

Update to Maine GeoLibrary Orthoimagery Program

June 2015



References:

Maine GeoLibrary Orthoimagery Subcommittee Report and Recommendations May 24, 2010

Base Orthoimagery Specifications

Orthoimagery RFP issued by the State of Maine Office of Information Technology in 2011

Subcommittee Members:

Dan Walters, US Geological Survey

Joe Young, Maine GeoLibrary

Sean Gambrel, City of Bangor

Jon Giles, Sebago Technics

Ken Murchison, Northern Maine
Development Commission

Bob White, E911 Public Utilities
Commission

Mal Carey, Public

John Root, City of Rockland

Sarah Tucker, Town of Bethel

Donald Katnik, Maine Dept. of Inland
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Nate Kane, Maine Dept. of
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Brett Horr, Town of York

Jim Fisher, Hancock County Planning
Commission

The Maine GeoLibrary Geospatial Data Committee activated the Orthoimagery Subcommittee in September 2014 to take stock of the current orthoimagery program and make adjustments. The Subcommittee will not rewrite the 2010 report. Instead, this document describes changes that will need to be made to the Program, the Base Orthoimagery Specification and the Orthoimagery RFP that was issued in 2011. These documents will guide the development of an Orthoimagery Program RFP to be issued in January 2016 by the GeoLibrary (State of Maine). The committee continues to be focused on a plan that provides orthoimagery to all parts of the state on a regular cycle.

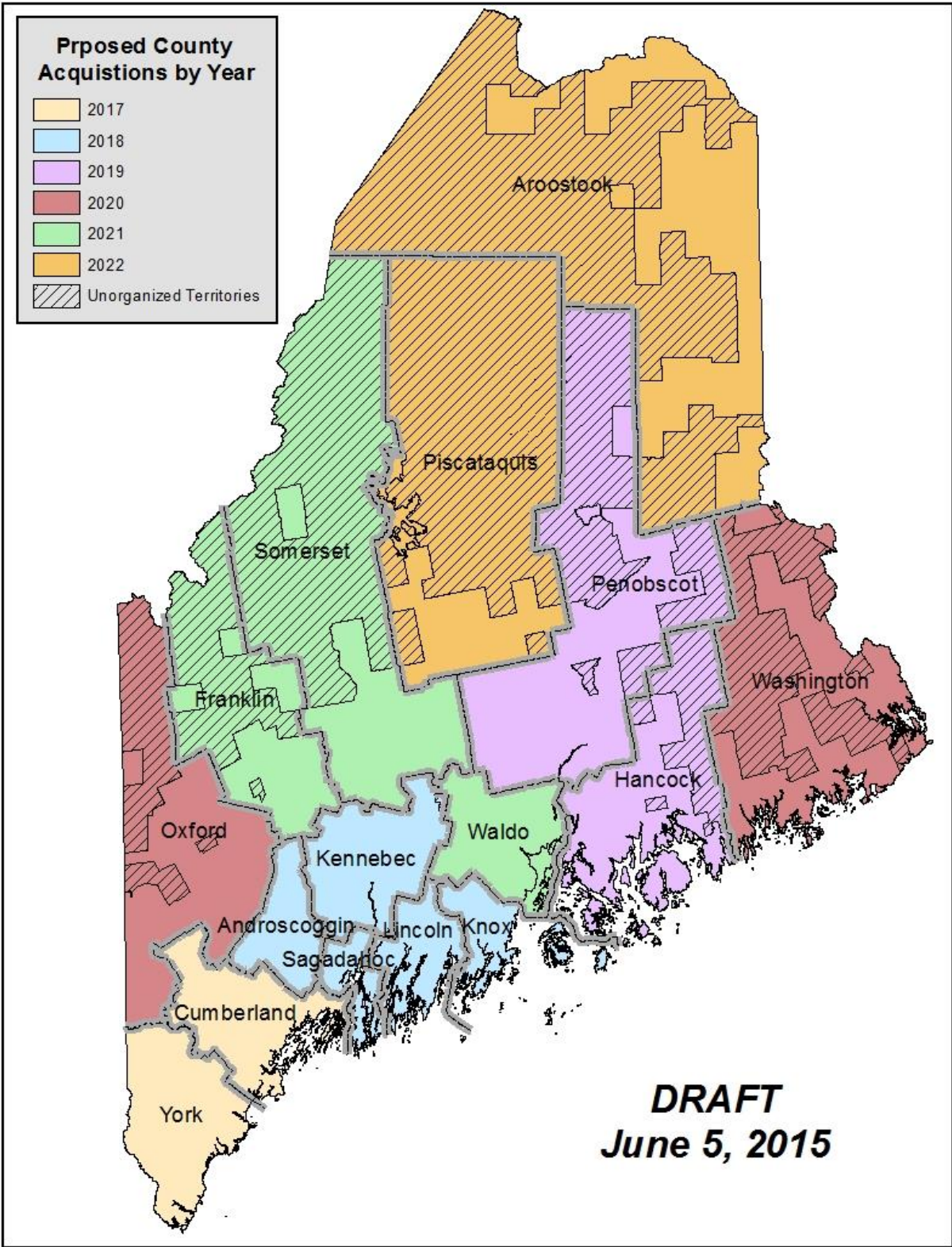
The Subcommittee recommends the following program modifications:

