Final Report - Maine Category 4 CAP Grant

Date:
January 3, 2014

Agreement #:
G12AC20133

Project Title:
Implementation of a Statewide Orthoimagery Business Plan for Maine

Organization:
Maine Office of Geographic Information Systems,
SHS 145,
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Collaborating Organizations: N/A

Executive Summary:

This project builds on previous CAP grants and in particular Maine's strategic plan supporting NSGIC goals. A program for updating the states high-resolution aerial orthoimagery on a regular refreshment cycle was a key component of the plan. In 2010 despite a lack of dedicated funding, the Maine Library of Geographic Information Board (GeoLibrary) established a committee to review orthoimagery needs within the GIS community and develop a plan to meet those needs. The committee included a multi-disciplinary statewide team of GIS users. The result was a credible 5-year plan for a collecting imagery on a revolving five-year schedule based on a partnership between state, federal, county and local community support. This ambitious plan is being implemented with limited staff support and volunteer services from board members. The Board identified the need for high-quality promotional material and presenting the program at conferences where users of the data congregate to market its services for data acquisition, encourage participation and funding for the project. Without dedicated state support it was critical to enlist the support of state and federal agencies as well as, and more importantly, the support of counties and communities in this effort.

The purpose of this proposal is to develop promotional materials, host, forums and workshops to promote the imagery acquisition program. A secondary purpose for these activities is to support outreach to legislators and community leaders who may be able to assist in developing sources of funding for acquiring imagery and other geospatial data to support the GIS user community.

Project Narrative:

Beginning in May of 2012 a contractor was confirmed and a process for developing promotional materials started. Promotional materials were developed and submitted to FGDC, these include a 2-page folding brochure, a one-page cost sheet insert, a one-page ROI insert (funded from a 2011 Category 5 CAP grant), and summary postcards for mailing to municipal and county contacts. In addition to these print materials and two freestanding banner stands were acquired for use as visual aids in trade show

settings. (electronic copies of the materials are will be submitted with this report. Municipal and county contact lists were purchased from the Maine Municipal Association, and a vendor (Woolpert, Inc.) was contracted to provide additional staff support and expert testimony.

Throughout the course of this project with staff assistance from the Maine Office of GIS and board members, the othoimagery acquisition program has been presented at nine statewide conferences. In addition to exhibits at the conferences, listed speaking engagements were solicited to present the program in workshop sessions. Also through assistance from the Maine Department of Conservations Floodplain Management, Program a Geospatial Data Symposium was sponsored to present and illustrate how the orthoimagery and LiDAR data was being used in public, nonprofit and private sectors to satisfy their business needs.

The symposium was held in March of 2013 and was attended by 62 professionals from a variety of disciplines including municipal and utilities management, GIS, engineering and forestry. The one-day symposium included presentations showcasing the use of imagery and LiDAR in forestry, government, environment, engineering and development. It also included a "Working with LiDAR and Imagery Data" workshop.

Michael Smith, Maine Office of GIS Manager, provided an overview of publicly available data, how to access and download data. He also provided demonstrations of the GeoLibrary's orthoimagery and LiDAR data acquisitions, including, concepts such as point cloud, shaded relief, raster images, bare earth, DEM, TIN, LAS and how to use these files in your applications.

The Board sought out opportunities to appear before constituencies in speaking engagements. This effort was rewarded with speaking engagements at several conferences and was successful in raising awareness of the orthoimagery and LiDAR data acquisition programs in many different professions. These speaking engagements included the 2012 and 2013 Convention of Maine Counties. New England Society of American Forestry, two Northeast ARC Conferences, Geological Society of Maine Annual Meeting and the Center for Forestry Research Unit at the University of Maine.

Conference Exhibitions

2012

- Maine Municipal Association Annual Conference
- Convention of Maine Counties
- Maine Rural Water Utilities Conference
- Maine Water Utilities Conference

2013

- Maine Municipal Association Annual Conference
- Maine Emergency Management Preparedness Conference
- Convention of Maine Counties
- Maine Water Utilities Conference

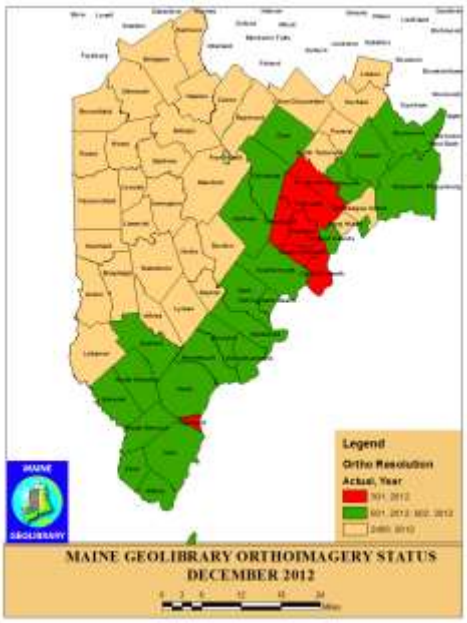
Legislative

The Board also pursued the establishment of a GeoSpatial Data Reserve Fund to provide matching funds for acquisition of geospatial data. Consequently, in the 2013 legislative session LD 877 was passed for this purpose. Although it did not receive a funding allotment, it did raise legislative awareness of the need to acquire geospatial data on a regular basis. The bill attracted support from communities and municipalities forming the beginnings of a statewide coalition to support more accurate mapping for the state. The Board will continue to pursue a consistent source of revenue supporting data acquisition and improvements to Maine's geospatial data infrastructure.

