FY 2017 ANNUAL REPORT
MAINE LIBRARY OF GEOGRAPHIC INFORMATION

To the Joint Standing Committees of:
Environment and Natural Resources
and
State and Local Government
128th Legislature, Second Session

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

(page left intentionally blank)

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

TABLE OF CONTENTS

GEOLIBRARY PURPOSE 5

EXECUTIVE SUMMARY 5

GeoLibrary recommendations 6

GEOLIBRARY BOARD ACTIVITIES 7

OneMAP for ME initiative 7

Legislative Changes 9

DATA ACQUISITION 9

Leaf-off Orthoimagery 9

Elevation/Bathymetry 10

Elevation Data 11

Bathymetry 11

Parcel Data 12

Hydrography 12

Governmental Unit Boundaries 13

Transportation 13

Structures 13

Land Cover and Impervious Surfaces 14

GEOSPATIAL DATA STANDARDS 14

GEOSPATIAL DATA LIBRARY 14

FINANCIAL STATUS 15

APPENDIXES 17

APPENDIX A – ACRONYMS & SELECTED DEFINITIONS 18

APPENDIX B – GEOLIBRARY LEGISLATION 19

APPENDIX C - PAST PROJECTS 28

APPENDIX D – GEOLIBRARY ORGANIZATION 30

APPENDIX E – DATA ACQUISITION PROGRESS MAPS 33

APPENDIX F – GEOPARCEL PARTNERSHIP PROGRAM OUTLINE 36

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

APPENDIX G – GEOLIBRARY BOARD MEMBERSHIP 37

LIST OF TABLES

Table 1: Partial estimate of geospatial data costs 8

Table 2 GeoLibrary project funding fy17 16

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

GEOLIBRARY PURPOSE

In 2001, the Legislature instructed the State Planning Office to convene what came to be known as the Resolve 23 Steering Committee (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 ("GeoLibrary" or "Board") 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 GeoLibrary 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.

EXECUTIVE SUMMARY

The GeoLibrary continued its efforts to coordinate agency data acquisitions in FY 2017. The Maine Office of GIS (MeGIS) completed a restructuring of its staff. This has resulted in a reduction of staff time allocated to supporting GeoLibrary activities. This reduction limits the GeoLibrary's ability to develop geospatial acquisition plans, and manage its active projects: orthoimagery, elevation, and

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

parcel mapping development. Geospatial data sets of high importance to the State are not being updated to reflect today's standards for accuracy and currency. The GeoLibrary's ability to implement improvements is severely impacted by its lack of funding and staff support.

Following is a summary of the GeoLibrary's data acquisition activities and data needs. These topics are presented in greater detail in the following full report.

The United States Geological Survey (USGS) approved the GeoLibrary's 2016 LiDAR data acquisition application to acquire data for an estimated 8,800 square miles. The contractor completed data acquisition of about 7,000 square miles in the spring of 2017 and completed the remainder in the fall of 2017. Delivery of data is expected in the spring of 2018.

The USGS and FEMA also initiated two projects in Maine adding approximately 2,000 square miles of data to be acquired.

The GeoLibrary will develop another proposal for submission to the USGS in October of 2017. If approved, collection would begin in the spring of 2018. When the 2017 collection is completed, it will leave just a little more than 6,000 square miles of the state in which to acquire LiDAR data.

The GeoLibrary initiated a refreshment of orthoimagery base mapping in York and Cumberland counties. This partnership with the two counties and seventeen communities will result in upgraded eighteen-inch pixel resolution mapping for the counties. Eight communities will acquire three-inch pixel resolution and nine more will acquire six-inch pixel resolution mapping. An interactive map is located on the GeoLibrary's website (http://www.maine.gov/geolib/programs/ortho/index.html) providing much more detail regarding the orthoimagery base mapping efforts.

Data from many towns in the State's composite parcel data layer are very out of date. This happens for several reasons. Sometimes communities do not update their data every year and others may update the data but do not share it with the GeoLibrary. Several times a year, inquiries from communities are made regarding the availability of grant funds to help pay for the conversion of paper maps to digital. An interactive map showing communities that have submitted parcel information to the GeoLibrary is located here (https://maine.maps.arcgis.com/apps/webappviewer/index.html?id=28e35c8fcf514d2685357b78bdd0b246)

GeoLibrary Recommendations

Recommendation #1:

Provide bonding in the amount of six million dollars to increase the State's economic competitiveness with current spatial data. This would be matched with at

least six million dollars from other sources and potentially much more considering the GeoLibrary's proven track record in finding partners to finance data acquisition.

Recommendation #2:

Submit a bill in legislature to update the GeoLibrary's enabling legislation, clarifying its responsibilities and maintaining currency with today's evolving technology.

Recommendation #3:

The services of the GeoLibrary are for stakeholders outside of state government. They support engineers, surveyors, developers, realtors, communities, the educational community and many others. These services should be supported through appropriations from the State's general fund or another dedicated source of funds. The GeoLibrary should work with the Legislative oversight committees to develop a funding mechanism to support a functional geospatial Library.

GEOLIBRARY BOARD ACTIVITIES

ONEMAP FOR ME INITIATIVE

'OneMAP for ME' seeks to maintain and improve Maine's base mapping. Geographic information systems (GIS) utilized by the state, private and nonprofit sectors all rely on certain base level mapping layers. Maintaining and improving these mapping layers is an important service benefiting from the GeoLibrary's systematic and coordinated approach to improving the state's authoritative mapping data. The GeoLibrary has identified seven key mapping data layers where stewardship is not the responsibility of any single state agency. Creating these base maps reflect an investment valued in many millions of dollars. This has been accomplished over many decades and is a result of years of work.

The mapping layers identified below are of strategic importance to Maine including:

- Orthoimagery
- Elevation
- Bathymetry
- Hydrography
- Cadastral/Parcel
- Transportation
- Land Cover and Impervious Surfaces

Table 1 provides some budget data developed and acquired through experience from working to improve the highest priority data. However, several of the base maps have not had any significant updates made in many years and cost data is not available. This deficiency will be corrected as part of the strategic planning update described later in this report. The table does not reflect a full cost of data maintenance and acquisition needed. The GeoLibrary is pursuing an update to its strategic plan and will provide a better analysis of needs in the next annual report.

