

The Farm Service Agency's National Agricultural Imagery Program (NAIP)

Presentation for the U. S. Geological Survey
Eastern Region Geography State Cooperators
Forum 2002.

November 12-14 in Reston, Virginia

NAIP Vision Statement

The **National Agricultural Imagery Program (NAIP)** consolidates USDA's aerial photography, digital imagery, and digital orthoimagery requirements into a national strategy that **acquires the best value products** for USDA agencies while is flexible enough to create win-win partnerships with Federal agencies, State and local governments, and private entities. NAIP will maximize the informational value of acquisitions by **minimizing the cycle time** from acquisition to fielding while keeping the image content information for the creation of traditional photographic and orthoimagery.

NAIP Program Goals

- Procurement plan based on “Best-Value” contracting practices
- Acquire large format aerial photography, 1:40,000 scale, color positive film
- Acquire during the peak agricultural growing season (leaf-on)
- Deliver digital imagery (one & two meter), in a county format, within one month of acquisition for FSA Compliance Program

NAIP Program Goals

- Provide new photography/digital imagery on an annual basis
- Update ortho-image base on 1-5 year cycle (depending on USDA Service Center needs)
- Aerial film archived at APFO and made available for photographic products
- Digital imagery furnished to the “National Map” concept in place of or to augment the NAPP/NDOP

National Agricultural Imagery Program (NAIP)

USDA Service Centers are:

- Responsible for administering a variety of farm commodity and conservation programs
- In the process of transitioning from analog to digital imagery (GIS) in order to administer programs more effectively
- Seeking imagery cost sharing partnerships under cooperative agreements

Traditional Service Center Methods



Image Format Comparison



Small Format

- 35mm Camera
- 3 sq. miles @ 8,000 feet
- Digital Camera
- 3 sq. miles @ 10,000 feet

Large Format

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

National Agricultural Imagery Program (NAIP)

Previous Pilot Projects:

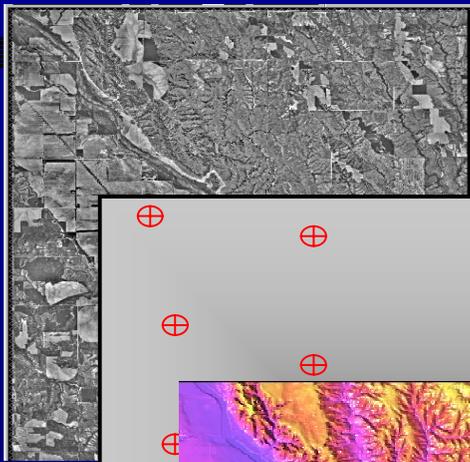
- Scanned 35mm Slides
- Direct Digital 35mm Cameras
- Aerial Mapping Cameras (1:40,000 QQC)
- Satellite Imagery

Program Purpose and End Products

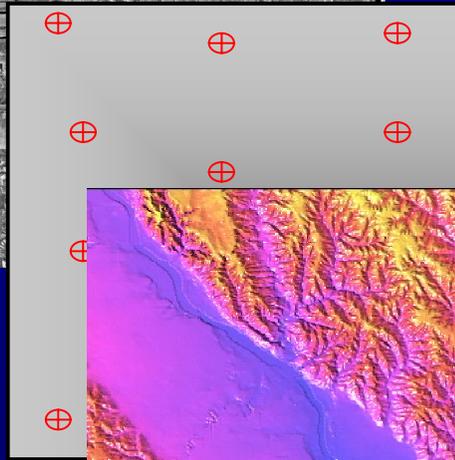
- **FSA Compliance Program:**
 - Two Meter Geo-referenced Digital Imagery
 - One Meter Ortho-rectified Digital Imagery
- **GIS Orthoimagery Base Update:**
 - One Meter Ortho-rectified Digital Imagery
 - One Meter Ortho-rectified Digital Imagery produced at USDA-APFO
- **Aerial Photography Film Archive:**
 - Digital and Photographic products made from 1:40,000 scale, Color Positive Film at APFO

