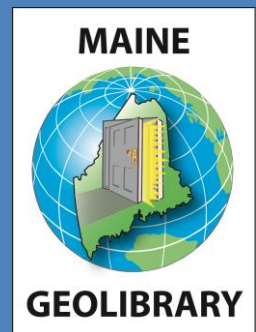


Maine Statewide Orthoimagery Program

GPCOG

March 3, 2021



Maine Orthoimagery Program

- Five-year program (2017-2022) to collect new orthoimagery for the entire state on a county-wide basis.
 - 18" pixel resolution
 - Four-band imagery
- 2 Seasons Left
 - Spring 2021
 - Spring 2022



Program Goals

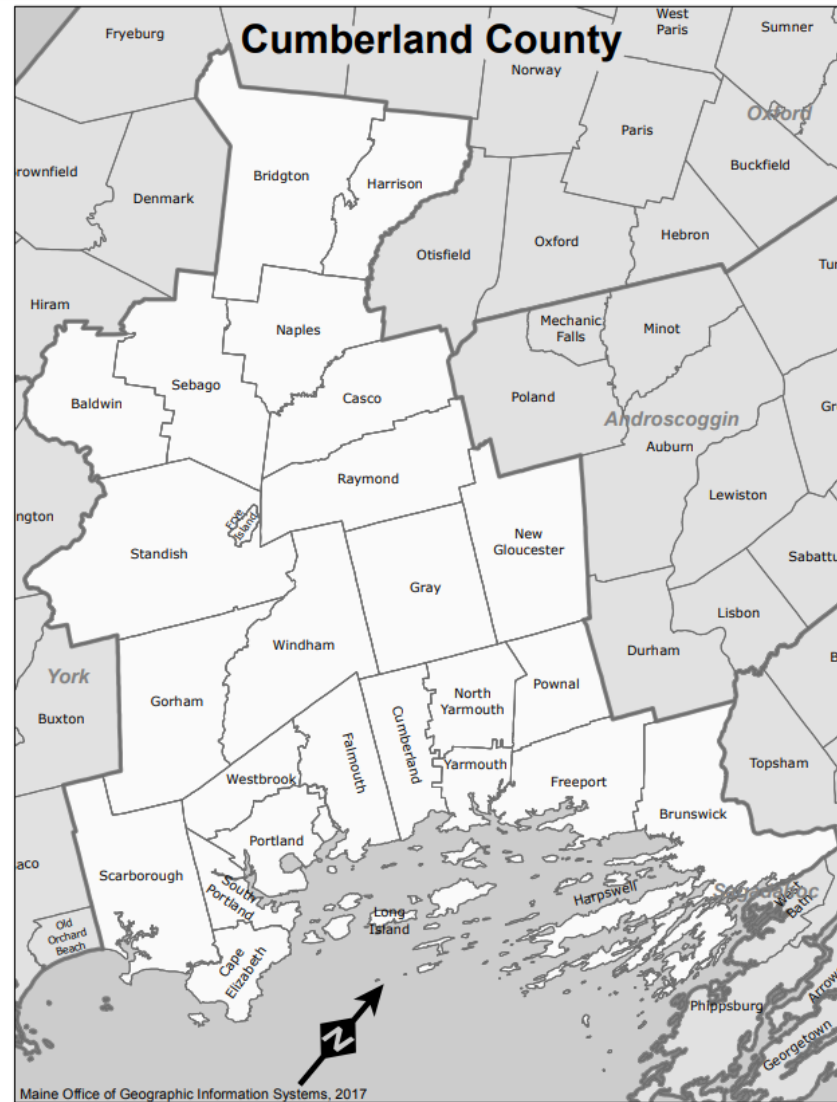
- Develop reliable, consistent statewide data
- Promote cost-efficiency
- Make timelier decisions
- Reduce unwanted costs
- Promote data sharing

“Why can’t I simply use Google Earth or Maps to plan my projects?”

The answer is simple: the accuracy, resolutions and updates for free sources of imagery are undetermined. They lack flexibility and accuracy. And, most importantly, the data can’t be integrated into GIS software.

