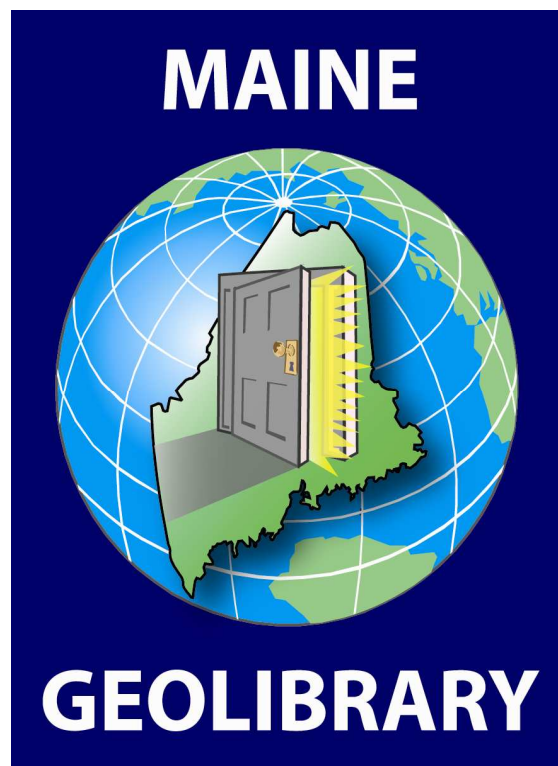# Maine Library of Geographic Information
2012 Annual Report
to the
Environment and Natural Resources
and
State and Local Government
Joint Standing Committees
of the
126th Legislature

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Acronyms & Selected Definitions

Board	Board of directors for the Maine Library of Geographic Information
CIO	Chief Information Officer for the state
FEMA	Federal Emergency Management Agency
FGDC	Federal Geographic Data Committee, sets metadata standards
GeoLibrary	Common name for Maine Library of Geographic Information
GIS	Geographic Information System
LiDAR	Light Detection And Ranging, a remote sensing system used to collect topographic data
MDIFW	Maine Department of Inland Fisheries and Wildlife
MDOT	Maine Department of Transportation
MEMA	Maine Emergency Management Agency
MEGIS	Maine Office of GIS
MEGUG	Maine GIS Users Group
MPUC	Maine Public Utilities Commission
NGA	National Geospatial-Intelligence Agency
NGO	Non-Government Organization
NMDC	Northern Maine Development Commission
NRCS	Naturals Resources Conservation Service
NSDI	National Spatial Data Infrastructure, a consortium to promote the sharing of geospatial data and standards
OGC	Open Geospatial Consortium, a non-profit international organization that develops standards for geospatial and location based services
OIT	Office of Information Technology
Orthoimagery	Aerial imagery accurately representing the earth's surface, having been adjusted for topographic relief, lens distortion, and camera tilt
Resolve 23	Legislative committee that drafted the plan that resulted in the GeoLibrary
SPO	State Planning Office
USDA	United States Department of Agriculture
USGS	United States Geological Survey

1. GEOLIBRARY

The Maine Library of Geographic Information ("the GeoLibrary") is a partnership of public and private stakeholders created by the Maine Legislature to operate a coordinated, cost-effective electronic gateway providing access to data custodians' public geographic information. The GeoLibrary received bond funds totaling $2.3 million in 2003 to start its work.

The **mission** of the GeoLibrary is to create an electronic gateway to public geographic information, and to expand and promote the value of geographic spatial data through widespread distribution and innovative use for the benefit of Maine's citizens.

The **vision** of the GeoLibrary is to provide state-of-the-art, comprehensive, and continuously expanding access to public geospatial information and services, and to facilitate the availability of geographic information collections and access for all citizens. This vision encompasses:

- the maintenance of an Internet-based GeoLibrary Portal ("The GeoPortal"). This portal enables discovery of and access to spatial data held by public and private sources. It utilizes nationally recognized standards and techniques that permit these data to be combined and aggregated for many uses,

- the stewardship of priority statewide spatial datasets and the associated technology essential for sharing geographic data ensuring that State data is available, up to date and accurate,

- the design and implementation of appropriate spatial data standards to allow all data to be used for multiple purposes,

- facilitating the modernization and consistent GIS development of local government land records to make them more accessible and usable by businesses and citizens of Maine,

- support for smart growth and growth management with datasets and techniques that enable state/county/municipal governments to effectively plan land use, location decisions, and site designs in a way that will minimize negative impacts on the social, economic and environmental health of Maine,

- multi-organizational data-sharing that results in significant savings in the cost of creating and maintaining geospatial data,

- promoting innovative uses of public geospatial information that fosters economic development, and,

- implementing education and outreach programs that advocates for the further development of Maine as a national center for GIS research, education, and industrial growth.