NAIP Products and Cost

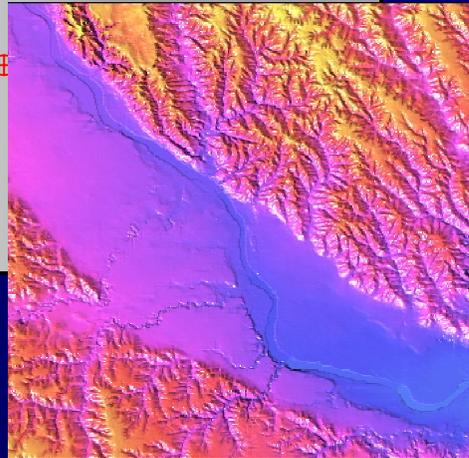
1m Ortho-Rectified



Digital Image
(one meter GSD)



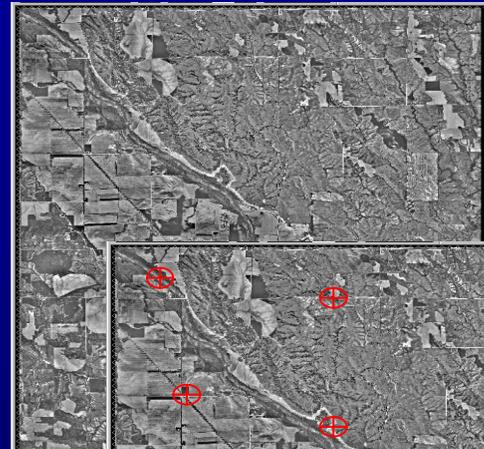
Control
(survey)



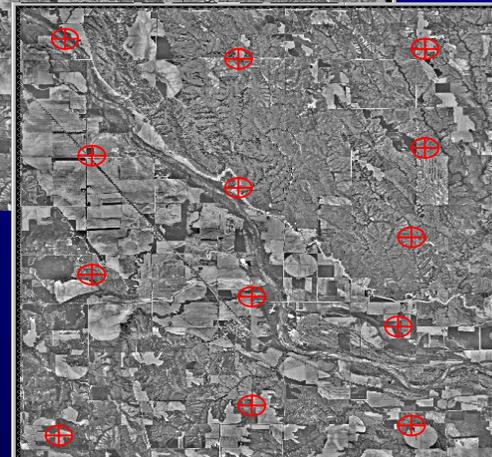
Elevation
Model

\$18.00 / Square Mile

2m Geo-Rectified



Digital Image
(two meter GSD)



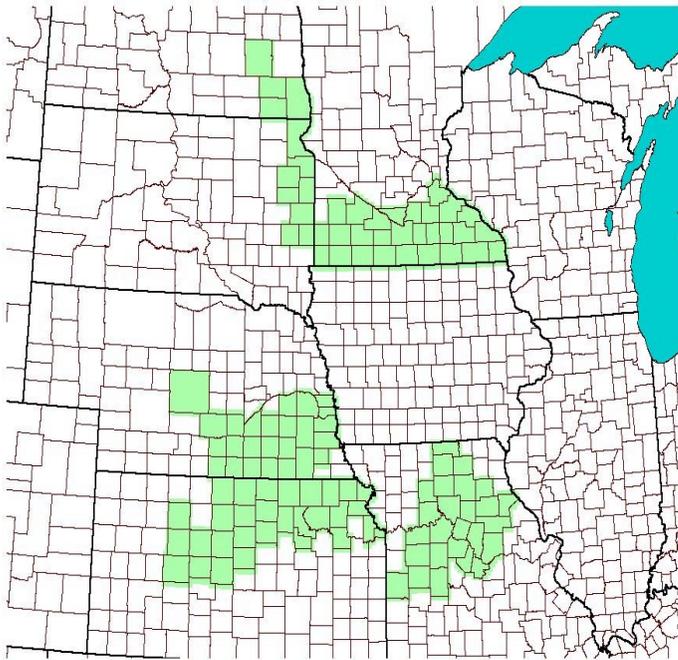
Control
(reference
image)

