Maine Library of Geographic Information

Maine Office of Geographic Information Systems
Department of Administrative & Financial Services
Office of Information Technology
145 State House Station, 51 Commerce Drive, Augusta Me. 04333-0145
Voice Phone 207-266-7087

Janet T. Mills	Kirsten LC Figueroa	Fred Brittain	Claire Kiedrowski
Governor	Commissioner	Chief Information Officer	Executive Director

December 22, 2021

Honorable Senator Joseph Baldacci, Chair
Honorable Representative Ann Matlack, Chair
Members of the Joint Standing Committee on State and Local Government
100 State House Station
Augusta, ME 04333-0100

Dear Senator Baldacci and Representative Matlock:

The Maine Library of Geographic Information is pleased to submit its report of operations as required by L.D. 2116 "An Act to Establish the Maine Library of Geographic Information (Chapter 649)." This report will be posted to the GeoLibrary website at http://www.maine.gov/geolib/ .

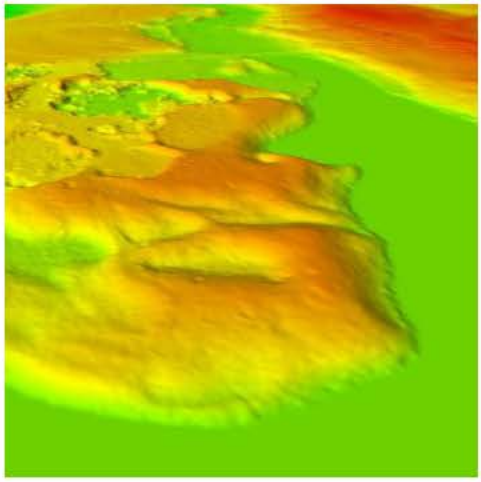
Significant recommendations in this report are to provide funding to support geospatial data acquisition and to develop a funding mechanism to support GeoLibrary Board activities. This data is used by everyone: public, private, nonprofit, and educational institutions. Maintaining it is an investment in our future just as the building and repairing of our roads, bridges, and other physical infrastructure. Please support us in this effort.

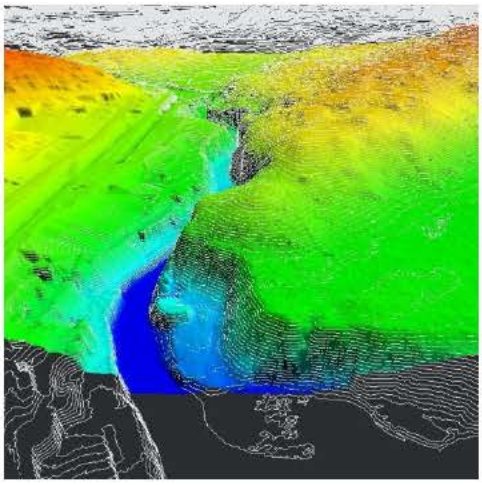
I, and members of the Board, would be pleased to appear before your Committee to answer any questions and to update you on our recent activities.

Sincerely,

Claire Kiedrowski

Claire Kiedrowski
Executive Director
Maine Library of Geographic Information Board





MAINE GEOLIBRARY

CY2021 ANNUAL REPORT

MAINE LIBRARY OF GEOGRAPHIC INFORMATION

TO THE JOINT STANDING COMMITTEES OF:
ENVIRONMENT & NATURAL RESOURCES AND STATE & LOCAL GOVERNMENT
130TH LEGISLATURE – SECOND SESSION

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This Maine Library of Geographic Information Annual Report for CY21 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

ABOUT THE GEOLIBRARY

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 Geographic Information Systems (GIS) in statewide strategic planning. The Committee developed a needs assessment – the conclusion of which recommended the creation of the Maine 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:

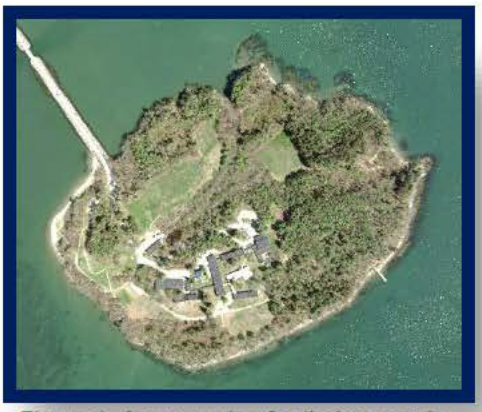


Figure 1. An example of orthoimagery in Cumberland County – Mackworth Island, acquired in Spring 2021.

- 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.

This Maine Library of Geographic Information Annual Report for CY21 has been prepared in accordance with 5 M.R.S.A. §2003(I)(L).

EXECUTIVE SUMMARY

The following is a summary of the GeoLibrary's data acquisition activities and data needs. The GeoLibrary continued its efforts to coordinate agency data acquisitions in Calendar Year (CY) 2021. The United States Geological Survey (USGS) approved and partially funded the acquisition of **almost 4000 square miles of LiDAR data along the Mid-Coast and DownEast portions of Maine in 2021** (see Figure 2). The contractor was partially successful in acquiring the eastern portion of the dataset, which is currently being processed. The Mid-Coast section (in red) is being flown this fall and into early winter as conditions allow. Anticipated delivery for the final data is in the fall of 2022.

Figure 2. LiDAR Coverage acquired in Spring 2021 shown in green; anticipated capture of mid-coast area (shown in red) in Fall 2021. Anticipated availability in Fall 2022.

The GeoLibrary submitted a proposal to the USGS in October of 2021 for over **2000 square miles of LiDAR** data to replace outdated information along the Southern Coast of Maine; approval on our submission came mid-November 2021 and a planned 2022 spring acquisition with a delivery in early 2023.