The Board has identified four areas of Strategic Focus to realize its mission and vision:

SF1. *Support a web-based distribution system to facilitate access to statewide data holdings.*

SF2. *Support the development and implementation of statewide data standards to ensure data quality and to enable common use.*

SF3. *Support the provision of funding and management for high priority data and database development to support community and regional planning, smart growth, and community preservation.*

SF4. *Provide for coordination, outreach, and education in support of better public use of geospatial data and to maintain and enhance Maine's position as a national center for GIS research, education and industrial growth.*

2. 2012 GOALS AND ACCOMPLISHMENTS

In 2012 the GeoLibrary undertook the following projects or initiatives in support of its strategic focus.

SF1. Support a web-based distribution system to facilitate access to statewide data holdings:

GeoPortal: The GeoLibrary continues to modify and upgrade its web-based GeoPortal for public access to statewide spatial data. A geoportal is a type of web portal used to find and access geographic information and associated services such as display, query, analysis and editing. The GeoPortal is now operational and can be accessed at http://geolibportal.usm.maine.edu/

- Over 400 metadata documents have been loaded into the GeoPortal. A portion of these accompany data loaded directly into the GeoPortal and some point to data stored elsewhere. Organizations wishing to make their data available to the GeoPortal can manually enter metadata using Web forms, or upload metadata files directly. During this process, over 250 municipalities were assisted in loading their metadata and/or data records into the GeoPortal.

- Anyone with an internet browser can use the portal to view geographic information. Unlike most viewers, the GeoPortal can convert geographic data uploaded from data providers into an image that can be displayed on its map viewer. This function enables local and county governments, academic institutions, industry, non-governmental organizations and anyone else who does not have a web server to provide their geographic data for viewing free of charge.

- For people not familiar with geographic data, there are pre-set categories of data searches or channels available. Specific data searches including advanced searches are available for the more experienced users. This function will enable users to type in a word such as "parcels" and find a description of all data and services registered with the portal dealing with cadastral data.

SF 2. Support the development and implementation of statewide data standards to ensure data quality and to enable common use.

In 2012 the GeoLibrary Board maintained four Strategic Plan implementation workgroups: Coordination & Communication, GeoParcels, Education & Training, and Geospatial Data. Some of the work done by these groups involved data standards:

Land Use Code Standard: The Geospatial Data Committee submitted standards for land use codes to the Board. The Board approved the standard and authorized a public comment period through April 30, 2012.

SF3. Support the provision of funding and management for high priority data and database development to encourage community and regional planning, smart growth, and economic development.

<u>Aerial Orthoimagery Program:</u> The Maine GeoLibrary, in cooperation with the Maine Office of GIS, has begun its 5-year orthoimagery program. In 2012 orthoimagery was collected in Cumberland and York Counties. This acquisition was funded by baseline grants from Maine DOT, Maine EMA, the Maine GeoLibrary, USGS, and Cumberland County. Twenty-two communities opted to buy up to 6" resolution imagery and seven towns purchased 3" resolution imagery. This collaboration and resulting bulk purchase resulted in equal or better quality products and saved all partners money. For example, the town of York saved $26,000 when compared to a 2005 acquisition that provided the same quality data. Final plans for 2013 have been completed and the following counties are involved: Androscoggin, Kennebec, Sagadahoc, Lincoln, and Knox Counties. Twenty-two communities in these counties have signed agreements for higher resolution orthoimagery in 2013. The plan is available for review on our website at http://www.maine.gov/geolib/orthophotography.htm

<u>Return on Investment Study for Orthoimagery:</u> The Maine GeoLibrary, in cooperation with the Maine Office of GIS, received a FGDC grant to conduct a return on investment (ROI) study of orthoimagery in Maine. The independent study was conducted by Applied Geographics, and showed ROI of 400-1200%.

