LAR-IAC4 Status and User Group Meeting

March 19, 2015

LOS ANGELES REGION
LAR|IAC
imagery acquisition consortium

Agenda

- LARIAC Status Update
- Vendor Presentations
  - Pictometry
  - Dewberry
- LARIAC Data Discussion
- LA County GIS Repository Access
- LARIAC Training Schedule
- Other County Programs
  - CAMS
- Questions
- Lunch
- Pictometry Technology Update

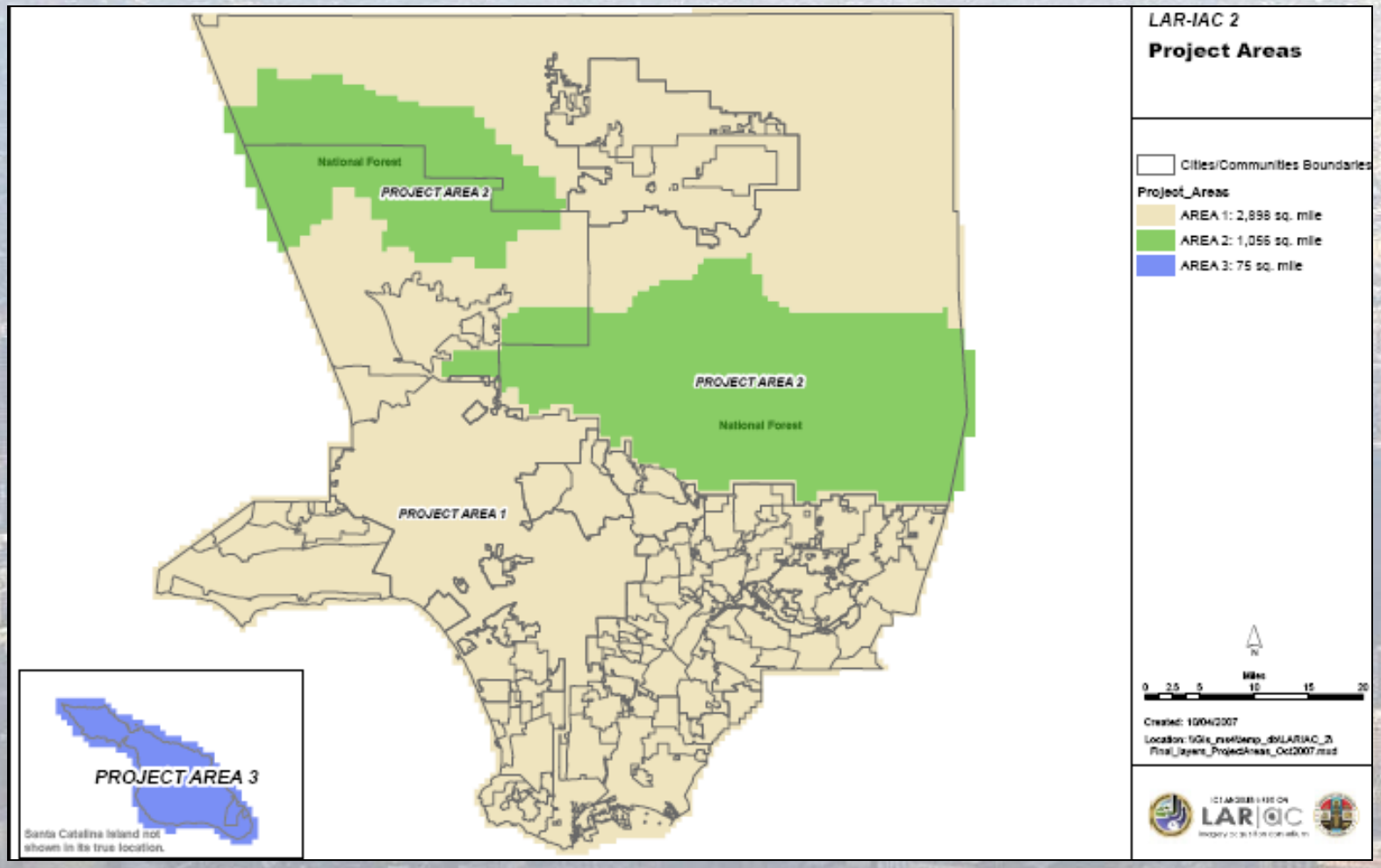
What is LAR-IAC?

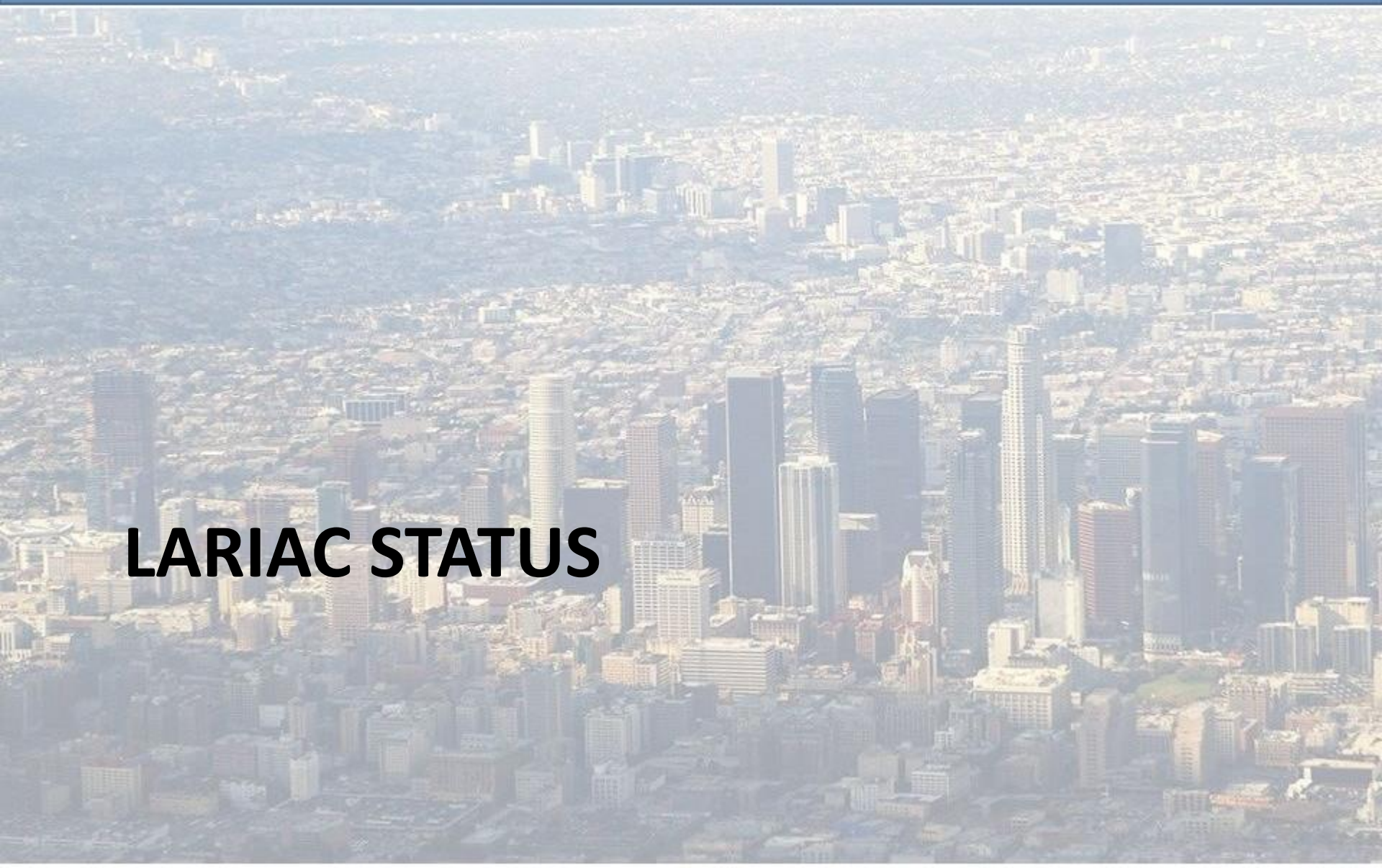
- Los Angeles Regional Imagery Acquisition Consortium (LAR-IAC)

  "LAR-IAC 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 2003 by LA County Regional Planning and Chief Information Office.

LARIAC Geographic Scope



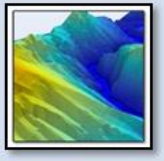


LARIAC STATUS

Current Participants

Participant	LOI	Participant	LOI	Participant	LOI
LA County Sanitation Districts	X	City of Arcadia	X	City of Long Beach	X
Los Angeles Air Force Base	X	City of Azusa	X	City of Los Angeles	X
Catalina Island Conservancy	X	City of Bellflower	I	City of Lynwood	I
US Geological Survey	X	City of Beverly Hills	X	City of Malibu	X
Los Angeles County	X	City of Burbank	X	City of Manhattan Beach	X
Rio Hondo Community College	X	City of Carson	X	City of Monrovia	I
California State University Long Beach	X	City of Cerritos	X	City of Norwalk	X
California Polytechincal University Pomona	X	City of Claremont	X	City of Pasadena	X
Newhall Land and Farming	X	City of Covina	X	City of Pomona	I
California Department of Transportation	I	City of Culver City	X	City of Rancho Palos Verdes	X
Las Virgenes Municipal Water District	I	City of Downey	X	City of Redondo Beach	X
Los Angeles County Metropolitan Transit Authority	X	City of Duarte	X	City of San Dimas	X
Loyola Marymount University	X	City of El Segundo	X	City of Santa Clarita	X
		City of Gardena	X	City of Santa Monica	X
		City of Glendale	X	City of South Pasadena	I
		City of Hawthorne	I	City of Temple City	X
		City of Hermosa Beach	X	City of Torrance	X
		City of Industry	X	City of Vernon	I
		City of Inglewood	X	City of West Hollywood	X
		City of La Canada Flintridge	X	City of Westlake Village	X
		City of Lakewood	X	City of Whittier	X

LAR-IAC4 Product Matrix

Data Types	LARIAC1 2006	LARIAC2 2008	LARIAC3 2011	LARIAC4 2014
Orthogonal Imagery (4-inch)	X (including Infrared)	X	X	X (including Infrared and 1-foot imagery from 2012 and 2013)
Oblique Imagery	X	X	X	X
Building Outlines		X		X
Elevation Data 	X			X
Derived Data • Tree Canopy • Solar Insolation • NDVI (Permeability) • Slope • Hillshade • Height	X			X

Current Finances

- Current LARIAC4 costs - $4.4 million
  - Oblique: $1.2 million
  - Ortho: $811,000
  - Buildings: $135,000
  - LIDAR costs: $1.6 million
    - Contract Amendment will be executed next week
  - QAQC: $600,000
- $4.7 million in commitments
  - $2.8 million received
- Delay penalty assessed - $45,750