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

TABLE 1: PARTIAL ESTIMATE OF GEOSPATIAL DATA COSTS

Mapping Layer	Total Estimated Cost	Budgeted	Annual Cost
Orthoimagery	$1,886,000.00	$1,886,000.00	$314,000.00
Elevation	$7,000,000.00	$4,000,000.00	$666,700.00
Bathymetry	N/A	$3,000,000.00	$500,000.00
Hydrography	N/A	$00.00	$00.00
Cadastral/Parcel	N/A	$4,618,000.00	$770,000.00
Transportation	N/A	$00.00	$00.00
Land Cover	$847,000.00	$847,000.00	$141,000.00
TOTAL	$9,733,000.00	$14,351,000.00	$2,391,700.00

The OneMAP for ME program responds to the State's need for current authoritative base mapping. By acquiring data for large geographic areas and seeking out partners needing the same mapping, the GeoLibrary reduces the cost of acquisition and leverages their funding to further reduce investment of state taxpayer dollars.

The GeoLibrary has managed to maintain a very large return on investment of state tax dollars. Since 2009 when the GeoLibrary initiated the first elevation acquisition project and with the successful conclusion of a five-year effort to acquire imagery base mapping, the GeoLibrary has attracted over seven million dollars of funding from dozens of other investors with less than one million dollars in state tax dollars. Current, accurate mapping reduces the state's labor costs and facilitates economic development in the private sector.

With current reliable informative mapping, state employees can do more work without leaving the office saving thousands of hours of unnecessary travel time and expenses. It speeds up the permitting processes by allowing verification of information in applications submitted, thus saving economic development projects time and money.

The GeoLibrary proposes a $6 million bond for continuing investment in base mapping data important to the public, land development community and, state and local government for management of Maine's assets. This Bond anticipates leveraging an investment of an additional $6 to $8 million from other private, non-profit, state, federal, local, and county sources.

In most instances, state and federal agencies, communities and other interested parties all have an interest in developing high accuracy base mapping. This represents numerous opportunities to leverage work and funding from these sources.

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

LEGISLATIVE CHANGES

The GeoLibrary reviewed its legislative enabling language. Because of changes in the functional aspects of the GeoLibrary, changes in technology, the manner of creating and maintaining geospatial data, the GeoLibrary is recommending changes to legislation. These recommendations are shown in Appendix B.

DATA ACQUISITION

Key data layers outlined below need more study to develop plans for coordinated data updates and maintenance. Each data layer has a brief description of acquisition plans and their status. Additionally, an estimate of costs and potential partners for data acquisition are provided when information is available.

LEAF-OFF ORTHOIMAGERY

The Maine GeoLibrary has attempted to acquire orthoimagery statewide since it was established in 2003. Some of the initial bond proceeds were used to acquire one-foot and two-foot pixel imagery. This was successful in organized communities but the unorganized parts of the state were mostly left out of the process. In 2011, the GeoLibrary initiated a second attempt to acquire statewide imagery from 2012 to 2016. This was done in partnership with the three state agencies, the Department of Transportation, Maine Emergency Management Agency and the Public Utilities commission. Unfortunately, MEMA was not able to participate in all years and anticipated partnerships with federal agencies did not materialize. The program required commitments from counties to cover one third of the acquisition costs in their jurisdiction and allowed communities to purchase higher resolution imagery.

The only four counties that chose not to participate in the time period 2012 to 2016 were Washington, Oxford, Piscataquis and Aroostook.

In the other twelve counties, imagery acquisition covered all communities within the counties, both organized and unorganized. So, during the term of this project the GeoLibrary acquired coverage for approximately 22,000 square miles, which is nearly 70 percent of the state.

This imagery base map data is available for use by public, private, nonprofit corporations and individuals at no additional charge through the GeoLibrary's data services. This program is a notable example of a cost sharing approach leveraging state, county, and municipal funding sources. The imagery base map serves as an accurate base map upon which other data is developed and registered.

With the completion of the 2012 to 2016 program, total savings for the 77 participating communities is estimated to be $1.5 million. In addition to the community savings, the GeoLibrary utilized state agency funding of $480,000 to leverage nearly $1.3 million in funding from federal agencies, counties and communities. This unique collaborative effort has resulted in a bulk purchase of imagery resulting in better quality imagery products compared to previous acquisitions, saving Maine taxpayers hundreds of thousands of dollars.

"With the completion of the 2016 program, total savings for the 77 participating communities is estimated to be $1.5 million."

The GeoLibrary initiated its third program (2017-2022) for imagery base mapping. During FY17, York and Cumberland counties signed contracts for eighteen-inch resolution orthoimagery and 17 communities joined in to purchase higher resolution imagery. Unfortunately, only two State agencies committed to helping provide matching funds for the 2017 program. At the writing of this report, agreements are in place or being negotiated to map an additional 5 counties in the Spring of 2018. These include Sagadahoc, Kennebec, Lincoln, Androscoggin and, Knox counties. Once agreements with the counties are finalized, towns will be offered the opportunity to "buy-up" to better resolution at greatly reduced cost.

Adoption of the new MeGIS/GeoLibrary budget will stabilize the orthoimagery program for the next two years. It will provide enough funds to continue providing matching funds to counties and attract funding from local communities. This will provide continuity for a program that has substantially benefitted the state, counties and municipalities. The GeoLibrary encourages counties that have not participated to join its efforts to acquire an orthoimagery base map for all of Maine.

Elevation/Bathymetry

The GeoLibrary has been pursuing high resolution, base elevation or topographic data since 2009. In FY17 the GeoLibrary initiated another acquisition totaling nearly nine thousand square miles. This combined with other projects sponsored by FEMA and the USGS will bring the total acquisition scheduled for completion to over ten thousand square miles nearly one third of the state. The GeoLibrary will expend just a little over $1.6 million for LiDAR acquisition this year without any funds from the GeoLibrary. All funding will come from ten state, county, federal, non-profit and private funding sources.

