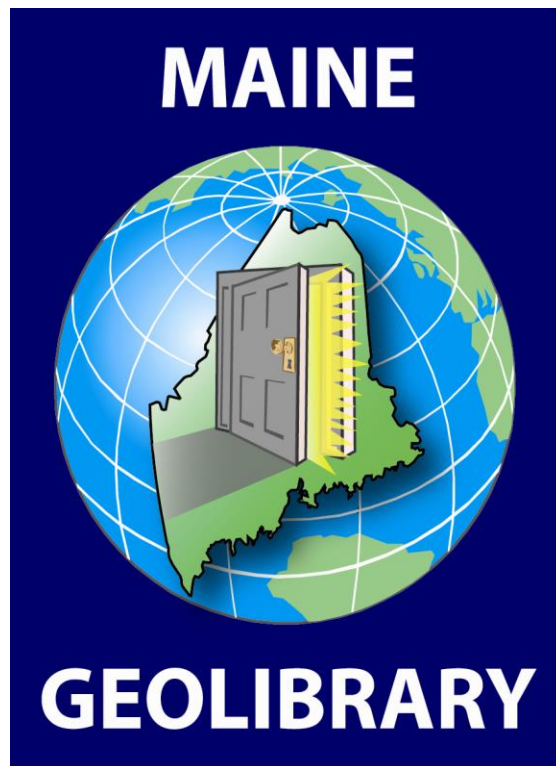


**Maine Library of Geographic Information
2014 Annual Report
To the
Environment and Natural Resources
and
State and Local Government
Joint Standing Committees
of the
127th Legislature**



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This Maine Library of Geographic Information Annual Report for calendar year 2014 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

1. PURPOSE

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. The Maine Library of Geographic Information (“the GeoLibrary”) was established as a partnership of public and private stakeholders with the following guidance of purpose and duties, to;

- operate a coordinated, cost-effective electronic gateway providing access to data custodians’ public geographic information;
- establish and maintain standards, rules and policies for non-state data custodians' geographic information;
- reduce redundancies in the creation, verification and maintenance of public geographic information and to enhance its utility for complex analyses;
- set priorities and authorize the expenditure of state funds;
- promote innovative uses of geographic information;
- enter partnerships to promote the purposes of the legislation;
- hear and resolve disputes that may arise between data custodians or with respect to information to be placed in the Maine Library of Geographic Information, enforcement of geographic information board standards, rules or policies or other related matters;
- conduct studies relating to the coordination, development and use of statewide geographic information;
- report annually by January 1st to the joint standing committees of the Legislature having jurisdiction over natural resources matters, and state and local government matters, and;
- develop appropriate internal services to facilitate generalized access for and use of data by governmental agencies and the public.

2. EXECUTIVE SUMMARY

The Board continued its efforts to coordinate agency data acquisitions in 2014. In November of 2013, the Maine Office of GIS (MeGIS) committed one full time position to the support of the Board. With this support, it will work to improve implementation of its three active projects, a five-year effort to acquire orthoimagery statewide, a continuing effort to improve elevation data from the current 10-meter digital elevation models to 1-meter models and an ongoing effort to assist communities in developing digital tax maps. Unfortunately, these efforts have been severely impacted because the

Board has not been funded since 2003 and with the increased staff support, the Board will be seeking additional funding to fulfill its legislatively mandated duties. The board was successful in adopting new statewide land-use codes. Over time as communities adopt these codes the state will be able to track development on a macro level and communities can add to the basic structure of the codes to provide additional details for their own purposes.

The Board had some success in its orthoimagery project completing acquisition of 3,808 square miles of new imagery in Hancock and Penobscot counties and included participation of 16 communities purchasing higher resolution 12", 6" or 3" pixel imagery. Experience has shown towns are saving at least \$20,000 each by participating in the program. Using this estimate of savings this year communities have saved at least \$320,000. The elevation project saw development of a proposal to the USGS for funding acquisition of 2,880 square miles of new data. The parcel data layer received contributions of data from 28 new communities and updates from 22 more.

Unfortunately, without support through state funding the state's geospatial data infrastructure is deteriorating at an alarming rate. MeGIS is responsible for maintaining ten core GIS data sets without any secure sources of funding for maintenance. The three projects described in this report are all funded through voluntary contributions from other agencies, partnerships and grants.

3. 2014 ACTIVITIES

The Board continues to support and play a coordinating role in the GIS community. Despite lack of funding, it has initiated refreshments of three key data sets of statewide importance. Through volunteer efforts of Board members and support from the Maine Office of GIS, the Board was able to add considerably to the publicly available, high-resolution topography, orthoimagery and parcel data sets. It also approved a new statewide standard for Land Use codes engaged in its first retreat, continued to develop partnerships for data collection and training through and expanded level of coordination and communication.

A. STANDARDS DEVELOPED

I. Land Use Codes

Understanding the patterns of development and changes over time is an important part of planning for policy makers at all levels of government. With this in mind, the GeoLibrary's Geospatial Data workgroup worked with a wide range of stakeholders to develop a unifying set of land use codes to guide local planners in development of detailed land use coding. As these codes become integrated into communities across Maine on a voluntary basis, policy makers will be able to track development and changes in land use.

A complete listing of Board policies and data standards can be found on the [GeoLibrary web site](#).

B. DATA DEVELOPMENT

I. ORTHOIMAGERY

The Maine GeoLibrary, with support from its board members and the Maine Office of GIS initiated a plan to acquire orthoimagery statewide over a five-year period. In 2014, imagery was acquired for Hancock County and the southern third of Penobscot County. This added to the acquisitions completed in 2012 and 2013, when orthoimagery was collected in Cumberland and York, Androscoggin, Kennebec, Sagadahoc, Lincoln, and Knox Counties. This collaboration and resulting bulk purchase resulted in equal or better quality imagery products from previous acquisitions, has saved each participating community thousands of dollars.

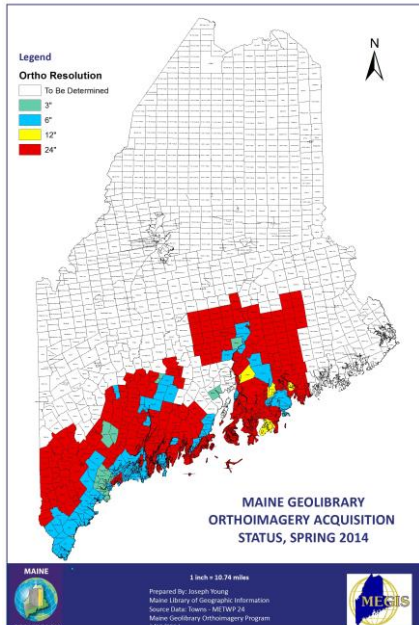


Figure 1 Orthoimagery Status 2014

With the completion of the 2014 program, total savings for all communities is estimated at \$1.3 million dollars. In addition to the community savings, the Board has assisted state agencies in leveraging \$870,000 in other funding with their commitment of just \$280,000 commitments to acquire over one million dollars of partnership funds. In

addition to the dollar savings, this program has opened the door for smaller towns to buy badly needed imagery which was unaffordable previously.