\$7.00 / Square Mile

FSA NAIP Contracts

2002 Aerial Imagery Contracts

FY2002 NAIP

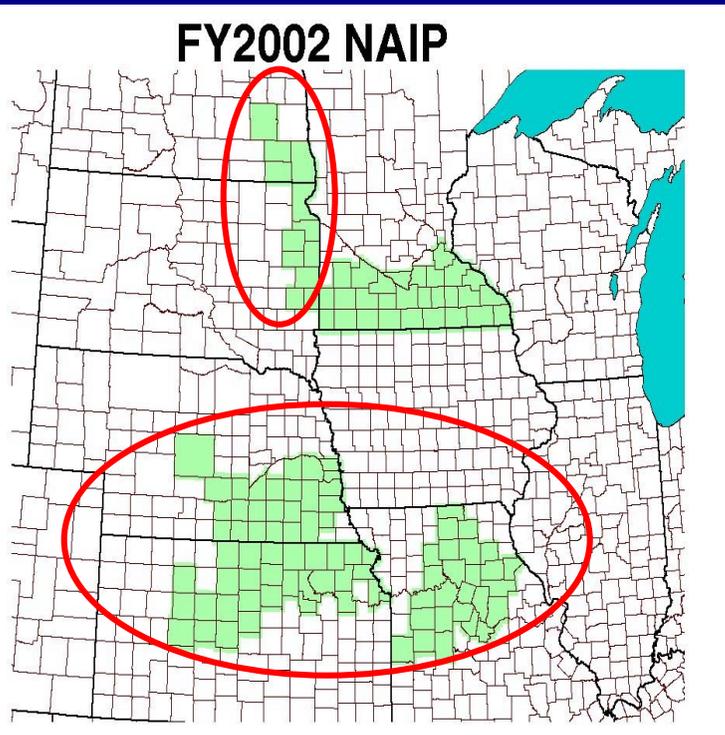


Project Summary

- 121 Full Counties From Six States
- 28,932 Line Miles covering 82,727 Square Miles
- Quarter Quad Centered Tiff Images and Color Positive Film
- Leaf On Summer Flying
- Some Defects Allowed

FSA Compliance Imagery

2 Meter Geo-rectified



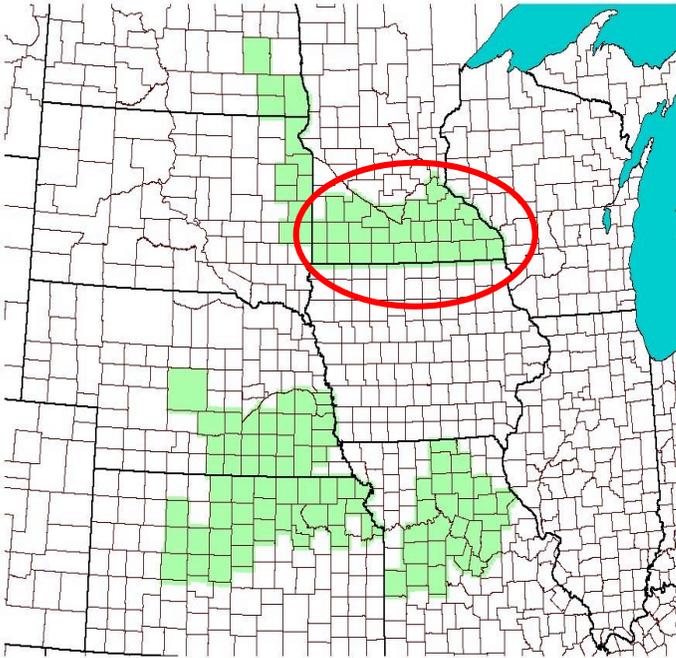
Kansas, Nebraska, North & South Dakota, and Missouri

- Average Project Cost: \$6.94 Per Square Mile
- 65,266 Square Miles , 5 States, 93 Counties
- Natural Color Digital Imagery Scanned From Color Positive Film
- 2.0 Meter GSD
- Geo-Tiff Image Format

