Maine Library of Geographic Information Board Meeting
Date: Wednesday, 20 April 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 16 March 2011, 29 March 2011 (conf. call) meeting minutes – Chair
   *note change from Vinton
3. National Enhanced Elevation Assessment – Dan Walters

4. Revision to conference call agreement re: $73 discrepancy – Mike Smith

5. CAT5 ROI RFP Update – Mike Smith

6. Strategic Plan Implementation Groups
   - Coordination & Communication – Mike Smith, Dan Walters
     Letter re: Gov. LePage Reform Proposal & Landowner Access Requirement
     ICMA/ESRI Case Study Update
     Lidar one-pager

   - GeoParcels – Nancy Armentrout
     status of Hancock Co. parcels
     status of viewer for CAT4 grant
     - GeoMoose platform previewed with Maine parcel data
     http://mapservertest.maine.gov/geomoosemaine2/geomoose.html
     - code-sharing agreements executed with Clatsop County, Oregon
     status of final report for CAT4 grant (Nancy)
     broadband-funded parcels
     - Washington County agreement executed
     - UMPI agreement executed
     - RFP for the rest is 'in the pipe'

   - Education & Training – Tora Johnson (or designated Board member)

   - Geospatial Data – Dan Walters
     Orthos RFP Update
     Lidar Update

7. Committee Reports
   - Financial Committee – Chair
     One-pager to present to CIO

   - Policy & Marketing Committee – Vinton Valentine

   - Technical Committee – Christopher Kroot
     Status Report

8. Guest Comments
9. Recommendations for Next Agenda
10. **NEXT SCHEDULED MEETING:** Wednesday, 18 May 2011, 10:00 AM – 12:30 PM, 19 Union St., Augusta.

MINUTES
Maine GeoLibrary Board Meeting
04/20/2011

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

Attending	Present	On the Phone
Gretchen Heldmann	X	
Bill Hanson		X 10:45am
Ken Murchison		
Vinton Valentine	X	
Aimee Dubois	X	
Paul Hoffman	X	
Greg Davis		X
Dan Walters		
Jon Giles		
Nancy Armentrout		
Michael Smith	X	
Christopher Kroot		
Judy Colby-George		X
Dan Coker	X	
Guests:		
Steve Weed	X	

1. **Approval of the 16 March 2011, 29 March 2011 (conf. call) meeting minutes – Chair**
   - Motion by Dan Coker, 2nd Vinton Valentine, all in favor.
2. **National Enhanced Elevation Assessment(NEEA) – Dan Walters**
   Michael Smith gave this update – NEEA is a survey commissioned by USGS to define high resolution topographic data and products most useful to the geospatial community. They are looking for approximately six individuals users of LiDAR data from the public and private sector to complete the survey – private, municipal and non-profit. The survey will take about four or five hours to do the survey. Individuals chosen will need to be committed to completing the survey. Dan Walters is seeking suggestions for good candidates as it is important to seek out those that understand elevation data and can provide valuable insight. It's a very detailed survey – if someone wants 9cm they need to then go into detail about WHY, etc. Board members are asked to look into constituencies and report back to board or to Dan Walters with suggestions. People must be in Maine.
3. **Revision to conference call agreement re: $73 discrepancy – Mike Smith**
   Mike Smith had emailed everyone regarding this. $19,311 was allocated for hosting and upgrading the portal during the conference call on March 29, 2011. However it turns out

there is only $19,238.50 left in the account so the amount allocated needs to be reduced by $73.

- Motion by Michael Smith to amend amount allocated to support hosting and upgrading to portal as voted on 29 March 2011 to make total $19,238.50 Seconded by Aimee Dubois. All in favor, Chair votes yes.

Vinton Valentine abstained from discussion and voting.

4. **CAT5 ROI RFP Update – Mike Smith**

   The ROI RFP has been submitted to the Bureau of Purchases, they are moving forward without the official award letter. The RFP allows the review committee reject all bids. Mike Smith hasn't had status update from Purchases though he did ask for one a week ago.

5. **Strategic Plan Implementation Groups**

   - Coordination & Communication – Mike Smith, Dan Walters

     Letter re: Gov. LePage Reform Proposal & Landowner Access Requirement

     Judy Colby-George is working on it and will work Jon Giles to complete, no other update. The goal is to keep the length short with broad language.

     ICMA/ESRI Case Study Update

     All resolved, letter was drafted, ended up not needing to send b/c she emailed first.

