NY State Geospatial Advisory Council

Draft Minutes for December 11, 2019 Meeting

The New York Field Office of The Nature Conservancy, 195 New Karner Road, Albany, NY
(upstairs from the Albany Pine Bush Discovery Center)

Mission: Advise the State on effective use of geospatial technology resulting in tangible benefits to NYS

In person:	Christina Croll, Eric Herman, David Jorgensen, Todd Nelson, Christopher O'Connor, Lindi Quackenbush, Chris Rado, Randy Rath, Richard Reichert, David Richardson, Heather Weller, Frank Winters
Via phone:	Ross Baldwin, Mickey Dietrich, Ana Hiraldo-Gomez, Julie O'Brien, Matthew Owen, Michael Ross
Invited Guests:	• Brett Chellis, Deputy Director, Office of Interoperable & Emergency Communications, State 911 Coordinator • Rodger Coryell, GPO Street and Address Program • Elisabetta DeGironimo, GISP, Watershed / GIS Coordinator, Mohawk Valley Water Authority • Gerry Engstrom, GPO State Police Support
Absent:	Emily Fogarty
Minutes:	Christopher O'Connor

10:30 Welcome / Agenda Review / Approval of Minutes (Richardson)

- Approve previous meeting minutes
  - There were no suggested edits to the September 10, 2019 draft meeting minutes.
  - Nelson motioned to accept the minutes, Weller seconded, everyone unanimously approved.

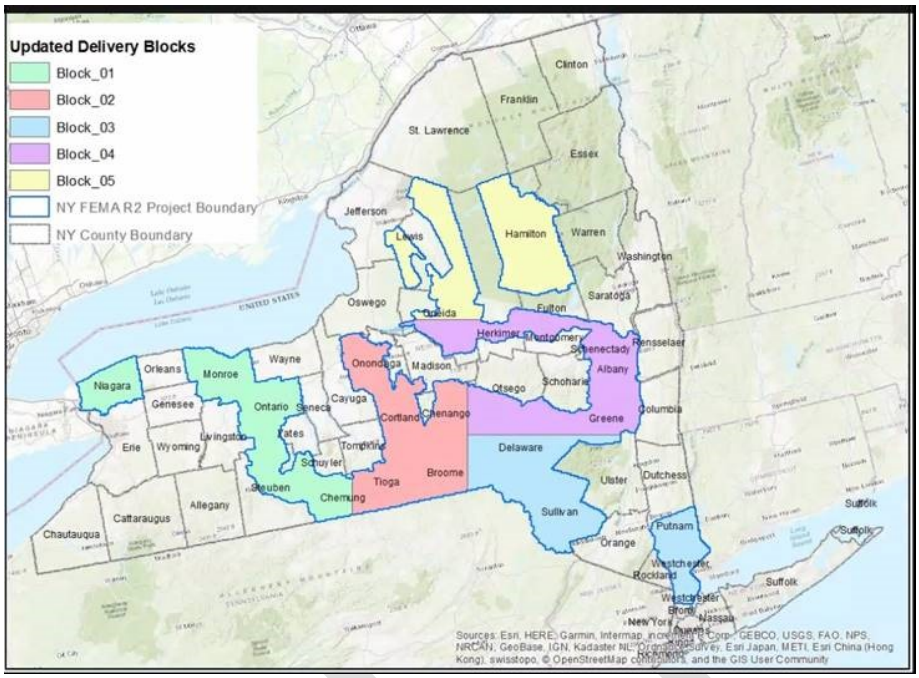
10:35 Nominations for 2020 GAC – open seats, chair & co-chair (M. Ross, Richardson)

- Thanks to the nominating committee and efforts of the NYS GIS Association for reaching out to the GIS community; there was a very good response from candidates excited to put forth the effort and participate.
- There are *three* open seats for *Local Government* representation and *one* seat for the *Private Sector*. The slate of candidates was circulated; no comments were provided back. The candidates are:
  1) Local Government
     Richard Reichert, Oneida County
  2) Local Government
     Keith Ducett, GIO, Onondaga County 911. (Syracuse)
  3) Local Government
     Svetla Borovska, GIS Analyst, Tompkins County (Ithaca)
  4) Private
     Carrie Wiley, Technical Sales Manager, Nearmap (NYC)
- Ross motioned to approve slate, Nelson seconded, everyone unanimously approved.

