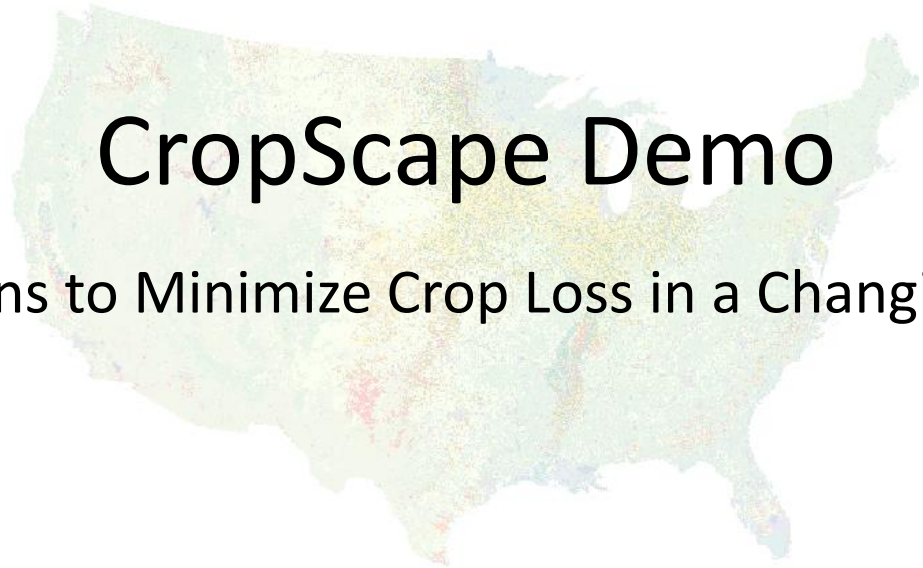




# CropScape Demo

Innovations to Minimize Crop Loss in a Changing Climate



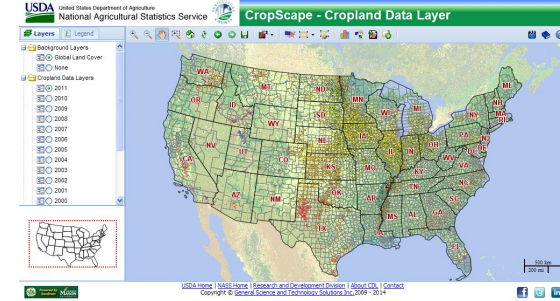
Rick Mueller

National Agricultural Statistics Service

February 24, 2012



# CropScape



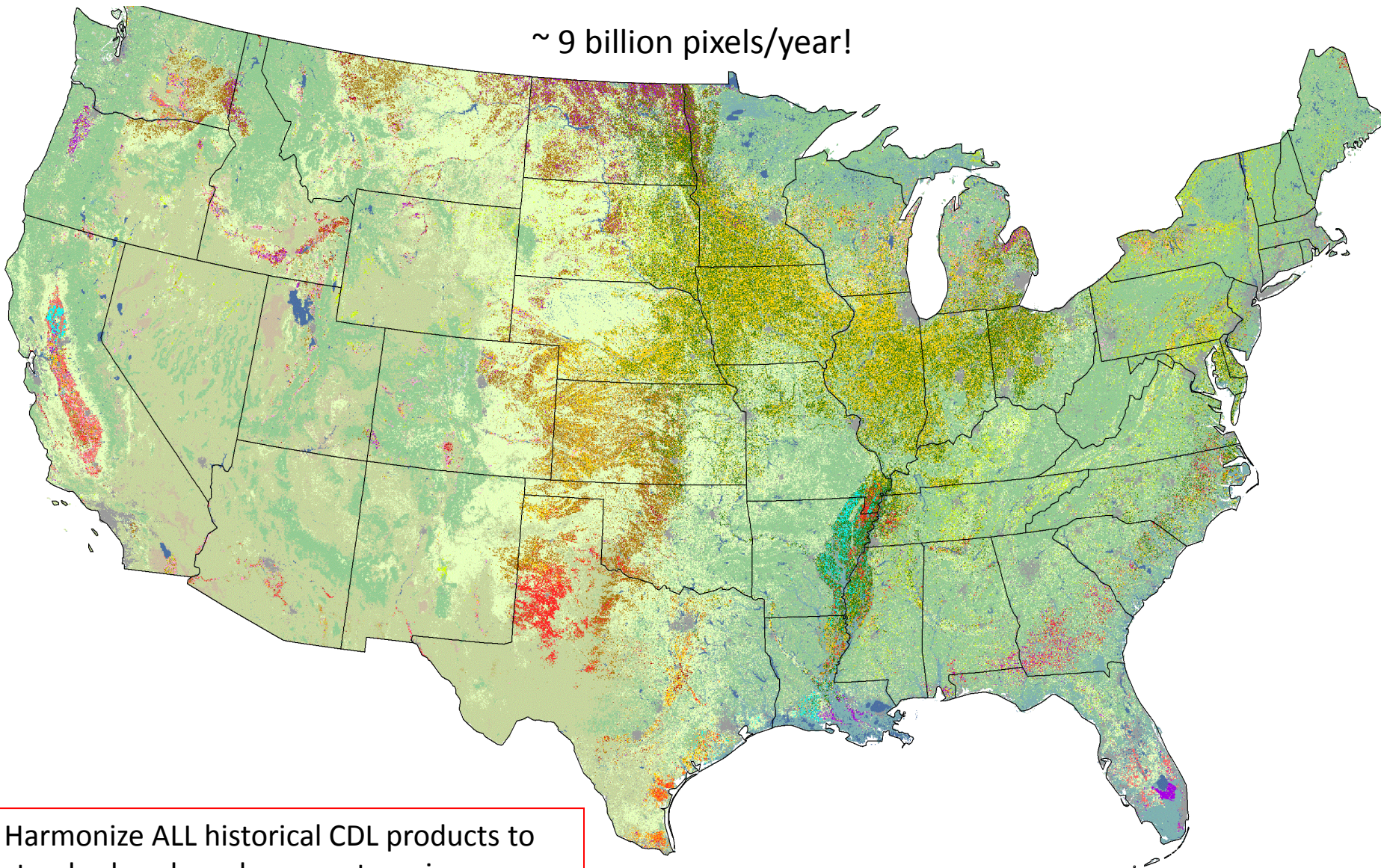
- A web service based interactive map visualization, dissemination and querying system for U.S. cropland
  - No burden on users
    - No client software development & installation
    - No special software tools needed
    - Data mashable
    - Democratization of data
  - Equitable information access, automatic timely delivery, and geospatial navigation
- Collaboration with George Mason University/Center for Spatial Information Science and Systems (CSISS)