     Lidar one-pager

     Jon will do first draft and Judy will edit.

   - GeoParcels – Nancy Armentrout

     Hancock County parcel data is almost complete with a few outstanding parcels maps to be completed. Tora will be following up to make sure data set is complete.

     Status of Map Viewer for CAT4 Grant

     It has been received from Clatsop County Oregon and *code*-sharing agreements have been executed. Bob Bistrais has been adapting to our needs and will be able to make the June 7, 2011 deadline for our use. It will meet the grant requirements; however that will not be the final product. More improvements are being planned. It will be used for GeoParcels and Board of Pesticides viewer as well as the Broadband map viewer. There are three other counties part of agreement in northwest and now Maine is part of that shared code base as well, based on GeoMoose, used specifically for cadastral data.

     The GeoMoose platform can be previewed with Maine parcel data at:
     http://mapservertest.maine.gov/geomoosemaine2/geomoose.html

     Status of Broadband-funded parcel mapping

     The agreement to complete parcel mapping in Washington County between the University of Maine Machias and the Maine Office of GIS was executed in January 2011 and the deadline for completion is July 1, 2012.

The agreement to complete parcel mapping in fifteen communities in the Presque Isle area between the Maine Office of GIS and University of Presque Isle was executed in March 2011 and the deadline for completion is October 1, 2012.

An RFP for the rest was issued by Maine office of GIS on April ____, 2011.
Mike Smith may need GeoLib help to review proposals received. UMPI agreement executed in March, will be doing 15 towns in PI area.

County Deeds Court Settlement
Gretchen wants to make sure we make effort to keep up with Mr. Simpson and follow our legislated directive to not be redundant or duplicative. We are linking to registry data vs. he wants to host it. He wants to have one site for all state registry data vs. going to 16 different registry sites to find deeds. This item was discussed briefly as a result of recent news articles and pending deed-related legislation.

Status of final report for CAT4 grant (Nancy Armentrout)
See Nancy's email below – she attached the final report

- **<u>Education & Training</u> – Tora Johnson (or designated Board member)**
  MEGUG scholarship and grants program.
  Scholarship had two submissions. Educator grants had zero submissions. Primarily they think the reason is lack of information getting out to schools. The grants need to be promoted better.
  USM has their Thinking Matters student research symposium on April 29, 2011. It will take place from 8AM to 12pm at the Sullivan Gym on the Portland campus. At least 10 GIS proposals/poster presentations will be done and another half dozen or more that used MEGIS data throughout the state. Participants will be both undergraduates and graduate students and include non-GIS subject areas as well. The GIS III class at USM will have eight posters, and other sciences programs that have used GIS data in their research will have submissions. Some students from SMCC and Maine Medical Research Institute will have presentations also. Over 200 posters submitted and in afternoon are oral presentations.

  The MEGUG Summer School is scheduled for June 24, 2011 at Sunday River. A social event is being planned for the afternoon of June 23. Elections for At-Large Members will be held at the meeting.

  Ken Murchison is hosting a roundtable in May at UMPI. He has invited Mike Smith or Dan Walters to talk about the various RFPs, projects, etc we have going on, also talk about local stuff going on. Lunch will be sponsored by MEGUG lunch about GeoParcels. Virtual presentations may be done and a full day of activities organized into different subject areas is being planned.

- Geospatial Data – Dan Walters
  Orthos RFP Update
  Also in the hopper but just went in last week, so is lagging behind other two. RFP is for statewide program over five years, funding has not been identified yet. The successful vendor will enter into a contract based on cost per sq. mi and pending availability of funding. The proposal will be based on the program outlined in the Boards report on Ortho Imagery approved earlier this year. The RFP was designed using Wisconsin's Ortho Imagery acquisition proposal as a model. The contracted price will be used to leverage other funding – 1/3 federal, 1/3 state, 1/3 local/county. It is specified in RFP what areas first, will be southern Maine since they have shown most interest and have sort of offered funds.

  Lidar Update
  The contractor has been hampered for the last two weeks – headwinds, cloud cover, other weather issues, air traffic over Long Island resulted in no collection getting done. Data collection can occur up until leaves are about 75% out. The contractor has brought in additional resources and is hoping for good weather. If they can't meet the deadline, USGS and Photo-Science will have to negotiate alternatives. One option is to wait and complete acquisition in the fall. The Maine data collected last fall has been delivered to USGS for QA/QC.