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

Less than two hundred thousand dollars of state funding will have leveraged eight dollars for every dollar invested.

The GeoLibrary is planning to submit another proposal to the USGS for funding to complete elevation data acquisition in the northernmost sections of Maine starting as early as the Spring of 2018.

Current bathymetry data is a hodgepodge of data acquired piecemeal for numerous independent studies and of varying accuracies. New consistent high-resolution data is needed to complete studies of the land-sea interface for myriad applications. Near and offshore high-resolution data is needed for a better understanding of Maine's fisheries, support to aquaculture and impacts of development. No estimate is available for the cost of acquiring this data at this time.

Partners for acquiring elevation and bathymetry include the USGS, NOAA, USDA, State agencies, the University of Maine, Non-Profit Organizations, the Bureau of Ocean Energy Management, counties, communities and private enterprise.

ELEVATION DATA

Since 2009, the GeoLibrary has initiated several projects to acquire high resolution elevation, also known as topographic data. Topographic data is used to create contour maps at 1 or two-foot elevation intervals suitable for planning development at the parcel level. Despite a lack of GeoLibrary funding, it has developed partnership proposals to acquire new data with Light Detection and Ranging (LiDAR) Technology for about 80 % of the state's land area. (See map in Appendix E)

The GeoLibrary has received funding from numerous public and private sources including the Natural Resource Conservation Service (NRCS), the NRCS National Geospatial Center for Excellence, state agencies such as Maine Bureau of Public Lands and Maine Drinking Water Program, the Nature Conservancy, Plum Creek Timberlands, Town of Carrabassett Valley and many others. The GeoLibrary has solicited $945,181.00 from state and local partners to apply for USGS matching funds. This has resulted in attracting over $6 million in federal funding for data acquisition. These data are having a transformative effect on land development costs for private and public sectors in Maine's economy. In addition, elevation data provides a rich resource for analyzing the natural and manmade environments.

BATHYMETRY

In addition to terrestrial topography, the state needs updated bathymetry data. Bathymetry data for near shore areas is fragmented, acquired for specific projects and not in a coordinated, regional manner. Large sections of the coast lack current near shore bathymetry and the rest of the Gulf of Maine needs to be updated taking advantage of modern technology for increasing the accuracy. Better bathymetry would contribute greatly to improved navigation, understanding of fisheries habitat, aquaculture support and flood modeling.

Developing cost estimates for improving the state's bathymetry will be addressed in the proposed strategic plan update.

PARCEL DATA

Four communities provided updated data and one community provided new data to the parcel layer in FY17. This is totally inadequate in terms of providing a current statewide parcel map. Only two hundred and ninety-two communities have invested in digital parcel maps; approximately two hundred and eight communities have not. A significant reason for this is that small communities do not see a significant cost benefit to converting their paper parcel maps to a digital product. The GeoLibrary sees a need a need for a partnership grant program that would assist communities to maintain parcel maps in some digital format meeting state standards for data sharing.

In addition, the State's parcel data for the unorganized communities, maintained by Maine Revenue Service (MRS), is several years out of date and in poor condition for inclusion in the statewide parcel map.

For budget purposes in support of the OneMAP for ME concept, the GeoLibrary assumed an estimated cost for converting paper maps to digital products at $20,000 per town. However, this price can vary based on many factors including the number of parcels, currency and quality of existing maps. Using this average cost, the estimate for converting all communities to digital products would be approximately $4,200,000.

Costs for updating parcel maps will also vary widely according to how large the community is and level of subdivision activity. Again, an estimate of average cost for small rural communities updating an existing parcel maps would be about $2,000 every six years. Larger communities may complete updates every year. For budgeting purposes, the GeoLibrary set a goal of obtaining updates from communities every six years. By matching the estimated cost of $2,000 with a $200 stipend to defray the expense, the GeoLibrary would leverage community investment at the rate of $10 for every 1 invested and get a copy of the updated data.

Cost estimates for improving parcel data quality will be updated as part of the proposed strategic planning process.

Potential partners besides the communities would be state agencies among others.

HYDROGRAPHY

The USGS maintains this data at a scale of 1:24000 (1" =2000'). However, to be useful at the local level, a resolution of 1:4800 (1" =400') or better is needed for most state agencies and communities. To achieve this level of mapping requires high resolution topographic and orthoimagery data to create the better resolution mapping of Maine's lakes, ponds, river, streams and watersheds. Potential partners for developing this level

of data quality include the USGS and state agencies. An assessment of the cost for a complete update of all data components needs to be done.

The USGS Regional Water Science Center has developed a proposal to update the 12-digit HUC watershed boundaries component of this data set. This is just one small component of the total NHD data layer and would cost $75,000. The GeoLibrary will consider this as a project to be included in future acquisition plans.

In addition to the USGS, potential partners include other state agencies.

GOVERNMENTAL UNIT BOUNDARIES

The delineation of Maine's township and county boundaries have evolved over time. For most of the state, no modern surveying of boundaries has been done. Frequently, parcel data submitted by communities does not agree with the boundaries in the Maine Township boundary data due to the latter's original accuracy as depicted on the familiar USGS Topographic Quad sheets at a scale of 1:24000 (1" =2000'). A system for updating town, township, and county boundaries to reflect modern technical capacity for accuracy should be established. This will require engaging with stakeholders to determine a long-term plan for improving this data, preferably, with participation from all stakeholders.

Potential partners would be state agencies, counties and communities. No estimate of cost for this data upgrade is available.

TRANSPORTATION

The Department of Transportation and the Public Utilities Commission, Emergency Communications Services Bureau (ESCB) have business requirements for developing transportation data. Each entity has divergent technology for developing this type of data resulting in overlapping efforts and a level of redundancy. Since the GeoLibrary's past efforts to reconcile these two data sources, new technology exists to eliminate this duplication. However, to adopt the new technology and move to a new platform would require substantial upfront costs that are beyond the scope of existing agency budgets. The exact costs are unknown, but should be investigated and a plan developed for a single transportation data layer meeting the combined business needs of both agencies.

This would provide all stakeholders with more usable and accurate transportation data. Potential partners are state and federal agencies.

