

**Geographical Information Systems
(GIS)
Farm Service Agency
(FSA)**

**Joseph K. Curless
October 06, 2005
Governors Conference
Management of Illinois River System**

FSA's mission is to stabilize farm income, help farmers conserve land and water resources, provide credit to new or disadvantaged farmers and ranchers, and help farm operations recover from the effects of disasters.

- FSA is expected to administer over \$20 Billion in farm program benefits to agriculture producers in FY 2005.
- FSA is using Geospatial Information Systems (GIS) to optimize its shrinking human and programmatic resources.



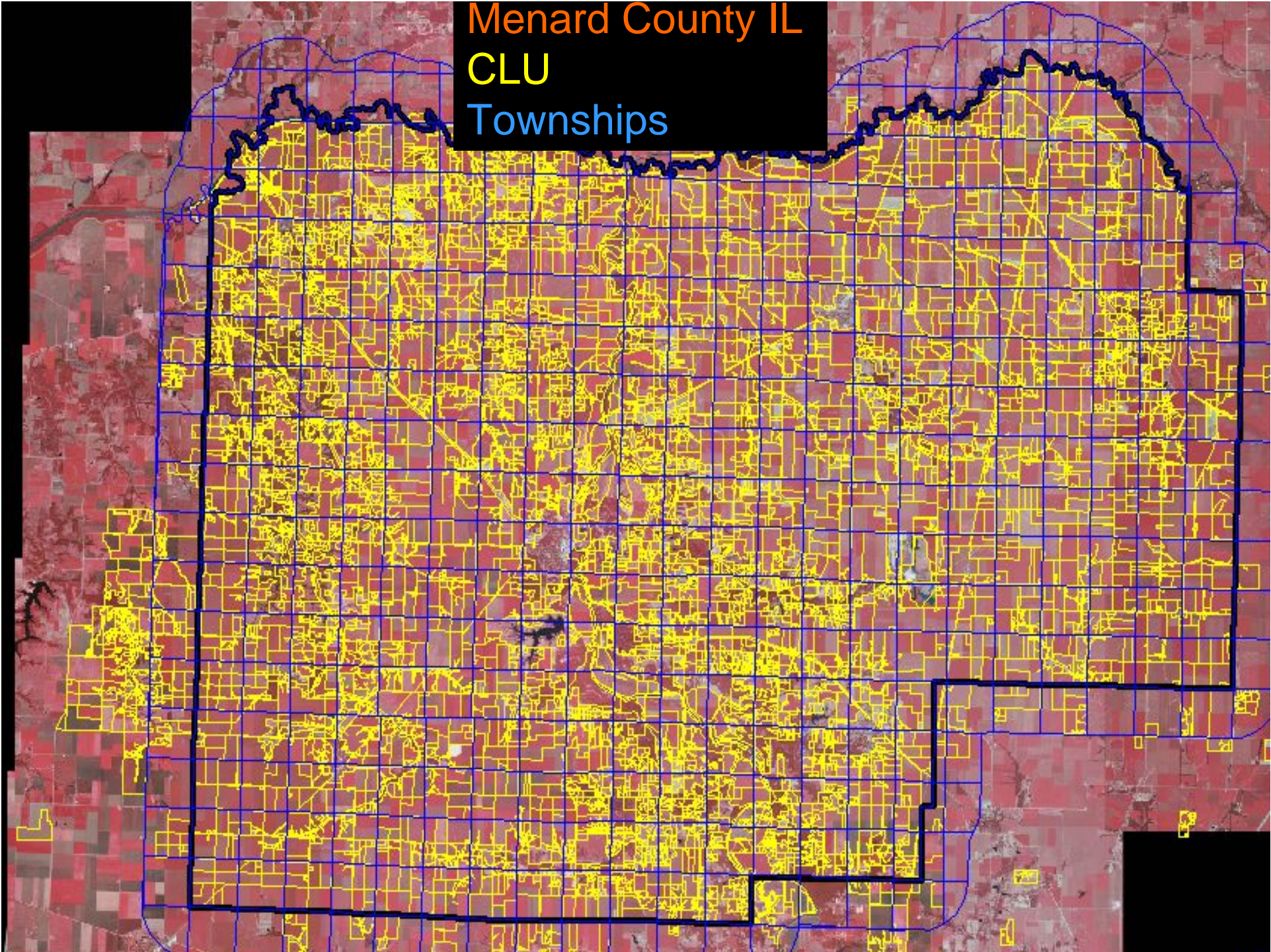
Benefits of GIS to FSA?

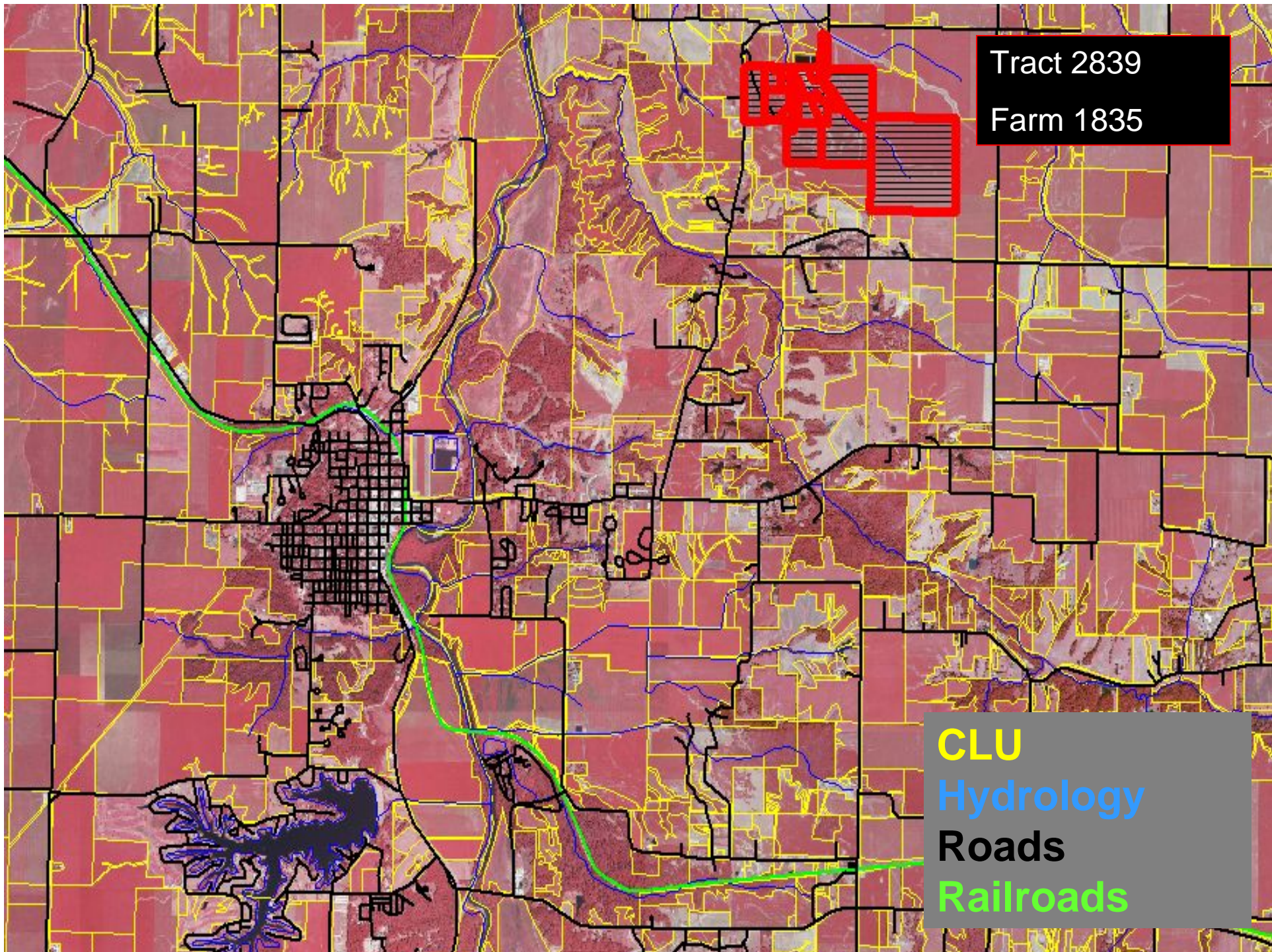
- Positive impact to producer business practices
- Improved Program response time
- Improved response to natural disaster or bio-terrorism events
- Positive impacts to e-File requirements
- Creates Technology Assets – tools that provide fast, effective service and reduce overall program cost
- Migration from outdated legacy systems
- Ability to Data Share – Increased cooperation and integration partner agencies
- Compliance with Federally mandated requirements