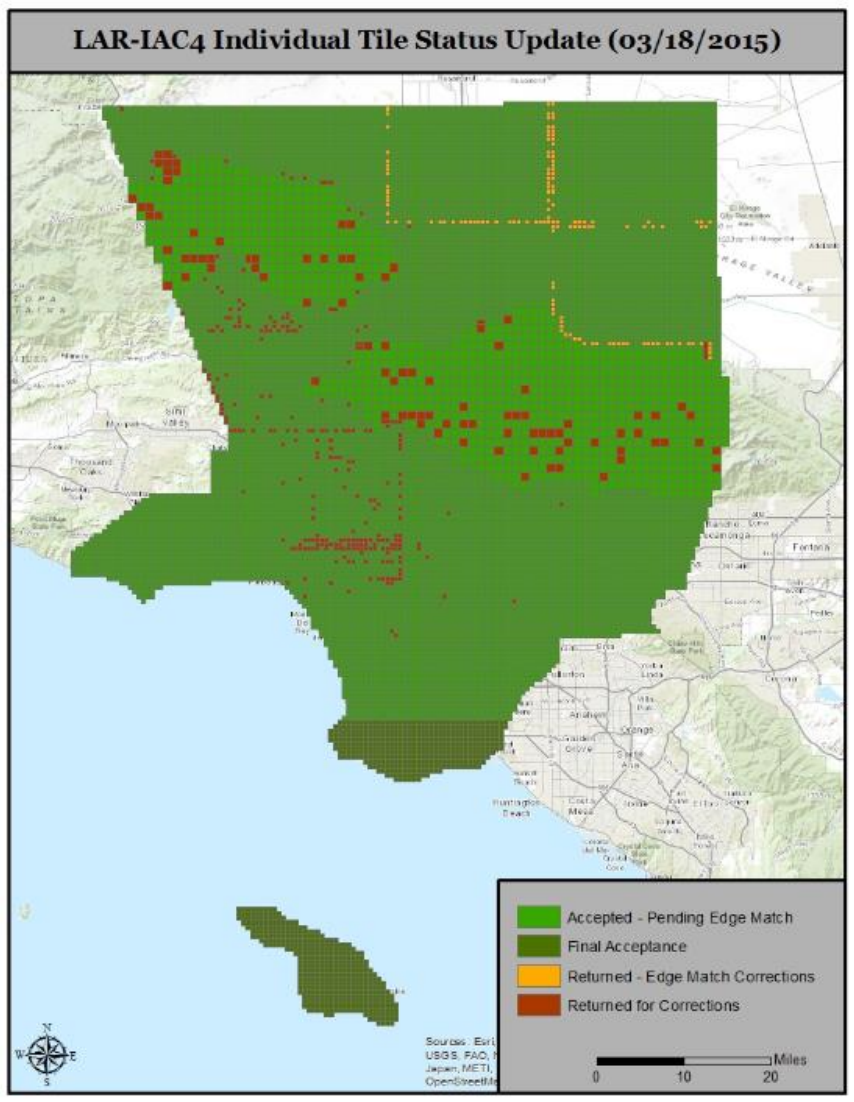
LIDAR Status

- County amending the current LARIAC contract to add LIDAR
  - 2 points/meter squared Countywide
  - 1 foot contours
  - .las formats, DEM, DSM, DTM
- LA County DPW is piloting the automated delineation of micro-watersheds and required quality.
  - Meets state criteria for water quality
  - May need to increase quality (DPW would cover increase)
- Flights start September 2015.
- Delivery 1st quarter 2016 (currently March 31, 2016)

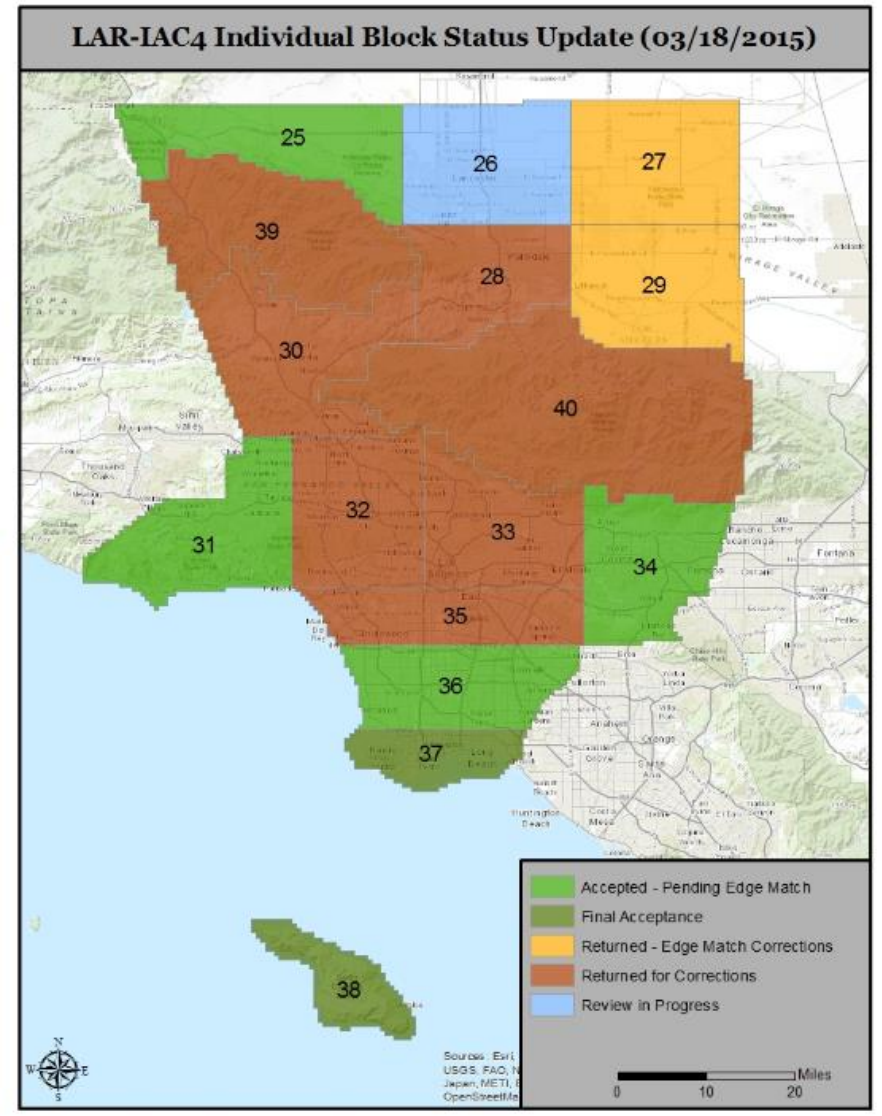
Delivery Schedule

- Oblique Imagery
  - Delivered a while ago via Pictometry Online
  - Also will come on hard disk
- Ortho imagery
  - 2012 and 2013 imagery will come on hard disks with 2014.
  - Deliveries will start next week.
  - Deliveries will be completed by end of April
- Building Outlines
  - Delivered September 2014.

Tile QAQC Status



Ortho Processing Status



Initial Deliveries

- Deliveries to be shipped by the end of March
  - City of Arcadia
  - Catalina Island Conservancy
  - City of Azusa
  - City of Claremont
  - City of Covina
  - City of Duarte
  - City of La Canada Flintridge
  - City of Malibu
  - City of Temple City
  - City of Westlake Village
- Other deliveries will ship as data passes QA
  - Anticipate complete delivery by late April/Early May

Contact Information

- **Project Director**

  Mark Greninger, County GIO

  mgreninger@cio.lacounty.gov (213) 253-5624

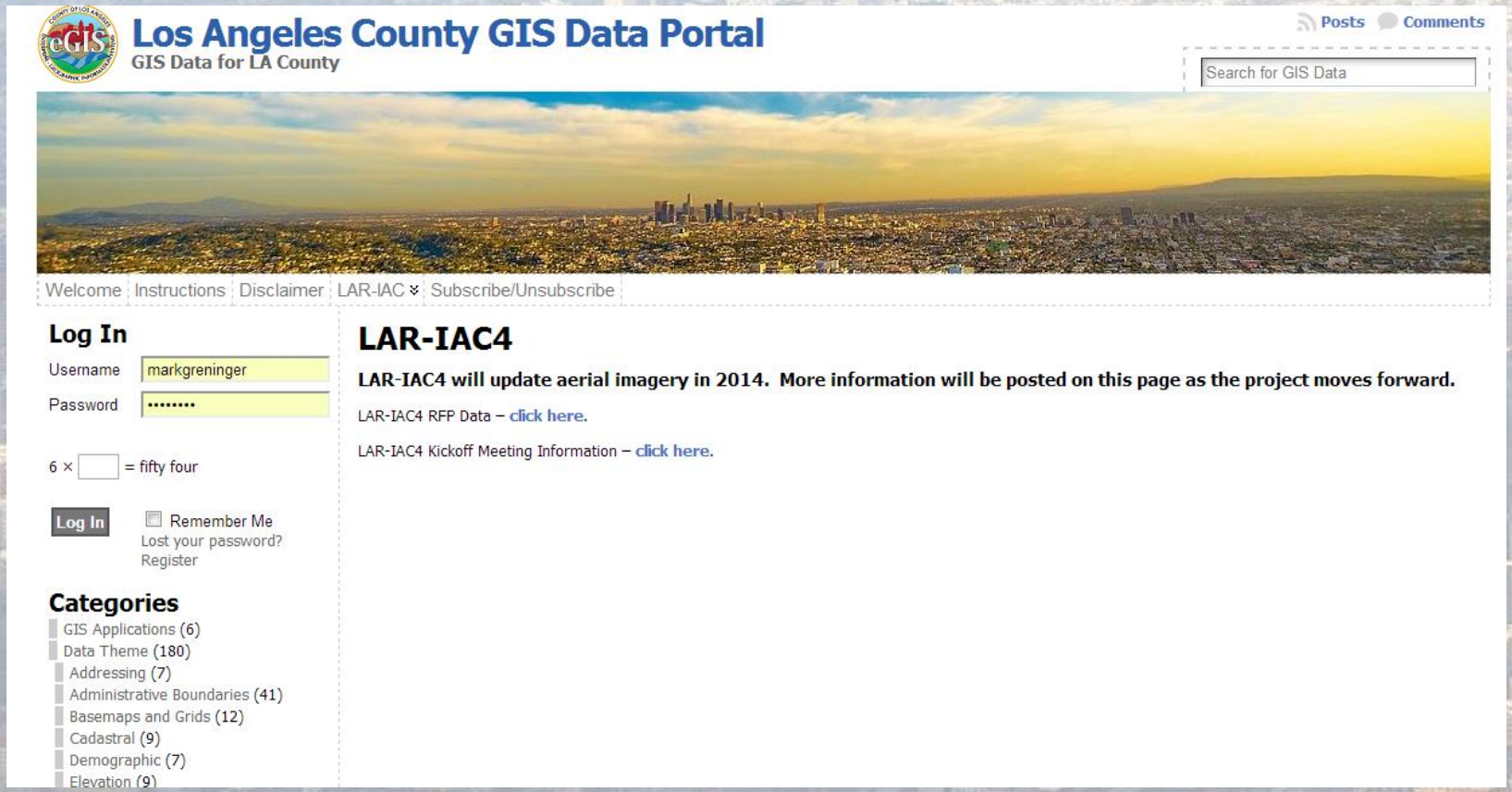
- **Outreach Manager**

  Nick Franchino, GIS Manager, Regional Planning Dept.