The GeoLibrary initiated a refreshment of base mapping orthoimagery in southern Maine (see Figure 1 for an example of 3" imagery). An interactive map is located on the GeoLibrary's website which provides more detail regarding the orthoimagery base mapping efforts.

http://www.maine.gov/geolib/programs/ortho/index.html

A land cover initiative was adopted by the Board to update the old 2004 land cover dataset. Fundraising and community outreach were accomplished this year with a goal of new landcover datasets available to the public in 2023.

The Board voted to update our Strategic Plan, as the last one was developed in 2009. Funds to hire a consultant to coordinate the plan were also approved by the GeoLibrary Board. The strategic plan will develop a road map for achieving the GeoLibrary Board's legislatively mandated responsibilities.

KEY DATA LAYER ACTIVITIES

The 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 PROGRAM

Leaf-off imagery is a key data set for all agencies and other users needing to see through the canopy cover to the ground for a multitude of planning and development purposes. This is true in organized communities as well as the unorganized territories where it is useful to the wood products industry and other commercial purposes. Due to the lack of funding from state sources, the GeoLibrary has not been able to acquire a statewide data set. The current program is based on a *pay-to-play* system where only those communities and counties with resources can participate in the GeoLibrary Orthoimagery Program. The coverage of orthoimagery can be seen in **Appendix A.**

Through an open RFP process, the GeoLibrary contracts with a reputable vendor to acquire orthoimagery annually. The target area is developed in concert with counties that are willing to pay for one-third of the costs of acquisition. The remaining two-thirds of the costs are covered through funds provided by state agencies either with memorandums of agreement or as part of the Maine Office of GIS fee structure. Communities can participate in acquiring high-resolution imagery by paying into the program to cover the additional acquisition costs. The costs for Counties and Communities are substantially lower than what they would be if they had to contract for service on their own. Figure 3 shows an example of high-resolution imagery.

Figure 3. An example of high-resolution imagery. Location is Higgins Beach. Imagery captured in Spring 2021.

The 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.

The GeoLibrary initiated its third program (2017-2022) for imagery base mapping and is in its fifth year of the current program. During CY21, both Aroostook County including a portion of Aroostook's Unorganized Territories (UT) and Waldo County signed contracts for eighteen-inch resolution orthoimagery. In addition, four communities (Cape Elizabeth, Cumberland, Falmouth, and Gorham), joined in to purchase higher 3-inch resolution imagery. Frye Island (see Figure 4) opted to purchase 6-inch resolution imagery. Many communities are repeat customers where their county had already participated in the program. Due to adverse weather conditions, only Cape Elizabeth, Cumberland, Falmouth, and Frye Island were flown. The remaining counties, UTs, and Gorham will roll over to the final year of the program in 2022.

Figure 4. All of the Town of Frye Island was captured at 6" high resolution imagery in April 2021.

The GeoLibrary needs an ongoing funding source to stabilize the orthoimagery program for the future. This will provide enough funds to continue to provide matching funds to counties and attract additional funding from local communities. On-going funding will provide continuity for a program that has substantially benefited 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 PROGRAM

Since 2009, the GeoLibrary has initiated several projects to acquire high-resolution elevation (see Figure 5), also known as topographic data. Topographic data is used to create contour maps at one- or two-foot elevation intervals (see Figure 6) suitable for planning development at the parcel level. Accurate elevation data is important to many programs such as: flood risk mapping, watershed delineation and hydrographic mapping, mapping landslide hazards away from the coast, and mapping infrastructure and managing wildlife.

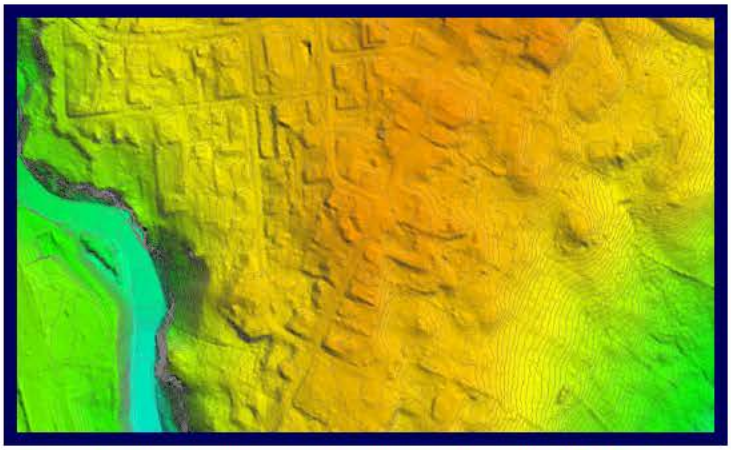


Figure 5. A derivative product developed from the LiDAR – a shaded relief.

Despite a lack of GeoLibrary funding, it has developed partnership proposals to acquire new data with Light Detection and Ranging (LiDAR) Technology for **all** the state's land area. (See map in **Appendix A**). LiDAR provides elevation and topographic information, and derivative products include shaded relief models and contours.

The current **Mid-Coast and DownEast LiDAR project** covers a total of 3981 square miles (sq mi) and provides a complete set of USGS Quality Level 2 (QL2) accuracy data with tidal coordination where applicable.

