North Carolina
Geographic Information Coordinating Council

Minutes
March 13, 2014

PRESENT
Chair: Stan Duncan. Members: David Baker, Jay Bissett, Bob Brinson, Ronald Brown (for Bliss Kite), Marc Burris, James Caldwell, Kathryn Clifton, John Cox, John Dorman, Dianne Enright, Jeff Essic (for Hugh Devine), John Farley, John Gillis, Derek Graham, Julie Hochsztein (for Rebecca Troutman), Jeff King (for Chris Estes), Dan Madding, Elaine Marshall, Anne Payne, Sarah Porper, Alex Rankin, Linda Rimer, Hunter Robinson, Sharon Rosado, Allan Sandoval, Colleen Sharpe, Joseph Sloop, Richard Taylor, Gary Thompson (for Ryan Draughn), Keith Werner, and Ron York

Staff: Tim Johnson, CGIA

ABSENT
Matt Helms and Sarah Koonts

PROCEEDINGS

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

Chair Announcements

Mr. Duncan welcomed new Council appointee Joseph Sloop, Forsyth County Geographic Information Officer, and recognized his colleague Jason Clodfelter in attendance.

Tim Johnson gave a brief tribute to Roger Tomlinson, considered the father of GIS, who died last month at the age of 80. North Carolina owes a lot to Mr. Tomlinson who implemented the first GIS—Canada Geographic Information System—in the 1960s. Mr. Johnson recommended an online video "Data for Decision" for a fascinating look at the early GIS technology. Mr. Tomlinson's long career included projects with and advice to many US agencies and other national governments. He received numerous prestigious awards including the National Geographic Society's Alexander Graham Bell Award. Years ago, Mr. Johnson met the 6-foot, 7-inch Mr. Tomlinson whose impact matched his stature. Mr. Tomlinson once remarked that he may have been the father of GIS, but many others were raising the child. Mr. Johnson pointed out that the Council's work on raising the GIS child would have made the late Dr. Tomlinson proud.

Mr. Johnson announced that the 14th NC GIS Conference will take place in Raleigh during February 25-27. Workshops will occur on the 25th and the conference sessions will be held on the 26th and 27th. The Executive Committee selected the Raleigh Convention Center based on quality of facilities and cost. Proposals from Charlotte, Greensboro, and Winston-Salem were evaluated as well. The committee is trying to keep the costs down. In the coming weeks, the committee will work on publicity and defining rates. The registration rate will likely be in the $150-175 range, a bit higher than the last two conferences. Mr. Duncan noted that attendance reached 1,000 at the last conference and he looks forward to success again next year.

Regarding the original February 13th date for today's meeting, Stan noted that he has the dubious distinction of being the first Council Chair to cancel a Council meeting because of weather, ever. He based his decision on the Governor's Executive Order 43 declaring a State of Emergency and consultations with emergency managers.

Approval of Minutes

The minutes of the November 13, 2013 meeting were approved with no changes.

Legislative Matters

Mr. Duncan observed that Executive Order 30 (2013) is relevant to all state agencies, boards, and commissions. The Executive Order stresses collaboration in information technology which is where the Council fits in. Mr. Duncan has been seeking advice and information from the General Assembly and its Joint Legislative Oversight Committee on Information Technology. There are many ideas and perspectives in legislative matters. It is important for the Council to stay engaged. To date, the focus and direction of the Council are well received. He will continue to seek direction for the Council and stay attuned to various viewpoints.

Mr. Duncan recognized Jeff King, Deputy State Chief Information Officer, and asked Mr. Johnson to summarize the report submitted in early December by State CIO Chris Estes on GIS Applications in State Government. The report described current GIS applications in state agencies including Transportation, Agriculture, Environment and Natural Resources, Public Safety, and Commerce. The report was complete and included information on data sharing. No comments have been received to date from the General Assembly.

Mr. King thanked the state agencies for their cooperation. He explained that the State Chief Information Officers is always seeking ways to identify redundant functionality, streamline operations, and save money.