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

LAR-IAC Project Web Site

http://egis3.lacounty.gov/dataportal/lariac/lar-iac4/



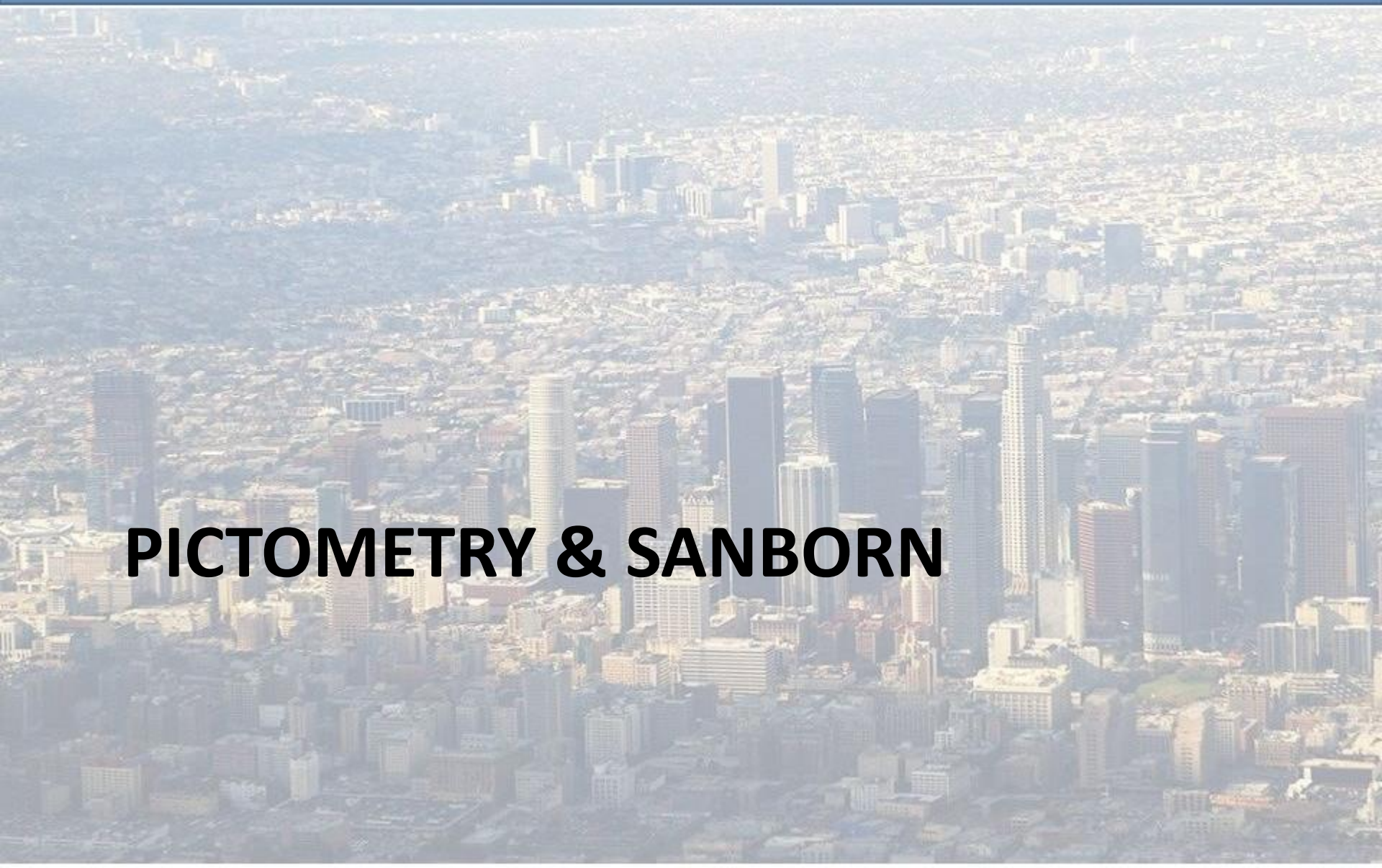
Los Angeles Region – Imagery Acquisition Consortium (LAR-IAC4)

Questions/Comments?

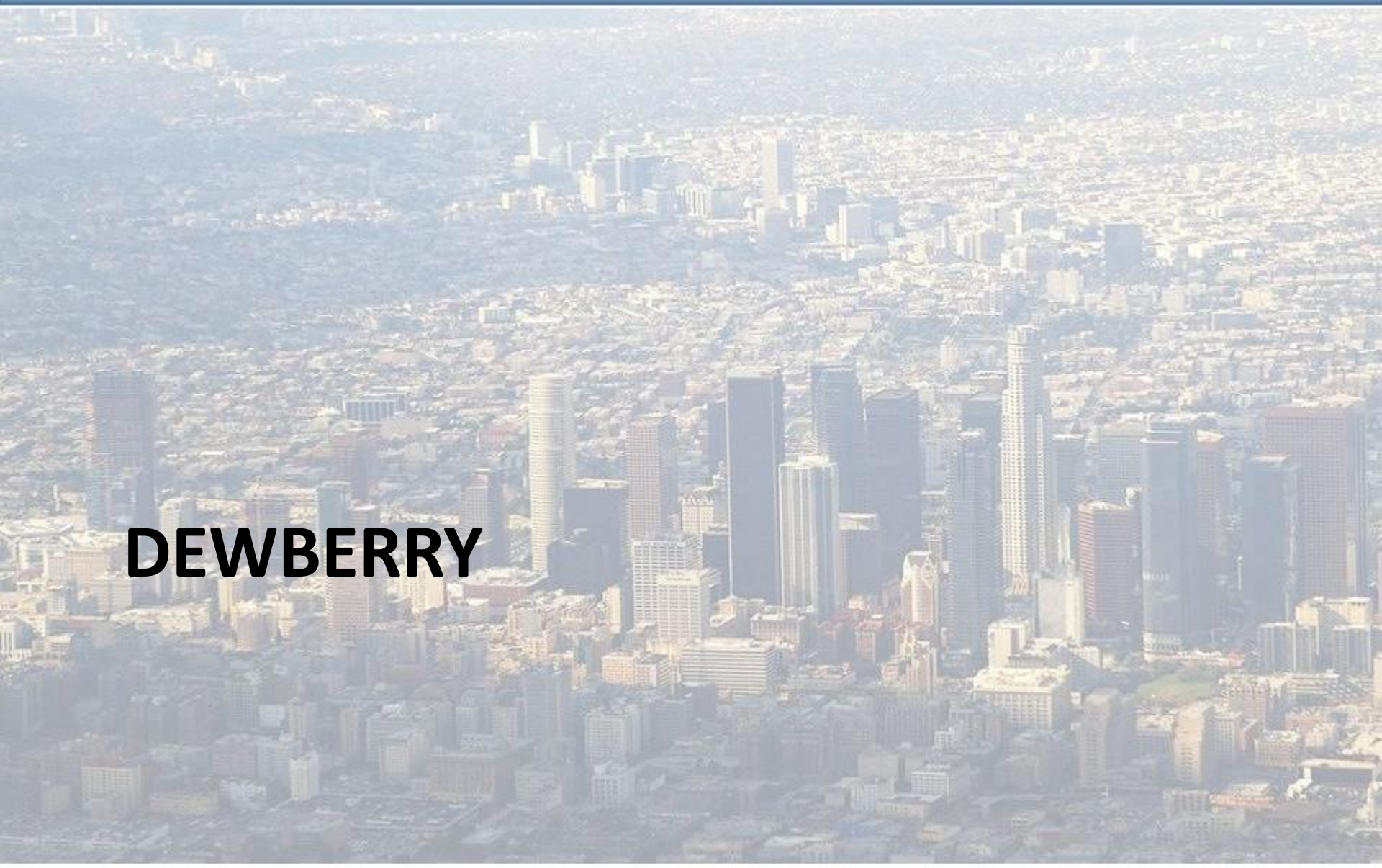
LOS ANGELES REGION
LAR|ac
imagery acquisition consortium

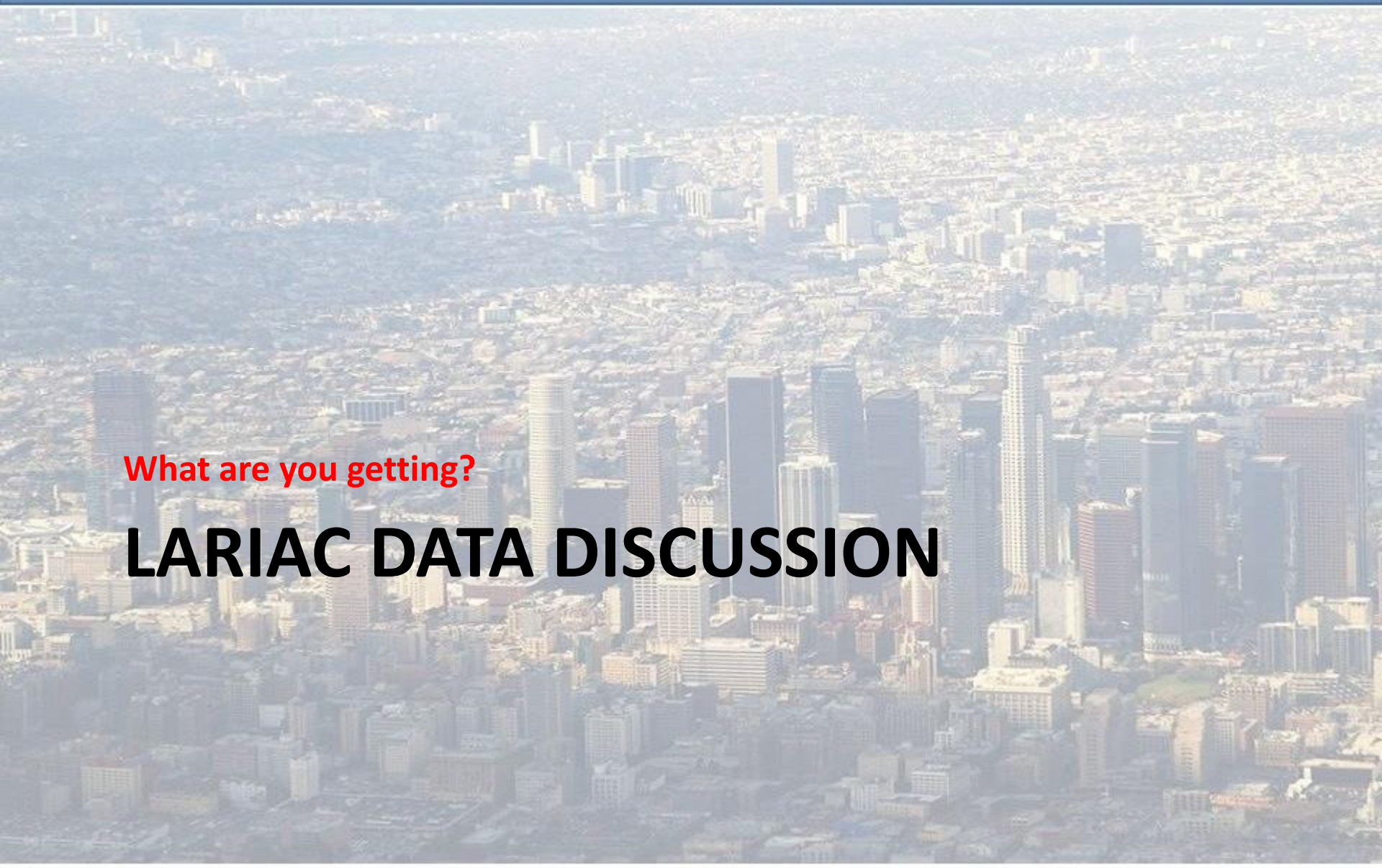
Prepared by:
Los Angeles County

LARIAC VENDOR UPDATES



PICTOMETRY & SANBORN


DEWBERRY



What are you getting?

