LAR-IAC4 Status and User Group Meeting

September 18, 2014

LOS ANGELES REGION
LAR|IAC
imagery acquisition consortium

Agenda

- LARIAC Status Update
  - LA County
  - Pictometry
  - Dewberry
- LARIAC Data Discussion
- LARIAC Training Schedule
- Other County Programs
  - CAMS
  - GIS Services for Cities

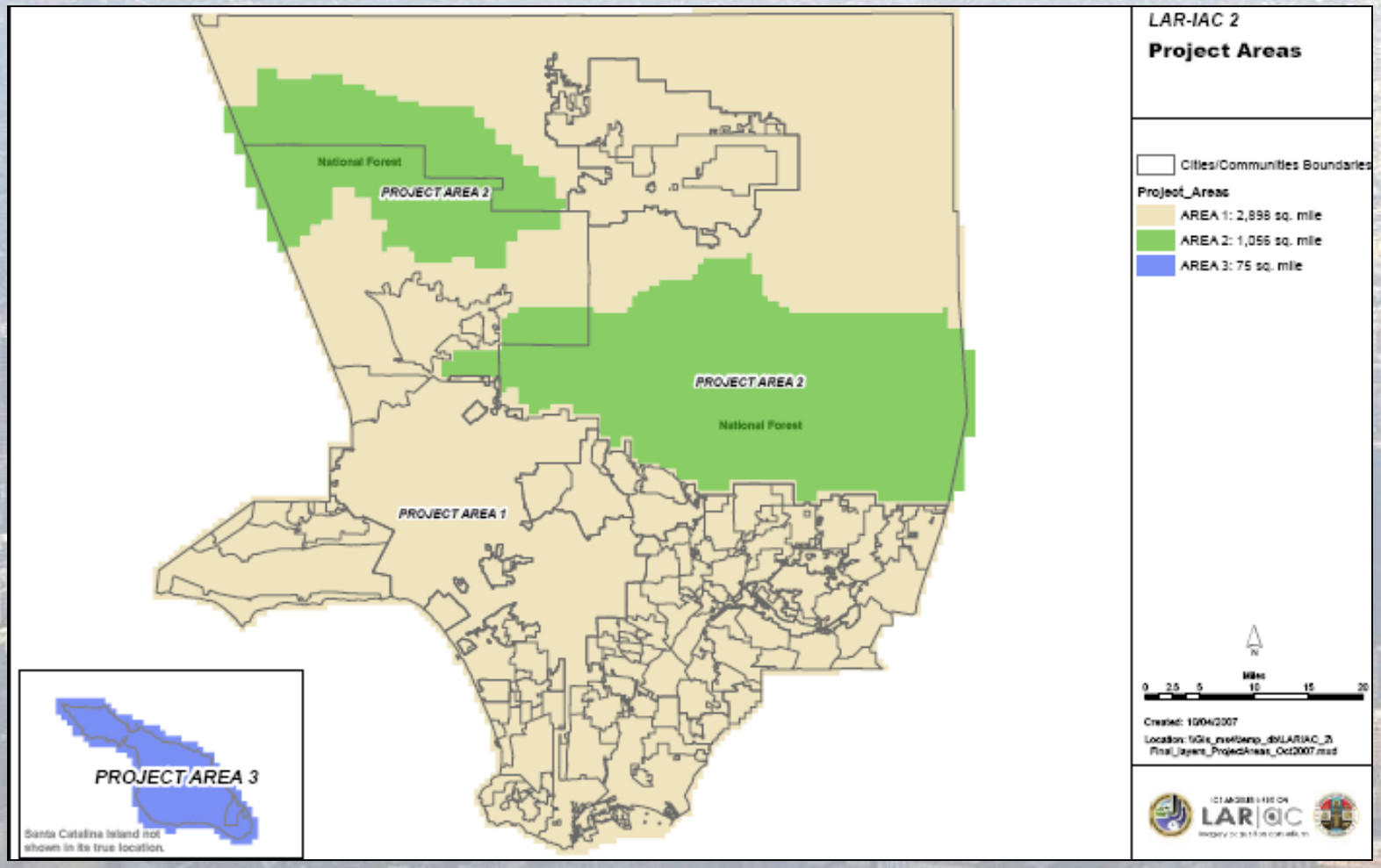
What is LAR-IAC?

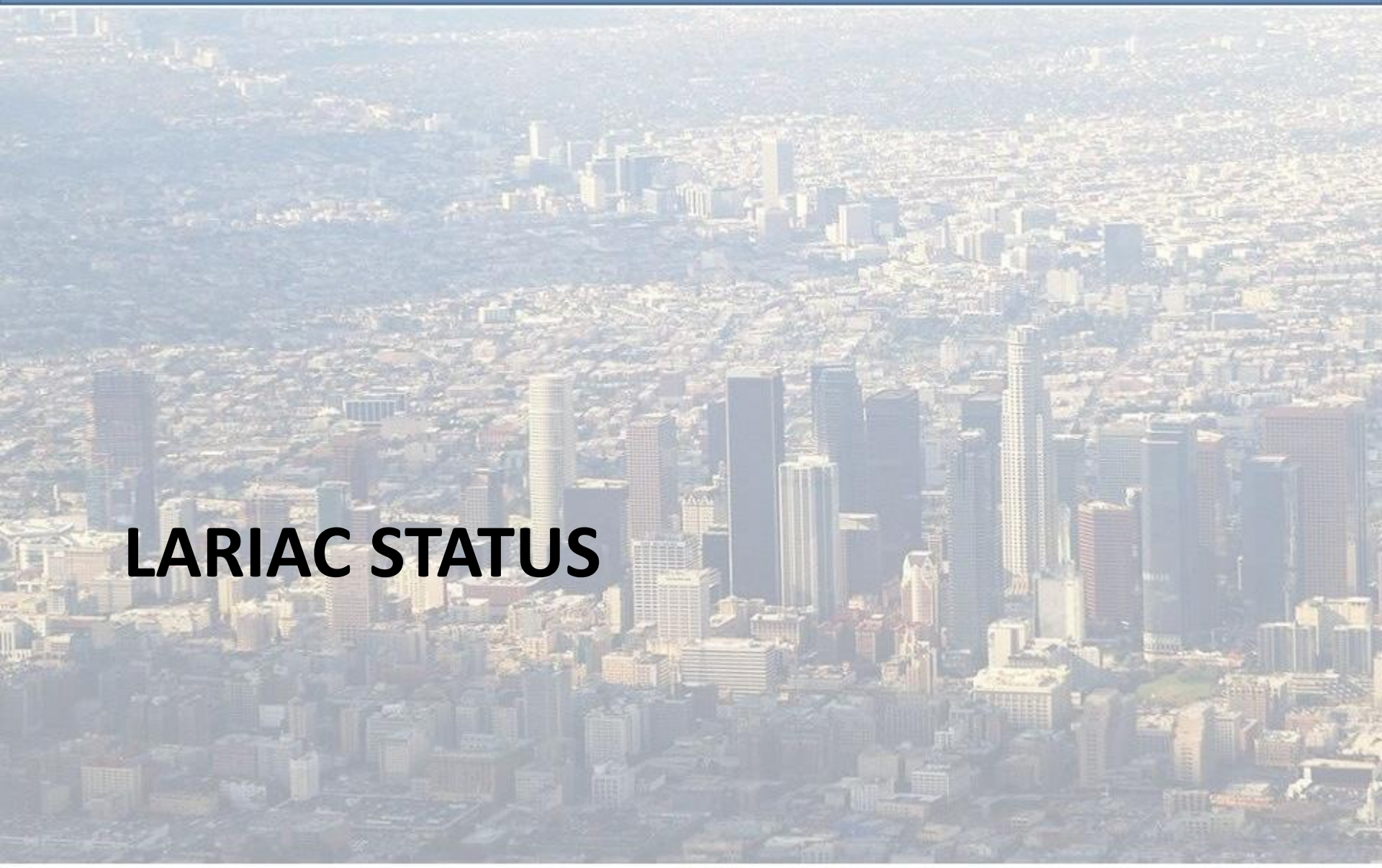
- Los Angeles Regional Imagery Acquisition Consortium (LAR-IAC)