The Value of GIS to Council Members

Mr. Duncan gave credit to John Farley for an idea to invite Council members to give brief statements of the value of GIS in their work. Mr. Duncan asked Kathryn Clifton and John Gillis to share their perspectives today.

Kathryn Clifton shared her personal journey from an early love of maps and atlases to an opportunity to use GIS and apply it to city and regional planning at Clemson University. She has worked for the City of Salisbury since 1999. She has enjoyed applying GIS to a variety of problems and training people across the organization to use GIS in various workflows. She likes

to help city colleagues to think through processes and document processes so that others can benefit as well. Maturation of GIS technology has strengthened the role of GIS in decision support. She emphasized that GIS professionals help get things done with creative problem solving, turning good ideas into solutions.

John Gillis of the Gillis Group Partnership shared his background in electrical engineering (NC State University), radar and communications with the US Air Force, and management of a shipboard weather terminal for the Harris Company that was processing imagery from weather satellites. Other private work involved applying GIS to merge imagery with data for classified intelligence purposes. Later he returned to North Carolina to work for family businesses and applying the technology. He was on the planning board for Cumberland County. He is now a Keller Williams real estate agent. He emphasized that GIS has great value for agriculture, legal services, land development, and real estate. For example, county data and NC OneMap data were valuable to John in searching for a suitable property for a client who seeks up to 200 acres of hunting land for a retirement home, with concern for wetlands and forestation. The client has no knowledge of GIS, but will be well informed because of it. He sees that the Council and its collaborators have a real impact on real taxpayers, even if most people are not aware of who is working "behind the curtain" to provide geographic information.

Committee Reports

Management and Operations Committee (M&O) and NC OneMap Governance Committee. Mr. Duncan reported that the M&O Committee has revisited the subject of making strong business cases for GIS projects. He pointed out that presenting a project purpose and cost is not enough. Time savings are accounting oriented and do not represent tangible benefits to consumers. He added that stories like the one John Gillis described provide ways to explain the value of GIS and information technology projects. The committee is working on ways to provide guidance to business owners who require projects involving geographic information and technology. Regarding NC OneMap, there has been progress on making servers reliable and in expanding and maintaining datasets. The committee is also looking at updating the GICC and NC OneMap websites. Mr. Duncan asked members to be thinking about website design and share examples of websites that are attractive, informative, and easy to use.

ACTION #1 GICC members will send Mr. Duncan thoughts on website design and content for GICC and NC OneMap websites, and share examples of attractive, informative websites.

As part of the committee report, Mr. Duncan invited Bob Coats to report on the Working Group for Census Geospatial Data. Mr. Coats is the Governor's Census Liaison, coordinator of the State Data Center network that helps people use Census data, and chair of the working group. He reported that he met with the Census Bureau in Washington last week. Budget constraints at the Census Bureau are related to the postponement of the Boundary and Annexation Survey, coordinated through the NC Department of the Secretary of State, again this year. The State needs to be prepared to back up efforts that the Bureau of the Census may not be able to fully fund. The Census will employ new technologies and new procedures for Census processes including verifying addresses for the Local Update of Census Addresses. Mr. Coats reminded the Council that complete and accurate address data supports complete population counts. The Government Accountability Office (2009) estimated that each resident counted in the Census translates into $1,500 per year in federal funds coming to the

state. He pointed out a newer Census initiative, Geographic Support System, involving CGIA and representatives from other states in efforts to improve Census geospatial data and processes. Mr. Coats emphasized that the quality of geospatial data that will go into Census 2020 will depend more than ever on the quality of source data provided by state and local governments.

With that in mind, the Working Group is looking at the needs of North Carolina agencies in terms of address data and other geospatial information. The Working Group will answer questions including: Are there ways to use resources already in place? Is there duplication of data development and management? How can we use datasets that are valuable to the Census to also meet a wide range of needs in North Carolina throughout the decade? The goal is to have a central location for freely accessible data that meets the needs of all state agencies and relieves the data sharing burden on local government data managers where many of the most valuable datasets are created. Mr. Coats added that local governments will have opportunities to influence sub-county Census geographic boundaries to make them meaningful locally.