STRUCTURES

Having an accurate representation of structures is very useful for emergency response to calls for police, fire and other emergency services. It can also be helpful in evaluating changes to transportation routes, development and many other applications. Maine does not have an adequate structures data layer. The ESCB has initiated this project to support Next Generation 911. Potential partners for development of this important data layer include state and federal agencies, counties and communities. No estimate has been completed for accelerating development of this data.

LAND COVER AND IMPERVIOUS SURFACES

Maine's most recent land cover data was developed in 2006 and is at a resolution of 5 meters (16.4 feet). It is very out of date and entirely inadequate for supporting the level of analysis required today. Urban communities planning for storm water runoff and retention from impervious surfaces, oil and hazardous spill responders charged with protecting the environment, Inland Fisheries and Wildlife professionals identifying prime habitat for the state's aquatic and land species, all require resolution of at least 1-meter resolution. NOAA estimates the cost of developing these data for the State of Maine would be about $847,000.00. NOAA has already committed to invest $230,000 to develop a 10-meter data layer. (This is only half the resolution of existing data and a step backwards in quality for Maine. NOAA is offering a buy up program to 1-meter resolution for an estimated additional estimated cost of $300,000.00 for the state of Maine.

A buy up to this resolution of data would be a great benefit for communities and state agencies needing accurate data for modeling storm water modeling, floodplain mapping and impact of development and land use activities.

Potential partners for this project besides NOAA would include, state agencies and non-profits and other federal agencies.

GEOSPATIAL DATA STANDARDS

Much more work is needed to identify data standards and cost estimates for data acquisitions, but, with MeGIS staff support limited and an all-volunteer work group, the GeoLibrary is not able to keep up with this legislative mandate. Orthoimagery is just one of several data layers needing work to develop standards and a strategy for data acquisition.

The proposed update to the GeoLibrary's strategic plan will identify data standards needing updating and provide recommendations for updates and additions to the current standards, as well as recommendations for its true staffing needs and a funding solution to meet those needs.

GEOSPATIAL DATA LIBRARY

The first purpose specified in the GeoLibrary's enabling legislation was to create an electronic gateway for distributing GIS data to the public. The GeoLibrary has pursued several attempts to create a Geoportal that would meet the needs of the GIS community and extend what is already available on the Maine Office of GIS' Data Catalog. So far, these efforts have been unsuccessful in the long term. Changes in technology, the costs of operating an electronic gateway, and a funding source to maintain, operate and staff a geospatial data library have prevented a fully operational gateway for GIS data and reference services.

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

MeGIS staff support the GeoLibrary's efforts with its data catalog of state data and services for distributing elevation, imagery and parcel data developed by the GeoLibrary. What is lacking is a central repository of geospatial data developed in support of communities, research and other sources that are of interest to the greater GIS user community.

Due to the lack of operational funds, the GeoLibrary discontinued its latest attempt. However, the need for an organized library of geospatial data still exists. Just as the State Library maintains and keeps current its selection of books, periodicals and reference materials, and provides a librarian to assist customers, a GeoLibrary must continually maintain and acquire new data layers, reference materials and staff support to stay current and meet the needs of Maine's GIS and geospatial data users. For many applications of geospatial data, it is also important to have access to older data that is no longer current.

Researchers and others need to be able to complete comparative analysis using previous data relative to the newest data. The State and GeoLibrary do not have any method for making this data available and, even more importantly, the State is not providing a historical record of more than just a few data layers deemed important. Even these are not stored with easy access to the public.

Analyzing these needs of the public for a geospatial library and developing a strategy to meet them will be an important part of the strategic plan update.

FINANCIAL STATUS

The GeoLibrary does not receive funding from Legislature for either operations or data acquisition. Despite the lack of funding, the GeoLibrary has been able to leverage funding from cooperating partners to finance data acquisition. As a result, the GeoLibrary has managed to accrue a positive balance in its Geospatial Reserve Fund (account # 013-18B-3057). This balance results from good fiscal control and acquiring data at less than anticipated costs. As of January 1 2017, the GeoLibrary had managed to achieve a balance of $70,171.28. This accumulated savings came mostly from the five-year orthoimagery project. The 2016 LiDAR project, estimated to cost $1,334,325.00, came in under budget by $134,313.97 bringing the total fund balance to $204,485.25.

These funds will be used to update the GeoLibrary's strategic plan and to support additional data acquisition. Table 1 shows the status and sources of funding from partners. A more complete description of sources will be found in the data acquisition section under the project descriptions.

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

TABLE 2 GEOLIBRARY PROJECT FUNDING FY17

GEOLIBRARY PROJECT FUNDING SUMMARY							
Project	**Total Committed**	**Geo-Library**	**Federal Agencies**	**State Agencies**	**Counties**	**Muni-cipalities**	**Private - Nonprofits**
Ortho Imagery	$ 383,591.00	$ 0.00	$ 0.00	$ 70,000.00	$46,116.00	$267,475.00	$0.00
LiDAR	$ 1,767,246.00	$ 0.00	$ 1,443,716.00	$168,495.00	$25,000.00	$00.00	$130,035.00
Parcel Mapping	$0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 36,000.00*	$0.00
Total	**$2,150,837.00**	**$ 0.00**	**$1,443,716.00**	**$238,495.00**	**$71,116.00**	**$303,475.00**	**$130,035.00**

* Estimated value of municipal parcel data updates

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

APPENDIXES

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

APPENDIX A – ACRONYMS & SELECTED DEFINITIONS

Board	Board of Directors for the Maine Library of Geographic Information
CIO	Chief Information Officer for the state
ESCB	Emergency Services Communications Bureau
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
HUC	Hydrologic Unit Code
LiDAR	Light Detection and Ranging, a remote sensing system used to collect topographic and other 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
NG911	Next Generation 911
NHD	National Hydrography Dataset
NMDC	Northern Maine Development Commission
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural 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

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

APPENDIX B – GEOLIBRARY LEGISLATION

GeoLibrary Policy Committee Recommendations for Updating the Maine Library of Geographic Information Act (Title 5 Maine Revised Statutes §§2001 et seq.) , 2016

(Revision history: a) revised following 11.10.14 Bill Hanson TCW with Mike Smith and Joe Young; b) revised 1.21.15 to reflect Board meeting comments from December 17, 2014, c) further revisions following 3.4.16 and May 26, 2016 conferences of Bill Hanson, Vinton Valentine and Joe Young).