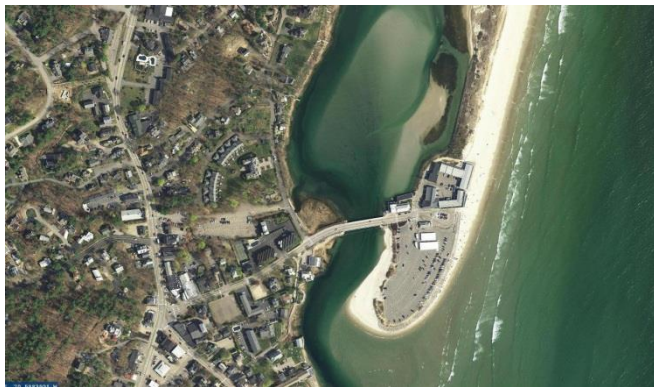
What does it take to participate?

- County and/or UT pay 1/3 cost of 18" aerial imagery
- GeoLibrary will pay the remaining 2/3 cost



Buy Up Options

- When the County or UT participates, then municipalities within that County can ‘buy up’ to increased pixel resolution at a substantial savings.



4-band imagery shows natural color and near infrared.



Location: Ogunquit, ME

Note: All products developed through the program will be distributed through the Maine GeoLibrary.

County Participation to date

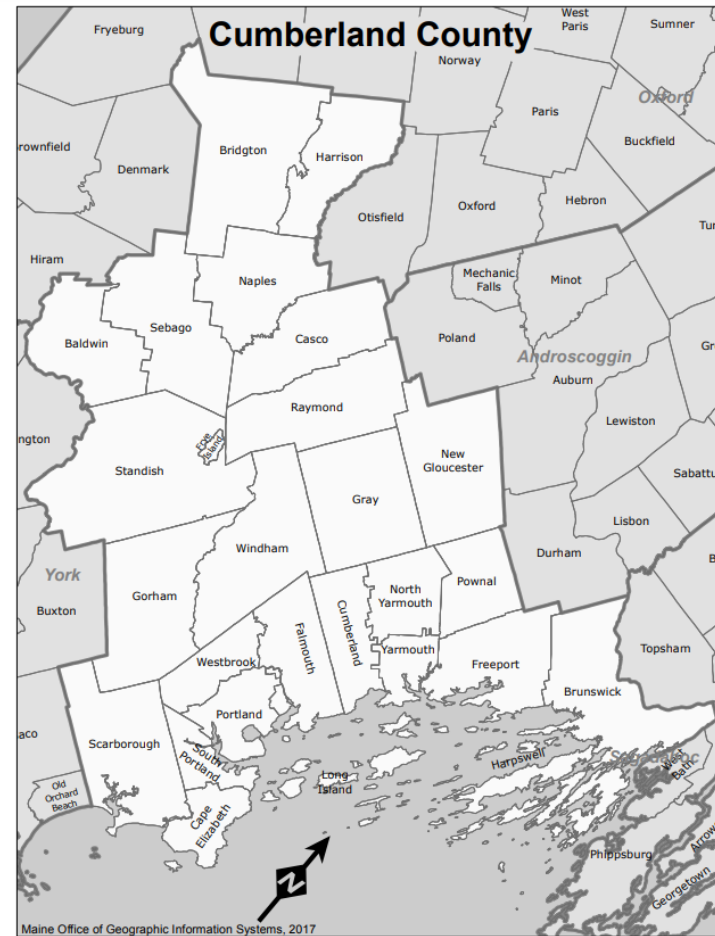
- These counties have already participated so municipalities within those counties are eligible to participate in the current program, which has 2 more flying seasons: Spring 2021, Spring 2022.
 - 2017
 - Cumberland
 - York
 - 2018
 - Androscoggin
 - Lincoln
 - Kennebec
 - Sagadahoc
 - 2019
 - Penobscot
 - 2020
 - Hancock

Municipality Pricing* - Cumberland

*when county and/or UT participate

State of Maine Orthoimagery Prices Cumberland County						
			County Price for Increased Resolution			
County	Tiled Area (SqMI)	18" Base Price	State Share	12"	6" L1	3" L1
Cumberland	1,186	\$64,044	\$42,691.73	\$34,398	\$160,114	\$588,260
County Share		\$21,352				

