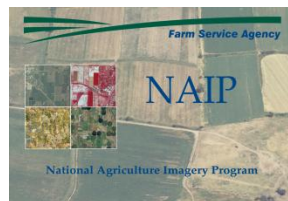


APFO Contracting Activities Report

USDA Imagery Planning & Coordination Meeting

Salt Lake City, Utah
December 6 - 8, 2011

USDA FSA Aerial Photography Field Office



SAC

Small Area Aerial Photography Contracts (SAC)

**Jacque La Croix
Contracting Officer**

SAC Small Area Aerial Photography Contracts

Accomplishments:

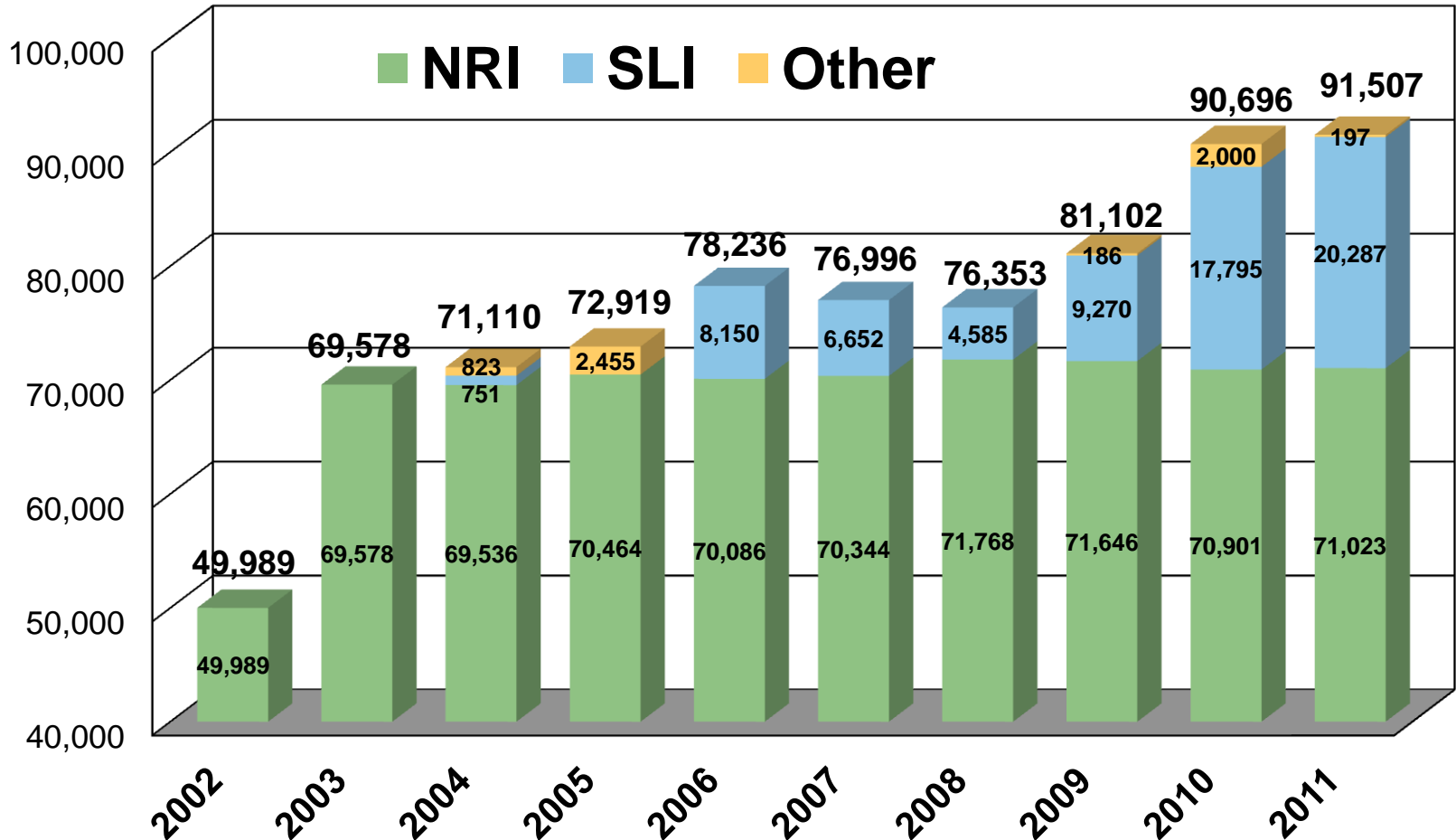
- Successfully acquired over 15 years of imagery
- Established program with specific requirements
- Planned for the 2012 Option Year:
 - Task Order RFP for film and scans
 - Opportunity for digital projects
 - Internal hard drive delivery from contractors

Challenges:

- Transitioning to digital acquisition
- Establishing a digital replacement that best mimics the film acquisition performance and costs
- Taking advantage of latest technologies (sensors) and incorporating them into a long term contract

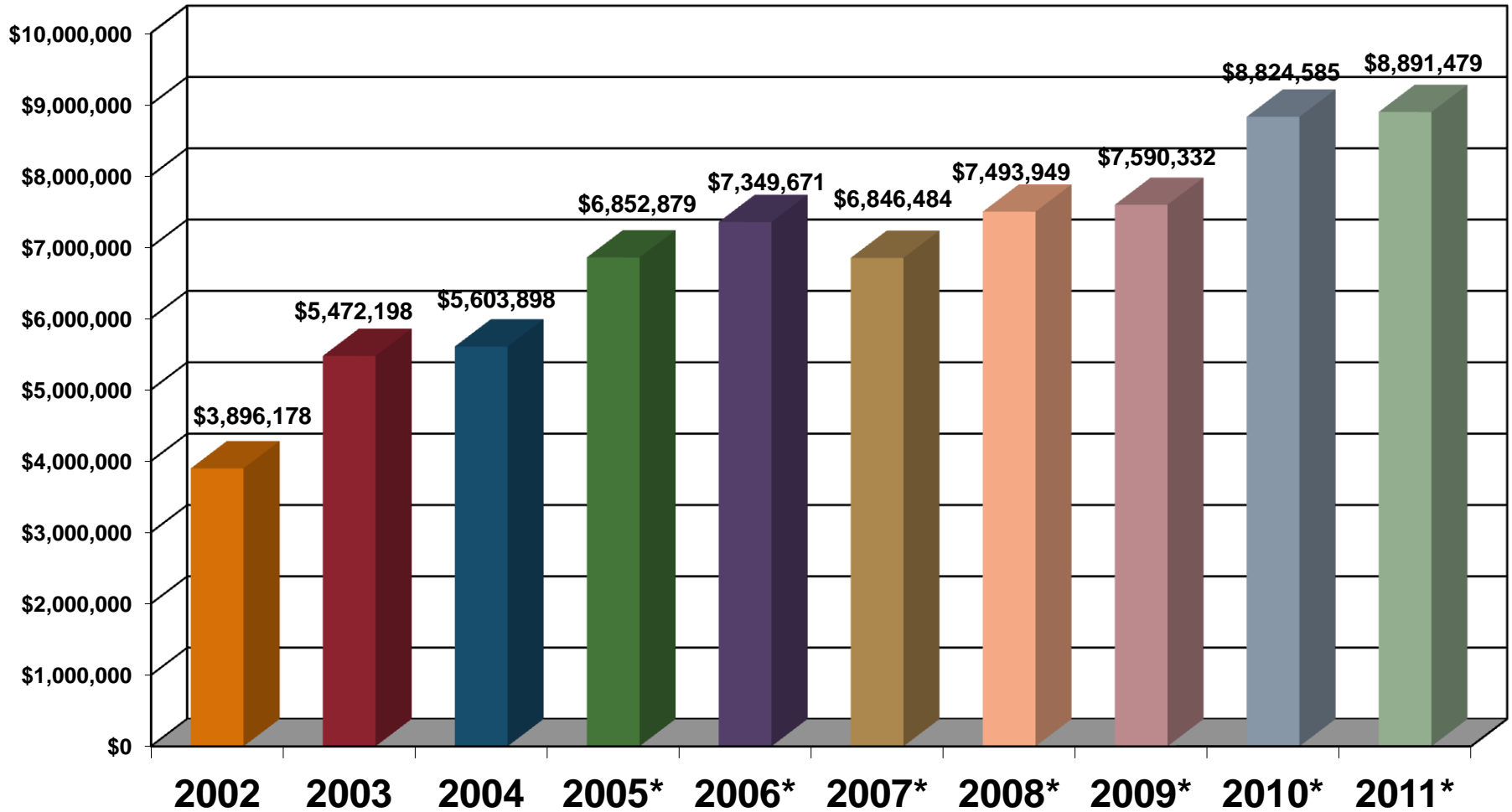
History of Small Area Contracts

Number of NRI Sites and SLI Exposures (and Easements)