Title 5 Maine Revised Statutes

§2001. Short title

This subchapter may be known and cited as "the Maine Library of Geographic Information Act."

§2002. Definitions

As used in this subchapter, unless the context otherwise indicates, the following terms have the following meanings.

1. Association. "Association" means an organization:

A. Whose membership is identifiable by regular payment of organizational dues ~~and~~ or regularly maintained membership lists;

B. That is registered with the State or is a ~~corporation~~ legal entity chartered in the State; and

C. That exists for the purpose of advancing the common goals, occupation or profession of its membership.

2. Data custodian. "Data custodian" means a federal data custodian, state data custodian or nonstate data custodian.

3. Federal data custodian. "Federal data custodian" means any branch, agency or instrumentality of the Federal Government.

4. Geographic information board. "Geographic information board" means the Maine Library of Geographic Information Board.

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.

6. Maine Library of Geographic Information. "Maine Library of Geographic Information" or "library" means the ~~statewide network~~quasi-state agency 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~~to promote the purposes and conduct the business set forth in Section 2003(1) with board public support and input enhanced by the geographic information board specified in Section 2003(2).

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

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;

B. Land ownership, land use, land use controls and restrictions, jurisdictional boundaries, tax assessments, land value and land survey records and references; and

C. Geodetic control networks, aerial photographs, maps, planimetric data, remote sensing data, historic and prehistoric sites and economic projections.

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

B. Otherwise expressly authorized by law to be released. The presence of data in the library does not, by itself, make that information a public record.

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

11. State funds. "State funds" means bond revenues and General Fund money appropriated by the Legislature ~~for the purposes of this chapter~~ to the GeoLibrary.

§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;

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

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

(6) Data validation tools and processes;

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;

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;

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;

F. To enter partnerships to promote the purposes of this subchapter;

~~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;~~

H. To conduct studies relating to the coordination, development and use of statewide geographic information as funding permits;

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 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**.**

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

A. The commissioner or the commissioner's designee;

B. The Chief Information Officer or the Chief Information Officer's designee;

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;

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;

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

F. One public member, appointed by the President of the Senate.

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 pursuant to paragraph A and B above as that member's designee shall provide written notice to the geographic information board's staff of the name and title of the designee.

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

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

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.

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.

7. Memorandum of understanding. Information to be provided by a nonstate data custodian ~~or its designee~~ to the Maine Library of Geographic Information ~~is~~may be governed by a memorandum of understanding between the geographic information board ~~or its designee~~ and the nonstate data custodian ~~or its designee~~.

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 except when distribution of the data is prohibited under state or federal laws. 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;

B. Updating source data bases following verification of suggested corrections that users submit in accordance with geographic information board standards; [2005, c.

C. Complying with standards adopted by the geographic information board; and

D. Providing reasonable safeguards to protect confidentiality.

§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. 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.

§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.

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

A. All money appropriated for inclusion in the accounts;

B. All interest earned from investments of the accounts;

C. Any money allocated from Other Special Revenue Funds accounts for the purpose of the accounts;

D. Proceeds from any bonds issued for the purpose of the accounts; and

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.

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

B. An elevation data set. A consistent statewide elevation data set must be collected using light detection and ranging technology or an equivalent method.

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

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.

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 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 advances in the field of digital mapping is fast and requires the GeoLibrary to make continual adjustments in how it approaches the acquisition of data and the delivery of geographic information to the many users of this information. The 2009 plan 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.

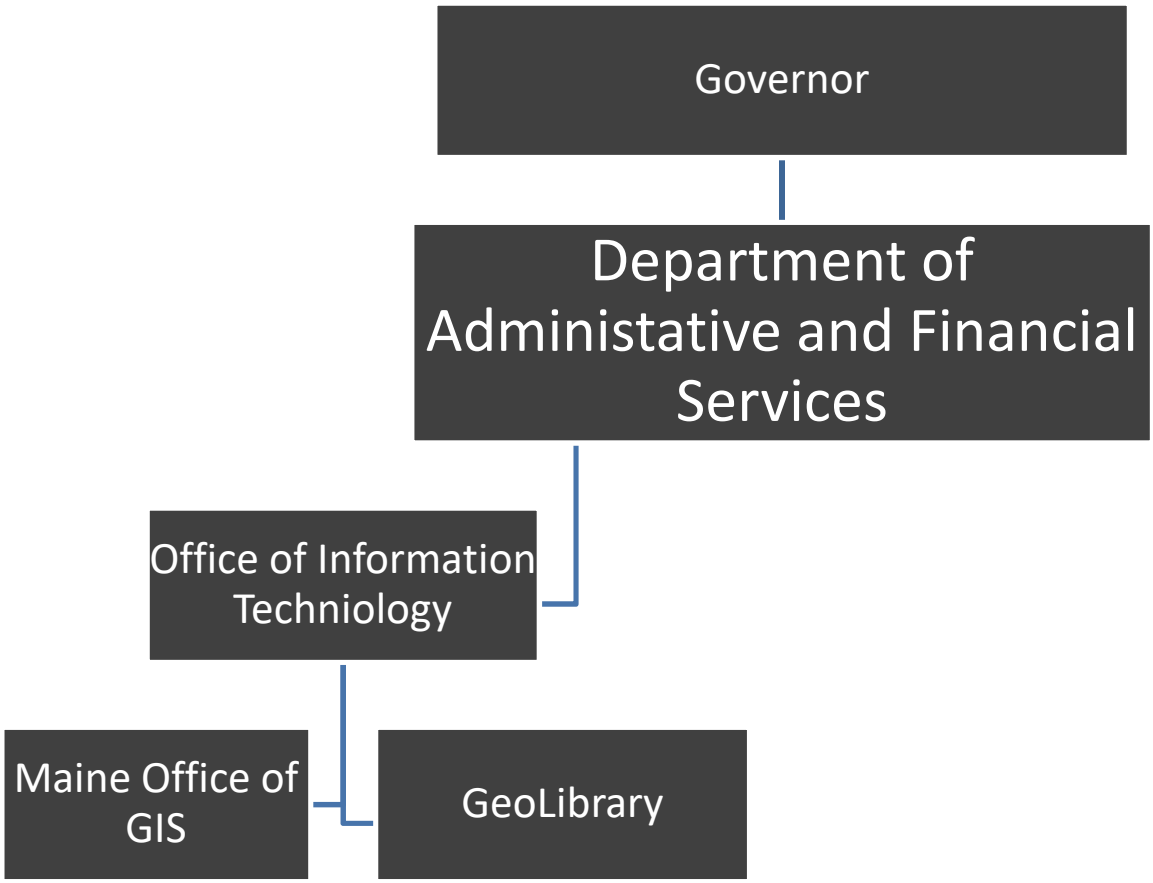
Parcel Grants: In the Resolve 23 Study leading to the creation of the Maine Library of Geographic Information (GeoLibrary), surveyed municipalities placed great emphasis on acquiring and updating digital tax parcel data. Having this local information in a standard format, and in a central repository, 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 approved two rounds of grants to Maine municipalities for the upgrading and creation of digital parcel data, budgeting a total of $371,419 with awards varying from $1,000 to $10,000.

