. The Working Group wants to have the standard approved at the August Council meeting so it will be adopted in time for the winter 2009-2010 flying season. He said the Council subcommittees should review and comment by June 30. Ms. Payne said the Working Group has made a very thorough effort on the orthophotography standard.

*Action #4:* GICC members and standing committees to review the orthophotography standard by June 30 and send comments to Tom Morgan, Secretary of State's Office.

The siting of a digital camera calibration range at NC A&T State University in cooperation with the U.S. Geological Survey may not occur because of a federal requirement for a 100-meter terrain variation. An alternative site, perhaps in a state park, will be investigated.

Statewide Imagery Proposal. Ms. Tonya Pearce, from the 911 call center in Durham, discussed a proposal submitted May 10<sup>th</sup> to the North Carolina 911 Board. The 911 Board publicized a grant program for regional areas to assist 911 call centers, also known as the Public Safety Answering Point (PSAP). Ms. Pearce said when the City/ County of Durham reviewed the grant application they interpreted regional to include a statewide effort. She said that regional 911 call centers need an orthophotography basemap that covers the entire state in the same time period at the same pixel resolution, instead of the current situation that has different pixel resolutions and time periods when you cross a county or metropolitan boundary. The Director of Durham GIS suggested consulting with state agencies about the proposal. Key members and staff of the Working Group for Orthophotography Planning were consulted, including NC Geodetic Survey, Center for Geographic Information and Analysis, Floodplain Mapping Program, and the Land Records Program. The proposal specifies that the new digital orthophotography standard will be used. The SMAC Working Group for Orthophotography Planning will serve as an advisor to the project team. The grant, if funded, would provide the imagery to each 911 PSAP and make it available for free download on NC OneMap. Ms. Pearce said the group recognized that this could be a one-time grant to provide this baseline data. The anticipated cost for the statewide imagery is \$12 million.

Ms. Payne said the photography would be true-color, digital, and one-half-foot pixels across the state. Dr. Mandell said there is the issue of coordinating efforts for orthophotography, but recognized that we have no guarantees that past funding sources will continue to be available. He mentioned that funds for the GIS Reserve fund were eliminated from the state budget proposal that is now being considered in the General Assembly. He said value must be maximized for everyone, and recalled the February presentation on oblique imagery that was of high interest to 911 call centers. Ms. Pearce said that first responders like the oblique photography, but they need orthophotography for street centerlines.

Dr. Willis said that the PSAPs already can choose to use their funds to purchase either orthophotography or oblique imagery. He said that a synchronized one-time fly-over does not consider the needs of those who recently flew, or those counties that need more. He said that the telephone companies represented on the 911 Board want to reduce the monthly rate customers are charged on their phone bill for the 911 services. He said the application is a good idea but there needs to be a more sophisticated programmatic approach. Mr. Tim Johnson said this application from Durham to the NC 911 Board does not replace the orthophotography strategy that is in the GIS Study and the associated need for a business plan for orthophotography that is called for in the State Geographic Information/Consolidation Implementation Plan.

Dr. Mandell said the proposal addresses a statewide base map. Mr. Dan Madding said he appreciated the Durham initiative, but cautioned that statewide photography is a huge effort for a contractor to fly and deliver. He agrees with the Working Group for Orthophotography Planning that the state needs to be divided into four sections for rotating regional flights. Dr. Willis said that the legislation that covers the NC 911 Board is in transition and the current list of approved expenditures may be changed. The NC 911 Board must come up with a plan for what activities could be paid with revenues from the 911 Fund. He suggested that Ms. Pearce and a committee look beyond this grant request and consider the life cycle of orthophotography and make a proposal to the NC 911 Board. Ms. Pearce stated that their May 10 proposal addressed the parameters of the one-time grant. Dr. Willis said he would suggest that

representatives from the National Emergency Number Association (NENA) and the Statewide Mapping Advisory Committee (SMAC) create an unsolicited proposal for the NC 911 Board that addresses a continuation plan for life cycle management of orthophotography that justifies and meets 911 needs.