NRI-SLI Contract Awards

Total Contract Award Amount

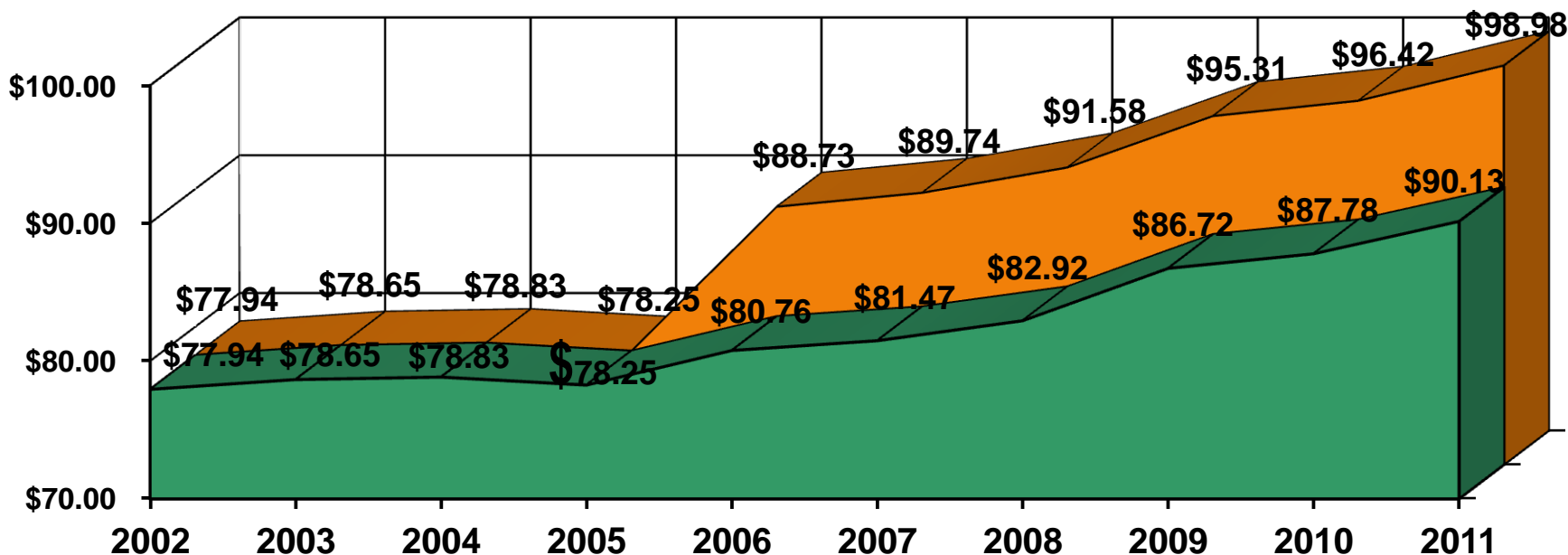


* Awards Include All Small Area Sites & Other Services

National Resource Inventory (NRI)

Average Price of NRI Sites

2002 – 2011 NRI Aerial Imagery Contracts



Quantities

Awarded: 49,989 69,591 71,110 70,464 69,636 70,344 70,555 71,646 70,901 71,023



Acquisition Only

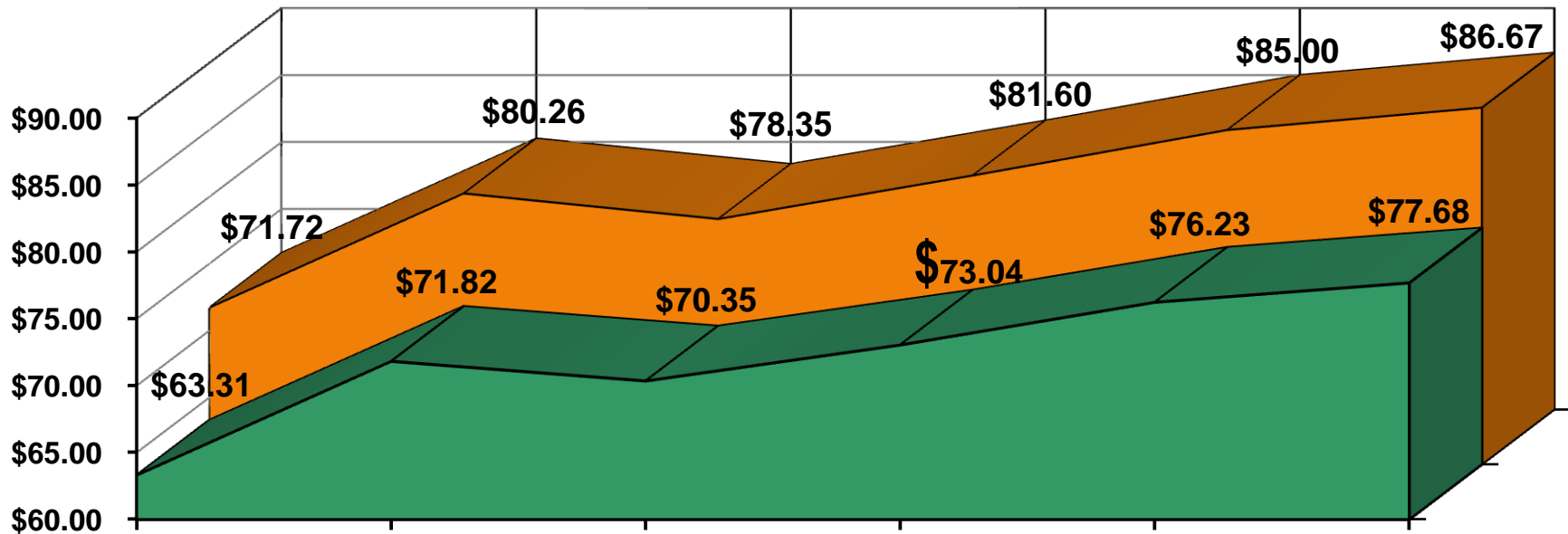


Acquisition plus scans/ortho

Stewardship Lands Imagery (SLI)

