

NYS GIS State Agency Advisory Group
Meeting Report
Virtual WebEx Meeting
September 21, 2021

Welcome/Roundtable Discussion of Agency Involvement with Climate Change Initiatives. The attendees were called upon to introduce themselves and note any major climate change focused initiatives from their agencies and if/how GIS has a role. Eric noted that climate change may be a focal topic for a future meeting, since GIS has the power to truly make a critically important difference:

- **Eric Herman – NYSTA:** A few climate-oriented initiatives—biggest is cashless tolling, reducing idling and traffic; Alternate fuel vehicles are used as part of the fleet; installation of electric vehicle charging stations at service plazas; no major mapping/GIS components other than mapping of toll gantries
- **Christina Croll – Parks:** Many parks are coastal; using GIS and DOS models to look at effects/impacts; looking at infrastructure and natural resource data to evaluate; invasive species migration info forests with temperature rise
- **Rebecca Newell – DOS:** Have created a [risk assessment tool & map](#) for NYS communities to look at sea-level rise and flood risk using large variety of datasets; prioritize existing assets and infrastructure for resilience; coastal areas are big focus; model local laws to help communities climate change – risk areas; looking into the First Street Flood Modeling and its potential use in planning for climate change/flood risk throughout NYS—if anyone is familiar with this data or has used it, contact her
- **Jeff Herter – DOS:** Number of climate initiatives through the Climate Leadership and Community Protection Act (CLCPA), working with DEC, OPRHP & others; looking at distressed communities – justice, equity, inclusion; Climate Justice working group for directing grants as a GIS exercise; released guidance on resilience to change last week; noted that high water on the Great Lakes takes months to recede; serves as designee on Ocean Acidification Task Force & developing a report
- **Arjita Rai - DOH:** Using GIS to develop an ArcGIS Online StoryMap of NYS flood vulnerability (overlying CDC’s social vulnerability index, Live Atlas layers, flood hazard layers, flood vulnerability); Climate and Health Program uses GIS and created a [Heat Vulnerability Index Map](#), including county heat and health profiles, all on [Climate and Health web page](#); using model data from NASA – temperature and precipitation and relationships with health issues; noted NYSERDA’s [Electric Vehicle Station Locator](#)
- **Amber Tobin – OASAS:** Not doing much with climate change
- **Anthony Calabrese – NYS Senate:** Mostly SAGE project, not directly involved with climate
- **Anyée Fields – NYSTA:** See Eric’s notes
- **Brent Kinal – DEC:** Bureau of Invasive Species; DEC does a lot of climate work, but Lands & Forests recently hired 2 climate change foresters to look at impacts on forests and carbon sequestration; impact on forest health issues like invasive species (like Hemlock Woolly Algid) & pests as they increase as well as pathogens
- **Gwen LaSelva – DOH:** Environmental Public Health programs to track outcomes related to climate change; research into what may be related to health changes; map of cooling centers (on hold with pandemic)
- **Jason Baum – GPO:** Serve base data and make rest services available (many are related to climate change projects)