  "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

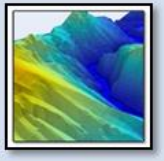
Current Status

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	I
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	I	City of El Segundo	X	City of Santa Clarita	X
Suburban Water System	I	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 Westlake Village	X
		City of La Canada Flintridge	X	City of Whittier	X
		City of Lakewood	X		

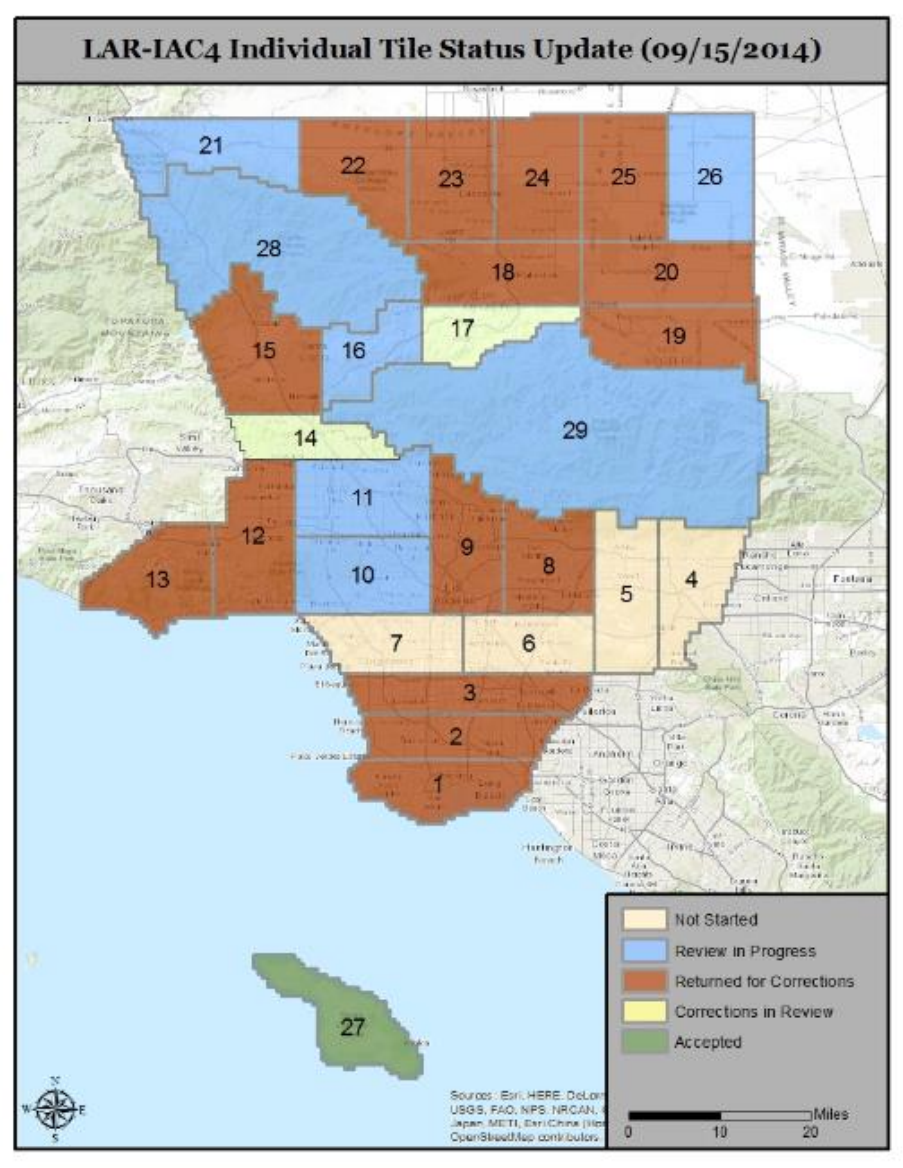
Current Finances

- 6 Agencies, 24 County departments, 32 cities
- $4.22 million in commitments
  - $2 million received
- Current LARIAC4 costs - $2.85 million
- LIDAR costs: $1.5 million
  - Need in additional commitments of $125,000 to complete LIDAR flights.
  - I am authorizing flights
  - Need $400,000 in payments to cover the costs

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

Ortho Processing Status



Delivery Schedule

- Oblique Imagery
  - Delivered a while ago via Pictometry Online
  - Also will come on hard disk with orthos
- Ortho imagery
  - 2012 and 2013 imagery will come on hard disks with 2014.
  - Expect completion by early to mid October.
  - Delivery will come in late October.
- Building Outlines
  - Areas outside LA City delivered 9/18 (today)
  - LA City delivered September 30th.
  - We will deliver together.

LIDAR Status

- County will amend the current LARIAC contract to add LIDAR
  - 2 points/meter squared
  - 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)
- Anticipate flights early 2015.

