# National Geospatial Advisory Committee
## Hybrid Meeting April 2-4, 2024

The National Geospatial Advisory Committee (NGAC) held a public meeting on April 2, 2024 from 9:15 a.m. to 5:00 p.m., April 3, 2024 9:00 a.m. to 4:30 p.m., and April 4, 2024 9:00 a.m. to 4:00 p.m. The meeting was held via webinar, teleconference, and in-person at the Department of Interior (DOI) Headquarters in Washington D.C. In accordance with the requirements of the Federal Advisory Committee Act, the meeting was open to the public.

**NGAC members present:**
Maggie Cawley, NGAC Chair
Bert Granberg, NGAC Vice Chair
Nadine Alameh
Clio Andris
Frank Avila
Chad Baker
Byron Bluehorse
Jack Dangermond
Lynn Dupont
Holli Howard
Leslie Jones
Ryan Mattke
Mark Meade
Curtis Pulford
Breece Robertson
Vasit Sagan
Kathleen Stewart
Phil Thiel
Gary Thompson
Tim Trainor

Josh Delmonico, Executive Director of the Federal Geographic Data Committee and Designated Federal Officer (DFO) for the NGAC, and Ken Shaffer, Alternate DFO, were also in attendance.

**NGAC Members not in attendance:**
Tony LaVoi
Devaki Raj
Siva Ravada

**Other Attendees:**
Dierdre Bevington Attardi (Census), Gale Blackmer (Pennsylvania Geological Survey), Annalise Blum (DOI), Earl Burkholder (Global COGO, Inc.), John Byrd (NSPS), David Cackowski (Census), David Carter (DOI), Julie Carter (FGDC Support), Roxanne Clinton (Census), Pat Cummens (Esri), Ross Davis (Census), Elizabeth DuBan (FGDC), Erin Dudley (Department of State), Eldrich Frazier (FGDC), Doug Geverdt

(NCES), Tiffany Gibby (Tennessee Valley Authority), Glen O'Grady (URISA), Nathan Jones (Census), Vicki Lucas (USGS), David Maidment (University of Texas Austin), Jessica Miller (NGA), Amy Nelson (US DOT), Rachel Opitz (OGC), Karla Riso (Census), Linda Rowan (Congressional Research Service), Jill Saligoe-Simmel (Esri), Shelby Sencindiver (FGDC Support), Tim Stiles (GeoDecisions), Vaishal Sheth (FGDC Support), Kim Valentine (NOAA), Reed Van Beveren (Epic), Lynda Wayne (Ardent)

**Tuesday, April 2, 2024 NGAC Public Meeting:**

**Welcome & Brief Introductions:**
NGAC past Chair, Gary Thompson, called the meeting to order at 9:15 a.m. and welcomed members and public attendees. An overview of the agenda was provided. Mr. Thompson introduced Josh Delmonico (FGDC), who thanked Mr. Thompson for his service as the NGAC Chair and John Mahoney for his service to the NGAC. Mr. Delmonico announced that Mr. Thompson's term as NGAC Chair had ended. Maggie Cawley will serve as the new NGAC Chair, and Bert Granberg will serve as the NGAC Vice Chair. Maggie Cawley and Bert Granberg took over the leadership of the meeting.

**Review and Adoption of Minutes from October NGAC meeting:**
The draft minutes of the October 2023 NGAC meeting were reviewed, and the Chair called for approval.

**DECISION:** The NGAC adopted the minutes of the October 11-12, 2023, NGAC meeting.

**Leadership Update:**
Annalise Blum, Deputy Assistant Secretary for Water and Science (DOI), covered critical Administration activities. Highlights included:
- Science and data underpin Department of the Interior policy and decisions to keep our public lands, wildlife, and cultural resources protected for the public to enjoy for generations to come.
- The Department is launching a campaign to tell stories about the impact and value of DOI science, on how science and data have been unleashed in ways that benefit our country and the world.
  - Investments from the Bipartisan Infrastructure Law and Inflation Reduction Act have played a key role in ensuring that science and data are being used to help the Administration make the best decisions possible.
  - The Department is starting this initiative because it is important now more than ever to tell peoples' stories about the impact and value of DOI science. The Department is soliciting stories from those who have used the Department's science or data.
- The Department is grateful to the FGDC and NGAC in supporting the Department and the importance of applying key data and information to inform decision making.
- Ms. Blum discussed additional topics that the Department is focusing on, which include: NSDI Strategic Plan and solutions, the future of the GeoPlatform, geospatial standards, FGDC governance, restoring natural resources, supporting State/Local/Territorial/Tribal (SLTT) activities, and the implementation of Geospatial Data Act (GDA).

**Federal Geographic Data Committee (FGDC) Roles and Update:**
Ken Shaffer (FGDC) provided an update on FGDC roles and activities. Highlights included:

- The GDA outlines that the FGDC is the lead entity in the executive branch for geospatial policies, practices, and standards for geospatial data. The GDA provides a key set of requirements that FGDC is following to comply with the annual reporting requirements.
- FGDC Leadership includes the Secretary of the Interior, the Director of the Office of Management and Budget (OMB) (or designees), and the FGDC Executive Director. Josh Delmonico is the FGDC Executive Director.
- The GDA directs covered agencies to be FGDC members.
- OMB is finishing up their review of a revised OMB Circular A-16.
- Governance Structure for FGDC is set up with the FGDC (Steering Committee) as the decision-making body with current supporting groups set as the Executive Committee, GDA working group, and the NGDA Theme working group.
- DOI is the managing and overseeing body for the GeoPlatform, a GDA mandated service.
- Data.gov is the official Federal data catalog.
- GeoPlatform collaboration communities provide a secured platform and workspace for agencies to collaborate. GeoPlatform is an OMB shared service across Federal agencies.
- The FGDC engages internationally through organizations including the United Nations Global Geospatial Information Management (UN-GGIM), Group on Earth Observations (GEO), AmeriGEO, and the Open Geospatial Consortium (OGC). The GDA requires that FGDC to engage with international entities interested in spatial data infrastructures.
- The FGDC Office of the Secretariat (FGDC OS) is working to fill 3 vacant positions, and currently only has 5 full-time employees.
- 2024 is a GDA audit year and the agencies' audit results will be published in the Fall of 2024. Inspector's General for each GDA covered agency will submit an audit every two years on certain activities within the GDA. As independent bodies, the auditors focus can vary across agencies and overtime..
- On March 5, 2024, the FGDC Steering Committee met to welcome Mike Brain as the FGDC Chair, DOI Principal Deputy Assistant Secretary for Water and Science. The FGDC approved the following motions: retiring two subcommittees and working groups due to inactivity, a suite of NGDA Portfolio updates, and the list of 2024 FGDC priorities.
    - The 2024 FGDC priorities are geospatial standards, governance, the GeoPlatform, and NSDI Strategic and Implementation Plans.
- In the March meeting, four themes requested a total of 32 dataset changes within the NGDA Portfolio. As of this vote, the current NGDA Portfolio has 171 Datasets managed across 18 Themes, 12 Agencies, and 21 sub-agencies.
- The restructure analysis of the GeoPlatform has been put on hold for now, due to funding and contractual issues. As such, the NGAC has paused work on and discussions related to the GeoPlatform.
- In November, the FGDC OS and Managing Partner (DOI) determined that the funding agencies needed to come together to discuss the future capabilities of the GeoPlatform. In the coming weeks, FGDC OS is hosting a GeoPlatform Summit to discuss the GeoPlatform with the funding agencies.
- The long-term plans for updating and developing the GeoPlatform needs to be provided to the users. The users should be included in the process (and perhaps given the opportunity to comment on the updates).