Mr. Richard Taylor, the Executive Director of the NC 911 Board said there are eight bills before the legislature that are being rolled into a study bill regarding expanded use of 911 fees. The NC 911 Board will present its recommendations at the legislative session in 2010. This is a great time for the Council to provide input. Mr. John Dorman said this proposal was not pursuing the same strategy for flying a quarter of the state at a time, as other agencies have proposed. He said the one-time grant application was a potential funding source for the 911 set of needs. Dr. Willis said he did not think that flying a quarter of the state every year using 911 funds would be unachievable with a management plan. Dr. Mandell said the Council has worked on the coordination of process and now has the opportunity on funding coordination so that orthophotography can be as broadly useful as possible. Mr. Zsolt Nagy said there is a decline in the number of county governments that are flying imagery this year, and the US Geological Survey dollars are tiny. He remarked that Ms. Pearce came to the right group to consider the entire community of orthophotography users. Ms. Colleen Sharpe said to make sure local government GIS is represented on any committee. Dr. Mandell said the group should work expeditiously.

*Action #5: SMAC to work with NENA to propose and submit a statewide plan for funding orthophotography through 911 revenues to the NC 911 Board for inclusion in its legislative study.*

Working Group for Seamless Parcels (WGSP). Ms. Julia Harrell reported that the US Environmental Protection Agency has made a preliminary announcement of a \$500,000 grant award to NC DENR, in partnership with the Eastern Band of the Cherokee Nation, the Secretary of State's Land Records Division, the NC Property Mappers Association and the SMAC Working Group for Seamless Parcels. The grant will develop an Integrated Cadastral and Land Use Data Exchange (InCLUDE) for the State of North Carolina, using the open source "OpenNode2" National Environmental Information Exchange Network platform. We are waiting on the final award. The next step is to work with EPA's Region 4 office (Atlanta) to begin the design. The scope of work should be completed by the end of June and requirements will be complete by September. NC DENR already operates the North Carolina Exchange Node, and that will reduce some costs and provide more opportunities to add other information to the parcels, such as Brownfields information or other deed restriction information from regulatory agencies. She mentioned that WGSP co-chair, Ms. Pam Carver, is trying to elicit more individual county information on parcel content and attributes they use.

Mr. John Farley asked if the NC Division of Motor Vehicles (DMV) contacted the WGSP. He mentioned that DMV wants to identify which jurisdictions every registered vehicle owner is in, and they want a 100% match, because they will be collecting local government taxes on those vehicles. Secretary of State Elaine Marshall asked if there will be a mandatory requirement that cities report annexations to her office: Her office can only request that information, not require that it be provided. Mr. Farley mentioned that the NC Department of Transportation maintains a spatial dataset based on the Powell Bill annexations. He said DMV will be in a good position to encourage

counties to participate in seamless parcels since DMV will be collecting the county taxes based in part on parcel information.

Working Group for Roads and Transportation (WGRT). Mr. Alex Rickard, co-chair, said the group had its quarterly meeting in April. The GICC adopted the “Geographic Data Content Standard for Transportation and Roads Data” in May 2005, which lists data fields and acceptable standards. The Working Group took county data and matched it to the standard to see how it worked. It is apparent that there needs to be a translator tool to share data consistently within the standard, and leave the county’s fields as they exist. The next step is to look for data translation tool. Revisions to the standard should be ready by the August Council meeting, and it might incorporate pavement management information available from ITRE. The WGRT is looking for a funding source to build the translator tool.

***State Government GIS Users Committee (SGUC).***

Mr. John Correllus said the monthly SGUC Executive meeting and the quarterly general membership meeting both occurred in April. A focus is to try and leverage GIS skill sets within the state community. The Central Piedmont Community College presented on their course of study available to everyone and the North Carolina Zoo presented about a handheld mobile tracking and data entry device that was used in monitoring wildlife and environmental destruction in Africa. Mr. Correllus said the SGUC Executives representing 11 agencies presented at an Executive Open House for legislators and state officials at the February NC GIS Conference at the Raleigh Convention Center. The ESRI statewide Enterprise License Agreement is on hold at the Office of Information Technology Services (OITS) until July. A small working group has been created to tackle GIS architecture in state government and will devise a few architectures and hope to streamline the process with OITS. The SGUC continues to work on goals and objectives and help out agencies, such as the State Auditor, who will be starting a GIS program. Dr. Willis said the GIS architecture project is timely. Mr. Farley said the plan is to get architecture information together and then vet with OITS so other agencies have a good starting point in the future.

