

MINUTES

Statewide Mapping Advisory Committee Meeting

Wednesday, January 12th, 2022, 1:30 – 3:30 PM

Microsoft Teams Virtual Meeting

Welcome/Introductions

In attendance: Paul Badr, Cam McNutt, Rich Elkins, Alice Wilson, Christian Vose, John Lay, Kitty Kolb, John Bridgers, Bob Coats, Sarah Wray, Sean McGuire, Gary Thompson, Steve Averett, Greg Dobson, Marcus Bryant, Zsolt Nagy, Jeff Essic, Eric Wilson, John McCombs, Jeremy Goldsmith, Tim Johnson, Darrin Smith, Matt McLamb, Ben Shelton, John Derry, Elizabeth Daniel, Colleen Kiley, David Giordano

Minutes from the October 13th, 2021 meeting were approved.

Framework+ Datasets

Orthoimagery

Ben Shelton reported to the SMAC that the 2021 Eastern Piedmont is essentially complete (project area is found in Figure 1) and that, unlike in 2017, military bases have not been redacted from the data.

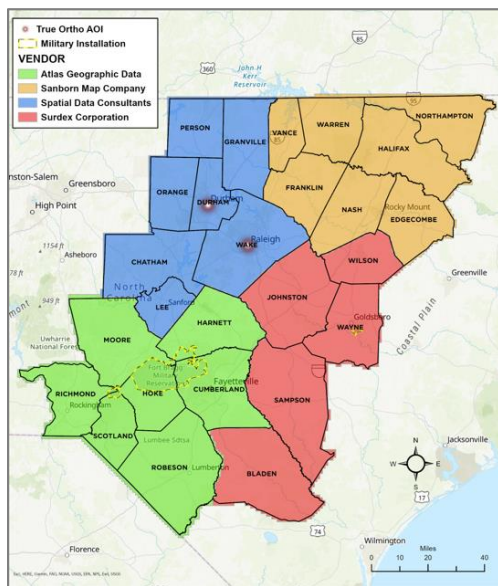


Figure 1 - The 2021 Eastern Piedmont project area.

The deliverables include color infrared imagery. This makes the 2nd year (previous year is 2020) where CIR has been collected and delivered. Approximately 50% of the state has had false color collected.

CGIA has shifted production of images for download and web services to Amazon Web Services (AWS). This has allowed more products to be created because of the increase in efficiency in their creation. Rather than MrSID tiles to support web services, cloud optimized GeoTIFF (COG) will be used. The new format is better for the cloud server environment and should improve the performance of the image services. MrSID is still the format for tile downloads via the NC OneMap [web app](#), however if users use the image service to download their imagery those formats will be COG.

Tile downloads via the app are available in 4-band generation 4 and a 3-band generation 3 MrSID files.

Work is gearing up for the 2022 Northern Piedmont and Mountains project. The vendor contracting is complete and imagery acquisition will begin shortly. The project has 25% mountain acquisition of imagery. True orthoimagery is being collected for Greensboro and Winston-Salem. As in 2020 and 2021, 4-band products will be included. Delivery to PSAPs in the area is expected in November 2022. Figure 2 shows the project area.

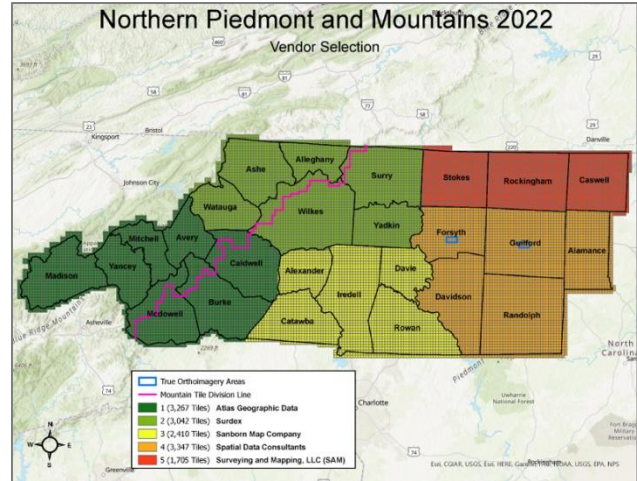


Figure 2 - The 2022 Northern Piedmont and Mountains project

Cadastral

Since it is the beginning of the 1st quarter of 2022, John Bridgers sent emails to the NC Property Mappers listserv and directly to county GIS coordinators, reminding them to upload their parcel updates to the NC OneMap transformer. John also reported he emailed the NC OneMap parcel date [map](#). All 100 counties have uploaded their data within the past year.