Common Land Unit (CLU) Initiative

A CLU is the smallest unit of area that is a permanent, contiguous boundary, a common land cover management, with a common owner, producer and association

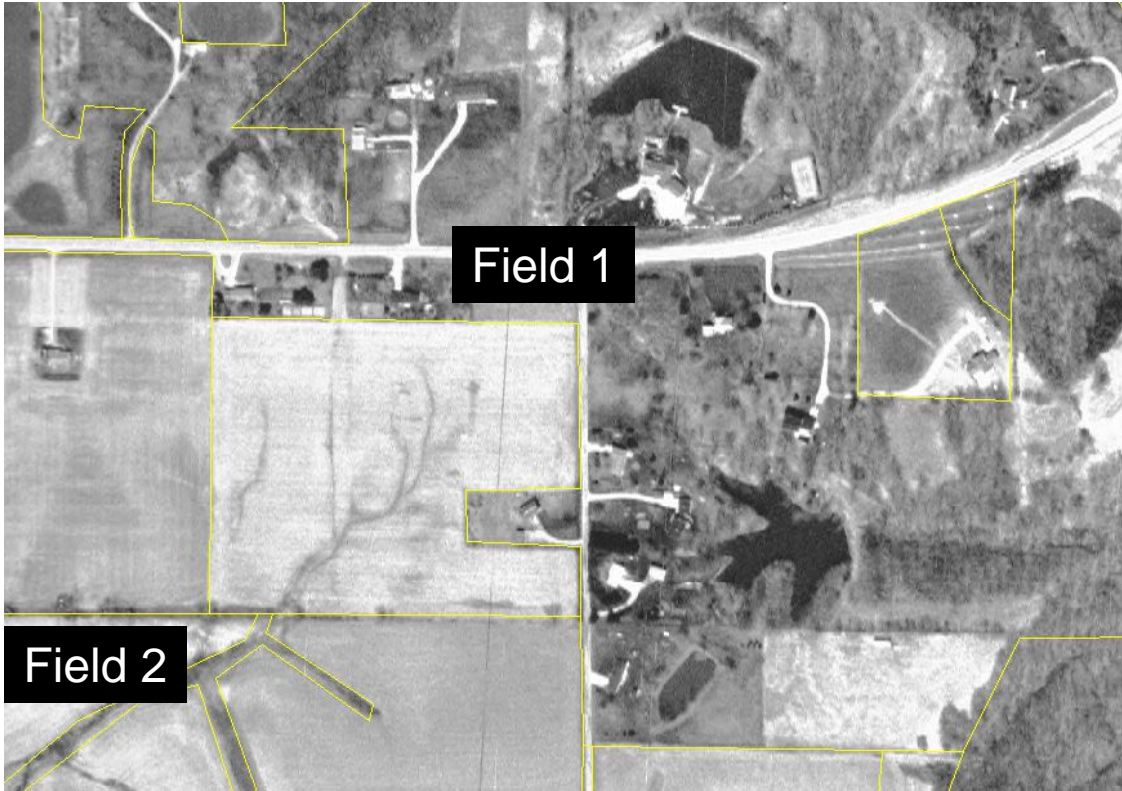
Menard County IL
CLU
Townships



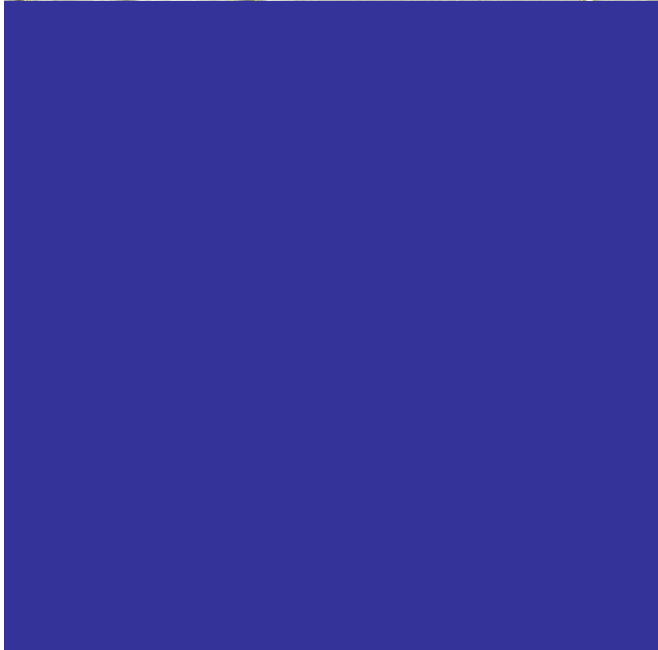


Tract 2839
Farm 1835

CLU
Hydrology
Roads
Railroads