- - Funding is always a concern for the GeoPlatform, and influences the near-term and long-term planning.
  - FGDC and the NGAC should seek to understand what capabilities or services the GeoPlatform should provide in the future, and then determine how to support users.
  - The July 2024 meeting will be administrative (not a public meeting) and be held via webinar. The October meeting will be public and in-person. The December meeting is planned to be a public webinar.

**NGAC Vision Presentation and Discussion:**
Josh Delmonico led a discussion on the NGAC role and vision, including the following highlights:
- Per the Federal Advisory Committee Act (FACA), the NGAC is intended to be advisory-only.
- Federal Advisory Committees can be established by statue or the President or public interest by law. NGAC was originally established administratively in 2008 and was statutorily authorized in 2018 by the GDA.
- The NGAC can be composed of no more than 30 members (with at least one from the NGA) and be appointed by the chairperson of the FGDC. NGAC members are selected to achieve a balance of representation of Geospatial industries and sectors.
- Advice and recommendations from the NGAC may represent the views of  sector, a member, or by a subcommittee.
- Recommendations vary in types and timeline, but all recommendations must be voted and approved by the full NGAC in public meetings.
- Subcommittees can be formed to compile information or conduct research, and a subcommittee may include non-NGAC members, such as subject matter experts in the subcommittee's topic of focus.
- NGAC members are responsible for representing the interests of their sector and are expected to communicate back to their sector on NGAC's work.
- Subcommittees need to be standardized and structured in the future as some of the subcommittee focuses shift annually.
- NGAC timeline starts in March with the appointing of new members, quarterly meetings typically occur in spring, summer, fall, winter. New study topics are identified in February. Voting on recommendations occurs during fall or spring.
- The Paperwork Reduction Act (PRA) applies any time the Federal Government is trying to collect information externally. Internal collections don't require PRA clearance. As such, the NGAC can not collect information from the public as part of NGAC 4activities without an approved PRA, as the NGAC is a Federally sponsored committee.
  - The timeline for getting PRA clearances can vary from six months to two years, and the requirements for getting a clearance are rigid. Most agencies estimate six to nine months for PRA clearance from agency development to OIRA's decision.
  - The Act doesn't apply for general requests for information or direct observation.
  - Solicitation of information is acceptable if a member is not collecting information acting as an official member of NGAC/FGDC (i.e. acceptable as part of external job duties or research).
- All recommendations made by the NGAC need to be implementable. Funding NGAC recommendations may take an act from congress.
- FGDC needs assistance with recommendations and advice on how to manage standing committees. The three policy-mandated subcommittees are the Landsat Advisory Group (LAG), 3D Elevation Program (3DEP), and GDA Reporting.

- - FGDC is also seeking advice regarding the National Spatial Data Infrastructure (NSDI) development.
    - Other topics that FGDC is interested in advice and recommendations for include: National Geospatial Data Assets (NGDA), standards, and policy gap analysis.
- FGDC seeks to rename the "FAIR Data Subcommittee" to the "Data and Standards Subcommittee".
- FGDC seeks to align subcommittees with issues in the industry to make the subcommittees more applicable to real-world issues.
- FGDC seeks to validate the subcommittees, consider establishing more standing-subcommittees, reevaluate subcommittee membership (allow members to change assignments), finalize topics, and establish bi-weekly recommendation expectations.
- Current policies do cause some constraints, but the FGDC has learned to work within and around the constraints.
- A funding and policy subcommittee should be considered as an addition to the current list of Subcommittees. It would be helpful to learn how policies are impacting the public.
- FGDC cannot lead discussions with other organizations on NSDI pilots around governance without adhering to FACA requirements. FGDC can attend such discussions as an invited attendee if sponsored by another organization.
- FGDC could consider reorganizing the NGAC. Mandated subcommittees have to remain but fewer long-term standing subcommittees could be removed. An agile approach may be more helpful to adapt the structure to align with emerging problems and needs of the National Geospatial Community.
    - FGDC should provide NGAC input on what the needs and troubles are of the FGDC members.
    - The recommendations coming out of the advisory committee should not have constraints. Recommendations should be shared even if they "just sit on a shelf".
    - Members and FGDC want to hear more from agencies on what they would like to hear/explore. External engagement is currently low.
- It would be a good use of time to sit down and go through all the questions that Mr. Delmonico has developed on topics that FGDC needs help with, which will help determine where there are barriers and where improvements can be made. It would be better to work as a group and hammer out responses to the questions.
- The standing committees focus on their topics and the NGAC loses opportunities to discuss broader issues and share more information.
- There is no clear connection between the outcome of the NSDI Visioning workshop and the NSDI subcommittee. The subcommittee would like to have been engaged to help inform and collaboratively discuss issues and approaches.
- Members are concerned with recommendations falling flat, so NGAC needs to work with agencies to understand how they can craft recommendations that are implementable.
    - Subcommittees typically engage with agencies, not NGAC as whole.
- FACA has requirements for documentation of discussions and recommendations that will need to be considered when determining the method for creating solutions to national problems.
- The Committee should look at recommendations that NGAC has made since its inception in 2008 and determine if there are reoccurring topics with recommendations that have not progressed. Then, the Committee should prioritize these consistent recommendations to ensure they are implemented.

- At public meetings, announce what recommendations, resolutions, and changes have been made. Then, announce anything that has been posted on the FGDC site. This will ensure that the public will be aware of what is happening with FGDC and NGAC.

