

FSA State Office NAIP Training

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June 15, 2006

National Agricultural Imagery Program (NAIP)

- Initiated in 2002 to support programs in USDA Farm Service Agency (FSA)
 - GIS and Common Land Unit (CLU)
 - Farm field boundaries
 - Aerial Compliance
- Cost Share Partners
 - USDA NRCS, USFS
 - DOI USGS, BLM
 - State government

NAIP Program Highlights

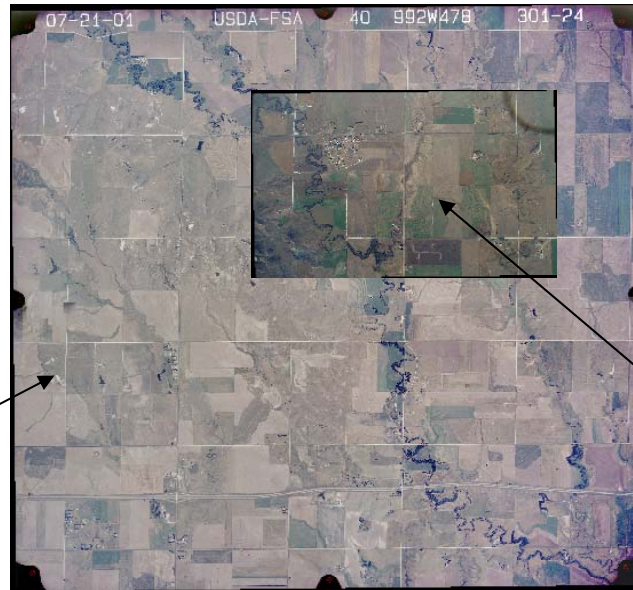
- 2 sets of product specifications, similar acquisition parameters (natural color and peak agricultural growing seasons)
 - Compliance
 - 2 meter GSD (Ground Sample Distance – resolution)
 - 10 meters from image base
 - Annual requirement
 - Ortho Base Replacement
 - 1 meter GSD
 - 5 meters from image base
 - Suitable for both aerial compliance and base replacement
 - 3-5 year cycle

NAIP Program Highlights

- Large format mapping quality camera systems
 - supports CLU maintenance and partner requirements
- Rapid acquisition (in terms of mapping quality) to meet FSA compliance requirements
 - Trade offs exist
 - 6-8 week flying seasons
 - State based projects
 - Up to 10% cloud cover
- Ortho rectified
 - GIS ready

Definitions

Imaging Format



Large Format

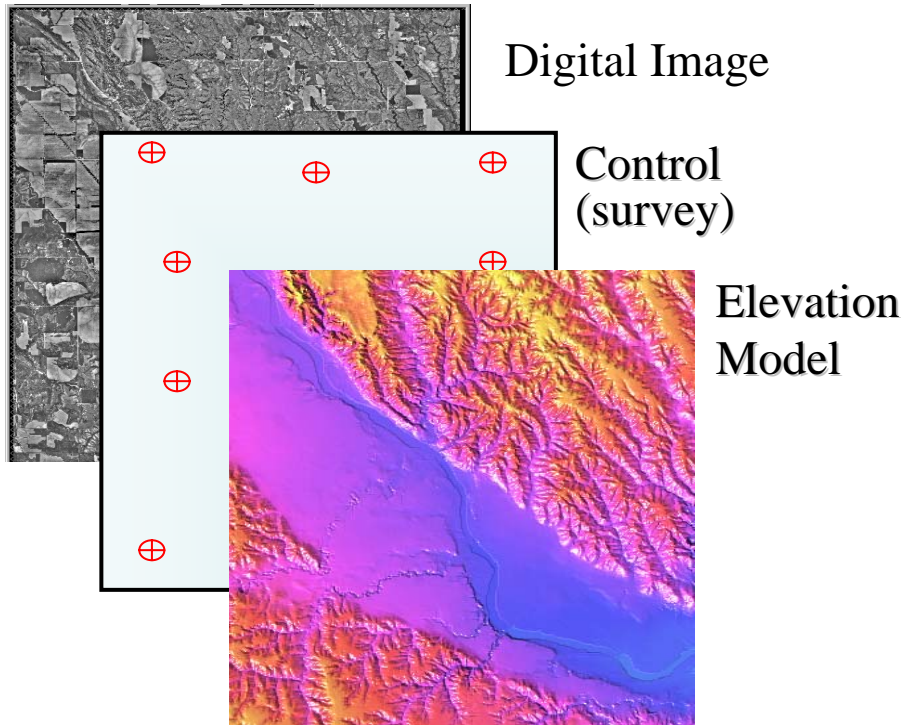
- Mapping Camera
- 9" x 9" film
- 25 sq. miles @ 20,000 feet