In the first three years of the program, 66 communities have taken advantage of the opportunity to buy high-resolution imagery. In addition to the benefit of community buy-ups, new imagery has been acquired for nearly one third of the state and covering over half of the organized communities.

II. HIGH RESOLUTION TOPOGRAPHIC DATA

During 2014, the Board developed a partnership proposal to acquire new data in the central Maine area. This continuing effort to acquire 1 meter DEM's received a support from the Natural Resource Conservation Service

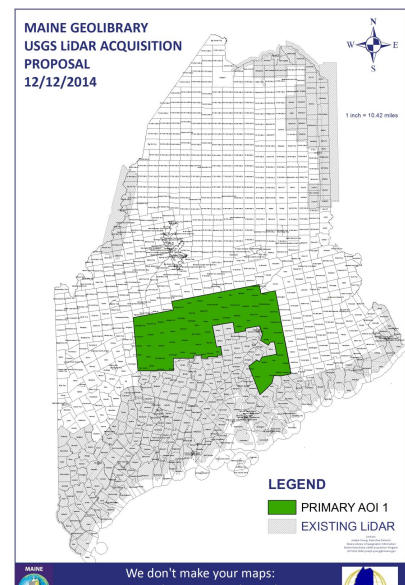


Figure 2 LiDAR 2014 Area of Interest For USGS Partnership Funds

(NRCS) They signed an agreement with MeGIS to provide \$200,000 in support of a LiDAR acquisition in central Maine. With this funding in place three state agencies, Maine Geological Survey, Maine Emergency Management Agency and Maine Department of Transportation committed an additional \$160,000. These funds would leverage a total project of \$720,000 adding 2,880 sq. mi. of high-resolution elevation data. This was done in partnership with the Massachusetts Office of GIS. If the proposal is fully funded, almost 6,000 square miles of data in the two states with a total project would be \$1,693,750.

III. STATEWIDE GEOPARCELS DATA

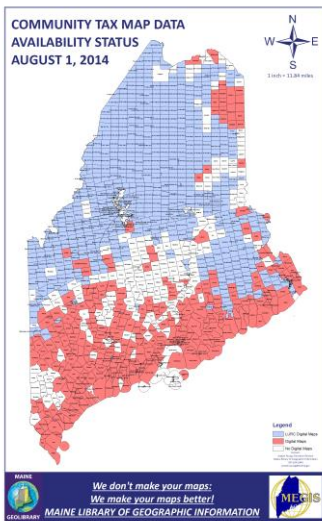


Figure 3 Status of Statewide Parcel Data Layer

Development of a statewide GeoParcels data layer has proceeded slowly. Management of landownership in Maine is almost unique in its structure. In much of the rest of the country land records are managed at the county level where the deed registry and tax mapping are part of one system for tracking ownership and title to land parcels. In Maine, we have a bifurcation of this process where towns manage development and maintain tax mapping (although some towns in Maine do not keep tax maps) and the county keeps the official record of deeds.

This system complicates the process for developing a uniform process for developing a statewide parcel map data layer. Despite these obstacles the GeoLibrary has through initial funding from the Bond in 2003 and subsequent grants has been able to assemble an initial data set. With the delivery of data from 22 additional communities, the current data layer includes nearly 80% of the state.

C. BOARD RETREAT

The Board held its first one-day retreat in May of 2014. It provided members with an opportunity to explore several issues in depth. The results of these discussions are providing a framework for Board committees and workgroups to guide their work. The discussions resulted in a short (weeks) and long term (months to a year) to do list of issues or projects needing to be addressed. Summaries of those items are outlined below.

I. Electronic Gateway

The first purpose specified in the GeoLibrary's enabling legislation was to create an electronic gateway for distributing GIS data to the public. The Board has pursued several attempts to create a Geoportal to meet the needs of the GIS community. So far, these efforts have been unsuccessful. Changes in technology and the costs of operating an electronic gateway have placed

significant obstacles in the way. Due to lack of funding, the Board discontinued its latest attempt. This action did not mean that the board has given up on a portal. It will continue to investigate potential methods of meeting this responsibility, develop a cost estimate for implementation, and submit its findings to the legislature for funding.

II. Parcel Mapping

While parcel mapping is the responsibility of municipalities, many GIS stakeholders share a need to use this data layer on a regular basis. Surveyors, Realtors, Developers as well as state agencies use this information a regular basis. Deed, book and page numbers, addresses and other information that can be accessed at any time through web-based services can prevent a lot of wasted time. This type of access allows small businesses and agencies to do prior research even when town offices are closed to make the most efficient use of their time and avoids expensive trips to town offices when sufficient information is already available. The Board directed its Geospatial work group to develop technical options for improving the current parcel map viewers.

Just prior to the end of 2014, 28 communities submitted parcel mapping data and 22 more provided updates to existing data already in our data set. This brings the number of communities in the dataset to nearly 80%.

III. 1 to 4800 Mapping

The state's current base mapping was initiated over 30 years ago based on USGS topographic mapping at 1 to 24000 scale. Since then the use of mapping has become more ubiquitous for all of our core constituencies. The New NG911 system recently adopted by the Emergency Services Communications Bureau is just one example where particularly in urban areas a much more precise level of mapping is needed. Communities are required to provide shoreland-zoning maps at 1 to 1000 scales yet the state does not have any hydrography data of sufficient accuracy to meet these needs. Other data layers including roads, land cover and boundary data are also in need of being updated. The Board directed its Geospatial work group to develop technical options and cost estimates for developing 1 to 4800 base mapping.

IV. Legislative Needs

In the last legislative session the an amendment to Title 5, Chapter 163 adding SS 2006 establishing a Geospatial Data Accounts for the purpose of acquiring geospatial data. The language requires all money for data

acquisition be placed in this account and all funding in the accounts must have a 1 to 1 match ratio. This creates a situation where the match can never be achieved. Language to correct this circular reference is included in Appendix D.

The Board and MeGIS cannot adequately fulfill legislative mandates to reduce the costs of geospatial data acquisition and maintain the quality of the states mapping infrastructure without funding. The GIS community, encompassing federal, state, local, non-profit and business sectors, relies on core mapping data layers foundational to all map development. These core data sets include orthoimagery, elevation, hydrography, governmental unit boundaries, cadastral, structures, land cover /impervious surfaces, and geographic names. Features on the land are continually changing, consequently these data sets must be constantly updated and improved to maintain the quality of GIS stakeholders mapping. The Board has identified the most critical areas where funding is needed immediately and addressed funding levels required in Section 4 of this report.

4. PARTNERSHIPS DEVELOPED

The Board has been very successful in developing functional partnerships with many of the GIS stakeholders. In the 2010 application to the USGS for LiDAR data acquisition, it was instrumental in initiating a coalition of 6 northeast coastal states. This resulted in multiple state and federal agencies, non-profit organizations and municipal participation. In 2014, the Board continued to build on these relationships through its LiDAR, orthoimagery and parcel mapping acquisition efforts and described in previous sections.