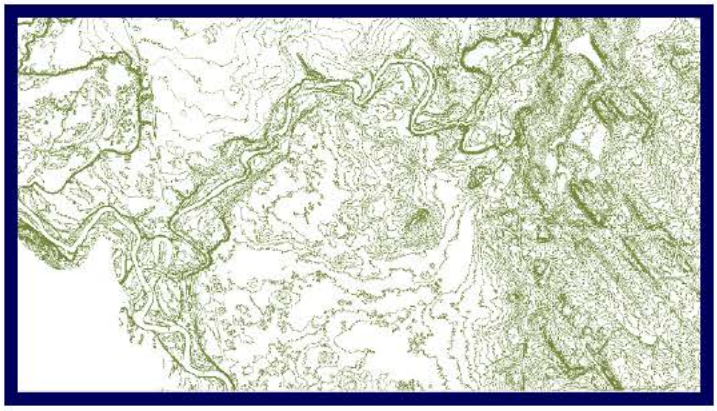


Figure 6. A derivative product derived from LiDAR – 2' contours.

The GeoLibrary received funding from numerous public and private sources including the Natural Resource Conservation Service (NRCS), state agencies such as the Maine Department of Transportation, The Nature Conservancy, and others. This year, the GeoLibrary solicited over $275,000 from state and local partners to apply for USGS matching funds. USGS then expanded the original area of interest of 2030 sqmi (due to State funding limitations) to almost 4000 square miles (sqmi), for an estimated value of **$784,000. This means that Federal partners are providing over 65% of the total project costs.**

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 natural and manmade environments.

LAND COVER AND IMPERVIOUS SURFACES

High-resolution land cover and impervious surfaces data provide critical information for tracking changes in our environment important to designing numerous development projects.

Urban communities planning for stormwater 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 landcover data. A buy-up to this resolution of data would be a great benefit for communities and state agencies that need accurate data for stormwater modeling, floodplain mapping, and the impact of development and land use activities.

In addition, with a regular refresh rate, this data will provide important insights regarding the effects of climate change and provide much-needed information to support decisions impacted by the changing climate. Maine's most recent land cover data was developed in 2004 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.

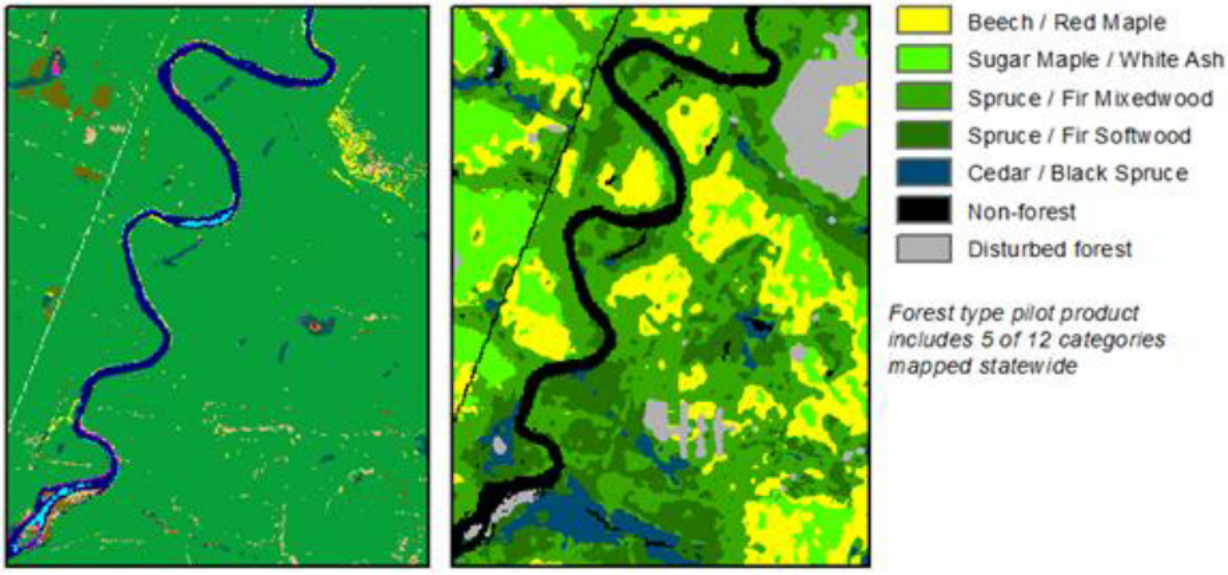


Figure 7. An example of old (2004 data) vs. new (2016) land cover. Notice the detail on the right image.

The GeoLibrary Board voted to make updating this land cover dataset a priority in CY21 and if necessary, provide partial funding from the remaining balance in the GeoLibrary account. NOAA and the University of Maine will be partners in this project and will provide a portion of the funding needed to develop a comprehensive, statewide 1-meter land cover map, and a statewide 10-meter forest type map (see Figure 7), which combined costs $701,000.

NOAA has already committed to invest $250,000 in-kind services, and the University has agreed to donate processing services, which reduces our funding request to $451,000. The GeoLibrary is actively looking for funding partners to complete the final phase of the funding portion of the program (see Figure 8).

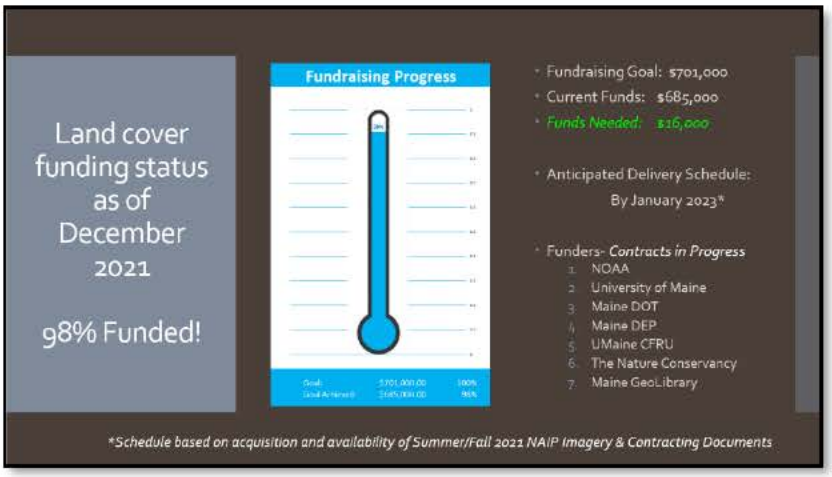


Figure 8. Land cover funding as of December 1, 2021.

