

Maine Library of Geographic Information Board Meeting

Date: Wednesday, 18 May 2011

Time: 10:00 AM to 12:30 PM

Place: 19 Union St., room 110, State Planning Office, Augusta

AGENDA

1. Introductions
2. Approval of the 20 April 2011 meeting minutes – Chair
3. National Ecological Observatory Network (NEON) Presentation (1 hour)
Hannah Dean, Sea Grant Fellow, Chellie Pingree's Congressional Office
Brian Wee, Ph.D., Chief of External Affairs, National Ecological Observatory Network (NEON), Inc.
4. Draft Land Use Code Report – Dan Walters
5. Select volunteers for RFP review groups
6. Strategic Plan Implementation Groups
 - Coordination & Communication – Mike Smith, Dan Walters
 - GeoParcels – Nancy Armentrout
 - Education & Training – Tora Johnson (or designated Board member)
 - Geospatial Data – Dan Walters
7. Committee Reports
 - Financial Committee – Chair
 - Policy & Marketing Committee – Vinton Valentine
 - Technical Committee – Christopher Kroot
Status of GeoPortal
8. Guest Comments
9. Recommendations for Next Agenda



NEXT SCHEDULED MEETING: Wednesday, 15 June 2011, 10:00 AM – 12:30 PM, 19 Union St., Augusta.

MINUTES
Maine GeoLibrary Board Meeting
05/18/2011

1. Call to Order - 10:10 AM
2. Introductions:

Attending	Present	On the Phone
Gretchen Heldmann	X	
Bill Hanson		
Ken Murchison		X
Vinton Valentine	X	
Aimee Dubois	X	
Paul Hoffman		
Greg Davis		
Dan Walters	X	
Jon Giles	X	
Nancy Armentrout	X	
Michael Smith	X	
Christopher Kroot	X	
Judy Colby-George	X	
Dan Coker		
Guests:		
Steve Weed	X	
Brian Wee, NEON	X	
Hannah Dean, Chellie Pingree's Office		X
Brian Stearns, DeLorme	X	
Rich Grady, AppGeo	X	

1. **Approval of the 20 April 2011 meeting minutes – Chair**

-  Motion approve April minutes by Mike Smith, Vinton Valentine 2nd. CK abstain. Minutes approved.
-  Motion by MS to append CK's revisions to the end of the March minutes, 2nd by DW. Approved.

2. **NEON**

Brian Wee –from the National Ecological Observatory Network (NEON) Washington D.C. office, headquarters are located in Boulder, CO. Hannah Dean from Chellie Pingree's office is on the phone and watching the presentation via WebEx.

NEON's Mission is to:

Enable understanding and forecasting of the impacts of climate change, land-use change and invasive species on continental-scale ecology -- by providing infrastructure and consistent methodologies to support research and education in these areas.

Their organization analyzes climate change, carbon forecast, land use change, invasive species and other environmental stressors on landscapes and complex interactions between the two. NEON has 60 sites, an airborne platform and uses existing satellites to make regional maps from airborne and satellite scale up to national maps.

NEON's website will collect data across the United States on impacts that changes in climate, land use and invasive species have on natural resources and biodiversity. NEON is a project of the U.S. National Science Foundation, in a cooperative partnership with many other U.S. agencies and NGO's. Partners include NASA, USDA, NOAA, Smithsonian, EPA, CDC and many other White House initiatives such as global climate change initiatives, etc.

NEON will be the first observatory network of its kind designed to detect and enable forecasting of ecological change at continental scales over multiple decades. The data NEON collects will be freely and openly available to all users.

NEON plans to identify and develop sites consisting of wild land areas guaranteed undeveloped for 30 years, agriculture, active forest management, urban areas, invasive species sites, and sites based on weather/climate conditions – some of these sites will monitor nitrogen in the air to determine power plant effects. Agricultural, forestry, other themes are relocatable – so the 30 year rule does not apply to them – the sites are moved every five to seven years, so as environmental conditions change; we can observe what's happening.