Tract # 1356
Farm # 2863





Illinois Maps

Shipped

July 18, 2005

CLU (Field) #

Acres

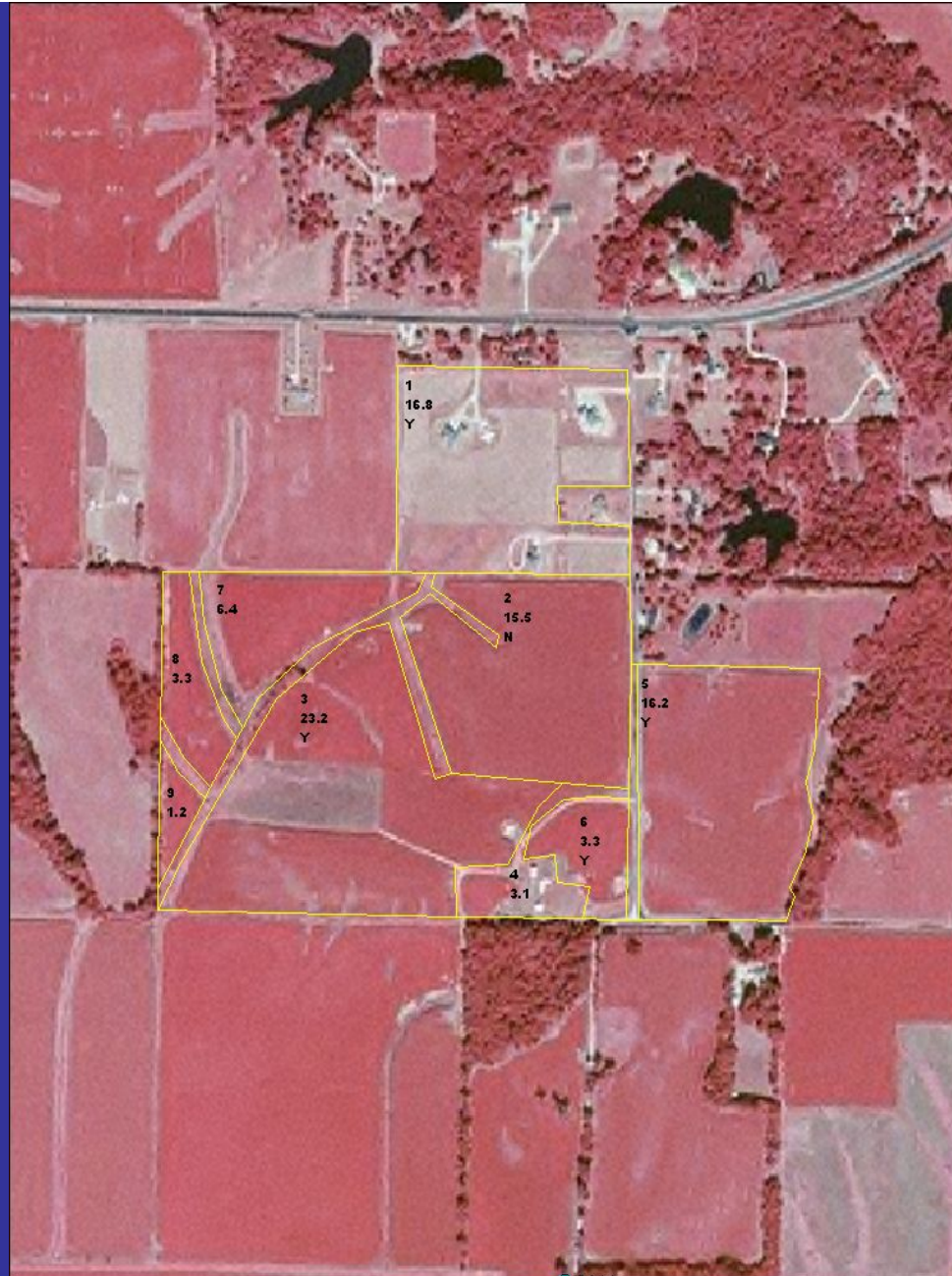
HEL Status

Tract Number

Farm Number

**Drops
Neighbors
Information**

**Date
Printed**



Tract 1653
Farm 1191

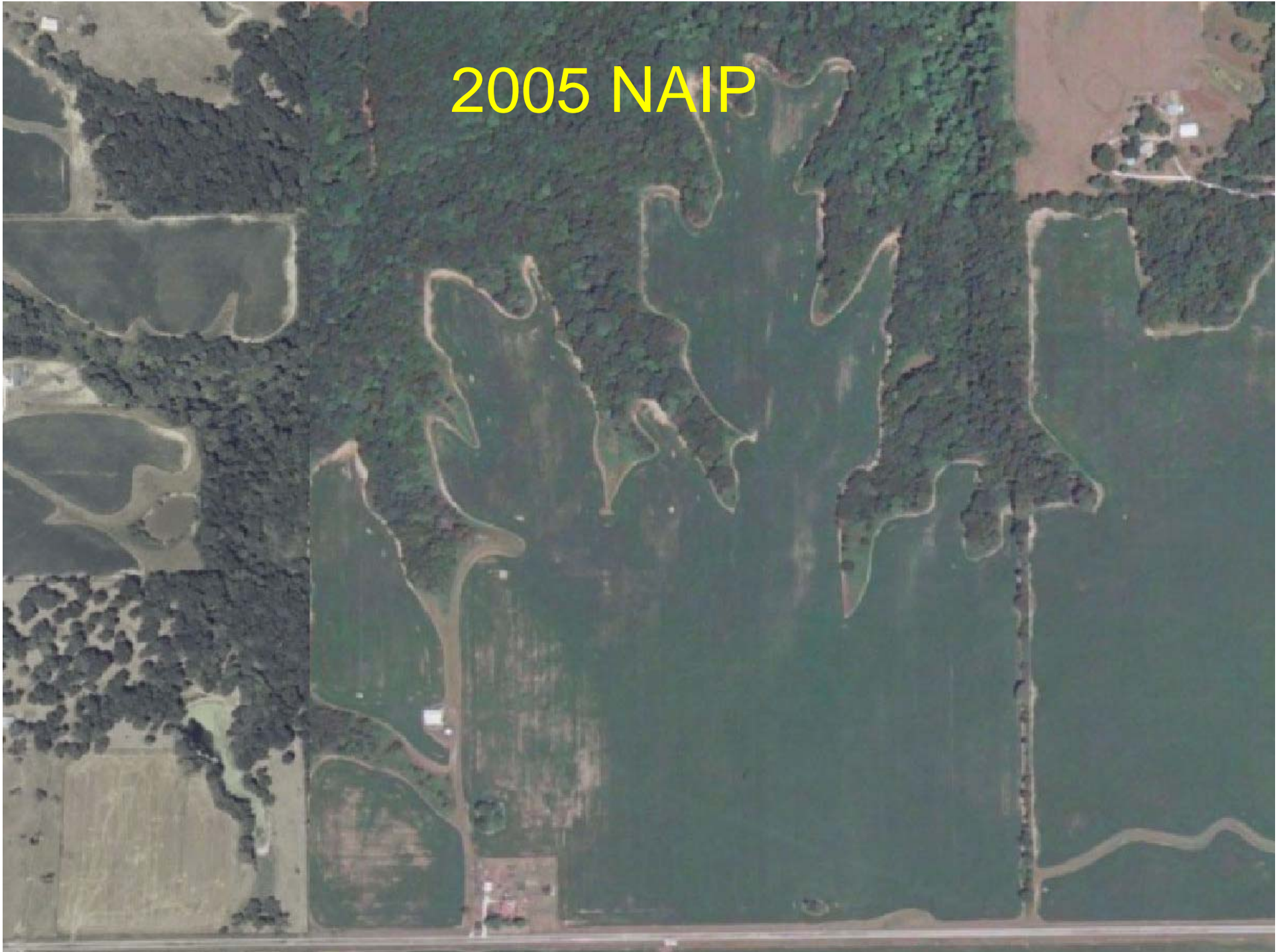
- Township_a_1129.shp
- Township_l_1603.shp
- Boundary_a_1129.shp
- CLU_a_1129.shp