<http://nassgeodata.gmu.edu/CropScape>



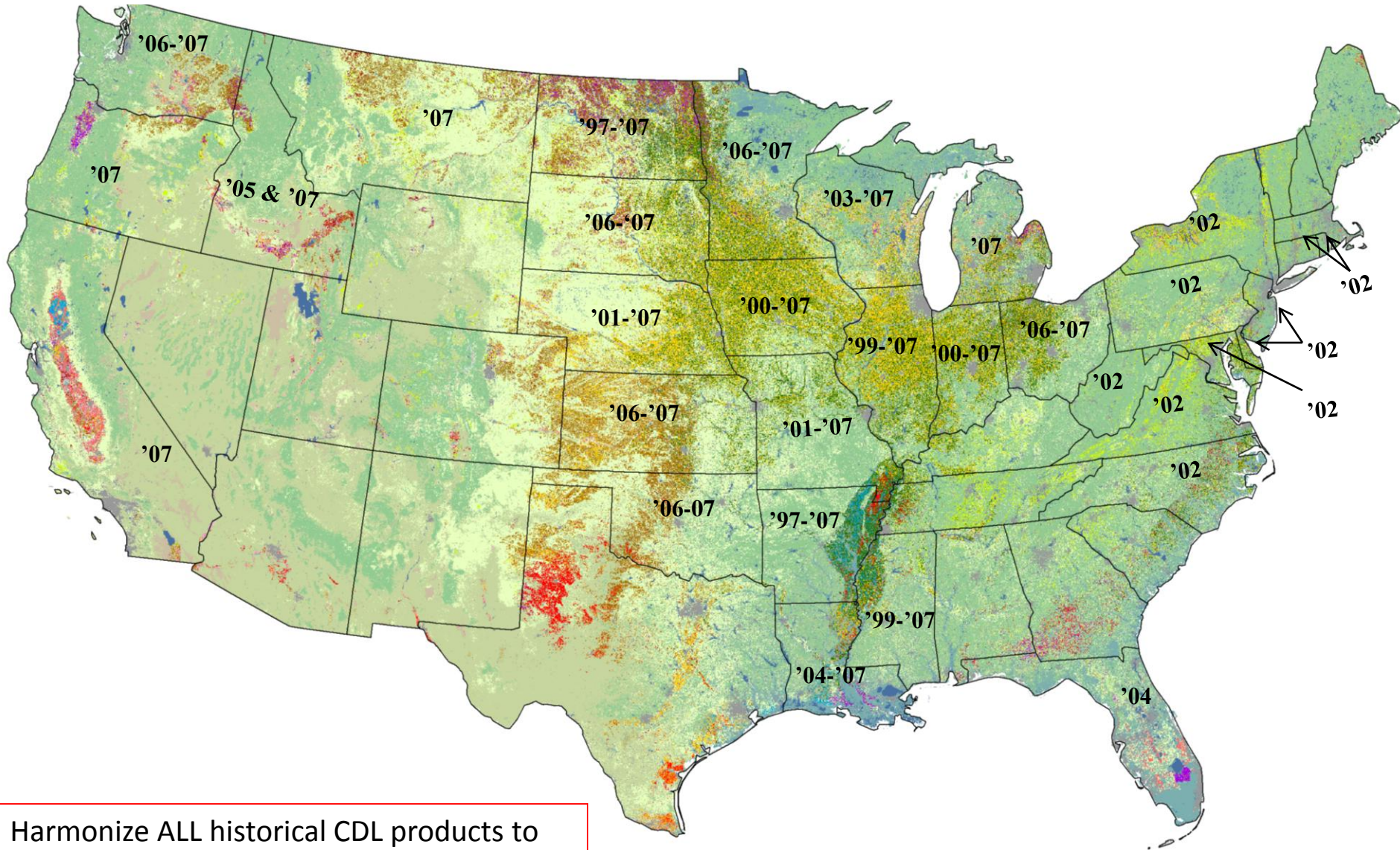
# 2008 – 2011 National Cropland Data Layers

~ 9 billion pixels/year!



Harmonize ALL historical CDL products to standard: color scheme, categories, projection, metadata.