LARIAC DATA DISCUSSION

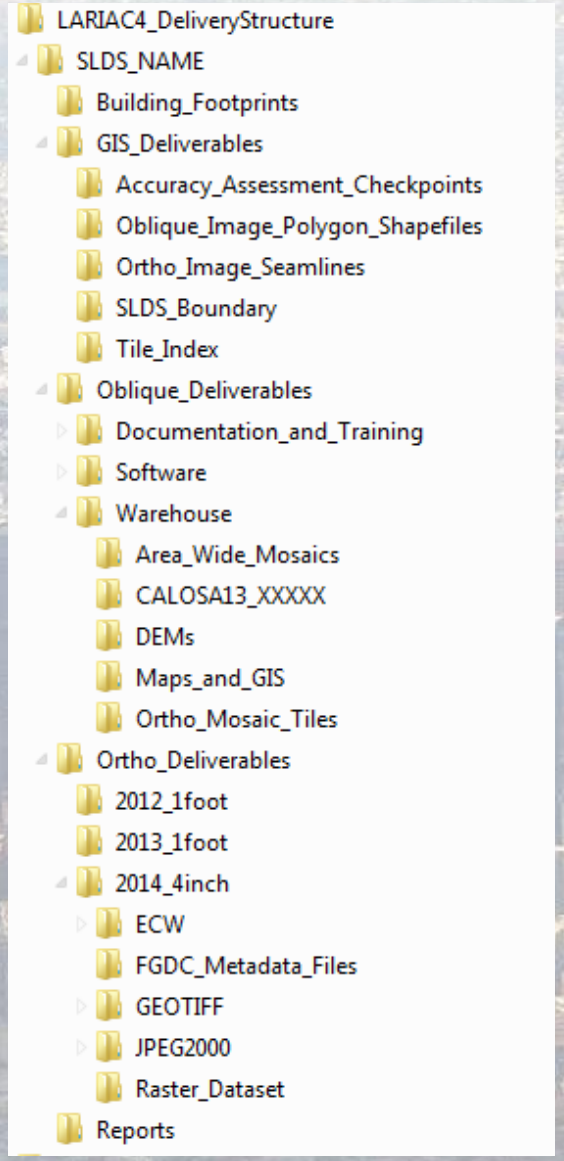
Data Delivery Formats

LAR-IAC4

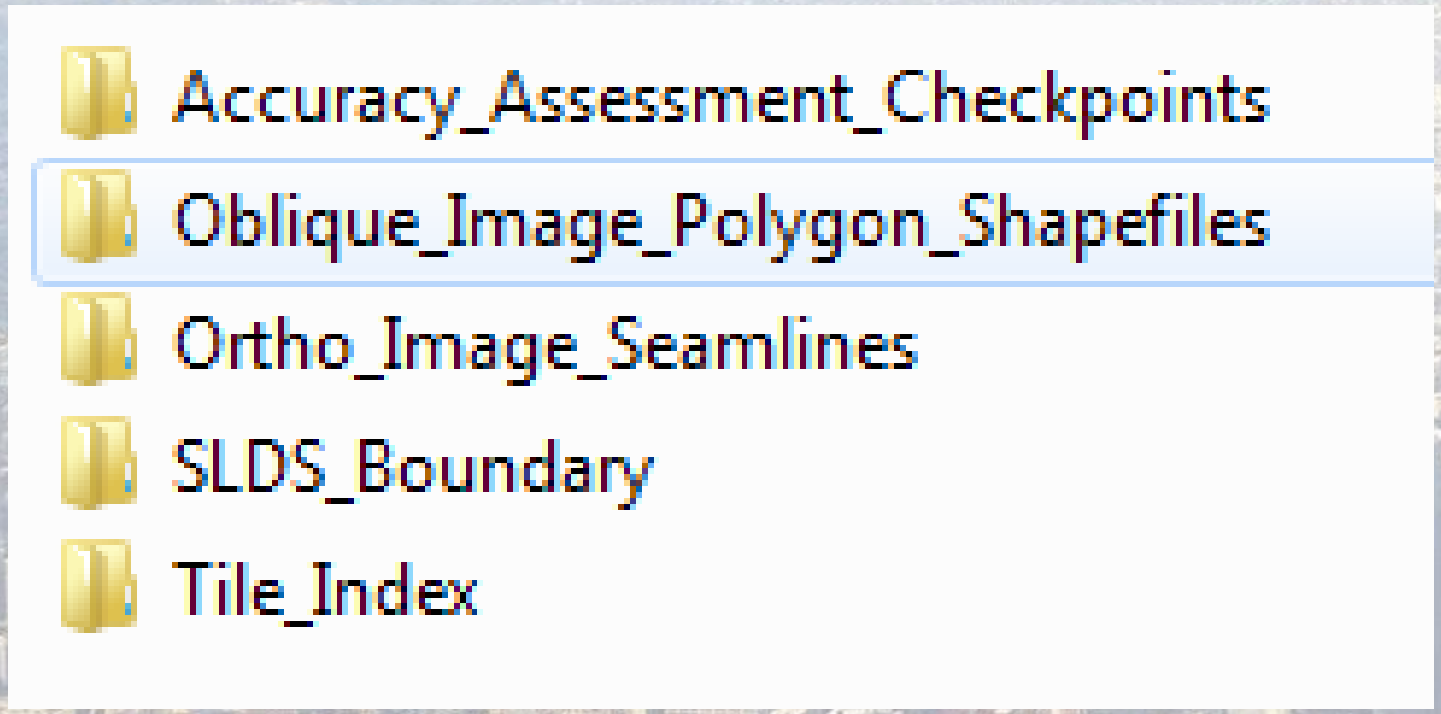
Delivery Product	Format 1	Format 2	Format 3	Format 4
Orthophoto (color) (4" and 1')	GeoTIFF & JPG2000 (raw format – 180 Mb per tile)	File Geodatabase (compressed, seamless)	ECW mosaics (compressed, seamless)	Map Services from LA County.
Pictometry oblique imagery (4" and 1')	Medium Compressed JPG format	Online Access		
Building Outlines	ArcGIS shapefile	ArcGIS Shapefile of new construction, changes, and demolition		
Digital Terrain Model (2015)	.las format files (RAW)	Digital Elevation and Surface model (rasters)	Other related formats	

Folder Structure

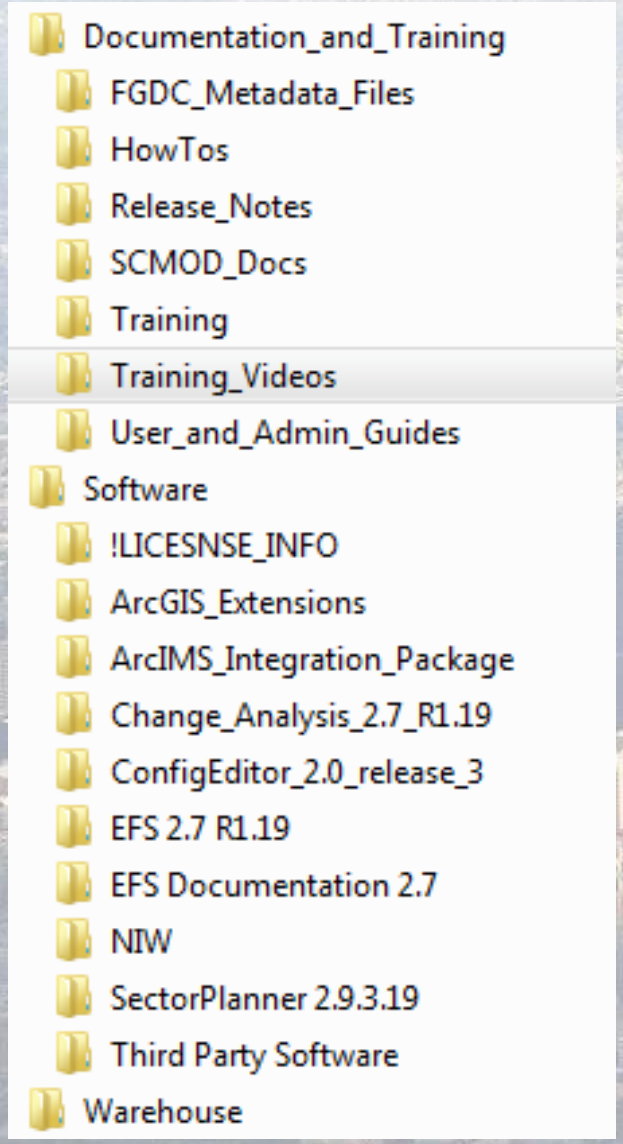
- Building Folder
- GIS Folder
- Oblique folder
- Ortho folder
- Reports Folder