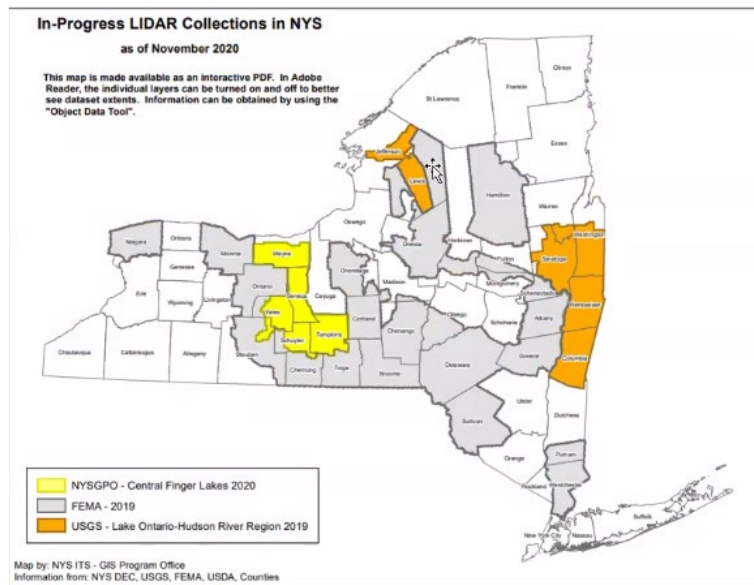
- **John Marino – NYNHP:** iMapInvasives program doesn't directly deal with climate change, but working on early detection of invasive species to bring data together
- **Jeff Langella – GPO:** Elevation data, noted below, is a big component of climate change initiatives
- **Joe Lasch – DPS:** Utility Event Dashboard project will provide a wealth of data regarding outages; working on hardening infrastructure to reduce outages from increasing storms; analytical tools for analysis
- **Kate Kiyanitsa – GPO:** Looking for good climate change uses for parcel data sharing
- **Kate Lawson – University at Albany:** University set up a Visualization and Informatics Lab (AVAIL) to ingest data (like parcels) and created a state hazard mitigation plan - finishing 4 county plans; NSF funding to use 3000 years of tree ring data to see growth change & look at forest stress with full access to data & drought index; working as FEMA partner and funding fusion datasets; platform for NYSDOT's federal reporting measures/see effects of flooding; Kate provided links (best used through Chrome):
 - Tree ring data, research on forest stress, global temperatures, and drought index data: <https://pire.availabs.org/>
 - First FEMA-approved State Hazard Mitigation Plan: <https://mitigateny.availabs.org/>
 - Multi-jurisdictional Local Hazard Mitigation Plans (have a back end that allows authorized users to access parcel data, building footprint data, and flood-prone areas on a base map, to develop natural hazard problem statements, describe need, and propose mitigation actions): <https://sullivan.mitigateny.org/>, <https://delaware.mitigateny.org/>, <https://hamilton.mitigateny.org/>, <https://fulton.mitigateny.org/>
 - Requires permission from NYSDOT to access tools: <https://nprds.availabs.org/>
- **Kevin Hunt – ITS:** Policy & Planning Division is handling climate efforts with Dr. Lawson addressing congestion & resiliency; looking at past issues to consider for planning
- **Mark Giddings – DOH:** No direct involvement with this issue; Arjita covered other DOH projects
- **Matthew Shepherd – SHPO:** Deferred to Mike; Sandy impacted sites with rising water
- **Mike Schifferli – SHPO:** Sandy, Lee, Irene caused a look at inundation areas and comprehensive surveys done, while CRIS expanded with this data
- **Michele Golden – DEC:** Division of Water is focused on rising water levels and impacts on infrastructure
- **Mickey Dietrich – Tug Hill Commission:** Several initiatives: clean energy and Climate-Smart Cities initiatives; encouraging more walking; converting community street lighting to LED with Power Authority with Climate-Smart Cities technology
- **Stephanie Rockwell – Canal Corp:** Using mitigation strategies for climate change regarding major flood events; using GIS to map soundings and dredging to keep canal navigable from rain events; using ArcGIS Pro to view infrastructure over NOAA's live rain accumulation numbers to monitor major storms; removing invasive species
- **Carol Hockeson – ITS (DOH):** Focus on defense use of technologies such as evacuation zones in New York
- **Matt Richards – DEC:** Marine Resources group is using Survey 123 field apps to get data into GIS; working with NOAA on a project looking at mussel beds impacts from climate change
- **Tim Ruhren – GPO:** Office provides data relevant to all these efforts to get good data shared & encouraged a focus on web services and metadata
- **Tim Daly – ITS/DEC:** Lots of climate work at DEC; DEC's Environmental Resource Mapper online now includes flood info and sea level rise models; flood hazard mapper flood data also helps with DEC permit applications for Hudson & Long Island regions
- **Katherine Barnes – DEC:** Mapping of property and species; No direct climate change involvement
- **Todd Nelson – GPO:** No direct climate change involvement
- **Rui Li – University at Albany:** Arrived after this topic
- **Barb Cruden – ITS:** Arrived after this topic

- **Sean O’Connell – ITS/GPO:** Arrived after this topic

GPO Datasets. Eric provided an update on the state’s coordination with wayfinding companies. He noted the importance of good physical addressing data (not mailing addresses) for things like emergency services (noting that even responders often use 3rd party tools). Google is now using data from NYS to enhance their own and a press release from Google should be forthcoming. He also noted that Frank Winters is working with these companies to foster partnerships on a national level, and encourage use of the [National Address Database](#) that is under development. NY is one of about half of the states that are currently partnering on the effort. He also noted that these companies are being encouraged to look at the Work Zone Data Exchange format for updated information regarding attributes such as bridge clearance and road directionality.

Eric also noted that the new Census counts are out, and that the 2020 population values will be added to the GPO’s civil boundary files at the end of the month.