**NGAC Member Presentations:**
- Bert Granberg, Analytics Director at the Salt Lake City Area Metropolitan Planning Organization. Mr. Granberg highlighted the Wasatch Front Regional Council (WFRC) Map Gallery with a "map of the month" that his team created. He then highlighted the Housing Inventory Explorer that his team created to show housing developments in Salt Lake City, UT that are near transportation.
  - He wants to advance the NSDI by optimizing the simple search in search engines.
- Nadine Alameh is the Executive Director at the Taylor Geospatial Institute. Dr. Alameh's institute is launching a global food security and geospatial challenge and creating a "GeoAI" center of excellence within the Taylor Geospatial Institute.
  - She wants FGDC and NGAC to secure funding for geospatial science research and provide a usable up-to-date spatial data infrastructure as part of open source infrastructure. The NSDI could support projects that could lead to open training datasets for AI development.
- Clio Andris is an Associate Professor at the Georgia Institute of Technology. She wants to work with NGAC to document issues of accessing and using public data and wants to advocate for the average user.
  - Dr. Andris believes that Federal Information Processing Standards (FIPS) codes could be used as a use case for the NSDI. FIPS codes should be uniform across datasets, because the average user cannot join Census data to the data they are using.
- Frank Avila is the Deputy Director of the NGA Commercial Operations. He is currently leading the procurement of commercial analytical services to support mission requirements across the U.S. Intelligence Community (IC), Department of Defense (DOD), and Federal Communities. Mr. Avila has established a structured process to gather community requirements that can be supported by commercial solutions.
  - He feels that FGDC needs to ensure the NSDI aligns with geospatial standards that are established within the IC/DOD standards community.
- Chad Baker is the Geospatial Data Officer at the California Department of Transportation. Mr. Baker highlighted the California Road Sharing (CaRS) system, which creates a single authoritative, quality statewide road centerline dataset that is maintained jointly by the state and counties.
  - The NDSI can help develop a national linear referenced road network of all public roads in partnership with the Federal Highway Administration that supports safety analysis and Model Inventory of Roadway Elements requirements.
- Byron Bluehorse is a volunteer with Tribal GIS and the Chief Executive Officer (CEO) of Sovereign Planning. Mr. Bluehorse assisted with updating the Long-Range Transportation Plan and developing the Comprehensive Plan.
  - The NSDI can be used to assist with developing strong infrastructure and support land planning efforts. He would like the FGDC to make policy that can be used within the tribe based off the United Nations Geographic Information Systems (GIS) policy to help standardize data.
- Maggie Cawley is the Executive Director at OpenStreetMap U.S. Ms. Cawley highlighted the Trails Stewardship initiative, which helped update trail data using stakeholders and land managers. This initiative utilized the Pilot structure. She also highlighted the Utah Campaign

as part of the Trains Stewardship Initiative. OpenStreetMap US has established a Pedestrian Working Group to convene a diversity of stakeholders with an interest in OpenStreetMap pedestrian data to find ways to collaborate and improve pedestrian accessibility across the country.

- ○ The NSDI can be advanced by improving the curation, contracting, and dissemination of data to reduce duplication of efforts and cost, and diminish the reliance on the top-down approach.
- Jack Dangermond is the President of Esri. Mr. Dangermond highlighted the Esri ArcGIS Online Living Atlas project that curates, reliable, ready to use content and makes data easily accessible.
  - ○ The Living Atlas could be a testbed for what is possible with the NSDI as it is a global entity. The NSDI should provide sound infrastructure to support broad GIS operations and new pilots.
  - ○ Mr. Dangermond feels that the FGDC should address the NSDI as soon as possible so that other challenges can be solved, such as reaching new audiences, addressing digital equity, and filling critical data content and capacity gaps.
- Lynn Dupont is the Metropolitan Planning Organization (MPO) GIS Manager at the New Orleans, Louisiana (LA) local government. Ms. Dupont is hoping to improve coordination among agencies contracting for the costliest geospatial data to achieve datasets serving multiple levels of government.
  - ○ As the NSDI develops, regional representation can aid in determining which layers could be more prudent to build from the local level up. After Hurricane Katrina in 2005, Louisiana created a state spatial data infrastructure (SDI), which could be used as an example for how the NSDI could be created and utilized.
  - ○ The NSDI could be communicated simply over the course of 3-5 years to define the benefits and cost-sharing opportunities of using the NSDI below the state level.
- Holli Howard is with Google Maps and hopes to enhance the understanding of government needs to support public-private partnerships (P3s) and our collective stakeholders. Ms. Howard wants to build collaborative relationships with experts in the field.
  - ○ Data quality and a data hierarchy would be helpful to approaching the NSDI.
  - ○ FGDC should continue to strive for a centralized location for standardized geospatial data.
  - ○ The private sector can be used for data sharing, promoting data standards, creating tools and technology, and education and outreach.
- Leslie Jones is the Geospatial Information Officer (GIO) at the State of Alaska. Dr. Jones highlighted her work enhancing state SDIs with Federal Data; pipelining federal data to State SDIs.
  - ○ FGDC/NGAC could support the states by providing policy that will support the NSDI governance framework, improving policy and funding gaps in critical/foundational data themes, and creating standards to enable data integration and interoperability.
  - ○ The NSDI could benefit from Public-Private-Philanthropic Partnerships (P4) to build a national parcel and address database by leveraging all sectors.
- Ryan Mattke is the Map and Geospatial Information Librarian at the University of Minnesota, where he is working on a geospatial data archiving process.
  - ○ Mr. Mattke believes that the NSDI could benefit from a federal grants geodata repository, which will help make the data more "FAIR". The NSDI could benefit from significant experience in (geo)data discovery, access, and archiving technologies and platforms.

- Mark Meade is Quality Control/Quality Assurance Guidance for NV5. Mr. Meade wants to ensure that geospatial data and state-of-the-art tools are being utilized efficiently to plan, track, and analyze challenges of our nation where geospatial is integral to the solution.
  - The NSDI could be advanced by the bipartisan infrastructure legislature that became law funded by the National Oceanic and Atmospheric Administration (NOAA) Water center to assist with flood forecasting in areas susceptible to inundation. They need better surface and subsurface modeling to achieve goals.
- Curtis Pulford is Enterprise GIS Manager for the City of Phoenix, Arizona. FGDC could assist his sector in facilitating standards, crosswalks, and workflows that would enable the creation of the regional data desired by local jurisdictions and citizens.
  - Mr. Pulford believes that local governments could provide content, promote the standards, automating crosswalk uploads, and data sharing to help the NSDI prosper.
- Breece Robertson is an Advisory and Executive Leader in conservation and non-government organizations. Breece is the owner and operator of the Breece Robertson Consulting Firm. Ms. Robertson highlighted her "ParkScore Index" project, which helped create a National Dataset on parks with public access and provide locations were parks could be developed. She also highlighted the creation of the National Conservation Easement Database, which provided data on conservation easements at the national level.
  - The NSDI can be advanced by scanning sectors for data products that are critical and fill important gaps, creating and implementing renewed outreach to diverse Non-Governmental Organizations (NGO). The NGOs can be used to build awareness and share knowledge.
- Vasit Sagan is Professor at Saint Louis University and TGI's Chief Scientist for Food Security and Digital Agriculture. Dr. Sagan's university is developing global Interferometric Synthetic Aperture Radar (InSAR) solutions for change detection with enhanced regional calibration with NGA.
  - He believes that academia can play an important role in advancing the NSDI by training the talent needed to create and promote infrastructure as well as to provide cutting-edge interdisciplinary research.
- Kathleen Stewart is a Professor at the University of Maryland. Dr. Stewart presented the idea of hiring interns where possible to help promote the next generation of geospatial leaders.
  - She believes that the NSDI can improve the data access and experience for academics. FGDC could improve the NSDI by building artificial intelligence (AI) capabilities into the infrastructure, and by expanding the kinds of geospatial data that agencies make available. Academics can develop and implement how AI can be used in NSDI content.
- Phil Thiel is an Executive at Dewberry. Mr. Thiel highlighted the Alaska Mapping Project, which developed a common set of objectives, requirements/standards, a singular implementation plan, and collectively funded the implementation. The private and state sectors worked together to make this happen.
  - The NSDI would benefit from a new reliable national level multifunctional geo-portal that is easy to search and use and provides seamless authoritative framework data as well as additional notional data of interest. The private sector could build the portal and the associated geospatial data for the government.
- Gary Thompson is the Deputy Hazard Mitigation Chief and the Chief of North Carolina Geodetic Survey for the State of North Carolina. Mr. Thompson highlighted the Flood

Inundation Mapping and Alert Network for NC, a publicly accessible map to show current and forecasted floods as well as provide current and historic gauging data.