- Reichert will discuss with GIS Association members their representation on the GAC.
- Nominations for GAC Chair and Vice Chair were accepted. To be eligible, nominees are required to have served at least one year (come January 2020) on the GAC Board.
- Members not in attendance during this discussion would be contacted afterward for their interest.
    - Chair nominees include:
        - **Nelson** and **Weller**
    - Vice Chair nominees include:
        - **Croll, Nelson, Owen, Reichert, Weller**
- Voting for the chair and vice chair will be done using an on-line voting app.
- Winters thanked Richardson (current Chair) and Weller (current Vice Chair) for their efforts in the respective roles.

10:55 Reports

- **State Agency Advisory Group report (Herman)**
    - Minutes from the September 17, 2019 meeting can be found online at: https://gis.ny.gov/coordinationprogram/workgroups/wg_7/meetings/2019-09-meeting-minutes.pdf
    - Of note – there was broader usage of ArcGIS Pro across the agencies than what might have been assumed.
    - Of note – the DEC's new DECinfo Locator, which was demonstrated by Tim Daly (ITS), was worth a look at (https://www.dec.ny.gov/pubs/109457.html).
- **NYSGISA report (Reichert)**
    - Pleased with the response received from the GIS community for participation on the GIS Advisory Council board; there were more than enough responses to meet the current need.
    - NYSGISA has several committees that can always use extra participation and support, including the Membership and Communications Committees.
    - The GIS Summit Fall 2020 will be held in Syracuse.
- **Federal report (O'Brien)**
    - Discussed the status of FEMA's National Flood Insurance Plan Studies.
        - The FEMA Region II Study Tracker is available to the public at: http://fema.maps.arcgis.com/apps/webappviewer/index.html?id=3e3da8a85d7b40a8bdc7b44929140a20
            - This is updated on a quarterly basis. May be offline during map updates, due to FEMA review requirements.
                - Data includes: Preliminary – already completed a floodplain study and now in 3-year review and appeal process; and Post-Appeal



- LiDAR
  - They have resumed data collection now that leaves are off and are working on the last six counties.
- Datum 2022
  - In 2022, NOAA's National Geodetic Survey (NGS) will replace both the horizontal (NAD 83) and vertical (NAVD 88) datums. This will be the first time that datums have been replaced ahead of technological advances, to be prepared for them. More information can be found at: https://geodesy.noaa.gov/datums/newdatums/

- **GIO/GPO/GCO report (Winters)**
  - Orthoimagery and Elevation
    - No orthoimagery was flown in 2019; but collection efforts for elevation data were doubled.
  - Processing for GPO's 2019 LIDAR project is underway.
    - Quality Level 2 specification will be met.
    - Using partial 3DEP funding.
    - Classified point cloud tiles for western half of NY are under review at the GPO.
    - Rest (eastern half) of classified point cloud is due by the end of December 2019.
  - Federal LIDAR project has been partially collected.
    - Spring 2019 flights acquired Western half and parts of eastern areas.
    - Additional flights this Fall (2019) acquired more of the eastern areas, but snow has shut down flights.
  - NY was completely flown for USDA NAIP orthoimagery - 60cm resolution, 4-band.
    - Flights ran from Summer to early October. Data is not available as of 12/11.
    - Winters will check on any gaps in coverage – there may have been a small gap in western NY.
    - There will be a web service to access the data.
  - Orthoimagery and Elevation - Distribution

        - All CIR imagery, or CIR-view from 4-band, is now available as web services.
        - The GPO also has statewide CIR-Latest service.
    - Orthoimagery and Elevation – Planning
        - 2020 Production will use a new contract based on a Request for Proposals; the RFP package is with the State Comptroller's Office for final review.
        - GPO applied for 3DEP funding to help with costs of LIDAR collection.
    - SAM
        - GPO is working with DEC and OPRHP to include "greenway trails" in the street data.
            - Legislation was passed that called for the inclusion of major non-motorized trails. This will align it with the NEMA 911 standard, which is a positive.
            - NYC has a great mechanism for getting address point updates; street updates are more challenging. GPO is working with NYSDOT and several NYC agencies on this. In general, routing through NYC needs to be improved.
    - Civil Boundaries
        - A new version of the Civil Boundaries file was uploaded to gis.ny.gov last June and included the new Town of Palm Tree in Orange County. The Village of Kiryas Joel is within the town, not coterminous.
        - January update will include:
            - A revised state boundary for areas adjacent to New Jersey, from Port Jervis out through Raritan Bay.
                - Updated boundary was part of an effort under Andrew Rowan, NJ GIO, in June. Updates were based on GPS observations made by the NJ Geologic Survey in 2008.
            - NY will have one less village, as the Village of Morristown in St. Lawrence County is scheduled to dissolve on 12/31/2019.
        - Place Points file was uploaded to gis.ny.gov in November; this data is updated approximately quarterly.
    - GPO Statewide Parcel Map (SPM)
        - 2018 GIS Tax Parcels are available for State Agency use (61 counties), and Public use (21 Counties). Dataset includes State-Owned Parcels and Statewide Centroid Points.
        - Outreach for 2019 GIS tax parcel polygons is underway. Expect 2019 Assessment data in Q1 of 2020.
        - GPO is working on permission from Suffolk County to share with other State Agencies. The current Tax Director is retiring, and the new agreement is on hold until a new Tax Director is named.
        - GPO is developing a presentation to share with counties that highlights the benefits of sharing their tax parcel data with the public. Economic development is a great example where readily available tax parcels are key to private investment decision making.
            - GAC attendees would be interested in seeing the presentation, possibly as a WebEx in January 2020.
    - ShareGIS
        - GPO plans to roll out a more robust ShareGIS platform by the beginning of 2020.