Average Price of SLI Exposures

2006 - 2011 NRCS SLI Aerial Imagery Contracts



Quantities
Awarded: 8,150

2007
6,652

2008
4,585

2009
9,270

2010
17,795

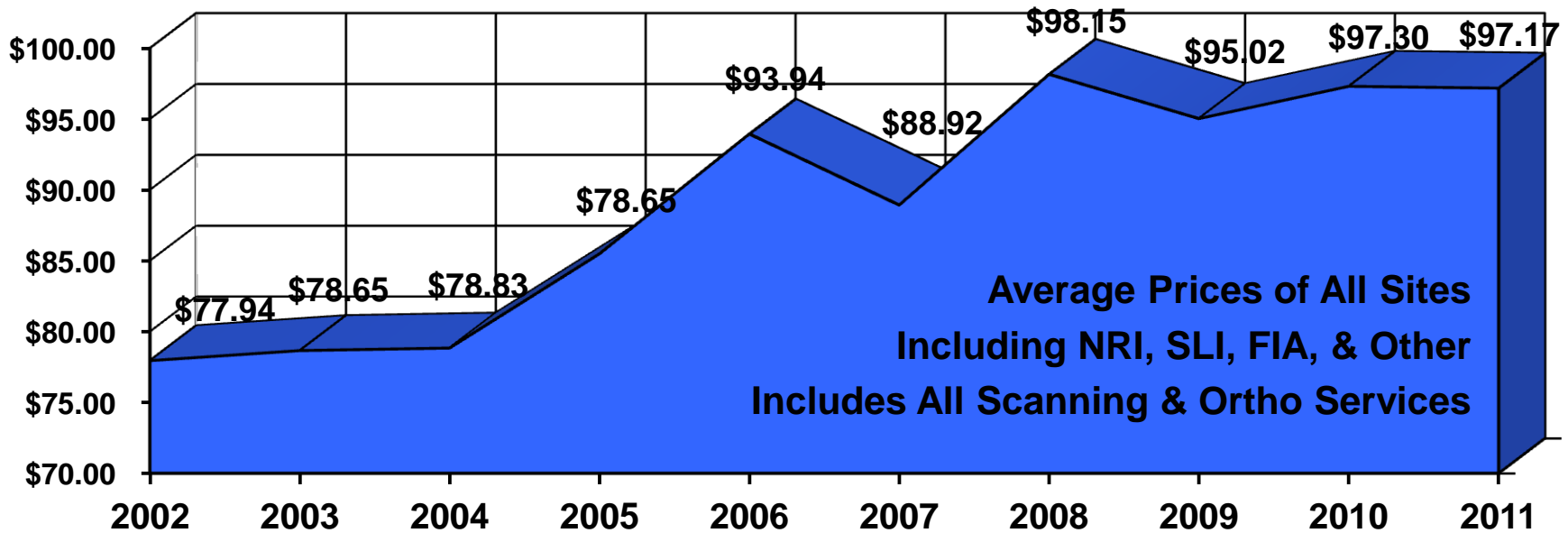
2011
20,287

 Acquisition Only

 Acquisition plus scans/ortho

NRI/SLI Site Pricing

2002 - 2011 USDA NRI Aerial Imagery Contracts



**Average Prices of All Sites
Including NRI, SLI, FIA, & Other
Includes All Scanning & Ortho Services**