- He believes that the NSDI could be advanced by partnering with state agencies, other federal advisory committees, and the private sector to provide accuracy support.

- Tim Trainor is a principal consultant in the private sector. Mr. Trainor is working with the United Nations and SDG Data Alliance to help developing countries create a Country-Level Action Plan (CAP) and stand up an "SDG Data Hub" using Esri technology and services.
  - He believes the NSDI could be advanced by creating a pilot to test a "system-of-systems" concept using data managed by local government system that automatically feeds a federal data asset repository using required standards and data hygiene to assure data quality. The private sector could collaborate with local and federal governments as a part of the pilot.

**NSDI Vision Presentation and Discussion:**

Josh Delmonico and Maggie Cawley provided an update on the NSDI Vision. Highlights included:

- The NSDI Strategic plan is expected to go out for public comment in the next 30-45 days.
- Use cases for the NSDI could be utilized by pilots and the FGDC target sectors.
- A Climate change use case is not currently on the list, because it is not universally accepted.
- The user-centric design is very good to see in the outlook and trends; many federal websites are not user-friendly. The public's "digital experience" is a priority for the administration.
- Any large language models and interfacing with geospatial data should be included in the outlook and trends.
- Inclusion and addressing bias are not included in the outlook/trends, but NGAC believes it should be.
- FGDC should consider what are the roles of the NSDI stakeholders.
- Outlooks and trends could be thought of as the "influencers and enablers" while the use cases are the reason behind the operation of the NSDI.
- FGDC should be more explicit when talking about use cases, but the audience is important to consider with this as well. FGDC should value story-telling issues over other issues, so that more people will buy into the NSDI. FGDC should also be more explicit in usage of multi-modal data.
- We lose focus in how the core data is developed. One of the issues we can address is the user's perspective and how it is not well-represented while other things are being represented more.

**Adjourn**

Ms. Cawley made closing remarks and provided overview of Day 2 agenda.

**Wednesday, April 3, 2024**
NGAC Vice-Chair Bert Granberg called the meeting to order at 9:00 a.m. and welcomed members and public attendees and reviewed the day's agenda.

**3DEP for Transportation Panel Discussion:**
Gary Thompson led a discussion on the topic of using 3DEP data for transportation projects. The panel was developed to provide outreach to the transportation field as it relates to the usage of geospatial data. The panel members included: Brad Doucet of the Louisiana Department of Transportation (LDOT), Matt Laffer of the North Carolina Department of Transportation (DOT), and David Maidment of the University of Texas-Austin. Each of the panel members provided a briefing about their organization and experience. Highlights included:
Mr. Doucet briefed on his work with LDOT.

- In 2012, Act 409 advanced mapping and topographic technology usage in the LDOT.
- LDOT's goal is to provide high quality, authoritative, and easy access.
- A major activity of the program is the development of the wide area QL1 Light Detection and Ranging (LiDAR) High Resolution (3-6 inches) imagery.
- LDOT is contributing LiDAR data to the 3DEP program that is currently in the National Map.
- Mr. Doucet highlighted the Representational State Transfer (REST) services, imagery download tool, and the Open Data Portal found on the LDOT website.
- The program is coordinating and participating in the collection and publication of high quality, wide area imagery across the approximately 52,000 square miles within Louisiana boarders.
- LDOT's data is mostly "steady state". During Hurricane and flood seasons, the DOT has drones to gather pertinent information when needed.
  The plane and sensors are managed through transportation funds, but often the funding is provided through cost-sharing.

Mr. Laffer briefed on North Carolina DOT LiDAR Applications.

- LiDAR is applied to the following: bridges, constructions, geotechnical engineering (such as rockslides and rock mass monitoring), highway design/corridor mapping, hydraulics and hydrology, and pavement.
- The DOT uses LiDAR for resilience planning for hurricanes and flooding. Mr. Laffer highlights the work done after Hurricane Michael and Hurricane Florence.
- Mr. Laffer highlighted the development of the NC Statewide Road Elevation Model, which used the DOT LiDAR as a result of 2018 Hurricane Florence.
- He also emphasized DOT's planning and project delivery resilience tools, which include landslide risk, coastal road flood risk, inland road flood risk, rail flood risk, and asset management.
- He called attention to the hydraulic and Hydrology LiDAR flood plain mapping and modeling that the DOT is doing to understand how to limit the changes to the flood plains when constructing and remodeling roads/highways. These models are also used for hurricane and flood response when rebuilding washed out roads and bridges. LiDAR will be used to monitor upstream and downstream after roads and bridges are repaired nearby and over waterways.
- Mr. Laffer highlighted the Transportation Surge Analysis Prediction Program (T-SAPP) a predictive tool based on ADvanced CIRCulation (ADCIRC) Modeling provided by the University of North Carolina-Renaissance Computing Institute (UNC-RENCI) is capable for providing advice awareness of potential coastal roadway flood impacts for entire NC coast

specific to individual storms. He also highlighted the Bridge Watch Alerts and the Flood Inundation Mapping Alert Network for Transportation (FIMAN-T) applications.
- NC DOT and the University of North Carolina are working on deep learning research for the automatic classification of hydraulic structures from LiDAR and sonar data.
- NGAC recommends the use of contractors to do the Statewide LiDAR data collection, if the data is collected to 3DEP specifications.
- NC DOT does not currently include drone data.
- Runoff modeling is an application of LiDAR, and as construction gets more specific it will require more data collection and airborne LiDAR collection.

Dr. Maidment briefed on his work with the University of Texas in Austin.
- Dr. Maidment highlighted the national flood forecasting's utilization of the national water model to gauge the flood impact on roads and bridges.
- Currently, flood inundation mapping is being deployed nationally with the goal to have 100% of the population served by October 2026.
- The National Weather Service (NWS) has historically provided flood messaging, but emergency managers needed quick actionable information that the flood messaging was not providing. Therefore, flood inundation mapping was created in response to this issue and to support emergency managers.
- Base level engineering modeling is being developed and will be completed in FY 2024. This is a $60,000 investment for the State of Texas.
- AI is being used to identify roads, bridges, and centerlines in state imagery as the state continues to develop land.
- The road elevation model is foundational as it as it provides information on span bridges, bridge-class culverts, and low-water crossings. The road elevation model provides the "hanger" for all drainage types.
- The NOAA Coastal Change Analysis Program provides coastal data for many coastal counties and some states. The road elevation model would help coastal flood resiliency and response.
- States should consider the public data that insurance agencies and consortiums provide. This would assist in cutting down the costs associated with obtaining data.
- There are some requirements to determine what the prioritized roads are, such as which roads often wash out or are critical for evacuation routes.
- Agencies want to be proactive and using LiDAR for flood inundation modeling helps the transformation from reactiveness to proactiveness.
- Texas has developed a statewide flood plan so that all areas of the state will be supported and protected, especially rural areas.