FSA Compliance Imagery

1 Meter Ortho-rectified

FY2002 NAIP



MINNESOTA

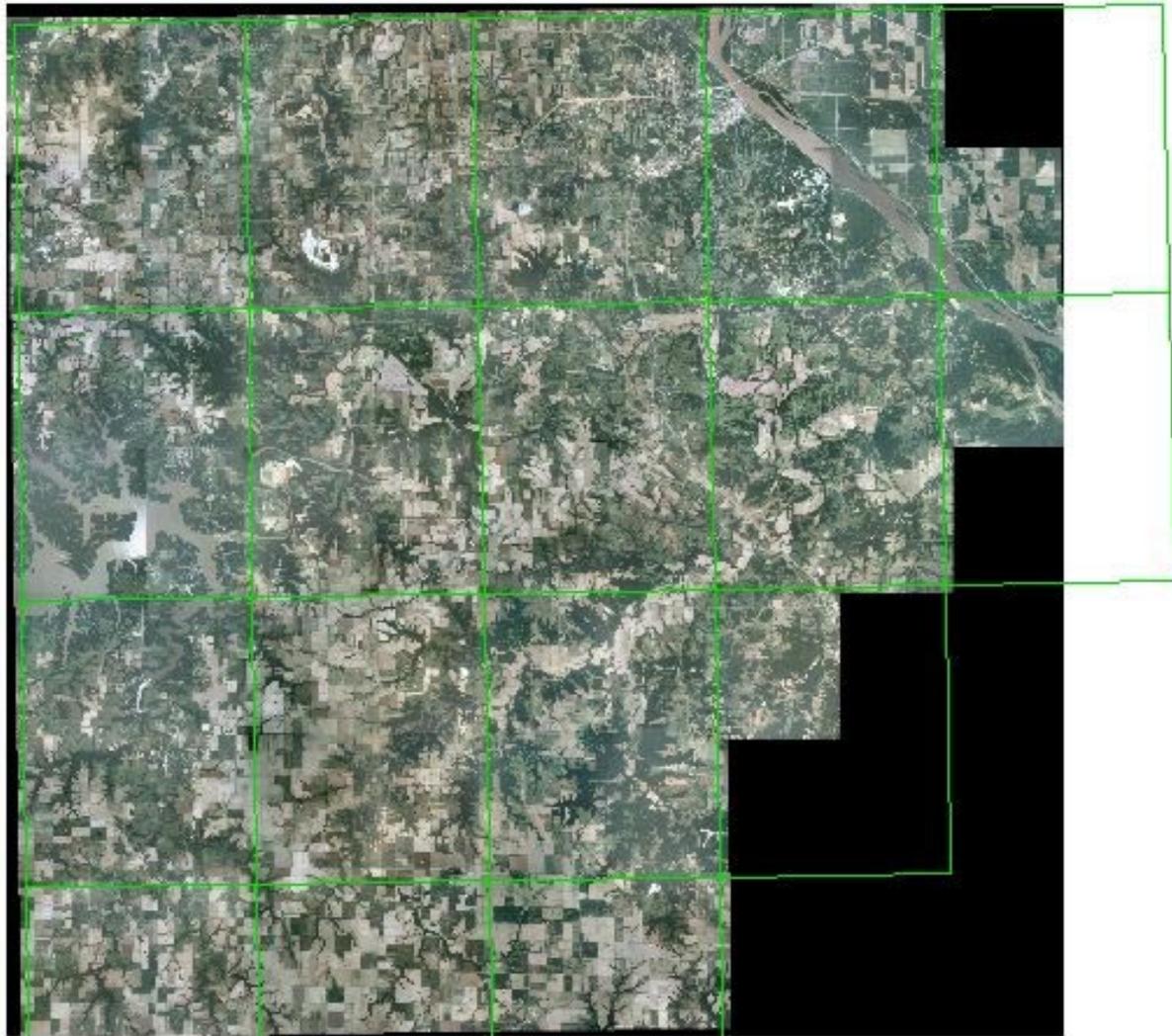
- Project Cost: \$18.99 per square mile
- 17,461 Square Miles, 28 Counties
- Natural Color Digital Imagery
Scanned from Color Positive Film
- 1.0 Meter GSD
- Geo-Tiff Image Format