Elevation

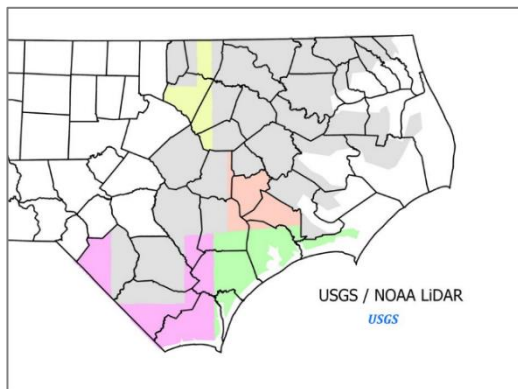


Figure 3 - Status of USGS LiDAR uploads to DPS.

John Lay reported the USGS continues to upload LiDAR data to the DPS servers. Figure 3 shows the areas uploaded and what remains (gray).

With regards to contour line QC, Watson Ross at the NC Geodetic Survey said he hopes to have phase 2 completed this week. The hope is that by next week phase 2 data (contours, DEMs, LiDAR points) can begin to be uploaded to CGIAs S3 location.

Hydrography

Cam McNutt will report on hydrography mapping status when discussing the Hydrography Working Group later in the agenda.

Geodetic Control

One of the key components of the geodetic network are the CORS locations. Gary Thompson reported that 2 CORS stations were lost due to construction. The NCGS is partnering with the NGS to install replacement stations. A new station will be installed on Knotts Island, a partnership with NCDOT. To support earthquake research in the Sparta area, 2 new stations will be installed there.

NCGS was able to obtain gravity meters, on loan from NGS. Gravity data was collected in preparation of the new datum, which now appears to be pushed back to 2025.

Administrative/Governmental Units

County Boundaries:

Figure 4 shows the current projects. Those in green are close to completion. The Davie-Yadkin boundary is a test for e-recording of the plats.

A follow-up is needed for Montgomery-Richmond. The report was submitted in early 2021.

Gary and his team are working on a mutual aid agreement with the Department of Revenue and the SC Geodetic Survey concerning parcels along the NC/SC border that are only accessible from roads in Transylvania County NC. The agreement would allow Transylvania County to provide service to those property owners.

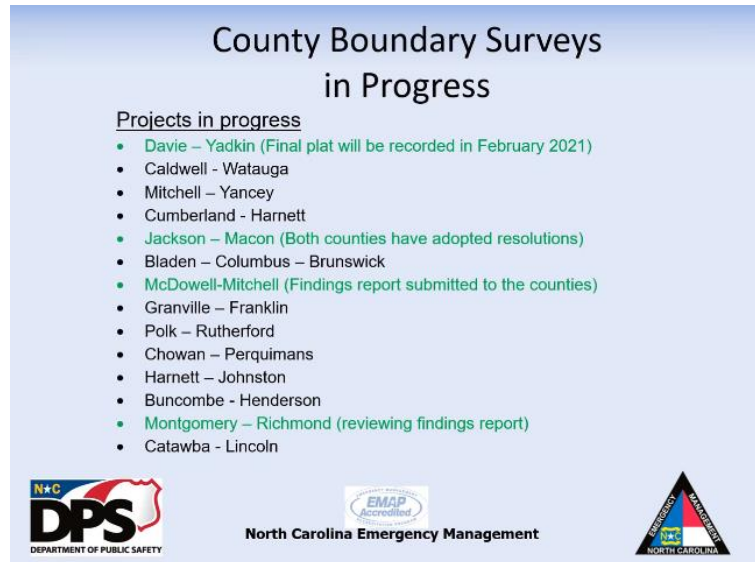


Figure 4 - Current county boundary mapping projects.

Regarding the NC/VA border, Governor Cooper sent a letter to the Commonwealth asking for the establishment of a boundary commission. Virginia law requires their General Assembly perform this. Virginia has asked which areas have boundary issues, and Gary has been working on identifying those locations.

Municipal Boundaries:

Sarah Wray briefed the SMAC. The annual update of Powell Bill municipal boundaries will be available on February 14th.