# 1997 – 2007 Cropland Data Layers



Harmonize ALL historical CDL products to standard: color scheme, categories, projection, metadata.

# CropScape Components

Data View

Pixel Query

Stats/Change

USDA United States Department of Agriculture  
National Agricultural Statistics Service



CropScape - Cropland Data Layer

Layers Legend



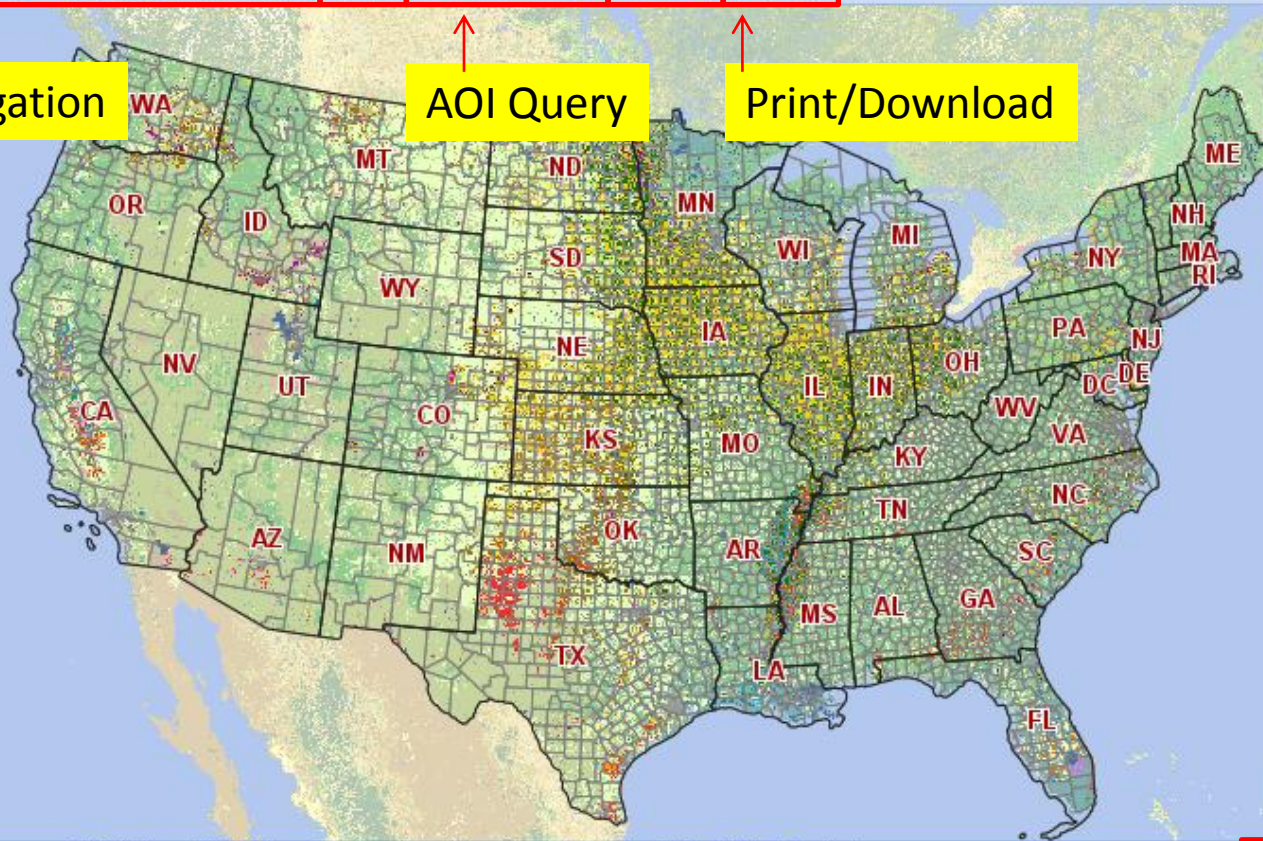
- Background Layers
  - Global Land Cover
  - None
- Cropland Data Layers
  - 2011
  - 2010
  - 2009
  - 2008
  - 2007
  - 2006
  - 2005
  - 2004
  - 2003
  - 2002
  - 2001
  - 2000

Navigation

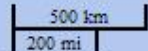
AOI Query

Print/Download

Help



Overview



[USDA Home](#) | [NASS Home](#) | [Research and Development Division](#) | [About CDL](#) | [Contact](#)  
Copyright © [General Science and Technology Solutions Inc.](#), 2009 - 2014



Social Media

# Select an Area of Interest



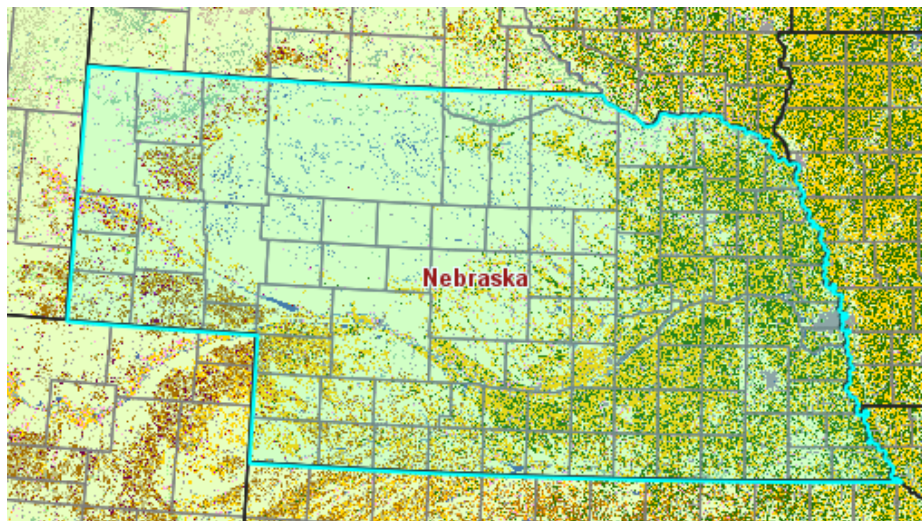
### By State

Define Area of Interest By State/ASD/County

Select a State  
State:

Select an ASD  
ASD:

Or Select a County  
County:



### By State & ASD

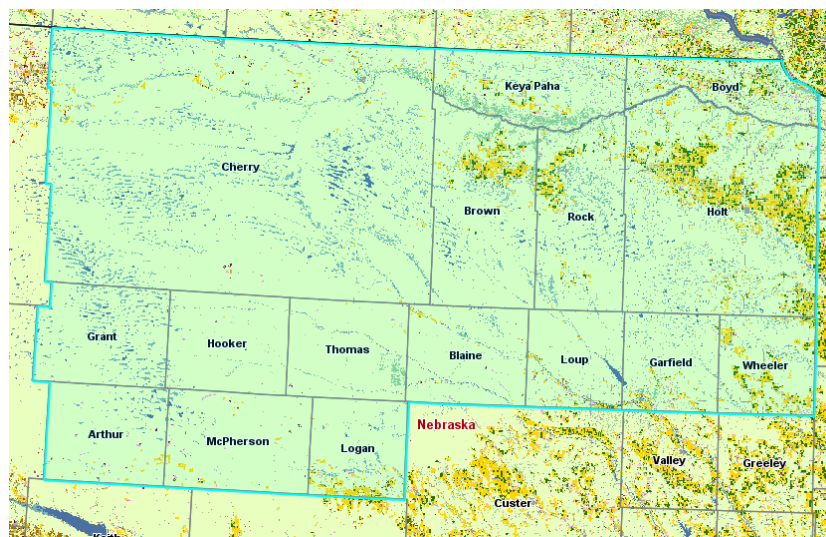
Define Area of Interest By State/ASD/County

Select a State  
State:

Select an ASD  
ASD:   

- 3110
- 3120
- 3130
- 3150
- 3160
- 3170
- 3180

Or Select a County  
County:



# Select an Area of Interest



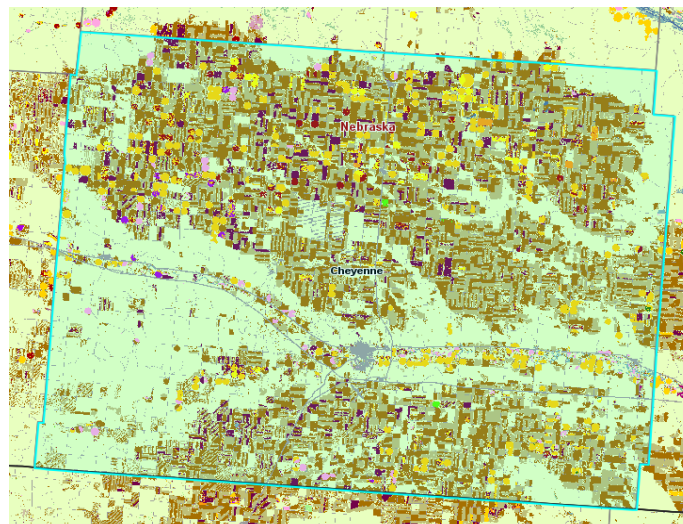
## By State, District & County

Define Area of Interest By State/ASD/County

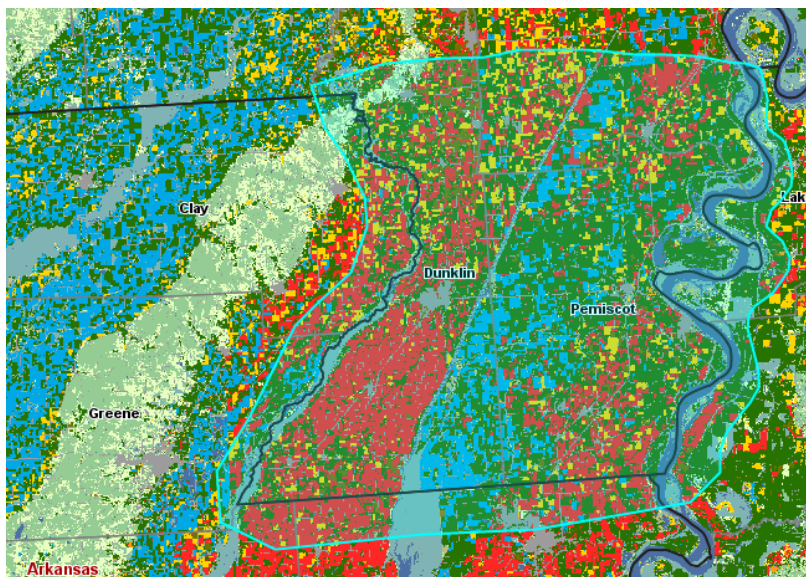
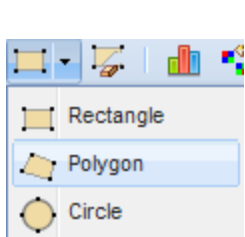
Select a State  
State:

Select an ASD  
ASD:

Or Select a County  
County:



## By Rectangle, Circle, or Polygon



# Crop Statistics



2010 Cropland Data Layer Statistics for the Defined Area of Interest

Note: Pixel and acreage counts are not official estimates.