<u>LiDAR Phase II:</u> Phase II has been proceeding at a smaller scale than previously expected due to a lack of the massive funding we saw with ARRA. At the end of 2011 a new project covering areas in 5 counties was being assembled for collection in 2012.
More information on this ongoing project is available on the MEGIS website at
http://www.maine.gov/megis/projects/lidar.shtml

<u>GeoParcels Phase II:</u> In coordination with MEGIS, the GeoLibrary Board has begun work on Phase II of the GeoParcels project. MEGIS was awarded funds from the American Reinvestment and Recovery Act- supported Broadband Initiative, and through a competitive bid process, secured a private contractor to collect and/or create digital parcel data that was previously unavailable. This Phase will collect digital parcel data for communities surrounding Bangor, Portland, and Presque Isle, Washington County, and various communities throughout central, southern, and western Maine. Also included in Phase II is the creation of a web based parcel viewer to allow for public access to the data collected as part of the project. The viewer is in the final stages of testing.   The goal is to have the parcel viewer online and available to the public at the beginning of 2013.

SF4. Provide for coordination, outreach, and education in support of better public use of geospatial data and to enhance Maine's position as a national center for GIS research, education and industrial growth.

<u>Orthoimagery promotional grant</u>: In 2012, the GeoLibrary Board performed over two dozen outreach and education functions to promote its programs, especially the orthoimagery program. The Board received a $60,000 federal grant to promote this program using forums, conventions, conferences, and creating printed material.

All articles and single sheet quick-read publications are available on the website at: http://www.maine.gov/geolib

3. FUTURE PRIORITIES AND INITIATIVES

The GeoLibrary's proposed projects reflect the priorities of all of its stakeholders. Reference the GeoLibrary 2009 Strategic Plan, which included an extensive stakeholder engagement process, for full details. Since the formation of the GeoLibrary in 2002, these major initiatives have been consistently identified as high priorities in surveys, forums and meetings. However with continuous cutbacks in state funding the GeoLibrary Board has not been able to keep pace with basic necessary requirements of the state and local GIS stakeholders.

Table 1. GeoLibrary Board Projected Project Funding Requirements

FISCAL YEAR				
Project	**FY14**	**FY15**	**FY16**	**FY17**
Statewide Digital Orthophotos	$456,149	$456,149	$456,149	$456,149
High Resolution Topography Data	$800,000	$800,000	$800,000	$800,000
Municipal Parcel Grant and Maintenance Program	$175,000	$175,000	$175,000	$175,000
Integrated Land Records Systems	$100,000	$100,000	$100,000	$100,000
Municipal & Regional Data Services	$262,500	$262,500	$262,500	$262,500
Total Required	$1,793,649	$1,793,649	$1,793,649	$1,793,649

Table 1 above represents basic needs to ensure efficient delivery of government and private sector services. The Board does not propose any one source of funding for these initiatives. Possible sources include bond issues, legislative appropriations, Federal grants, state agency funds and contributions from NGOs and non-profits. Other possible sources would be fees attached to services requiring current updated geospatial data. Potential candidates for fees would be; building and development permits, flood insurance policies, utility hook ups. Each project is described in detail below.

Statewide Digital Orthophotos
From 2003 to 2008, the GeoLibrary implemented a $3.2 million project, 50% of the cost of which was provided by the USGS, with $500,000 from NRCS, to produce high resolution digital orthoimagery for the state's organized townships. The resulting cost savings to business, industry, state and local governments and the public has been extraordinary. Some examples of the cost savings and ways that the imagery has been utilized are described in Appendix A.

In early 2010 the GeoLibrary Board's Orthoimagery Subcommittee produced a written recommendation, approved by the full Board in May of 2010, for the regular updating of statewide orthoimagery at a considerably reduced cost (estimated to be about 8 cents per acre). The proposal divides the state into groups of towns with the timing of updates being determined by the estimated rate of change and development. All organized towns would be covered by 2-foot resolution color orthoimagery and all unorganized towns by 3.3-foot color resolution orthoimagery, both being flown leaf-off. The proposal recommends buy-up options for groups of towns so they could acquire better quality orthoimagery by contributing money. The full text of the recommendation can be seen here:
http://www.maine.gov/geolib/workgrps/geo_data/memb_mission.htm

To make this project work, the Board proposed an even 1/3-1/3-1/3 split between local county, state, and federal levels of government, which amounts to about $150,000 per year each. GeoLibrary Board members have been working to get all necessary parties (county, state, federal) interested. To date, over $250,000 has been pledged in support of this project by cities, towns, and counties of Maine, the State has pledged $40,000 and the federal government $15,000. Due to inconsistent levels of interest by counties and diminishing federal funds for orthoimagery, the board recommends that the state budget funds for the entire base program to ensure that all areas of the state receive up-to-date orthoimagery.