6. Committee Reports
   - Financial Committee – Chair
     One-pager to present to CIO
     What Mike Smith really needs is for us to figure out some sort of funding formula we can put in there – actual numbers. Greg McNeal's concern is the roughly $200K MEGIS spends to maintain public-facing data and services. He's hopeful we can identify a better way to pay for it. All agencies pay part for the public services and they want to know why they are paying for public services.

   - Policy & Marketing Committee – Vinton Valentine
     No update.

   - Technical Committee – Christopher Kroot
     Status Report
     Christopher Kroot e-mailed a status report, attached. No other update since. Aimee Dubois asked several questions.
     - Will the new portal be ready by May 15th to replace the current public-facing one?
     - Will the new portal function without a shape file uploader, and how will it respond after May 15th date.
     - Will shape files still exist and just can't be uploaded from the new portal or what?

- We need clarification on procedures if we won't be able to download from new portal.

7. Guest Comments

8. Recommendations for Next Agenda

9. Motion to Adjourn Mike Smith Seconded by Aimee Dubois 11:02am
   - **Voted Unanimously**

NEXT SCHEDULED MEETING: Wednesday, 18 May 2011, 10:00 AM – 12:30 PM, 19 Union St., Augusta.

GeoParcels Update Email – 04/15/2011

Hello, all. Sorry for the late notice but I will be away next week so I will miss the Board meeting and the GeoParcels meeting. You all are welcome to meet without me as long as someone takes notes! We have room 402 reserved from 12:30 to 2pm. It would be good to make some progress as opposed to missing a whole month. Below are notes from our last meeting and below that are action items.

Notes from 3/16:

This was held directly after the Board meeting and Donna Tippet from GPCOG joined us for the discussion.

As part of the Board meeting discussion MEGIS talked about changing the platform upon which the GeoParcel viewer is written. They want to use a tool that was written by a group in Oregon on mapserver. This application already has many of the functions that we have asked for in GeoParcels.

We discussed the distinction and separation of zoning versus current use coding. Zoning is the type of use the municipality wants to see in that location and current use is what the property is now being used for. Current use is usually associated to the parcel and zoning is often associated to an area or areas of the town. Zoning will likely be its own layer in a GIS. GeoParcels would be interested in zoning information and many questions have come up about it but it is not a priority for the project at this point.

We need to plan an outreach campaign. We have the germs of our system and will soon have a pilot viewer. And as you all know we do not have the funding to implement the system so our outreach moving forward should focus on potential funding sources and what our message should be to these organizations. I have begun to identify some of these organizations and Gretchen and Bill have also provided some. I spoke with one organization and got feedback that leads me to think we should market this system in two different ways – one as a reliable dataset and map service, and the other as a viewer tool. Different groups will be interested in the different products. We also need to product some document for towns to show to their managers to get them on board with participating in GeoParcels.

Mike and Anji were going to make the attribute name changes to the parcel standard so that it conforms to shape file format limitations. This was going to be done soon so that it can be used in the RFP going out to contract for parcel digitization for the broadband project. We discussed what format we would require for delivery of parcel data from the resulting contract and said that Level 2 was just shape file, level 1 allowed more formats. Doesn't the RFP require Level 2 parcels?

To clip or not to clip – parcels to town boundaries - was a good topic of discussion. There are reasons to go either way on this question. On one hand, if we do not clip, some parcels may spill over the town boundary and overlap with parcels in the adjoining town and they will be difficult

to see and could lead to skepticism of the data. On the other hand, if we clip to the town lines then we are modifying the parcel and we could be burying the issue that the parcel lines the town is using may not be right. We ended the discussion leaning toward not clipping and showing the ugly truth so that there is impetus to improve the data. We will need to put a disclaimer on the viewer and the metadata. I have a note here that says "Symbology not opaque" but I don't recall exactly what this was saying.

We intend to do whole file updates (meaning townwide files) not transaction based updates (upon each parcel change) as this will be simpler to accomplish and manage. We will harvest the portal for updates that aren't coming directly to us. Will we put updates that we get into the portal? That would help us to see what towns are updated and what ones are not.

We need to make it easy for users to get to chunks of parcels in addition to single parcels, whole towns, or statewide.

Final report – we should explore ways to automate what could be for the data maintenance - not the data itself but the updates process – like the upload process, the check for compliance, the conversion of formatting, etc.