Additional Discussion Highlights include:
- Zoning efforts could benefit from the flood inundation mapping, because storm water drains can be developed.
- Each state DOT is required by Federal Highway Administration (FHWA) to maintain a linear referenced centerline for all public roads. This centerline dataset is matched to their Highway Performance Monitoring System (HPMS) submittal which includes road characteristics. Using the HPMS sourced Linear Reference System (LRS) and roadway characteristics dataset provides for consistency across the nation.
- The depth of resources often limits State DOT response, so resource allocation becomes more difficult.

- High performance computing is incredibly helpful and connecting national consequences with what is being felt at the state/local level can be done with GIS.

**Standards Update and About the FAIRness Project:**
Josh Delmonico provided an update on the FGDC Standards activities, including the following highlights:
- When the GDA was passed, there is a section in it that outlines that the limitation of the use of federal funds does not apply based on standards established by the FGDC prior to the enactment of the FGDC. FGDC needs to create standards within 5-years of the enactment of the GDA.
- The task team draft timeline extends through June 2023 into June 2024; therefore, the process should wrap up soon with the endorsement of some active standards and the steering committee's approval of a quick approval process.
- The process must be easy to follow and easy to understand. The proposed process contains four simple portions: emerging, endorsed, sunsetting, and retired. The proposed process is low-risk and easily attainable. The Steering Committee votes in three stages of the process: emerging, endorsing, and retiring.
- Next steps for development include detailing the process for endorsing standards, drafting standards nomination form, drafting process for tracking standards from nomination, recommendation, endorsement, and through curation. FGDC will also be working with the Executive Committee to develop a vetting process.
- The International Organization for Standardization (ISO) metadata standards is being implemented in some places, but not everywhere; if we are setting up standards, we need to consider how they can be implemented. Two-way communication and collaboration are important to understanding what is needed and how to implement it.

Allison Shafer (US Census) provided a briefing on the FAIRness Project. Highlights include:
- The project is a collaborative effort which aims to improve users experience (internal and external to the Federal Government) to find, access, and use federal data. The Evidence Act is the operator for this project.
- FAIR stands for Findable, Accessible, Interoperable, and Reusable.
- Project is broken into core members and an advisory group that work to create three deliverables. The three deliverables are the updated Data Catalog Vocabulary - United States (DCAT-US) Schema to a US profile of DCAT version 3, a proposed governance model, and a two-year sequencing and transition plan.
- The new DCAT-US 3.0 will improve the user experience and make it more consistent while also increasing automation and decreasing maintenance costs.  The data sharing, reusability, and security will be enhanced while filling significant gaps for documenting data.
- Task 1 of the DCAT-US 3.0 Schema update is in draft form, and the public comment period ended in December 2023 with 188 total tickets received. The tickets were analyzed and put into the schema. The next step is to provide the draft schema to OMB and project advisory group.
- Tasks 2 and 3 are being developed. These tasks include a governance plan and a sequencing plan that are both in draft form and are being reviewed.
- The DCAT-US 3.0 will replace the ISO standard and the Content Standard for Digital Geospatial Metadata (CDGSM) standard.

- Two difficulties that the program will face are users that are resistant to change and ensuring representation of all data types.
- NGAC members would like to see communication on this DCAT-US item nationally. It would be beneficial for the project team to reach out to the State GIOs.
- The degree of support is still being developed, but there is currently not a Request for Information (RFI) being developed to gather data types and supporting information. To have consistent widespread adoption, there must be a plan related to metadata and cataloging.
- There is consistency globally even if the DCAT-US is a US national standard. There is a motion internationally to consolidate the North American and European standards.

**Adjourn**
Mr. Granberg made closing remarks and provided overview of Day 3 agenda.

**Thursday, April 4, 2024**

NGAC Chair Maggie Cawley called the meeting to order at 9:00 a.m. and welcomed members and public attendees and provided the day's agenda.

**Spotlight Sessions:**

Gary Thompson provided an update on the ASPRS Accuracy Standards, including the following highlights:

- ASPRS approved Edition 2 of the "ASPRS Positional Accuracy Standards for Digital Geospatial Data", and it was published in 2023. It included terms and definitions, specific requirements, and accuracy reporting.
- This volume will have 3 appendixes and best practices/guidelines to ensure accuracy.
- Mr. Thompson provided a summary of changes in the edition 2, which can be found in his presentation.
- Edition 2 Version 2 of the Standards includes four new addenda, enhancements to previous addendum I and II, and the adoption of Root Mean Square Error ($RMSE_v$) for Vegetated Vertical Accuracy (VVA).
- The public comment period for Edition 2 Version 2 will be from March 27, 2024 to April 26, 2024 with board approval and official publication is expected around May 15, 2024.
- The NGAC should review and decide on if they want the FGDC to continue with the current standards or adopt the new ASPRS standards.

Galen Scott (National Geodetic Survey/NOAA) provided an update on the National Spatial Reference System, including the following highlights:

- National Spatial Reference System (NSRS) is going to be redefined in the future to include four terrestrial reference frames/tectonic plates. A new state plane is coming as well.
  - The whole system will be designed to have fast, accurate, and consistent elevations everywhere. This system is also providing consistent surface across the country.
- This update will revolutionize professional surveying, vastly improve flood plain mapping, impacts on infrastructure, and provide fundamental support for new technologies.
- Every latitude, longitude, and ellipsoid height will change in the North American Vertical Datum (NAVD) 83 values +/- 2-meter range.
  - Every orthometric height will change from its NAVD 88 values in the +/- 2-meters median range. The reason for these changes is to remove the tilt and the bias of the existing datum, specifically in the verticals.
- The benefit of modernizing will be to include a geo-centric model for adaption into Global Positioning Systems (GPS) technology, which uses the current datums. This change will improve accuracy, access, and alignment of our positioning systems.
- Gravity for the Redefinition of the American Vertical Datum (GRAV-D) is 100% completed, which was their longest project as it started in 2007. This will help create a new geo-model.
- Modernized access will occur through the NOAA Cross-origin resource sharing (CORS) and Online Positioning User Service (OPUS) systems. National Geodetic Survey (NGS) will provide the software and the tools to differentially position your GPS receiver to each system.
- The NGS website includes five steps that users follow to prepare for the changes. Mr. Scott emphasized the importance of preparing the metadata of current products/datasets.
- The recommended ways to get into the modernized NSRS is to re-survey and re-adjust through the CORS and OPUS systems as well as to transform existing data as soon as

possible using the NGS Coordinate Conversion and Transformation Tool (NCAT) and the Vertical Datum Transformation (Vdatum) tool.