0.05 0 0.05 0.1 0.15 0.2 Miles

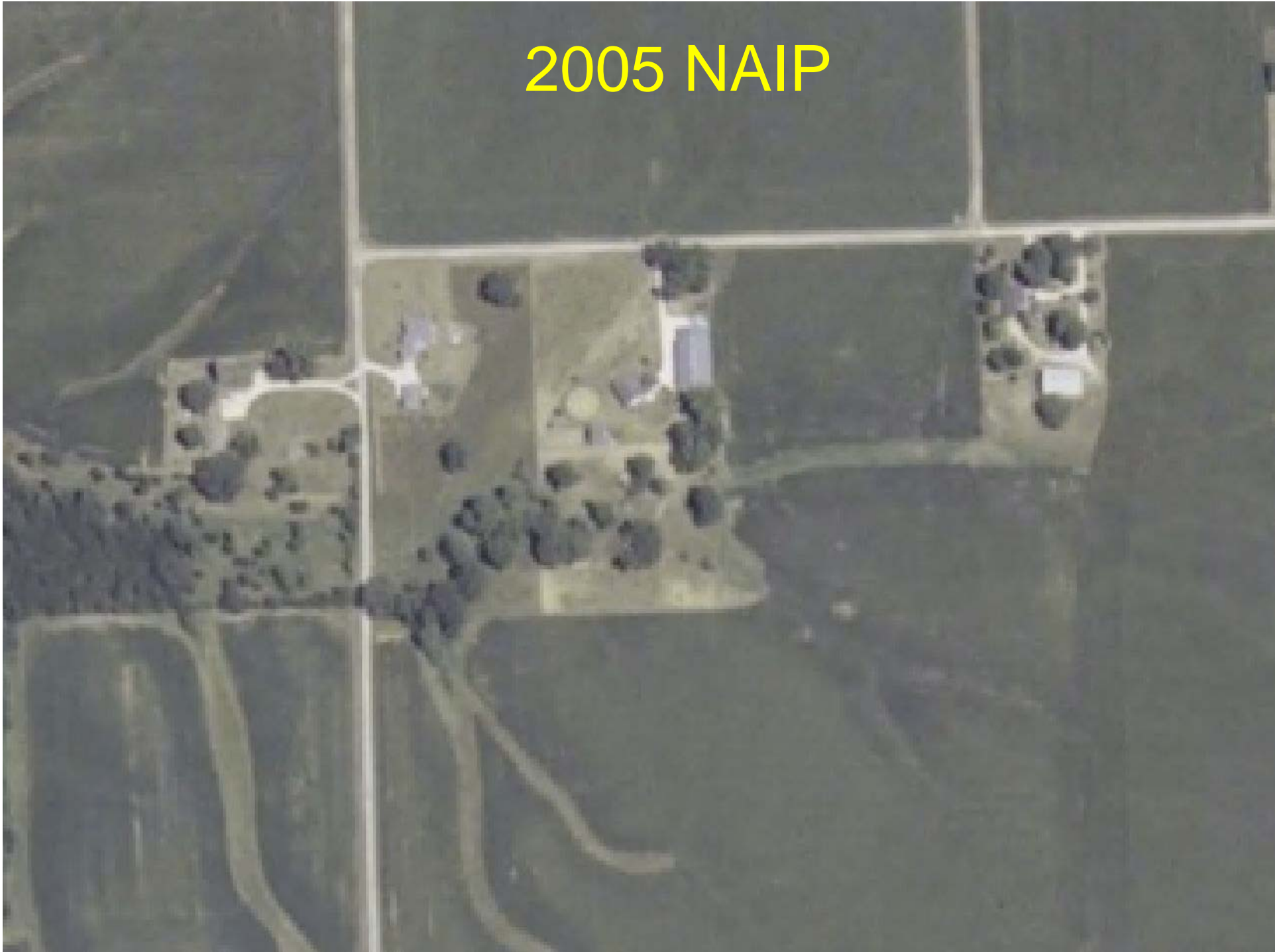


Map Printed: Nov 18, 2004

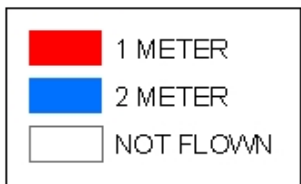
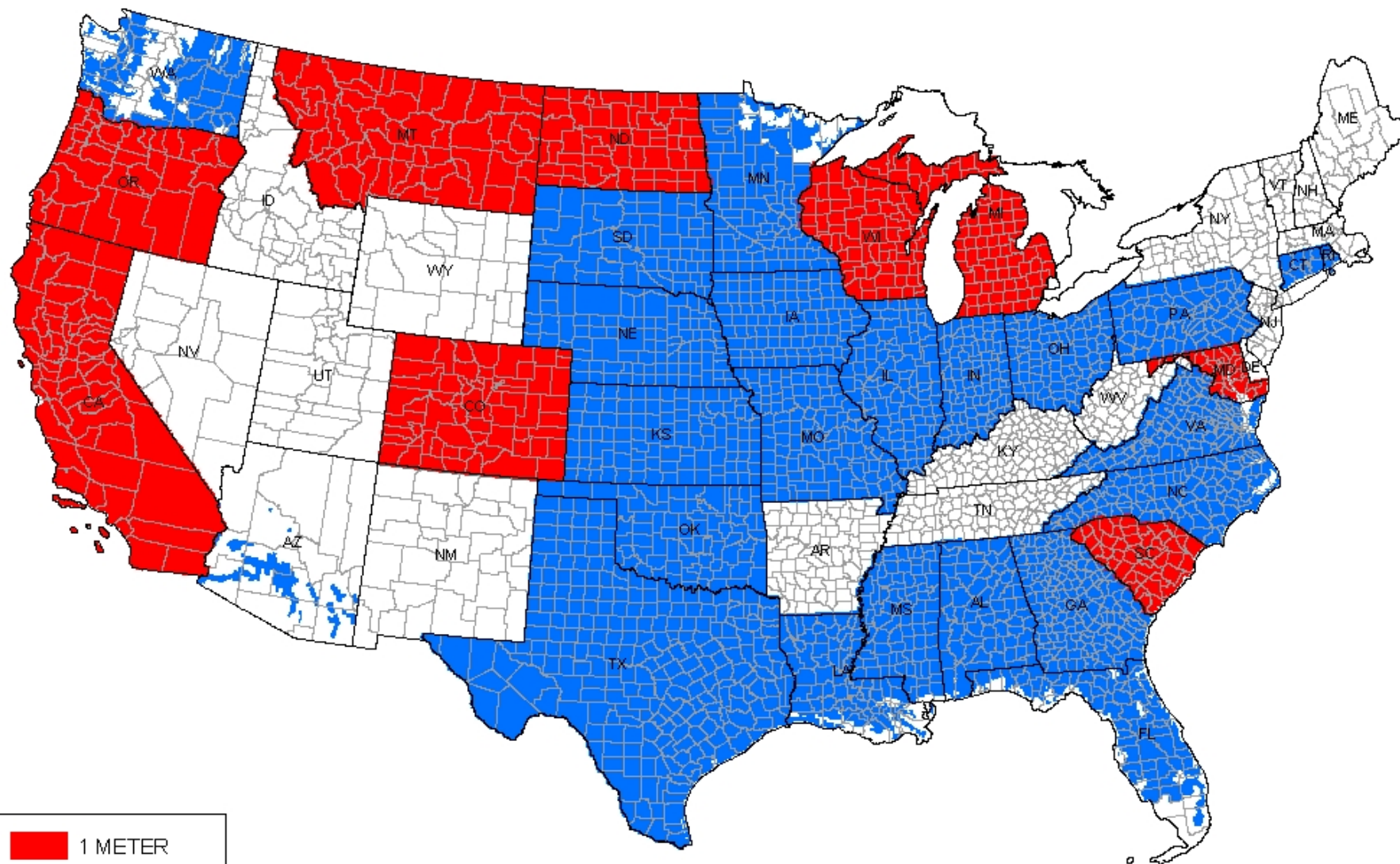
2005 NAIP