Five sites are slated to be constructed within two months time: Harvard Forest in MA., Burlington, MA., Bartlett Experimental Forest in N.H. and two sites in CO. These should be operational and streaming data by 2012. Plans are for each site to have plant biodiversity plots (traps, transects, etc) including; mammal webs, birding grids, mammal transects, and ecosystem productivity plots. The plans also include a meteorological tower and instrumentation hut. Soil array areas will be marked and cordoned off to prevent entry where soil pH and carbon, etc will be regularly measured. Field crews would go out to plots each year to conduct surveys at the plots (insects – ground beetles, mosquitoes to track malaria; mammal webs to trap mice and look for hanta virus, physical measurements, parasites on the mouse; aquatic parameters such as macroinvertebrates). Boardwalks put at sites so ground is not trampled to minimize impact. Instrument huts are built to protect sensitive instruments from weather.

Airborne – planes are equipped with full wave form lidar, imaging spectrometer, digital camera, GPS, up-looking ocean optics Vis for climate conditions. Using lidar for forest canopy measurements to assess health of forests, agriculture conditions, estimate biomass. Can be used for management of forest inventories, models for crop and forestry pest invasions,

better understanding of biodiversity changes especially as relates to invasive species. Field crews will ground truth remotely sensed data.

Satellite - A custom spectrometer is being designed to measure specific things. The new design to be deployed on HypSIRI (a planned NASA satellite to be launched in 2020 +/-), will have high signal-to-noise ratio, spectral bandwidth and resolution similar to NASA AVIRIS with mechanical cooling. This will be flown across all 60 sites during peak greenness (summer) each year acquiring data at one meter resolution, including a buffer of approximately 300 sq.km. around each site. One instrument package covers east, one covers west, one extra for when needed if something breaks down.

Program - About 539 primary observations will be recorded for each of the 60 sites (on average, because not all have ozone sensors for example) -> 100 summary variables -> 18 model outputs. 60 sites: 20 permanent, 40 relocatable; 36 aquatic sites; 10 experimental stream systems; 10 mobile labs. NEON calibrates over 18,000 sensors system-wide, and all data flows back to the headquarters, data is made freely and openly available to public users.

NEON participates in public engagement, involvement, and education as well as engaging with citizen scientist programs. Examples include eBird run by Cornell which collected over 48 million observations by citizen scientists and entered the data into NSF supercomputer TeraGrid to forecast spring migration of indigo bunting bird. NEON will be doing something similar with Project BudBurst; observing when first buds or leaves come out after winter. This initiative will be used as a public engagement and education tool, not necessarily for scientific forecasting.

Organization - Neon has about 105 employees, 60 member organizations (universities, federal orgs) that pay dues to fund NEON, 501c3, strongly supported by National Science Foundation. Annual operations are estimated at about \$80 million.

Question and Answers

- With Congress still hashing '11 budget, what is sense in keeping this going for 30 years?
 - GW Bush admin was very supportive of this project, Appropriations folks on both House and Senate side are very supportive, so FY11 budget wise, everyone out of NSF funded out of large infrastructure account, but there were some funds evaporated. NEON requested 20 million out of that account, so it will be hit somewhat but don't know what yet. OMB still looking at NSF spending plans. Don't know how much money will get to start construction in July, but guessing at least 12 million.
- Are you integrating with NOAA ocean observation systems (OOS)?
 - This was a recommendation under president's marine recommendations plan of 2009. NEON is not integrated with them at this time.
- How about reconciling with growing number of data portals out there? At least at federal level? Metadata formats? (missed most of answer due to phone problem)
 - Our portal will primarily only support NEON data, pushing for a very simple portal because user requirements change every hour, pushing for NEON to

conform to technical standards and not try to apply to every type of user out there, but apply for more technical users, researchers, etc.

- What about harvesting through portals?
 - Harvest metadata from NEON portal to our portal? They are looking at open archival portal metadata protocol to allow for that.

3. **Draft Land Use Code Report – Dan Walters**

Dan provided a summary of the report which was released this week and will give a review of comments next month after folks to have a chance to review and provide feedback. Judy Colby-George forwarded this on to the folks working for Charlie Colgan’s project and got tasked with creating codes for the Bangor area and Portland area for this project, based on what the towns have given that may need modifying.