Land cover data is most useful when comparing data over time and the GeoLibrary will need to develop a reasonable update cycle for land cover data and set aside annual funds to do this. NOAA's update cycle is every 4-6 years and is a reasonable refresh rate.

Potential partners/users for this project besides NOAA and the university include state agencies, non-profits, communities with water and sewer districts, and other federal agencies.

PARCEL DATA PROGRAM

Current parcel information is a frequent request posed by data consumers and they are frustrated by the lack of a statewide, comprehensive, current, and accurate dataset. Having access to community parcel maps in a digital format (see Figure 9) that is updated on a regular basis is an important resource to state agencies, real estate, and development interests as well as many other users of data. The Board has collected data from many communities through various grant programs, however, it lacks the resources to continue outreach to towns for soliciting updated data and assisting communities without digital maps to acquire them.

Figure 9. Parcel data with orthoimagery underlaid beneath it. An example of using multiple geospatial data layers.

Data from many towns in the State's composite parcel data layer is very out of date, which happens for several reasons. Some 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 a digital format.

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, 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 $4.2 million.

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

The GeoLibrary sees a need for a partnership grant program that would assist communities to maintain parcel maps in a digital format meeting a state standard for data sharing.

BATHYMETRY

Bathymetry data is an important component for transportation planning and development, monitoring fisheries, and analyzing climate change. Near and offshore high-resolution data is needed for a better understanding of Maine's fisheries, support to aquaculture, and impacts of development.

Current bathymetry data is an eclectic mix of data acquired from numerous independent studies and is of varying accuracies. New consistent high-resolution data is needed to complete studies of the land-sea interface for many applications. Large sections of the coast lack current near-shore bathymetry. Portions of the Gulf of Maine data date as far back as the times when lead sinkers and ropes were used to determine 'depth to the bottom'. The state needs a systematic approach to updating bathymetric data by taking advantage of modern technology for increased accuracy. Better bathymetry would contribute to improved navigation, provide an understanding of fisheries habitat, support aquaculture and, model floods. This data is especially important to the state's tidal areas including the rivers systems to heads-of-tide.

The state should acquire Atlantic Ocean near-shore bathymetry data (see Figure 10) on an annual basis with a goal of updating the data in a regular refreshment rate for areas susceptible to change due to accretion and erosion of shorelines. An initial estimate of costs for an annual acquisition program included in the GeoLibrary OneMAP program is estimated at $500,000.

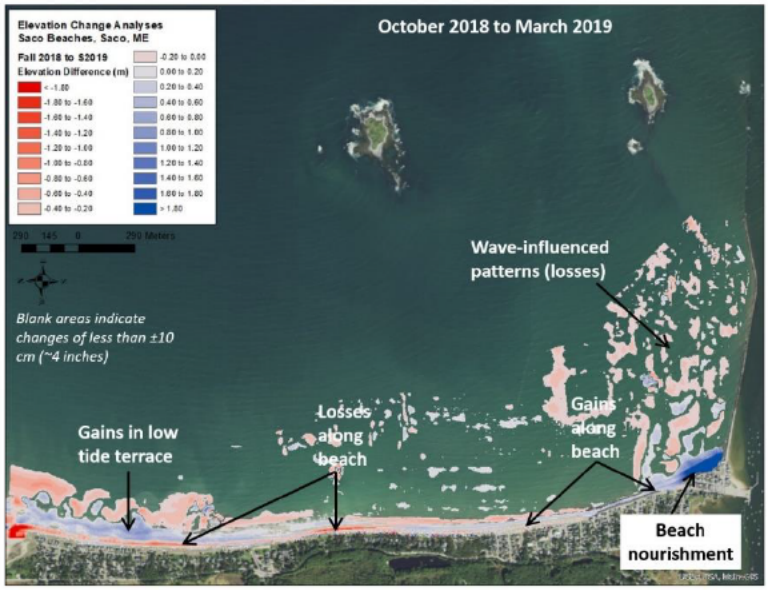


Figure 10. Example of bathymetric LiDAR and resulting analysis along Saco Beach.

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. This data is one of several geospatial datasets that supports the development of value-added products such as the Land Cover layer, which is critical to assess the effects of climate change.

FINANCIAL STATUS

The GeoLibrary has not received funding from Legislature for either operations or data acquisition. Despite the lack of funding, GeoLibrary staff have been successful in building partnerships and leveraging 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) – See Table 1. **This balance results from good fiscal control, strategic planning, and engaging partners by providing community outreach.**