Quantities

Awarded: 49,989 69,591 71,110 72,919 78,236 76,996 76,353 80,916 90,696 91,507

Includes All Sites & Services Awarded

2011 NRI-SLI Contract

Contract Awards and Pricing

NRI Project Summary

CONUS, Hawaii, Puerto Rico & U.S. Virgin Islands

SLI Project Summary

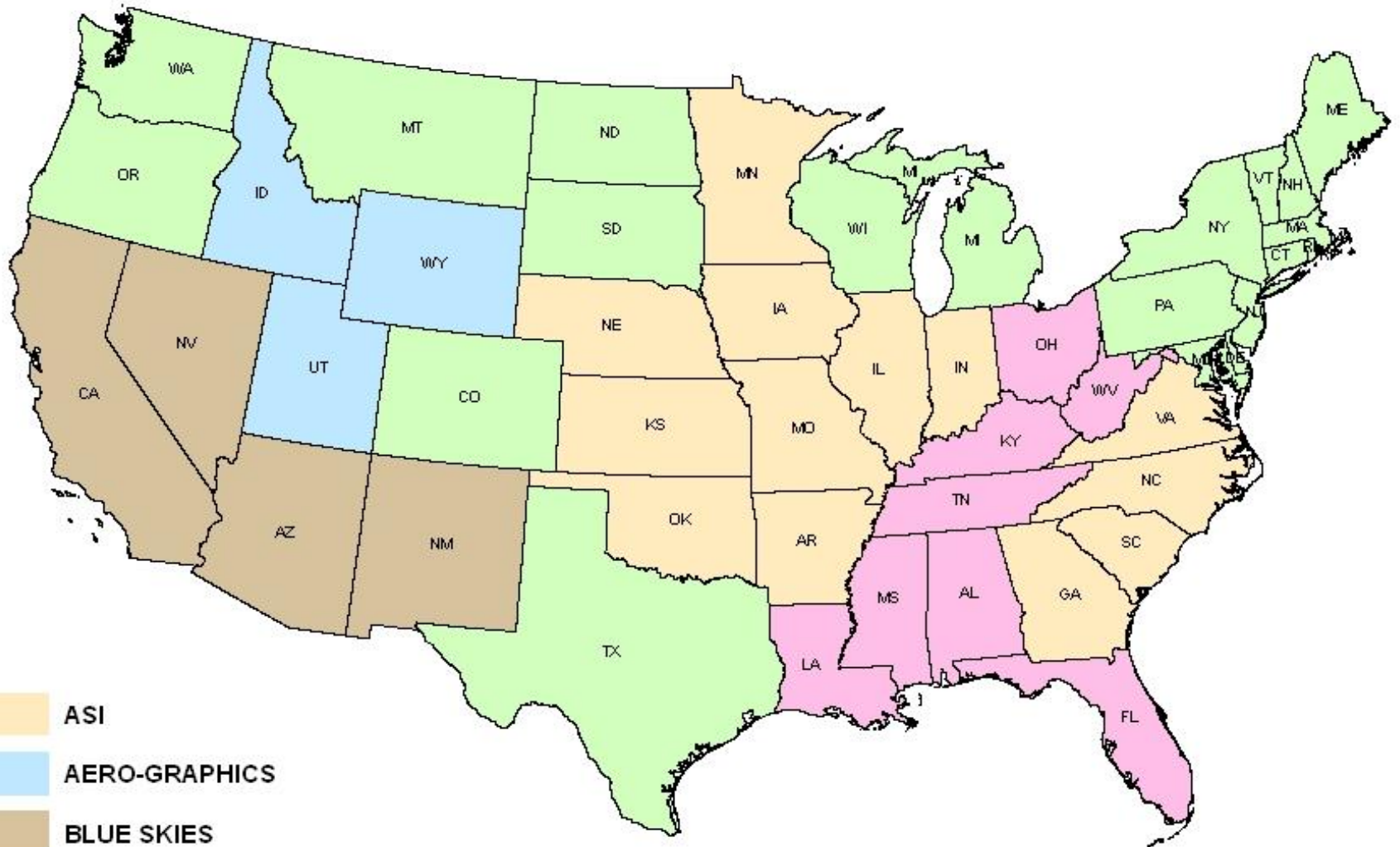
CONUS and 2 Exposures in Hawaii

Digital Projects Summary

ARS NRI Sites & NEAP Easements