The 2012 program goal was to acquire base level two foot resolution leaf off imagery for Cumberland and York counties. It succeeded in obtaining participation from both counties. A total of twenty nine partners signed up to participate. In addition to the two counties, twenty seven communities participated in buy ups to higher resolutions. High resolution imagery is very important for community programs such as storm water management, transportation planning and assessment

- Six communities Portland, Falmouth, Cape Elizabeth, Cumberland, South Portland and Westbrook bought up to 3" Level 2 resolution imagery;
- Nine communities Biddeford, Ogunquit, Old Orchard Beach, Saco, Scarborough, Gorham, Windham, Gray and Yarmouth bought up to 6" Level 1 resolution imagery and,
- Twelve communities Freeport, Brunswick, Harpswell, Arundel, Kennebunk, Kennebunkport, Wells, Sanford, South Berwick, York, Eliot and Kittery bought up to 6" Level 2 resolution imagery (The town of York experienced a savings of $26,000 over a previous acquisition in 2005 for the same quality data.)

Maine State Orthoimagery Collect - 2012

The Maine GeoLibrary contributed just $10,000 in funding to get the acquisition started. State agencies participating in the 2012 project included MDOT, MEMA and MPUC for a combined total of $100,000 in agency funding for base level orthoimagery. This effort succeeded in leveraging almost $528,000 in other funding. This included;

- $42,060 in county funding,
- $15,000 in Federal funding.
- $470,916 from cities and towns to increase the quality of imagery in their communities.
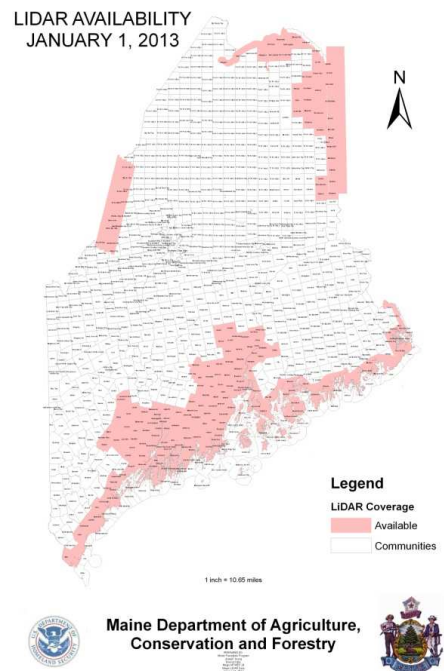
The 2013 program has begun and we have commitments and funding from the following counties to be involved: Androscoggin, Kennebec, Sagadahoc, Lincoln, and Knox. We have 22 communities committed to buying up to higher resolution imagery in 2013.

The Statewide plan is available for review on the Maine GeoLibrary website at http://www.maine.gov/geolib/orthophotography.htm.

High Resolution Topography Data

Until recently, the populated areas of Maine were covered by elevation data with a vertical accuracy of plus or minus 10 feet . The unorganized townships had elevation data with a vertical accuracy of plus or minus 30 feet. Recently, the collection of elevation data that is accurate to within 1 or 2 feet vertically has become economically feasible by using airborne LiDAR technology . In 2009, elevation data of plus or minus 2 vertical feet derived from LiDAR collection became available from the Federal Emergency Management Agency (FEMA) for selected river corridors in Cumberland, Oxford, and Franklin counties. FEMA and USGS also provided LiDAR and elevation products for all of

Androscoggin County. The Augusta/Manchester area was also collected, with funds from NGA, MDOT, Augusta Water District, and the municipalities of Manchester and Augusta. The Board also received and processed LiDAR data flown as part of a separate project by FEMA for coastal York, Cumberland, and Sagadahoc counties.