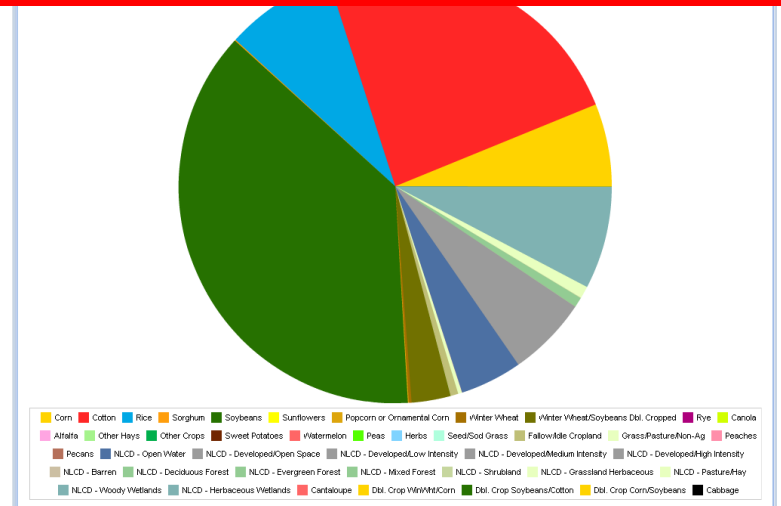
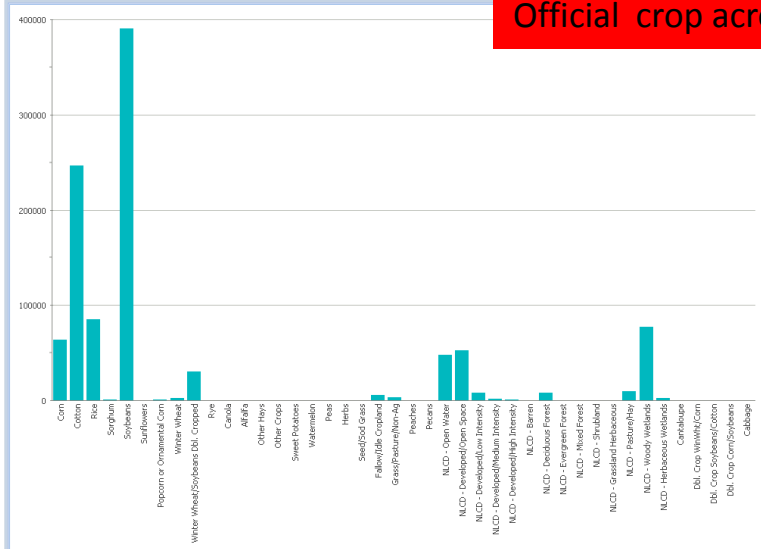
Value	Category	Pixel Counts	Acreage
1	Corn	286654	63750.3
2	Cotton	1110237	246910.8
3	Rice	383221	85226.3
4	Sorghum	3977	884.5
5	Soybeans	1754198	390124.2
6	Sunflowers	22	4.9
13	Popcorn or Ornamental Corn	2895	643.8
24	Winter Wheat		
26	Winter Wheat/Soybeans Dbl. Cropped		
<b>Total</b>	<b>42</b>		

Data Preview of Soybeans



Pixel counting is usually downward biased when compared to official estimates. Counting pixels and multiplying by the area of each pixel will result in biased area estimates and should be considered raw numbers needing bias correction. Official crop acreage estimates are available at <http://www.nass.usda.gov/>.