The Bureau of the Census is pleased to hear about the Working Group. North Carolina is one of the leading states in this regard. He would like to invite some of the Census experts to North Carolina for the purpose of doing a presentation to the Council.

Mr. Duncan emphasized that the greatest value of this Working Group is not in creating a single end product for the Census 2020, but in creating a viable, dynamic process for developing and maintaining commercial and residential address data to benefit a variety of functions in Revenue, Commerce, Agriculture and many other agencies. This should not be a one-time effort, but an ongoing process to keep momentum and get the most value from the data. The approach of the Working Group is to look at how other state and local agencies can benefit by having the data compiled.

Secretary Marshall pointed out that North Carolina municipalities continue to be required to submit boundary and annexation information to the Secretary of State. It is a constant challenge to get those filings.

John Dorman commented that Public Safety is using locations of residential and commercial structures and creating algorithms to estimate daytime and nighttime populations related to floodplains and hazards. Estimates are adjusted to match total population estimates by the State Demographer.

Mr. Coats added that Longitudinal Employer-Household Dynamics, available from the Census through "On the Map" (http://onthemap.ces.census.gov/) is a resource for daytime population estimates. The Bureau and/or the State Demographer may be interested in looking at the Public Safety estimates.

Local Government Committee (LGC). Kathryn Clifton, LGC chair, reported that the LGC welcomed a new member, Mr. Travis Penland, from the City of Hendersonville, representing Carolina Urban and Regional Information Systems Association. LGC also welcomed David Nash, City of Fayetteville, as a local government representative on the Working Group for Census Geospatial Data. LGC completed a two-page brief (newsletter format) on the benefits of statewide geospatial datasets that Ms. Clifton forwarded to Mr. Duncan for approval. The committee's next brief will explain why local governments will benefit by participating in the

statewide parcels project. Ms. Clifton added that she attended a Professional Land Surveyor's workshop that was very informative.

State Government GIS Users Committee (SGUC). John Farley, SGUC chair, reported that the Executive Committee met and discussed web services published by state agencies to keep all informed, including elevation products. Other topics were orthoimagery, 40 datasets now published as services by NCDOT, LIDAR plans, and CGIA's responsibility to review GIS projects in conjunction with the Enterprise Project Management Office. The committee discussed the value of giving CGIA advanced notice of proposed information technology projects involving geographic information and/or GIS. A presentation on the NC Integrated Cadastral Data Exchange project indicated good progress and interest by agency GIS coordinators. Mr. Farley added that the cloud-based ArcGIS Online for Organizations and integrated Portal functionality continues to be a topic of interest to state government GIS users.

Statewide Mapping Advisory Committee (SMAC). Gary Thompson, SMAC vice-chair, reported that much of the recent committee meeting focused on accomplishments of working groups.

Working Group for Seamless Parcels (WGSP). Tom Morgan, co-chair, presented an update on the NC Integrated Cadastral Data Exchange project. There has been a lot of progress, transforming parcel data for 25 counties and the Eastern Band of Cherokee Indians. The online Transformer has exceeded Mr. Morgan's expectations. The Carbon Project is progressing on the connection of web services to the US EPA Exchange Project. Mr. Morgan reminded that the Council had the goal of statewide parcels as one of the priority datasets. This project has created a tool to support that goal for North Carolina. The challenge now is to build local government participation to expand the content to 100 counties. The Working Group cannot accomplish this alone. Complicating the effort, Mr. Morgan found that 32 counties charge the public a fee for copies of parcel data; data uploaded to the parcel Transformer becomes public information that will accessible to the public. He recommends a network of trained trainers to assist participation. Funding will be required to manage and maintain the system, operating the Transformer in the cloud or on state government servers.

Mr. Duncan offered to meet with David Baker (Department of Revenue, Local Government Services) and David Thompson (Association of County Commissioners) to discuss the challenge and opportunity to expand the content of the parcel data, particularly in the context of county fees. Mr. Baker concurred. Mr. Morgan added that an exemption in the Public Records Law allows counties to charge a reasonable fee for GIS data. He explained that counties charge as little as a few dollars and as much as $30,000 - $40,000 for parcel datasets. He understands that the time spent doing transactions, as opposed to offering free download, tends to be a hidden cost that may amount to as much as the fee collected.