The Committee tried to focus on six or seven major codes and link codes to other states. Ken Murchison offered praise for the work and suggested the report clarify for the average user the difference between codes and zone. Dan mentioned they wanted to do code and subcode to capture dominant use and second use. Jon questioned the cutoff of apartment units in buildings and how that might affect coding for those with more than ten units – Dan stated there was room in the code to allow for expansion. Aimee complimented the succinctness of the report, very impressive, captured all the needs/requirements.

4. **Select Volunteers for RFP Review Groups - Chair**

Mike Smith has published three Requests for Proposals (RFP’s) with due dates within weeks of each other and needs to designate review teams to evaluate the proposals. The three RFP’s are:

- 1) GeoParcels work – not necessarily a GeoLibrary project, but would love to have someone, just one, to add to Mike Smith and Lisa Leahy of ConnectME. Nancy Armentrout agreed to be the one. Proposals are due June 15th, same day as next board meeting.
- 2) Return on Investment for Ortho Imagery – Mike Smith, Gretchen Heldmann, Joe Young were designated to be on this review team.
- 3) Statewide Orthoimagery Acquisition – Mike Smith, , Aimee Dubois, Joe Young were appointed to this committee. The Board will seek a volunteer from one of the counties (Dan Walters will coordinate the search), Dan Walters will also serve as technical advisor but not voting member.

5. **Strategic Plan Implementation Groups**

- Coordination & Communication – Mike Smith, Dan Walters
MEGUG Conference - Michael Smith and Dan Walters attended the conference at the University of Maine Presque Isle and gave a presentation at the luncheon roundtable. The goal was to encourage participation in the Boards Statewide orthoimagery acquisition program. It was well attended by assessors and code enforcement officers and provided a good opportunity to present the program. One utility representative was interested in how

they might play a role in funding. Steve Weed mentioned Acadia NP was also interested in such a role.

Board Funding - Mike Smith met with the Chief Information Officer(CIO) last week regarding funding initiatives for Board activities. He was under impression we would put forth legislation, we thought he would put forward legislation, based on past relationship with Dick Thompson. The CIO would like us to go forward with finding champions, and developing legislation. The Chair inquired of Michael Smith:

- if he thought we should contact David Emery since he uses and understands GIS, does GOP redistricting and is well connected with the Governor's office and could help us contact other legislators that might be interested?
- Can contact David Emery to meet with him, see if he knows other interested, get us in touch with others, etc.
- But as far as legislation, we need to identify legislative champions, such as Dennis Keschel as a possibility. Can talk to Joe Young about contacting him since Joe is a constituent of his.
- What about getting Charlie Colgan to be a supporter of this?

Knox County Community Officials – The Chair has a meeting on Friday in Rockland with County officials and municipalities to talk about ortho program and geoparcels.

Piscataquis County Officials – Dan Walters will be attending a meeting to make a presentation on the Boards statewide orthoimagery acquisition program

Penobscot County Officials - have expressed similar interest.

Franklin County Has already budget money for the program even though they aren't scheduled for a few years.

Portland already flew their photos this spring.

- **GeoParcels** – Nancy Armentrout
A draft update to the final report, is due June 7th. Michael Smith is working on two sections. Michael Smith is working on finishing up the map viewer to be completed by June 7th. A beta version of the viewer will be ready by the end of the week for board review. The map viewer is a work in progress and improvements can be expected after the delivery on June 7, 2011. The committee has now received all Hancock County data except for the town of Otis. The RFP for parcel mapping has received 78 requests for information so far.
- **Education & Training** – Tora Johnson (or designated Board member)
NEON - The presentation by NEON staff was a summary of what was presented yesterday at a USM session. The presentation was an educational thing in general, but also to inform us of the data stream that will be coming down the pipe, and how universities and researchers can plan ahead for how to utilize this information. Researchers and others can also plan ahead for how to offer up sites in ME as a relocatable site.

Scholarship - MEGUG awarded a scholarship to Peter Miller from Bates. He will begin work this summer and the money will help pay for his field season, he will present results of his work at the MMA Technology Conference in March.

MEGUG Annual Meeting – The annual meeting is June 24, 2011 at Sunday River’s Grand Summit Hotel.