Town	County	Tile Area (SqMI)	12"	6" L1	3" L1
Baldwin	Cumberland	44	N/A	\$8,000	\$21,500
Bridgton	Cumberland	74	N/A	\$13,000	\$37,000
Brunswick	Cumberland	65	N/A	\$11,500	\$32,000
Cape Elizabeth	Cumberland	24	N/A	\$4,500	\$13,000
Casco	Cumberland	45	N/A	\$8,000	\$22,500
Chebeague Island	Cumberland	17	N/A	\$3,000	\$9,500
Cumberland	Cumberland	33	N/A	\$6,000	\$16,000
Falmouth	Cumberland	44	N/A	\$8,000	\$21,500
Freeport	Cumberland	54	N/A	\$9,500	\$27,000
Frye Island	Cumberland	3	N/A	\$2,000	\$3,000
Gorham	Cumberland	60	N/A	\$10,500	\$30,000
Gray	Cumberland	52	N/A	\$9,000	\$26,500
Harpwell	Cumberland	93	N/A	\$16,000	\$49,500
Harrison	Cumberland	44	N/A	\$8,000	\$21,500
Long Island	Cumberland	8	N/A	\$2,000	\$4,500
Naples	Cumberland	45	N/A	\$8,000	\$22,000
New Gloucester	Cumberland	55	N/A	\$9,500	\$28,000
North Yarmouth	Cumberland	27	N/A	\$5,000	\$13,000
Portland and Island	Cumberland	46	N/A	\$8,000	\$24,500
Pownal	Cumberland	28	N/A	\$5,000	\$13,500
Raymond	Cumberland	53	N/A	\$9,500	\$26,000
Scarborough	Cumberland	63	N/A	\$11,000	\$34,000
Sebago	Cumberland	58	N/A	\$10,000	\$28,500
South Portland	Cumberland	19	N/A	\$3,500	\$10,500
Standish	Cumberland	79	N/A	\$14,000	\$42,500
Westbrook	Cumberland	22	N/A	\$4,000	\$11,000
Windham	Cumberland	59	N/A	\$10,500	\$29,000
Yarmouth	Cumberland	29	N/A	\$5,000	\$14,000



Other County Pricing located here:

<https://www.maine.gov/geolib/programs/ortho/index.html>

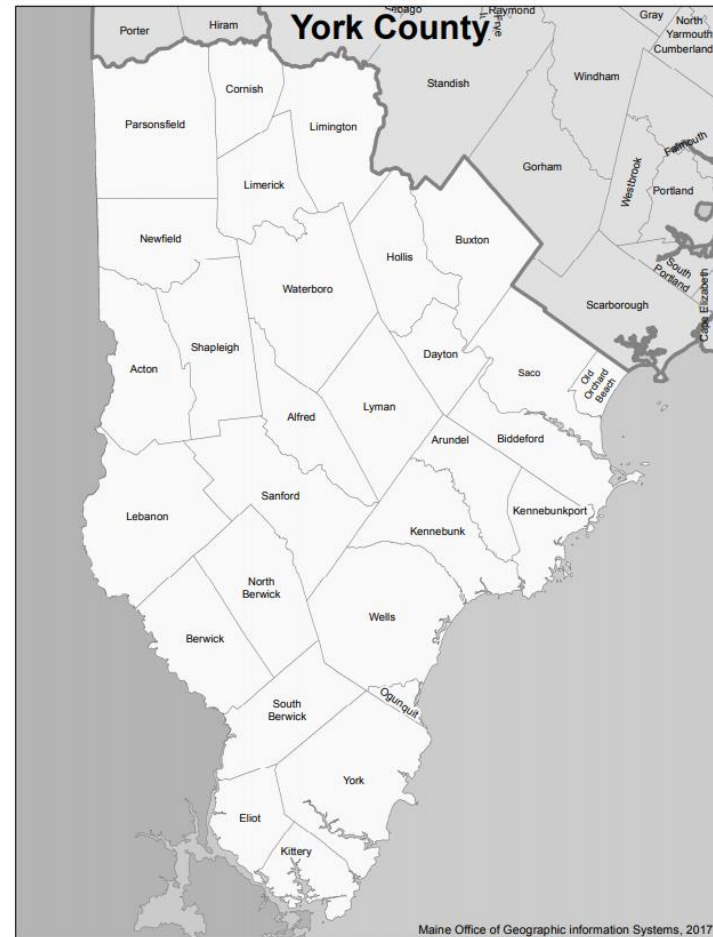


Municipality Pricing* - York

*when county and/or UT participate

State Of Maine Orthoimagery Prices			
York County			
			County Price for Increased Resolution
County	Tiled Area (SqMi)	18" Base Price	State Share
York	1,376	\$74,304	\$49,531
County Share		\$24,773	