2005 NAIP



2005 NAIP



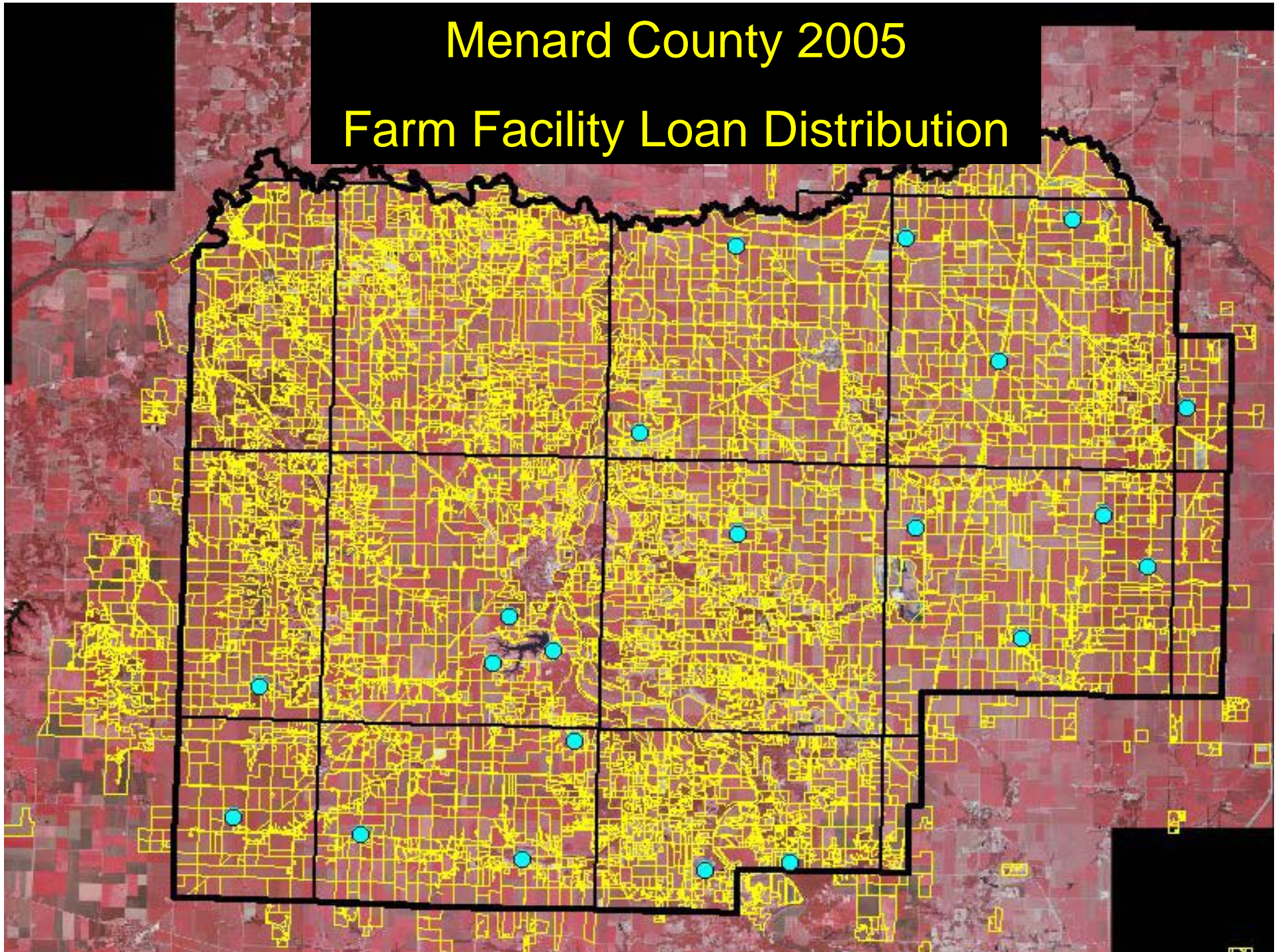
1 Meter NAIP



2 Meter NAIP



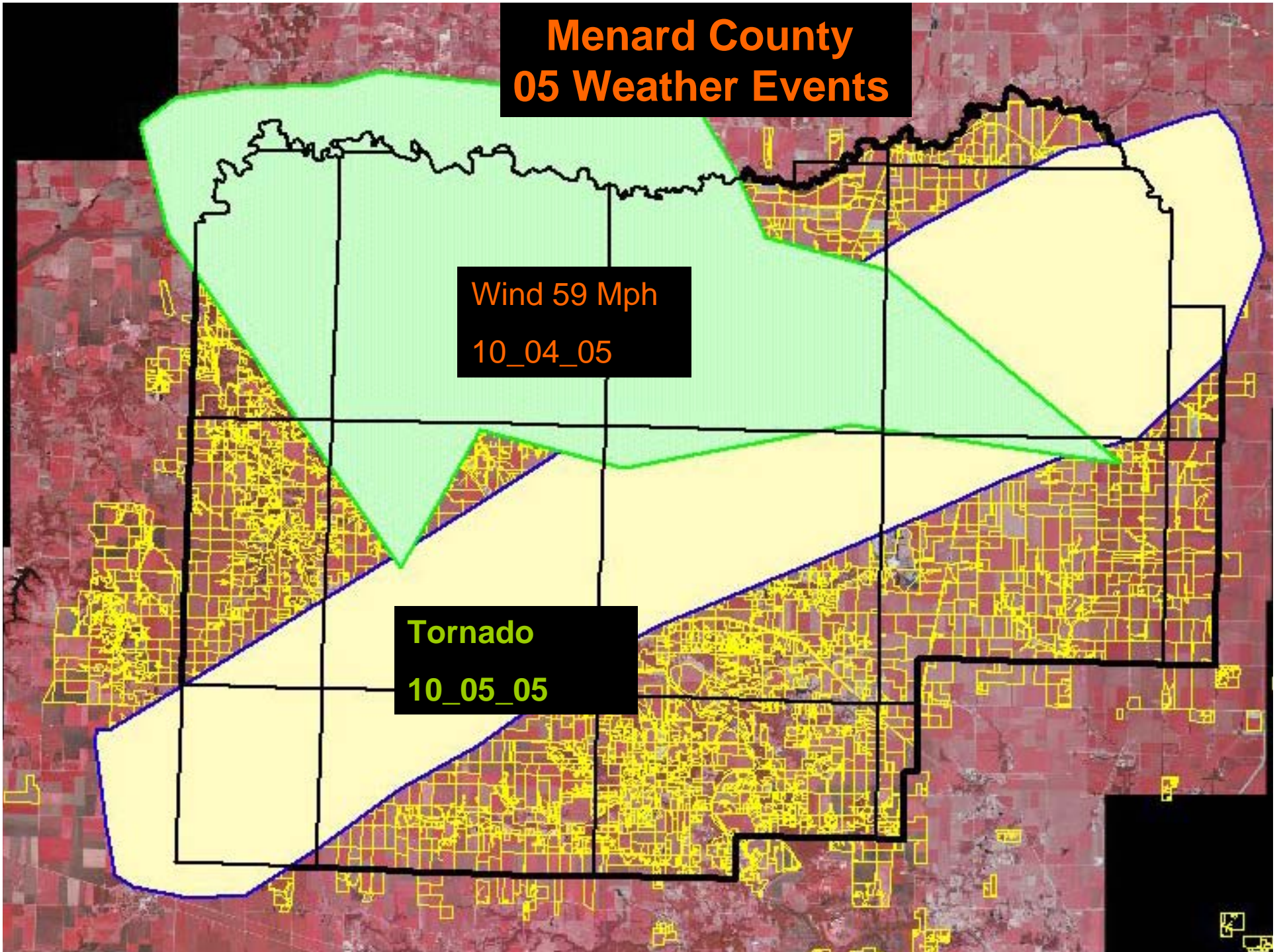
Menard County 2005 Farm Facility Loan Distribution