GIS Deliverables



Oblique Imagery



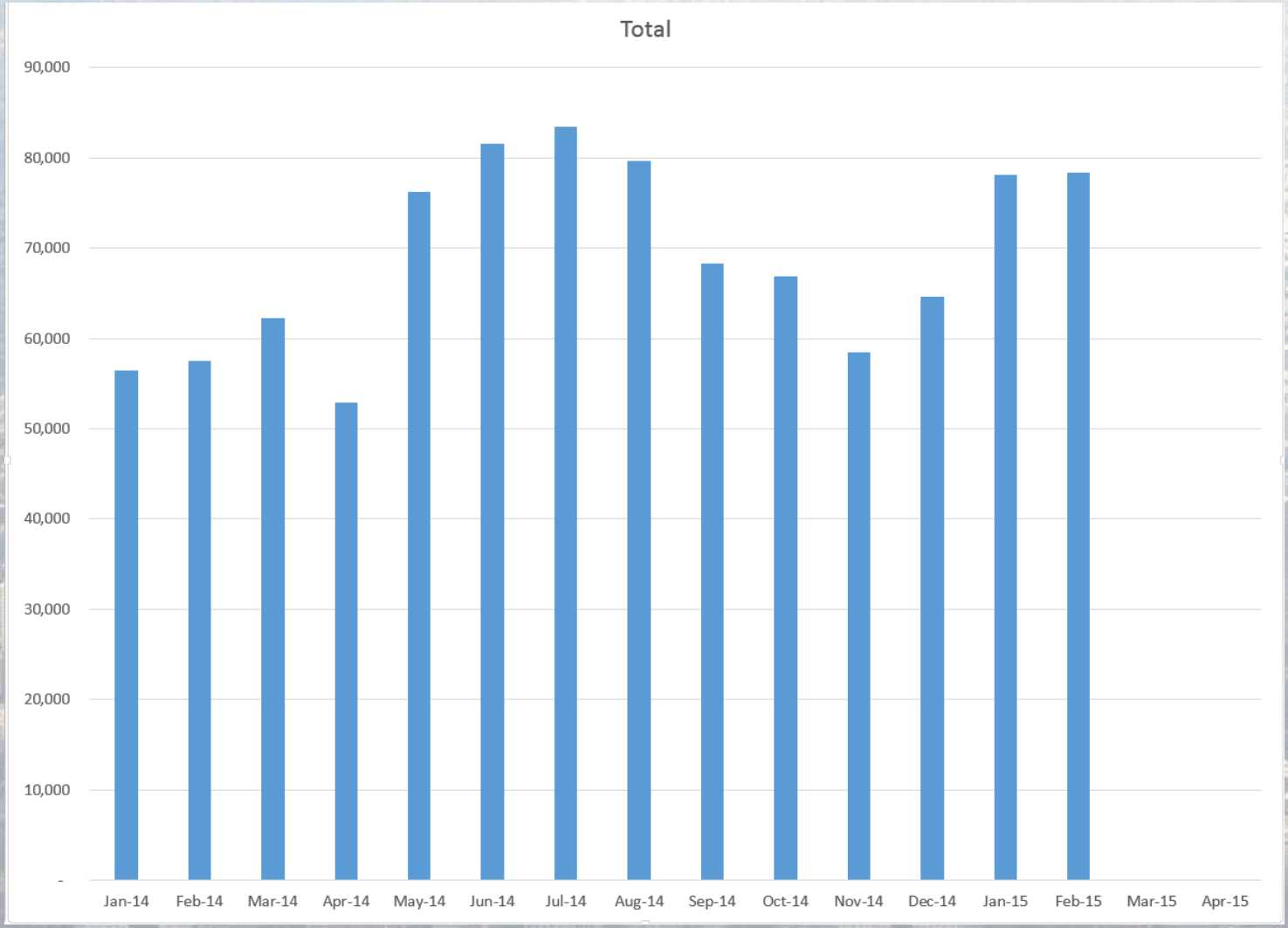
Oblique Image Access

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 Connect Explorer	Online Application for Access	Day to day use – also mobile - can pass parameters to it.
Pictometry iPAD Application	Mobile Access	Mobile Access
ArcMap Plugin	Connect to POL 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

Where do I find these?

- http://egis3.lacounty.gov/dataportal/lariac/lariac-access-methods/

POL Usage


Total
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
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Jun-14
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Jan-15
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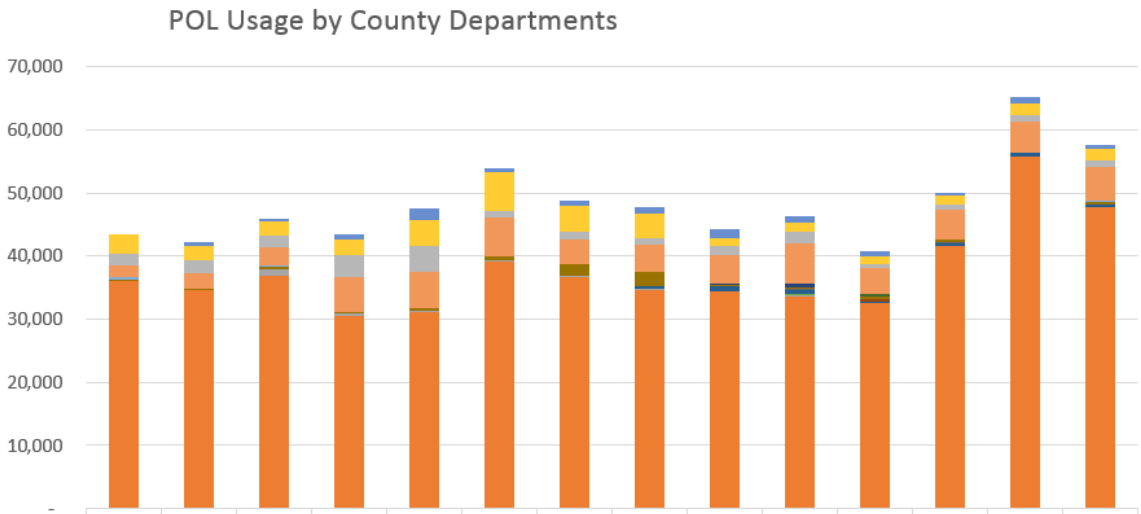
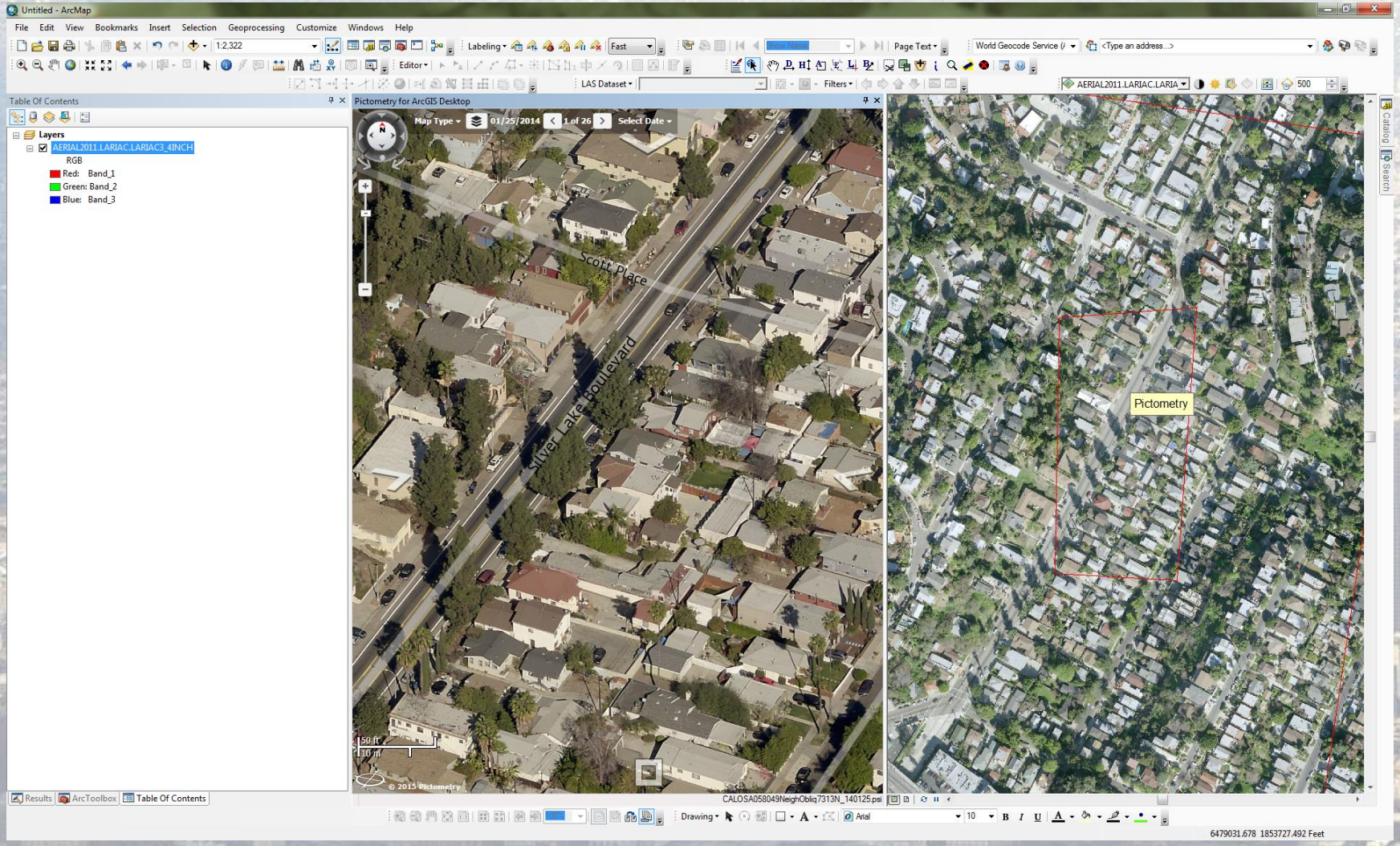
Apr-15

POL Usage by County



	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15
LA County Sheriff	-	636	513	916	1,871	544	776	954	1,479	1,081	832	361	970	637
LA County Sanitation Districts	3,134	2,230	2,304	2,525	4,134	6,039	4,106	3,872	1,368	1,414	1,271	1,318	1,872	1,924
LA County Regional Planning	1,751	2,162	1,833	3,356	4,178	1,087	1,239	1,171	1,325	1,696	579	869	1,083	960
LA County Public Works	1,981	2,406	2,892	5,629	5,738	6,110	3,887	4,140	4,506	6,354	4,153	4,667	4,773	5,404
LA County Public Library	336		64						-	5	-		-	55
LA County Public Health				13	22				7	34	336	39		4
LA County Probation									143	643	17	135	7	4
LA County Parks and Recreation	254	151	462	231	377	745	1,963	2,350	347	312	440	391	145	567
LA County Office of Emergency Management									21	16		66	14	
LA County ISD		1		2	44	-		15	-	132	453	32		12
LA County Fire		-	-	-	-	-	-	495	722	641	159	441	488	212
LA County EMS DHS		50	79	16	3	-	-		-	139	-	7		
LA County Department of Health Services (DHS)										12	41			
LA County Board of Supervisors														75
LA County Beaches and Harbors (LARIAC)	59	88	894	266	122	203	275	20	40	117	29	-	91	63
LA County Assessor	35,899	34,564	36,905	30,604	31,135	39,111	36,577	34,718	34,413	33,699	32,532	41,628	55,723	47,667
LA County ACWM	102	26	35			1	18	17	2					72

ArcGIS Plugin



Pictometry IPA

LARIAC Access Methods

egis3.lacounty.gov/dataportal/lariac/lariac-access-methods/

Apps | Financial | Work | GIS Demo | Utilities | NPMS Public Map V... | USDA Forest Service... | gis.e7studio.net | Imported | Socrata | TABLEIZER! | Spread... | LA County Intranet | Activity Dashboard f... | Enterprise GIS Track... | Visualization IPA for... | Other bookmarks

