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LARIAC4 Status Meeting & LARIAC5 Kickoff Meeting

July 28, 2016



Today's Agenda

10:00 – 10:10 AM	LARIAC Introduction Mark Greninger
10:10 – 11:00 AM Mark Greninger Pictometry Dewberry	LARIAC4 Status Update LIDAR Update Land Cover Update QAQC Update
11:00 – 11:30 AM Nick Franchino	LARIAC5 Project Kick-Off What's included Timeline Costs How to join
11:30 – 11:50 AM Brian Garcia & Amanda Tovey	Pictometry Technology and Update
11:50 – 12:00 PM	Wrap Up

LARIAC Introduction

- LA County – Mark Greninger

LARIAC4 Status Update

- Pictometry – separate presentation
 - LiDAR Update
 - Land Cover Update
- Dewberry
 - QAQC Update

LARIAC5 Kickoff - Agenda

- Introduction to LARIAC5
- What's Included
- Timeline
- Estimated Costs
- How to Join

WHAT IS LARIAC?

What is LARIAC?

- Los Angeles Regional Imagery Acquisition Consortium (LARIAC)

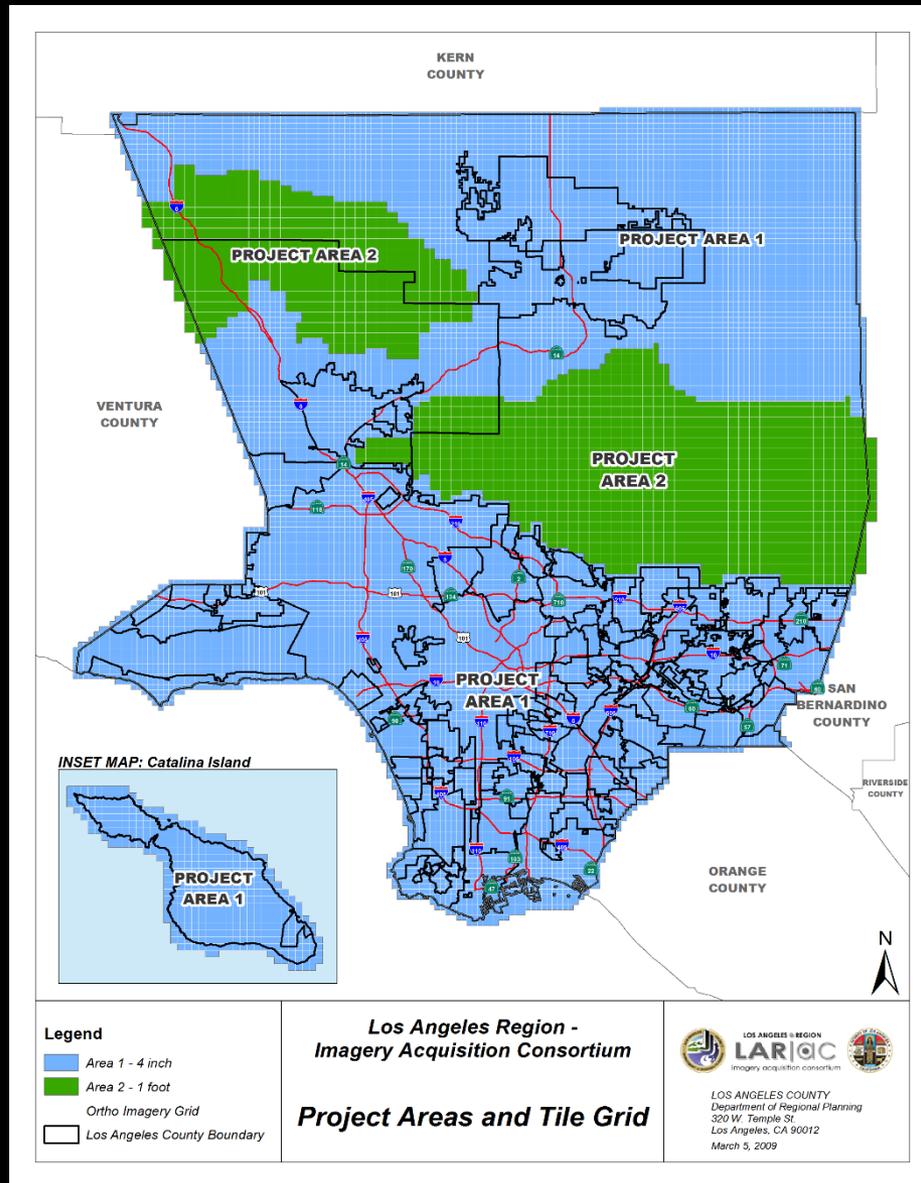
“LARIAC is multi-jurisdictional purchasing arrangement that enables participating local governments and agencies to benefit from combined economies of scale to efficiently and cost-effectively acquire high definition aerial data.”