Menard County 05 Weather Events

Wind 59 Mph
10_04_05

Tornado
10_05_05



Wind Event 10_04_05

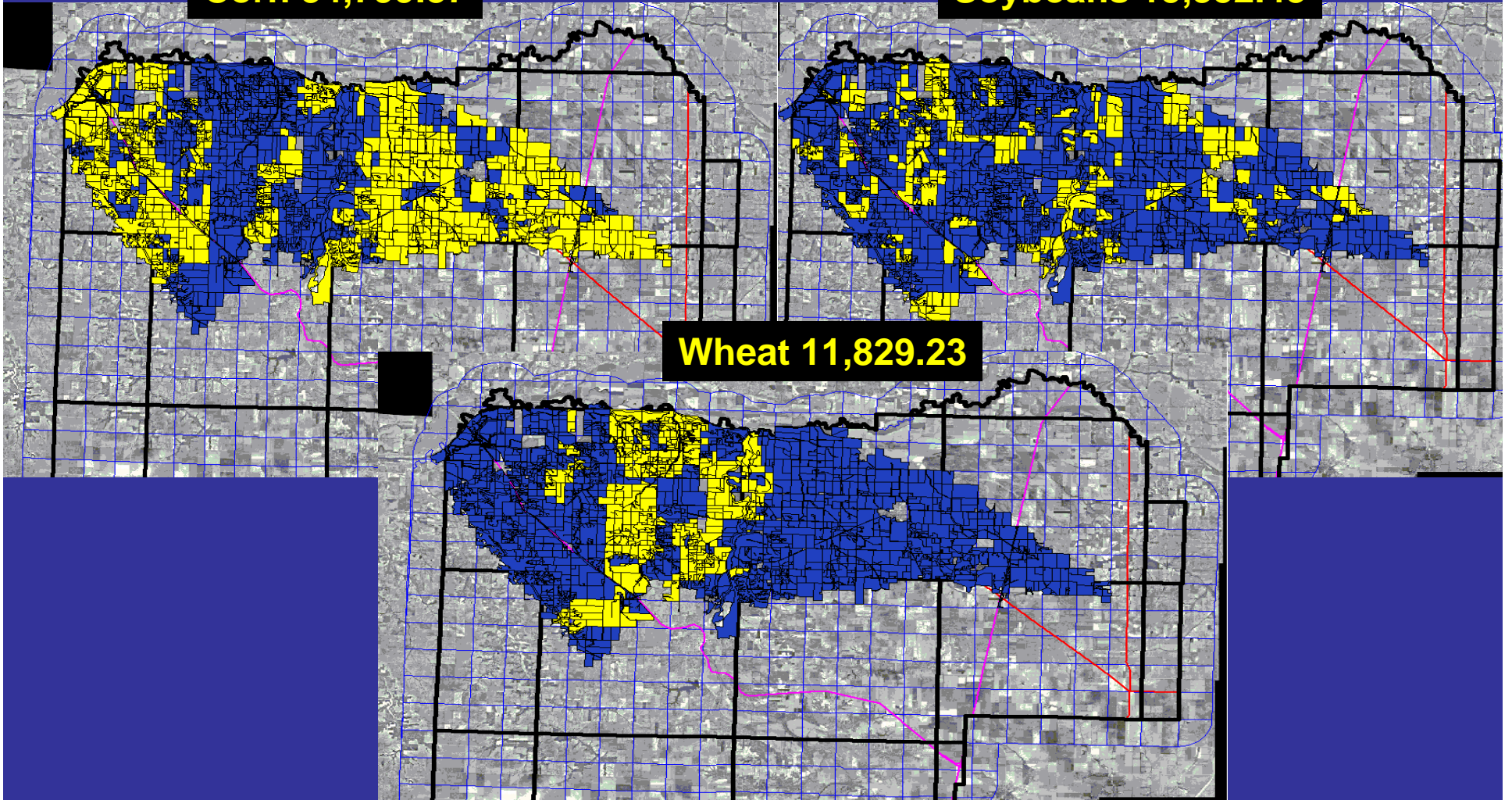
Estimated 59 mph

Potential Acres Affected

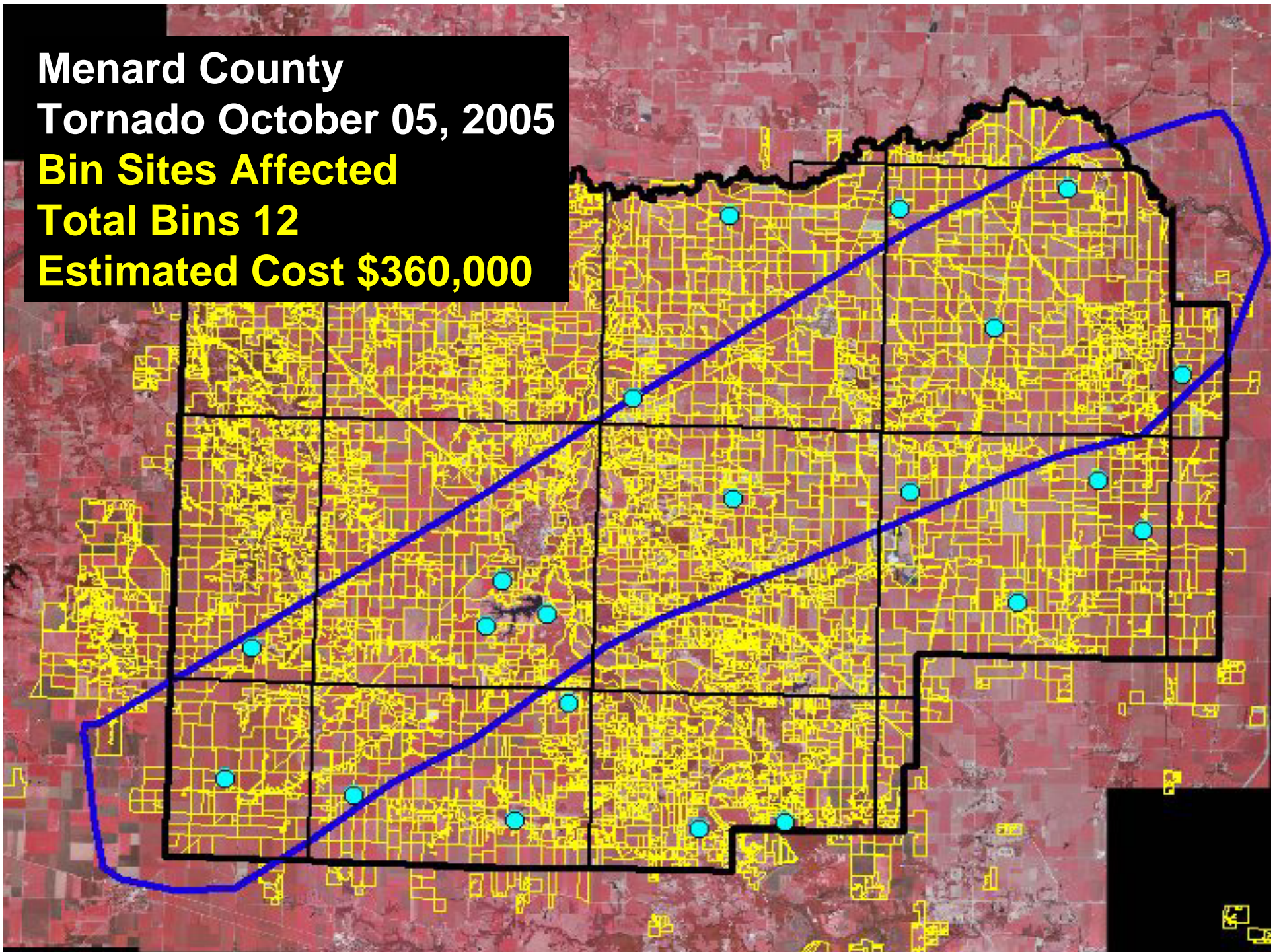
Corn 34,799.87