2010 Cropland Data Layer Statistics for the Defined Area of Interest

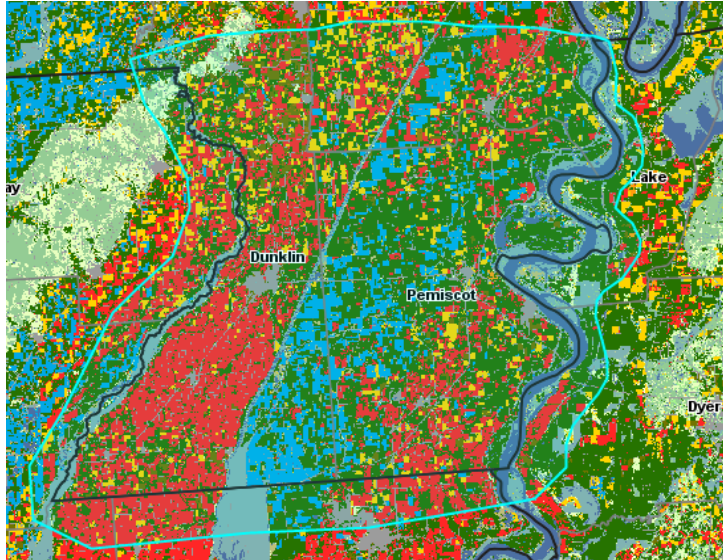




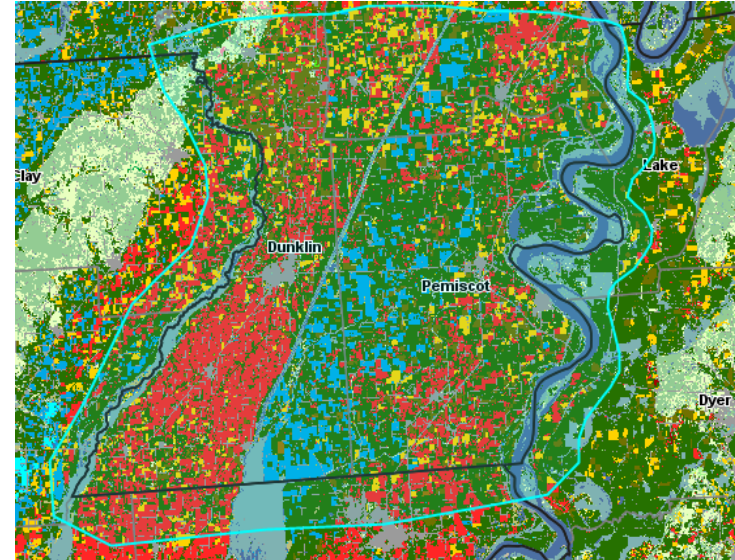
# Change Analysis



2010



2009



**Change Analysis** ✕

Select the Reference Year:  ▼

Select the Other Year:  ▼

Cropland Data Layer Changes between 2010 and 2009

Note: Pixel and acreage counts are not official estimates.

<input type="checkbox"/>	2010	2009	Pixel Counts	Acreage
<input type="checkbox"/>	Soybeans	Soybeans	322645	250024.6
<input type="checkbox"/>	Soybeans	Popcorn or Ornamental Corn	175	135.6
<input type="checkbox"/>	Soybeans	Winter Wheat	1202	931.5
<input type="checkbox"/>	Soybeans	Winter Wheat/Soybeans Dbl. Cropped	39529	30631.9
<input type="checkbox"/>	Soybeans	Rye	12	9.3
<input type="checkbox"/>	Soybeans	Other Hays	11	8.5
<input type="checkbox"/>	Soybeans	Dry Beans	2	1.5
<input type="checkbox"/>	Soybeans	Other Crops	1	0.8
<input type="checkbox"/>	Soybeans	Misc. Vegs. & Fruits	1	0.8
			<b>1337369</b>	<b>1036354.0</b>

# Download/Mashup



CDL Downloading - Please specify your choice(s)

Select Year(s)

Year:  2010  2009  2008  2007  
 2006  2005  2004  2003  
 2002  2001  2000  1999  
 1998  1997

Specify Projection

Projection: USA Contiguous Albers Equal Area Conic USC

Download Files from Server

[http://129.174.131.228/nass\\_data\\_cache/byfips/CDL\\_2010\\_31.tif](http://129.174.131.228/nass_data_cache/byfips/CDL_2010_31.tif)

Opening CropScape\_CDL\_775336053.kml

You have chosen to open

**CropScape\_CDL\_775336053.kml**  
which is a: KML file  
from: <http://nassgeodata.gmu.edu>

What should Firefox do with this file?

Open with: Google Earth (default)

Save File

Do this automatically for files like this from now on.










Google Earth interface showing a map of the central United States. Nebraska is highlighted in yellow. The interface includes search, places, and layers panels. The layers panel shows 'Primary Database', 'Borders and Labels', 'Places', 'Photos', 'Roads', '3D Buildings', 'Ocean', 'Weather', 'Gallery', 'Global Awareness', and 'More'. The search panel shows 'Fly To' and 'Find Businesses' options. The places panel shows 'My Places', 'Sightseeing Tour', and 'Temporary Places'.

**2011 Continental United States  
Land Cover Categories (by decreasing acreage)**

**Agriculture**

 Pasture/Grass	 Triticale	 Dbl Crop Lettuce/Cotton
 Corn	 Citrus	 Mustard
 Soybeans	 Safflower	 Plums
 Winter Wheat	 Pistachios	 Dbl Crop Barley/Sorghum
 Fallow/Idle Cropland	 Blueberries	 Broccoli
 Other Hay/Non Alfalfa	 Christmas Trees	 Radishes
 Alfalfa	 Dbl Crop Barley/Soybeans	 Garlic
 Cotton	 Tomatoes	 Speltz
 Spring Wheat	 Onions	 Vetch
 Sorghum	 Flaxseed	 Apricots
 Dbl Crop WinWht/Soybeans	 Dbl Crop Oats/Corn	 Caneberries
 Rice	 Pop or Orn Corn	 Greens
 Barley	 Herbs	 Nectarines
 Oranges	 Misc Veggies & Fruits	 Cucumbers
 Oats	 Olives	 Other Small Grains
 Sunflower	 Other Tree Crops	 Turnips
 Dry Beans	 Dbl Crop Corn/Soybeans	 Dbl Crop Lettuce/Cantaloupe
 Peanuts	 Sweet Potatoes	 Camelina
 Durum Wheat	 Peaches	 Cauliflower
 Sugarbeets	 Cranberries	 Rape Seed
 Potatoes	 Tobacco	 Honeydew Melons
 Canola	 Cantaloupes	 Celery
 Sugarcane	 Prunes	 Dbl Crop Durum Wht/Sorghum
 Almonds	 Dbl Crop Barley/Corn	 Eggplants
 Sod/Grass Seed	 Dbl Crop Soybeans/Cotton	 Gourds
 Grapes	 Pears	 Dbl Crop Lettuce/Barley
 Apples	 Lettuce	
 Rye	 Dbl Crop Lettuce/Durum Wht	
 Peas	 Watermelons	
 Millet	 Switchgrass	
 Walnuts	 Asparagus	
 Lentils	 Carrots	
 Pecans	 Strawberries	
 Dbl Crop WinWht/Cotton	 Pumpkins	
 Dbl Crop WinWht/Sorghum	 Squash	
 Sweet Corn	 Cabbage	
 Aquaculture	 Peppers	
 Clover/Wildflowers	 Dbl Crop Soybeans/Oats	
 Other Crops	 Hops	
 Dbl Crop WinWht/Com	 Mint	
 Cherries	 Pomegranates	