- A FedGeoDay Workshop on the NSRS will occur on May 1, 2024.
- The goal of the NSRS changes is to have the beta website operational by mid/late 2025 for testing. After, the Federal Geodetic Control Subcommittee (FGCS) will vote on the policy changes in 2026 that will impact the Federal Government. FGDC will also mandate the usage of the new policies.
  - The website will show all the estimated changes, to a meter's range, for both horizontal and vertical maps.
- The corner reflectors will be removed to work with Interferometric Synthetic Aperture Radar (IFSAR) and is part of the foundation of the CORS Network.

Ryan Mattke gave a presentation on his work as a Geospatial Librarian. Highlights included:
- Mr. Mattke states that Geospatial Libraries are dedicated to research collection, not an archival collection. However, his library has plenty of manuscript items that are available for research.
- His library has been collecting maps over the past roughly 100-years and have been actively digitizing their collections in the past 5-years. They have many aerial photograph collections that have been documented, digitized, and posted on their website in a web map application format.
- The project he highlighted is called "Mapping Prejudice", which maps racial injustice in the United States through land ownership archives.
  - The "racial covenant" history is included in this project and is mapped to show structural racism. Historical racial covenants have impacted the current ownership of land today, which is shown in Mr. Mattke's maps.
  - The ownership of land has been significantly impacted by the prejudice of the past.
- Mr. Mattke highlighted the contents of the University of Minnesota Geoportal as well as where to find it in the web service.
  - Many of the international maps found in the Geoportal are coming from Scandinavia and are used for genealogical research.
- Mr. Mattke's library has been working with the Library of Congress, but only to ensure that efforts aren't duplicated.

Maggie Cawley demoed the new Open Street Map US (OSM US) public domain. Highlights included:
- OSM US overview and what they provide. It is a foundation that acts as a data steward with chapters all over the world.
- There is a growing need for Geospatial data, so OSM US are collaborating with US and International providers to create a neutral space for collaboration.
- Recently mapped 24k buildings in Vermont
- Ms. Cawley highlighted that OSM US is using a "tagging" system for the data in their system so that it can be easily found and used.
- Crowdsourcing and AI have been utilized recently to continue to increase the amount of data that can be used in the OSM US system.
- The goal of OSM US's public domain system is to ensure that there is consistency in data and data usage.
- There is a Federal Government working group that is working to assist with the inclusion of federal data in the public domain within the constraints of existing laws and policies.
- Ms. Cawley provided a demo of the OSM US Tasking Manager.

- The public version is only building on information from public agencies. Federal agencies that want to use public data may run into barriers due to the legality of Open Data Commons Open Database License (ODbL).

**Public Comment Period:**

The floor was opened for comments. Jill Saligoe-Simmel (Esri) provided public comment, including the following highlights:

- Ms. Saligoe-Simmel highlighted her "Maximize the deliciousness of your shared geospatial content" story map on Esri's ArcGIS Online (AGOL) site. This story map provides a downloadable checklist, which is a good start to understanding the nine best practices for metadata and other authoritative data.
- A link to the StoryMap is here: [Best Practices for Authoritative Data Providers (arcgis.com)](arcgis.com)
- She has a book that dives into making created authoritative data, which Pat Cummens (Esri) emphasized.
- There is a large amount of tension regarding data that is unintentionally or intentionally incorrect, and the challenge comes when trying to discern if the data is correct. Creating more deliberate authoritative data will help with this challenge.

Glenn O'Grady (URISA) provided public comments, including the following highlights:

- Mr. O'Grady is concerned that the FGDC is trying to "drive across the country on a tank of gas", meaning that FGDC is taking on tasks without enough resources.
- FGDC should look at how they are organized and resourced, as there may need to be changes to accurately resource important tasks. Mr. O'Grady believes that the FGDC needs more resources to succeed.
- The United Nations (UN) is approving work without resources for over 10-years now, and the UN found it difficult to complete the work without the resources. As a result, they got seven new positions to assist with resourcing.
  - NGAC can and should consider making recommendations for FGDC resource increases.
- FGDC needs to know what the resources that are needed for the NDSI undertaking. The Standards and Data Subcommittee was discussing ideas for resourcing for supporting the NSDI and the FGDC.

**Landsat Advisory Group (LAG) Subcommittee:**

Vasit Sagan provided an update on Landsat Advisory Group (LAG) activities, including the following highlights:

- The task 1 paper is focused on National Land Imaging (NLI) program future data products.
- This paper will reflect on the content of the Landsat Archive and its continuing acquisitions, long with contributions from vendors. This paper will also examine evolutions or new trends in what data products are requested by users, particularly the "Cloud" era.
  - This is currently being worked on, and the task lead is Keith Masback (Plum Run LLC).
- The task 2 papers are focused on the Interagency Operations Efficiencies and is broken into two parts task 2A and task 2B.
- The task 2A paper is focused on developing a resolution that provides an overview and endorses the interagency operational efficiencies concept. The LAG is seeking NGAC approval of this paper. Anne Miglarese (Miglarese Consulting) is the lead on this paper

- The task 2B paper, led by Dr. Sagan, will be a more detailed review of the interagency operational efficiencies concept with additional recommendations. This paper will be ready for review and approval by the October meeting.
- It might be a good idea for the National Aeronautics and Space Administration (NASA) or NOAA to review this document before it becomes published.

**DECISION:** The NGAC approved the NGAC Paper: *NGAC Comments On The 2030 Earth Observation Data Challenge - Interagency Operational Efficiencies, April 2024.*

- Recommended to look at last three years of budget allocation to see how much these things are costing and look at the value of collaboration. More discussion on this will be in the task 2B paper.
- Anyone who owns lands is likely collecting imagery of it, so more state and local level folks should be included in the discussion.
- Not just access to the data, it is more about customization. Adding insights, not just data/technical discussion should occur.
- These papers make a real difference to the United States Geological Survey (USGS) in working to understand users and usage of the data.

**Geospatial Data Act (GDA) Subcommittee:**
Mark Meade provided an update on GDA Subcommittee activities. Highlights included:
- FGDC agencies used common criteria, reporting templates, and processes – including agency self-assessments of performance – to complete the 2023 GDA annual reports.
- On March 8, 2024, FGDC submitted a summary of the annual reports for the NGAC to review. The subcommittee collected and consolidated comments to create a report.
- The report will be submitted to FGDC no later than April 19, 2024, and will include recommendations for future reports.
- There was some feedback around streamlining the reporting and trying to balance qualitative and quantitative reporting burden.
- The subcommittee is asking the NGAC to approve the report of comments. Once approved, FGDC will incorporate these comments into the 2023 GDA Summary report.