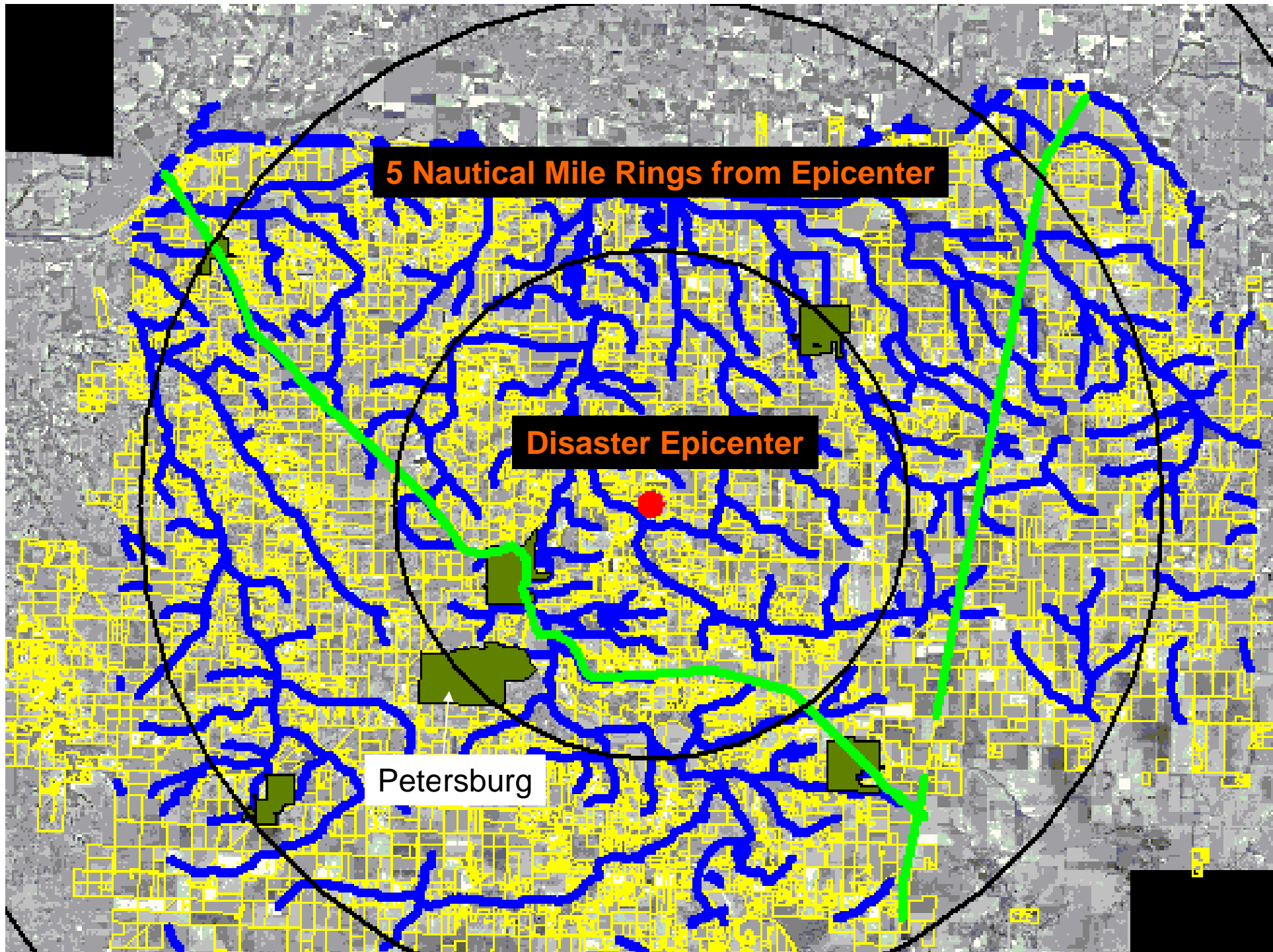
Soybeans 15,352.43

Wheat 11,829.23



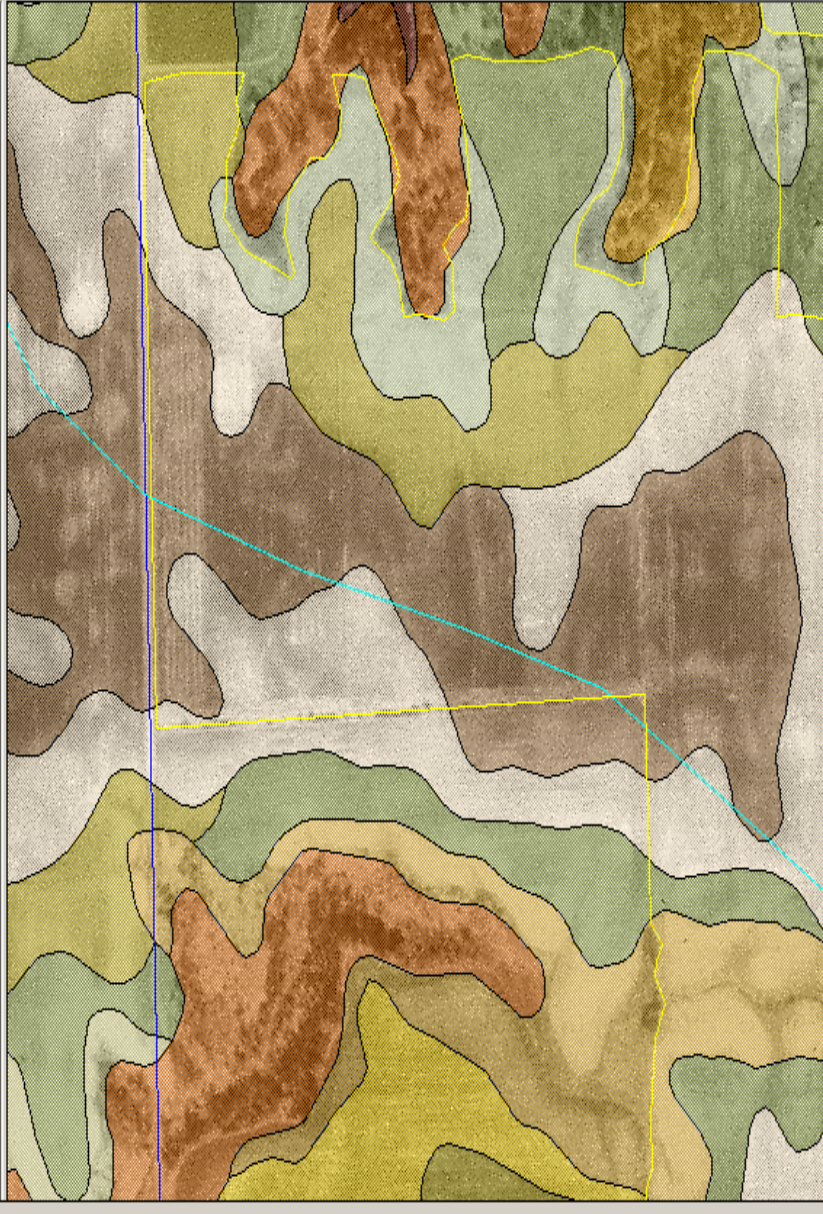
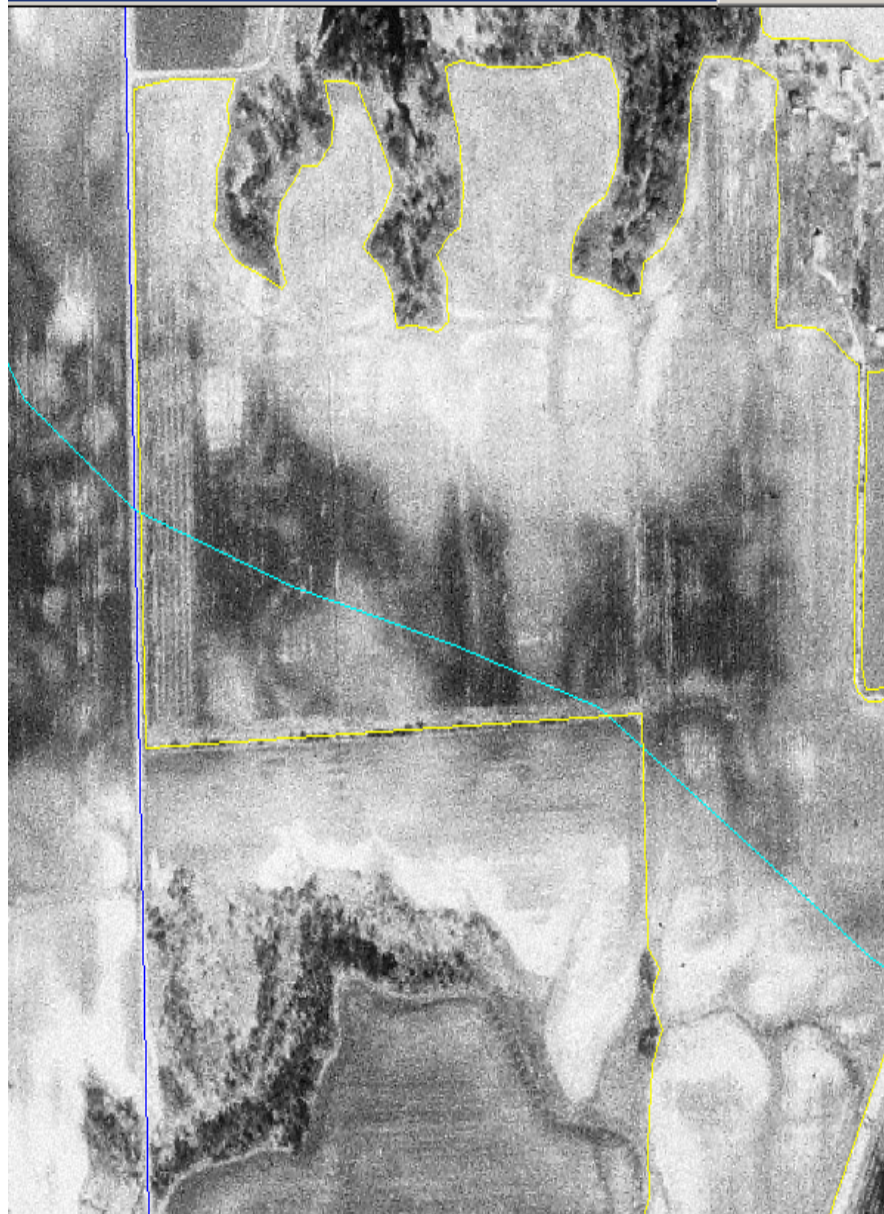
Menard County
Tornado October 05, 2005
Bin Sites Affected
Total Bins 12
Estimated Cost \$360,000