The Board has established a close working relationship with the Cooperative Forestry Research Unit whose membership includes 30 of the largest landowners of Maine. Irving Woodlands owner of over 2,000 square miles of forest has offered to provide funding of \$100/square mile for LiDAR data acquisition covering its lands. Unfortunately, the offer came too late to be included in this year's USGS application for funding it is continuing working with the group. A meeting is scheduled for January 22nd to meet with the landowners again. Several members in addition to Irving woodland have indicated they would be interested in a similar partnership. The Board hopes to develop a full plan for LiDAR acquisition that would benefit the forest industry.

State funding will be required to create a competitive application for USGS participation. The Board estimates the cost of acquisition and processing for approximately 20,000 square miles would be about 4 million dollars. Minimum state funding needed would be about 1.3 million dollars

The Board has participated in many partnerships with the United States Geological Survey (USGS). This year for the first time, this partnership has been formalized with a Memorandum of Understanding (MOU). Although the Board has always enjoyed a good relationship with the USGS liaison, it has never had a formal relationship with the agency. This MOU provides a structure for the Board and USGS to communicate.

5. FINANCIAL EXPENDITURES 2014

The 2014 GeoLibrary projects were all dependent upon funding from outside sources (state agencies or grants). The legislature has not provided funding to the GeoLibrary or MeGIS for data acquisition and maintenance since a bond was issued in 2003. Because of this, the state’s needs for maintaining current data sets outlined in Section 3d are not being met.

The Department of Transportation, Maine PUC - Emergency Services Communications Bureau, Maine Drinking Water Program, Maine Geological Survey and Maine Emergency Management Agency provided funding for this year’s LiDAR and Orthoimagery projects. The University of Southern Maine’s, Muskie School of Public Service provided funding for 22 towns to develop new digital tax maps were added to the statewide data layer.

Table 1 GeoLibrary Project Expenses 2014

GEOLIBRARY PROJECT EXPENSES						
Project	Total Expended	GeoLibrary*	Federal Agencies	State Agencies	Counties	Municipalities ***
Ortho Imagery	\$ 332,337.00	\$25,337.00	\$ 0.00	\$ 100,000.00	\$ 76,000.00	\$ 131,000.00
LiDAR	\$ 562,572.00	\$ 0.00	\$ 460,572.00	\$ 55,000.00	\$ 0.00	\$ 0.00
Parcel Mapping**	\$0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00
Total	\$846,909.00	\$25,337.00	\$ 460,572.00	\$ 155,000.00	\$ 76,000.00	\$ 131,000.00

* The GeoLibrary funds applied here are from unexpended funds in the floodplain mapping account used to hold community and county funds for data acquisition. So far contracting costs have been slightly less than funds collected for data acquisition.

** All funding for parcel mapping development were provided by the University of Maine, Muskie School of Public Policy

*** There is a value to the contributions of municipalities to parcel data layer updates , that cannot be quantified. However, this data is used by many professionals in public and private offices.

A. DATA ACQUISITION, DISTRIBUTION AND MAINTENANCE

I. Data Acquisition

MeGIS is charged by legislature to maintain core geospatial data sets used by all state agencies and not specifically assigned to any agency. These data sets are also used by federal agencies, county and local governments, private industry, universities and non-profit entities. The GeoLibrary is responsible for minimizing and elimination of redundant data development and allocating state resources for data acquisition and maintenance. Table 2 shows the data sets and funding allocations for FY 15 through FY 17.

Table 2 Funding budgeted for data acquisition

FUNDING FOR DATA ACQUISITION			
Data layer	Funding Allocations		
	FY 15	FY 16	FY 17
Orthoimagery	\$0.00	\$0.00	\$0.00
Elevation/Bathymetry	\$0.00	\$0.00	\$0.00
Hydrography	\$0.00	\$0.00	\$0.00
Government Boundaries	\$0.00	\$0.00	\$0.00
Land Cover / Impervious Surfaces	\$0.00	\$0.00	\$0.00
Structures	\$0.00	\$0.00	\$0.00
Cadastral/Parcel	\$0.00	\$0.00	\$0.00
Structures	\$0.00	\$0.00	\$0.00
Address	\$0.00	\$0.00	\$0.00
Geographic Names	\$0.00	\$0.00	\$0.00

Funding has not been allocated for this work since the 2003 bond issue. Without adequate funding for data acquisition, Maine’s economic development and business community is at a competitive disadvantage relative to other states. A full orthoimagery dataset with 24” resolution for the state costs an estimated \$1.8 million dollars, A full elevation data set would cost an estimated \$8.2 million and this does not include bathymetric data for Maine’s submerged lands. The Board has yet to develop cost estimates for updating other important data sets. However, collectively the total need for data acquisition to replace outdated inaccurate data is easily in the tens of millions of dollars.

II. Data Distribution

As noted earlier in section 3c i, the Board is mandated to provide an electronic gateway to provide access to geospatial data. The MeGIS data catalog provides this function adequately for state GIS data, but other data developed by municipalities, non-profit institutions and other sources cannot be distributed through this portal. To accomplish this service the Board needs a secure source of funding.

III. Data Maintenance

MeGIS provides a small amount of funding for updating the USGS National Hydrography Data set. This provides matching funds for a small USGS grant to maintain the NHD layer. However, this does very little to bring NHD data up to local quality data standards. The legislature has mandated communities to achieve shoreland zoning mapping standards of 1 to 1000 scale mapping yet the best quality NHD data we have is mapped at 1 to 24,000 scale and has an accuracy level of +/- 40'. The NG911 system has targeted a mapping scale of 1 to 5000 which has an accuracy standard of thirteen point three feet. To comply with these mandates and targets a complete update of orthoimagery, elevation and hydrography data layers must be accomplished for communities to meet their legislative mandates.

APPENDIX A

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 corrected to represent the earth's surface, having been adjusted for topographic relief, lens distortion, and camera tilt so that it can be used as an accurate base map
Resolve 23	Legislative committee that drafted the plan that resulted in the GeoLibrary
USDA	United States Department of Agriculture
USGS	United States Geological Survey

APPENDIX B

Maine Revised Statutes
Title 5: ADMINISTRATIVE PROCEDURES AND SERVICES
Chapter 163: OFFICE OF INFORMATION TECHNOLOGY

§2001. SHORT TITLE

This subchapter may be known and cited as "the Maine Library of Geographic Information Act."
[2005, c. 12, Pt. SS, §16 (NEW).]

SECTION HISTORY

2005, c. 12, §SS16 (NEW).

§2002. DEFINITIONS

As used in this subchapter, unless the context otherwise indicates, the following terms have the following meanings. [2005, c. 12, Pt. SS, §16 (NEW).]

1. Association. "Association" means an organization:

- A. Whose membership is identifiable by regular payment of organizational dues and regularly maintained membership lists; [2005, c. 12, Pt. SS, §16 (NEW).]
 - B. That is registered with the State or is a corporation in the State; and [2005, c. 12, Pt. SS, §16 (NEW).]
 - C. That exists for the purpose of advancing the common occupation or profession of its membership. [2005, c. 12, Pt. SS, §16 (NEW).]
- [2005, c. 12, Pt. SS, §16 (NEW) .]