        - ShareGIS gets 30 – 40 million hits / month; need to accommodate 10x that with new usage including the Assessment Community Enterprise System (ACES). New features include:
            - Map services, geocoding services and geoprocessing service set up in new and separate environments.
            - More capacity allowing for web service buildout.
            - URL changes adding in *gis in place of *its; this change will allow for integration into the NYS ITS API Gateway.
        - There is a new DPAT service in NYResponds to assist in tracking state assets.
        - GPO staff are experimenting with mapping NY Open data using the Socrata JavaScript API.
        - GPO staff have successfully tested Pelias Geocoder with the company Prominent Edge, which took over from Boundless.
        - GPO staff have developed an Excel geocoding macro that connects to the NYS geocoder. Demonstrated that the VBA script returns coordinates from the NYS Geocoder based on address information in Excel, negating the need for desktop GIS software. GPO will document and make it publicly available.
        - Working toward getting the Socrata platform to use the NYS geocoder.
    - Winters's presented Certificates of Appreciation to Mike Ross, Kate Buss and Ross Baldwin; thanking them for their service on the GAC.

11:50 Datum and reference frame changes & NYSAPLS outreach (Elisabetta DeGironimo)

- The New York State Association of Professional Land Surveyors (NYSAPLS) requested training on resources available from the NYS GIS Clearinghouse; due to NYS government travel constraints, DeGironimo agreed to assist in that training.
- DeGironimo provided an overview of the datum and reference frame changes planned for 2022.
    - New datums are of critical importance to our professions.
    - The National Geodetic Survey (NGS) will replace the North American Datum of 1983 (NAD 83) and the North American Vertical Datum of 1988 (NAVD 88) with a new geometric reference frame and geopotential datum in 2022.
    - The North American Terrestrial Reference Frame of 2022 (NATRF) will be, for the first time, gravity-based.
    - New reference frame will be tied to tectonic plates and time will be a factor (at a geological scale, which translates to approx. 1.5cm horizontal per year). It is expected that software will account for the temporal component, and potentially provide updates on an annual basis.
    - There will be a change of 1.2 meters horizontally.
    - GPS uses WGS 84; so orthometric heights will be off. With GPS we're getting ellipsoid height, not the orthometric height.
    - The new datum and reference frame are good examples of the need for well-documented metadata, particularly considering the temporal component.
    - The new datum and reference frame will impact current legislation – anything tied to the old datums will need to be changed. Winters noted that the NYSAPLS outreach to

the GIS community has been very good, and that NYSAPLS should continue to lead efforts for necessary legislative changes.

- Winters asked the GAC if there was interest in establishing a workgroup.
  - Weller put forth the motion, Richardson seconded, members unanimously approved.
  - DeGironimo agreed to lead the workgroup, Reichert, Croll, and Quackenbush expressed interested in participation, and Winters offered participation from his orthoimagery and elevation teams.
  - The workgroup will initially focus on factfinding.
- All Federal agencies will be required to use the new datums in 2022; at the New York state level, focus has been on gathering awareness. This has been an agenda item for the National States Geographic Information Council (NSGIC) as well, with individual states supporting varying positions. Some states have not begun to plan, some are actively planning for adoption, and others don't believe the minor errors introduced impact GIS data layers enough to warrant adoption.
- A key consideration for adoption now is planning for future technologic advances. Another consideration for adoption is the potential requirement from programs like 3DEP.
- Winters is interested in learning about shared areas of concern from the NYSAPLS and GIS communities.
- NGS is looking for input on potentially redefining the state plane zones – comments can be provided to DeGironimo.

- Mentioned the NGS's GPS on Bench Marks (GPS on BM) Program
  - Anyone can document benchmarks and submit to NGS, but there is a preference for surveyors to conduct the work
- DeGironimo agreed to represent the GIS Advisory Council at NYSAPLS.