Action Items:

- Ask Anji to next meeting
- Add Tora's report to the final report for the FGDC
- Add a summary of the GeoParcels Viewer to the final report
- MEGIS to consider what automation possibilities there may be for the data maintenance process
- Need to schedule a demo of the GeoParcels Viewer
- Incorporate recent notes into Final Report
- Finalize section 4.2 of the final report – attached.
- Begin planning our Outreach Campaign – I have started a draft (attached but very rough) and will plan to have it in better shape for our May meeting.

Maine GeoParcels – Outreach Plan

1. Formalize mission

2. Finalize pilot and create road show – map viewer, slide presentations, and flyer/pamphlet/card for distribution

3. Refine budget for public exposure

4. Hone our message – what can we provide, what do we want from them, how can we make this happen

5. Contact outside organizations to meet with them to research funding opportunities

    - DECD
    - Maine Development Foundation
    - Maine Community Development Association –
      President - *James Q. Gulnac, AICP (207) 324-9150*
    - Maine Realty Groups – Rick Smith, etc.
    - USDA – Rural Development

6. Continue to outreach to other potentially interested parties
   Maine Association of Assessors
   Land Surveyors – update

Category 4: Business Plan Implementation in Support of the NSDI Future Directions Fifty States Initiative:

Property Boundary Data - Capture and Integration Pilot

Keywords: assessing, cadastral, deeds, geolibrary, maine, megis, parcels, property, registries, tax maps;

Maine – Final Report

a) Project title

Piloting the Municipal-State-Federal Partnership for Cadastral Data in Maine

b) Applicant Organization:

Maine Library of Geographic Information (GeoLibrary)
Maine Office of Geographic Information Systems (MEGIS)
174 State House Station
Augusta, Maine 04333-0174

c) Collaborating Organizations:

Town of Bar Harbor, Maine - provided guidance on the town-county-state cadastral flow
Hancock County - provided on-line access to deeds
Maine Library of Geographic Information (GeoLibrary) – provided guidance, in-kind hardware and support
Maine Office of Geographic Information Systems (MEGIS) - provided project administration application development support
Maine Revenue Service - provided information on unorganized territories
Maine Land Use Regulatory Commission - provided information on unorganized territories
University of Maine, Machias - provided staff resource to collate parcel data
Hancock County Planning Commissions – provided coordination between towns and UMM technical staff
College of the Atlantic - provided parcels data for towns already digitized
US Geological Survey – provided coordination with related NSDI and Federal projects

A significant number of municipalities who were active participants in the GeoLibrary Parcel Grants program are playing a role[1]. The Maine GeoLibrary has involved a wide array of additional participants and stakeholders to ensure that any proposed implementation will have the widest and most diverse participation and acceptance.

d) Organization internet address

Maine Office of GIS: http://megis.maine.gov
Maine Library of Geographic Information: http://www.maine.gov/geolib/

e) Principal Investigator

Michael Smith, GIS Administrator
207-215-5530 michael.smith@maine.gov

f) Other key contact personnel

Nancy Armentrout, E9-1-1 Database Manager, GeoLibrary Board Member, ILRIS project leader

[1] A complete list of Maine GeoLibrary Parcel Grant recipients is included as Appendix F.

207-287-6084 nancy.armentrout@maine.gov

g) Short project description

The GeoLibrary Board has implemented the concepts defined in its 2008 Integrated Land Records Information System Business Plan (funded by a 2007 CAP Category 3 award) as a pilot for a County in Maine. The 2008 Business Plan outlined a conceptual framework and identified function specifications for this system. This project has conducted a pilot based upon that framework and specifications. Maine's long history of interagency and interjurisdictional GIS planning and implementation has been helpful in developing a successful pilot.

This project used existing parcels and parcel standards developed as a result of earlier Maine GeoLibrary parcel grants to towns where available. This project focused on:

- creating a composite parcel dataset for Hancock County,
- developing a Parcel Map Viewer application
- providing links to the Hancock County deed registry documents from the viewer, and
- outlining a maintenance mechanism for keeping parcels up to date.

For nearly two decades Maine counties, municipalities and the Office of GIS have worked piecemeal to standardize and assemble this essential resource. This initiative was the next logical step in realizing the goals of statewide integrated land records information.

Access to uniform digital property parcels has been identified as the most pressing core component lacking in Maine's geospatial data framework since at least 2001. The 2002 Statewide Needs Assessment was significantly motivated by growing realization of this need by a large number of GIS users throughout Maine government. Subsequent reports and study groups, including the Counties GIS Needs Assessment[2], the Development Tracking Steering Committee, the recent state geospatial strategic plan, and independent efforts have reasserted this need.