- Established in 2004 by Los Angeles County

Geographic Scope

- Los Angeles County
 - 4,083 sq. miles plus small buffer area
- Split into regions
 - Area #1 (Urban)
 - Project area covers approximately 3,000 sq. miles
 - Area #2 (National Forest)
 - Project area covers approximately 1,050 sq. miles

LARIAC Geographic Scope



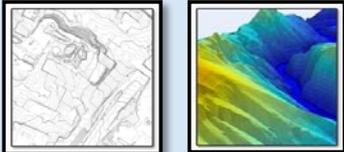
LARIAC is Data and Services

- LARIAC provides geographic data that forms the foundation of geo-spatial decision making and analysis
- All Digital Aerial data
 - Orthogonal imagery (potential for multiple flight captures per year as well)
 - Oblique imagery
 - Building Outlines
 - Elevation Data
- LARIAC now includes more access methods too
 - Less work to benefit more users

LARIAC5

What's different and new

LARIAC5 Product Matrix

<u>Data Types</u>	<u>LARIAC1 2006</u>	<u>LARIAC2 2008</u>	<u>LARIAC3 2011</u>	<u>LARIAC4 2014</u>	<u>LARIAC5 2017</u>
Orthogonal Imagery (4-inch) 	X (including Infrared)	X	X	X (including 1-foot imagery from 2012 and 2013)	X (including infrared) X (might include multiple captures per year)
Oblique Imagery 	X	X	X	X	X
Building Outlines 		X		X	X
Elevation Data 	X			X (acquired 2015-16)	
Derived Data <ul style="list-style-type: none"> • Tree Canopy • Solar Insolation • NDVI (Permeability) • Slope • Hillshade • Height 	X			X	

Data Delivery Formats

Delivery Product	Format 1	Format 2	Format 3
Orthophoto (color) (4" and 1') Color CIR (color infrared)	GeoTIFF & JPG2000	File Geodatabase/ECW mosaics	ArcGIS Server Map Services hosted by LA County
Pictometry oblique imagery (4" and 1')	Medium Compressed JPG format	Online Access	
Building Outlines	ArcGIS shapefile	ArcGIS Shapefile of new construction, changes, and demolition	
Orthophoto as a Service (color) (4")	Online Access		

Oblique Image Access

Method	Description	Use
Electronic Field Study (EFS)	Desktop Application connecting to data delivered on hard disk	Disconnected situations. Use rarely.
Pictometry Online (POL)	Online Application for access	Day to day use – will be deprecated soon – can pass parameters to it.
Pictometry CONNECTExplorer	Online Application for Access	Day to day use – also mobile - can pass parameters to it.
Pictometry iPad Application	Mobile Access	Mobile Access
ArcMap Plugin	Integrate with CONNECT inside ArcMap	Desktop GIS users
Integrated Pictometry Application (IPA)	Embed oblique imagery inside applications	Enhance existing apps
Pictometry Gateway	Get multiple shots at one time.	Reporting
Pictometry WebApp Builder Tool	Get widget for Pictometry that works in Esri's WebApp Builder	Enhance existing apps

Pictometry CONNECT Access

- Pictometry CONNECT Access goes with each iteration of the project
- If you were in LARIAC4 but not LARIAC5 your access will end when this project officially begins (date is TBD – probably 6/30/2017)
- You still have rights to use the data products that were delivered