Accounting Summary

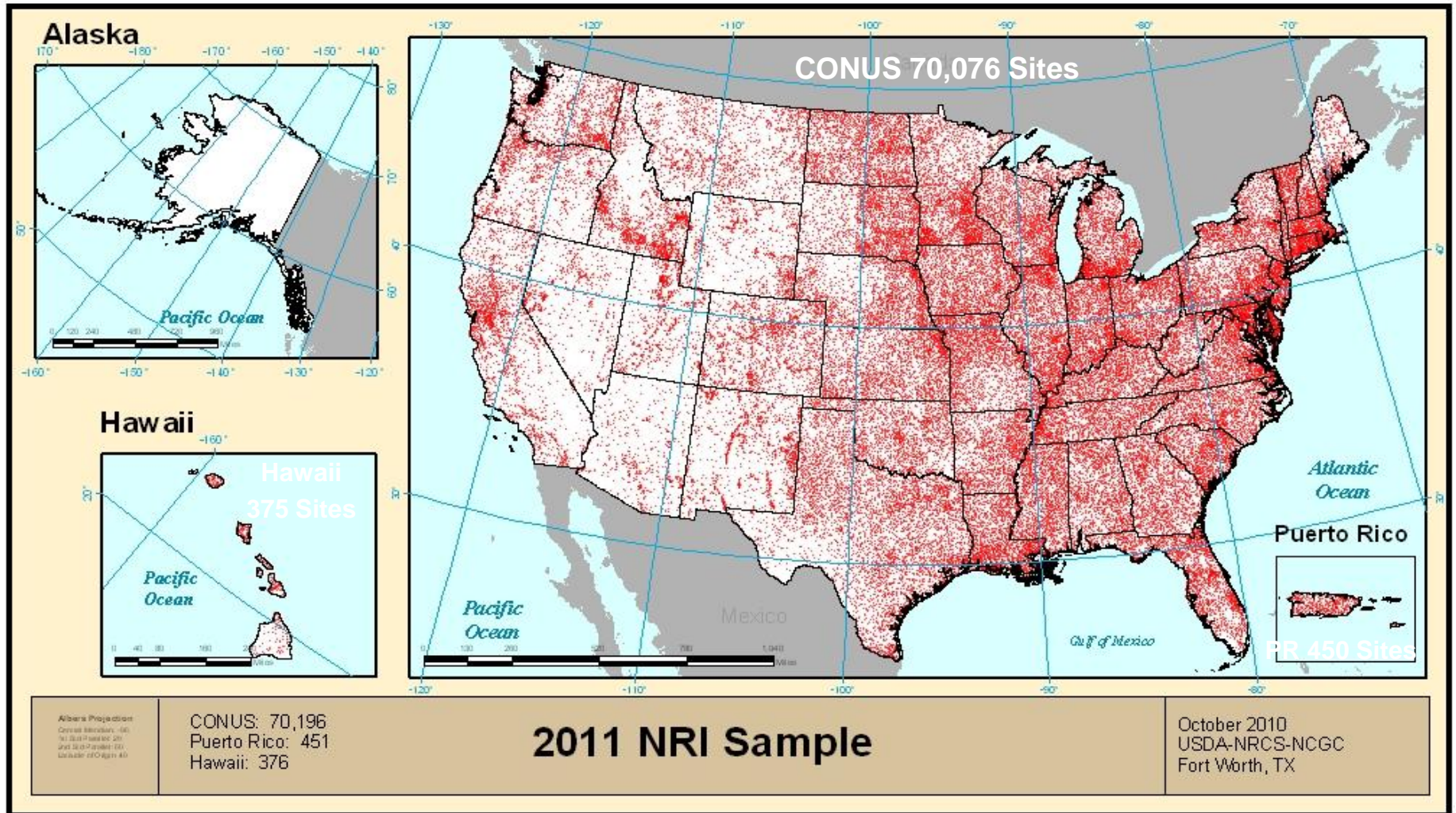
NRI/WRP 2011



- ASI
- AERO-GRAPHICS
- BLUE SKIES
- KEYSTONE
- MIDWEST

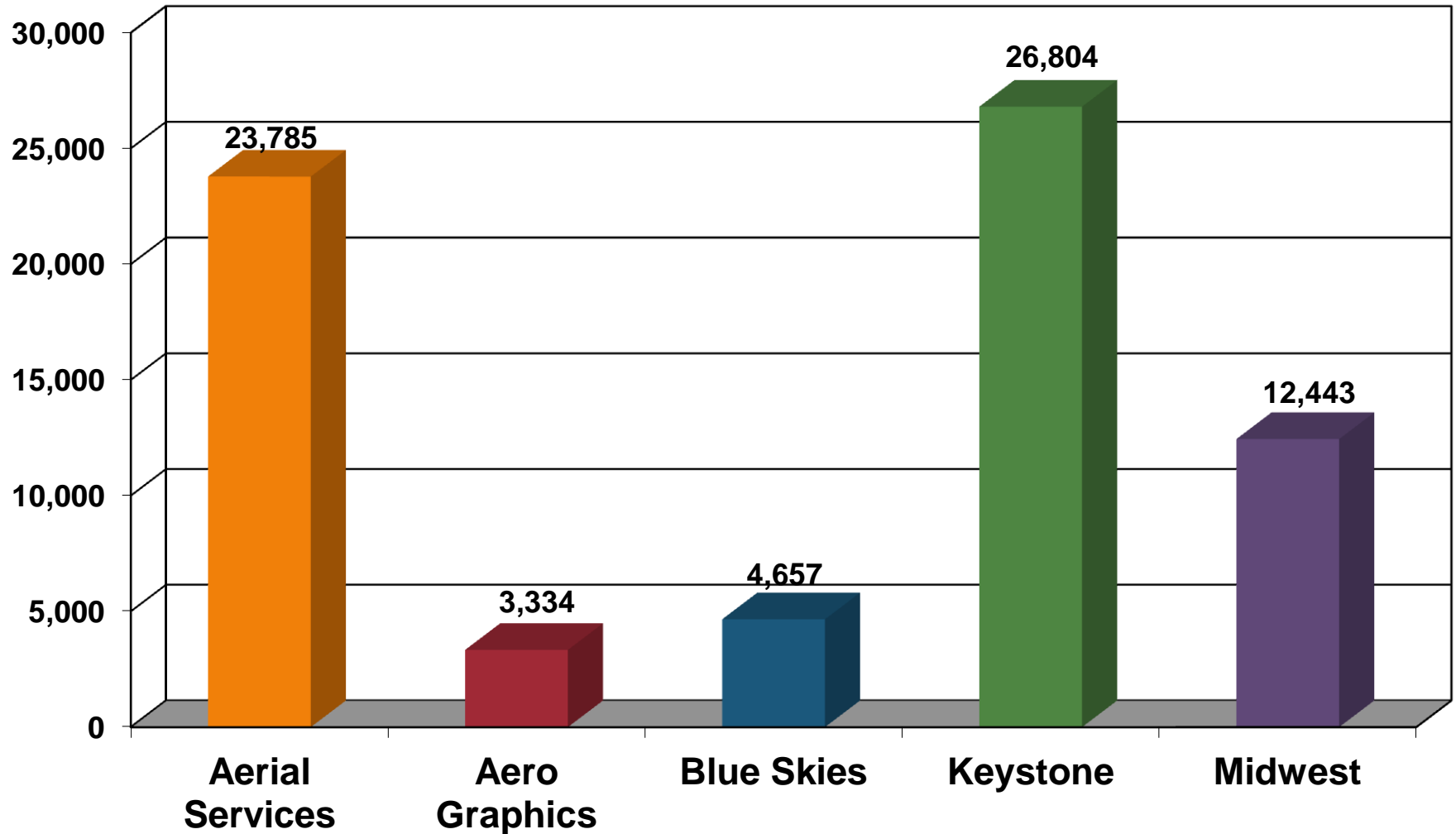
91,507 Sites/Exposures

2011 National Resource Inventory Sites

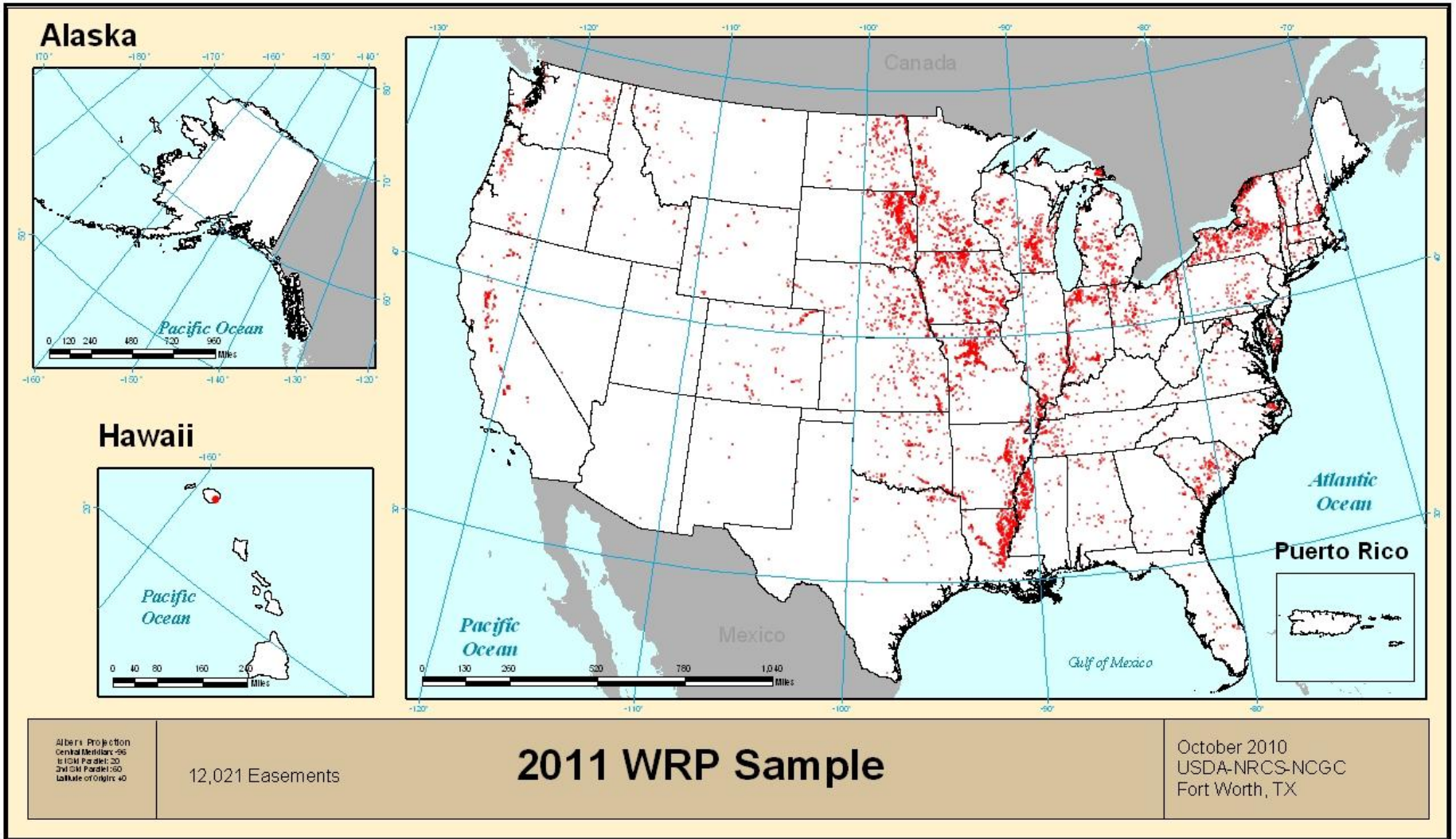


71,023 Total Sites

2011 NRI Contract Awards

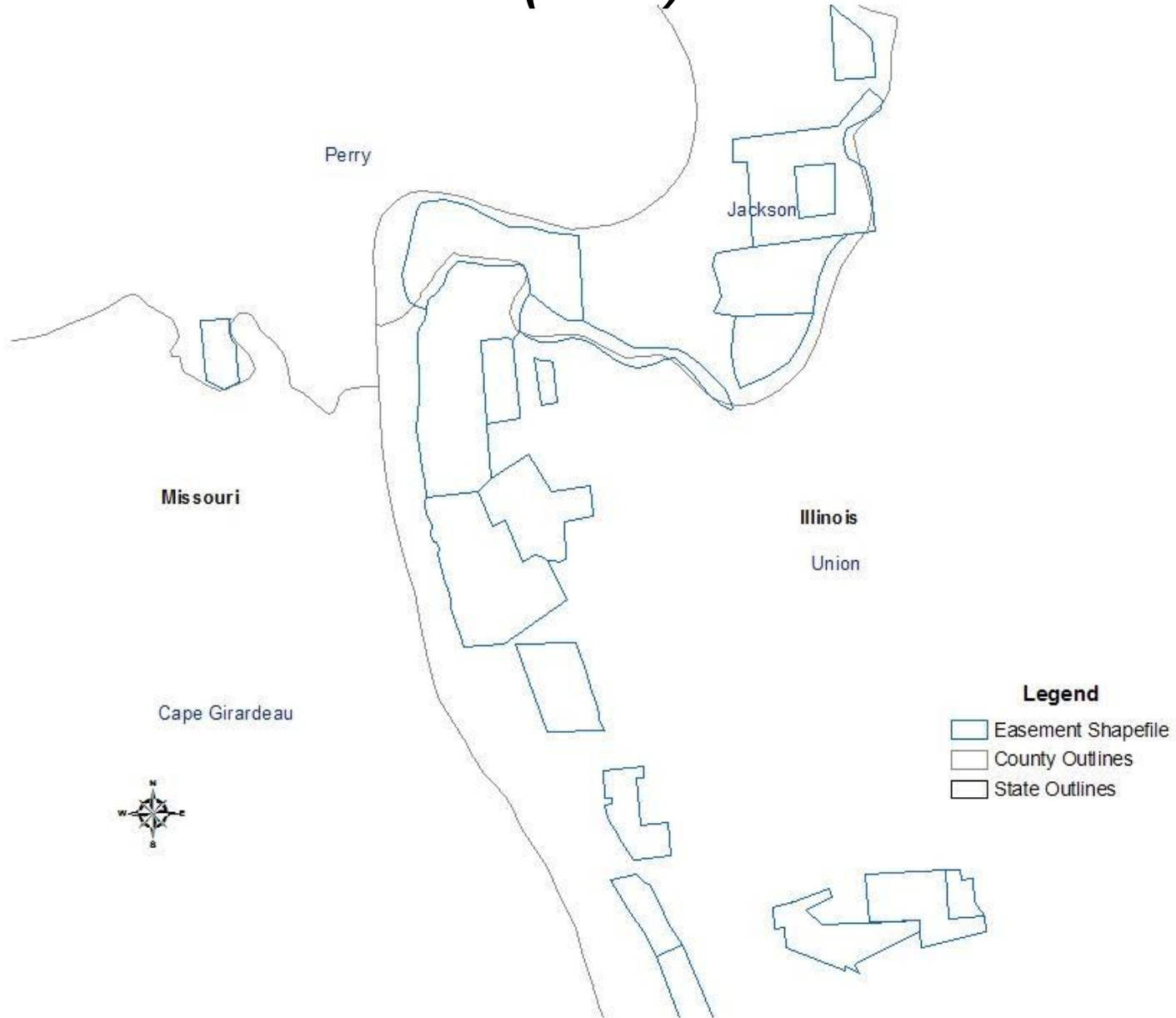


Stewardship Lands Imagery (SLI) Exposures