(1) Project Scope

a) Status of state's strategic and business planning activities

In 2007, the Maine GeoLibrary received a CAP award to update Maine's geospatial strategic plan, align it with National States Geographic Information Council guidelines, and the "Fifty States" Initiative. Additionally, a functional specification and business plan was completed specifically for cadastral data, the Maine Integrated Land Record Information System (ILRIS, now known as "GeoParcels") to integrate with the Maine GeoPortal. Both products were finalized in early 2009 and are posted on the Maine GeoLibrary web site (http://www.maine.gov/geolib). Thus, Maine's geospatial strategic plan is very fresh, as is the business plan regarding unification of cadastral data in Maine. The requirement for cadastral data and its unification is clear in the state's strategic plan. This project has taken that plan to the next step toward implementing Maine GeoParcels.

b) Business plan development and implementation

This project has built on the findings of the 2007 Category 3 grant and its resulting land record business plan, and has taken steps towards statewide implementation of the cadastral data needs.

[2] CAP Grant Funded project report at: http://www.maine.gov/geolib/MECo_Report_Final.pdf

For Maine, the trickiest part of the unified approach to cadastral data is the fact that such data are managed by many independent organizations, each with a separate part of the process. Maine's approximately 500 municipalities maintain, at their own leisure and with their own standards, their tax map base. Well-funded towns or cities can thus have very accurate and current cadastral data in digital format, which are generally easily brought into a state system. Adjacent towns may have less revenue and just have paper maps updated at regular intervals. Other more remote towns may use a paper tax map base with only hand-written updates as needed. Still other towns have no parcel maps at all, relying solely on local knowledge of who lives where. Maine also has approximately 500 unorganized territories (about half the state) that are sparsely populated, where property taxes and land development are managed by state government. These unorganized territories, despite having very few residents, have higher-quality cadastral data.

This Category 4 Project funded a pilot for a unified approach to management of cadastral data. Using a single county, Hancock, we developed a unified cadastral layer and tied it to assessing and title records, all through an online application which is publicly accessible. With this pilot Maine has been able to test and refine the processes outlined in the ILRIS business plan. Hancock County made an excellent test case because it is a small county, yet runs the gamut of possible scenarios likely to be encountered elsewhere in Maine, including urban areas such as Ellsworth, small towns such as Southwest Harbor, and unorganized territories. Additionally, the County Registrar is amenable to providing online access to deed records.

Using Hancock County, Maine has:

- Digitized and collated cadastral data into a single unified composite, using an updated version of the state standard for parcels. The parcel data standard was updated under the recommendation of the previously mentioned Cat 3 business plan. This collation effort involved inventory and acquisition of existing parcel information from each town in the county. This information came in all stages of readiness for the composite, from no tax maps to fully aligned and up-to-date parcel data. The majority of towns had paper parcel maps which were digitized for this project. The collecting, digitizing, and collating work was done by the University of Maine in Machias.

- Outlined an update process, based on the varying needs and abilities of the municipalities and the state, to provide annual updates which can be further fed up to *The National Map* and support the NSDI framework. The outlined maintenance process is a combination of tools to convert local data to a state standard and support to assist low-tech towns with the process.

- Developed a prototype web application which provides public access to cadastral data and related tax records and deed documents.

With more understanding of these processes and systems for Hancock County, Maine can now take the lessons learned and apply them to the whole state.

This project was also helped by partnering with US Geological Survey (USGS). USGS was already funding a project in Maine to inventory and collect municipal data in Maine's GeoPortal, and was interested in having cadastral data as a layer in *The National Map*. This project is a natural corollary to the data inventory project, where the same contacts can be used to take the data collection further. Maine utilized its USGS Geospatial Liaison heavily in this project.

This project advances Maine's geospatial strategic plan by furthering the development of the cadastral framework. This project continues to link the geospatial community with the State's Chief Information Officer, as MEGIS falls under the CIO's direct jurisdiction, and the principal investigator herein serves as the CIO's personal representative on the GeoLibrary Board. This project has advanced both the state's spatial data infrastructure and the NSDI by furthering the goal of statewide cadastral data built to uniform standards; cadastral data being an NSDI framework layer, and the one most difficult for Maine to complete.