Mr. Duncan emphasized the importance of a systematic way to refresh the data to make it reliable for answering questions from the General Assembly and many other purposes. He added that free download saves staff time in Henderson County. Mr. Morgan confirmed that 41 counties offer free download of parcel data.

Mr. Farley added that state agencies are collaborating on annual parcel data compilation through the State Government GIS Users Committee and this tool presents an opportunity to formalize current efforts.

Working Group for Orthophotography Planning (WGOP).

Mr. Thompson, chair, summarized the recent work. The group discussed the statewide orthoimagery program and the LIDAR initiative. The group continues to discuss oblique imagery. Finding that a significant number of counties had acquired oblique imagery at least once, the working group identified a need for more research into how local governments are using the imagery. The group is considering some type of document, depending on research findings on user requirements and other information to be collected. Mr. Thompson is in contact with the American Society for Photogrammetry and Remote Sensing (ASPRS) oblique imagery committee and is inquiring about specifications used by the National Oceanic and Atmospheric Administration (NOAA) for their oblique imagery. Mr. Duncan encouraged the working group to pursue collecting more information about oblique imagery. He is a customer of oblique imagery and finds it very useful. In his view, oblique imagery will never replace orthoimagery. Oblique imagery is a different kind of tool that can be used in conjunction with orthoimagery.

The update of the Global Navigation Satellite Systems (GNSS, formerly GPS) standard received additional review, comment, and editing. Submission of the revised document to SMAC is expected in April.

Mr. Thompson continues to serve on the National Geospatial Advisory Committee (NGAC).

Regarding the Stream Mapping Advisory Committee, Cam McNutt, NC Department of Environment and Natural Resources, Division of Water Resources, is now the chair of that committee.

***Federal Interagency Committee (FIC*).** Linda Rimer, chair of the FIC, reported that a general meeting in Asheville featured informative presentations on the National Hydrography Dataset (NHD) by John Derry of CGIA, and on Open Source Geospatial Research and Education by Helena Mitasova of NC State University. The Executive Committee spent time to develop proposed changes to the FIC bylaws. The addition of federal government contractors as eligible general members of the FIC would allow active work group contributors to participate on the committee. The other substantive change is to provide flexibility to have more than 8 members on the FIC Executive Committee. Ms. Rimer requested approval for the revised bylaws.

DECISION #1 A motion was made and approved to adopt the revised bylaws for the Federal Interagency Committee.

Technical Advisory Committee (TAC). Colleen Sharpe, chair of the TAC, reported that the group has not met and had no assignments.

Mr. Duncan invited Ms. Sharpe to the head table. He announced that Ms. Sharpe has resigned from the Council and recognized her service and commitment to local government and the Council. He presented a certificate in recognition of her excellent service, as well as a letter to personally thank her long service. He wished her the best in her new job in the private sector.

Technical Presentation

(See "NC_QL2_LiDAR_GICC" PPT file at GICC website - http://www.ncgicc.org/GICCMeetings.aspx)

John Dorman, Department of Public Safety, Division of Emergency Management, Office of Geospatial and Technology Management / NC Floodplain Mapping Program (GTM), presented "Next Generation LiDAR-Derived Elevation Data – Initiative Briefing." Hope Morgan of GTM was in attendance, also. As an overview, Mr. Dorman explained that current statewide LiDAR-derived topography is between 8 and 13 years old. Technological advances with sensor and data management now enable greater accuracy and efficiencies in acquisition and management of data.

After Hurricane Sandy, US Geological Survey (USGS) informed GTM that Disaster Mitigation Funding would possibly be used for LiDAR-derived topographic data acquisition in Sandy impacted areas. The driver for acquisition funding was requirements for LiDAR at the national level. GTM established the intent to acquire new Quality Level 2 (QL2) LiDAR data statewide. GTM began working with USGS and other federal and state agencies. In addition to LiDAR over land, topography-bathymetry ("topo-bathy") has been collected by NOAA through USGS with funding from Hurricane Sandy recovery. The data will be combined with LiDAR collected over land for final delivery.