Contact Information

- **Project Director**

  Mark Greninger, County GIO

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

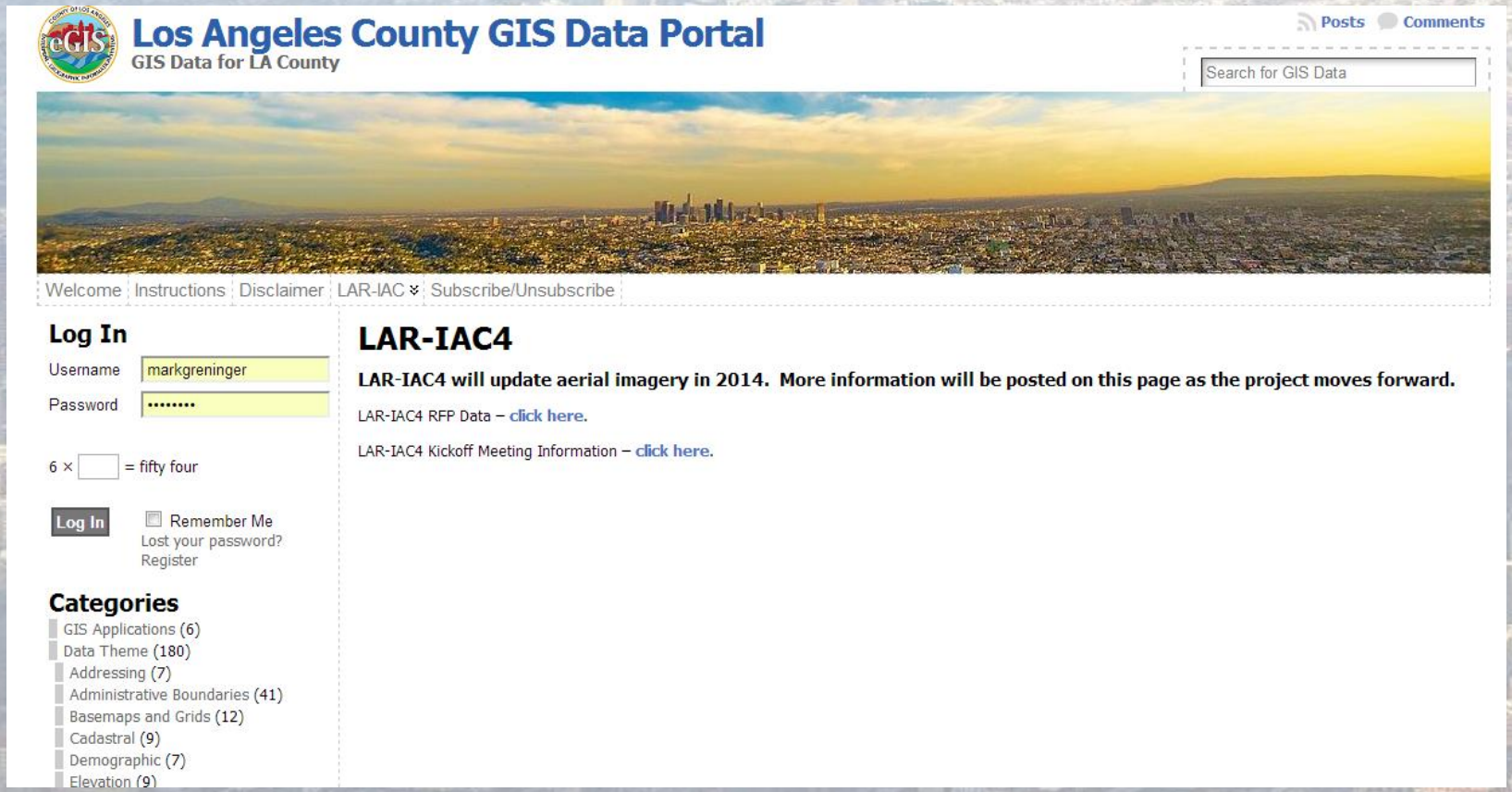
- **Outreach Manager**

  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/



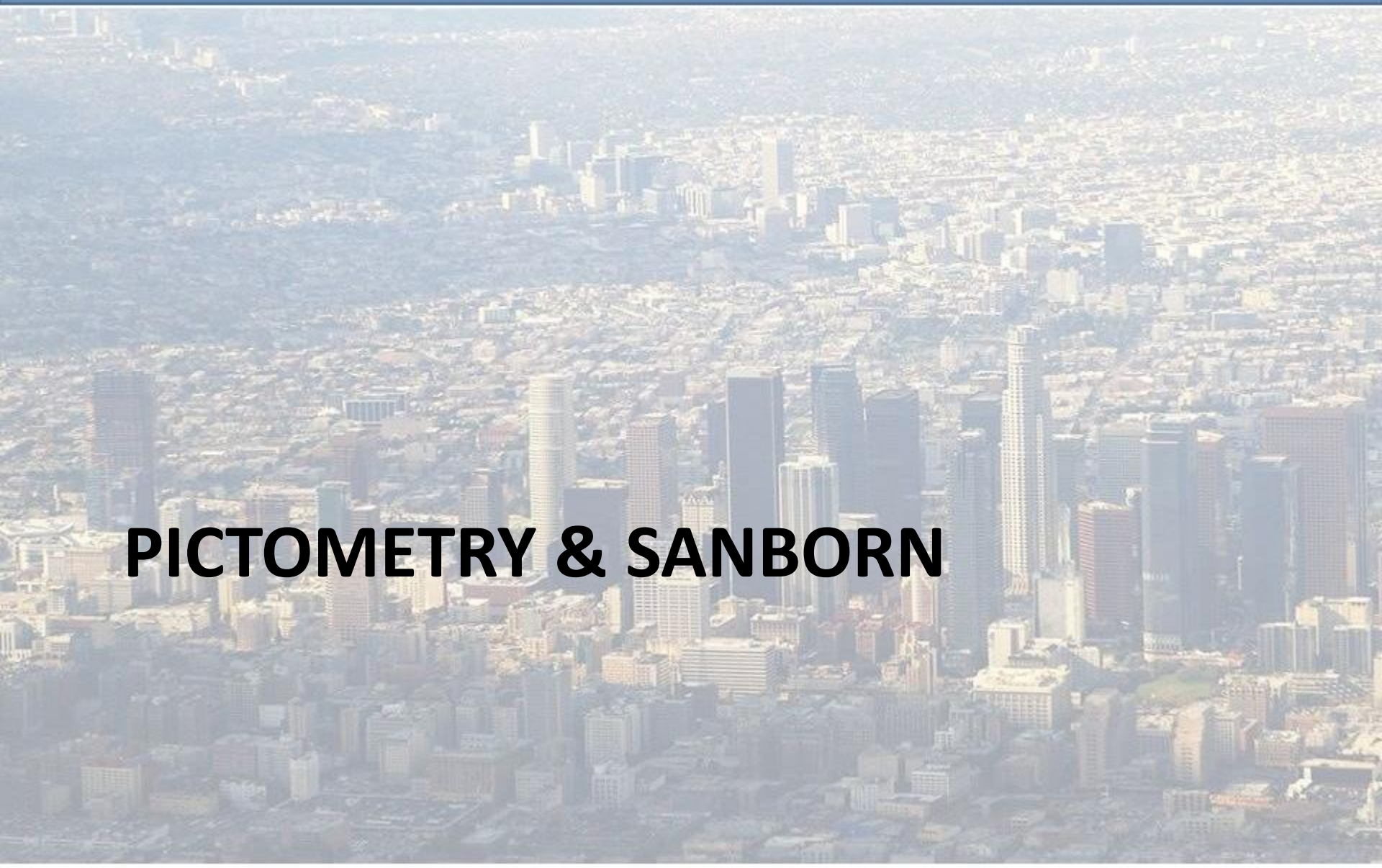
Los Angeles Region – Imagery Acquisition Consortium (LAR-IAC4)

Questions/Comments?