Town	County	Tile Area (sq mi)	12"	6" L1	3" L1
Acton	York	49	N/A	\$8,500	\$24,000
Alfred	York	35	N/A	\$6,000	\$17,000
Arundel	York	30	N/A	\$5,500	\$14,500
Berwick	York	45	N/A	\$8,000	\$22,000
Biddeford	York	48	N/A	\$8,500	\$26,000
Buxton	York	49	N/A	\$8,500	\$23,500
Cornish	York	27	N/A	\$5,000	\$13,500
Dayton	York	23	N/A	\$4,000	\$11,500
Eliot	York	26	N/A	\$4,500	\$13,000
Hollis	York	40	N/A	\$7,000	\$19,500
Kennebunk	York	46	N/A	\$8,000	\$26,000
Kennebunkport	York	30	N/A	\$5,500	\$28,500
Kittery	York	28	N/A	\$5,000	\$15,000
Lebanon	York	64	N/A	\$11,000	\$32,000
Limerick	York	35	N/A	\$6,000	\$17,000
Limington	York	51	N/A	\$9,000	\$25,500
Lyman	York	47	N/A	\$8,500	\$23,500
Newfield	York	40	N/A	\$7,000	\$19,500
North Berwick	York	44	N/A	\$8,000	\$22,000
Ogunquit	York	9	N/A	\$2,000	\$5,000
Old Orchard Beach	York	12	N/A	\$2,500	\$6,500
Parsonsfield	York	68	N/A	\$12,000	\$34,000
Saco	York	65	N/A	\$11,500	\$31,500
Sanford	York	58	N/A	\$10,000	\$28,500
Shapleigh	York	49	N/A	\$8,500	\$24,000
South Berwick	York	39	N/A	\$7,000	\$19,500
Waterboro	York	65	N/A	\$11,500	\$33,000
Wells	York	69	N/A	\$12,000	\$37,000
York	York	71	N/A	\$12,500	\$38,000



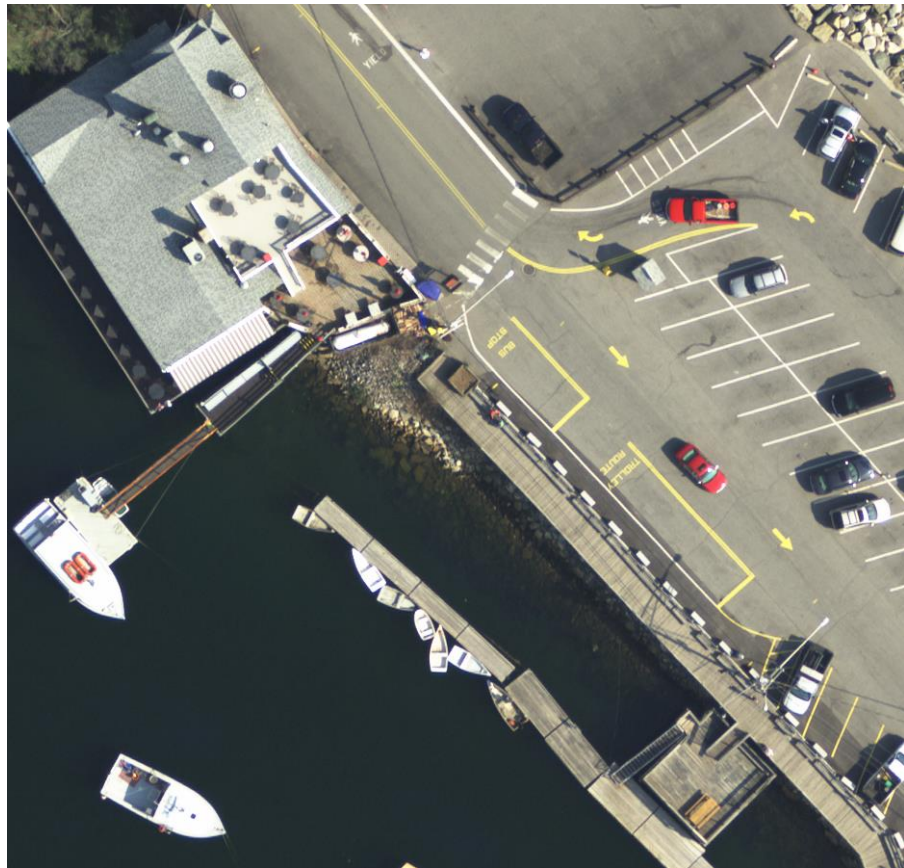
Other County Pricing located here:

<https://www.maine.gov/geolib/programs/ortho/index.html>

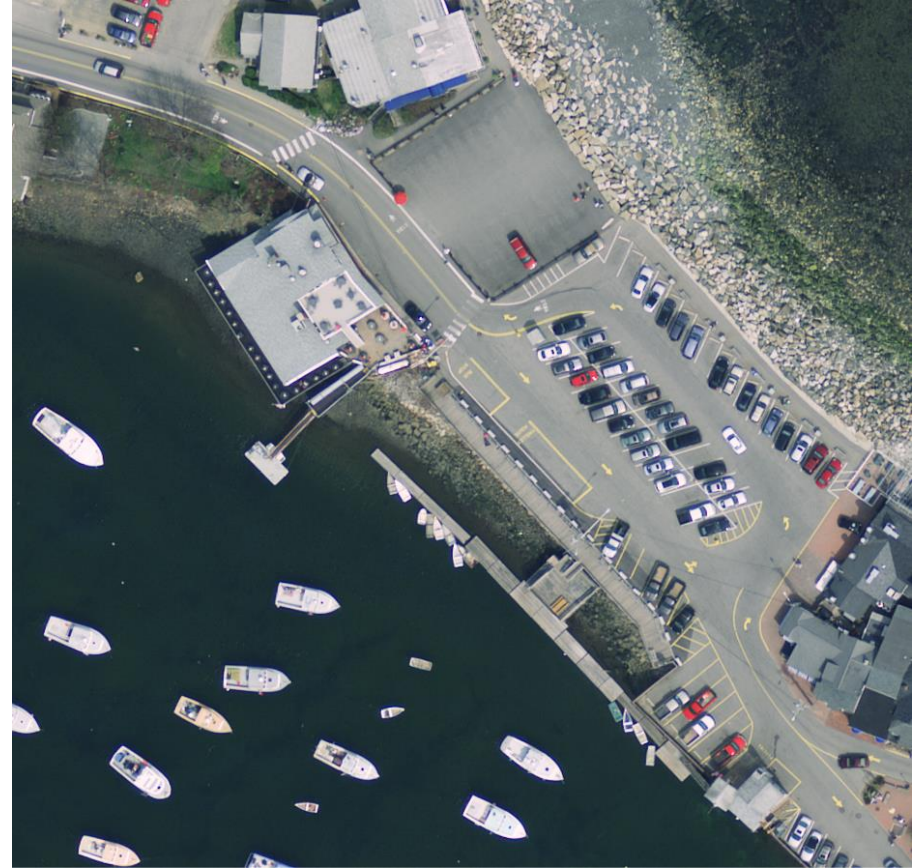


Image Resolution Comparisons

3-Inch Pixel Resolution



6-Inch Pixel Resolution



Ogunquit, Maine



12" (left), 6" (right)