Small Format

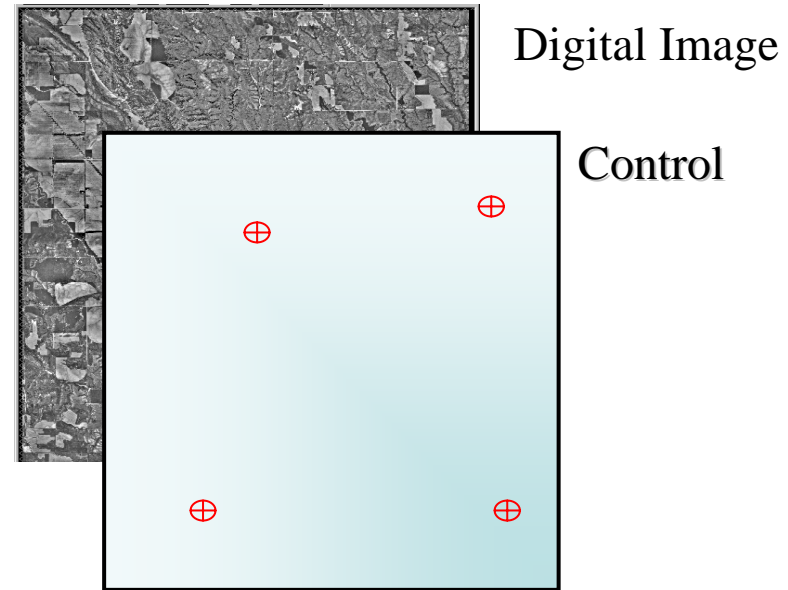
- 35mm Camera
- 3 sq. miles @ 8,000 feet

Rectified vs. Orthorectified

Ortho Rectified



Rectified



NAIP Annual Cycle

Acquisition

May | June | July | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | April | May