Los Angeles County GIS Data Portal | 2 | 0 | + New | Edit Page | SEO | Howdy, Mark Greninger

Welcome | Instructions | LARIAC | GIS Data Viewers | Interactive Map | Subscribe/Unsubscribe | Feedback

Hi Mark Greninger

profile
log out
blog admin

Categories

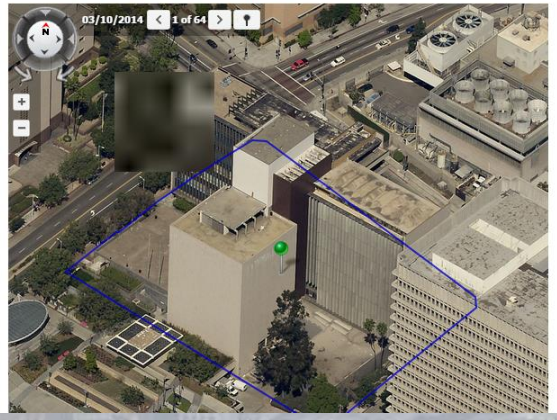
- GIS Applications (12)
- Data Theme (195)
  - Addressing (9)
  - Administrative Boundaries (49)
  - Basemaps and Grids (12)
  - Cadastral (13)
  - Demographic (7)
  - Elevation (11)
  - Environmental (18)
  - Hazards (8)
  - Hydro (15)
  - Imagery (14)
  - Infrastructure (18)
  - Jurisdictional Boundaries (3)
  - Political Boundaries (23)
  - Services (10)
  - Society (5)
  - Transportation (25)
- Data Source (206)
  - Assessor (3)
  - Beaches and Harbors (3)
  - Chief Executive Office (2)
  - Chief Information Office (13)
  - Children and Family Services (4)
  - City (7)
    - City of El Segundo (1)
    - City of Los Angeles (4)
    - City of Santa Monica (1)
  - Federal (24)
    - Census (6)
    - FCC (1)
    - FEMA (1)
    - Forest Service (1)
    - NOAA (5)
    - NREL (1)
    - US Geological Survey (9)
  - Fire (8)
    - Emergency Response (1)
  - Health Services (3)
  - Internal Services Department (11)
  - LA Times (1)
  - LAR-IAC (25)
  - Library (2)
  - Mental Health (2)
  - Metro (1)
  - Orange County (2)
  - Other (4)
  - Parks and Recreation (3)
  - Public Health (4)

LARIAC Access Methods

Pictometry

- There are a number of methods to access Pictometry data:
  - Desktop (Electronic Field Study – EFS) – requires either a local data store or NIW
  - ArcMap Integration (Pictometry Connect for ArcMap)
    - ArcMap 10.2
      - PictometryforArcGISDesktop10.2-Connect (zipped installation files)
      - Pictometry ArcGISDesktop Connect 10-2 Guide (pdf file)
      - Pictometry ArcGISDesktop Connect 10-2 ReleaseNotes (pdf file)
  - Pictometry Online: http://pol.pictometry.com
  - Pictometry Connect iPad Application
    - From your iPAD, go to the App Store and search for "Pictometry Connect Mobile"
  - Pictometry IPA (Integrated Pictometry Application)
    - See below for an example of how this works.
    - Click here to download (zipped .php file) – contact Pictometry to get the key files.
  - Pictometry Connect Explorer
  - Geocortex Silverlight Widget
    - For POL: Click here to download the zipped .xaml file
    - For Pictometry Connect Explorer: Click here to download the zipped .xaml file

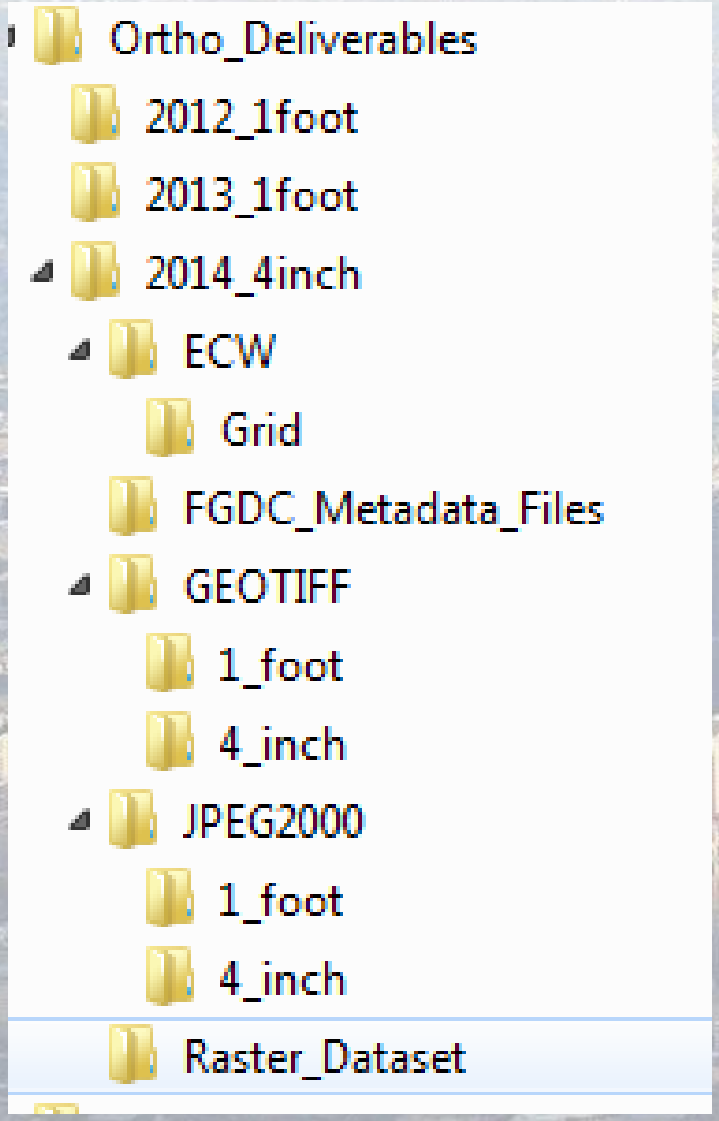
- Pictometry IPA (Integrated Pictometry Application) – see below



Oblique Imagery

- Warehouse and EFS
  - For disconnected situations
  - If you don’t join LARIAC5
  - You need EFS software (included) to use.
  - Very large

Ortho Imagery



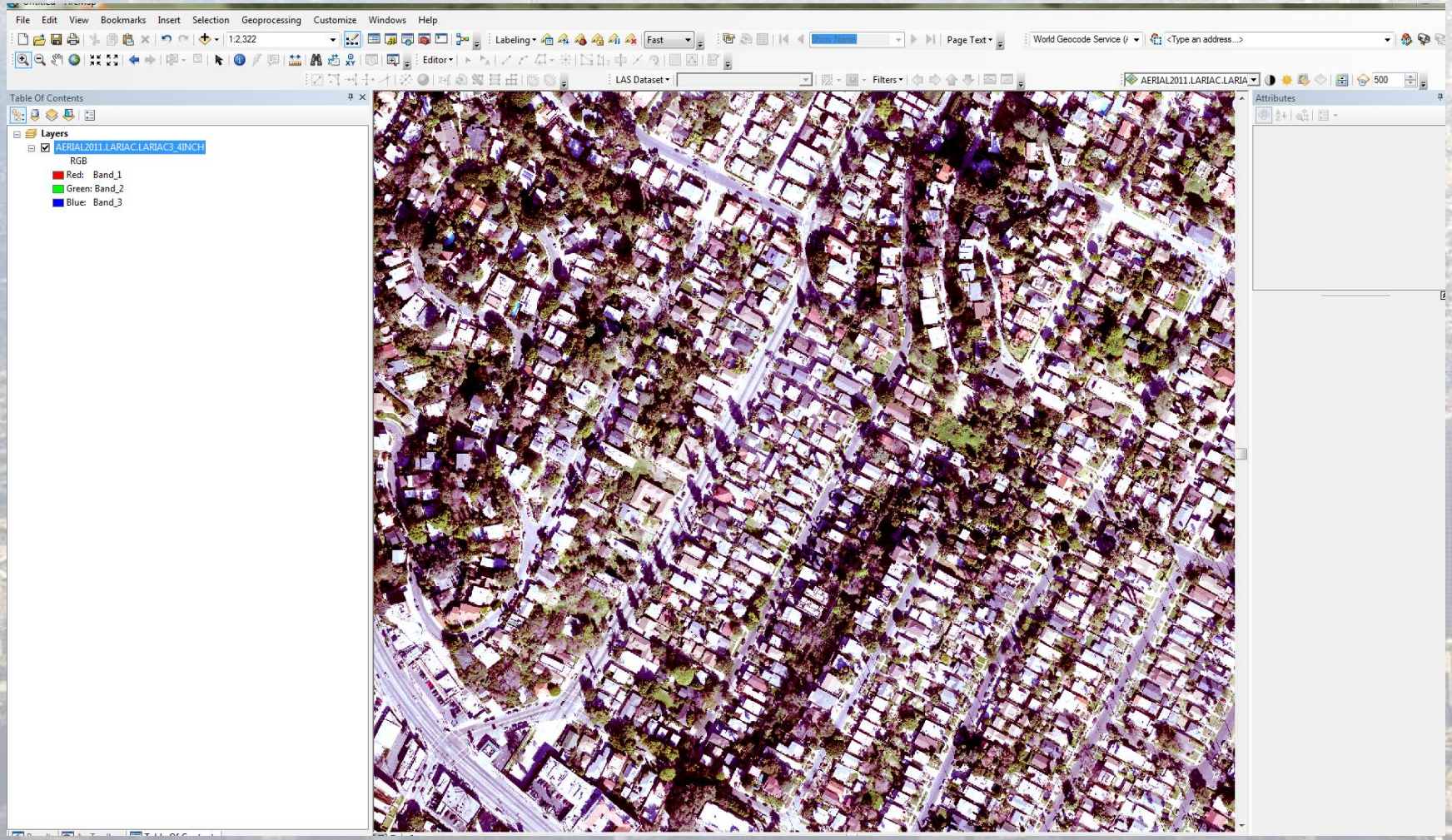
Orthogonal Imagery

- Raw imagery
  - .tiff files – the source data
  - JPEG 2000 files
- Compiled format
  - Raster Dataset (60% JPEG compression)
  - Combined to look like one image
  - Use right away
- Compressed format
  - ECW compression (20:1) for in vehicle use, etc.
- Online access from LA County
  - ESRI map service for inclusion in web sites (example)

Some notes

- Various formats available in ESRI
  - Mosaic
  - Raster Catalog
  - SDE Export
  - **Raster Dataset (this is how it will be delivered)**