(2.2) Previous NSDI/CAP Participation and Applicability:

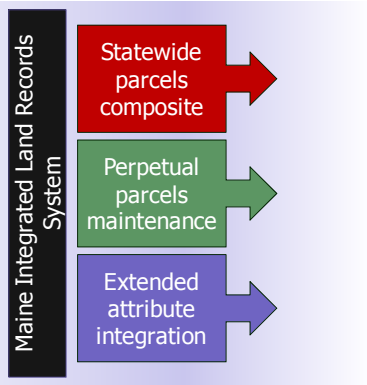
The 2004 Category 3 CAP Grant that resulted in the Maine Counties GIS study is a critical pillar in the ongoing evolution of this effort. This grant evaluated the potential role of county government in the use of GIS to improve county services including deeds registries, emergency response and law enforcement. An important aspect of this report was provision of GIS services to municipalities.

A number of issues/opportunities have converged that make the proposed studies very relevant to Maine and the state's overall implementation of GIS. It is clear that GIS plays an important role in answering Governor John Baldacci's call to regionalize municipal services. GIS is needed to support government's strategic planning process for regionalization. In addition, the GIS services needed by local government to support day-to-day operations may be best provided through a regionalized system.

Additionally, the CAP Category 2 Metadata Training and Outreach (2002) grant as well as the Category 4 Clearinghouse Integration with OpenGIS Services (2003) grant have advanced the technical framework of the State's geospatial resources to the point where many of the structural impediments to such an undertaking have been removed.

All of these earlier efforts culminated into the development of a conceptual framework and functional specifications as part of the 2007 Category 3 CAP Grant. This framework consists of 3 main components:

- Creation of a statewide parcel composite
- Development of a perpetual maintenance system and network to ensure these records are kept current
- Adding value to these data through technical association of individual records with other data sources through extended attributes sets.



The results of the 2007 Grant positioned the GeoLibrary to take the next step in implementation of a system to meet the identified goals.

(3) Commitment to Effort

Partner Organizations

The main partnering organizations included:

- Maine GeoLibrary Board - the state's primary geospatial coordinating organization, several Board members provided direct support in oversight of the project, including coordination with other stakeholders, review of deliverables, and advice and expertise. The GeoLibrary also provided two servers on which to run the pilot Map Viewer application.

- Maine Office of GIS - the state's primary geospatial service provider, the State GIS Manager provided project oversight, direct management of project goals and review of deliverables, and advice and expertise. MEGIS also provided hosting, software, and support services for the pilot application.

- US Geological Survey - via the state's geospatial liaison, USGS provided project oversight and advice, and coordination with the USGS-funded data inventory project already underway. USGS also provided guidance regarding integration of the data into *The National Map* and the NSDI.

- University of Maine, Machias - provided a staff resource to work with the towns to collate cadastral and assessor's data, develop a list of needs for annual updates, and coordinate with the GeoLibrary, MEGIS, and USGS. This staff resource was the same one used for the USGS data inventory, ensuring consistent communication with the towns.

- College of the Atlantic - provided local knowledge of the municipalities in Hancock County including digital cadastral data the College had already collected.

- Hancock County - provided online access to electronic deed documents.

- Town of Bar Harbor - assessor's office provided local knowledge and expertise of cadastral data in neighboring communities, and processes for linking to county data.

- Maine Revenue Service and Maine Land Use Regulation Commission - provided cadastral data and related data for unorganized territories in Hancock County.

- Hancock County Planning Commission – provided coordination between towns and the University staff to assist in getting access to parcel information.

(4) Project Results

This project has been executed in three distinct phases:

1. Collation of spatial cadastral data for Hancock County - a geospatial intern contacted all municipalities in Hancock County, Maine and gathered cadastral data and assessing data for the project. The information was found to be in various levels of sophistication from a couple of towns with no tax maps to Bar Harbor and others with publicly available GIS-based parcel information. Note - this process was also partially funded through a USGS partnership grant G09AC00157, which is a complementary project. Cadastral data for unorganized territories in the county was provided by the Maine Land Use Regulation Commission (LURC). Parcel data was brought to the parcel standards previously determined by MEGIS. During this process the Parcel Standard was updated, as outlined by the 2008 Conceptual Framework project, and approved by the GeoLibrary.