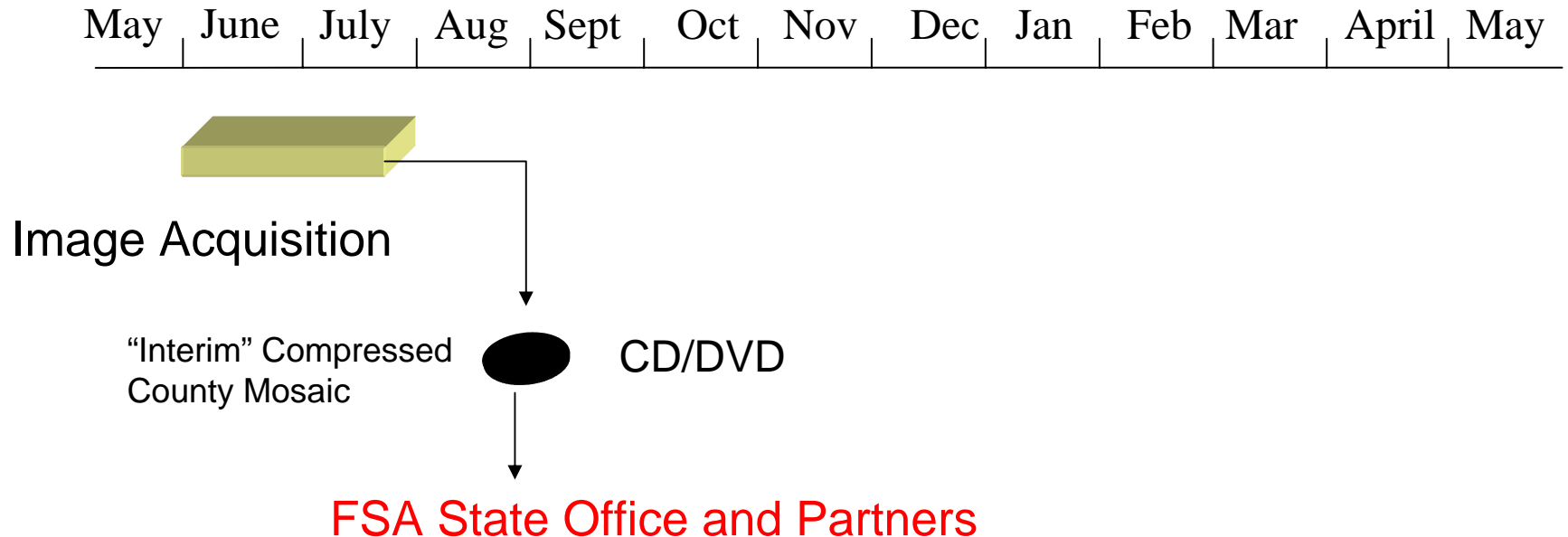


Image Acquisition

- Flying season established in coordination with State GIS Specialists
- 6 to 8 weeks typically
- Large states may be split into multiple seasons
- NAIP vendors
 - 2-3 aircraft per state
 - Go for cloud free coverage
 - High performance aircraft

NAIP Annual Cycle

Delivery of Interim CCM



- Delivery of “Interim” Compressed County Mosaics
 - Has not been inspected yet
 - “naip” prefix on file name
 - Goes in “compliance” sub folder

NAIP Annual Cycle

Public Access to Interim CCM

May | June | July | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | April | May