Mr. Dorman described a 5-phase, 4-year statewide plan for QL2 data. Acquisition of LiDAR is occurring in early 2014 for both Phase 1 funded by USGS and Phase 2 funded by the State. Financial partnering by the US Department of Agriculture, Natural Resources Conservation Service (NRCS) resulted in the addition of Onslow County to Phase 1, enabling the NC collection in Phase 2 to add Robeson County.

The 2014 LiDAR data collection will meet a standard of 2 points per square meter with nominal post spacing of 0.7 meters. All data will include multi-return and intensity values. Data collected will support a 9.25 cm (3.36 inches) Random Mean Square Error (95 percent confidence) horizontal accuracy and 18.13 cm (6.58 inches) Fundamental Vertical Accuracy based on National Digital Elevation Program (NDEP) guidelines. A display of elevation data from previous federal and state sources and the new source data demonstrated that the new data will have a much higher resolution and more accuracy for representing elevation in NC. This will be particularly useful to the Floodplain Mapping Program.

Mr. Dorman described quality control methods, including work by the NC Geodetic Survey using the 91 Continuously Operating Reference Stations (CORS) in NC, as well as a validation range for multiple LiDAR sensors. Contractors have control points, and Geodetic Survey will engage contractors to assure quality.

LiDAR classification methods relate to bare earth, vegetation, structures, roads, impervious surface, and other features. Mr. Dorman summarized cost savings, efficiencies, and other potential benefits of updated, higher resolution elevation data:

- denser, more accurate data for road design
- much higher definition in road shape and extent

- detail for detection and classification of land cover (using elevation plus color infrared imagery where available as leaf-off high resolution available)
- tree canopy detection and calculation of volume
- delineation of drainage areas and approximate stream locations including intermittent streams
- wetland identification
- support for precision farming
- source for building footprint extraction and updates to the current set of footprints
- source for first floor building elevations for flood hazard analysis

Regarding coordination discussions, Mr. Dorman explained that he met with USGS, NOAA, USDA – NRCS, NCDOT, NC Department of Agriculture, NC 911 Board, UNC Systems, Duke Energy, NC Forest Service, and the military to understand requirements and seek financial support.

In terms of funding for the 5-phase plan, phases 1 and 2 are covered by federal and state cost-sharing, including $520,000 from GTM and $3.8 million from NCDOT. The estimated costs for phases 3, 4, and 5 are $4.3 million per phase. GTM expects to contribute $100,000 per phase and NCDOT has committed $1.0 million per phase for the three remaining phases. Altogether, the 5 phases have an estimated cost of $20.4 million with a funding gap totaling $9.7 million (about $3.2 million for each of the 3 remaining phases) as shown in the following table from the presentation.

LiDAR-Derived Topography (QL2)

Anticipated Cost, Current Funding, Funding Gap

	Project Summary	2014 Phase 1	2014 Phase 2	2015 Phase 3	2016 Phase 4	2017 Phase 5
Project Cost	$20,376,683	$3,096,683	$4,320,000	$4,320,000	$4,320,000	$4,320,000
Project Funding	$10,716,683	$3,096,683	$4,320,000	$1,100,000	$1,100,000	$1,100,000
USGS	$2,359,763	$2,359,763	$0	*	*	*
US DOA - NRCS	$100,000	$100,000	$0	*	*	*
GTM - NCFMP	$1,456,920	$636,920	$520,000	$100,000	$100,000	$100,000
NC DOT	$6,800,000	$0	$3,800,000	$1,000,000	$1,000,000	$1,000,000
Funding Gap	$9,660,000	$0	$0	**$3,220,000**	**$3,220,000**	**$3,220,000**

* Year by Year Determination based on Federal Appropriations

Mr. Dorman seeks funding partners for the initiative. He added that GTM's current IT infrastructure will support the new data and a download capability for areas of interest. He plans to share copies of datasets with counties.