Transportation

The NCDOT Q4 2021 data update release will be on November 8th. Q1 2022 will occur on February 14th. Data are available from [Go!NC](#) and [NC OneMap](#). The updates include road centerlines with major asset data by segment, railroad network with crossings and stations, bridge structures, and the aforementioned

Powell Bill municipal boundaries. Also released if value-added data for county boundaries. This core data set is from the NC Geodetic Survey but DOT adds relevant attributes for their work.

As promised at the last SMAC meeting, Sarah has compiled a series of resources related to bicycle and pedestrian data collected by DOT. Those links are below:

- [Research and Data](#)
- Bicycle & Pedestrian Crash Data
 - [Crash Data Map](#)
- Pedestrian & Bicycle Infrastructure Network (PBIN)
 - [Viewing and Downloading Data](#)
- Non-Motorized Traffic Monitoring Program
 - [NC Non-Motorized Volume Data Program](#) (NC NMVDP)
 - [Resources for Local Agency Partners](#)
- [Bicycle Level of Service \(BLOS\)](#)
 - [BLOS data sheet](#)

Addresses

Darrin Smith brought the SMAC up to speed on AddressNC data. The address points in the data set rely on data from NG911. So far, 93 counties are completely mapped. There are only a handful of counties that are partially complete or don't have any data at all. Those are Watauga, Halifax, Bertie, Pitt, Sampson, and Robeson. In the event 100% completion for those counties can't be achieved, Darrin will look to other sources to fill in the gap, such as parcel centroids. Wake County is the lone county with an exception, in that their data is not ready for inclusion into NG911. However, Darrin has access to the counties' internal working data set of address and can use that if needed.

With regards to partnerships/coordination and outreach, Darrin recently met with the USDOT to understand schemas, requirements, and expectations. The department manages the National Address Dataset. AddressNC is focused on completeness and QC. It is the hope that through the data standardization processes, the AddressNC data will align closely with what the USDOT expects.

Work with the NC Broadband Office revolves around using the AddressNC points to quantify and accurately locate the served areas by broadband providers.

There are a group of geocoding service testers from NC agencies DPS, BOE, DHHS, SPO, NCDOT, DOQ, and DEQ. From local government Davidson and Person counties are assisting in the testing. The goals are to look at function, performance, and reliability of the service.

The goal in the next two weeks is to finalize the geocoding service so testing can begin. Q1 2022 is the timeframe to release the data and service through NC OneMap for discovery.

Working Groups

Building Footprints

Colleen Kiley informed the SMAC that CGIA is in the process of developing a group of stakeholders to serve on the working group. Ben Shelton and Darrin Smith have volunteered to co-lead the group. The desire is to have the first meeting during the last week of January or the first week of February. There is a list of people that have expressed an interest in participating. A few more people need to be recruited so there is representation among small and large local governments.

Hydrography Working Group

The HWG has been meeting every other month, according to Cam McNutt. The group will increase their meetings to monthly, and in-between those meetings a smaller group will convene to produce documents and updates for the SMAC and GICC.

At the next SMAC meeting the HWG hopes to present a position paper about how the committee will interact with federal agencies involved in hydrography mapping. At the April SMAC meeting there will also be a review of the ATLAS hydrography geometry in the Neuse river basin. This includes the stream network, shoreline, connectors, artificial paths, and 2D waterbodies.

The work after ATLAS data development is complete (hopefully in July 2022), the HWG and DEQ will work to move the data onto DEQ enterprise servers and include not only ATLAS hydrography requirements into the data set but also requirements that are being gathered from other users outside of NCDOT. This is the version of the hydrography the HWG hopes to present to the GICC later this year.

The other large component of the project is the development of a governance structure. There is a draft version of this create years ago. The document outlines how the data and attributes will be maintained. A lot of the attributes are already being updated by DEQ staff, however not on the new geometry. The goal is to maintain flexibility in the data to possibly bring in other data and preserve interaction with USGS.

Related to hydrography and the GICC: there is a DEQ rule that specifically mentions GICC approval of a hydrography map as well approval needed in regulatory basins by the Environmental Management Commission (EMC). Regulatory basins compose about 30-40% of the state. Cam anticipates interaction between the GICC and EMC and hopes to outline the work so there is no confusion about who is approving what and for what uses.