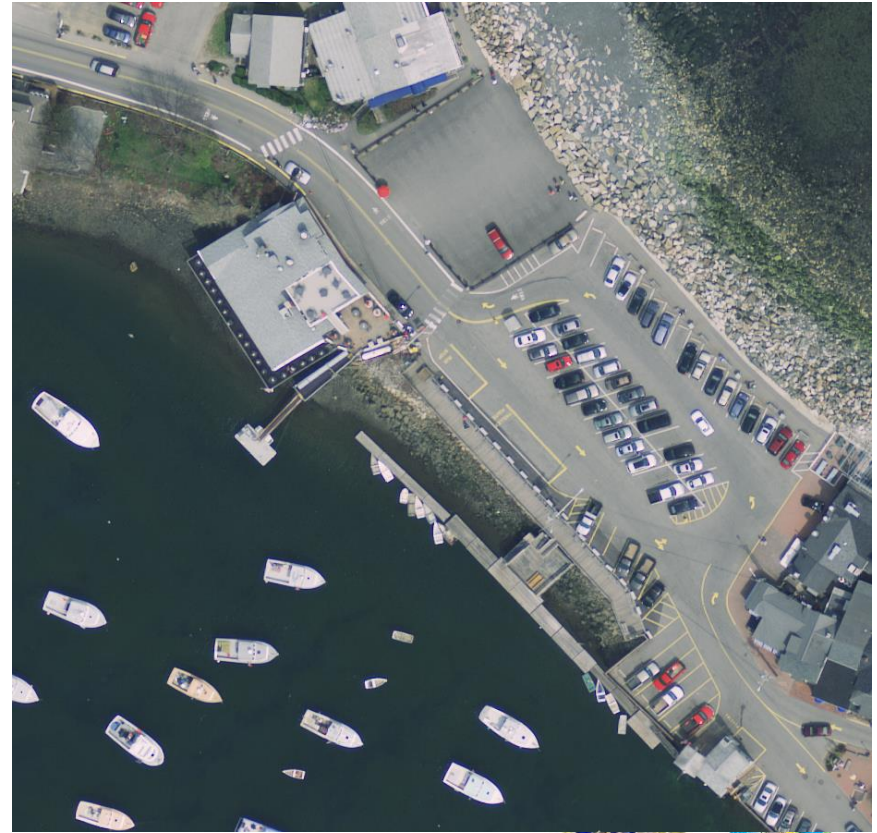
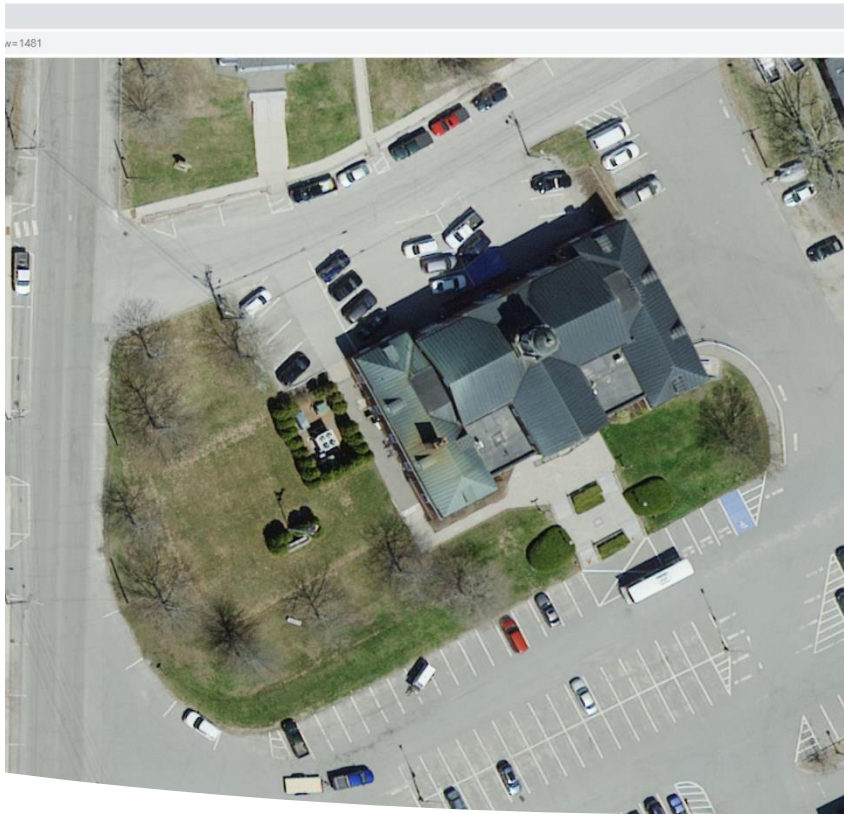