2. Data custodian. "Data custodian" means a federal data custodian, state data custodian or nonstate data custodian.
[2005, c. 12, Pt. SS, §16 (NEW) .]

3. Federal data custodian. "Federal data custodian" means any branch, agency or instrumentality of the Federal Government.
[2005, c. 12, Pt. SS, §16 (NEW) .]

4. Geographic information board. "Geographic information board" means the Maine Library of Geographic Information Board.
[2005, c. 12, Pt. SS, §16 (NEW) .]

5. Geographic information system. "Geographic information system" or "GIS" means a computer system capable of assembling, storing, manipulating, analyzing and displaying information identified according to locations. A GIS includes operating personnel, hardware,

software and the data that go into the system.

[2005, c. 12, Pt. SS, §16 (NEW) .]

6. Maine Library of Geographic Information. "Maine Library of Geographic Information" or "library" means the statewide network created pursuant to this subchapter by which data custodians or their designees organize and catalog public geographic information and provide access to that information to all levels of government and to the public.

[2005, c. 12, Pt. SS, §16 (NEW) .]

7. Nonstate data custodian. "Nonstate data custodian" means any agency or instrumentality of a political subdivision of the State.

[2005, c. 12, Pt. SS, §16 (NEW) .]

8. Public geographic information. "Public geographic information" means public information that is referenced to a physical location. Public geographic information includes, but is not limited to, physical, legal, economic or environmental information or characteristics concerning land, water, groundwater, subsurface resources or air in this State relating to:

A. Topography, soil, soil erosion, geology, minerals, vegetation, land cover, wildlife and associated natural resources; [2005, c. 12, Pt. SS, §16 (NEW).]

B. Land ownership, land use, land use controls and restrictions, jurisdictional boundaries, tax assessments, land value and land survey records and references; and [2005, c. 12, Pt. SS, §16 (NEW).]

C. Geodetic control networks, aerial photographs, maps, planimetric data, remote sensing data, historic and prehistoric sites and economic projections. [2005, c. 12, Pt. SS, §16 (NEW).]

[2005, c. 12, Pt. SS, §16 (NEW) .]

9. Public information. "Public information" means information that is stored, gathered, generated, maintained or financed by a data custodian. Information of state and nonstate data custodians is public information only if it is either:

A. A public record under Title 1, section 402, subsection 3; or [2005, c. 12, Pt. SS, §16 (NEW).]

B. Otherwise expressly authorized by law to be released. [2005, c. 12, Pt. SS, §16 (NEW).]

The presence of data in the library does not, by itself, make that information a public record.

[2005, c. 12, Pt. SS, §16 (NEW) .]

10. State data custodian. "State data custodian" means any branch, agency or instrumentality of State Government.

[2005, c. 12, Pt. SS, §16 (NEW) .]

11. State funds. "State funds" means bond revenues and money appropriated or allocated by the Legislature.

[2005, c. 12, Pt. SS, §16 (NEW) .]

SECTION HISTORY

2005, c. 12, §SS16 (NEW).

§2003. MAINE LIBRARY OF GEOGRAPHIC INFORMATION BOARD

1. Purposes and duties. The Maine Library of Geographic Information Board, as established by section 12004-G, subsection 30-B, has the following purposes and duties:

A. To oversee the Maine Library of Geographic Information to ensure that it operates as a coordinated, cost-effective electronic gateway providing public access to data custodians' public geographic information. Nothing in this paragraph may be construed to affect the rights of persons to inspect or copy public records under Title 1, chapter 13, subchapter 1, or the duty of data custodians to provide for public inspection and copying of those records; [2005, c. 12, Pt. SS, §16 (NEW).]

B. To establish and maintain standards, rules and policies for nonstate data custodians' geographic information that is incorporated into the Maine Library of Geographic Information. These standards, rules and policies must be consistent with the standards, rules and policies set by the Chief Information Officer that govern state data custodians' information technology. The geographic information board shall adopt rules to carry out this subchapter. Rules adopted pursuant to this paragraph are routine technical rules as defined in chapter 375, subchapter 2-A. Standards and policies may concern, without limitation

- (1) Methods of access and delivery of information held by the library;
 - (2) Geographic information system technical specifications;
 - (3) Data content, metadata and security, including guideline criteria for accepting 3rd-party data from data custodians or data volunteered by the private sector;
 - (4) Privacy and privacy protection;
 - (5) Mechanisms to correct inaccuracies; and
 - (6) Data validation tools and processes; [2005, c. 12, Pt. SS, §16 (NEW).]
- C. To reduce redundancies in the creation, verification and maintenance of public geographic information and to enhance its utility for complex analyses.
- (1) Each state data custodian, or its designee, that acquires, purchases, verifies, maintains or produces geographic information with state funds or grants shall:
 - (a) Inform the geographic information board and the Office of Geographic Information Systems of the existence of this information and its geographic extent; and

(b) Upon request, provide to the library and office an electronic copy of all information classified as public, in a form compatible with standards set by the Chief Information Officer.

(2) Each nonstate data custodian, or its designee, that acquires, purchases, verifies, maintains or produces geographic information with state funds specifically provided for that purpose shall:

(a) Inform the geographic information board and the Office of Geographic Information Systems of the existence of this information and its geographic extent; and

(b) Upon request, provide to the library and Office of Geographic Information Systems an electronic copy of all information classified as public, in a form compatible with standards set by the Chief Information Officer; [2005, c. 12, Pt. SS, §16 (NEW).]

D. To set priorities and authorize the expenditure of state funds, including awarding of grants or subgrants to data custodians when available. The geographic information board may seek federal and other funding partners, accept gifts and grants and expend the funds acquired for purposes consistent with this subchapter; [2005, c. 12, Pt. SS, §16 (NEW).]

E. To promote innovative uses of geographic information through the provision of verified, coordinated, intergovernmental information via the Maine Library of Geographic Information. The geographic information board shall seek advice from the general public, professional associations, academic groups and institutions and individuals with knowledge of and interest in geographic information regarding needed information and potential innovative uses of geographic information; [2005, c. 12, Pt. SS, §16 (NEW).]

F. To enter partnerships to promote the purposes of this subchapter; [2005, c. 12, Pt. SS, §16 (NEW).]

G. To hear and resolve disputes that may arise between data custodians or with respect to information to be placed in the Maine Library of Geographic Information, enforcement of geographic information board standards, rules or policies or other related matters, all in accordance with the Maine Administrative Procedure Act. Complainants may directly present their case to the geographic information board, which has the power to hold investigations, inquiries and hearings concerning matters brought to its attention and to make decisions with respect to the case. All interested parties must be given reasonable notice of the hearing and an opportunity to be heard. Hearings must be open to the public; [2005, c. 12, Pt. SS, §16 (NEW).]

H. To conduct studies relating to the coordination, development and use of statewide geographic information; [2005, c. 12, Pt. SS, §16 (NEW).]

