**Maine Library of Geographic Information Board Meeting**

**Wednesday, May 17, 2023**

**10:00 AM to 12:00 Noon**

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| **Seat #** | **Attending** | **Present/Online** | **Notes** |
| 1 | Nicholas Marquis | **ABSENT** |  |
| 2 | Brian Guerrette | **X** |  |
| 4 | Nate Kane | **X** | *Awaiting re-appointment* |
| 5 | Vinton Valentine | **X** |  |
| 6 | Gregory Copeland | **X** |  |
| 7 | *Vacant, Municipal Government* | **-** | *Awaiting nomination from MMA* |
| 8 | Leticia vanVuuren | **X** |  |
| 9 | *Vacant, Statewide Ass’n of Counties* | **-** |  |
| 10 | Katie Bernhardt | **X** |  |
| 11 | Sarah Haggerty | **X** |  |
| 12 | *Vacant, Public Utilities* | **-** |  |
| 13 | Aaron Weston | **ABSENT** |  |
| 14 | Patrick Cunningham | **X** |  |
| 15 | Mal Carey, Public | **X** |  |
| 16 | Maria Jacques | **X** | *Awaiting re-appointment* |
| **Staff:** | |  |  |
| Claire Kiedrowski, Executive Director | | **X** |  |
| **Guests:** | |  |  |
| Tracy Scopel | | **X** |  |
| Bob Bistrais | | **X** |  |
| Rob Rogers | | **X** |  |
| Lauren Hayden | | **X** |  |
| Jon Giles | | **X** |  |
| Kasey Legaard (Erin Simons-Legaard) | | **X** |  |
| Lola | | **X** |  |
| Rena Kalmon | | **X** |  |
| Tara King | | **X** |  |
| Christopher Lewis | | **X** |  |
| Justin Schlawin | | **X** |  |
| Emily Pettit | | **X** |  |
| Jon Rice | | **X** |  |
| Becky Schaffner | | **X** |  |
| Corinne L Michaud-LeBlanc | | **X** |  |
| Joe Young | | **X** |  |
| Jason Czapiga | | **X** |  |
| Amy Dowley | | **X** |  |
| Clarence Young | | **X** |  |
| Dawn F. McCall | | **X** |  |
| Wil Mercier | | **X** |  |