Continuing from LARIAC4

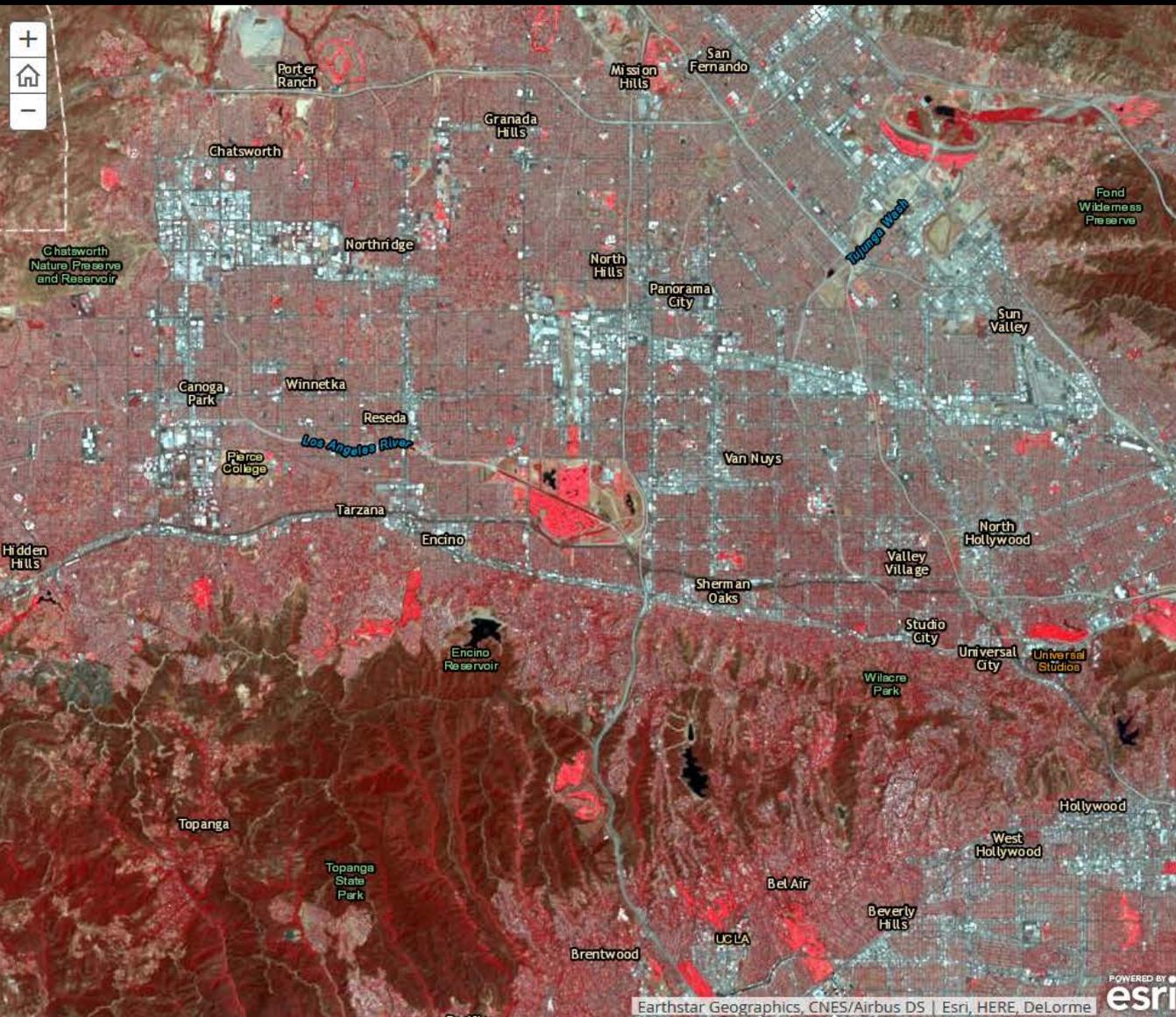
- Direct access from LA County
 - Orthophotography
 - Map services hosted by LA County
 - Oblique Imagery
 - Online Access
 - Mobile application
 - Embeddable widgets for your websites
 - Building Outlines
 - Change detection (find unpermitted additions)
 - Similar cost