Land Cover Partnership: The Maine Landcover Dataset (MELCD 2004) project provided updated land cover and impervious surface 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 (98.4 feet). This project provided data at a higher resolution of 5 meters, and was tightly integrated with federal landcover mapping projects. In addition, impervious surface 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, and 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 – 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. The GeoLibrary Board meets monthly or as needed. Agendas and meeting notes can be found on the GeoLibrary website: http://www.maine.gov/geolib/.

The GeoLibrary has three standing committees:

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

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

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

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

In addition to the three standing committees, the GeoLibrary 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:

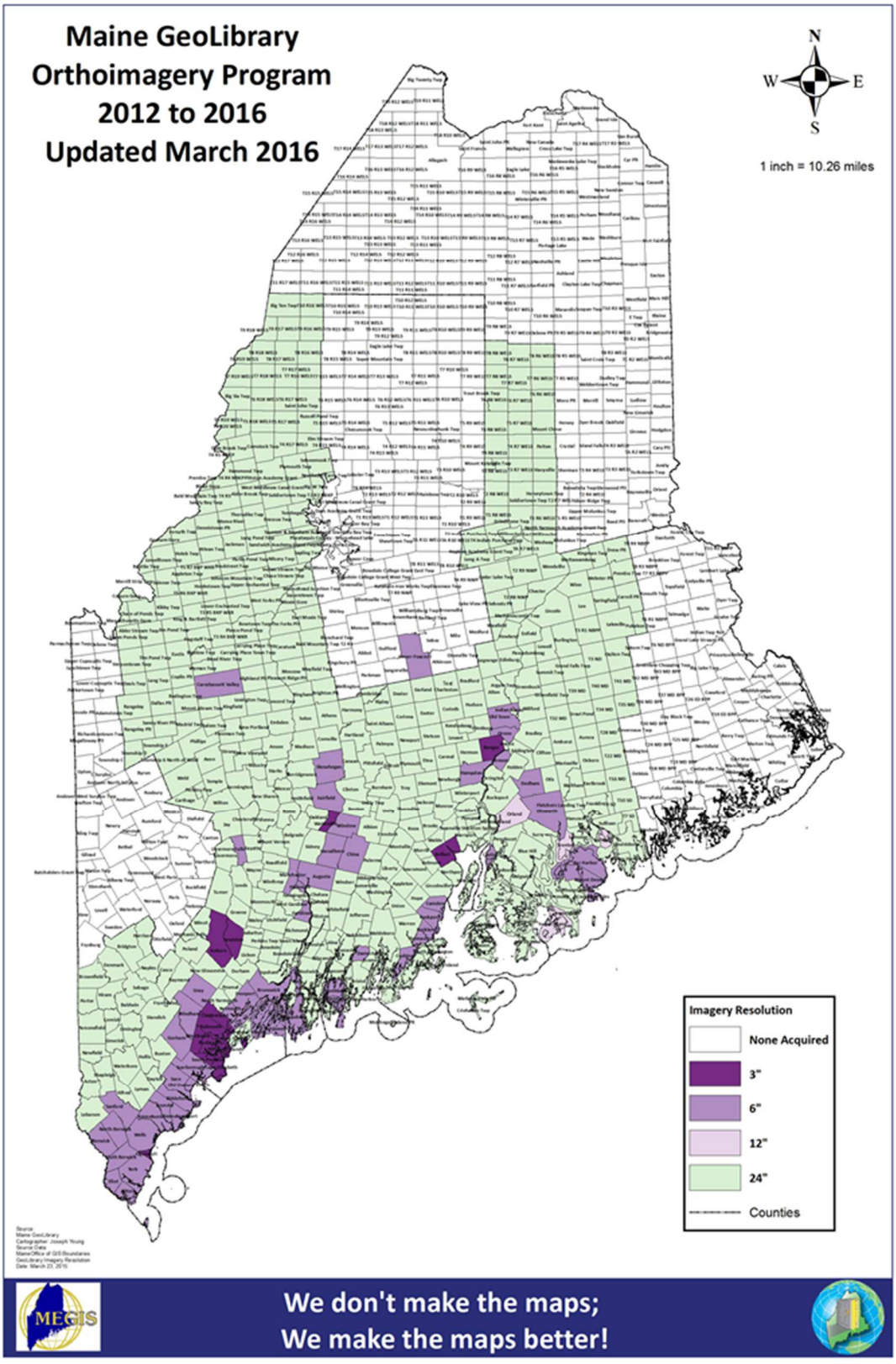
1) **Coordination and Communication**
   - The Communication/Coordination Workgroup seeks to continually improve GeoLibrary outreach relations with federal, state, county, and local governments, academia, non-profits, private industry, and the public, by way of documenting and promoting the activities 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 seeks 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.