Image tone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Blue: Band_3
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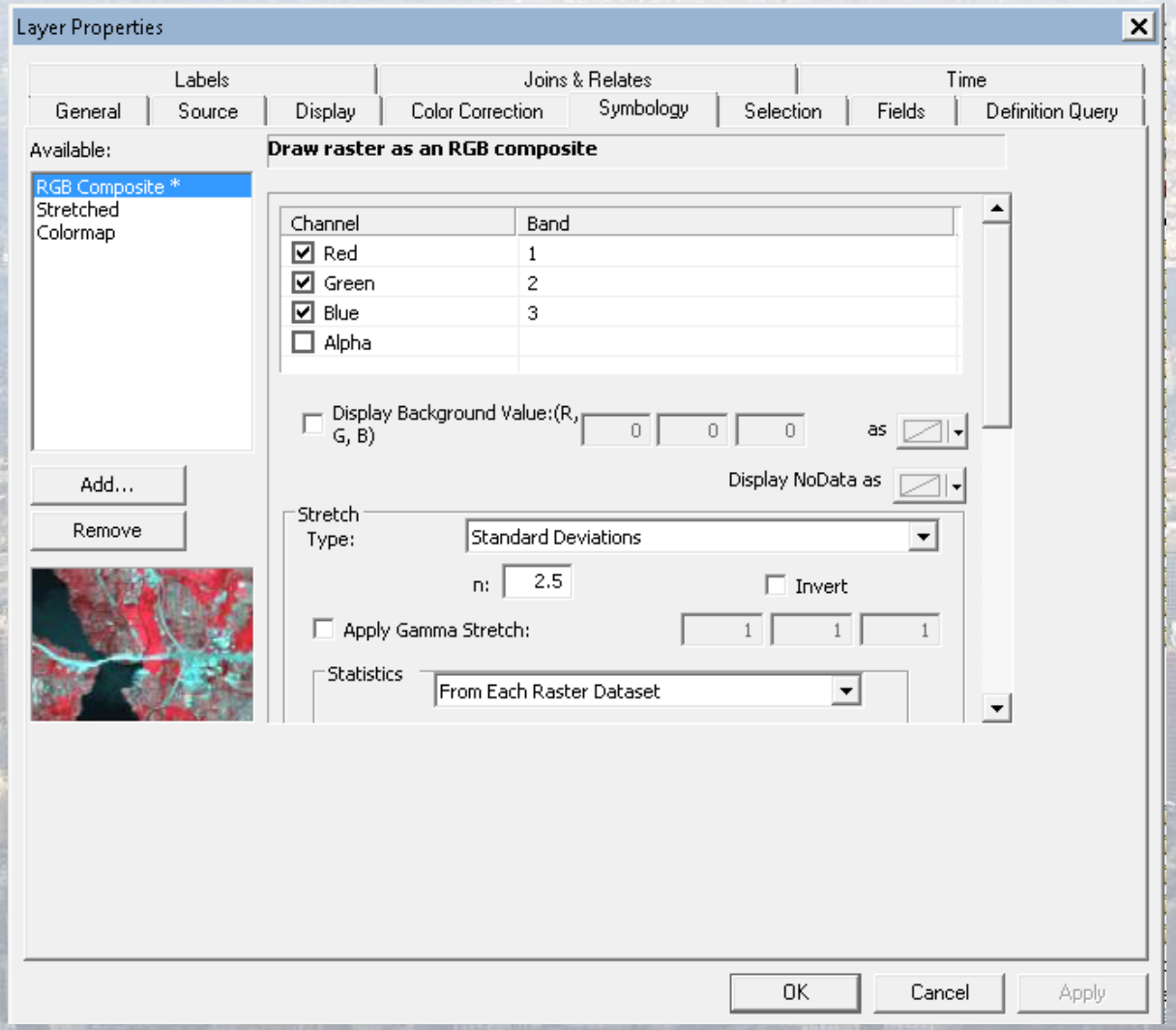

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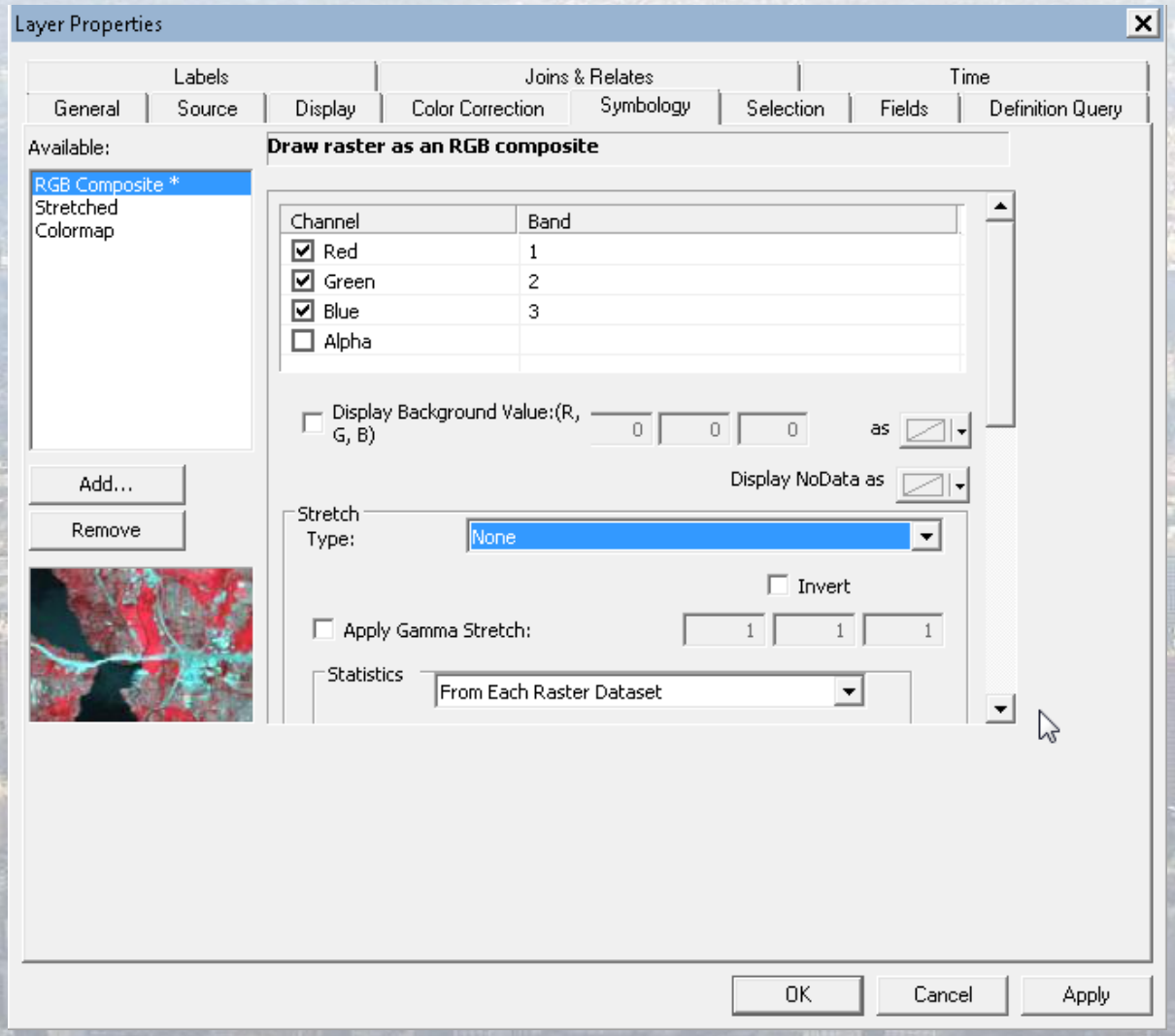
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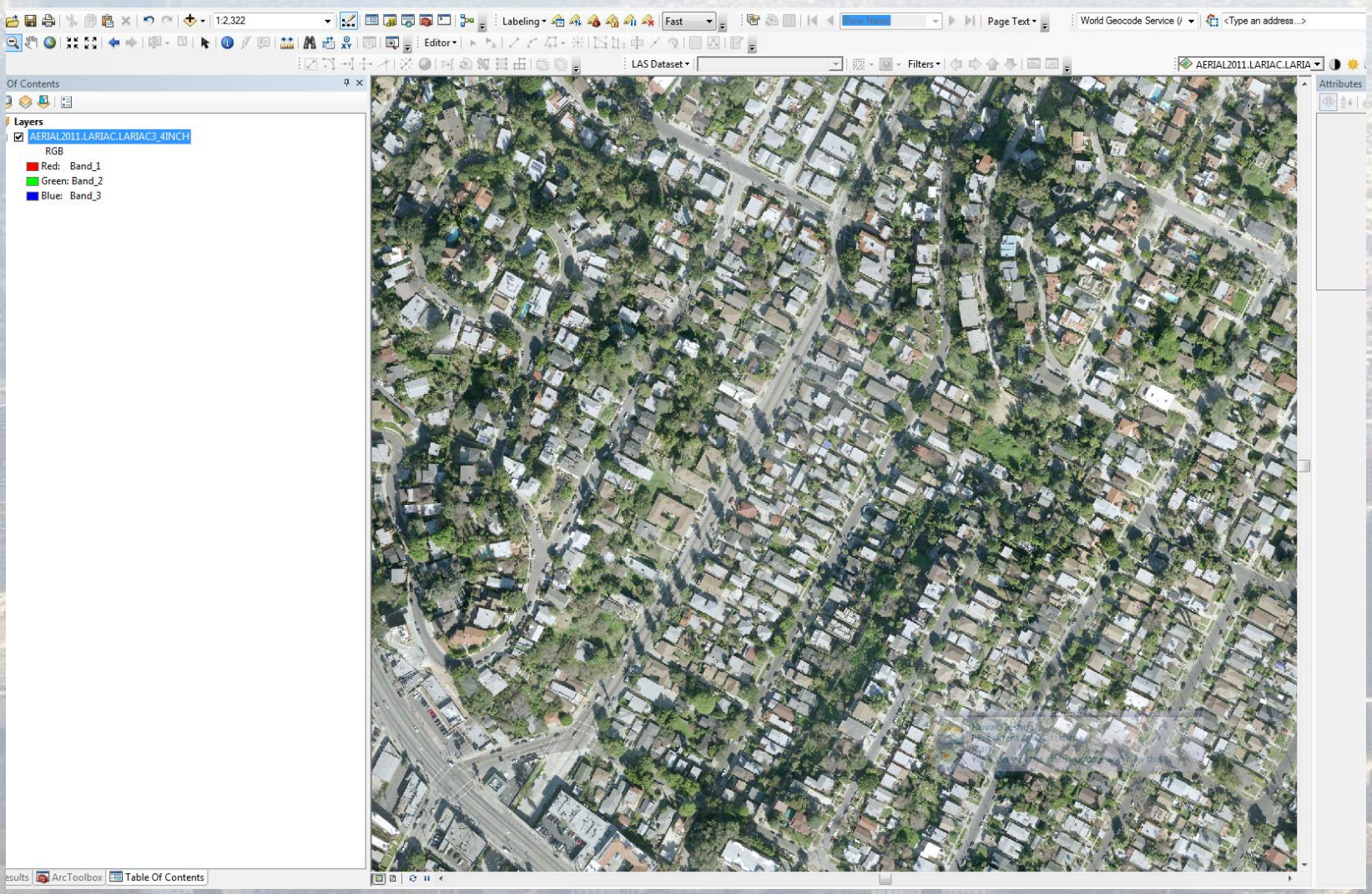
See – all nice!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Layers
AERIAL2011.LARIAC.LARIAC3_4INCH
RGB
Red: Band_1
Green: Band_2
Blue: Band_3
Attributes
ArcToolbox
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Take-aways