LARIAC4 Additional Products

- Additional products that were acquired:
 - 2012 and 2013 imagery
 - High Resolution Land Cover
 - Commercial, Industrial, Gov't Parking Lots
 - WebAppBuilder Integration
 - Gateway
- No additional cost to participants

Changes from LARIAC4

- No terrain data (just acquired this year)
- Enhanced orthophotography
 - Add a Near Infrared Band (to get CIR)
- New product – Imagery as a service
 - Multiple flights per year
 - Consume in web mapping applications
 - Will not receive data as tiles or on hard drives



As featured in The ArcGIS Imagery Book

Near Infrared (NIR)

This image's band combination (4 3 2) gives results similar to traditional color infrared aerial photography and is useful for vegetation studies, monitoring drainage, soil patterns, and various stages of crop growth. Emphasizes biomass content, making it particularly useful for agriculture.

The visible stripes at this scale reveal a truth about Landsat imagery: not all scenes contain images from the same date.

[Egypt's Nile River Delta](#)

[Deforestation in Rhondonia, Brazil](#)

[Farmland near the Salton Sea, California](#)

[Aberdare Range, Kenya](#)

LARIAC5 TIMELINE

LARIAC5 Simplified Schedule

- July 2016 – Kickoff Meeting
- Aug - Oct 2016 – Finish scope and amend contract(s)
- September 2016 – establish bridge funding
- November - complete/verify contracts (all firms)
- December - start flying
- March 2017 - flying completed...start processing
- April – July 2017 - QC underway & obliques available
- September-October 2017 – all other final deliverables (project closure)

ESTIMATED COSTS

LARIAC5 Estimated Costs

- Similar to LARIAC4
 - Oblique imagery: ~\$1.2 million
 - Ortho imagery: ~\$1 million
 - Multi-flight imagery: ~\$1 million*
 - Buildings: ~\$135,000
 - QAQC: ~\$500,000

*Replacing LIDAR with multi-flight imagery

HOW TO JOIN

How To Join

- Letter of Intent
 - Informs the County that your agency intends to budget for LAR-IAC participation.
 - Non-binding

SAMPLE LETTER OF INTENT

<Current Date>

Mr. Richard Sanchez, Chief Information Officer
County of Los Angeles
World Trade Center
350 S. Figueroa St., Suite 188
Los Angeles, CA 90071

Dear Mr. Sanchez:

It is our intent to participate in the 2013-14 Los Angeles Region Imagery Acquisition Consortium (LAR-IAC4). LAR-IAC4 will acquire 4-inch color orthogonal, 4-inch oblique aerial photography, building representations (outlines), and digital terrain data. We understand the estimated cost will not exceed **\$XXXXXXX**. Recognizing that our final commitment is contingent upon approval, it is understood that this approval must be obtained prior to confirming our participation in this project.

If you have questions, please contact <Name and Title of Primary Contact> at <Telephone, Fax and E-mail Address>.

Sincerely,

Signature

Print Name

Title

Date

How To Join

- Participant Agreement
 - Commits your agency to pay your share of LAR-IAC and “join the team”
 - Can make two payments over two fiscal years (one this year, one next)

PARTICIPANT AGREEMENT BY AND BETWEEN
THE COUNTY OF LOS ANGELES AND PARTICIPATING ENTITIES
FOR THE
LOS ANGELES REGION – IMAGERY ACQUISITION CONSORTIUM 4 (“LAR-IAC4”)
PROGRAM

This Participant Agreement (Agreement) is made and entered into by and between the County of Los Angeles, a political subdivision of the State of California (County), and ~~XXXXXX~~, a California city, special district, or agency. Each individual city, district, or agency is referred to herein individually as a “Participating Entity” and collectively as the “Participating Entities”. The County and the Participating Entities are hereinafter referred to collectively as the “Parties” and each individually as a “Party.”

- A. **WHEREAS**, County has planned to acquire new digital orthogonal and oblique aerial imagery in the winter of 2013-2014 (“Project”);
- B. **WHEREAS**, County has become aware that various Participating Entities have similar projects currently underway or plans to undertake similar projects in the near future;
- C. **WHEREAS**, in order to avoid the duplication of efforts and costs by the Parties, the Parties desire to pool their resources to collectively undertake the Project; and
- D. **WHEREAS**, the Parties intend to participate in the Project upon the terms and conditions set forth herein below.