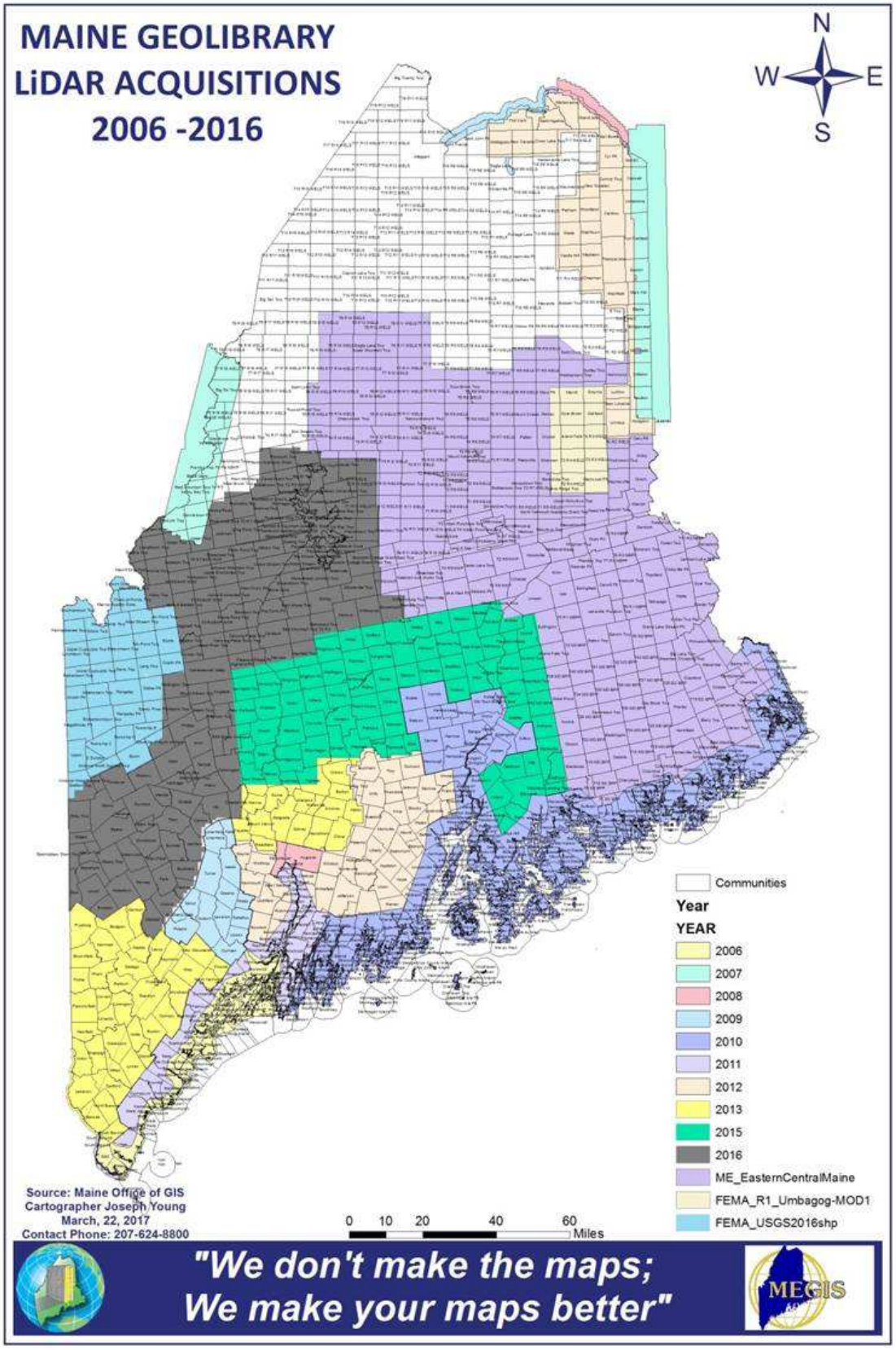
4) GeoParcels

- 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.

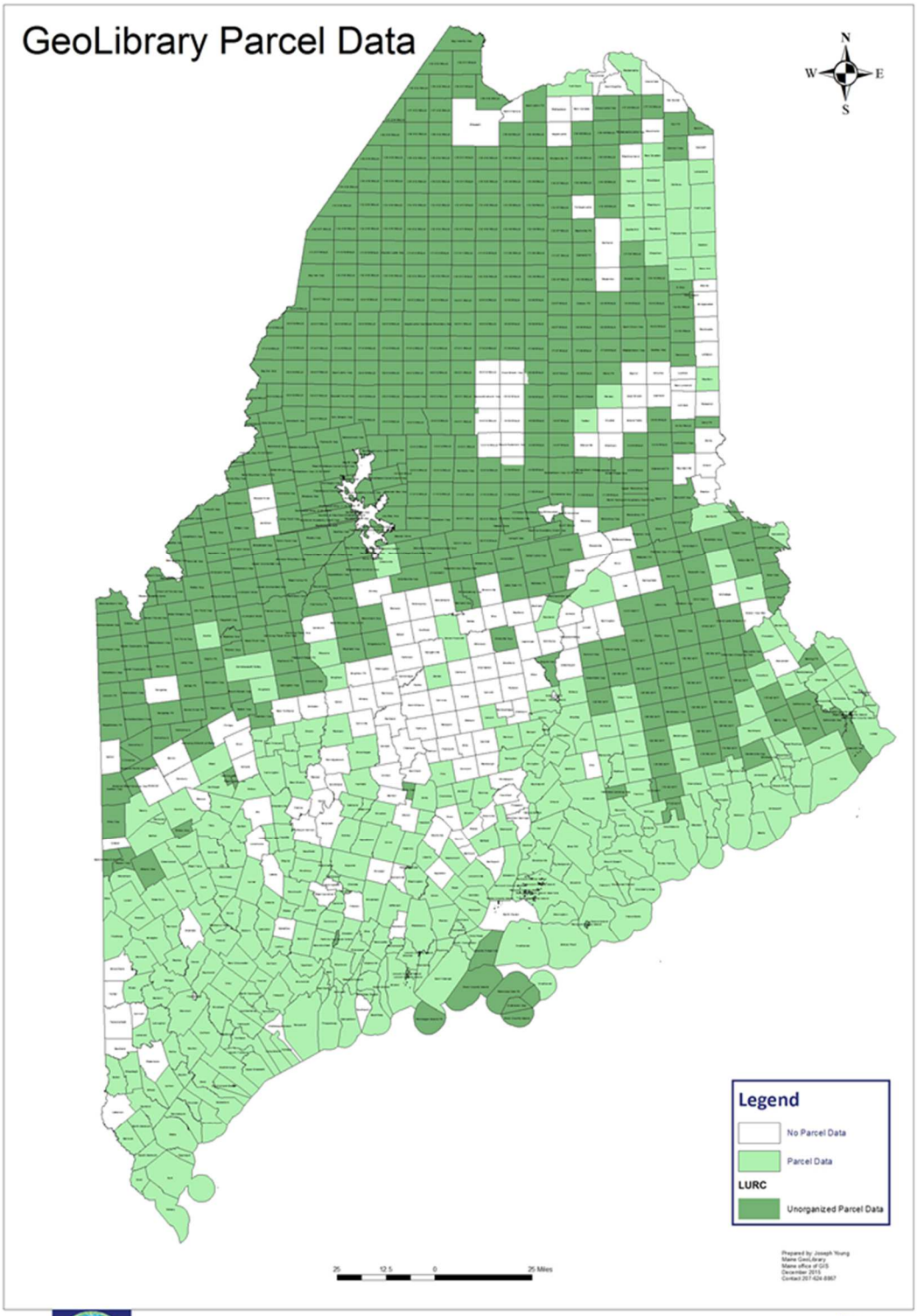
This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