General Government Service Center
OIT Finance Group

Cash Balance Available
As of 12/3/2021

Geospatial GIS Report

	A	B	C	D	E	F
	Cash Balance Projection	**Vendor**	**Agreement**	**End Date**	**Amount**	**Notes**
1	**OSR Revenue**					
2	Funds Available (9/30/2021)				$ 1,700,284.57	Inlcudes $102K for Landcover
3	Recievable Expected				80,190.00	
4	**OSR Expenses/Obligations**					
5	Contract Liability	USGS	20210226000000002347	7/1/2024	(192,348.75)	
6	Contract Liability	Quantum Spatial	20200423000000010581	3/31/2021	-	
7	Contract Liability	Woolpert	20210409000000008474	12/31/2021	(248,553.60)	
8	Contract Liability	HUC USGS	20210426000000002931	12/31/2021	(2,500.00)	
9	Contract Liability	Timmons Group Inc, Consulting	20210819000000000403	3/31/2022	(47,200.00)	
10	**Total 014 Cash Expected**				$ 1,337,072.22	
11		**TIMMONS GROUP INC**				
12	**Grant Related Analysis**					
13	Funds Available (9/30/2021)				$ 4,800.49	
14	Contract Liability	Dewberry	20200915000000002007	12/31/2021	-	
15	Contract Liability	Quantum Spatial	20200423000000010581	3/31/2021	-	
16	**Grant Balance Remaining**				$ 4,800.49	Grant Available, must be in scope of grant
17						
18	**Total Cash Available (With current expenditures)**				$ 1,341,872.71	
19						
20			**Projected Cost through SFY 2022**			
21	**OSR Revenue**					
22	Funds Available after Current Obligations				$ 1,337,072.22	6/30/2021 Cash Balance, Less Grant Available
23	Recievable Expected in SFY 2022 based on future obligations				701,996.96	Includes $31,966 for SFY 2021 Flying Season
24	**OSR Expenses/Obligations**					
25	LiDAR				(221,698.11)	
26	Ortho Counties - Remaining				(371,077.00)	
27	Ortho County Uts - Remaining				(613,619.00)	
28	Ortho Buy Ups				(90,000.00)	
29	Land Cover				(451,000.00)	
30	STACAP (4.6667%)				(2,202.68)	Admin cost of Strategic Plan
31	**Cash Balance at Yearend (6/30/2022)**				$ 289,472.39	

Notes:
1. This report is based on obligations and does not factor in cash flow

Geospatial Final GIS report 12.3.2021.xlsx
12/3/2021

State Fiscal Year 2022

Table 1

Our projected costs for data acquisition for the fiscal year 2022 (ending June 30, 2022) are also shown in Table 1. The GeoLibrary manages and supports a variety of geospatial acquisition projects every year which include orthoimagery and LiDAR. Funds will also be needed for the land cover project, which will be processed in 2022. Funds for all these projects require matching funds from the GeoLibrary, as well as raising funds from outside sources. The GeoLibrary has been successful in its fundraising campaign but still requires an ongoing funding source.

STRATEGIC PLAN UPDATE

The Maine GeoLibrary Strategic Plan was last updated in 2009. This is the guide for strategic work performed on behalf of the Maine Library of Geographic Information. In July of 2021, the GeoLibrary Board launched a project to develop an updated strategic plan that will provide a future-looking blueprint for financing Board operations, data acquisition and hosting and dissemination of geospatial data to the greater GIS community and the citizens of Maine. This plan will form the basis for completing and maintaining the Board's OneMAP for ME program and other strategic efforts to build or provide access to core geospatial infrastructure shared with the GIS community.

Goals and tasks for the plan include:

- Lead an in-depth review of the GeoLibrary Board's legislation seeking input from policymakers, GIS users, GIS Managers, and other GIS constituencies. This review will lead to a determination of;
  - The efficacy of the Board in meeting its obligations under existing legislation and,
  - Determine whether legislative changes are necessary and provide draft legislation for any recommended changes.
- Provide an analysis of:
  - State agency and non-state GIS data users' needs for GeoLibrary services,
  - Technology required to deliver services,
  - Staff required to support these services,
  - Funding requirements to deliver GeoLibrary services,
  - Potential partnerships and sources of funding other than direct State support the Board should seek to develop for achieving goals identified in this strategic plan.

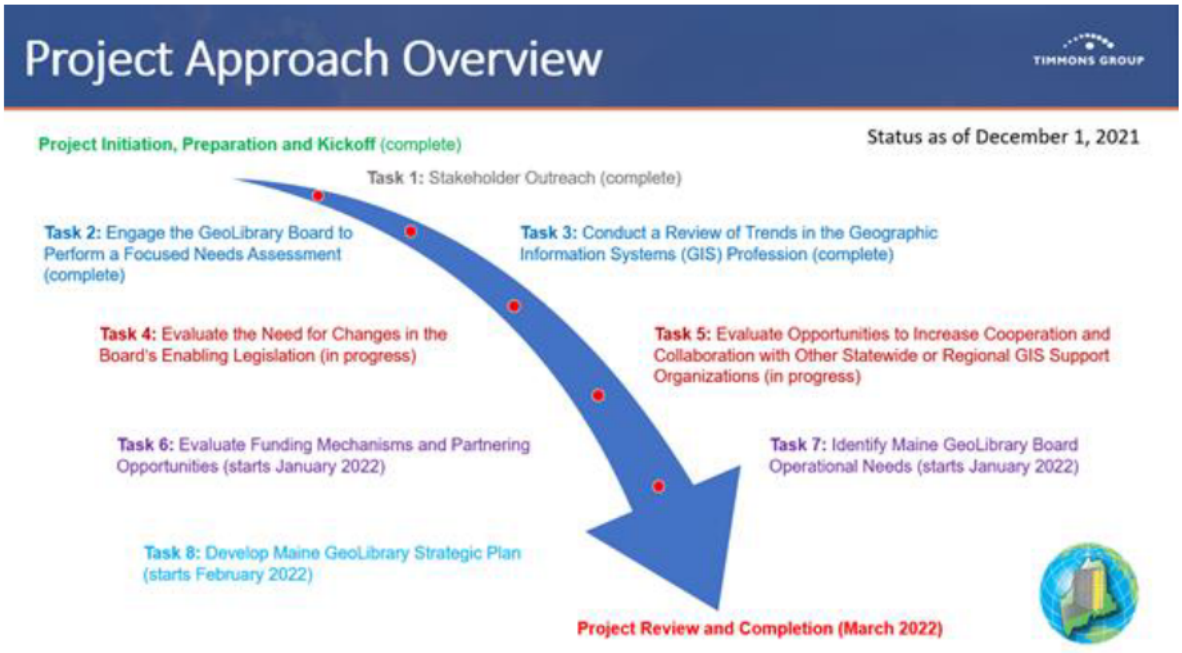


Figure 11. Strategic Plan Overview and Timeline, as of December 1, 2021.