NOW, THEREFORE, in consideration of the mutual covenants herein set forth and the mutual benefits to be derived therefrom, the Parties agree as follows:

1. Purpose

The purpose of this Agreement is to provide a vehicle for the collective participation in the Project by the Parties. The Project shall focus on the acquisition of certain aerial imagery digital data which may include, but are not limited to, products listed in Attachment A (“Digital Data”). It is the intent of the Parties that Digital Data shall be acquired under this Agreement for areas within the County of Los Angeles covered by the jurisdictions of the Parties.

Participant Agreement

- Three important areas:
 - Pages 1-5 are the agreement
 - Agreement between agency and County about costs.
 - Counter-signatures on Page 5.
 - Attachment A lists the data products
 - Attachment A.1 allows you to contract for additional services
 - County allows “Optional Items” for participants.
 - 3D buildings, curb lines, etc.
 - A sub-contract between you and the vendor
 - Attachment B is between you and your contractor.
 - It protects you in case they use the information improperly.

Distribution and Sub-licensing

- Distribution
 - 4-inch orthos can be displayed on the Internet
 - Oblique imagery can be shown on the Internet
 - Note: measurement tools for internal use only
 - 1 foot orthos can be distributed to the Public
- Licensing
 - Participant Agreement
 - Sub-licensing
 - One simplified form to cover all data products for sub-contractors

*This is proposed for LARIAC5 – not yet finalized

Staying Up-To-Date With LARIAC

- Meetings
 - Briefing Meetings (every few months)
 - Technical Advisory Group (as necessary)
 - User Group Meetings (twice a year)
- Documents
 - Participant Agreement
 - Status Reports
 - Web Site

Contact Information

Christine Lam, Project Manager, ISD

clam2@isd.lacounty.gov (562) 940-3844

Nick Franchino, GIS Manager, Regional Planning Dept.

nfranchino@planning.lacounty.gov (213) 893-0881

LARIAC Project Web Site

<http://egis3.lacounty.gov/dataportal/lariac/>



Los Angeles County GIS Data Portal
GIS Data for LA County

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Recent Releases

Park Needs Assessment July 7, 2016
Moving to LA County Chief Data
offices July 15, 2016

LARIAC Meetings and Presentations

If you are looking for presentations to provide to your staff and management, here are a list of presentations that provide information about LARIAC.

January 28, 2016 User Group and Status Update Meeting

Agenda: [LARIAC4 Status Meeting Agenda – January 28, 2016](#)

Training Notice: [Training Notice for LARIAC – Feb 2016](#)

Presentations:

- [Presentation 1 – LA County – LARIAC4 Status and User Group Meeting](#)
- [Presentation 2 – Dewberry_LARIAC4_Presentation_January_28_2016](#)
- [Presentation 3 – Pictometry Training](#)
- [Presentation 4 – Nearmap -LARIAC User Meeting](#)
- [Presentation 5 – Loyola Marymount Land Cover Project](#)
- [Presentation 6 – Leveraging LARIAC LIDAR for Stormwater Drainage System Development](#)

October 8th, 2015 User Group and Status Update Meeting

Agenda: [LARIAC4 Status Meeting Agenda – October 8, 2015](#)

Presentations:

**Los Angeles Region Imagery Acquisition Consortium
(LARIAC5)**

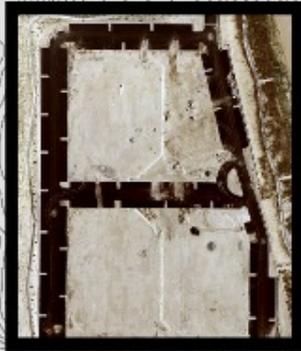
**Questions/Comments?
(time permitting)**

Pictometry – Technology Update

Separate presentation

Los Angeles Region Imagery Acquisition Consortium (LARIAC5)

Wrap Up



<http://www.geogreeting.com/view.html?yDrkxuUlyEa>