Image Acquisition

“Interim” Compressed
County Mosaic



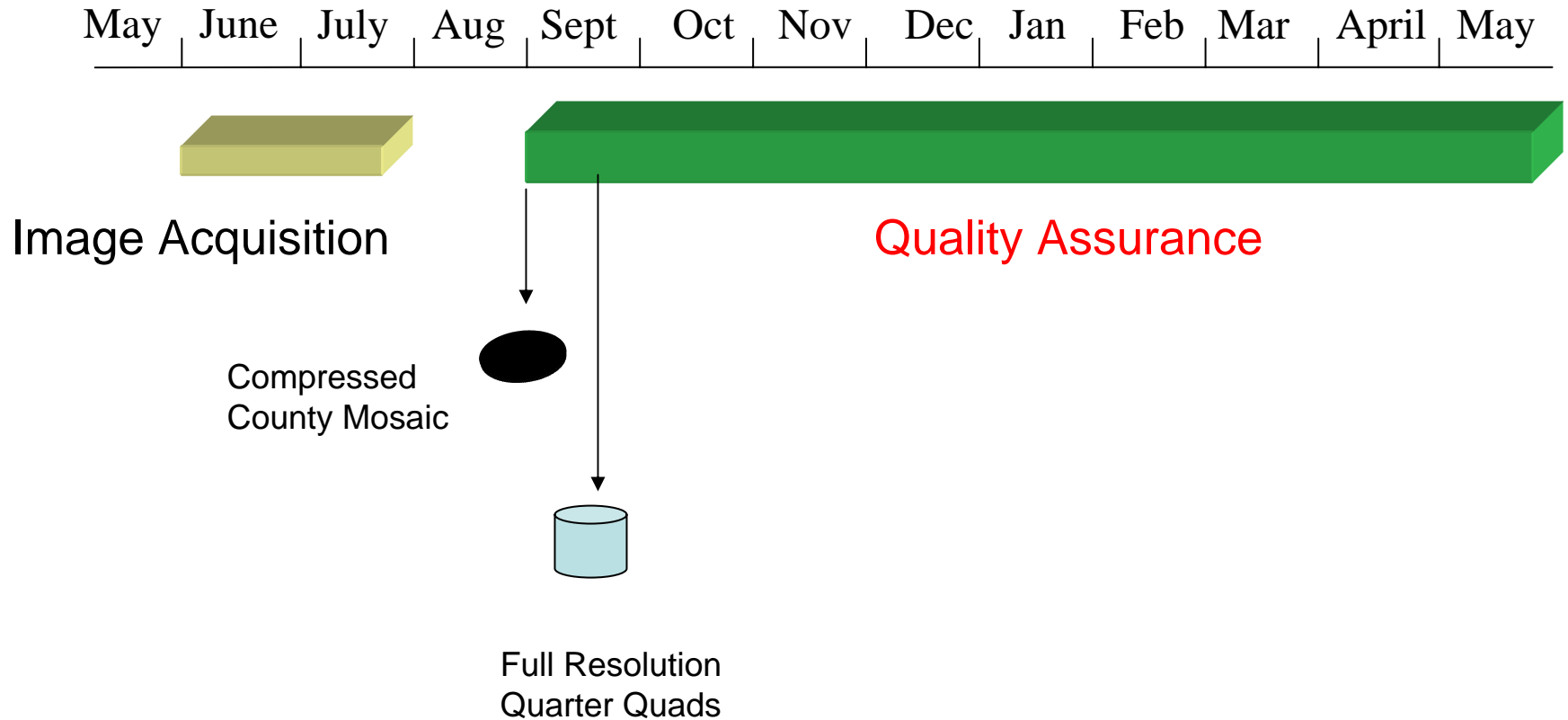
USDA Geospatial Data Gateway

<http://nracs.gateway.usda.gov>

Downloads only

NAIP Annual Cycle

Quality Assurance Process



Quality Assurance

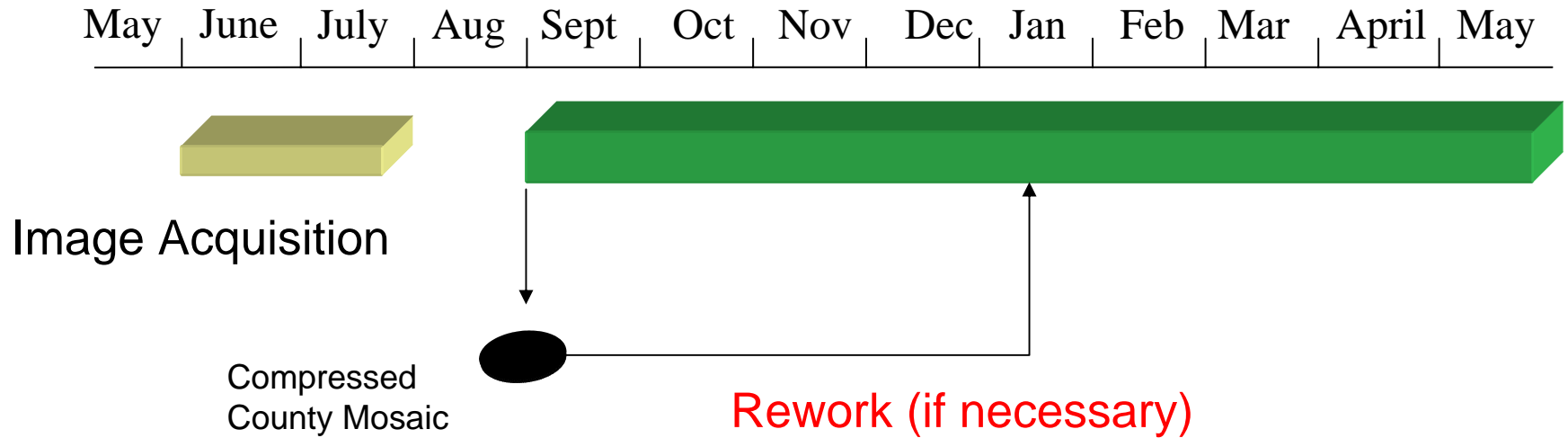
- How it is used
 - Used in Contract Reconciliation
 - Contractor rework
 - Price reduction
 - Past performance evaluation of vendor
 - Metadata
 - Program Improvement
 - Indicate areas of problem DEMs (for example)
 - ID trends