The recommendations of the updated Strategic Plan will be presented to the GeoLibrary Board in March 2022 (see schedule in Figure 11). All are welcome to attend and participate in this public meeting. The results of the Strategic Plan will also be displayed on the GeoLibrary's website and disseminated through our online Listserv email account.

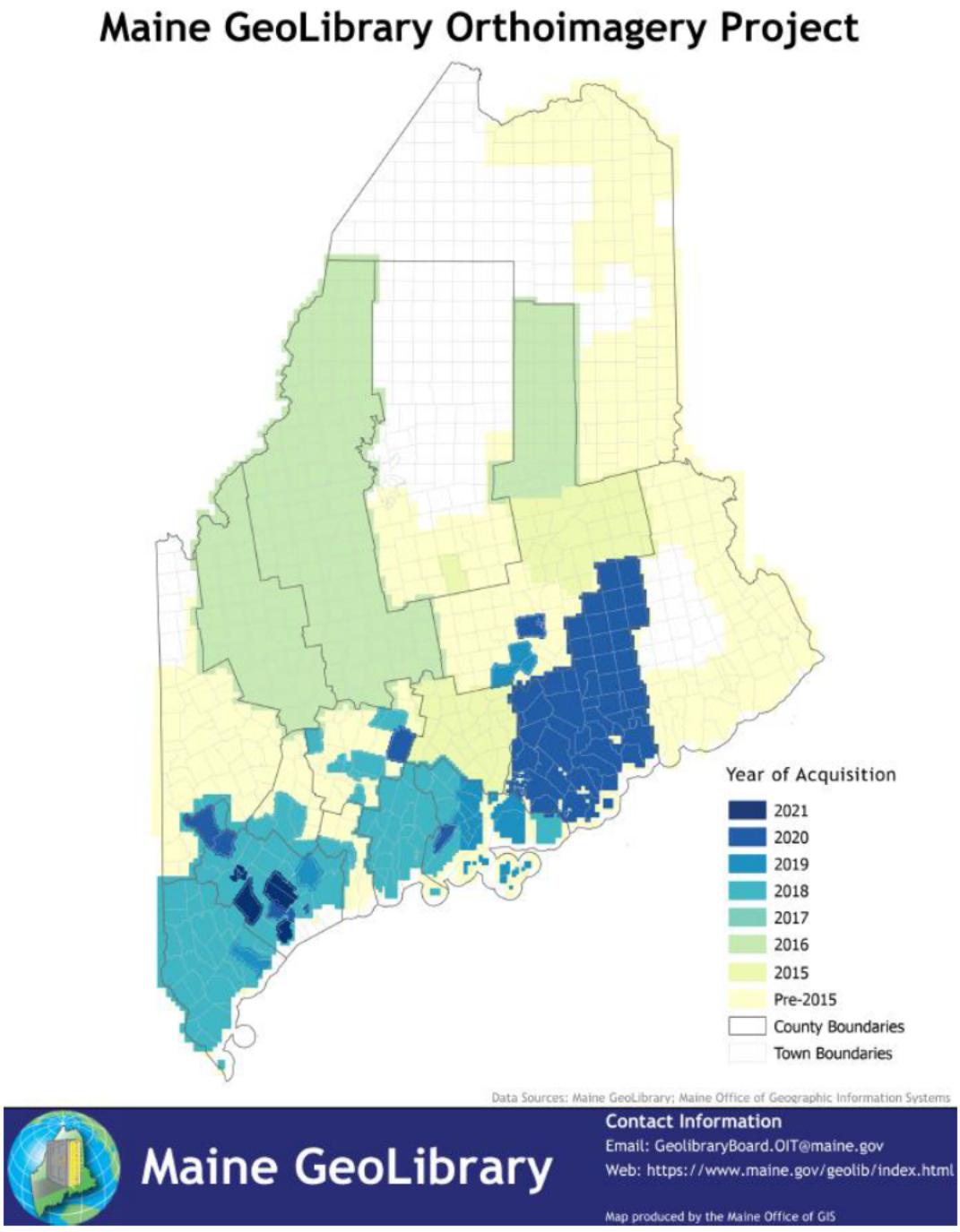
RECOMMENDATIONS

1	Provide funding to support geospatial data acquisition. All state funds require at least a 1:1 match and the GeoLibrary has a proven track record in finding partners to finance data acquisition. The Maine Climate Council's Scientific and Technical Subcommittee's report "Scientific Assessment of Climate Change and its Effects in Maine" found the following recommendations and needs for improved data collection and studies, which include imagery, LiDAR, land cover, bathymetric LiDAR, and parcels. The Maine Library of Geographic Information is the logical vehicle to accomplish the data acquisition components of the data collection and to assist in developing resources. With limited staff support and no general fund allocations, it has been successful in developing funding to acquire millions of dollars in elevation and imagery geospatial data which is playing a key role in supporting initial data development for the climate council.
2	The services of the GeoLibrary are for stakeholders outside of state government. They support engineers, surveyors, developers, realtors, municipalities, 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 GeoLibrary Board activity.