In late 2010 the entire Maine coast and some inland areas were flown with LiDAR at a cost of approximately $801,000, as part of a regional project operated by the Northeast states in cooperation with USGS, FEMA and other federal partners. This brought the percentage of Maine   LiDAR coverage to about 17%. Federal entities contributed approximately $700,000 and a consortium of Maine interests contributed the remainder. Federal interest in imagery is moving from orthoimagery to LiDAR so the GeoLibrary will be seeking an additional $800,000 per year over 4 years to match those previously anticipated federal funds in order to complete the rest of the state.

LIDAR AVAILABILITY
JANUARY 1, 2013

Legend
LiDAR Coverage
  Available
  Communities

1 inch = 10.65 miles

**Maine Department of Agriculture,
Conservation and Forestry**

The 2012 LiDAR acquisition focused on completing the LiDAR data set for Sagadahoc, Lincoln, Knox and Waldo Counties. In addition to completing these county data sets the Board was also able to acquire additional coverage in Kennebec and Aroostook counties. The Board formed a strategic partnership with six state and federal agencies to leverage its $10,000 commitment to a total project acquisition of $402,084. The funding leveraged participating partners included;

- $95,000 from FEMA
- $16,000 from MDOT
- $10,000 from the Maine Coastal Program
- $196,084 from the NRCS/USDA
- $60,000 from the USGS and
- $15,000 from the Maine Geological Survey

Maine GeoParcels System

In February of 2010 the GeoLibrary initiated the Integrated Land Records Information System pilot project for Hancock County. The budget for this project was $51,700. The GeoLibrary contributed $13,000, which combined with an additional $8,700 of in-kind match from state agencies, resulted in a Federal matching grant of $30,000. The intention of the pilot was to develop a complete digital tax map layer tied to assessing and title records and to make these data publicly available with an on-line application. Hancock County was selected because it is a small county, has urban areas, small towns and unorganized territories and the County Registrar of Deeds was amenable to providing online access to deed records.

The project had three phases: 1) Collate the cadastral data into a single unified database, using the standards for parcels already published; 2) Develop an updating process to provide annual updates which can support the NSDI framework. This phase included developing tools to convert local data to a state standard and training to assist non-GIS enabled towns with the process; 3) Develop a prototype web application to provide public access to cadastral data and related tax or deed records. The existing state Digital Parcel Standards were also updated by a GeoLibrary workgroup as part of the project. This project seeks to build on the parcel grants by implementing a means to update parcel data by providing a composite of parcel data across the state, and by linking to related data such as deeds and assessors' tables to give users a robust environment for acquiring and using land information in Maine. The viewing tool would provide a means for small towns without GIS to view and use their own parcel data. Thus far, much of the funding for GeoParcels has been in the way of grants from FGDC (Federal Geographic Data Committee). FGDC grants can provide assistance with development of geographic capabilities but cannot be used for operations or maintenance, therefore, The GeoLibrary Board is seeking approximately $100,000 per year over four years to fund the system and an expansion of this program to other counties.

In 2012 the Board made significant progress towards achieving the first step, receiving $150,000 from broadband mapping grants to complete an additional 114 towns with digital parcel and assessing data. When combined with other partnering efforts, this will result in 80% of the state having digital parcel data by the end of 2013.

Municipal and Regional Data Services

Data Access Improvement Program

One of the significant problems for smaller municipalities, small businesses and the general public has always been the lack of availability of state and local GIS data. *Not knowing where existing GIS data are or not being able to access data easily is costing taxpayers in the state of Maine on a daily basis.*

The GeoLibrary's GeoPortal program has progressed towards making state agency and municipal data widely available. In the case of local municipal data, the services of a USGS funded, part-time intern to directly assist town officials in loading data and metadata onto the GeoPortal has proved invaluable. A comparatively small level of available funding has yielded unexpectedly large results. The next phase of this program seeks to develop a network of GIS data nodes with more technologically advanced municipalities, non-governmental organizations, private industry, academia, and others by connecting them through common standards over the internet to the newly constructed GeoPortal.

The GeoLibrary is seeking only $10,000 per year over 5 years to continue helping municipalities and other organizations make their data available to everyone through the GeoPortal.