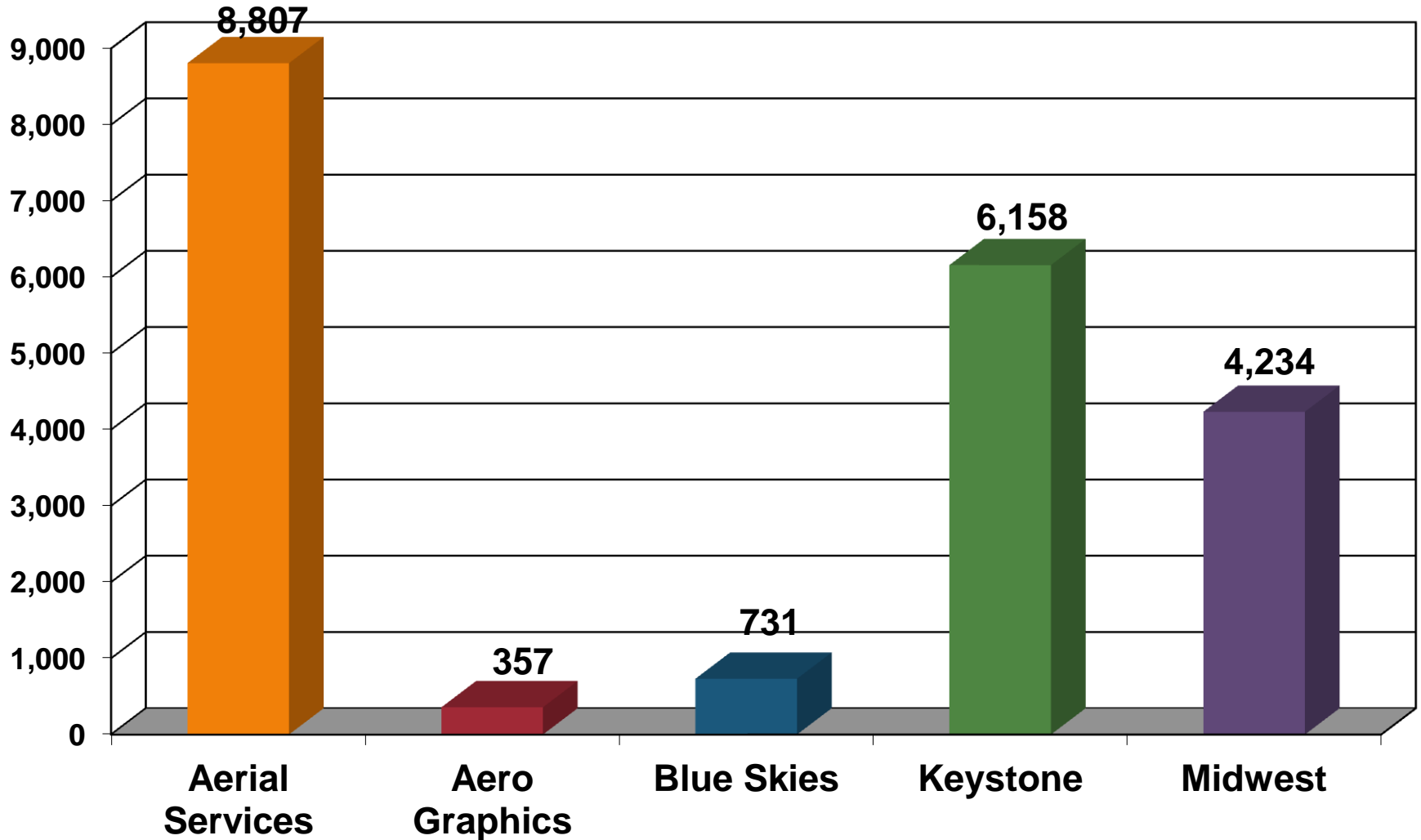


20,287 SLI Exposures

SAMPLE SLI (WRP)EASEMENTS

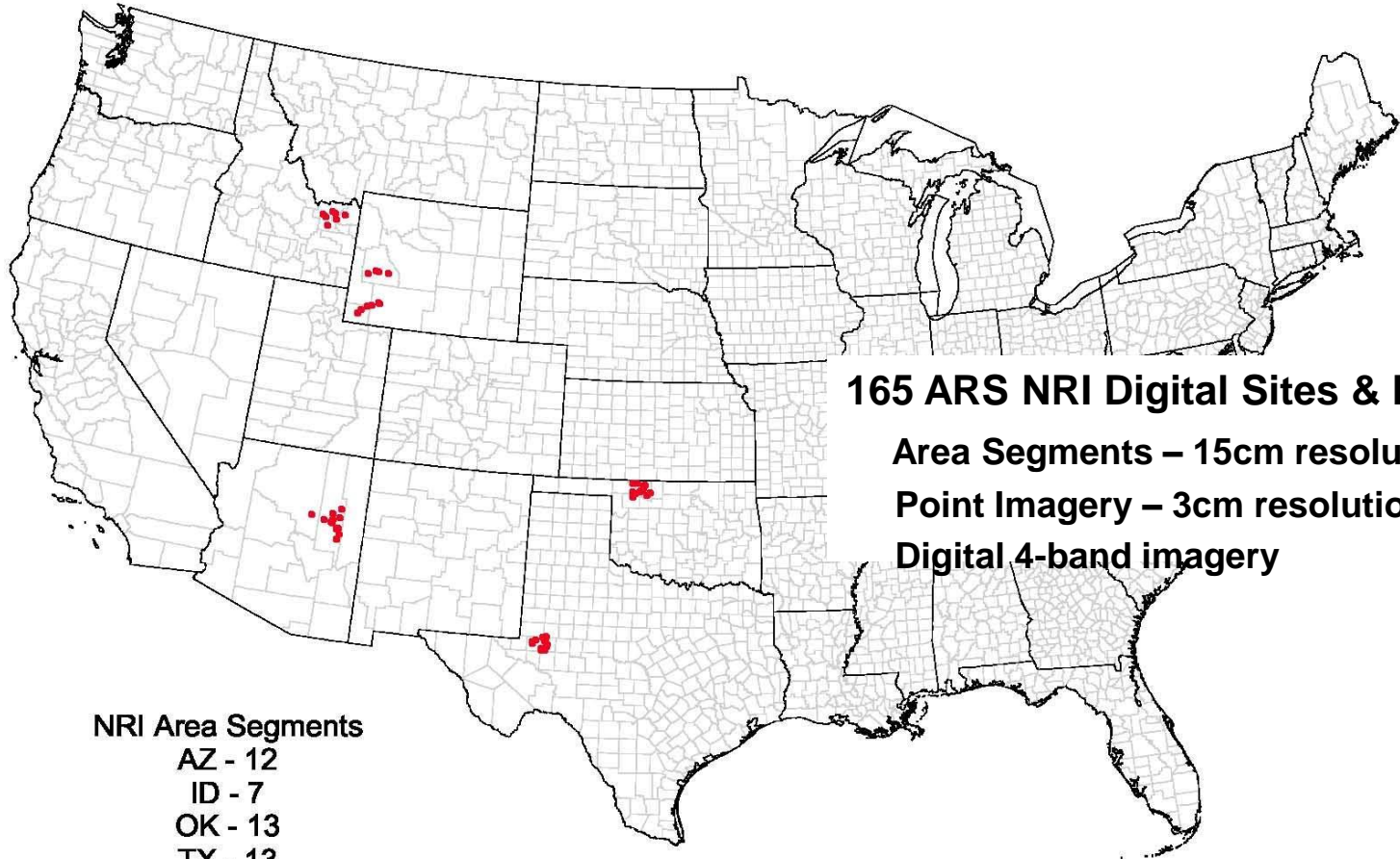


2011 SLI Contract Awards



Digital High Resolution Locations

ARS NRI Sites



165 ARS NRI Digital Sites & Points
Area Segments – 15cm resolution
Point Imagery – 3cm resolution
Digital 4-band imagery

NRI Area Segments
AZ - 12
ID - 7
OK - 13
TX - 13
WY - 10

Each area segment contains 2 points.