**DECISION:** The NGAC approved the subcommittee's paper: *NGAC Comments on FY 2023 Summary of GDA Annual Reports*.

**The National Agriculture Imagery Program (NAIP):**
Lori Uhlhorn (USDA) briefed on the NAIP and the challenges the program is facing. Highlights included:
- The Farm Production and Conservation Business Center (FPAC) Geospatial Enterprise Operations (GEO) was formally known as "Aerial Resource".
- Title 7 of the Code of Federal Regulations (CFR) mandated the creation of NAIP.
- GEO is starting a project to assess and digitize imagery from the 1980s. The Farm Service Agency's (FSA) minimum requirement for film is 6 cm, but all increases must be paid for by the creating agencies.
- Shifting NAIP to digital delivery severely impacted the program's revenue stream, which put the program at risk. Funding, staffing, and misunderstood demand severely impacted the program and caused challenges for the program.

- The mandate to reduce the budgets has played a large role. The two biggest customers are the primary funders of the program which leads to risk for the program.
- NAIP is a free and open program, which has helped grow the geospatial industry, empower innovation, and support small businesses.
- NAIP is assessing the viability of satellite data, because of the impact of the environment on the imagery. Satellite data could be the solution to the issues caused by environmental changes.
- Previous programs were not consistent in collection, but NAIP has created consistency and driven down costs.
- The program can't rely on vendors to fill the gaps, because vendors have differing licensing models and distribution modes. Nonetheless, Partnerships has allowed for the increase in data volume and funding.
- US Department of Agriculture (USDA) has continued to advance the program and resolution since 2002 with the digital collection starting in 2008 and the last film collection taking place in 2009.
- Revenue started to drop in 2008 as a result of shifting costs/USDA budgets, an increase of enterprise infrastructure requirements, and the growing need for data management.
- NAIP is seeking NGAC's guidance and insight into what is manageable as well how to correct the problems the program is facing.
- Their current solution to the problems is to create a new revenue model, focus on automation, and to learn about the customer. The new solution vision is to have a single full authoritative source.
- As data is shifting into being held by the Cloud, there will be the development of a geospatial enterprise operation branch. This will allow for the data that is collected be used in a variety of sought-after services.
- A solution could be like 3DEP, where states and local agencies can provide data that can be used in the program.
- NAIP currently does not have partnerships with National Defense Organizations (NDOs), but NGAC recommends that the program utilizes these organizations.
- The NAIP was useful to Census to gather information on rural roads, and they could not get that information from anyone else.
- There could be duplication occurring with state and local collections, so it would be beneficial to get folks together to understand what is being and will be collected.
- NGAC could consider a NAIP or Imagery Working Group to help support the solutions development.
- Drone imagery and user data should be included in the NAIP imagery.
- There should be a mechanism where NAIP can charge for-profit companies that use NAIP imagery to deliver it to farmers. Many farmers use NAIP through vendors rather than through NAIP directly.
- NAIP provides free REST Services, but the raw dataset has a cost associated with obtaining it. By vendors selling the data, NAIP can't recover the cost.
- NGAC should consider a resolution to ask data creators to step up and assist with collection. This should be a public domain opportunity, and an opportunity to incentivize buying future collections.
- NAIP should consider a way to keep current funding model but increase the amount of funding.

- The main problem is that they are a congressionally mandated program that does not get enough federal funding. OMB would likely benefit from a case study in order to understand the problem so they can support the solution.

**2023 Geospatial Maturity Assessment:**
Karen Rogers (NSGIC) briefed on the 2023 Geospatial Maturity Assessment (GMA) and the Coalition of Geospatial Organizations (COGO) NSDI Report Card. Highlights included:
- National States Geographic Information Council (NSGIC) exists to advance effective national coordination of geospatial information.
- The American Society of Civil Engineers (ASCE) and COGO created geospatial report cards, which inspired the state-level report card system that NSGIC currently follows. The first GMA occurred in 2019.
- The system is made up by framework layers as well as coordination (graded), Next Generation 9-1-1 (NG9-1-1) data (non-graded), and elections layers (non-graded).
- Themes are broken up by state-led and federal-led themes that build into the grading.
- Some grades are given as a points-based system, while others are done on a percent-completed system.
- A dashboard, made by Esri, is used to visualize what the grades are across the country.
- The subsequent 2021 and 2023 reports were largely repeated from 2019's report. Some themes were changed in order to challenge states to improve their current data availability and processes (such as transportation), and some themes were added to start to gather more information (such as NG9-1-1).
- States are well-positioned as the hub for geospatial coordination. There are positive impacts on states from support of federal programs as well as positive impacts from the federal support of state programs.
- Ms. Rogers highlighted areas of opportunity as they are shown from the reporting outputs.
- While bad grades occur, they should be areas of improvement and the community should encourage states to grow in these areas of improvement.
- The GMA needs a working group, and this group should assist in reconsidering how these themes are graded. The value of providing the opportunity for business partners to underwrite/sponsor the GMA should be considered.
- There is interest growing in making county-level GMAs.
- COGO released an assessment by the professional geospatial user community of the NSDI.
  - COGO's grading occurred in 2015, 2018, and 2023. Each year the grading scale and factors increased.
  - This is not a report card, but rather an assessment of how the NSDI is currently being implemented.
  - In 2023, there were less than expected responses nationally; however, this is being taken in stride to improve the process in the future.
  - There is a messaging problem with the NSDI, even though the NSDI is in everything that we do. We need to find ways to articulate the message to the general public.
- GDA Reporting is cumbersome, and the value is not bubbling to the top. A better governance model is needed to get the value added by the GDA. It may be better how to measure outcomes verses outputs.
  - There is value in reporting updates and progress that is meaningful, not just reporting the bare minimum to meet a reporting requirement.

- The sustainability of the COGO Assessment process is concerning, so NSGIC should look at how to make the reporting process more sustainable. It's not based on anything that is easy to point back to on a piece of paper.
- NSGIC needs to determine the story that they are trying to tell with all these report cards. NGAC should provide feedback on how to tell the story.
  - In some ways, we may be telling the wrong stories and may need to reevaluate the story. We could report on the things we are struggling with, so that the message could resonate more and get the support needed to fix the issues.
- It's helpful that the assessments do put something out there for people to react to, even if the process and output are not perfect.
- As part of the assessment process, provide resources as part of it so folks can do further research.
- Considering the varying geospatial experience across the states, NSGIC should consider ways for consumers to provide feedback to NSGIC.
- There may be two ways to look at measurement: current standing and future possibilities.
- If we have an underlying intent to build toward a sharable capability, then the community needs to better define the intent and the metrics to progress towards the intent.

**Subcommittee Brief-Outs:**
Gary Thompson provided an update on the **3DEP subcommittee** activities. Highlights included:
- The subcommittee seeks to schedule a webinar for state DOTs to offer panel discussion again with a "question and answer" period.
- The subcommittee completed their 3DEP Assessment paper last year. This year, the subcommittee is reviewing the 3DEP research paper to develop a timeline and submit committee's comments.
- In the future, the subcommittee would like to meet in-person because they never have had the opportunity to do so.
- NSGIC also has a monthly webinar that could be used to host/co-host this panel.
- The subcommittee should engage with other federal highway commissions as well.