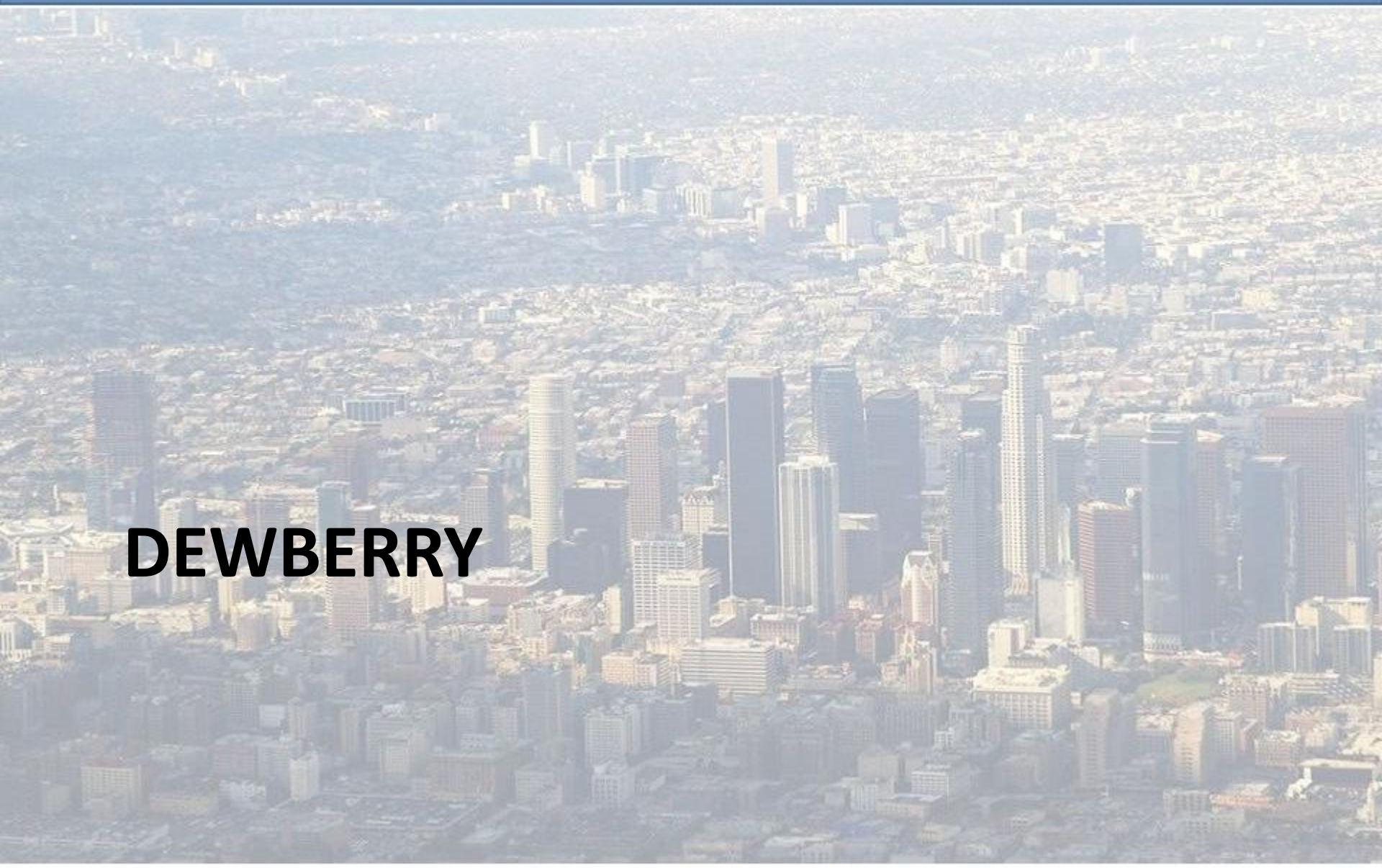
LOS ANGELES REGION
LAR|ac
imagery acquisition consortium

Prepared by:
Los Angeles County

LARIAC VENDOR STATUS UPDATES



PICTOMETRY & SANBORN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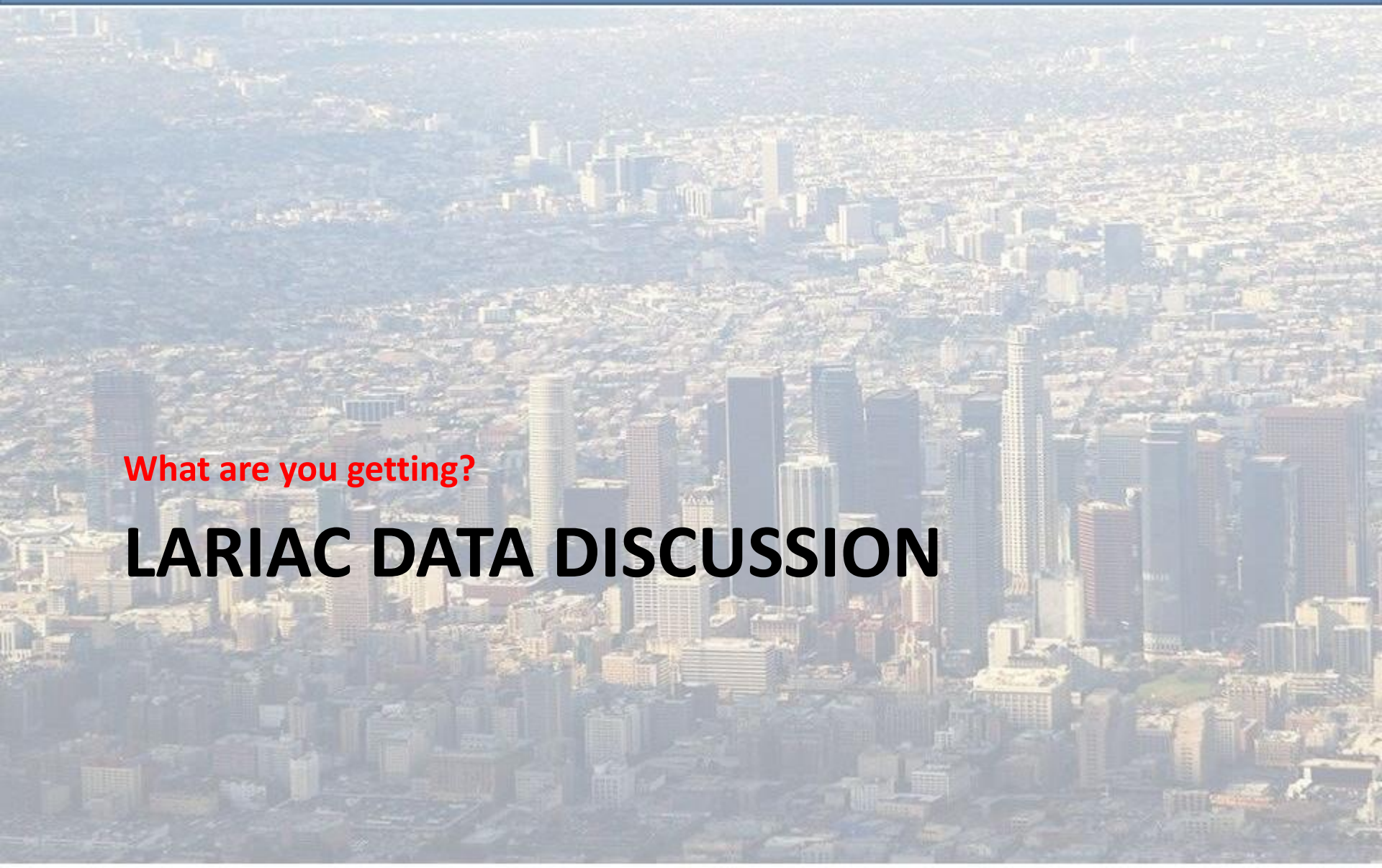


What are you getting?