Municipal Services Applications Program

One of the themes heard in the Strategic Planning Forums and on-line survey was the difficulty in obtaining the software and expertise to effectively use GIS within local communities. This program would build off the GeoPortal project and would develop three to five easy-to-use (non-technical) GIS applications that would be made available to communities via a web browser.

These applications would be based on a study of overall community needs, but could include services such as: tax mapping, zoning, building permits, planning, and economic development. This program would enable these communities to use these applications without having to invest in data hosting, software, expert staff or contracting out for the individual development of these applications. In addition, using these applications would encourage the development of local data that meets acceptable standards. The GeoLibrary is seeking $50,000 per year over 4 years to help fund this operation.

Zoning Map Development Program

A comprehensive regional or statewide zoning data layer is a key component of economic development, development tracking, build-out analyses, smart growth planning, and modeling of zoning option*s.* Zoning data are used by realtors, developers, business development groups, conservation organizations, municipalities, and others. While limited regional composites of zoning data have been made, comprehensive zoning data do not exist on a statewide basis. The Board would fund a program of grants modeled on the Parcel Grants Program to upgrade and submit digital zoning to the GeoLibrary in order to begin creation of a statewide zoning data layer. The relevant data falls generally into two types:

- Shoreland zoning data from each community would be automated and compared to an established standard and once approved, it would become part of the GeoLibrary. Shoreland zoning is comparatively uniform because it is created by state statute and based on natural features. In recent years, the Maine Department of Inland Fisheries and Wildlife (MDIFW) has assisted in this process by digitizing shoreland zones based on digitized wetlands and bird habitats created from orthophotography.
- General Municipal Zoning would be automated with zoning areas represented as polygons that have attribute information describing the municipal zoning classification. Maine municipal zoning does not have a uniform set of zoning codes. Therefore, as with the digital parcel data, standards will need to be developed by the GeoLibrary Board to guide data development. A state standard would not involve removing local codes from the data but would include both municipal and standard zoning information. Again, data from each community would be automated and compared to an established standard and once approved, it would become part of the GeoLibrary.

Comprehensive Conservation Lands Maps Development Program

The state does not currently have a mechanism to track conservation lands that fall under state, federal, municipal or private ownership. Efforts are underway to address this situation, but without additional resources, tracking ownership of conservation lands is impossible. This program will use funds to update the current conserved lands data and will develop a mechanism to increase and update these data annually. Efforts will include: coordination with a steering committee, discovery and review of documents held by state and local entities, input of attributes into a database (i.e., owner name, ownership type, contact information, etc.), geo-location of sites as necessary, development of FGDC-compliant metadata, and a mechanism to update the database.

The stakeholders interested in the status and quality of conserved lands in Maine is large and varied, including:
- legislators, municipal officials, planners, policy makers, the public, and members of non-profit conservation groups who need to assess current programs in order to invest resources effectively;
- permit reviewers for conserved lands who, under Maine statutes and rules, need to know the location and attributes including size, location, type of easements or restrictions, habitat types and view-sheds to analyze the potential effects of new development;
- forest industry, since many companies own or manage land under conservation easements, including maintaining their own mapping of such lands;
- the University system, which often conducts research on conservation easements, holders, managers, and also has worked on mapping these lands;
- conservation organizations working under new policy directives such as the Maine Coast Protection Initiative (MCPI) and the Coastal and Estuarine Land Conservation Plan who are challenged to choose projects that address multiple objectives such as public access, conservation of working lands and protection of high priority habitat types. Each of the seventy MCPI partners has committed to a new framework for strategic land

conservation, so a variety of public and private conservation organizations would benefit strongly from better evaluative tools; and

● the increasingly more sophisticated eco-tourist who desires additional information about conserved lands beyond simple location information. With more visitors using the internet, a web-based coastal access guide would complement Maine's efforts to claim additional market share of nature-based travelers.

4. FINANCIAL EXPENDITURES THROUGH 2012

The GeoLibrary Board is composed of volunteers. Its staffing is funded by an arrangement with OIT. The Board was given authority to administer $2,300,000 in state bond funds for GIS capital investments in November 2002. The Board entered a series of cooperative agreements with federal agencies to garner the required $1.6 million federal match for the approved bond funds for a total of $3.2 million. Later projects including LiDAR and landcover mapping further leveraged funds extensively yielding over $2.7 million in matching federal and local funds. The table below totals bond expenditures to date.