0 400 Miles

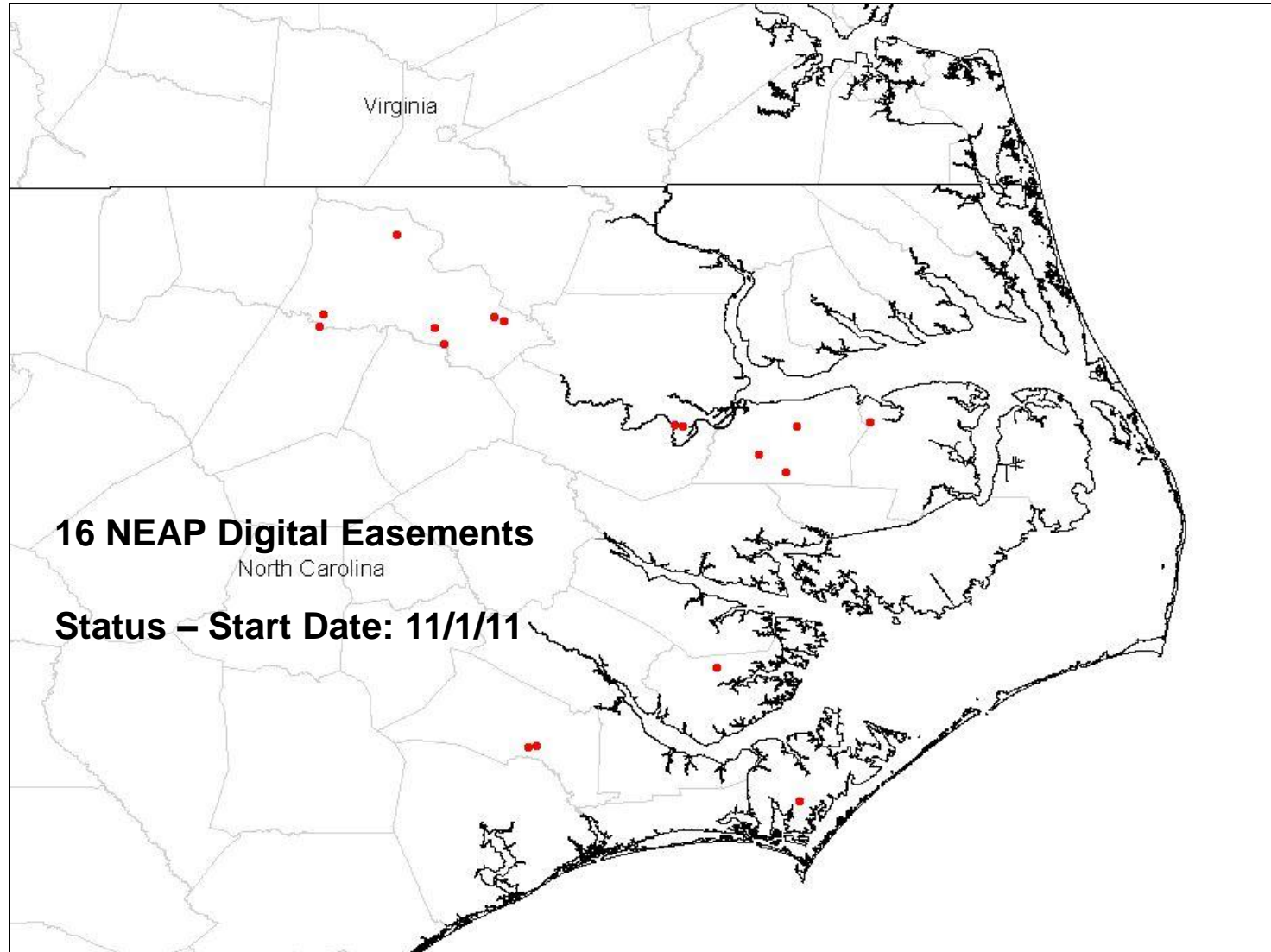
2011 NRI Contract Performance – ARS Digital

| CONTRACTOR | CONTRACTED (Segments/Points) | ACCEPTED | REMAINING |
|-----------------------------|---|---------------------|------------------|
| Aero-Graphics | 17/34 | 17/34 | 0 |
| Midwest Aerial Photo | <u>38/76</u> | <u>38/76</u> | <u>0</u> |
| Grand Totals: | 55/110 | 55/110 | 0 |

All States have been accepted.

DIGITAL HIGH RESOLUTION LOCATIONS

SLI NEAP Easements



2011 SLI NEAP Contract Summary

Contractor: Keystone Aerial Surveys

Project: 16 Easements; 5,390 Acres

Key Deliverables:

(1) 15cm Stereo Tiles & Ortho Mosaics

(2) 8cm Stereo Tiles & Ortho Mosaics

Flying Season: Nov. 1, 2011 through Nov. 30, 2011

Keystone has acquired the easements and is in post-processing.

2011 Small Area Contract Summary

| Contractor | Program | Quantity | Amount |
|-------------------------|---------|----------|----------------|
| Aerial Services, Inc. | NRI | 23,785 | \$2,432,404.00 |
| | SLI | 8,807 | \$784,471.00 |
| Aero-Graphics, Inc. | NRI | 3,334 | \$299,059.80 |
| | SLI | 357 | 32,022.90 |
| Blue Skies Consulting | NRI | 4,657 | \$437,758.00 |
| | SLI | 731 | \$68,714.00 |
| Keystone Aerial Surveys | NRI | 26,804 | \$2,635,101.24 |
| | SLI | 6,158 | \$519,488.88 |
| Midwest Aerial Photo | NRI | 12,443 | \$1,225,635.50 |
| | SLI | 4,234 | \$353,539.00 |
| Totals: | NRI | 71,023 | \$7,029,958.54 |
| | SLI | 20,287 | \$1,758,235.78 |

2011 NRI-SLI Contract

Accounting Summary

| <u>FY2011 CONTRACTS</u> | <u>AMOUNT</u> | <u>ADMIN FEE</u> |
|--------------------------|-----------------------|---------------------|
| NRI – CONUS (70,196) | \$6,755,606.54 | \$202,668.20 |
| NRI – Hawaii (375) | \$ 155,288.00 | \$ 4,658.64 |
| NRI – Puerto Rico (451) | <u>\$ 119,064.00</u> | <u>\$ 3,571.92</u> |
| | \$7,029,958.54 | \$210,898.76 |
| SLI – CONUS (20,285) | \$1,757,409.78 | \$ 52,722.29 |
| SLI – Hawaii (2) | <u>\$ 826.00</u> | <u>\$ 24.12</u> |
| | \$1,758,235.78 | \$ 52,747.07 |
| ARS Digital Hi-Res NRI | \$ 56,145.00 | \$ 1,684.35 |
| NEAP Digital Hi-Res NEAP | <u>\$ 47,140.03</u> | <u>\$ 1,414.20</u> |
| | \$ 103,285.03 | \$ 3,098.55 |
| GRAND TOTALS: | \$8,891,479.35 | \$266,744.38 |