LARIAC DATA DISCUSSION

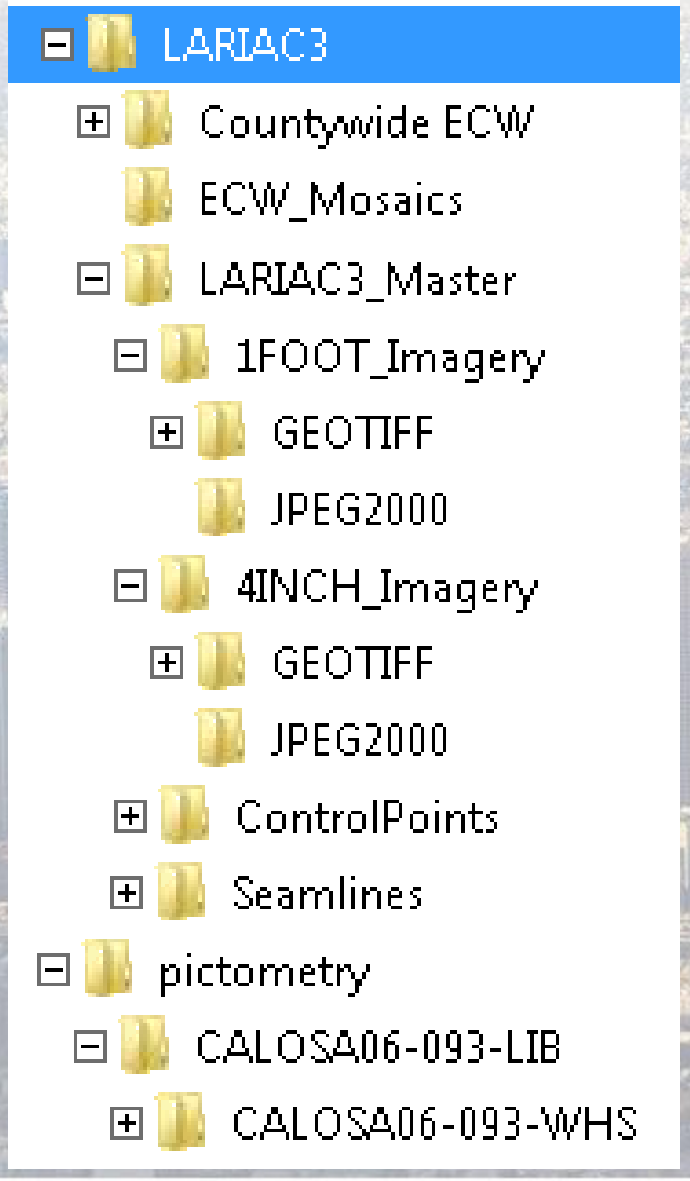
Data Delivery Formats

LAR-IAC4

Delivery Product	Format 1	Format 2	Format 3	Format 4
Orthophoto (color) (4” and 1’)	GeoTIFF & JPG2000	SDE Export/ File Geodatabase	ECW mosaics	Online Access
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