Image Resolution Comparisons

6-Inch Pixel Resolution



18-Inch Pixel Resolution



Ellsworth, Maine

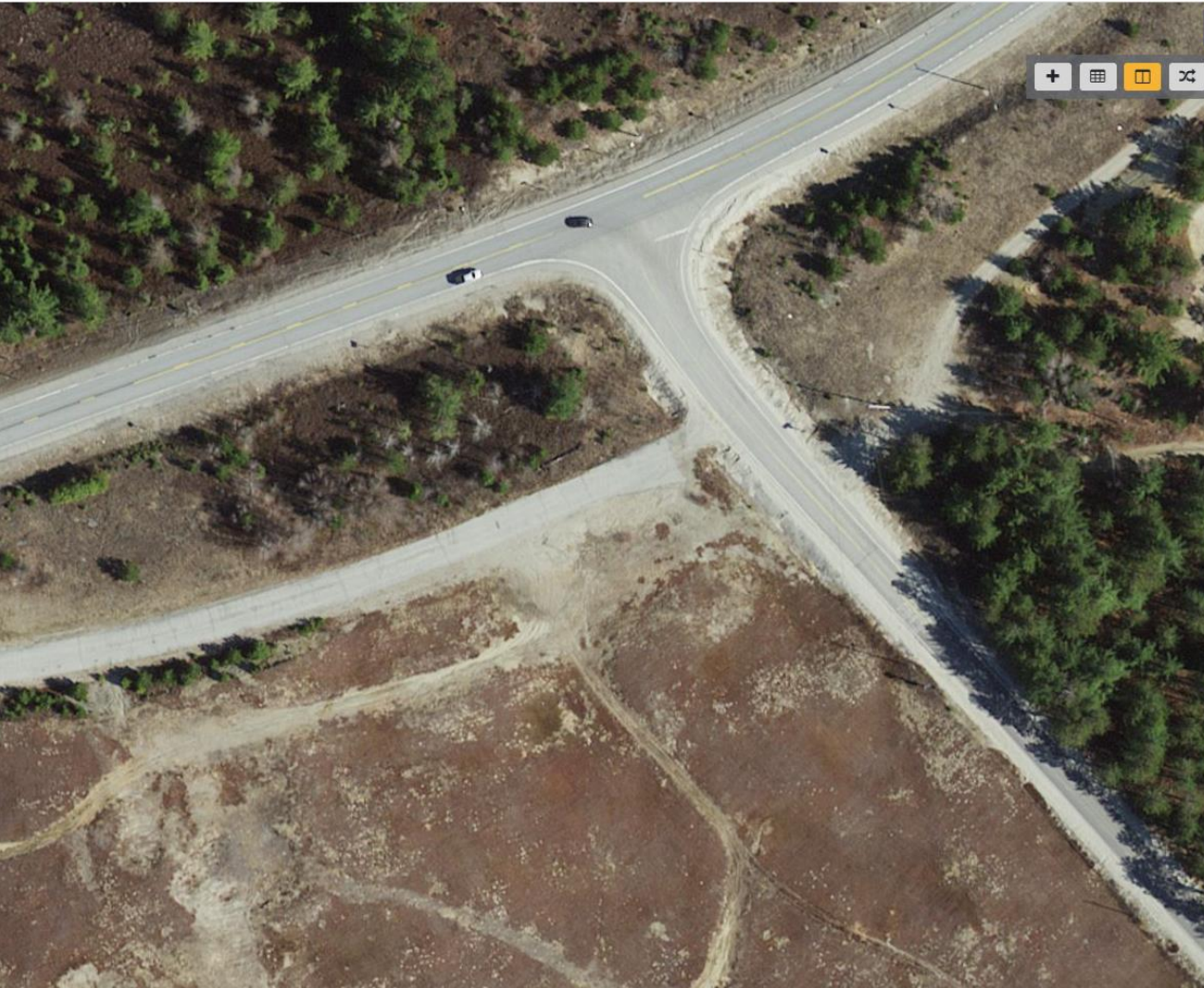
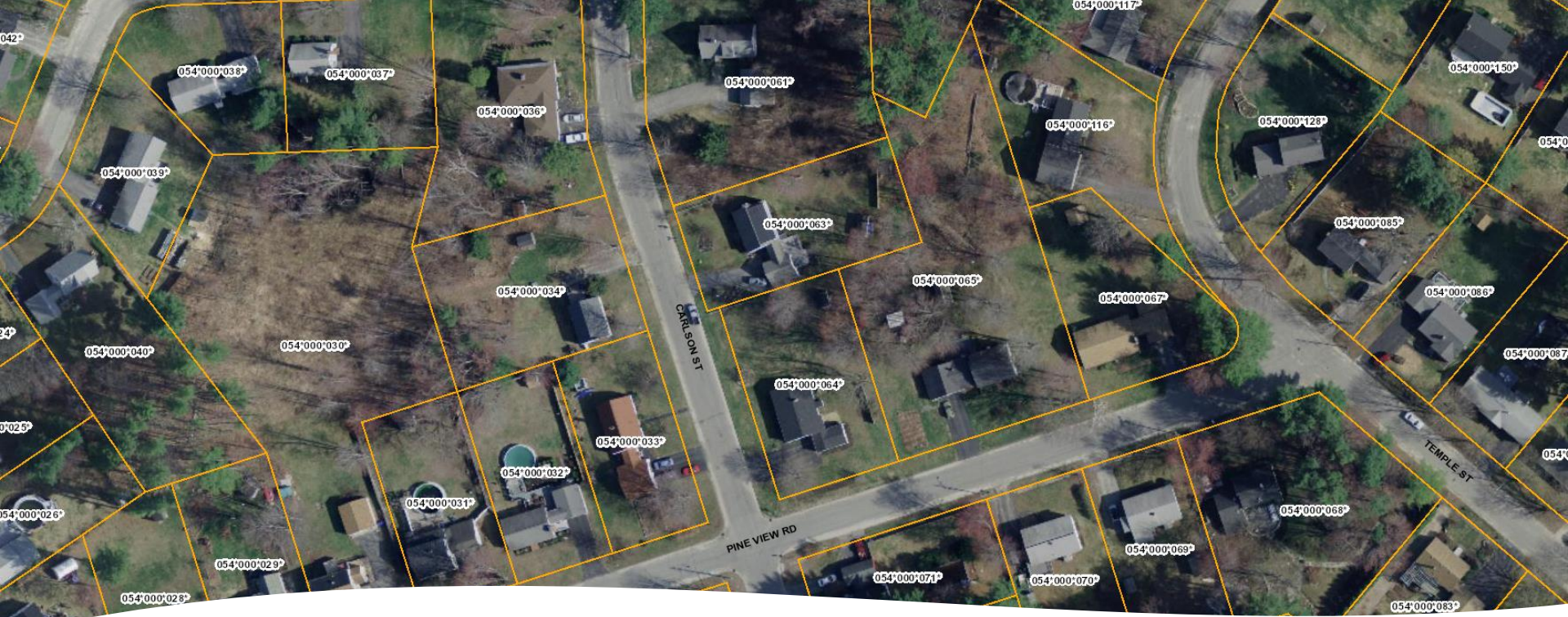