APPENDIX E – DATA ACQUISITION PROGRESS MAPS





This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).



"We don't make your maps;
We make your maps better"

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

APPENDIX F – GEOPARCEL PARTNERSHIP PROGRAM OUTLINE

This program is designed to provide funding for communities in this order of priority:

- Towns that do not have any parcel maps
- Towns that have just paper parcel maps
- Towns that have digital maps but have not updated them in more than five years
- Proposed Allocation of Funds
    - New Digital Parcel Maps $280,000
    - Updating Existing Parcel Maps $16,500
    - Total $296,000

NEW DIGITAL PARCEL MAP FUNDING APPLICATIONS

Applications for funding are due on August 1st of each year. The GeoLibrary will provide up to 50% of the funding necessary to develop new parcel maps. To qualify for these funds communities must provide the GeoLibrary with parcel data meeting Digital Parcel Standards minimum of Level I as described in the GeoLibrary's "Standards for Digital Parcel Files".

PARCEL MAP UPDATE FUNDING APPLICATIONS

Applications for funding are due on August 1st of each year. The GeoLibrary will provide 10% of the funding necessary to develop new parcel maps. To qualify for these funds communities must provide the GeoLibrary parcel data meeting Digital Parcel Standards minimum of Level I as described in the GeoLibrary's "Standards for Digital Parcel Files".

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

APPENDIX G – GEOLIBRARY BOARD MEMBERSHIP

	MEMBER	SEAT
Photo Not Available	Paul Sandlin State of Maine, 51 Commerce Drive 145 State House Station Augusta, Maine 04333 Paul.Sandlin@maine.gov	# 1 Department of Administrative and Financial Services Commissioner Designee
	Brian Guerrette, OIT Child Street Augusta, ME 04333 (207) 649-3838 Brian.Guerrette@maine.gov	# 2 Chief Information Officer Designee
Photo Not Available	Nate Kane Dept. of Transportation Child Street, Augusta ME 04333 (207) 624-3297 Nate.Kane@maine.gov	#4 State GIS Stakeholders
Photo Not Available	Vinton Valentine University of Southern Maine 303 Bailey Hall Gorham ME 04038 (207) 228-8455 Vinton.Valentine@maine.edu	# 5 University of Maine System
	Patrick Cunningham Blue Marble Geographics 22 Carriage Lane Hallowell, ME 04347 (207) 624-4622 patrickc@bluemarblegeo.com	# 6 Municipal Representative
Photo Not Available	Vern Maxfield Town of Woodstock P. O. Box 317 Woodstock, ME 04219 (207) 665-2668 vhm24@megalink.net	#7 Municipal Representative
	VACANT	# 8 Regional Councils Representative

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

	Betsy Fitzgerald Washington County 85 Court Street Machias, ME 04655 (207) 255-3127 manager@washingtoncountymaine.com	# 9 County Representative
	William Hanson Rudman & Winchel Law Firm 84 Harlow Street Bangor, ME 04402 (207) 947-4501 whanson@rudman-winchell.com	# 10 Real Estate and Development Interests
	Jake Metzler Forest Society of Maine 115 Franklin Street Bangor, ME 04401 (207) 945-9200 jake@fsmaine.org	# 11 Environmental Issues
	VACANT	# 12 Public Utilities Interests
	Claire Kiedrowski, CP PSM Mapping Director Cornerstone, Energy Services, Inc. 6 State Street, Suite 301 Bangor, ME 04401 ckiedrowski@cornerstoneenergyinc.com	#13 Geographic Information Systems Vendors
	Jon Giles Sebago Technics 75 John Roberts Road South Portland, ME 04106 (207) 200-2128 jgiles@sebagotechnics.com	#14 Geographic Information Systems Vendors
Photo Not Available	David Edson James W. Sewall Company P. O. Box 433 Old Town, ME 04468 (207) 827-4456 edson@sewall.com	# 15 Public
Photo Not Available	Maria Jacques Maine Public Utilities Commission 101 Second Street Hallowell, ME 04347 (207) 287-6083 Maria.Jacques@maine.gov	# 16 State GIS Stakeholders

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

This page intentionally left blank

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

This report was prepared for the Library of Geographic Information with support from the Maine Office of GIS, Office of Information Technology, Department of Administrative and Financial Services

This Maine Library of Geographic Information Annual Report for FY17 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).