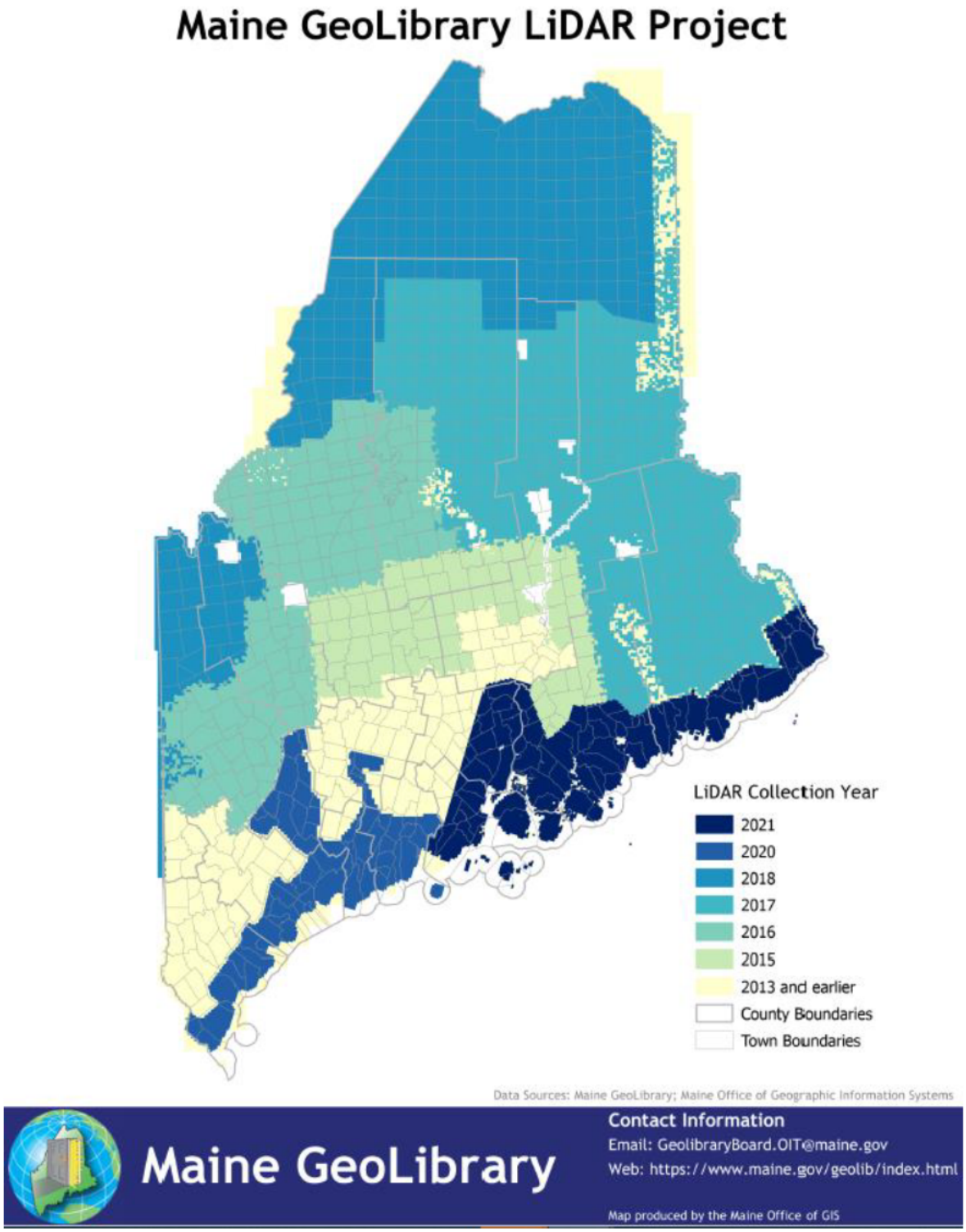
APPENDIXES

APPENDIX A: DATA ACQUISITION PROGRESS MAPS

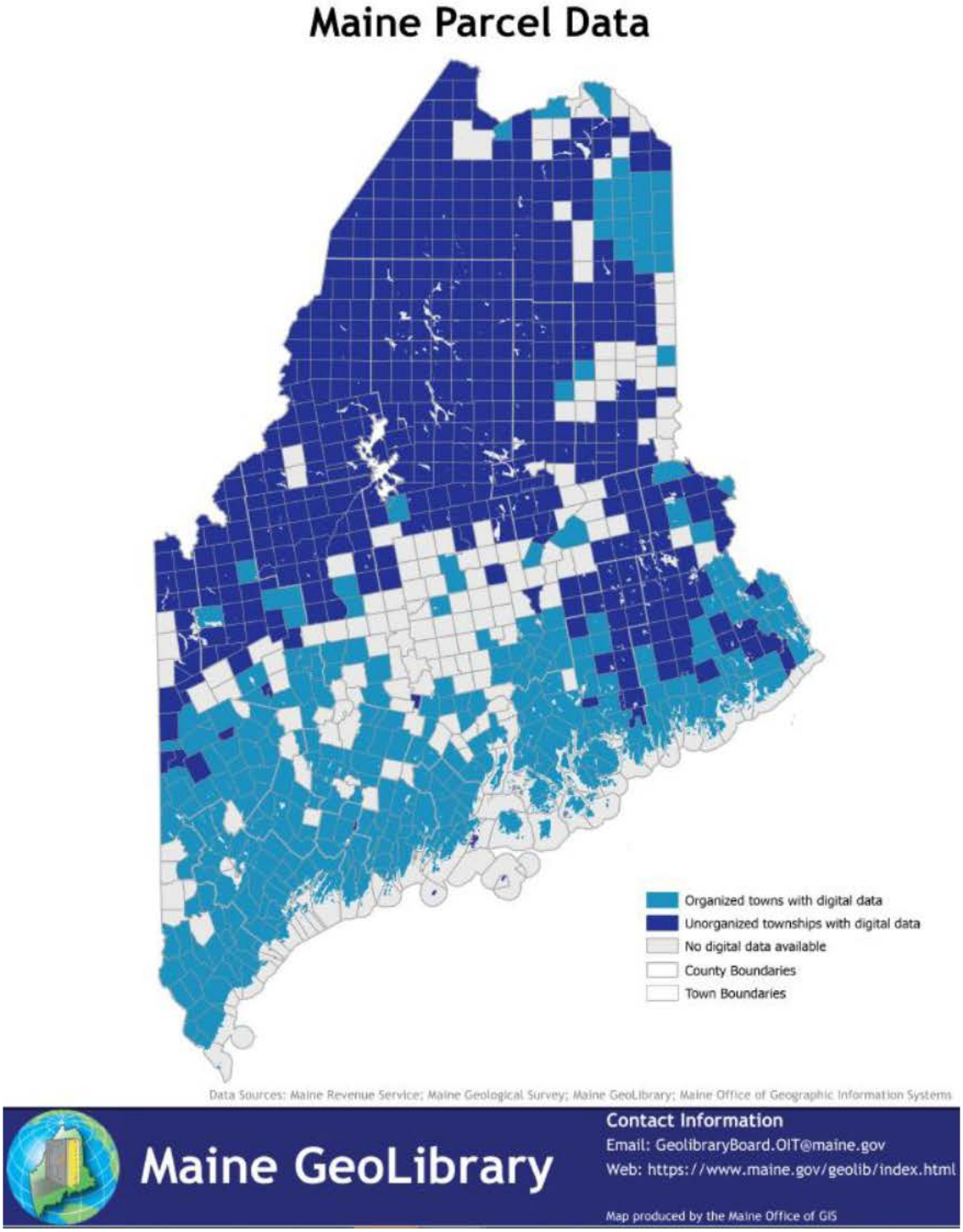
ORTHOIMAGERY (AS OF 12/1/2021)



LIDAR (AS OF 12/1/2021)



PARCELS (AS OF 12/1/2021)



APPENDIX B: PAST PROJECTS

** Please contact the Board for access to studies that are off-line. Projects are located here online: https://www.maine.gov/geolib/policies/otherdocs.html*

2012 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 a ROI of 400-1200%.

2009 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 C: 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/.

STANDING COMMITTEES

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.

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.

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.

WORKGROUPS

In addition to the three standing committees, the GeoLibrary has four workgroups with members solicited from the state's 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 workgroups are:

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.

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.

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 statewide, considering special needs of the various constituencies: K-12, academia, local government, non-profits, and any Maine citizen.

GEOPARCELS

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

APPENDIX D: BOARD MEMBERSHIP (AS OF 12/1/20)

Seat	Member	Term Ends	Representing	Appointed By
1	**Nicholas Marquis** Client and Infrastructure Department of Administrative and Financial Services (207) 624-7776 Nicholas.Marquis@maine.gov	Permanent	Dept. of Administrative and Financial Services (DAFS)	DAFS Commissioner
2	**Brian Guerrette** Enterprise Shared Services Department of Administrative and Financial Services (207) 649-3838 Brian.Guerrette@maine.gov	Permanent	State CIO	State Chief Information Officer