In a discussion, Linda Rimer pointed out that Denise Smith, GIS Manager for Camp Lejeune is involved in the process, but could not attend today's meeting. Mr. Dorman expressed appreciation

for collaboration by military officials. Kathryn Clifton had a question about vegetation classes and was advised to contact Hope Morgan. Dan Madding asked about methods for estimating tree volume. Ms. Morgan explained that points are classified as low, medium, and high in terms of vertical distance from the mean terrain, and points are the basis for volume calculations. She added that color infrared imagery is required for an accurate vegetation dataset. In response to a question from Linda Rimer, Mr. Dorman confirmed that he has discussed the initiative with the US Forest Service.

Mr. Duncan recalled that there was a presentation to the GICC (August 8, 2012) about the national 3-D Elevation Program (3DEP) initiative and quality levels of elevation data, and a recommendation for acquisition of LiDAR. Mr. Dorman explained that the USGS Liaison, Steve Strader, did a survey about elevation data requirements that informed the national effort. The resulting plan defined five quality levels, with North Carolina defined as requiring Quality Level 2 (next to highest resolution). He added that the national program has not been funded as planned, and North Carolina can serve as a demonstration of what USGS can accomplish with state collaboration for LiDAR data acquisition.

Tom Morgan added that the national LiDAR standard was the basis of the North Carolina LiDAR specifications.

In answer to a question about funding, Mr. Dorman expressed an intention to move forward to find funding for phases 3-5. Hurricane Sandy was a catalyst, but the Floodplain Mapping Program needs accurate elevation data to support flood insurance. He has not talked with all state agencies, but plans to talk to departments such as Commerce and NC DENR after data products are available to demonstrate business value to agencies that may generate funding support.

Mr. Duncan asked Mr. Dorman how he could bring in and leverage the Council in this effort, and how the LiDAR project could meet the needs of stakeholders around the Council table. Mr. Dorman invited partners from the Council and would like to have discussions and would like to keep the Council updated. He has a project steering committee made up of funding partners.

John Farley added that NCDOT was involved in developing derived products such as digital elevation models and contours from the first statewide collection of LiDAR. CGIA is now distributing those products via NC OneMap and they have added some products such as hill shade. When the new LiDAR point datasets are available, Mr. Farley would like to see those derived products updated and be accessible from one source, particularly as web services, for efficient discovery and access. Mr. Dorman explained that there will be added products. Wherever products are located they will be freely available. Mr. Dorman emphasized that the Floodplain Mapping Program needs updated LiDAR data for floodplain map maintenance, even if it takes ten years to completely update the state. Partnering can accelerate the process.

Hope Morgan added that this has been a coordinated effort, with USGS accommodating state requirements, specifications, product delivery, classifications, and quality control. Also, the military had an efficient approval process to meet flight schedules. The biggest users work in small areas of interest, meaning that derived products downloadable for small areas will be valuable. The project will document lessons learned early on, especially about derived products, and will seek other agencies that can help produce those products.

Mr. Madding observed and Mr. Dorman confirmed that digital elevation models are applied to orthoimagery processing, and updated models in the coastal plain will be available and are essential for cost-effective coastal imagery acquisition in 2016, presuming the Statewide Orthoimagery Program begins a new cycle that year.

Mr. Duncan concluded that LiDAR data and derived products are impressive and thanked Mr. Dorman and Ms. Morgan for the fine presentation.

Statewide Orthoimagery Program Update
(see Orthoimagery PPT file at GICC website - http://www.ncgicc.org/GICCMeetings.aspx

Tim Johnson summarized the current status of the Statewide Orthoimagery Program. First, he confirmed that LiDAR data has been valuable in each of the phases of the statewide acquisition cycle and has saved money for the NC 911 Board.

The Coastal area is complete. The Eastern Piedmont 2013 products have been delivered to the Public Safety Answering Points (PSAPs) since the November GICC meeting. The Northern Piedmont and Mountains 2014 is well underway with imagery acquisition in process. Also, the state project team is beginning the planning process for the Southern Piedmont and Mountains 2015 phase.