- **Geospatial Data** – Dan Walters
No additional report.

6. **Committee Reports**

- **Financial Committee** – Chair
This was covered in the legislative update provided by Michael Smith.
- **Policy & Marketing Committee** – Vinton Valentine
As part of NEON presentation, we have with us Hannah Dean from Chellie Pingree’s office, so that conduit is open if we have any sort of policy ideas. Hannah states it’s been useful to listen in on and hear what’s been happening with the board, she will send out her contact info.
- **Technical Committee** – Christopher Kroot
Portal Update - Administrator notification has been added. When someone creates metadata and submits it for publication an e-mail will be automatically sent to the administrator notifying them that someone has requested metadata to be published. Previously it just sat in there until the administrator looked for it. This function has been tested harvesting both ways to and from portal, and was successful.

The thirty day testing period coming up soon and Board members will need to participate. Christopher will send out a new portal URL soon for members to review. New individual usernames and passwords will be issued for each person to enable tracking workflows rather than everyone using a Guest1 log-in. A description of user roles available will be included. The thirty day period will begin when the link is sent. As members review they should think about present workflow, future workflow and how we might want to improve the process.

Another round of testing should be performed after shapefile uploader is done.

Send all comments including ideas for what shapefile uploader should be like, to Christopher.

7. **Guest Comments**

Rich Grady was interested in GeoPortal, interested in the open-source app it’s built on. Christopher described it to him, offered to provide him with more details later if interested.

8. **Recommendations for Next Agenda**

Portal – set aside time for questions if any based on prior 30 day period of testing
GeoParcel viewer – 30 min June
Sewall Demo – June/July, maybe push for July
Land Use Code – June

Parcel Standards – small updates

9. **Motion to Adjourn** – Motion by Aimee Dubois Seconded by Nancy Armentrout 12:32pm
🇺🇸 **Voted Unanimously**

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Geoportals Status Report – May 12th, 2011

Prepared by: Dan Smith and Ben Chandler

I. Branding

- A. Change banners on the PDFs generated from Geonetworks banner to the Geolibrary banner
 - Complete

II. GUI customization

- A. Adding admin notification button (request to publish)
 - Complete
- B. Fixing login/signup page to be both secure and separate from admin controls
 - Coding done, investigating a “null pointer exception”
- C. Allow users to view shapefiles associated with metadata entries
 - 75%, considered part of shapefile uploader
- D. Disable the display of the most recent uploads on search panel
 - Complete
- E. Disable optional languages
 - Complete
- F. Fix links to match production version
 - Complete

III. Outstanding application bugs

- A. Firefox advanced search bug. An error is occasionally shown in an alert box.
 - Under investigation. Difficult to reproduce.
- B. Downloadable search option not functioning
 - Removed

IV. Map Printing

- A. Change banner on map PDF printout
 - Complete
- B. Modify baselayer parameters so it shows up on PDF
 - Complete

V. Map viewer

- A. Have the base layers running locally
 - In progress, currently using State WMS
- B. Investigate repeating county names bug with base layer
 - Will investigate when layers are local
- C. Add town/county dropdown list in mapviewer for fast navigation
 - In progress, designed but not fully implemented
- D. Navigate by coordinates from within the mapviewer
 - In progress, , designed but not fully implemented
- E. Add clip zip functionality
 - Incomplete, considered part of shapefile uploader

VI. Testing

- A. Test harvesting
 - Complete
- B. Test batch upload
 - Complete. Functions different than expected. Only uploads from local (server) directory.
- C. Investigate the metadata fields associated with What, Title, etc. when searching
 - Prof. David Briggs: “We have traced the search operation logic to the point where the parameters of the search are assembled into a query string for the server and have identified the servlet that responds to the request. It remains to examine the source code for the servlet to see how the query parameters are used against the fields in the metadata records stored in the database.”

VII. Documentation

- A. Update documentation
 - Currently waiting for a wiki to be added to the development server
 - 1. Add ISO categories to help
 - Done, not yet published
 - 2. Change help to reflect new version
 - In progress, not yet published

See attached slides from NEON presentation, in pdf format.