4	**Nate Kane*** Dept of Transportation (207) 624-3297 Nate.Kane@maine.gov	09/17/2018	Governor	State GIS Functions
5	**Vinton Valentine** University of Southern Maine (207) 228-8455 vvalentine@maine.edu	06/22/2022	University of Maine Chancellor	University of Maine System
6	**Greg Copeland*** GIS Manager, City of Biddeford (207) 710-6666 Gregory.Copeland@Biddefordmaine.org	TBD	Senate President	Municipal Government
7	**Vern Maxfield** Town of Woodstock (207) 665-2668 vhm24@megalink.net	05/06/2023	House Speaker	Municipal Government
8	**Leticia vanVuuren** Knox County EMA (207) 594-5155 gisp@knoxcountymaine.gov	10/28/2022	House Speaker	Statewide Association of Regional Councils
9	**Betsy Fitzgerald*** Washington County (207) 255-3127 manager@washingtoncountymaine.com	09/17/2017	Governor	Statewide Association of Counties
10	**Katie Bernhardt** American Title (207) 404-3231 ckbernhardt@gmail.com	11/25/2022	Senate President	Real Estate and Development Interests
11	**Sarah Haggerty** Maine Audubon (207) 781-2330 x225 shaggerty@maineaudubon.org	6/17/2023	House Speaker	Environmental Interests
12	**VACANT**		Governor	Utility Interests
13	**Aaron Weston** Cartographics Associates, Inc. (603) 761-6241 aweston@cai-tech.com	04/28/2022	Senate President	GIS Vendors

14	**Patrick Cunningham*** Blue Marble Geographics (800) 616-2725 patrickc@bluemarblegeo.com	TBD	House Speaker	GIS Vendors
15	**Joseph Young, Chair** Private Citizen (207) 931-7626 joe.younggis@gmail.com	04/28/2022	Senate President	Public
15	**Maria Jacques** Maine PUC (207) 287-6083 Maria.Jacques@maine.gov	09/12/2021	Governor	State GIS Functions

NOTE: Seat 3 was eliminated by Legislature

"*" Renewals for these seats are awaiting appointment.

Executive Director: Claire Kiedrowski, (207) 266-7087, claire.kiedrowski@maine.gov

APPENDIX E: ACRONYMS & DEFINITIONS

Term	Description
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 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