Image Resolution – 12-inch

Hancock County
Unorganized Territories



Public & Private Usage

- Economic Development
- Parcel Mapping
- Land Planning & Zoning
- Emergency Management
- Surveying & Mapping
- Permitting
- Site Analysis
- Natural Resource Inventories
- And others



Emergency Dispatch - E911

Northern Cumberland Co – Casco Ortho 18in

The screenshot displays the Geolynx Server interface. On the left, a sidebar titled "9-1-1 Call Information" contains the following details:

- 9-1-1 Call**
- Call Information** | Report a problem
- Call Data**
 - Callback: Wireless Phase 2
 - Carrier: VERIZON
 - Sector:
- Caller Data**
 - n/a
- Location Data**
 - Estimated Address: Casco
 - Lat: 43.911 Long: -70.5269
- Responders**
 - ESN: 41
 - Law: CUMBERLAND SD
 - Fire: CASCO FIRE RESCUE
 - Med: CASCO FIRE RESCUE

The main map area shows an aerial view of a residential neighborhood with property lines overlaid. A green circular highlight is centered on a house with address 106. Other nearby addresses include 93, 97, 86, 90, 94, 98, 110, 102, 118, 129, 132, 11, 94, and 96. Roads labeled include Lakewood Rd, Waldron Point Rd, and Millard Dr. The interface includes a search bar at the top, navigation controls, and an overview map in the top right corner. The ESRI logo is visible in the bottom right corner of the map area.




Does it pay to participate in the program?

- A conservative analysis of just three of 13 sectors using aerial imagery, show an economic return of over 400%!



	Asset Management	Site Selection	Planning/ Reconnaissance	Code Enforcement	Improved Services	Infrastructure Planning	Support for Field Work/Inspections	Preservation	Change Over Time Comparison	Natural Disaster Planning	Assessing Current Conditions	Improving Spatial Data Accuracy	Identifying Encroachment	Monitoring	Operations/Management	Harvesting/Managing Resources	Attractive Procurement Efficiencies
Forestry			X				X	X	X		X	X	X	X		X	
Stormwater			X	X		X	X				X	X			X		X
Transportation	X	X	X		X	X	X			X	X	X	X		X		X
Wildlife Habitat			X				X	X			X	X	X	X			X
Flood Management			X	X			X		X		X	X					X
Search & Rescue			X		X		X			X					X		X
Agriculture		X	X				X		X			X	X	X		X	X
Emergency Response			X		X	X	X			X		X			X		X
Utilities/Pipelines	X		X		X	X	X			X		X	X		X		X
Fisheries			X		X		X					X		X		X	X
Municipal Government	X	X	X	X	X	X	X		X	X	X	X	X		X		X
Economic Development		X	X		X		X		X		X	X					X
Broadband	X		X				X					X					X

 ** Teal squares indicate use cases that were studied and documented as part of this report.



Typical Schedule

Geospatial Reserve Account Available to hold funds if making payment plans

Task	Due Date
Notice of intent to participate	December 30th
Complete Memorandum of Agreement	January 30th
Payment Due to State Treasurer	February 15th
Delivery Order to Contractor Completed	March 15th
Imagery Acquisition	April - May
Image Processing & QC	May - November
Images Delivered	December 30th

** Willing to be flexible on these dates...*



Where can I learn more information?

- Website
 - <https://www.maine.gov/geolib/programs/ortho/index.html>
- Maine GeoLibrary
 - Claire Kiedrowski, Executive Director
 - Claire.Kiedrowski@maine.gov
 - (207) 266-7087