COMBINED TOTAL: \$9,158,223.73

Information Technology

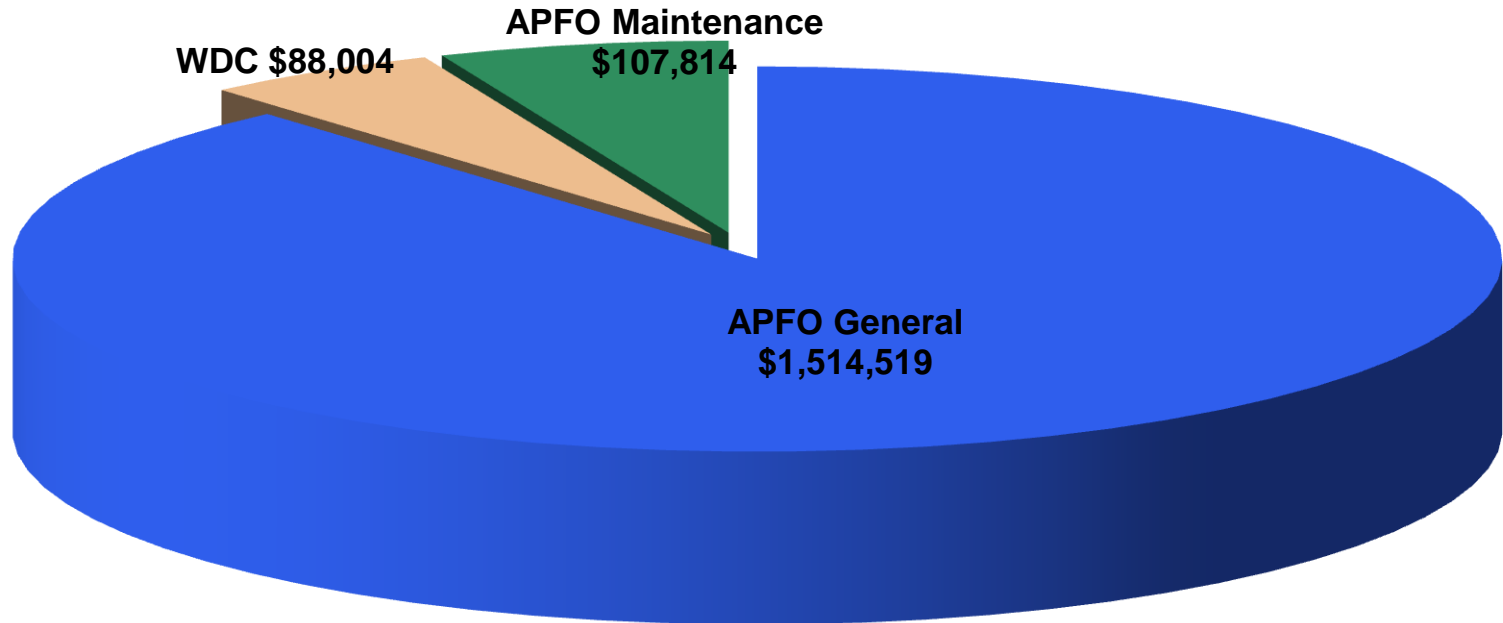
IT Computer Equipment,
Maintenance & Supplies
Contracts

Jacque La Croix
Contracting Officer



Fiscal Year 2011 IT Purchases

Total Amount Awarded: \$1,710,337.04



■ APFO General

■ WDC

■ APFO - Maintenance

QUESTIONS ??



Satellite Imagery Project

- Contract Type: *Proposed*: Blanket Purchase Agreement(s)
- USDA wide access – any USDA agency could use it
- Maximum 5 year duration

Key Questions:

- How much usage is envisioned?
- What items (products and/or services) should be included in any product listing?
- Likely maximum dollar amount.
- Would it serve the needs of the agencies?
- What licensing issues need to be addressed?
- ???

Talking Points

Levels of Service:

- Requesting Agency orders directly from Vendors
- Requesting Agency orders directly from Vendors and has APFO perform limited QC and then APFO forwards the product to the end user
- Have APFO Order, perform a full QC of product, archive the image and forward the product to the end user.
- ???

The vendor would provide APFO with accounting for product(s) ordered, dollar value, etc.

Licensing:

- Restrictive – varying degrees, similar to NextView?
- Enterprise Premium (additional cost)?
- ???

CURRENT USAGE ESTIMATES

- Farm Service Agency \$
- Natural Resources Conservation Service \$
- Rural Development \$
- Foreign Agriculture Service \$
- Forest Service Resource \$
- National Agricultural Statistics Service \$

Free Satellite Imagery

(With a Catch!)

NGA's WARP (THE WEB-BASED ACCESS AND RETRIEVAL PORTAL) Program

Here's the top level view (in part):

- SCOPE: This document outlines the steps that Federal Civil Agencies need to take to obtain commercial satellite imagery collected by GeoEye or Digital Globe acquired by NGA under the Enhanced View contract.

If archived imagery will meet your needs

- **Check to see if image is in WARP** (<https://warp.nga.mil/>)
 - If image exists, read license agreement, Download Image (you are done)
- **Check Vendor Archives**
 - Digital Globe at <http://browse.digitalglobe.com/imagefinder/main.jsp>
 - GeoEye at <http://geofuse.geoeye.com/landing/Default.aspx>
- **Image Exists In Vendor Archive?**
- Copy Catalogue ID, Sensor, Date
- Enter requirement in CIDR (self register) <http://cidr.cr.usgs.gov/> (If multiple images are required, you can provide a spreadsheet)
 - USGS Departmental Requirements Officer (DRO) validates and submits requirement
 - NGA Validates requirement; NGA Orders Image; NGA Receives Image and loads into WARP
 - NGA sends image to USGS EROS Data Center
 - USGS EROS Data Center sends image to requesting agency (USGS archives imagery and makes available in Earth Explorer)
- Requesting agency receives Imagery
- All imagery obtained by this process is governed by the NextView License.
- You do not need a PUM (Proper Use Memorandum) to order archived imagery

About the archives:

- The archives of GeoEye and Digital Globe hold more than is available in WARP. All commercial satellite imagery in the GeoEye and Digital Globe archives are licensed with the NextView License. You cannot obtain the imagery directly from the GeoEye or Digital Globe archives without paying for the imagery. So if you want free imagery, you must use the process outlined above.
- **THE CATCH(s):** 1. You must obtain access to this restricted site (it may not be easy and there are a LOT of caveats on use!) and 2. If what's available is not what you need, using the site to order something else is *painful*.

More Free Satellite Imagery (& More)

USGS's EarthExplorer Web Site: <http://edcsns17.cr.usgs.gov/NewEarthExplorer/>

- Licensed imagery requires registering for an account
- SPOT imagery and others, licensed for Federal Civil use are only available here.
- EarthExplorer has a subset of imagery available on WARP (according to the WARP folks)
- The EarthExplorer has quite a lot more than just satellite imagery.

Alaska:

- Alaska Mapped – A new, ongoing, effort at statewide mapping, broad scale imagery and elevation data for the state.
- Website - <http://www.alaskamapped.org/>
- This is a data portal serving imagery and elevation data collected through the [Alaska Statewide Digital Mapping Initiative \(SDMI\)](#) and the [UAF Geographic Information Network](#).

Climate and Land Use Change
Earth Resources Observation and Science (EROS) Center

SPOT L1T Generation



Author
Date

Wayne A. Miller
January 18, 2012

SPOT L1T Product

The SPOT L1T Product Generation is a two step process.

- First Step - Generate a L1Gst product
- Second Step – Generate the L1T product using the L1Gst product as input.

SPOT L1Gst Process

Utilizes ENVI orthorectification process using Interactive Data Language(IDL).

Begins with the SPOT L1A product as input:

- Process uses satellite ephemeris from the L1A metadata.
- Process uses the 90m GLS elevation data for terrain adjustment.
- Process uses cubic convolution resampling.
- No ground control is used in this process.

SPOT L1T Process

Utilizes in-house software – Land Analysis System(LAS) – to perform an automated image-to-image registration.

Begins with the L1Gst product as input:

- Image-to-image correlation with the LANDSAT GLS 2000 as the reference.
- Double resampling occurs when starting with the L1Gst but does account for the SPOT ephemeris.
- Same approach used by Landsat to create their L1T product.

Satellite Imagery Project



(This is not a satellite :-))

? QUESTIONS ?