Table 2.GeoLibrary Board Bond Expenditures.

2002 Bond Total	$2,300,000.00
Amount expended through 12/31/11	$2,270,733.57
Amount approved or encumbered by contract through 12/31/11	$29,266.43
Total expended or encumbered through 12/31/11	$2,300,00.00
Bond funds remaining	**$0.00**
Estimated amount of matching dollars attracted by GeoLibrary projects	*≥$4,323,000*

5. ORGANIZATION

Legislative Background
In 2001, the Legislature instructed the State Planning Office to convene what came to be called the Resolve 23 Steering Committee to study the use of GIS in statewide strategic planning. The Committee developed a needs assessment- the conclusion of which recommended the creation of the GeoLibrary, its method of governance, and strategic focus. The Legislature and Governor concurred, and the Maine Library of Geographic Information Act 5 M.R.S.A. Section 2001 *et seq* became effective April 2002.

Governance
The GeoLibrary is governed by a board of directors, and its members are appointed by the Governor, the President of the Senate, the Speaker of the House, the Chancellor of the University of Maine System, the Commissioner of Dept. Administrative & Financial Services and the Chief Information Officer. The Board is independent, term-limited (with the possibility of reappointment), and drawn from the public and private sectors. Therefore, it is uniquely positioned to represent all stakeholders fairly and in a way most likely to foster efficient cooperation and mission success. The membership as of 12/31/2012 was:

Table 3. Membership.

Sector	Name	Title	Affiliation
Commissioner of Administrative and Financial Services	Dan Walters	USGS Liaison for Maine	US Geological Survey
Environmental Interests	Dan Coker	GIS Manager	The Nature Conservancy in Maine
GIS Vendors	Jon Giles, PLS	GIS Manager / Surveyor	Sebago Technics
GIS Vendors	Brian Norris, PLS	Vice President	James W. Sewall, Co.
Municipalities	Aimee Dubois Mountain	GIS Analyst	GZA
Municipalities	Vacant		
Public	Steven Weed	Assessor	City of Brewer
Real Estate and Development Interests	William Hanson, Esq. (Co-Chair)	Attorney	Rudman & Winchell, LLC
State GIS Interests	Christopher Kroot	GIS Manager	Office of Information Technology
State GIS Functions	Joseph Young	Mapping Coordinator	Maine State Planning Office
State Government/Chief Information Officer	Michael Smith	State GIS Manager	Office of Information Technology
Statewide Association of Counties	vacant		
Statewide Association of Regional Councils	Ken Murchison	GIS Specialist	Northern Maine Development Corporation
U Maine System	Vinton Valentine,Ph.D	Director of USM GIS	Univ. Southern Maine
Utility Interests	Greg Davis	Project Manager	Time Warner Cable

The GeoLibrary Board meets monthly. Agendas and meeting notes can be found on the GeoLibrary website: http://www.maine.gov/geolib/. The Board has three standing subcommittees:

1) Finance Committee, with responsibility for:
   o budget oversight;
   o recommending budget or other financial actions to the Board for approval;
   o primary interaction with outside entities on financial issues.

2) Policy Committee, with responsibility for:
   o policy oversight;
   o recommending policy adoptions and amendments to the Board;
   o memorializing approved GeoLibrary policies;
   o primary interaction with external entities on policy issues.

3) Technical Committee, with responsibility for:
   o advising the Board on all technical matters;
   o oversight of all Board projects;
   o primary interaction with outside entities on technical issues.

As mentioned earlier, in 2011 the GeoLibrary Board also maintained four Strategic Plan implementation workgroups: Coordination & Communication, GeoParcels, Education & Training, and Geospatial Data.

Library Structure
The GeoLibrary is staffed by agreement with the Office of Information Technology (OIT). OIT/MEGIS manages and operates the GeoLibrary website, GIS database, and data access facilities. The GeoLibrary's GeoPortal is the central node in a distributed system linking its stakeholders via the web as well as providing the central point of connection between state agencies and the public and other public entities.