1. Roll Call of Members – Leticia vanVuuren
2. Meeting minutes of April 19, 2023 – Leticia vanVuuren
   1. Motion to approve April 19, 2023, meeting minutes made by Maria Jacques, seconded by Greg Copeland.
      1. Yea: 9 Nay: 0 Abstain: 1
3. Geospatial Work Group – Claire Kiedrowski, Leticia vanVuuren
   1. Short-term assignment for interested geospatial colleagues to define the orthoimagery specifications for the next program. The goal is to have a proposal to share with the Board at the next board meeting on June 21st for their review and approval. Current members are Leticia vanVuuren, Mal Carey, Patrick Cunningham, Joe Young, Justin Schlawin, and Claire Kiedrowski.
4. GeoLibrary budget request to Legislature
   1. Leticia vanVuuren
      1. The Chair thanks everyone for their in-person and written testimony to the legislature in support of the GeoLibrary budget request.
   2. Clarence Young
      1. The budget request is out of committee with an amendment for DAFS (Department of Administrative and Financial Services) to provide a staffing review. This should not delay the request for funding, but this review will be in parallel with the budget request. The schedule for providing the staffing review is yet to be determined.
   3. Brian Guerrette
      1. Brian would like to leverage using the Timmons Report to support the review process.
5. *“Land Cover Updates for Forestry and Carbon Mapping Projects”* – Kasey Legaard, University of Maine Intelligent GeoSolutions, Center for Research on Sustainable Forests
   1. Presentation with Slide Deck
      1. 10-meter detailed forest type information to include 15 forest classes, 1 recent forest disturbance class, and 15 C-CAP non-forest land cover classes. Planned update cycle of 4-6 years.
      2. 10-meter carbon mapping
   2. Timeline Review:
      1. Public release of both datasets in Winter 2024 with deliveries to the State of Maine in late fall 2023.
   3. Joe Young
      1. Are you on budget?
         1. Yes. The current funding was sufficient for the research and development of the projects.
      2. Do you have a plan for update funding?
         1. No, but Kasey thinks that the update would cost considerably less than the initial project. They have a highly automated processing pipeline now so frequent updates are much easier moving forward, but the funding source for updates has not yet been identified or secured.
   4. Justin Schlawin
      1. Please confirm that this project is mapping above ground only.
         1. Yes, it is above ground only.
      2. Are you using multiple predictor variables in addition to NAIP (National Agriculture Imagery Program) CHM (canopy height model) for carbon mapping such as NAIP spectral data?
         1. We will be using multispectral data but probably not from NAIP. We believe that we get more value from satellite Sentinel imagery which collects data in a broader set of wavelengths which correlate well to biomass.
   5. Patrick Cunningham
      1. What software are you using and if this is machine learning, is this considered deep learning?
         1. We are using custom software development including Python libraries. The machine learning models we use support gradient boosted regression or classification trees. All of these are used for multi-object machine learning. No deep learning is used.
   6. Mal Carey
      1. What is the documentation of the undertaking, and would other scholars (academic and commercial) be evaluating your approach of software development and customization?
         1. This project will have ample documentation on the software, approach, challenges, and insights. The customized software is not considered open source. However, the process, software, and results will be published.
      2. Do you anticipate that the State would use this for regulatory initiatives and if so, would the proprietary elements be an issue?
         1. The previous LCD (2004 Maine Land Cover Dataset) project was developed using methods that were not fully documented. The intent is for the data to be freely available with appropriate metadata. We are working with the state to leverage the carbon mapping to support the state’s interest.
   7. Jon Giles
      1. How do you come up with a forested wetland? Is it based on spectral signatures or a combination of soils data with forest type data?
         1. That would be a NOAA C-CAP question. They delineate the forested wetland from upland forest probably using spectral information from high resolution photography. The University does not perform that processing.
6. Executive Director’s Report – Claire Kiedrowski
   1. Current Projects
      1. LiDAR
         1. 2021 MidCoast & DownEast project.
            1. It is now publicly available on national websites.
            2. The derivative raster DEMs are now on the GeoLibrary’s Data Catalog. The 2-foot machine-generated contours are on hold because a gap was found between the previous 2017 LiDAR dataset and this 2021 dataset.
            3. USGS is working closely with their consultant NV5 to deliver the gap tiles to USGS, who will then provide quality control on those missing tiles.
            4. The intent is to have the Gap Tiles available on the national websites by September at the earliest and by December at the latest.
            5. Then the 2-foot machine generated contours will be delivered and available on the GeoLibrary Data Catalog.
         2. 2022 South Central project. Project is on schedule; final acceptance by USGS is anticipated this summer with public availability in fall 2023.
         3. 2023 MidCentral Project. The entire project area was captured with LiDAR as of May 16th. This project was designed to meet Quality Level 1 (QL1), which is 8 points per square meter (ppsm). A Memorandum of Agreement for funding with The Nature Conservancy is in progress.
      2. Orthoimagery. The State of Maine received their dataset in May. Also, all participants in the program have had their data delivered to them on hard drives. MEGIS and the GeoLibrary are working together to review the imagery for quality control and then get it available for access on the GeoLibrary Data Catalog.
      3. Land Cover
         1. Nate Herold of NOAA provided us with an update and schedule on the 1-meter C-CAP Program at the April Board Meeting.
         2. Kasey Legaard, University of Maine Intelligent GeoSolutions, Center for Research on Sustainable Forests just provided us with an update on the forest and carbon mapping projects at today’s meeting.
   2. Opportunity for USGS Broad Agency Announcement Program for 3DHP (3D Hydrography Program). This program will be modeled after the 3D Elevation Program, with an announcement and presentation in August, then an application period in the fall and finally an award announcement in late December/early January. Like the 3DEP program, this program will have matching funds. NRCS Maine is interested in this program.
      1. Link: [The 3D National Topography Model Call for Action - Part 1: The 3D Hydrography Program | U.S. Geological Survey (usgs.gov)](https://www.usgs.gov/national-hydrography/3d-national-topography-model-call-action-part-1-3d-hydrography-program)
   3. Community Outreach by Executive Director
      1. GeoLibrary presentation entitled *“GeoLibrary’s Geospatial Data: Lidar, Orthoimagery, & Land Cover”* on Friday, April 28, 2023, in Brewer Maine at the New England Regional Council on Forest Engineering Conference
      2. GeoLibrary presentation entitled *“State of the GeoLibrary”* on Wednesday, May 24, 2023 in Augusta at the Maine GIS Users Group (MEGUG) Spring Conference.
   4. Board Membership Updates & Changes.
      1. Governor Appointees – no movement on these individuals
         1. Re-appointments for Nate Kane & Maria Jacques
         2. New appointment Walter Anderson
      2. Senate President
         1. Katie Bernhardt was re-appointed.
         2. Seat #7, representing Municipal Government, is vacant and the Maine Municipal Association has been contacted for a recommendation.
      3. Executive Director. Claire Kiedrowski is a part-time consultant working through an agency for the State of Maine. Her contract expires June 30th, 2023, and she will not be renewing the contract. She expressed her appreciation for representing the GeoLibrary over the last few years and indicated her willingness to assist the next Executive Director during the transition process.
7. Guest & Board Comments
   1. Patrick Cunningham
      1. Please join us for the MEGUG Spring Conference next week on Wednesday, May 24, 2023. Register at [www.megug.org](http://www.megug.org) .
   2. Rob Rogers
      1. The previous orthoimagery program required the county to participate for municipalities to participate; will that be a requirement in the next program? Will municipalities be able to participate regardless of county participation?
         1. The Geospatial Work Group will take these comments into consideration when developing the next program.
   3. Jon Giles
      1. The previous recommendation on the next orthoimagery program used high resolution satellite imagery as source for the Unorganized Territories (UTs) and Plantations (PLT).
         1. The current Geospatial Work Group will evaluate the inclusion of satellite imagery in the program. Previously, there was a monthly fee to access the satellite imagery.
8. Next meeting agenda items
   1. Paul Smitherman, University of Maine Fogler Library, Sewall Historical Aerial Imagery
   2. Finance Report
   3. Technical Report
   4. Executive Director Transition
9. Adjourn – motion made by Sarah Haggerty, second by Nate Kane. Adjourned at 11:30 am.