I. To report annually by January 1st to the joint standing committees of the Legislature having jurisdiction over natural resources matters, and state and local government matters. The report must provide a review of the past year's activities, including, but not limited to, a description of standards adopted, data added to the library, partnerships established, disputes addressed, studies conducted and financial activity. The library shall also make this report available to the public. This report may also include suggested legislative language intended to address geographic information issues needing legislative action; and [2005, c. 12, Pt. SS, §16 (NEW).]

J. To develop appropriate internal services to facilitate generalized access for and use of data by governmental agencies and the public. The library may not compete directly with private enterprise. The library shall work in partnership with nonstate data custodians to promote the purposes of this subchapter. [2005, c. 12, Pt. SS, §16 (NEW).]
[2005, c. 12, Pt. SS, §16 (NEW) .]

2. Membership. The geographic information board consists of 15 voting members as follows:

A. The commissioner or the commissioner's designee; [2005, c. 12, Pt. SS, §16 (NEW).]

B. The Chief Information Officer or the Chief Information Officer's designee; [2005, c. 12, Pt. SS, §16 (NEW).]

C. Two members, or the members' designees, who are responsible for overseeing GIS functions of a state department that is a data custodian of geographic information, appointed by the Governor; [2005, c. 12, Pt. SS, §16 (NEW).]

D. Eight representatives as follows:

(1) **A representative of the University of Maine System**, appointed by the Chancellor of the University of Maine System;

(2) **Two representatives of a statewide association of municipalities**, one representative appointed by the President of the Senate from nominations made by the association's governing body and one representative appointed by the Speaker of the House from nominations made by the association's governing body;

(3) **One representative of a statewide association of regional councils**, appointed by the

Speaker of the House from nominations made by the Department of Agriculture, Conservation and Forestry;

(4) **One representative of a statewide association of counties**, appointed by the Governor from nominations made by the association's governing body;

(5) **One representative of a statewide association representing real estate and development interests**, appointed by the President of the Senate;

(6) **One representative of a statewide association representing environmental interests**, appointed by the Speaker of the House; and

(7) **One member representing public utilities**, appointed by the Governor; [2011, c. 655, Pt. EE, §1 (AMD); 2011, c. 655, Pt. EE, §30 (AFF); 2011, c. 657, Pt. W, §5 (REV).]

E. Two members of the private sector representing geographic information vendors, one member appointed by the President of the Senate and one member appointed by the Speaker of the House; and [2005, c. 12, Pt. SS, §16 (NEW).]

F. One public member, appointed by the President of the Senate. [2005, c. 12, Pt. SS, §16 (NEW).]

The terms for the members appointed pursuant to paragraphs C, D, E and F are 3 years. A member who designates another person to serve on the geographic information board as that member's designee shall provide written notice to the geographic information board's staff of the name and title of the designee.

[2011, c. 655, Pt. EE, §1 (AMD); 2011, c. 655, Pt. EE, §30 (AFF); 2011, c. 657, Pt. W, §5 (REV) .]

3. Board chair. The geographic information board shall annually elect a chair from its membership at the first meeting in each year.

[2005, c. 12, Pt. SS, §16 (NEW) .]

4. Staff. Staff support to the geographic information board is provided by the Department of Administrative and Financial Services.

[2005, c. 12, Pt. SS, §16 (NEW) .]

5. Quorum; action. Eight members of the geographic information board constitute a quorum. The affirmative vote of 7 members is necessary for any action taken by the geographic information board. A vacancy in the membership of the geographic information board does not impair the right of a quorum to exercise all the powers and perform the duties of the geographic information board. The geographic information board may use video conferencing and other technologies to conduct its business but is not exempt from Title 1, chapter 13, subchapter 1.

[2005, c. 12, Pt. SS, §16 (NEW) .]

6. Meetings. The geographic information board shall meet at the call of the chair but not less than quarterly. Notice must be provided no less than 5 working days prior to the meeting. Notice may be in writing by facsimile or electronic transmission.
[2005, c. 12, Pt. SS, §16 (NEW) .]

7. Memorandum of understanding. Information to be provided by a nonstate data custodian or its designee to the Maine Library of Geographic Information is governed by a memorandum of understanding between the geographic information board or its designee and the nonstate data custodian or its designee.
[2005, c. 12, Pt. SS, §16 (NEW) .]

8. Data custodian responsibilities. Federal and nonstate data custodians may voluntarily contribute data to the Maine Library of Geographic Information, except that data developed with state funds must be submitted to the library. Data custodians or their designees are responsible for:

- A. Ensuring that the public information is accurate, complete and current through the creation of adequate procedures; [2005, c. 12, Pt. SS, §16 (NEW).]
- B. Updating source data bases following verification of suggested corrections that users submit in accordance with geographic information board standards; [2005, c. 12, Pt. SS, §16 (NEW).]
- C. Complying with standards adopted by the geographic information board; and [2005, c. 12, Pt. SS, §16 (NEW).]
- D. Providing reasonable safeguards to protect confidentiality. [2005, c. 12, Pt. SS, §16 (NEW).]
[2005, c. 12, Pt. SS, §16 (NEW) .]

SECTION HISTORY

2005, c. 12, §SS16 (NEW). 2011, c. 655, Pt. EE, §1 (AMD). 2011, c. 655, Pt. EE, §30 (AFF). 2011, c. 657, Pt. W, §5 (REV).

§2004. LIABILITY

The geographic information board and any of the parties submitting data to the Maine Library of Geographic Information for public use may not be held liable for any use of those data.
[2005, c. 12, Pt. SS, §16 (NEW).]

SECTION HISTORY

2005, c. 12, §SS16 (NEW).

§2005. COPYRIGHTS AND FEES

Copyright or licensing restrictions may not be fixed by the geographic information board or data custodians to the information made available through the Maine Library of Geographic Information. The geographic information board may set fees for electronic copies of library data that are no more than 3 times the actual cost of reproduction. Fee schedules must be set annually and made readily available to requestors. [2005, c. 12, Pt. SS, §16 (NEW).]

SECTION HISTORY

2005, c. 12, §SS16 (NEW).

§2006. GEOSPATIAL DATA ACCOUNTS

1. Accounts established. There are established within the office separate accounts, referred to in this section as "the accounts," to be administered by the geographic information board. [2013, c. 122, §1 (NEW) .]

2. Sources of funding. The following must be paid into the accounts:

- A. All money appropriated for inclusion in the accounts; [2013, c. 122, §1 (NEW).]
 - B. All interest earned from investments of the accounts; [2013, c. 122, §1 (NEW).]
 - C. Any money allocated from Other Special Revenue Funds accounts for the purpose of the accounts; [2013, c. 122, §1 (NEW).]
 - D. Proceeds from any bonds issued for the purpose of the accounts; and [2013, c. 122, §1 (NEW).]
 - E. Matching funds received from the Federal Government or other legal entity for geospatial data acquisition expenditures made from the accounts pursuant to subsection 4. [2013, c. 122, §1 (NEW).]
- [2013, c. 122, §1 (NEW) .]