Bert Granberg provided highlights from the **NSDI subcommittee** breakout discussion. Highlights included:
- Increasing OMB participation, addressing resource/staffing issues at FGDC OS, developing NSDI communication campaign, enhancing strategy for discovery, refocusing key national data layers, identifying short term successes, and exploring authoritative designations.
- Anything that happens with the government goes through OMB first. They have been in meetings in the past, but they should be invited again.
  - We won't be able to always get OMB in the room for the full time; nonetheless, we can still brief out to OMB what they need to know, and this could lead to more leadership being present in the future.
- The subcommittee wrote a resolution to ask for full OMB participation in NGAC meetings that would provide valuable insight into the limitations faced by the current structure in which agencies operate that hamper greater coordination, collaboration, and the realization of public sector efficiencies.
- In the resolution, it may be beneficial to outline how often NGAC meets and align that with the expectation presented and outline how often the value added of having OMB join as well as why it would be beneficial to them.

- The requests need to be more explicit in order to relay what NGAC feels is needed.
- This is focused at OMB to relay how to go from recognition to occurrence.
- The subcommittee should consider refocusing the resolution to include FGDC leadership as well as OMB.
- If NGAC is making the same recommendations to solve challenges but are not being heard. NGAC needs to determine how best to promote the work that is done by NGAC and the Federal Government at the international level.
- It needs to be obvious that this resolution is an invitation as well as provide a summary of who and what NGAC is.
- People want to take the time to continue to work on this and think it over; however, we may not want to wait until the next public meeting so we could approve this with the expectation that it will be reworded prior to being shared externally.
- Members are in-favor of the theme, but not the wording exactly.

**DECISION:** The NGAC passed a resolution:  *Resolution for OMB Assistance*, pending minor administrative revisions.

Clio Andris, Nadine Alameh, and Byron Bluehorse provided an update on the **Standards and Data Access subcommittee** activities. Highlights included:
- Dr. Andris provided a brief update on the tasking changes for the subcommittee. Initially, the subcommittee intended to organize a presentation and paper survey about the GeoPlatform; however, the subcommittee's focus has shifted.
    - Similarly, the subcommittee intended to develop a scoping paper for the FAIR topic, but the subcommittee is revising this paper to focus on standards and data rather than just FAIR.
- The list of potential study topics has been changed since the previous meeting.
- The subcommittee leads noted that in topic 2 of the list of potential study topics, they would only have to collect the best practices instead of writing them because the vendors already have their own lists.
- There is a proposed timeline for completing and selecting the study topics that is broken out over the course of 12 months.
- There is roughly 30% overlap with the NSDI subcommittee, so they are determining how they can be most helpful. Distribution and discoverability efforts overlap between this subcommittee and the NSDI subcommittee.  The discoverability of data for the NSDI was solely Federal based.
- The user experience was not on the NSDI list of study topics, but it is agreed that the experience will be valuable to understand.
- The user-centric focus is coming through clearly.
- The GeoPlatform topic is being re-discussed given the business interests and business ethics surrounding the topic. FGDC is consulting with ethics officials to address this topic.
- The subcommittee would like to have feedback on which of their study topics would be the most helpful to the industry, and they are seeking this recommendation from the whole NGAC.
- The subcommittee is taking into consideration the desire of the Federal Government for the geospatial community to switch to the DCAT-US metadata standard as well as the need to communicate with the community on the effects of this change.
- The objective is to not duplicate where there is overlap. The subcommittee chairs should be working together to share and ensure no duplications.

- The subcommittee leads should consider working groups to manage the focus of the whole subcommittee.

**Feedback on the Quarterly Meeting:**

Josh Delmonico led a brief discussion to gather feedback on the quarterly meeting before adjourning. Highlights included:

- Members appreciated that subcommittee breakouts were in the agenda for this quarterly meeting; however, some felt that the amount of time for the breakouts could be reduced while others felt that more time was needed.
- Attendees enjoyed variety of topics and the order in which they were presented. The 3DEP Transportation panel was enlightening.
- Participation and attendance were higher than usual.
- Three days was too long, perhaps 2 and a half days; however, some enjoyed the three days as it allowed for more than usual discussion and collaboration.
- The nighttime activities to network were appreciated.
- Some members felt that they needed more time for strategic discussion.
- The group brainstorming was good, but reverse the process: subcommittee briefs occur first, brainstorming after, and then breakouts at the end.
- In-person is more productive than virtual.
- It's enjoyable to hear how things come together and how solutions/topics can be applied.

**Next Meeting:**

The next NGAC meeting will be held in June 2024. Additional information about the 2024 meeting schedule will be provided soon.

**Adjourn:**

Ms. Cawley made closing remarks and adjourned the meeting.

## Certification

I hereby certify that, to the best of my knowledge, the foregoing minutes are accurate and complete.

Ms. Maggie Cawley, Chair, National Geospatial Advisory Committee
Mr. Josh Delmonico, Designated Federal Officer, National Geospatial Advisory Committee

These minutes will be formally considered by the Committee at its next meeting, and any corrections or notations will be incorporated in the minutes of that meeting.

# Summary of Presentations and Handouts

The following is a list of the presentations and handouts from the meeting. These meeting materials are posted along with the minutes at: https://www.fgdc.gov/ngac/meetings/april-2024/index_html

**14. FGDC Roles and Update**
- FGDC Roles and Updates 4-2-24

**2. NGAC Vision Presentation and Discussion**
- NGAC Vision 2 April 2024

**3. NSDI Vision Presentation and Discussion**
- NSDI Vision Presentation and Discussion

**4. NGAC Member Presentations**
- NGAC Member Presentations

**5. 3DEP for Transportation Panel**
- Louisiana Statewide Topographic Mapping
- NCDOT LiDAR Applications in Transportation
- Road Elevation Model

**6. Landsat Advisory Group**
- USGS Report
- Landsat Advisory Group Update
- LAG 2021 Task 2 Paper

**7. Standards**
- April NGAC Standards

**8. About the FAIRness Project**
- FAIRNessProject_forNGAC_03282024

**9. Spotlight Sessions:**
- A Map & Geospatial Librarian's Perspective
- ASPRS Positional Accuracy

**10. LAG Subcommittee Brief-Out:**
- LAG Update – APR 2024

**11. GDA Subcommittee Brief-Out:**
- GDA Reporting Update 04042024_V2

**12. The National Agriculture Imagery Program (NAIP):**
- The National Agriculture Imagery Program (NAIP)

**13. 2023 Geospatial Maturity Assessment:**
- 2023 Geospatial Maturity Assessment

**14. Subcommittee Brief-Outs:**
- NGAC April Quarterly Meeting – 3DEP Subcommittee Update Slide Deck
- NGAC April Quarterly Meeting – NSDI Subcommittee Update
- NGAC April Quarterly Meeting – Standards and Data Access