2. Outline of a maintenance process - one of the key difficulties in having a composite parcels layer is ongoing maintenance of the data. Along with the collation of cadastral data in Hancock County, and based on an updated version of the State's published parcel data standard, a set of processes for updates to the composite cadastral data on an annual basis has been developed and "conceptually" tested in a variety of situations. Hancock County was a great choice as a pilot project because it is small, but also runs the gamut of cadastral data possibilities - from cities with well-developed digital data to small towns with paper tax maps (and even a couple that did not have tax maps). It also includes state-regulated unorganized territories which are state-maintained.

3. Creation of a web-based "GeoParcels" application - the county-wide parcels were used in a web mapping application based on open GIS standards and using open-source software. A similar application already existed for LURC parcels only, so that application was used as a base for this GeoParcels Viewer application. This Viewer integrates seamlessly with the Maine GeoPortal, the state's metadata clearinghouse for geospatial data. The cadastral data in the GeoParcels application was tied electronically to the Hancock County registrar's database and, where available, municipal assessing data. The results are provided through a single interface with simple querying functionality.

4.1 Parcel Data Collection and Composite Development

Insert Tora's Summary here

4.2 Data Maintenance Process

The effort of maintaining up to date parcel information in a statewide composite for Maine is complicated. This is because parcel information is currently maintained by the 500 or so individual towns; in different media, using different standards, with varying levels of automation and sophistication. Several towns across Maine do not even have paper tax maps. Some just scribble updates or hand draw in parcel changes, and sometimes ten years can go by without an update. So a maintenance process at the State level must be multi-faceted to include standards, outreach, active pursuit, and support.

Our current working premise is to include basic data which allows the user to get to somewhere else for more complete data. This does two things: 1) calms the privacy concerns because it makes data like Parcel Owner a little harder to get and 2) provides more current information as the ownership data is likely to be more up to date at the town's site. We decided that in our conversations with others, towns, etc. that we should distinguish between valuation data and parcel data in the assessors' databases. These databases usually have both areas of data but we are most interested in parcel data at this time.

This premise of minimal attributes does, however, reduce the overall usefulness of the composite data for multiple parcel queries. An additional attribute that would be useful to have in the composite is Current Land Use. This attribute gives a user interested in statewide or regional patterns some good information to work with. We decided against including this attribute at this time because of the many concerns that the information is frequently not accurate. This is not a field that assessors rely on so they may not keep it updated. We are pursuing this information on a separate track and have spawned a subcommittee to develop a Land Use Coding Standard.

4.2.1 Standards

A Parcel Data standard exists and has been updated for the GeoParcel effort. We have developed an Assessing Data Submission Standard which is a minimum requirement that should not be difficult for a town to meet because it is consistent with their "Commitment" submission

requirements. This minimum can be exceeded by a town that wishes to, but participating towns must meet the required list.

Standard GeoParcel Attribute Fields:

1. The required Commitment attributes: Map-Lot, Physical Address, Last sale book and page.
2. Include any ID used to link to the town's assessor database and/or GIS data.
3. Include a "date attributes last updated" field
4. Will add later – Current-Use Land Use Codes

Standard Parcel Composite Fields:

1. A "Date Parcels Last Updated" field.
2. Feature Level Metadata in the parcel composite to be able to include parcel level metadata.
3. GIS Area – an acreage amount calculated by the GIS.
4. If available, we will also carry a link to the Municipal Assessor's web site data.

We have identified a need for standardized Land Use Coding but there are no standards in place today so we intend to include this type of data in the future but not today. We have charged a sub-committee with developing a standard. This committee includes municipal assessors and has begun its work. The GeoParcels attribute standards will be updated once a Land Use Code Standard is adopted.

4.2.2 Outreach

Because maintaining GeoParcels will take some work on the part of municipal assessors, we believe that Outreach to the assessors is necessary. We must convey the importance of maintaining parcel information on a statewide basis and its benefits must be understood by the municipalities for this effort to work. Outreach must include: 1)publicizing the effort and its benefits and 2) coordination on a regional basis. We feel regional coordination is necessary to engender trust and local understanding.

We need to create a market for GeoParcels in order to get regular updates from towns. Why should a town update their GIS parcel records yearly and get their updates to GeoParcels? Some of the benefits of GeoParcels we have identified include:

- It should reduce the number of requests each town gets for data
- Town officials can use the viewer to look at their own parcel data – for small towns this can be very handy.
- Parcels are shown on the most current orthophotography which is helpful for small towns who don't have internal capability and would also be attractive to assessors.
- Is likely to be easier and cheaper than what a town might do on its own?
- Should help promote economic development
- Should be helpful for planning purposes
- Towns like to "keep up with the Joneses" - their neighboring towns

4.2.3 Active Pursuit

Every April 1st each municipality in Maine is required to submit a commitment of their valuation to Maine State Govt. Data updates often occur after that and also sometimes during the winter. To get the most for our efforts we decided that the GeoLibrary should actively seek out data updates twice a year – around July and February. It will take an active request from the GeoLibrary to get updates from most towns.