Imagery Acquisition

The Boards efforts to develop its 2012 orthoimagery acquisition were delayed due to an appeal of its contract award. The appeal was denied and so with very little time and resources to develop the 2012 program the first year goal was to acquire base level two-foot resolution leaf off imagery for Cumberland and York counties and succeeded in obtaining participation from both counties. Twenty-nine partners signed up to participate. In addition to the two counties, twenty-seven communities participated in buy ups to higher resolutions.

- Six communities Portland, Falmouth, Cape Elizabeth, Cumberland, South Portland and Westbrook bought up to 3" Level 1 resolution imagery;
- Eight communities Biddeford, Ogunquit, Old Orchard Beach, Saco, Scarborough, Gorham, Windham, Gray and Yarmouth bought up to 6" Level 1 resolution imagery and
- Thirteen communities Freeport, Brunswick, Harpswell, Arundel, Kennebunk, Kennebunkport, Wells, Sanford, South Berwick, York, Eliot and Kittery bought up to 6" Level 2 resolution imagery.



The GeoLibrary contributed $10,000 in seed funding to get the acquisition started and three State agencies, the Department of Transportation (MeDOT), Maine Emergency Management Agency (MEMA) and the Maine Public Utilities Commission (MPUC) signed memorandums of Agreement to contribute $100,000/year for five years to support a statewide acquisition program for base level orthoimagery. This effort succeeded in leveraging almost $373,000 in other funding. This included $42,060 in county funding, $15,000 in Federal funding and $315,456 from cities and towns. The first year project was substantially smaller than the goal of acquiring 6,000 square miles per year due to the lack of staff, time supporting materials and federal matching funds. It did succeed in acquiring 60.3 sq. mi of 3" resolution 316 sq. mi. of 6" resolution, and 1253.7 sq. mi. of 24" resolution imagery for a combined total of 1630 sq. mi. of data.

Using the resources developed under this grant the state was able to improve upon the number of counties included and nearly double the amount of imagery acquired. The 2013 program acquired base level two-foot resolution leaf off imagery for Androscoggin, Kennebec, Knox, Lincoln, and Sagadahoc counties. 27 local partners committed to participate in the second year of the project. These included five counties sharing the base level costs and 22 communities buying up to higher resolutions.

- Four communities Auburn, Lewiston, Belfast, and Camden bought up to 3" Level 2 resolution imagery;
- six communities Augusta, Hallowell, Gardiner, Livermore Falls, Rockport and Bath bought up to 6" Level 1;
- and 12 communities Manchester, Boothbay, Boothbay Harbor, China, Damariscotta, Phippsburg, Rockland, Thomaston, Vassalboro, Waterville and Winslow bought up to 6" Level 2.

State agencies participating in the 2013 project included the MeDOT, MEMA and the MPUC contributed $100,000 for base level orthoimagery. This effort succeeded in leveraging over $308,000 which included $73,834 in county funding, $30,000 in Federal funding and $204,302 from communities. There was a slight increase the total area acquired to 1,774 sq. mi. including 115.3 sq. mi of 3" resolution, 318.7 sq. mi. of 6" resolution and 1340.1 sq. mi. of 24" resolution.

With the conclusion of this second year effort, the Board has acquired 3,404 sq. mi. of imagery. The rate of acquisition is not meeting the initial goals set for this project. The continuing long-term economic challenges have reduced the appetite for funding projects that are not seen as critical needs. Funding from federal sources has been very disappointing and have fallen far short of the anticipate 30 percent match projected when the project was first initiated. Support from State agencies has been consistent at slightly below expectations but with the delivery of two years of data more interest has been shown and the Board anticipates being able to increase funding levels in this area. Support from Counties has been growing and as information about the program has been distributed during the course of this project Waldo county which had initially said no to participation has seen the value and is ready to participate.

Attached to final report submission:

Products:

Full:

Four Page Brochure
Return on Investment two-page brochure
Program brochure two-page
Symposium Program

Feedback on Cooperative Agreements Program

What are the CAP Program strengths and weaknesses?

The strength of the CAP program is its focus on changing the process of geospatial data, whereas most other grant programs change the data. Changing processes hopefully provides a more sustainable outcome.

Where did it make a difference?

For us, we used the CAP award to promote our orthoimagery program (implement the business plan). While we had developed a robust partnership program, many of the small communities and rural counties were either unaware of the program, or unaware of how it could benefit them. Our CAP award funded informational sessions and promotional materials to get the word out, and resulted in greater community involvement.

Was the assistance you received sufficient or effective?

Yes on both accounts.

What would you recommend that the FGDC do differently?

Nothing really, it's a good program and a shame it is not currently funded.

Are there factors that are missing or are there additional needs that should be considered?

No.

Are there program management concerns that need to be addressed, such as the time frame?

No.

If you were to do the project again, what would you do differently?

Nothing really, it worked well for us.