**Non-Agriculture**

 Forest
 Shrubland
 Developed
 Wetlands
 Water
 Barren
 Perennial Ice/Snow

# National Cropland Data Layer Legend

# 2011 CDL, Pocahontas, Iowa

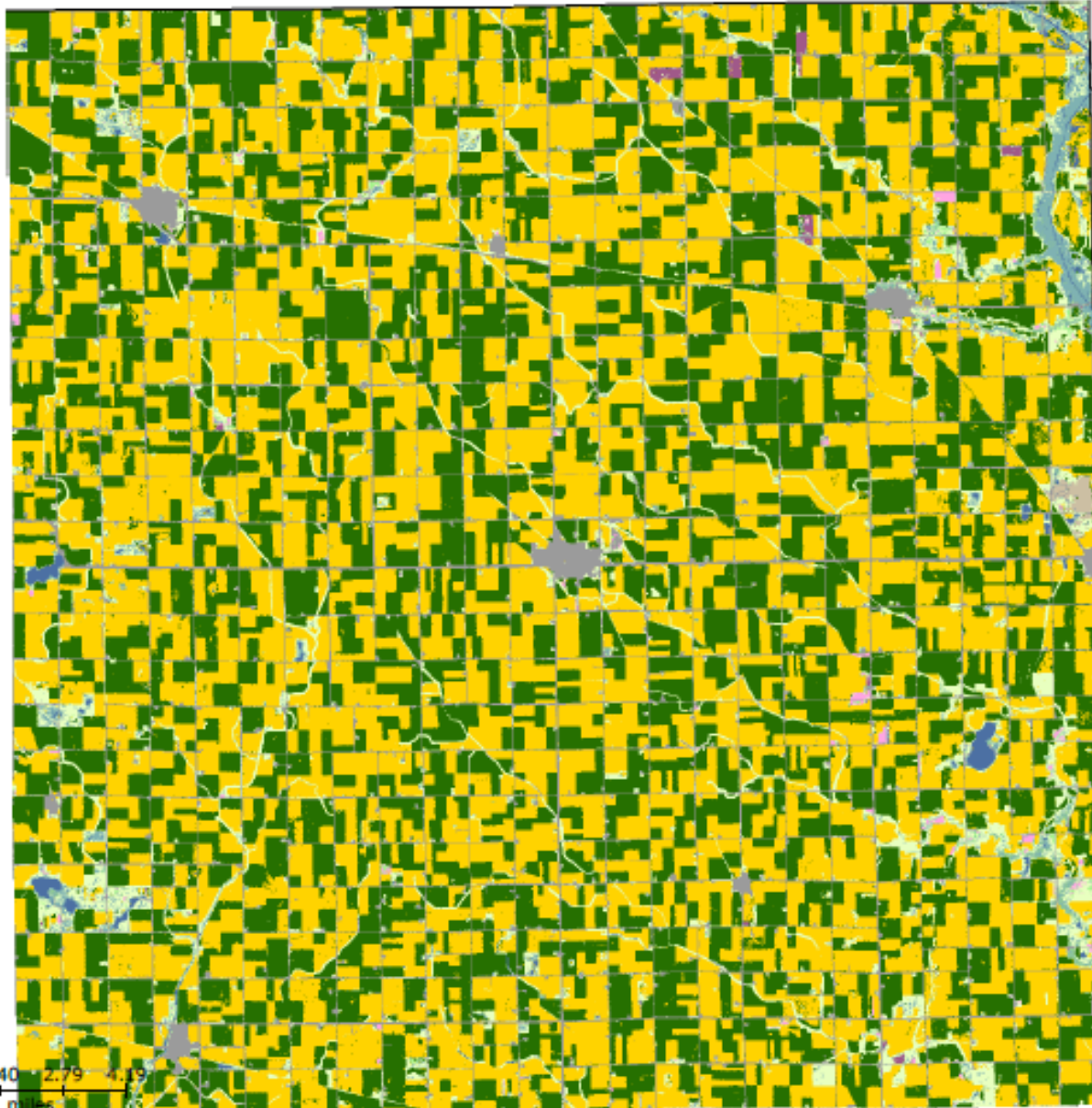
Land Cover Categories  
(by decreasing acreage)