12:15 Break for lunch

1:00 GIS in NG9-1-1 (Brett Chellis, Gerry Engstrom, Rodger Coryell)

- Chellis provided an overview of Next Generation (NG) 9-1-1
  - Current 9-1-1 is based on 1960's technology and has been updated over the decades in a piecemeal fashion; infrastructure is antiquated, and the system is still based on address information stored by the phone companies that is cross-walked with information on emergency service providers for particular areas
  - Geographic Information Systems are not part of the current system
  - Approximately 80% of calls are now made from wireless devices where position is determined based on cell tower (+/-150 meters horizontal), or GPS (+/- 5 meters horizontal), often resulting in inadequate location information

- Future state, or Next Generation 9-1-1 will be based on ESInets[1]
- In 2016 NYS established a NG911 Working Group. NG911 will require statewide coordination because of the necessary network
  - Workgroup includes 16 county 9-1-1 officials and representation from 5 state agencies
  - Workgroup has established partnerships with Federal agencies and other states
  - A GIS Subcommittee has been formed
    - GIS Subcommittee co-chairs are Gerry Engstrom, NYS ITS GIS Program and Chris Rado NYC DOITT GIS; and includes representation from 11 counties and NYC GIS Professionals
- New York state is in the middle of its migration
  - NG911 Draft Plan is complete, based on stakeholder input
  - Draft Plan is under executive review
  - Plan is for state to play leadership role, issue a Request for Information, and coordinate with NYC (which has a Request for Proposal out) – *NYC is the largest 9-1-1 system in the country*
  - NY is trying to stay in sync with evolutions in technology along the way
  - NY will eventually connect with adjoining states
  - Implementation roadmap takes about 5 years
- Looking at a state/regional hybrid model
  - State network, plus NYC and maybe others
- GIS data will play an important role
  - NG911 dataset creation project status (planned, in progress, or complete)
  - Data formatted for:
    - Location verification function
    - Emergency call routing
    - Policy routing function
  - Jurisdictional boundaries exported to neighboring ESInets
  - The GIS data and rule base will drive where calls go – this can be very dynamic – even allowing for the setup of temporary centers
  - GIS data for 9-1-1 Dispatch
    - Computer aided dispatch utilizes GIS layers along with response plans to recommend units to dispatch
      - Requests for service are becoming automated (ex. Automated Secure Alarm Protocol (ASAP), OnStar, Apple Watches, Internet of Things)
    - Location Accuracy Improvements
      - Happening in parallel

[1] "An ESInet is a standards-based "network of networks" that's designed with a high level of redundancy and resiliency to ensure that the network can continue to operate (deliver 911 calls) even if some of the circuits or end points are no longer functioning." – source: https://www.govtech.com/em/next-gen-911/ESInets-Are-a-Game-Changer-for-Public-Safety.html

        - The Federal Communications Commission (FCC) has a set of rules for wireless carriers to improve the location accuracy for wireless calls and for multi-line telephone systems
        - For wireless devices a hybrid approach utilizing system and device attributes has proven to be the most accurate
        - Z-axis is required to have been set at within 3m accuracy the Height Above ellipsoid (HAE) to identify the floor level or "disputable location"
    - Reviewed FCC Location Accuracy Timeline[2] – this is a Federal initiative that will happen regardless of where NY is in its implementation
    - System will need data for public safety answering point (PSAP) call centers, fire, emergency response, etc.; and the data will need to be maintained
        - Coryell - NYS has address points and streets in formats needed, but still needs to work on PSAPs and emergency service boundaries; big question is – how to coordinate across counties (overlap, gaps)
            - Chellis - Texas did clean-up work with communities using screen sharing and community review
- GIS is becoming more integral to emergency response (large demand for the data and ever-increasing need for higher data accuracy)

3:00 GAC Workgroup: Revising Data Sharing Cooperative Agreements (Weller)

- The workgroup has a draft document with a summary of findings

3:10 GAC Workgroup: Recommendations for Revamp of gis.ny.gov/clearinghouse (Rado)

- Rado walked the group through a presentation on the workgroup's considerations and thoughts on the Clearinghouse; including examples of what other organizations were doing and the group's vision for a new site
- The workgroup had several recommendations that will be shared and further refined

3:30 Meeting adjourns

Upcoming 2020 Meetings: TBD by poll in early January with new GAC membership

[2] https://www.fcc.gov/public-safety-and-homeland-security/policy-and-licensing-division/911-services/general/location-accuracy-indoor-benchmarks