- Ortho folder
- Oblique folder
- Building Folder



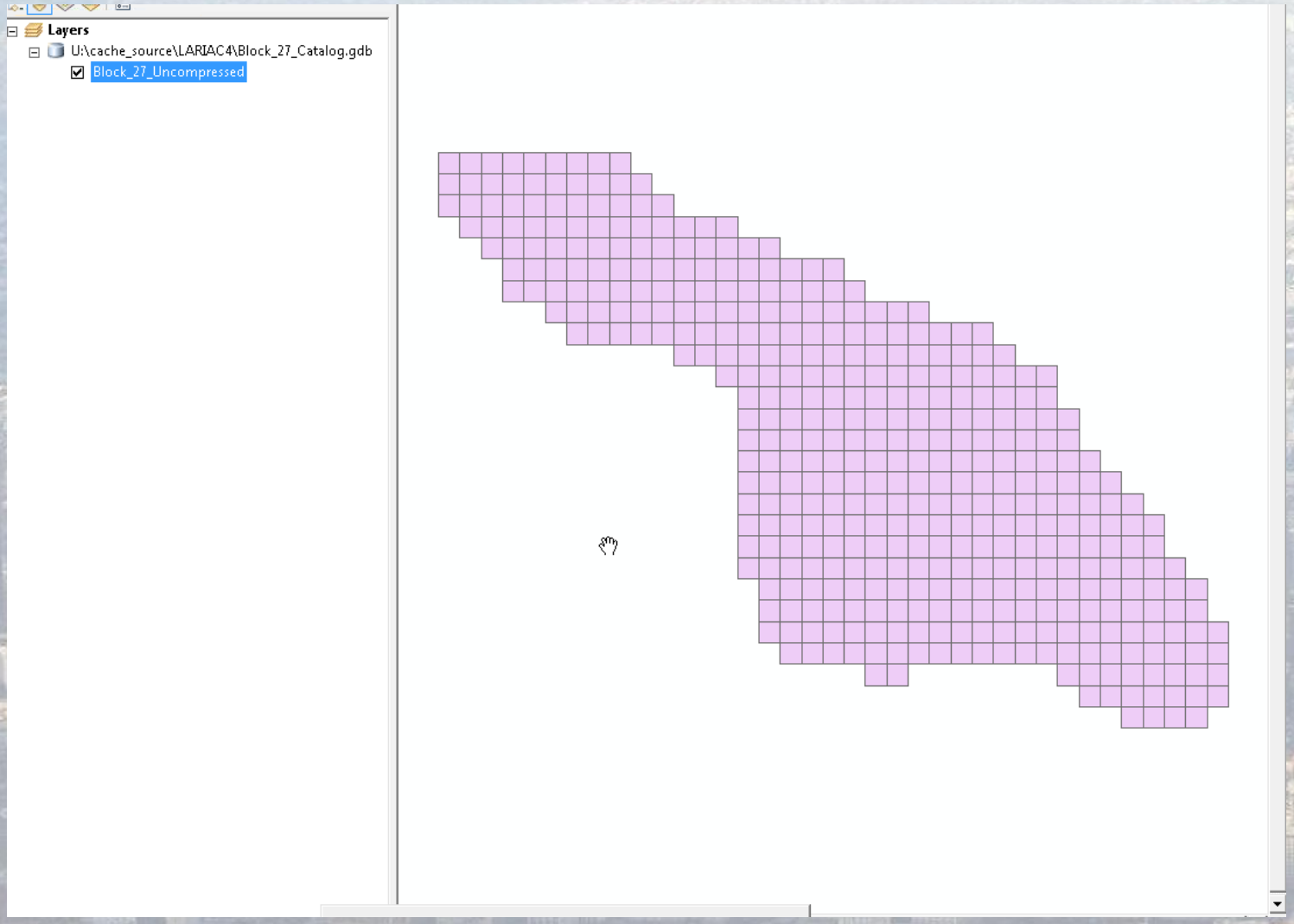
Orthogonal Imagery

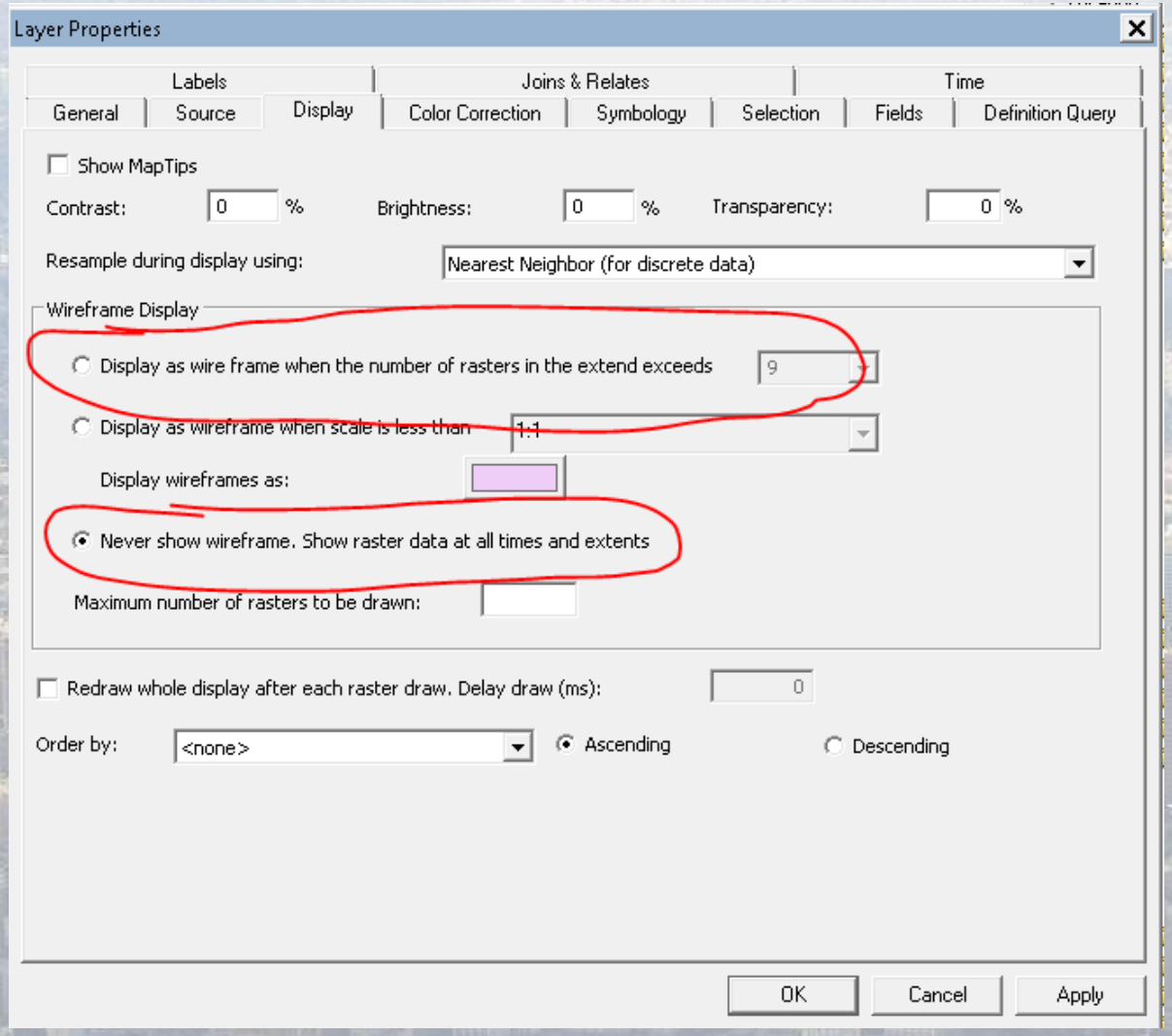
- Raw imagery
  - .tiff files – the source data
  - JPEG 2000 files
- Compiled format
  - Raster Dataset (60% JPEG compression)
  - Combined to look like one image
  - Use right away
- Compressed format
  - ECW compression (20:1) for in vehicle use, etc.
- Online access from LA County
  - ESRI map service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

Some notes

- Various formats available in ESRI
  - Mosaic
  - Raster Catalog
  - SDE Export
  - **Raster Dataset**