3. Use of accounts. The purpose of the accounts is to continue projects developed by the geographic information board. The accounts must be used to provide and maintain to the extent practicable statewide GIS data sets necessary for the efficient delivery of state services and to conserve state expenditures through partnerships with other GIS stakeholders interested in acquiring the same data sets. The accounts may be used at the discretion of the geographic information board for acquiring geospatial data primarily including but not limited to the following data sets:

A. An orthoimagery program. Imagery collected through this program must be from all areas of the State and be 4-band images that include the red, green, blue and near infrared bands; and [2013, c. 122, §1 (NEW).]

B. An elevation data set. A consistent statewide elevation data set must be collected using light detection and ranging technology or an equivalent method. [2013, c. 122, §1 (NEW).] [2013, c. 122, §1 (NEW) .]

4. Matching funds. Money in the accounts used to purchase geospatial data must be matched by funding from other sources at least a one-to-one ratio.

[2013, c. 122, §1 (NEW) .]

5. Annual report. The Chief Information Officer shall submit a written report by January 15, 2014 and annually thereafter to the Governor and the Legislature on the accounts' balance and expenditures. [2013, c. 122, §1 (NEW) .]

SECTION HISTORY

2013, c. 122, §1 (NEW).

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APPENDIX C PAST PROJECTS

[Return on Investment Study for Orthoimagery:](#) 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%.

[Strategic Plan:](#) When the Maine Library of Geographic Information was formed in 2002 its first strategic plan was developed under Legislative Resolve 23. The GeoLibrary completed an update to this plan in 2009. The strategic plan serves the same function for the GeoLibrary Board as a Comprehensive Plan for a municipality. The plan guides the development of the GeoLibrary and is a living document that needs to be updated regularly. The pace of technological advance in the field of digital mapping is fast and requires the Board to make continual adjustments in how it approaches the acquisition of data and the delivery geographic information to the many users of this information.

- This plan provides identified a series of recommendations for
- Expanding Participation
- Improving Statewide GIS Coordination
- Improving Access to Geospatial Data
- Developing and Maintaining Statewide Geospatial Data
- Lowering the Barriers to the Use of GIS
- Improving Access to Training and Education
- Establishing Sustainable Funding For the GeoLibrary

[2003 -2005 Orthoimagery Acquisition:](#) The project was a \$3.2M project to create, in cooperation with the U.S. Geological Survey (USGS), full color, high-resolution digital orthophotos for most of the populated areas of Maine.

[Parcel Grants:](#) In the Resolve23 Study that lead to the creation of the Maine Library of Geographic Information (GeoLibrary), surveyed municipalities placed great emphasis on acquiring and updating digital tax parcel data. Having this local information in a standard format, and in a central repository, would assist individual communities and regional planners in various planning activities. In addition, municipalities will also be able to develop a regional outlook for whatever data is being studied. Consequently, the GeoLibrary Board approved two rounds of grants to Maine municipalities for the upgrading and creation of digital parcel data, budgeting \$371,419 in total with awards varying from \$1,000 to \$10,000.

[Land Cover Partnership:](#) The Maine Landcover Dataset (MELCD 2004) project provided updated land cover and imperviousness data for Maine based on 2004 satellite imagery. Previously, the most recent such data for Maine was based on 13-year old imagery and was at a very coarse resolution of 30 meters. This project provided data at a higher resolution of 5 meters, and was

tightly integrated with federal landcover mapping projects. In addition, imperviousness data were developed at a 5-meter resolution as well.

[2005 County GIS Study](#): This study focused on county GIS needs and identification of opportunities to support county use of GIS. Data gathered from the study resulted in four general areas of information, [Lessons Learned](#), [Opportunities for Collaboration to Build and Fund County GIS](#), [Planned Information Forums](#), [the need to collect more detailed information](#).

[Resolve 23](#): This was the original comprehensive strategic plan developed in 2002. This plan set the stage for implementing a statewide partnership approach to collection and distribution of GIS data. It provided a comprehensive analysis of needs and benefits to all GIS providers

APPENDIX D

Changes Needed in Legislation

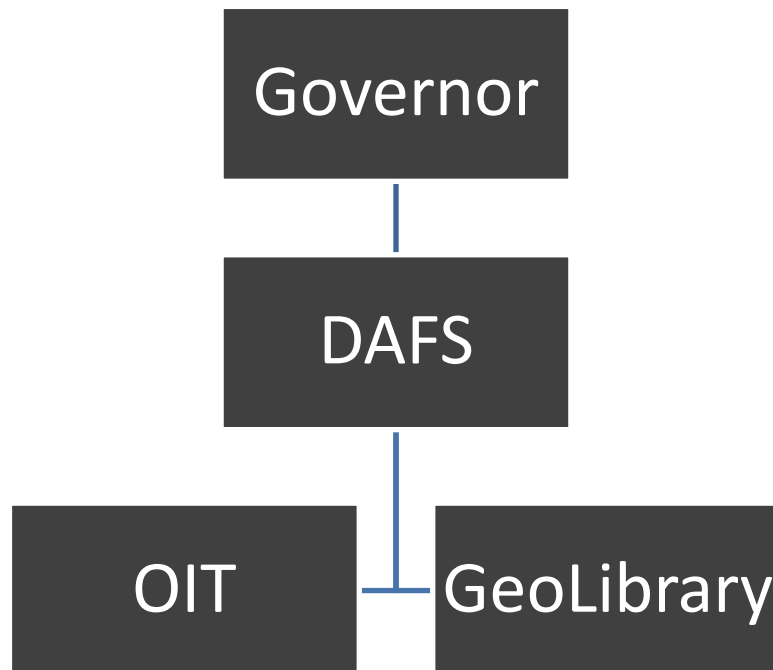
Sec. ____ . 5 MRSA §2002, sub-§11, as enacted by PL 2005, c.12, Pt. SS, §16, is amended to read:

11. State Funds. “State funds” means bond revenues and or General Funds money appropriated or allocated by the Legislature for purposes of this subchapter.

Sec. ____ . 5 MRSA §2006, sub-§4, as enacted by PL 2013, c.122, §1, is amended to read:

4. Matching funds. Money State funds in the accounts used to purchase geospatial data must be matched by funding from other sources at least on a one-to-one ratio.

APPENDIX E GEOLIBRARY ORGANIZATION



The GeoLibrary is staffed by agreement with the Office of Information Technology (OIT). OIT/MEGIS provides an Executive Director and support staff to manage and operate the GeoLibrary website, GIS database, and data access facilities. It meets monthly or as needed. Agendas and meeting notes can be found on the GeoLibrary website: <http://www.maine.gov/geolib/>.

The Board has three standing committees:

1) Finance Committee, with responsibility for:

- budget oversight;
- recommending budget or other financial actions to the Board for approval;
- primary interaction with outside entities on financial issues.

2) Policy Committee, with responsibility for:

- policy oversight;
- recommending policy adoptions and amendments to the Board;
- memorializing approved GeoLibrary policies;
- primary interaction with external entities on policy issues.