NAIP Problem Reporting

- Contact Quality Assurance Supervisor
 - brenda.simpson@slc.usda.gov
 - Please provide the following information
 - Location of problem, such as: Image file name, UTM coordinates, Screen capture.
 - Description of problem
 - Contact Information: phone number, name, email address
- Future web-based solution for reporting/logging all quality issues
 - Implementation within 6 months

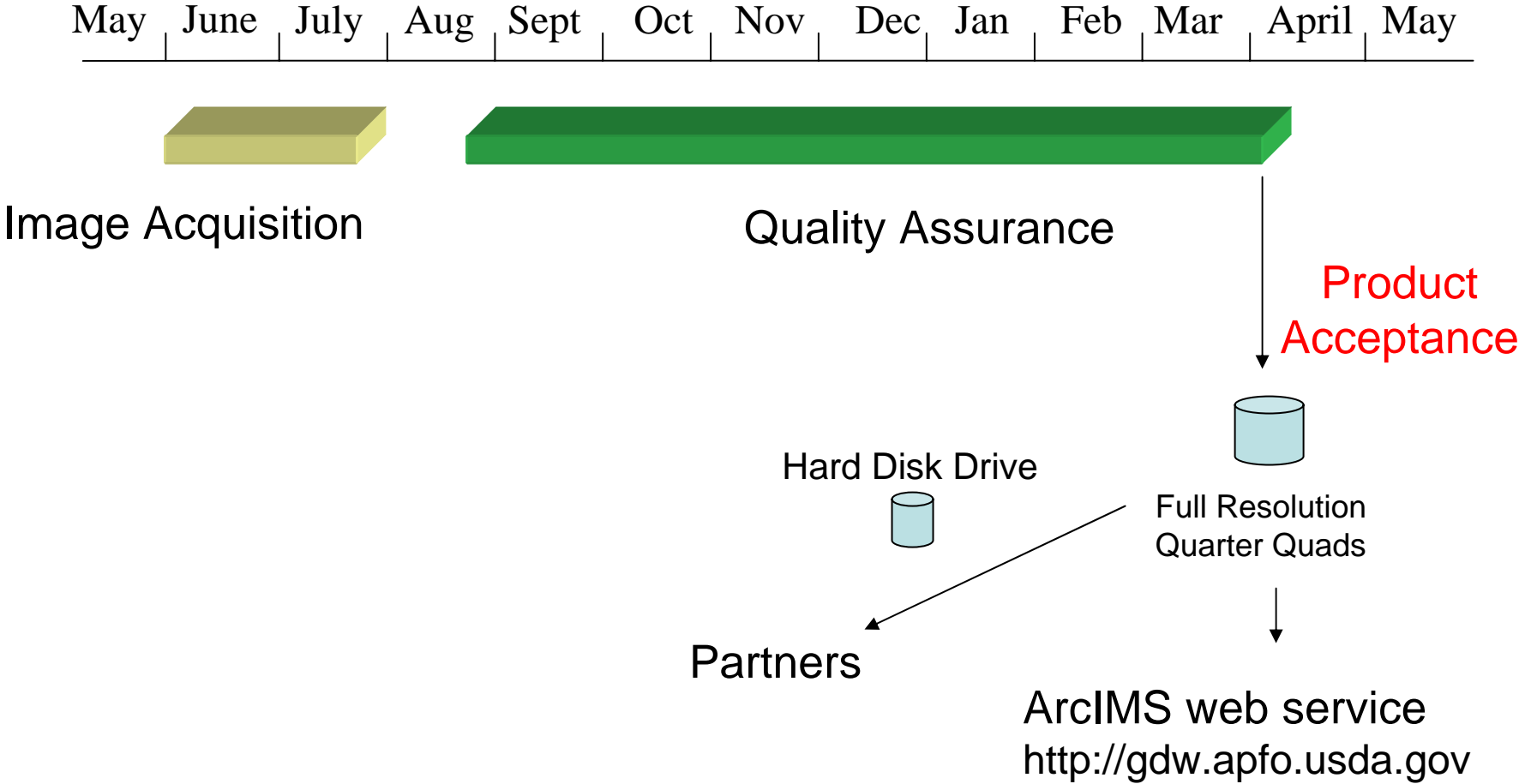
NAIP Annual Cycle

Rework of CCMs



NAIP Delivery Timeline

Availability of Quarter Quads



“Final” CCM

For FSA Base Replacement

- 1 meter only
- Any rework vendor
- Metadata on CD for state
- Memo for use as replacement imagery
- Move to “ortho” folder, rename to “ortho” prefix