***Local Government Committee (LGC).***

Ms. Julie Stamper said the LGC discussed tasks relating to NC Board on Geographic Names and Archiving of GIS data. She said that although the NC 911 Board legislation does not include a representative from local government GIS, the LGC wanted to send a representative to attend NC 911 Board meetings. Dr. Willis said it is a public meeting and they could attend.

***Federal Interagency Committee (FIC).***

Dr. Jerad Bales said the FIC met at the NC GIS Conference and in April. He said there is an issue with blue line streams on Natural Resources Conservation Service (NRCS) soil surveys since they are a cartographic construct with no field data supporting them. Those soil surveys and the 1:24,000-scale USGS quadrangle topographic maps are, by North Carolina legislation, the basis for locating streams that are regulated by the State of North Carolina. The local resolution data that the State, through the Center for Geographic Information and Analysis, developed for the 19 western counties is a better source for locating streams, but it only exists for those counties. Dr. Bales said the FIC wants to take this issue to the NRCS and the National Oceanic and Atmospheric Administration (NOAA). He reported that a vacancy on the FIC committee has been filled by David Wyatt from the Eastern Band of the Cherokee. Mr. Steven Puckett asked about the accuracy of streams on the soils maps for surveying. Dr. Bales said the state would benefit from an accurate stream database like that which was completed for the 19

western counties. Ms. Anne Payne said the accurate stream representation across the state is a common goal.

### ***GIS Technical Advisory Committee (TAC).***

Chair, Kelly Laughton said the TAC is gearing up and she asked the Council members to review the draft bylaws in their packet so they can be presented for adoption at the August meeting. She said the TAC should supplement and not duplicate efforts. Several things have changed in the revised bylaws including adding SMAC and other representatives to the TAC membership.

*Action #6:* Council members to provide comments on the draft TAC bylaws to Tim Johnson at CGIA.

## **ANNOUNCEMENTS**

Master Address Dataset. Mr. Joe Sewash, Center for Geographic Information and Analysis, reported that his group is involved in general aggregation of the statewide data. Quality control and transformation is underway in production. There are cascading data sets available for an individual geography. Multiple staff and consistent procedures for workflows are being followed, using the Federal Geographic Data Committee address data standard. He said in mid-May, 40-percent of the state is in the pipeline and has been collected by CGIA with no further need to contact those counties personally. A letter has been sent from the NC 911 Board and CGIA to county managers asking for their assistance. Metadata records will need to be supplemented and public tools will be created.

2009 NC GIS Conference. Mr. Johnson said it was a successful conference with more than 800 people attending at the Raleigh Convention Center in mid-February. There were nine session tracks. Organizations such as the North Carolina Property Mappers Association and the North Carolina Chapter of the American Planning Association offered continuing education credits and generated registration numbers. Even with tough economic times the conference attracted 44 vendors. Carolina Urban and Regional Information Systems Association is a co-sponsor and organized five pre-conference workshops.

The Herb Stout Student Award was given to 16 university students, representing 11 different schools, for their papers. The prestigious Herb Stout Award for Visionary Use of GIS by Local Government was awarded to both a city and county. The City of Asheville won for its creation of mapAsheville that serves the needs of city staff and the public. Mecklenburg County was selected because of the open source approach it has taken in deploying web services while increasing its reach across county departments, lowering costs and development time.

The conference organized an Executive Session for members of the legislature and state government officials. Invitations were sent jointly by the chair of the Joint Legislative Oversight Committee on Information Technology and the State Chief Information Officer to the members of the legislature. The Executive Session focused on GIS within state government agencies and the types of data and applications that are helping government do a better job and providing data access to citizens.



Register of Deeds Indexing Standards. Secretary of State Marshall said that all 100 counties have met the indexing standards, as approved by the Land Records Management Division of the Department of the Secretary of State. Problems can, however, arise when vendors create new versions of their software, but all counties are currently compliant. The Department's Land Records Management Division is now working on standards for plats.

## ADJOURNMENT

There being no other business, the meeting was adjourned. The next meeting will be August 12 from 1:00-3:00 pm at the Department of Public Instruction Board Room, Room 755, 301 N. Wilmington Street, Raleigh.

PowerPoint presentations and reports are on the Council Web site: [www.ncgicc.org](http://www.ncgicc.org) Click on "Meetings." Presentations and documents presented during the meeting are available in a Zip file for easy download.