Orthoimagery and Elevation

Gary told the SMAC the work group had a meeting on January 10th which included an imagery update from Ben and updates from NOAA and USGS. NCGS developed a partnership with NASA to utilize satellite data for pre- and post-hurricane activities. The team is currently looking at what data can be shared. Also a topic at the meeting was the LiDAR data collected in the Sparta, NC area (a 5.1 magnitude earthquake occurred there in August 2020) by USGS. NCEM is working to get this Sparta LiDAR data. The goal is to have this data used in the creation of the 2022 orthos.

Working Group for Municipal Boundaries

John Bridgers reported that Colleen set up a draft website so municipalities could approve their boundary. The site includes a draft version of the statewide municipal boundary layer. Colleen is recruiting people to test the site before it is released to all municipalities.

2022 Reference Frame Working Group

Gary had nothing to add about the reference frame what was not already discussed earlier in the meeting.

Metadata Committee

Sarah reported that the committee has been able to connect with Esri and discuss interoperability functionality and the ability to import and export metadata. She expects discussions with Esri will continue between Chelsea Duncan (internal DOT metadata lead) and Colleen.

Regular Status Updates

USGS/National Geospatial Programs Office

Kitty Kolb reported for Silvia Terziotti. QL1 LiDAR for eastern NC is available as 1-meter bare earth DEMs and LAS files for areas 1, 2, 3, and 8. Area 4 will be delivered soon.

The second item to report is that comments submitted by state, local, and federal governments and private users on the 3D National Topography model and the 3D Hydrography program have been incorporated and will result in a revised, shorter FAQ sheet that will describe the direction in which 3D hydrography will take. This should be available within the next few months.

Kitty indicated the USGS WBD would like to make changes to the watershed boundary at the 8-digit HUC level and would like input from the state. She is unaware of the timeline but will find out and relay that to the SMAC. Cam responded that the Hydrography Working Group has a team that reviews the boundary changes and is prepared to look at the draft modifications. He added the possibility of using the ATLAS hydrography to assist in examining the boundary changes, in particular the area east of Interstate 95, and mentioned to Kitty to contact him.

NC OneMap

The migration of NC OneMap from on-premises to Amazon Web Services (AWS) continues. CGIA is in close contact with a team of people from Esri to iron out issues that exist with configuring ArcGIS Enterprise.

NextGen 911

Matt McLamb brought the SMAC up-to-speed on the GIS status of NG911. There are currently 9 PSAPs that are working on their GIS data so it can reach the i3-ready status (see Figure 5).