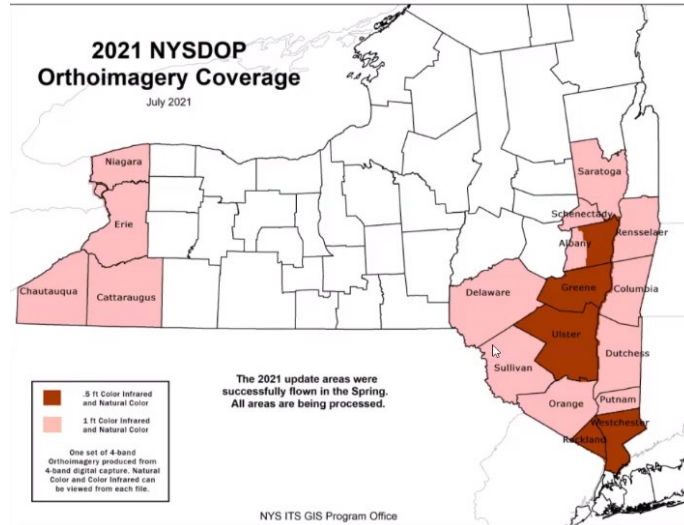
LiDAR Update. Jeff Langella provided an update on the state’s LiDAR collection. He noted the central Finger Lakes project should be available in the next few weeks. USGS is evaluating data purchased for the Hudson Valley region (shown in orange, below) is being evaluated and should be available around October-November timeframe. The FEMA LiDAR data collected in 2019 should be ready soon. This site is accessible via https, since the LiDAR ftp site was taken down. The GPO is proposing lower Hudson Valley collection for next year.



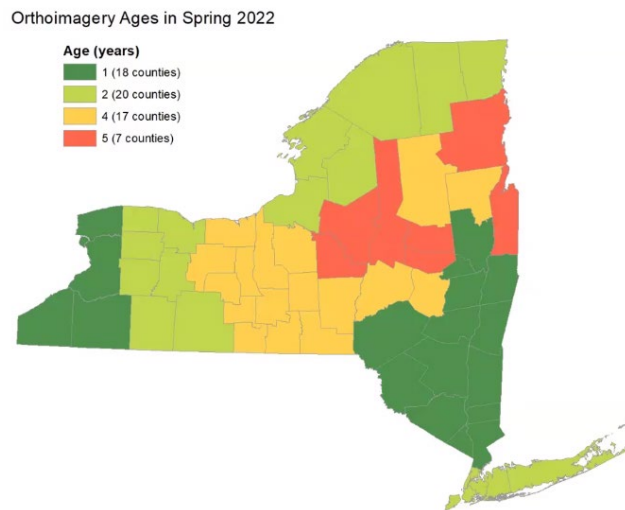
Evolution of Hydrography. Jeff then discussed the evolution hydrographic data. The federal NHD program was put on hold, after [NHDPlus](#) was finished. Several NHD improvements were first made by NYS (including thousands of new water bodies). NHD relies on the states to do their work, but there is no consistency between states. Elevation Derived Hydrography (EDH) is using break lines from 3DEP and standardizing across the country. The 3D Hydrography Program will have less focus on state stewards. The program is in its very early stages and is expected to take form in Fiscal Year 2023. EDH is going to only use 3DEP data, which covers larger water bodies than NHD. Jeff believes that NHD will still have a role to compliment EDH. He noted the state’s hydrography web services and the value added and is interested in uses and feedback of these services and what they include. He also noted that NHDPlus is meant to be higher resolution and has some attributes beyond NHD. Currently,

NHD is a matter of managing internal staff, whereas EDH may be more about searching for funding partners.

Orthoimagery. Tim Ruhren discussed imagery updates. The GPO has acquired 2019 NAIP imagery from the USDA, which slightly degrades the resolution. NYS will put it out a 60 cm version of the data and provide a service in CIR and one in natural color. He provided this graphic to describe the status of the 2021 data:



For 2022, he presented this map, and indicated that the plan is do as much of the lighter and darker orange areas as possible:



Building Inspections with Survey123. Tim Ruhren discussed the Survey123 application development at the GPO. He specifically discussed an application that allows people to record building damage on a standard form that originated with FEMA. Several groups of people are using the system during heavy rainfall events, with great success. Following Hurricane Ida, 647 buildings in Westchester County were inspected for damage using this tool, and immediately posted on the Esri cloud for use by others. He presented an ArcGIS Online interface to show the statuses of various buildings, electrical safety status,

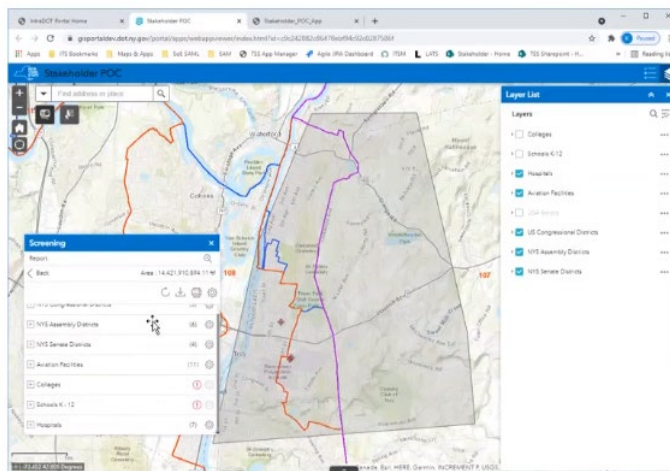
and the identification of the safety status of the structures based on ATC-45 (Applied Technology Council assessment) placards.