**AGRICULTURE**

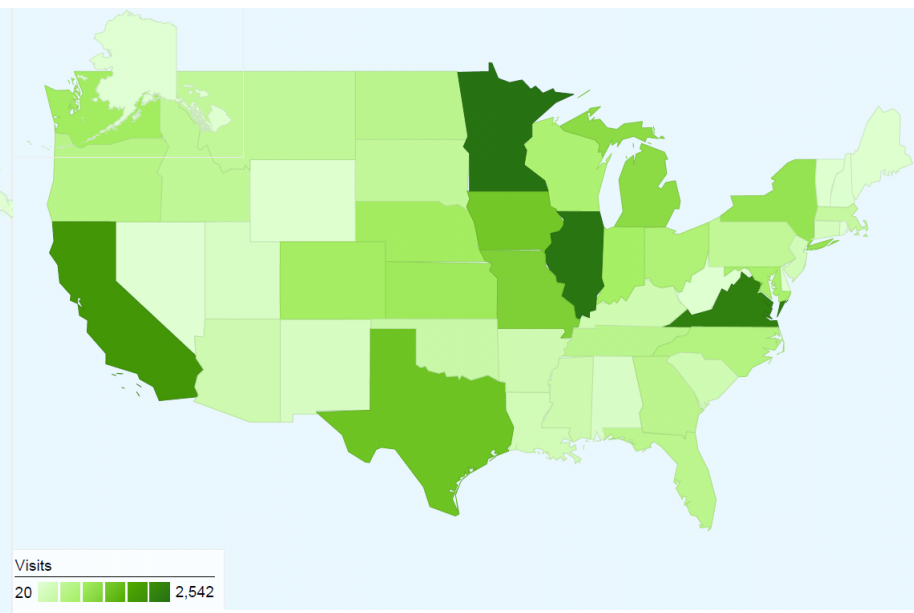
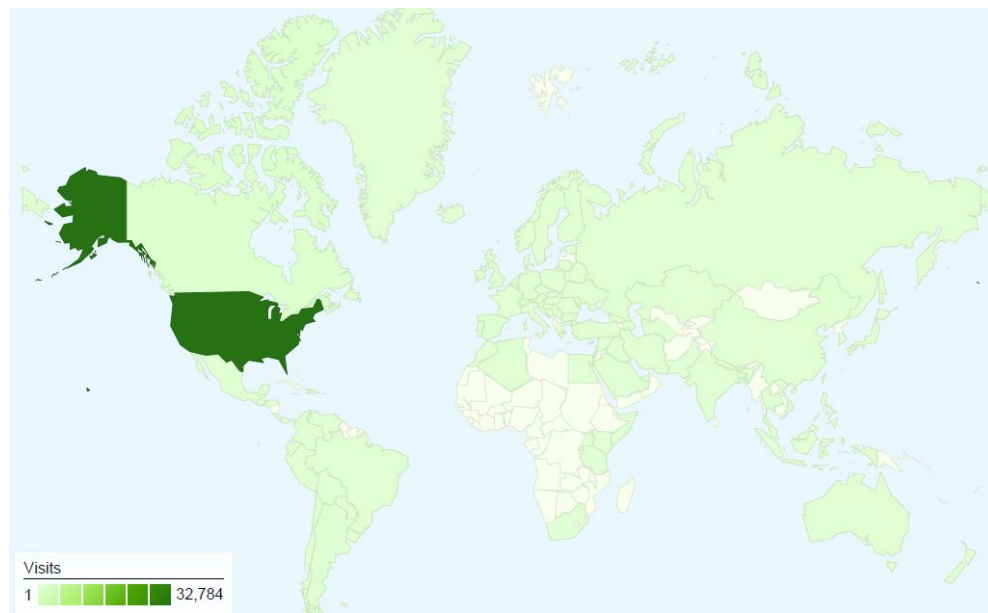
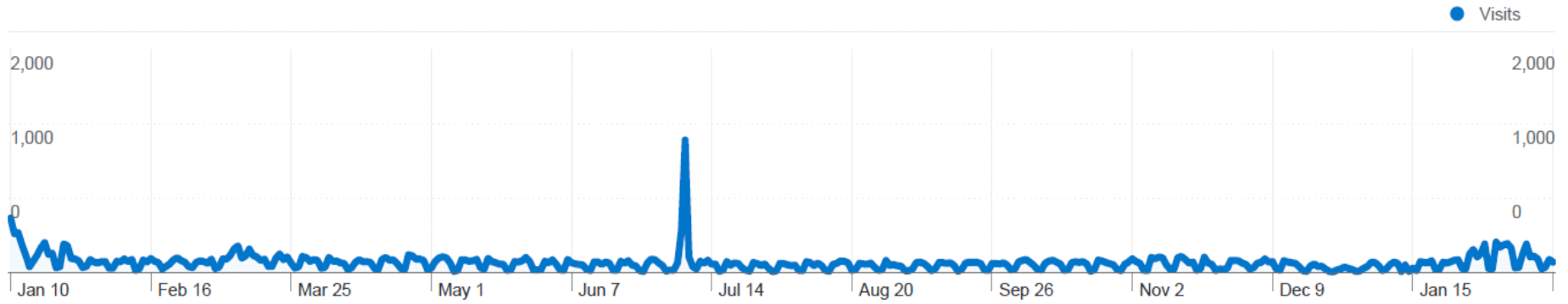
- Corn
- Soybeans
- Grassland Herbaceous
- Alfalfa
- Oats
- Other Hay/Non Alfalfa
- Pop or Orn Com
- Winter Wheat
- Fallow/Idle Cropland

**NON-AGRICULTURE\***

- Developed/Open Space
- Herbaceous Wetlands
- Developed/Low Intensity
- Woody Wetlands
- Open Water
- Deciduous Forest



# CropScape Google Analytics



# NASS Cropland Data Layer Applications