NAIP Delivery to Public

- Full National Coverage of CCMs on HDD
 - Approximately \$10,000 for NAIP 2005
 - 10% of current cost
 - Working on costs for states
- USDA Geospatial Data Gateway
- RFP for Web Based Delivery System (September/October 2006)
 - Full resolution
 - Quarter quads
 - Custom Area of Interest
 - Custom Formats
 - “Clip and ship”

Changes to NAIP under consideration

- 4 band image
 - Currently 3 band RGB (red, green, blue, or natural color)
 - Add color infrared band (CIR)
 - Partners like it, attracts cost share
 - Supports better information extraction
 - Digital acquisition only
- 1 meter only
 - Costs for 1 meter vs 2 meter are similar
 - Support continual CLU maintenance
 - Increase partnership interest
- Horizontal accuracy in terms of ground position
 - Currently in terms of original base imagery

NAIP Status Information

- Interactive Web Site (in testing)
 - Static Status maps on APFO web site
 - www.apfo.usda.gov/naip.html
- Daily progress (updated daily)

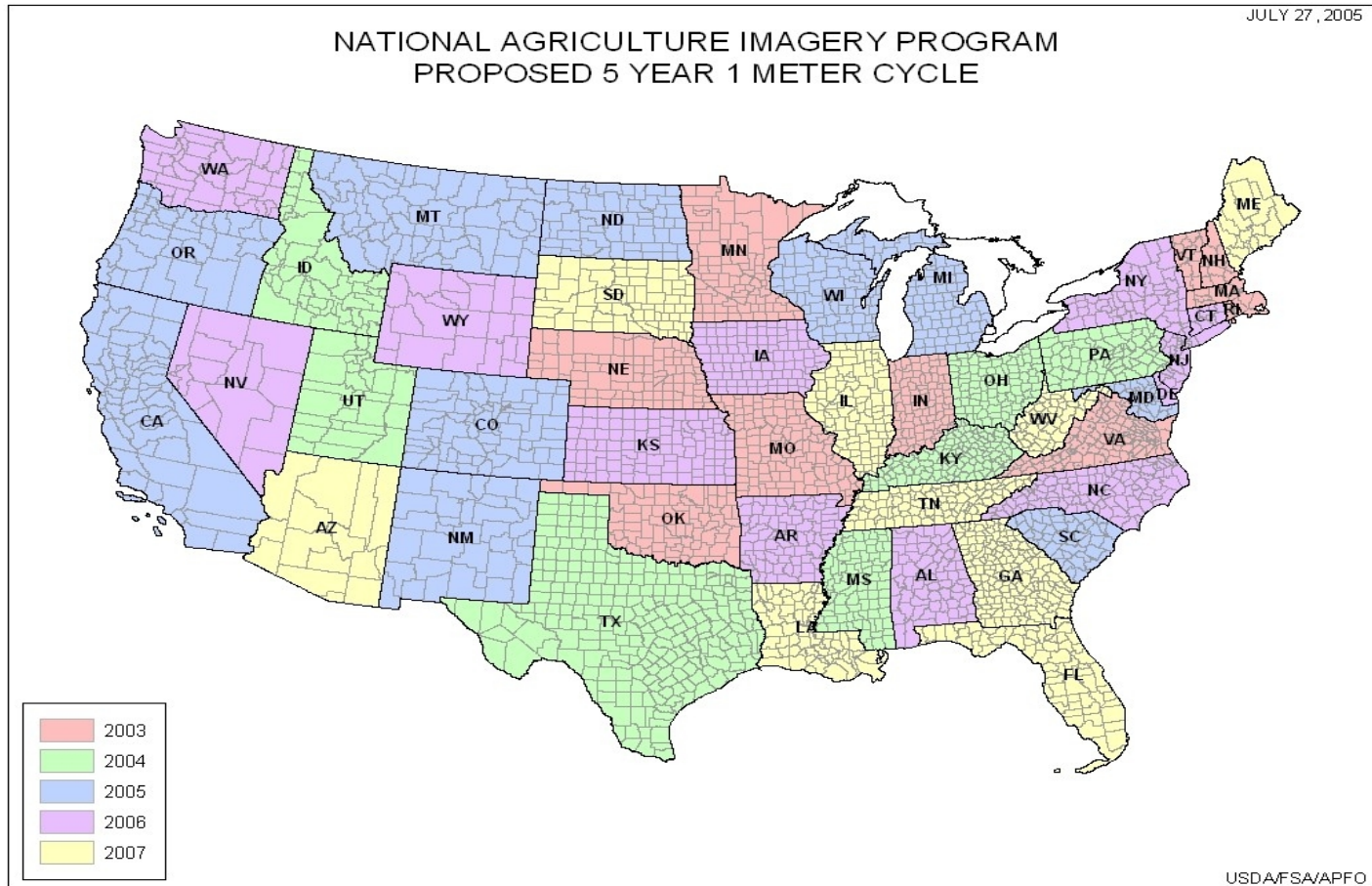
Why Partner?