3) Technical Committee, with responsibility for:

- advising the Board on all technical matters;
- oversight of all Board projects;

- primary interaction with outside entities on technical issues.

In addition to the three standing committees, the Board has four workgroups with members solicited from the states geospatial community. These members provide for a broad cross section of interests in a geographic sense and in terms of their use of GIS data. These work groups are:

1) Coordination and Communication

- The Communication/Coordination Workgroup seeks to continually improve GeoLibrary outreach relations with federal, state, county, and local governments, academia, non-profits, private industry, and the public, by way of documenting and promoting the activities of the GeoLibrary through various media delivery methods. The workgroup also seeks to educate people about the importance of GIS and using geographic data to solve problems, find new data contributors to the GeoLibrary, and obtain a wide base of support for the efforts of the GeoLibrary

2) GeoSpatial Data

- The mission of the GeoSpatial Data Work Group is to develop appropriate GeoSpatial data standards and define the GeoSpatial data needs and flows between all levels of government, private sector, and academia to permit the ongoing acquisition of multi- purpose GeoSpatial data for Maine. The workgroup will seek out a strong coalition of state, local, federal, private and non-profit partnerships to achieve this mission.

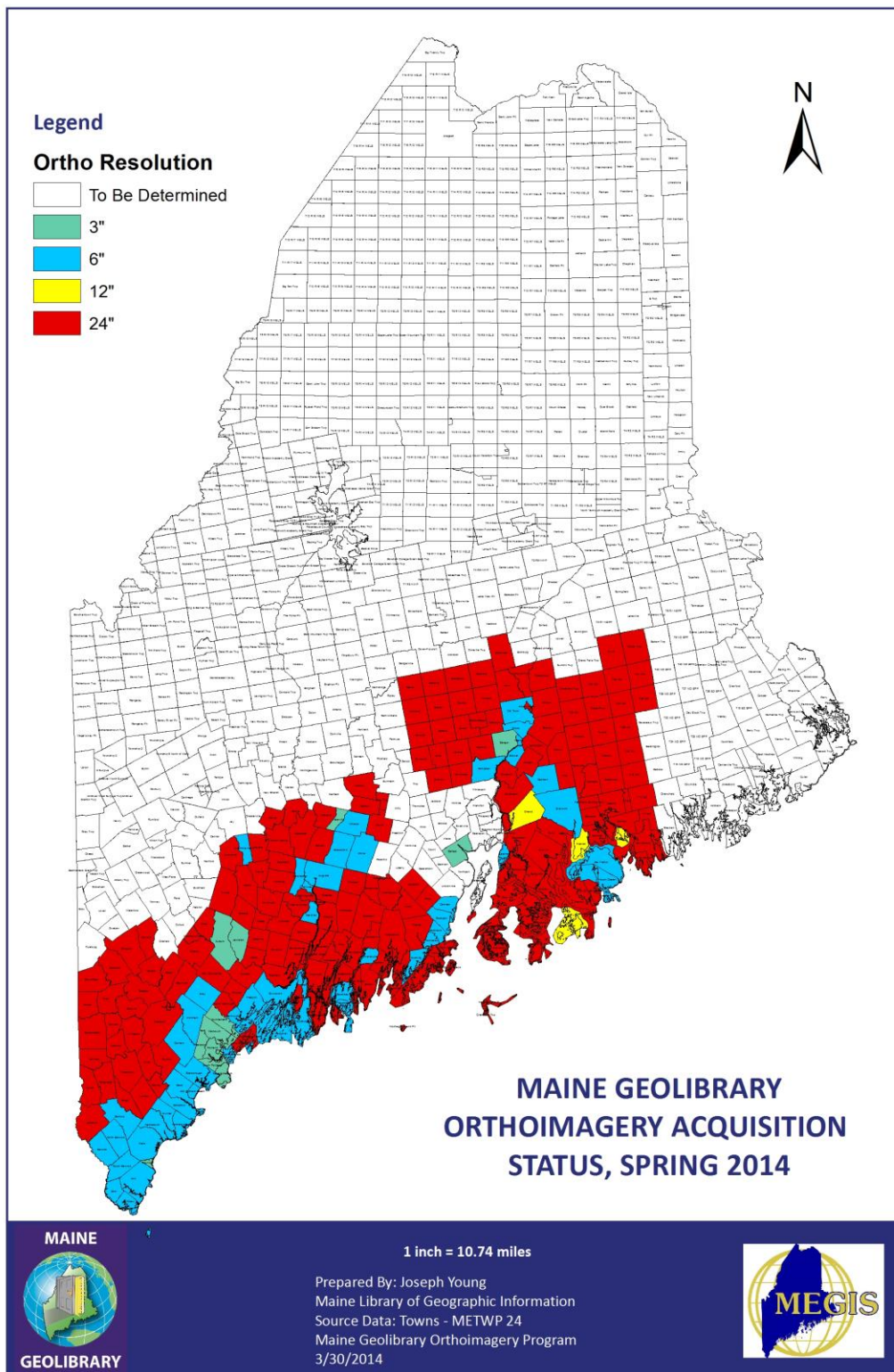
3) Education and Training

- The mission of the Education and Training Workgroup is to expand and improve coordination of geospatial education, training and other outreach activities in support of better public use of geospatial data. In this capacity the Workgroup seeks to develop and ensure a broad-based and efficient strategy for GIS education and training initiatives among all organizations and institutions state wide, taking into account special needs of the various constituencies --- K-12, academia, local government, non-profits, and any Maine citizen

4) GeoParcels

- The mission of the GeoParcels work group is to develop a statewide parcels data layer with links to the registry of deeds, assessing data and other related databases.