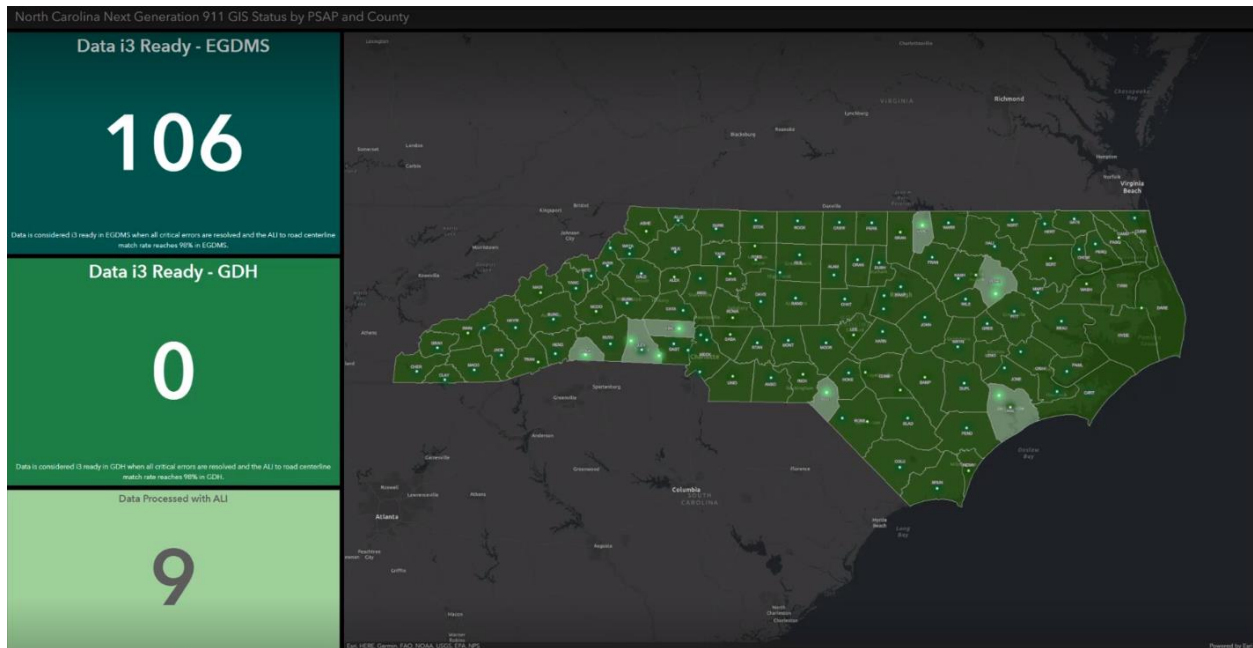


Figure 5 - NG911 GIS data status by PSAP.

Reaching that status will show that the PSAP is ready for NG911 call routing. "i3-ready" means all GIS data has been uploaded and is free of critical errors, and the match rate between the telephone records of all the addresses in the PSAP and the street centerlines is 98% or greater.

The 9 remaining PSAPs are engaged and are discussed at weekly status updates with the NC 911 Board, AT&T, and GeoComm. All remaining PSAPs are very close to being i3-ready within the next several weeks.

Shifting to "maintenance mode" is coming to the forefront. It is as important for the data to be i3-ready as it is to be maintained and current. New roads, addresses, boundary adjustments, etc. must be reflected in the data. Webinars will be conducted on the importance of data maintenance. A new dashboard is being developed that shows dates when PSAPs last uploaded their updates to NG911.

Other Business

FY 2021-22 Work Plan Major Task Review

As a way to keep the SMAC on-course through the fiscal year, the work plan tasks were reviewed by the committee. The numbers below relate to the objective and task number in the FY 2021-22 SMAC work plan.

1.1 - Tim Johnson said new GICC Chair Hope Morgan hopes to have a limited event to engage the GIS community where initiatives and priorities could be conveyed.

2.1 - John Bridgers hopes progress can be made on this front before the next SMAC meeting.

2.2 - John Lay and Gary Thompson said Watson Ross is actively “stamping” contour lines so they are certified. The goal is to have phase 1 contours completed by April.

2.3 - Tim added that David Giordano will be looking at NC OneMap framework datasets and how they are represented to see where they are in comparison to priorities.

3.1 - Cam indicated good progress is being made but the 1/2022 end date may need to be pushed back and evaluate timeframes for the FY2022-23 SMAC work plan. Cam hopes to have a more detailed schedule for surface water hydrography by the April 2022 SMAC meeting.

3.2 - Darrin reiterated great progress in the AddressNC project. The first priority is to get the initial data set published and available. The next step is to do a deep dive into relevant standards and errors found in the data. Paul hoped the task would near a close by the April 2022 SMAC meeting.

3.3 - Gary identified sections of the guidelines that need to be updated. He and Paul will identify team members to work through the updates with a goal of finishing by November 2022.

3.4 - Complete.

3.5 - This is considered complete. NC provided input to USGS for the 3DHP call-to-action.

4.1 - Bob Coats indicated the structure of the solution is in place. The pilot project team is being expanded to include larger municipalities not originally included. Colleen anticipates final testing to occur soon and should have a concluding report at the April 2022 SMAC meeting.

4.2 - Gary responded and said the WGOE meetings are on-going and always discussing and supporting the orthoimagery and elevation projects.

4.3 - There have been no new names for consideration recently, but Cam anticipates a handful of names for the NCBGN to consider shortly.

4.4 - Sarah mentioned the committee is a little behind in working with Esri to update documentation related to metadata in ArcGIS Pro. Conversations have started around metadata management, but the documenting has not. She mentioned the new Metadata committee chair could push to get this complete. Everything is in place to get it done except for the resource to devote time to it.

4.5 - Ken Taylor responded that the committee is still working on the recommended solutions and hope to have something to the SMAC by their next meeting in April 2022.

4.6 - Complete.

4.7 - Complete.

4.8 - Sarah and Colleen indicated there was not much of a need for centerline content update. Sarah said she will ask for Erin Lesh to get in touch with Colleen about this. It may be that this item can be deferred. Paul indicated a desire to have the standards reviewed periodically as advancements in data acquisition, GIS, and control can occur rapidly.

In-meeting Task Review

Modify task 3.5 in FY2021-22 SMAC workplan to indicate it is complete.

Adjourn