- Best value for the dollars spent
- State acquisition priority
- Immediate delivery of interim CCMs
- Potential for derivative products
- No contract administration charge

APFO Facilitated Partnership Opportunities

- Cost share for existing or expansion of FSA required state coverage of 2 meter imagery
- Cost share for full state coverage of 1 meter imagery (see schedule)
- Digital acquisitions: 4 band imagery possible option for 2007 and beyond

FSA 1 Meter Schedule



Partnership Deliverables and Schedule

- Interim CCMs on DVD or CD-ROM: No later than 30 days after the end of the flying season or any granted extension
- Full resolution DOQQ tiles on portable disk drives, DVD or CD-ROM (after APFO inspection and acceptance): No later than September 30 of the following year
- Replacement CCMs upon DOQQ tiles acceptance (if necessary)

Derivative Products

- Purchased by partners directly from the vendor
- Separate contract that partners are required to administer and QA
- Potential derivative products are:
 - Sub Meter Imagery Resolutions
 - Reprojected Imagery (state plane)
 - Raw Data
 - Color Infrared (digital acquisitions)

Partnership Requisites

- Standard reimbursement agreement
 - Established no later than December 31 year preceding imagery collection
- Establish single partnership representative for state/county agencies, responsible for:
 - Communications with APFO
 - Coordination of internal agreements (funding, technical issues, and data distribution)
 - Cost share minimums vary dependent upon requested products

NAIP Points of Contact

- **Program Coordination/Management**
 - Kent Williams – Program Coordinator
 - 801-975-3500 x261 email: kent.williams@slc.usda.gov
- **Quality Issues/Problems**
 - Brenda Simpson – Quality Assurance Branch Chief
 - 801-975-3500 x 219 email: Brena.simpson@slc.usda.gov
- **Technical Questions**
 - David Davis – GIS Specialist – Service Center Support
 - 801-975-3500 x 278 email: david.davis@slc.usda.gov
 - Brian Vanderbilt – GIS Specialist – Service Center Support
 - 801-975-3500 x240 email: brian.vanderbilt@slc.usda.gov
- **Partnership Information**
 - Cindy Sessions – Partnership Coordinator
 - 801-975-3500 x208 email: cindy.sessions@slc.usda.gov
- **Contract Questions**
 - John Mootz – Contracting Officer
 - 801-975-3500 x284 email:john.mootz@slc.usda.gov
- **CCM Delivery Questions**
 - Bridget Barlow – Contracting Staff
 - 801-975-3500 x243 email:bridget.barlow@slc.usda.gov

NAIP Information Resources

APFO Web Site

<http://www.apfo.usda.gov>

- Information Sheets
- Contract and task order documents
- Status maps
- Powerpoint files