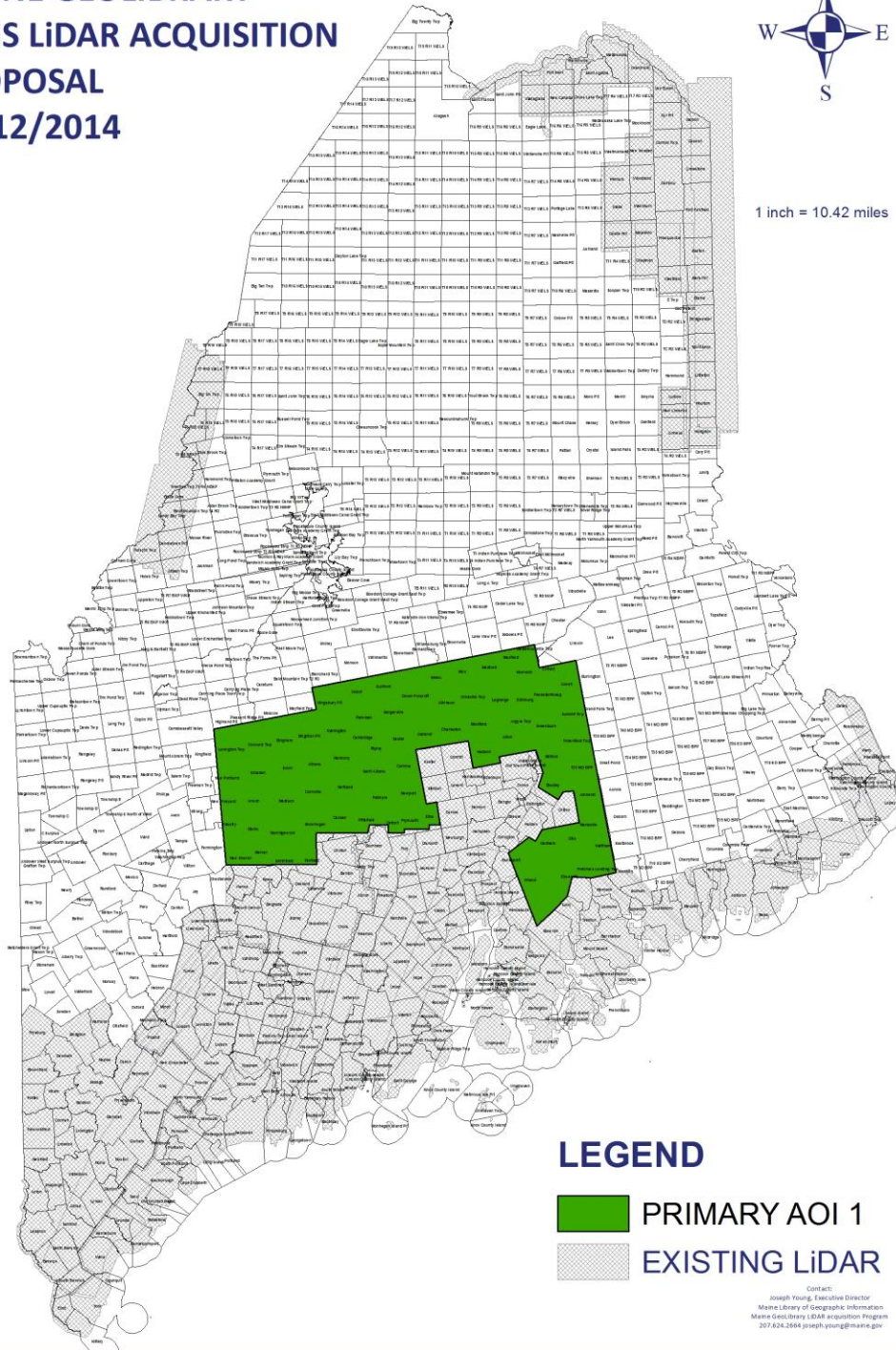
APPENDIX DATA ACQUISITION PROGRESS MAPS



**MAINE GEOLIBRARY
USGS LiDAR ACQUISITION
PROPOSAL
12/12/2014**



1 inch = 10.42 miles



LEGEND

-  PRIMARY AOI 1
-  EXISTING LiDAR

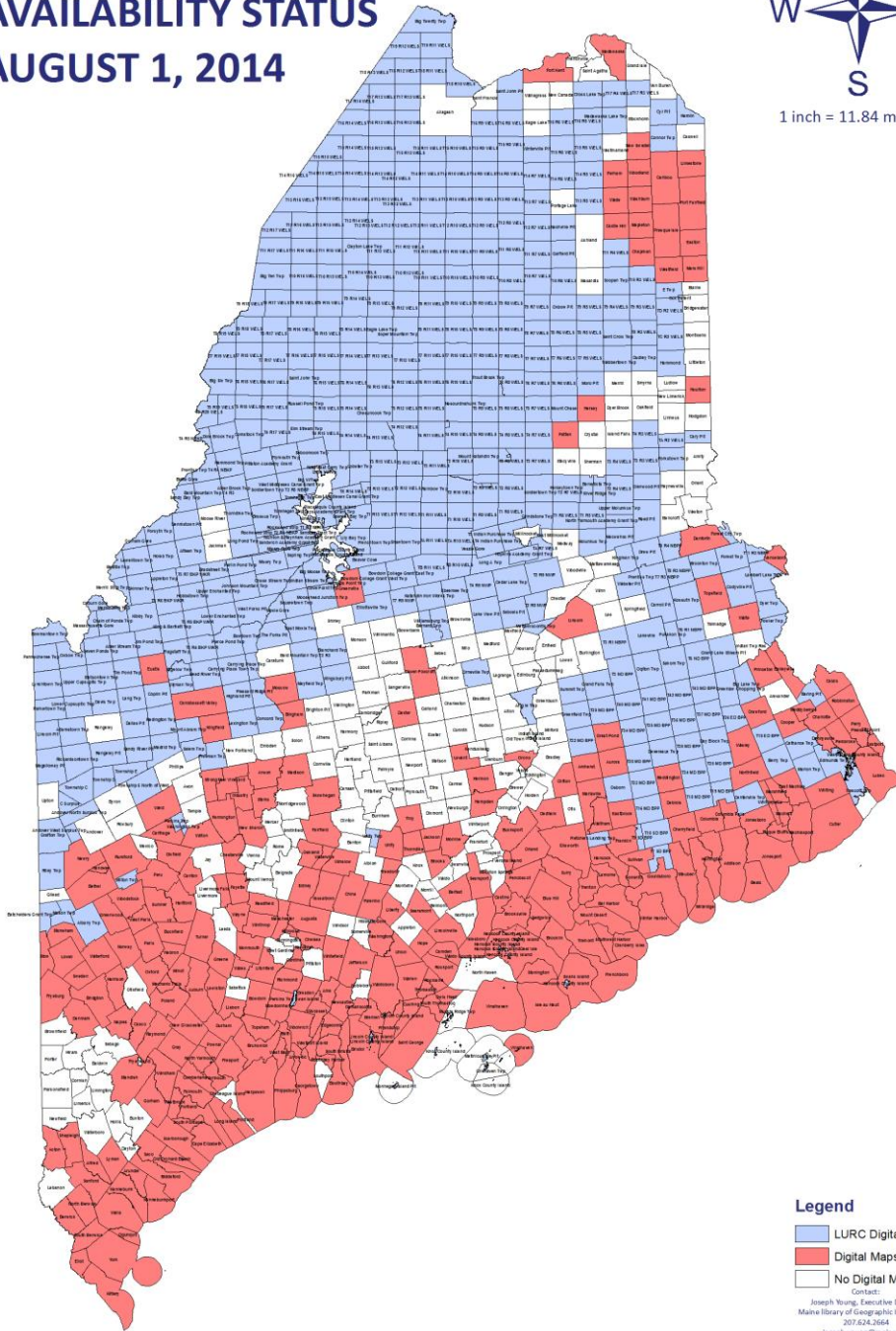
Contact:
Joseph Young, Executive Director
Maine Library of Geographic Information
Maine Geospatial LiDAR Acquisition Program
207.624.2068, jyoung@maine.gov



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MAINE LIBRARY OF GEOGRAPHIC INFORMATION



COMMUNITY TAX MAP DATA AVAILABILITY STATUS AUGUST 1, 2014



Legend

- LURC Digital Maps
- Digital Maps
- No Digital Maps

Contact:
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