Raster Catalog

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Symbology
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Definition Query
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Transparency: 0 %
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Wireframe Display
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Display as wireframe when scale is less than 1:1
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Never show wireframe. Show raster data at all times and extents
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Descending
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Cancel
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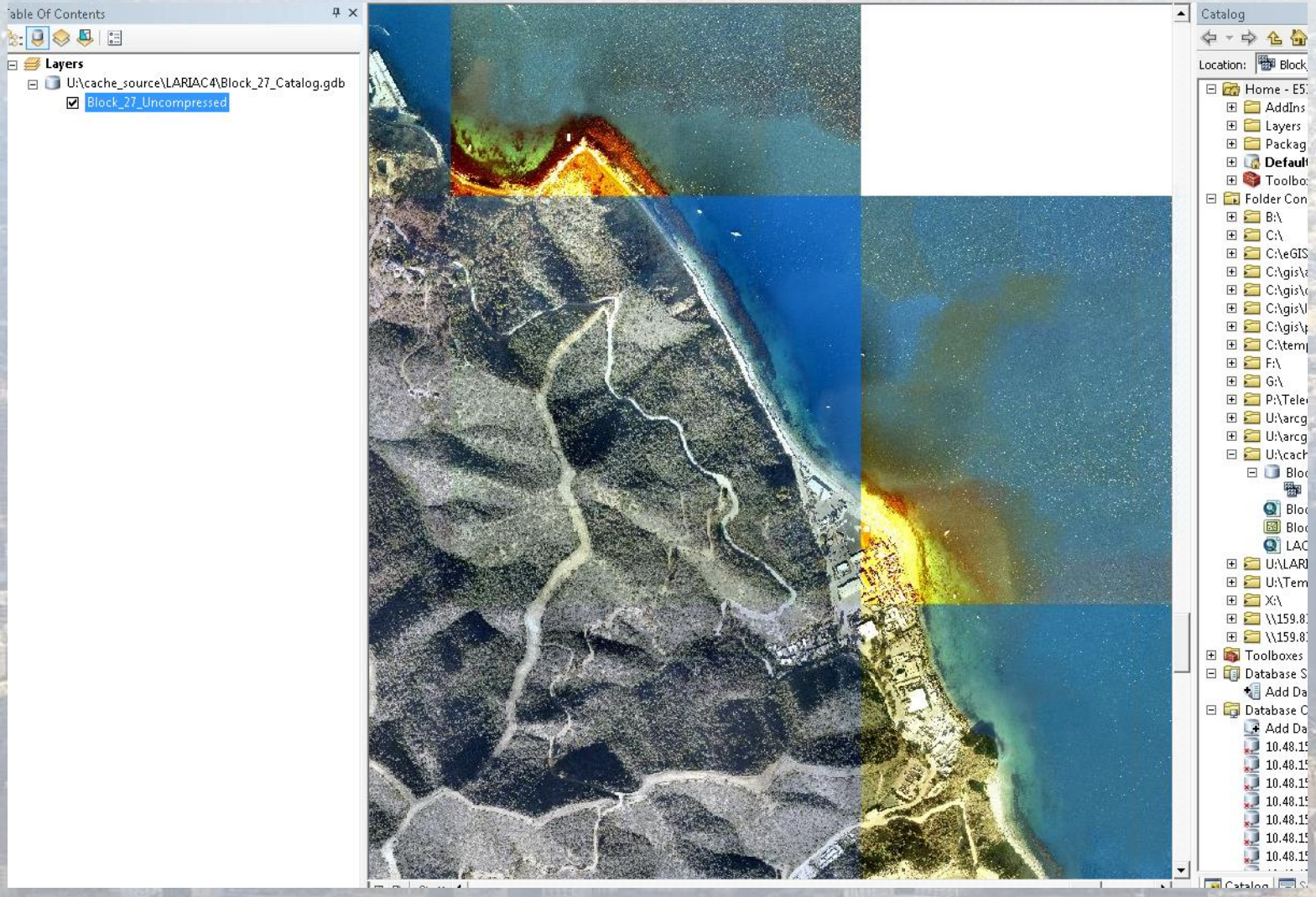
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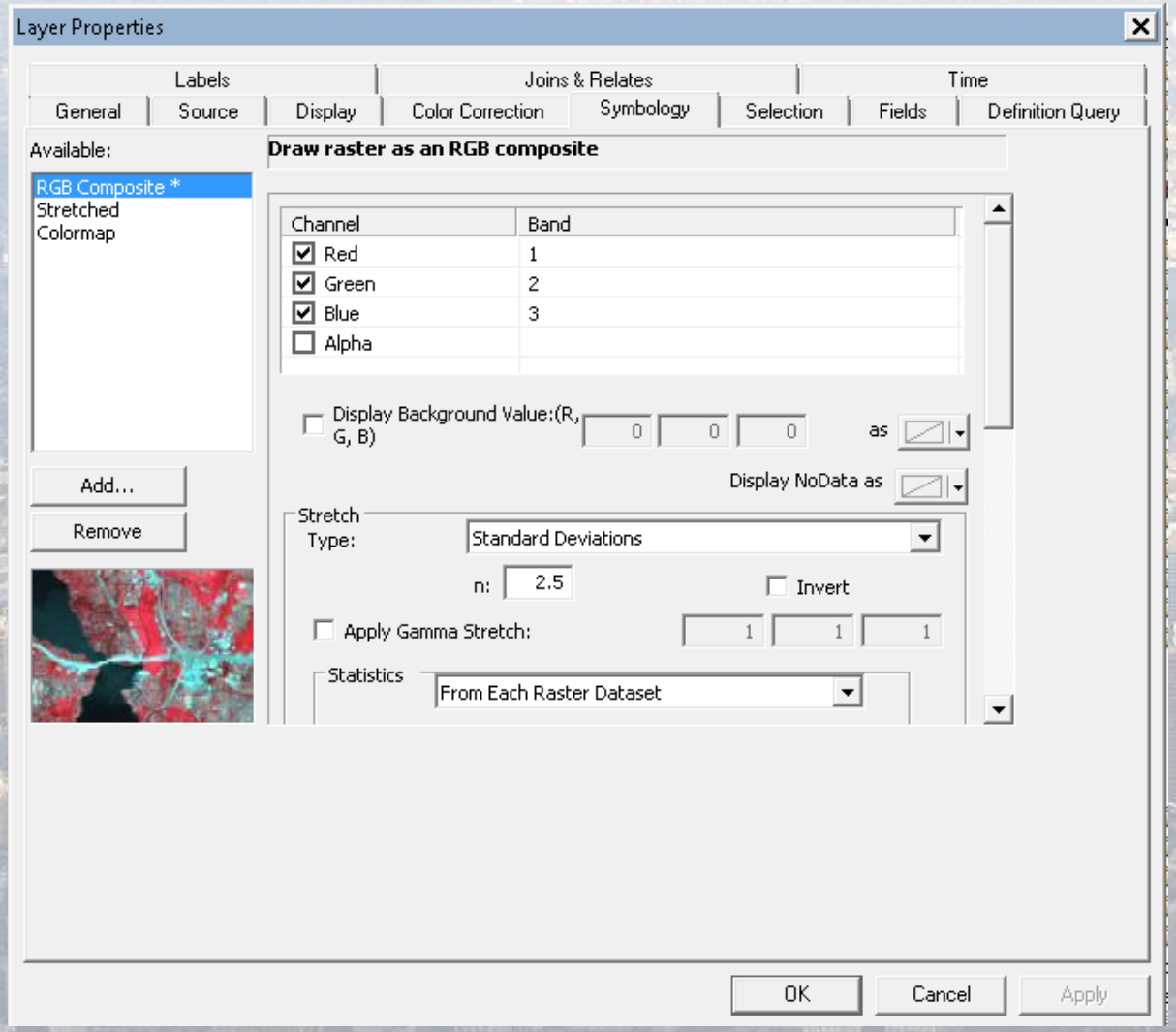
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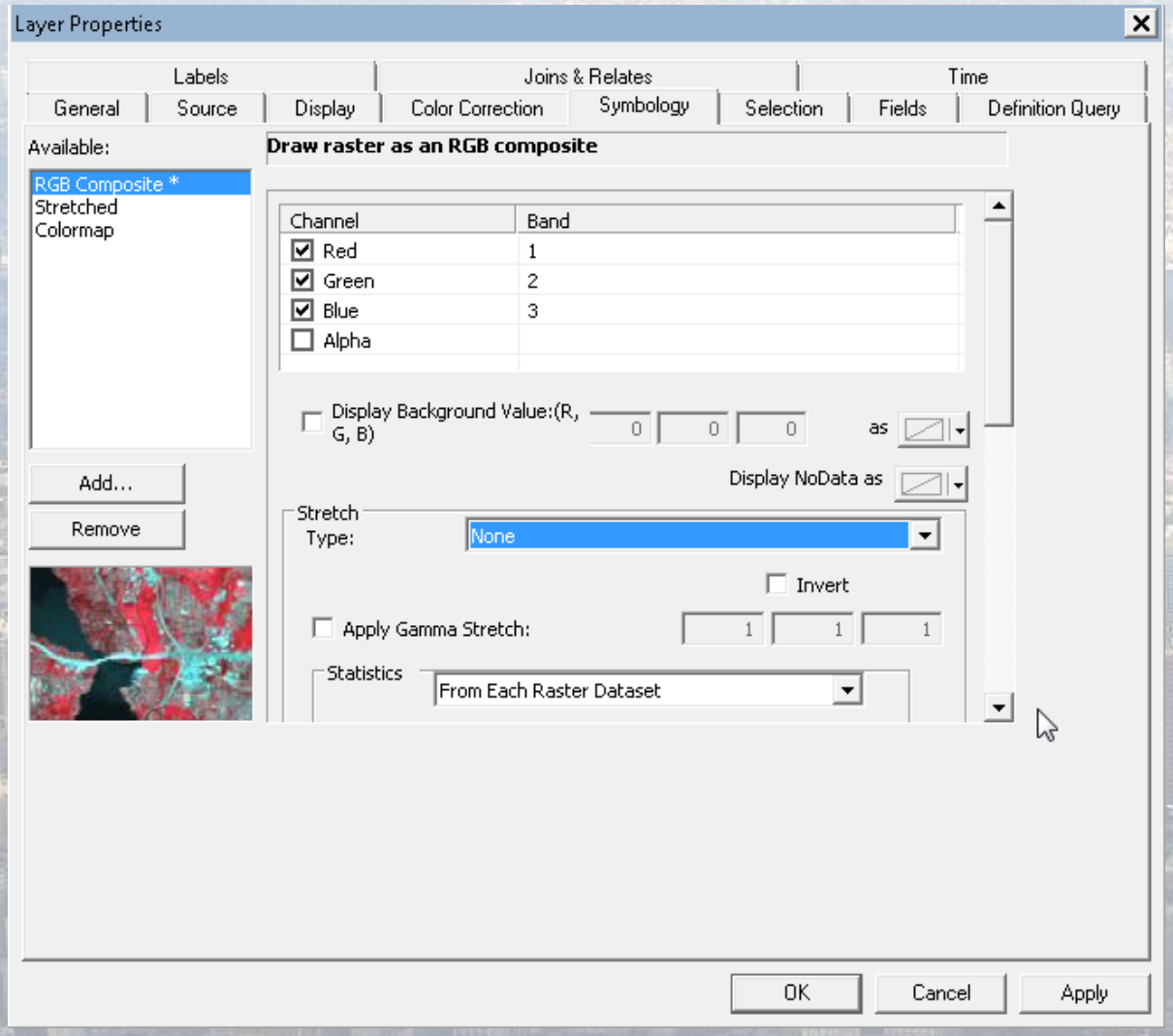
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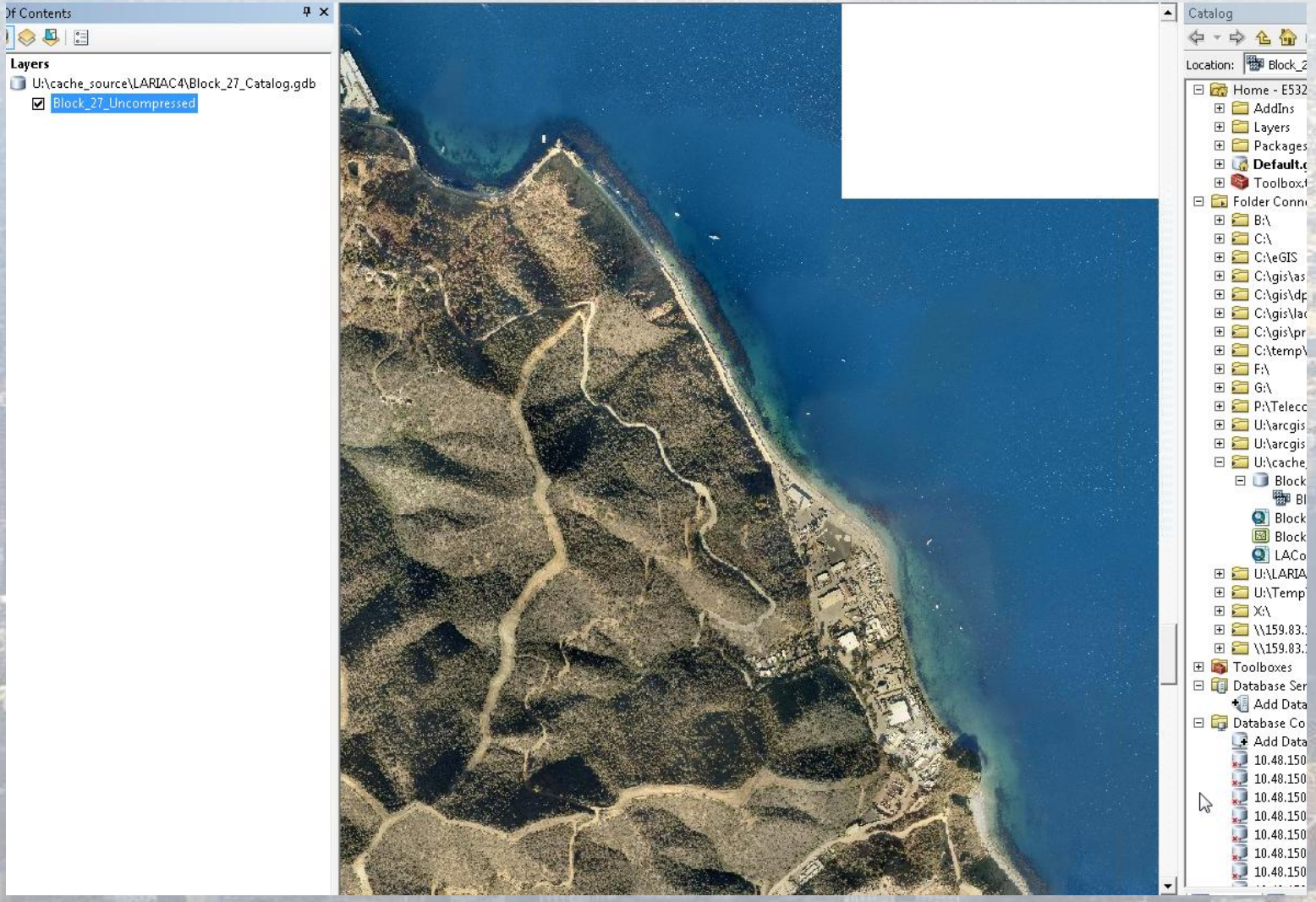
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Toolboxes
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Take-aways

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

Changes to cache

- Cached immediately upon receipt
  - Faster delivery
  - Loaded in apps right away
- Cached from uncompressed imagery
  - Better resolution (no double compression)

2011 Cache from compressed imagery

2014 Cache from uncompressed imagery

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)

Building Outlines

- Let’s take a look at how to use this.

Building Outlines

- Creating “shadows” with Representations

Oblique Imagery

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

OTHER COUNTY PROGRAMS

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/

CAMS

- We will have an information meeting in the next month
- Discuss the program in more detail
- Find city partners and arrange access, training, etc.
- Please sign up and we will contact you.

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Questions/Comments?

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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.