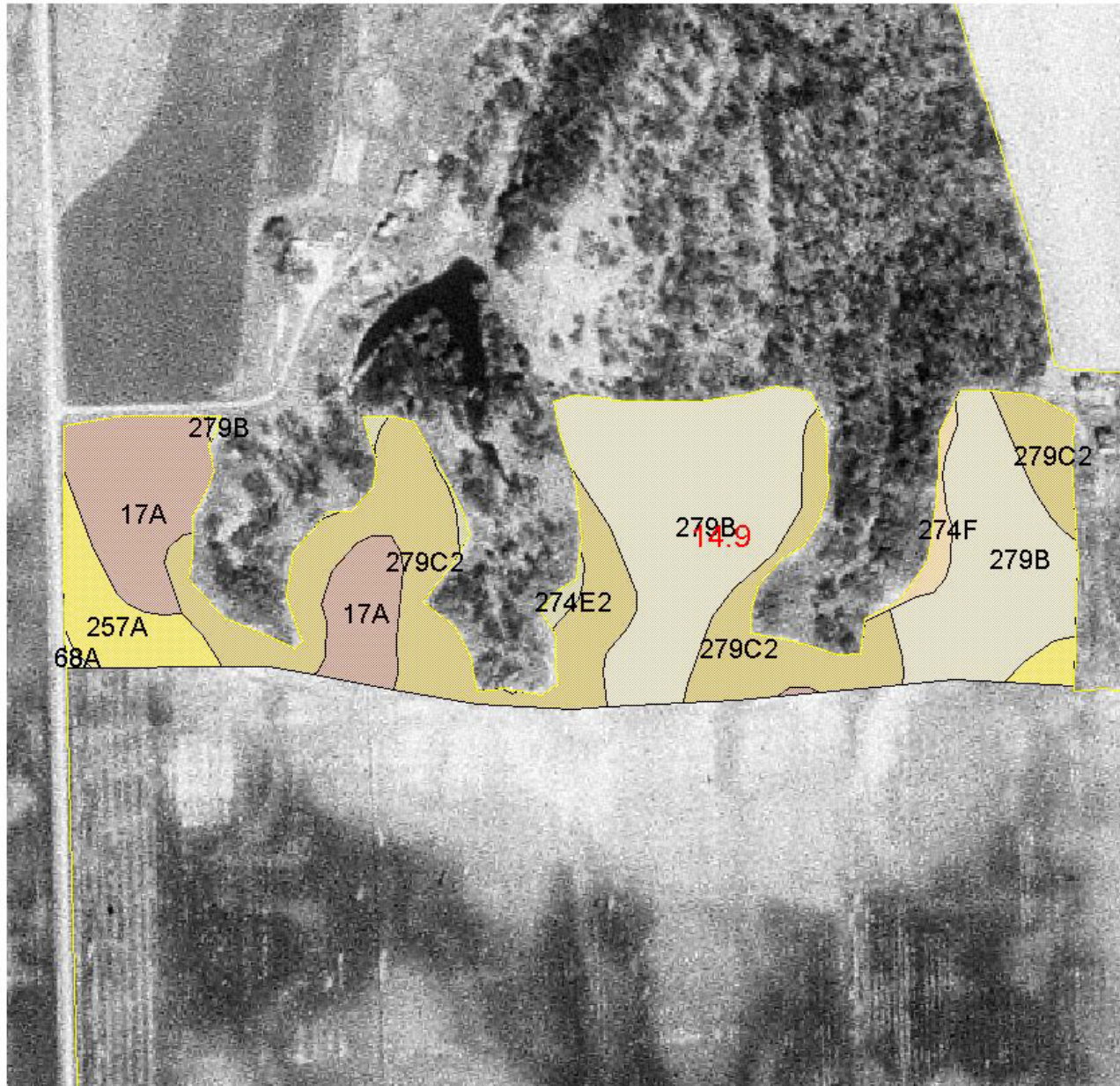




- Fulton.shp
- Hue_a_il.shp
- Plss_a_il057.shp
- Soil_a_il057.shp
- Ortho1-1_il057.sid
- Ortho1-1_il057.sid



**CRP GENERAL SIGNUP 29: SCENARIO #3 , ST/CNTY: 17057, SSAID: IL057
 FARM NO. 1234, TRACT NO. 1717, HUC-8 07130005**



CLU NO.	CLU ACREAGE
1	14.9

SOIL MUSYM CODE	SOIL ACREAGE	SOIL RENTAL RATE
279B	6.2	\$110
279C2	4.9	\$100
17A	2.3	\$110
257A	1.0	\$130
274F	0.2	\$68
274E2	0.2	\$79
68A	0.1	\$140
HIGH-3	13.4	
TOTAL	14.9	

WEIGHTED AVG. SRR: \$106.34
 MAINTENANCE RATE: \$ 5.00
MAX. PAYMENT RATE (Per Acre): \$111.34*
 MAX. ANNUAL CONTRACT PAYMENT: \$1,659*

*Not applicable for Waterbank Program or Marginal Pasture Land offers.

AVG. WATER EI: 12
 AVG. WIND EI: 1

LAND MEETS EI >= 8 ELIGIBILITY: YES*

RAINFALL FACTOR (R): 175
 CLIMATE FACTOR (C): 7

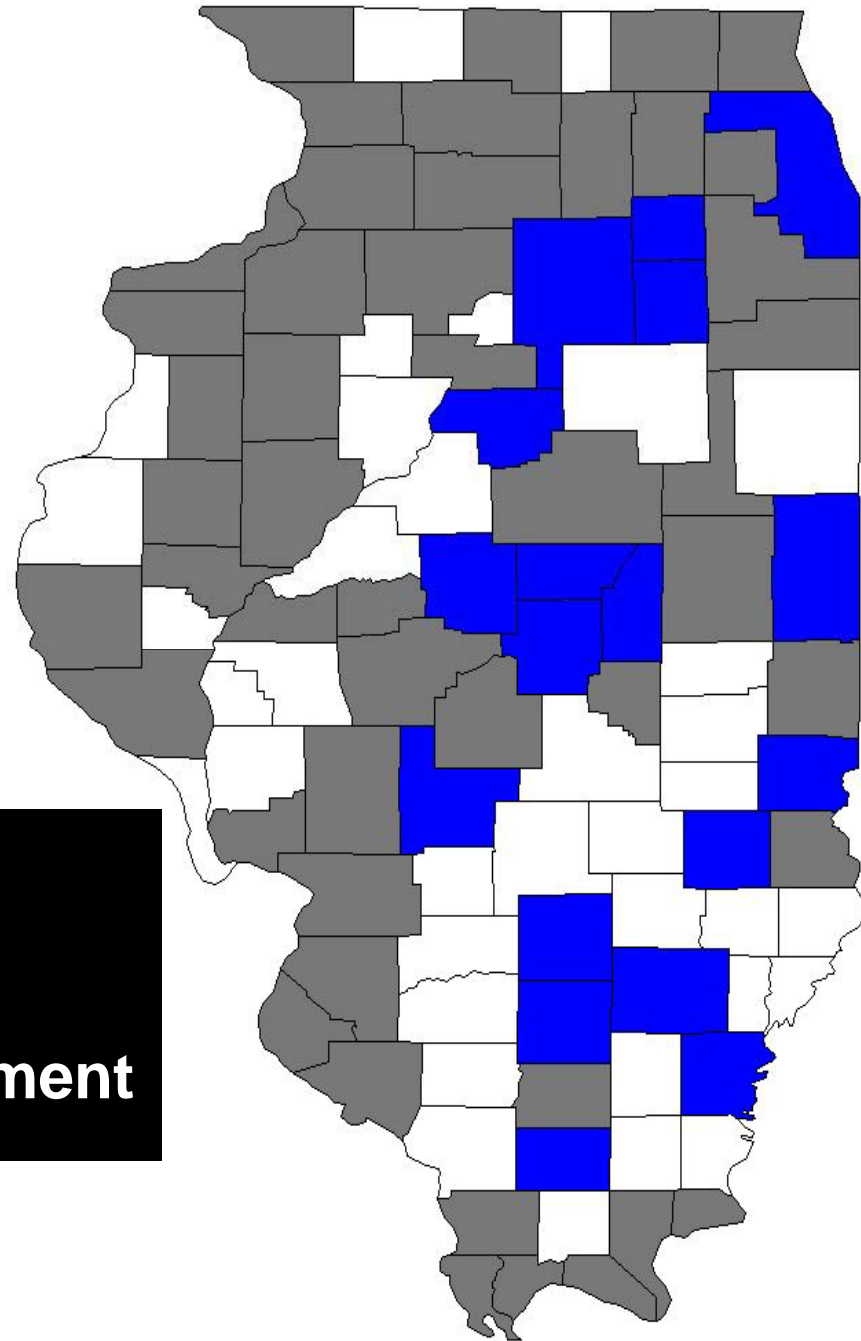
*Offers with expiring CRP acreage require separate EI calculations for new land only.

CRP NO Sign Up Fall 2005

Soil Type

Counties

- 48 SURGO II
- 9 Digitizing
- No Cooperative Agreement



Additional Theme Ideas

Illustrate Distribution of Each

- **Acres Flooded in a Watershed**
- **Precipitation events that influence productivity**
- **Farm Facility Loans**
- **Food, Feed, and Seed Locations**
- **Livestock Facilities**
- **Crop Productivity**

Implementing GIS Technology in FSA

- **In Place at Service Centers...**
 - **Customized ArcView Tools and Applications**
 - Farm Maintenance, Compliance and Digitizing Tools and CRP Application
- **Being Implemented Now...**
 - **Migration to ArcGIS - Converting Service Centers to a more powerful set of GIS tools**
 - Microsoft SQL Server Relational Database and ESRI ArcSDE (Spatial Database Engine) being deployed
 - CLU and related files being moved to the Geodatabase
 - Geodata Warehouse and Marts being implemented
- **Future Direction...**
 - **Mostly Centralized GIS**
 - **Mobile-Web Enabled GIS**
 - **Data Mostly on the Web**

Delivery Formats

NAIP imagery is available in two formats

- compressed county mosaic
- full resolution quarter quad tiles.

NAIP compressed county mosaics and tiles are available through

- USDA Geospatial Data Gateway
 - <http://datagateway.nrcs.usda.gov>
- Aerial Photography Field Office
 - <http://www.apfo.usda.gov>

CLU Progress Report By State

- <http://fsagis.usda.gov/fsagis/>



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