- The data is good
- If you have issues, it is generally user error
- Contact us

Building Outlines

- Two shapefiles
  - Current buildings
  - Deleted buildings
- Current Building Data Structure
  - CODE (Building or courtyard)
  - BLD_ID – Unique ID
  - HEIGHT (Height in feet)
  - Elevation (Ground elevation)
  - Area (Building roofline in Square Feet)
  - Source (which provenance)
  - Date (data acquired)
  - AIN (Parcel ID)
  - Status (Unchanged, New, Replacement, Modified)
  - OLD_BLD_ID (connects to the Deleted Buildings ID)

Building Outlines

- Deleted Building Data Structure
  - CODE (Building or courtyard)
  - BLD_ID – Unique ID
  - HEIGHT (Height in feet)
  - Elevation (Ground elevation)
  - Area (Building roofline in Square Feet)
  - Source (which provenance)
  - Date (data acquired)
  - AIN (Parcel ID)
  - Status (Destroyed, Modified)
  - NEW_BLD_ID (connects to the Current Buildings ID)

OTHER COUNTY PROGRAMS

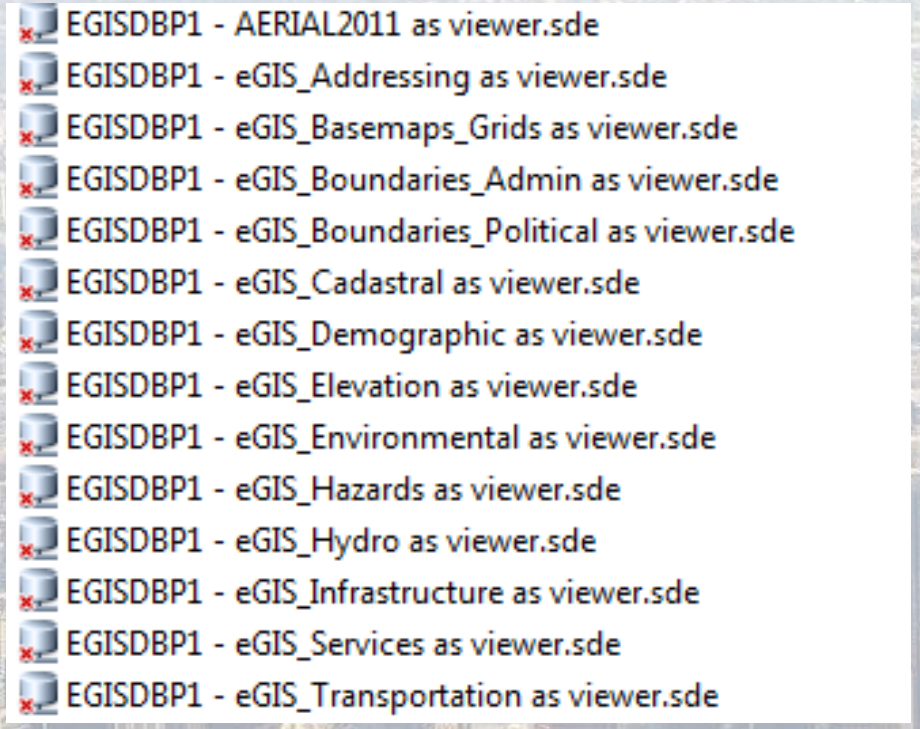
COUNTY GIS REPOSITORY

LA County GIS Repository

- A new feature of LARIAC
- Provide direct, read-only access to the County Enterprise GIS Repository.
- Enable participants to access our authoritative data directly – no need to download data from our data portal
- Eliminate duplicate effort.

What is the Repository

- 13 databases
- Organized by FGDC Theme
- Over 400 GIS data layers
- Many different sources



How do I access?

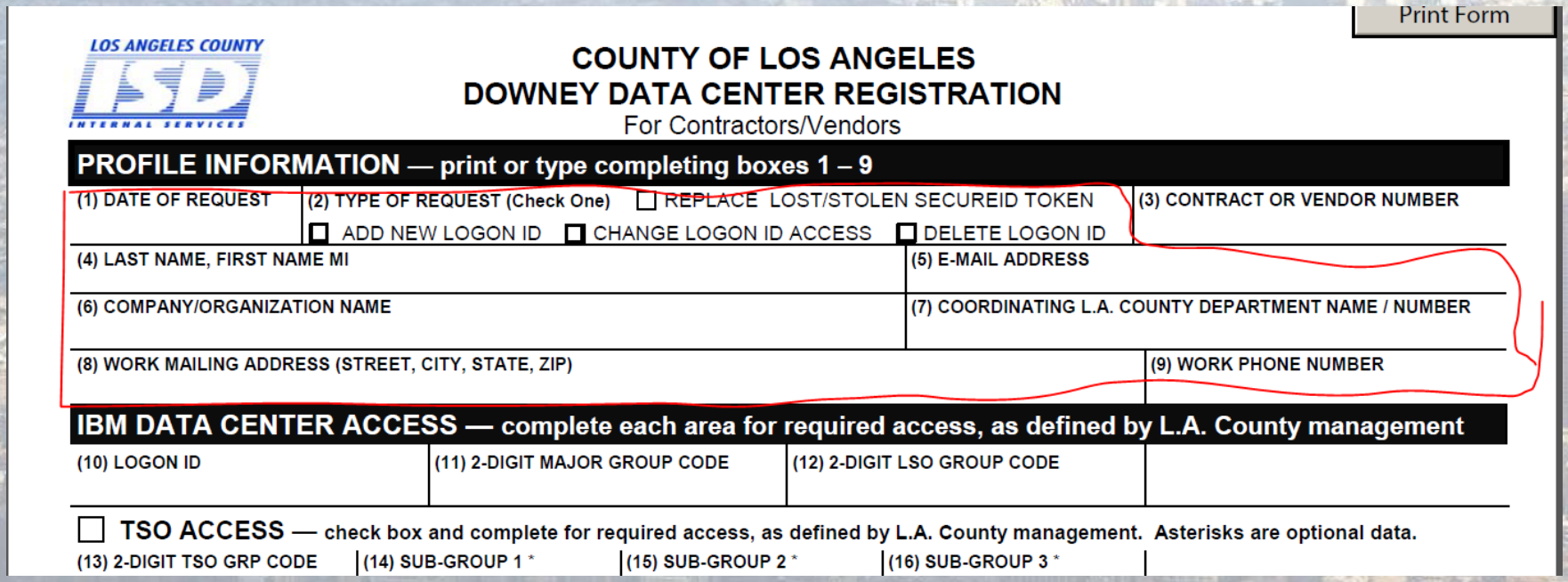
- Database is internal
- Requires VPN registration and access for an individual
- Is not designed for you to constantly connect
- Connect, download, disconnect, get to work.

Process

- Complete the Data Center registration form
  - A registration form is required for each individual
  - You become a “contractor” to the County.
  - You receive an RSA token for access to the County network.
  - Scan and email form to Mark Greninger
- County eGIS group provides data connection files.
- You learn how to connect to the county network
- You connect to our databases.

Data Center Registration Form

- Ignore #3
- Sign #27



Print Form

LOS ANGELES COUNTY ISD INTERNAL SERVICES

COUNTY OF LOS ANGELES
DOWNEY DATA CENTER REGISTRATION
For Contractors/Vendors

PROFILE INFORMATION — print or type completing boxes 1 – 9

(1) DATE OF REQUEST	(2) TYPE OF REQUEST (Check One) ☐ REPLACE LOST/STOLEN SECUREID TOKEN ☐ ADD NEW LOGON ID ☐ CHANGE LOGON ID ACCESS ☐ DELETE LOGON ID	(3) CONTRACT OR VENDOR NUMBER
(4) LAST NAME, FIRST NAME MI		(5) E-MAIL ADDRESS
(6) COMPANY/ORGANIZATION NAME		(7) COORDINATING L.A. COUNTY DEPARTMENT NAME / NUMBER
(8) WORK MAILING ADDRESS (STREET, CITY, STATE, ZIP)		(9) WORK PHONE NUMBER

IBM DATA CENTER ACCESS — complete each area for required access, as defined by L.A. County management

(10) LOGON ID	(11) 2-DIGIT MAJOR GROUP CODE	(12) 2-DIGIT LSO GROUP CODE	

☐ **TSO ACCESS** — check box and complete for required access, as defined by L.A. County management. Asterisks are optional data.

(13) 2-DIGIT TSO GRP CODE	(14) SUB-GROUP 1 *	(15) SUB-GROUP 2 *	(16) SUB-GROUP 3 *

Data Center Registration Form

- Sign last page (both you and your manager)

system, or computer network.

(8) Knowingly introduces any computer contaminant into any computer, computer system, or computer network.

I HAVE READ AND UNDERSTAND THE ABOVE AGREEMENT:

Employee's Name	Employee's Signature	Date
Manager's Name	Manager's Signature	Date

Next Steps

- Sign, scan, and email to me:
  - Mark Greninger (mgreninger@cio.lacounty.gov)
- I will be collecting the forms and processing in bulk.

Notes

- Practicality
  - When you connect to our network, the connection to your network is broken.
  - For concurrent use ArcMap users, you will need to “check out” a license (the connection to your license server may be broken).
  - Do not build maps that connect directly our databases – network speed may be limited.
- Program Design
  - One connection per city/department
  - Read only for now (we can discuss other storage later)

Programs

- County maintains GIS data through programs
  - LARIAC (imagery and elevation)
  - Parcels (Assessor)
  - Service Locations (211 & Location Management Systems)
  - CAMS (Countywide Address Management)
- CAMS is a collaboration
  - Maintain street centerlines and Address information
  - For dispatch, address lookup, and many other business functions.

CAMS

- CAMS is:
  - A collaborative program
  - Datasets (points and lines) - downloadable
  - A data structure and database
  - An editing environment
- CAMS needs
  - Cities to update their information in the system
- For more information see:
  - http://egis3.lacounty.gov/eGIS/county-gis-projects/address-management-cams/

Los Angeles Region – Imagery Acquisition Consortium (LAR-IAC4)

Questions/Comments?

LOS ANGELES REGION
LAR|ac
imagery acquisition consortium

Prepared by:
Los Angeles County

COUNTY GIS SERVICES TO CITIES

GIS Services

- County maintains a GIS infrastructure and GIS expertise
  - Cities may not have the resources to fully leverage GIS
  - Are the opportunities for the County to support cities with standard GIS tools and services?
  - Leverage collaboration to reduce cost to cities.