Eastern Piedmont Orthoimagery Project 2013
The Eastern Piedmont region, covering 25 counties in the center of the state, includes Fort Bragg and Seymour Johnson Air Force Base. Products were delivered to PSAPs in five regional distribution meetings in January 2014. Imagery services were released to the public on NC OneMap in early February. There is a 60-day final review period to assure final acceptance, and resolve any quality issues discovered. By agreement, the Fort Bragg imagery is not available to the public, but is being used by Fort Bragg and local 911 communications centers in the immediate area. There will be a lessons learned session with the orthoimagery contractors before contracts end in May.

Northern Piedmont and Mountains Orthoimagery Project 2014
The project team is most active on the region consisting of 26 counties in the northern mountains and piedmont, adjoining the 2013 project. Mr. Johnson noted that weather conditions have been challenging. The project is looking at a cost-share with the USGS and the National Geospatial-Intelligence Agency (NGA) in the Greensboro-Winston-Salem metropolitan area. Five companies are under contract and are collaborating effectively. This week, the project reached 81 percent complete of the acquisition. Completion is expected next month in the mountain areas.

Development of imagery and quality control will follow acquisition. Outreach to local governments includes individual contact as well as presentations in Land Records Workshops conducted by the Department of the Secretary of State.

Southern Piedmont and Mountains Orthoimagery Project 2015
Mr. Johnson explained that planning is underway for the next phase. The 24-county area will include the Charlotte metropolitan area where he hopes to partner with USGS and NGA on cost-share again. The region includes challenging mountain areas and military installations—Fort Bragg and Camp Mackall.

Bob Brinson asked about the cost of flights for imagery acquisition as a percent of total cost in a project phase. Mr. Johnson explained that the 2014 phase has a total cost of about $3.9 million. Contracts for orthoimagery acquisition and processing add up to about $2.7 million. The acquisition (flights) part is on the order of $2 million.

NC OneMap Update

(see NCOM update PPT file at GICC website - http://www.ncgicc.org/GICCMeetings.aspx

David Giordano, NC OneMap Database Administrator, reported additions to the NC OneMap Geospatial Portal.

- Since the November 2013 Council meeting, over 50 resources have been added or updated, including environmental, political, ownership, and transportation. Most of new resources came from nearly 40 map services provided by NCDOT.
- The 2013 orthoimagery was released as services and downloadable files. Mr. Giordano demonstrated options for accessing imagery services and downloadable data.
- Performance of the imagery server has exceeded expectations.

Mr. Giordano summarized upcoming NC OneMap efforts:

- Infrastructure build-out continues
  - The Eastern Data Center (EDC) web server was duplicated from the Western Data Center (WDC)
  - Installation of ArcGIS Server 10.2.1 on EDC is complete
  - Geodatabases on EDC DB server upgraded to ArcGIS 10.2.1
- The NC OneMap team is assisting with the EPA parcels project implementation, including generation of REST services for NC OneMap consumers
- Working on elevation download from Geospatial Portal imagery tab
- Website redesign expected this summer
  - NC OneMap
  - GICC

John Gillis reported that Cumberland County 911 had the new 2013 imagery online as a service within a day or two after it was available. Mr. Gillis added that NCDOT and its highway corridor planning affects local real estate. Without the NCDOT maps being integrated in county data systems, there can be problems. Cumberland County has made data available to help real estate agents keep property owners up to date on land restrictions, helping avoid lawsuits and other issues.

Mr. Duncan observed that Mr. Gillis' new work in real estate means that he is now filling a Council desire for a member from the real estate industry.

GICC Member Announcements

Mr. Farley announced that the NCDOT "Rome" project, including the implementation of a statewide road dataset, will be completed in the first or second quarter of 2015. Progress has been slower than expected in the context of a 7-month strategic prioritization project that took priority. Mr. Farley is willing to do a presentation to the Council with more information.

ADJOURNMENT

There being no other business, the meeting was adjourned at 3:00 PM. The next meeting will be Thursday, May 15, 2014 from 1:00-3:00 pm at the Department of Public Instruction Board Room, Room 755, 301 N. Wilmington Street, Raleigh.

Presentations and reports are on the Council Website: http://www.ncgicc.org/GICCMeetings.aspx. Click on "GICC Meetings" and navigate to March 13, 2014 and the column on the right for presentations and documents presented during the meeting in a downloadable zip file.