III B National Agricultural Imagery Program (NAIP)

- NAIP will become the base orthoimagery product for the unorganized territories (UTs) of the state. It is flown every two or three years depending upon USDA and USGS funding levels, and has demonstrated value to the forestry industry and other users in these areas. Standard program buy-up options are applicable through the state Program (Section III E) and USDA (<http://fsa.usda.gov/FSA/apfoapp?area=home&subject=prog&topic=nai>).
- In 2017 the NAIP standard product will be ½ meter resolution 4-band imagery.

III C Basic Program

- The ground sample distance (GSD) for the organized towns will remain 2 feet.
- The GSD for the unorganized townships will be 1 meter from NAIP.
- The refresh cycle for the Program will be changed from 5 years to 6 years.
- The areas to be flown each year beginning 2017 are shown in figure 1 and are based on the organized towns and townships.
- The delivery of orthoimagery for the unorganized territories within each county or county group is based on the USDA NAIP schedule, not the Program schedule. (see buy-ups section)
- The imagery will be 4-band digital imagery
- The program permits updates sooner than the 6 year refresh cycle. State and federal funding will only be available for the 6 year refresh cycle.
- Organizations buying up that have urban centers will receive preference in flight planning and acquisition times where building lean and shadow can be an issue. The customer, MEGIS and the contractor will identify these areas as the annual acquisitions are planned. Time of day for acquisitions, photo center adjustments and flight line density will be considered.



III E Buy up Options

Additional buy-up options are recommended:

- Non-orthorectified, uncompressed imagery and project files, and aerotriangulation data
- Projection buy-ups: Maine State Plane East NAD 83 feet, Maine State Plane West NAD 83 feet, and WGS 1984 Web Mercator Auxiliary Sphere.
- Quality control check points in cases where vendor statements concerning source materials and production processes used at the project level are deemed inadequate
- Oblique imagery
- Tide coordination as defined by organization paying for this buy-up (e.g., +/- 200 minutes of predicted mean low tide)
- Orthorectified, compressed imagery mosaic for a town:

Mr SID with 40:1 compression ratio

Mosaic will completely cover the participant's area, plus all quarter-tiles within or touching a 200 foot buffer from their defined area

- Orthorectified, compressed imagery mosaic for a county

Mr SID with 40:1 compression ratio

Mosaic will completely cover the county, plus all quarter-tiles within or touching a 200 foot buffer from their defined area

Add section: III F Deliverables

Source Data: Sensor Product Characterization Report

Airborne GPS and IMU data and reports

Supplemental ground control

Flight Diagram, including individual flight line locations. Each flight line will have an attribute in which is recorded the date of image collection on that line as well as the beginning and ending times of image acquisition (shape file format).

Non-orthorectified, uncompressed imagery and project files (applies to buy up at time of acquisition):

Suitable for use with the ERDAS Stereo Analyst Extension for ArcGIS.

LPS Block Files, SOCET SET Project Files, MATCH-AT Project Files or similar triangulation solution files compatible with ERDAS

Direct load “oriented images” such as NITF format, Calibrated Images from LPS or Image Analysis for ArcGIS, SOCET SET .sup files with path references to corresponding image files

The images, their associated vertical and horizontal coordinate information, triangulation solutions, and camera orientation data

Index map of tiles

Orthorectified, uncompressed imagery:

GeoTIFF with no overedge. Data shall not be compressed during any phase of the production or delivery process.

Image tiles shall be accompanied by a digital index in shapefile format

Aerotriangulation data when available

Referenced to UTM projection and coordinate system (meters) using horizontal datum NAD83 zone 19 N

Elevation data:

DTM used for orthorectification process in comma separated (.csv) text file

Metadata:

FGDC-compliant

Project level with separate files for the orthoimagery, the non-orthorectified imagery, and any new elevation data

Archive:

All raw data and other information used in the production of the deliverables will be archived by the vendor for 6 years and provided to customers in a suitable format at a cost to be negotiated at the time of distribution. The vendor will notify the state 90 before the 6 year period is up and the state will have the right to take possession at that time.