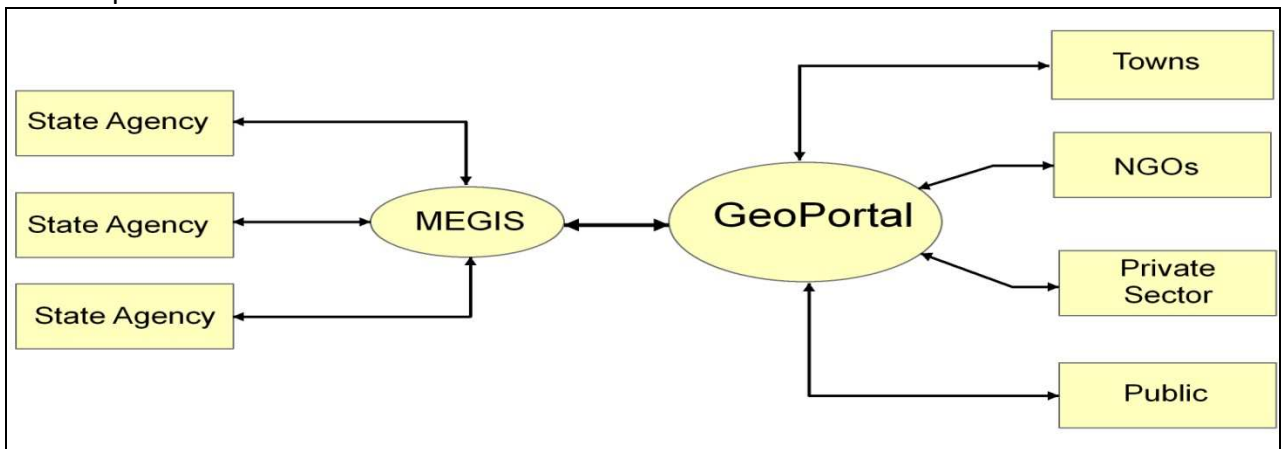As a simplified schematic it looks like this:

Figure 1. GeoLibrary Structure.

6. APPENDIX A

Cost Savings from the Use of Orthoimagery

Available at: http://www.maine.gov/geolib/orthosurveyresults.htm

At the request of the GeoLibrary Board state agencies have tried to quantify their cost savings from the use of aerial orthoimagery. A small information technology section estimated savings of approximately $17,000 per year using orthoimagery to map roads. One department dealing with natural resources estimated savings of $27,000 per year. Another natural resource oriented department estimated savings as high as $2,500 *per week* on a regular basis by using orthoimagery particularly to avoid field trips.

Avoiding expensive travel was a recurring theme. One agency gave a specific example "…one overnight trip from Augusta to Houlton by an employee at $15 per hour costs the state a minimum of $560. In most cases, a trip like this would have to be extended for at least a week in order to approach the amount of information contained in one recent, high resolution aerial image."

Here is a selection of responses to the GeoLibrary'sOrthoimagery Use Survey:

- A municipal mapping company: "We estimate that for a town of approximately 2,000 parcels, the savings in a tax mapping project is $20,000 or more by using the orthoimagery."

- An academic institution: "…using the orthoimagery for mapping wetlands saved over three weeks of intensive manual labor by two individuals, …240 hours or $12,000."

- An engineering firm reported saving $2,000 by using orthoimagery instead of an on-site visit.

- An agricultural management business: "I regularly download ortho imagery to use as a base map while constructed field maps for….potato growers. The maps (I) make allow me to soil sample and field scout more effectively and also increase the reproducibility of sampling from year to year versus the old hand drawn maps."

- A surveying firm: "Time (is) saved by being able to assess logging roads from photography to determine the most efficient access to an area. The aerial photography is a huge asset for us."

- The U.S. Naval Facilities Engineering Command: "I have used the orthoimagery to create presentation and base plans for use in civil engineering, land development and

environmental planning. It's indispensable for conceptual design, comes in handy during design development and even permitting documents."

- A land management company: "We have our own photos of the land we manage, but using the aerial photography….is very helpful to see abutting ownerships roads, etc. The aerial photography also ….can be useful in delineating harvest boundaries from previous harvests."

- A surveying company: "By using your information we reduce travel time to each site as well as time spent in the field."

- Site design consultants: "We use orthophotos available on the site all the time for pre-project planning and for overview of site area and general viewing."

- A large grocery chain: "(We) use the imagery to verify household counts in certain zip codes and pull imagery into a GIS so they can be shown with our town boundary files."