Christina commented about the work that Parks is also doing for required biennial facility inspections with the same technology. She also noted that she'd like to get Field Maps added to the state's app store, since several agencies are moving in this direction, though Esri has no immediate plans to deprecate Survey123.

Brent stated that the DEC & Canals have interest in "close to real time" 3rd party satellite imagery and was wondering if there was general interest in this. Tim was also interested in participating in this kind of discussion. The topic was tabled for a future meeting.

NYS DOT Stakeholder Portal Project. Kevin discussed the new tool that NYS DOT is looking to develop for outreach for notifications of projects, emergencies, etc. This will be added to NYS DOT Maps & Apps interface to identify stakeholders and geographic area for notifications. There are a large variety of stakeholder categories. DOT is starting with a proof of concept on their Stakeholder Portal with available data. They have identified four data scenarios: 1) Existing statewide dataset with contact info, 2) GIS dataset exist with just partial contact info, 3) Dataset has incomplete location and contact info, and 4) No existing statewide dataset exists

The project prototype started last month, and Kevin showed an early prototype:



This includes a screening widget for users to select area and report on information from within it, then export or generate a report. This would be of general interest, and not for DOT. It also encourages everyone to keep the datasets up to date. Kevin noted that they will be working with other agencies and looking for available data. Contact info will need to be maintained, and web services would be ideal. Kevin provided his PowerPoint to share with those interested.

OPRHP's Parks Explorer App. Christina then gave a presentation of the new Parks Explorer app. About two years ago, Parks worked with ITS's Mobile App group to develop an app for state parks group. The initial release provided information about amenities, photos, and allowed users to scan their Empire Pass into a mobile device. New mapping functionality was pushed to the second version, which was just released in the summer. There are a few bugs that are being worked out. The app includes curated cards to highlight several items. It has a search screen that sorts by location, or users can search by amenities. The app uses Esri technology for its mapping functionality. Trail Maps are

available through online access and includes offline capabilities. Typical pan, zoom, and scale dependencies are included, with a strong focus on park trail maps. Information about sites is available at a click, while long presses on trails provide segment mileage. A blue dot shows current location and direction of travel. Parks is looking to add several enhancements (such as trail mileage totals, descriptions, and distance to travel to a point). The app represents the culmination of about 20 years' worth of trail data. The data has been standardized and has consistent attribution. All maps are hosted in ArcGIS Online. It includes about 170 parks (all with a NYS Parks trail system are included).

Federal Updates. Eric gave some very brief updates on some federal programs. He noted that the USDA's National Resources Conservation Service will have soils updates live on their website on October 1. He also said that New York State will be flown by the federal government as a part of the NAIP program this fall. Finally, the new datum that will replace NAD83 (the North American Terrestrial Reference Frame of 2022 [NATRF2022]) for the USA, has been delayed. It's now expected to come out around 2024 or 2025 (but will have same name).

Accessibility of State Data (Web Services/Clearinghouse/Open Data). Eric then briefly discussed redundancies with data posting. He noted how his organization and many others post the same data to multiple sites (such as the Clearinghouse, NY Open Data, web services, Google, etc.) He also noted that many of these sources can be used together (like bringing Open Data into GIS products, or providing links to web services in Open Data). Barb added that she's working with Diane Boyd at NYS Open Data and Scott Geis with ShareGIS, to see if more collaboration can be found between the various sites. Further discussion on the topic was held off for larger discussion at a future meeting, to see how discussions evolve.

Open Forum.

- On Rui's behalf, Eric noted that the University at Albany's Geography and Planning Department is organizing a GIS Day event with the School of Public Health and NYS DOH on Nov 17-18. Frank Winters will be giving a keynote on GIS's role in the pandemic.

*A recording of the meeting is here: [NYS GIS State Agency Advisory Group Meeting-20210921 1332-1](#)
Contact Eric (email listed below) for the password.*

The next meeting is tentatively scheduled for January 11, 2022 from 9:30am-12:00pm via WebEx. If you have any ideas for topics or would like to provide a demonstration at this meeting, please let us know. Send any questions or concerns about any of these issues to the Advisory Group Chair, Eric Herman at the NYS Thruway Authority (518) 471-5890, or eric.herman@thruway.ny.gov.