Ralls County, Missouri

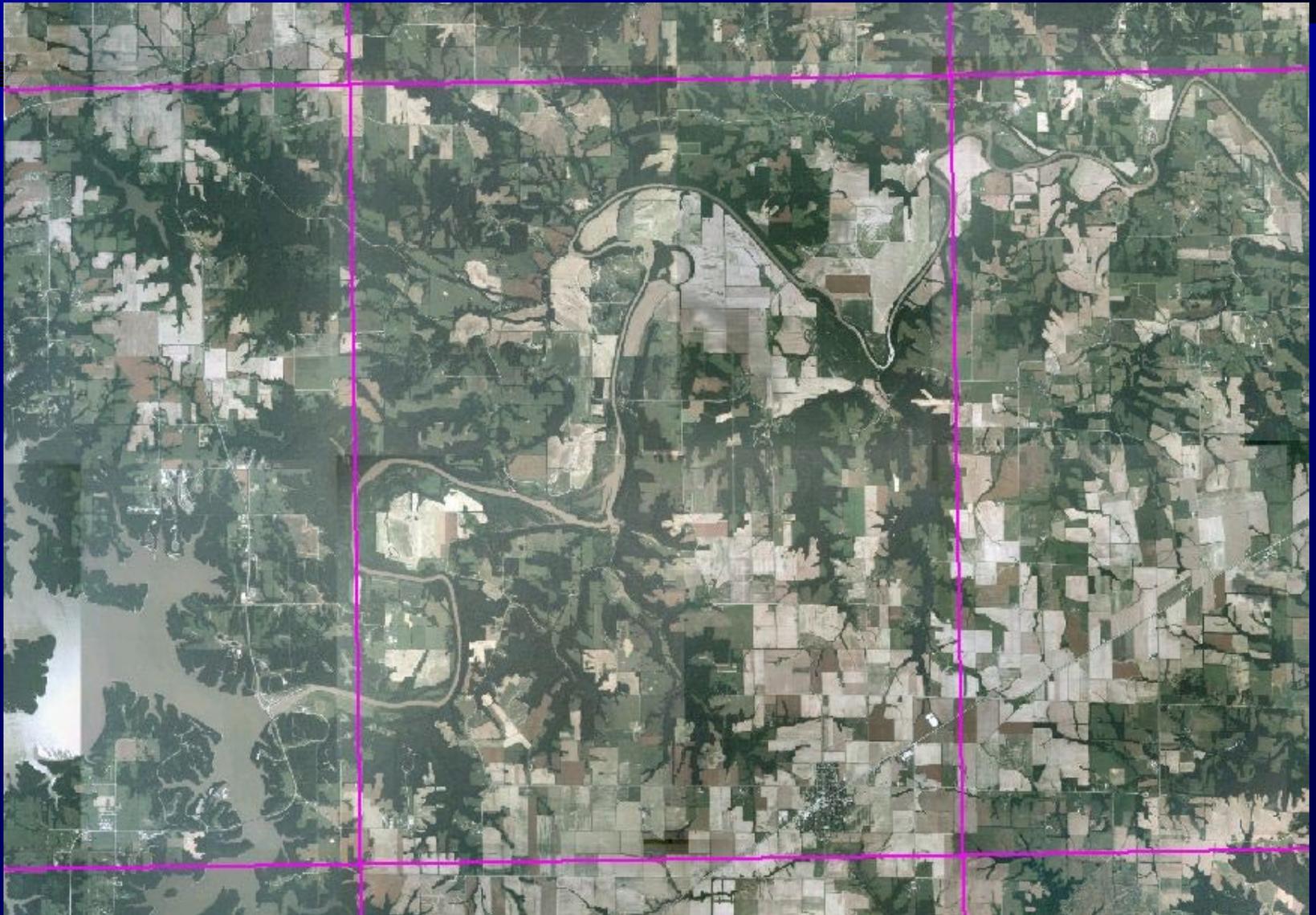
2 Meter Geo-Referenced Image



7.5 Minute Quad Boundaries



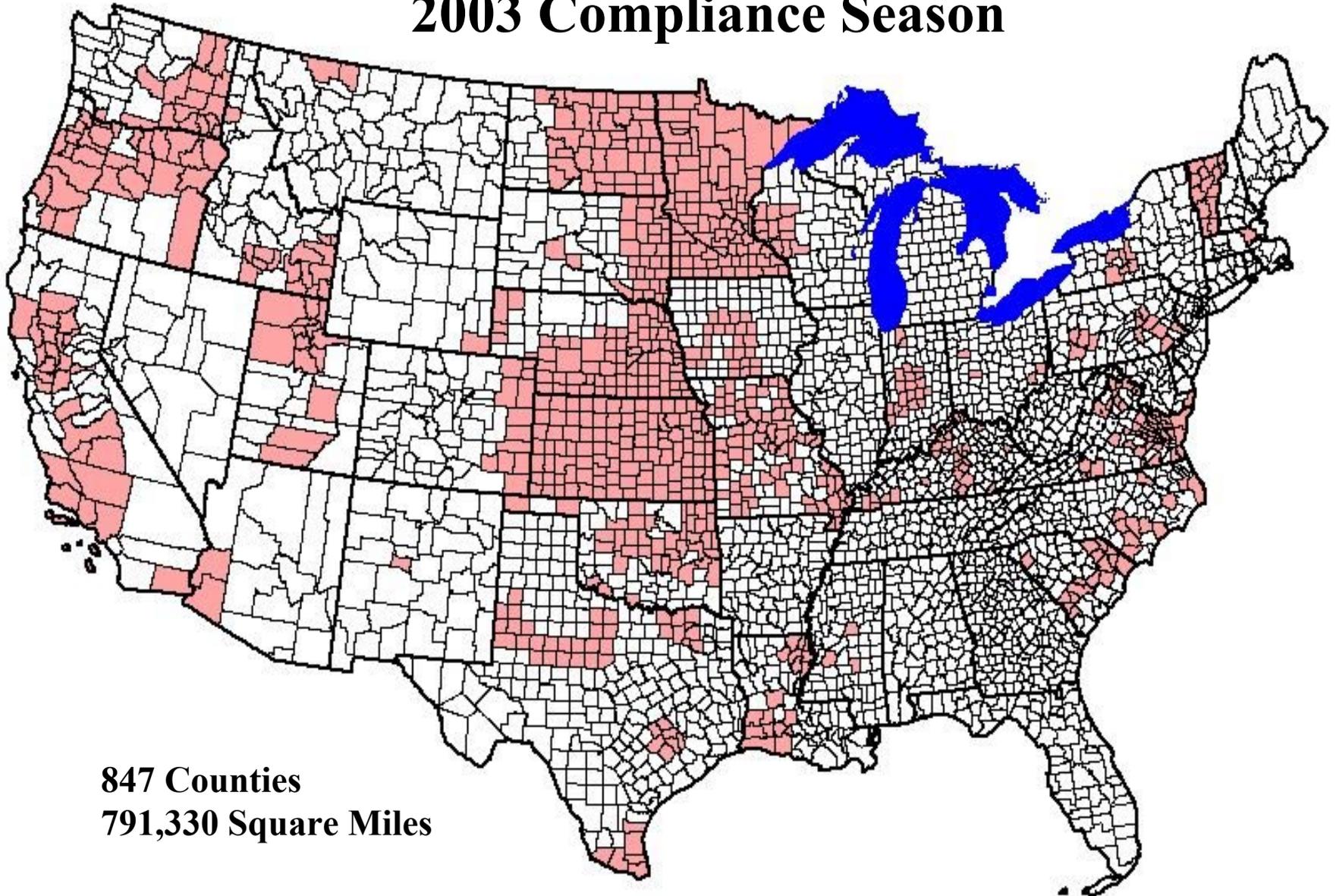
Single 7.5 Minute Quad



Single 7.5 Minute Quad With Common Land Unit (CLU) Boundaries



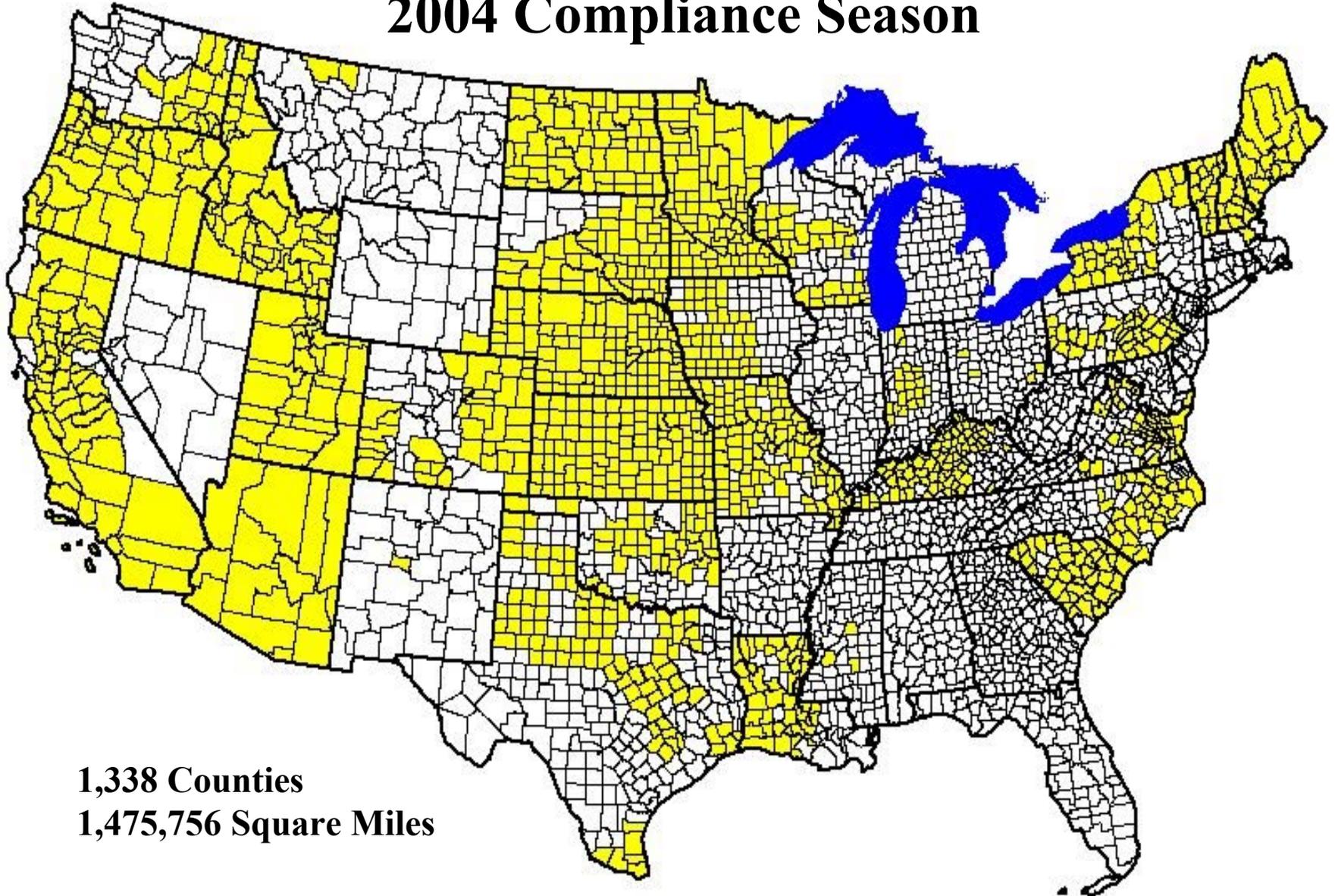
Potential NAIP Coverage for 2003 Compliance Season



847 Counties

791,330 Square Miles

Potential NAIP Coverage for 2004 Compliance Season



1,338 Counties

1,475,756 Square Miles

Types of Partnership Opportunities

- **Coverage of Additional Areas Adjacent to or Near FSA Counties**
- **Upgrade Resolution From Two Meter GSD TO One Meter GSD**
- **Upgrade Rectification**
- **Federal Agencies, State or County Cost Share with FSA**

USDA Aerial Photography Field Office
2222 West 2300 South
Salt Lake City, Utah 84119-2020

Contacts for Partnership Information:
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