Some towns will want to update more often and our process will allow towns to make more updates. For some of those towns that update more often, they have the ability to self update our version of their town's data as they maintain their own version. For towns that send data for us to

update our parcel composite, automated routines will be written to run the pieces that can be automated because this will be a significant chunk of the towns and the number of these towns will grow. We will also offer support to towns that do not have the capability to send us their data or to update it themselves.

For the semi-annual updates, as a minimum, we will request those data fields that are required in the commitment as an attribute "table". We will also request parcel geometry updates but we know that they are updated less often. A 3 – 5 year cycle for updating the geographic data is about right for those towns that don't do annual updates.

4.2.4 Support and Coordination

It is clear that someone at the state level must guide, coordinate and support parcel maintenance activities. Since we have outlined an active pursuit of updates for attributes once per year and geographic updates every 3 years, we must fund and put into place a mechanism to do this.

We look to a regional approach to help coordinate the several hundred towns and to existing organizations if at all possible. In many cases coordination can be done through existing regional planning groups such as Regional Planning Commissions (RPCs) and Councils of Governments (COGs). In our pilot we found that having the Hancock County Regional Planning Commission involved was very helpful to getting information from the towns. Towns tend to trust the RPCs and COGs because of the existing relationship they have so it makes it easier to get what is needed to digitize parcels. We found that cooperation can come down to a simple thing like a town has only one copy of their tax maps and is nervous about having them brought out of town for digitizing.

The private sector also plays a big part in parcel maintenance. We see the RPCs in a coordination role with the towns, not as the creator or updater of parcels, although we know some do this type of work today. The RPCs can take a role as the QA for parcels done by the private sector. We may put out an RFP to develop a short list of vendors who would be willing to digitize and/or update parcel data to the state standards in each geographic area.

Funding is always the biggest obstacle to an initiative like this one due to its nature of benefiting many but no one entity enough to fully fund it. A few ideas we have for funding are to follow the State Orthophoto Program's lead in terms of county/regional accumulation of funds to get an area flown or asking assessors to add a little money to their parcel update projects to get their resulting data into the composite. This would not be much additional cost and would relieve the towns from posting their data at their convenience.

4.3 GeoParcels Viewer

(5) Conclusion

It is unreasonable to expect that a solution for a statewide property records system can be architected and deployed under a $45,000 program. This is a large, complex and intractable problem that is not easily solved. However, we have found that through an incremental approach we have been able to make strides, we have built support and enthusiasm, and we have mapped out how such a system should work and how it might be developed. This project gave us the opportunity to pilot our ideas and to develop them more fully. Though funding the implementation of our system is still elusive, particularly in these economic times, we now have the details we

need to move forward. We are confident that by keeping a large number of stakeholders involved, holding expectations high, minimizing waste and redundancy, and maintaining continuity and consistency of vision over the long view, we can build a dependable, sustainable cadastral framework for Maine.

Funding Commitments and Project Budget

Match explanation

- GeoLibrary will contribute $13,000 in-kind through provisioning of web servers and 50 hours of staff time by GeoLibrary Board members ($4500 value)
- MEGIS will contribute with $1800 in-kind through provisioning of web hosting services and 25 hours of staff time by MEGIS staff to assist ($2400 value).
- This in-kind match will secure 2:1 funding ($30,000) for a total of $45,000.

Table 1: breakdown of costs for CAP funding (total $30,000)

2010 NSDI CAP Category 4: Business Plan Implementation				
Categories	Totals	Details	Description	SubDetail
Salaries and Wages	$30,000			
		$15,000	UMM - Collation of data and documentation of data standards	
		$5,000	MEGIS - development of update process	
		$10,000	MEGIS - development of web application and online linkages	

Detailed budget sheet explanation

The budget on the following page reflects approximate allocations of project tasks and responsibilities.

Hourly wages are based on rate costs as follows: Personnel 65.836%, Fringe 33.032%, Indirect 1.132%, consistent with many previous USGS/FGDC grant proposals.