

National Geospatial Management Center Moving into the Future

2011 National Cooperative Soil Survey Conference (Asheville NC)

May 23, 2011

Sam Brown, Soil Scientist

**“Web Services to support
Soil Survey Program ”**

National Geospatial
Management Center (NGMC)



National Geospatial Management Center (NMGC)

Mission

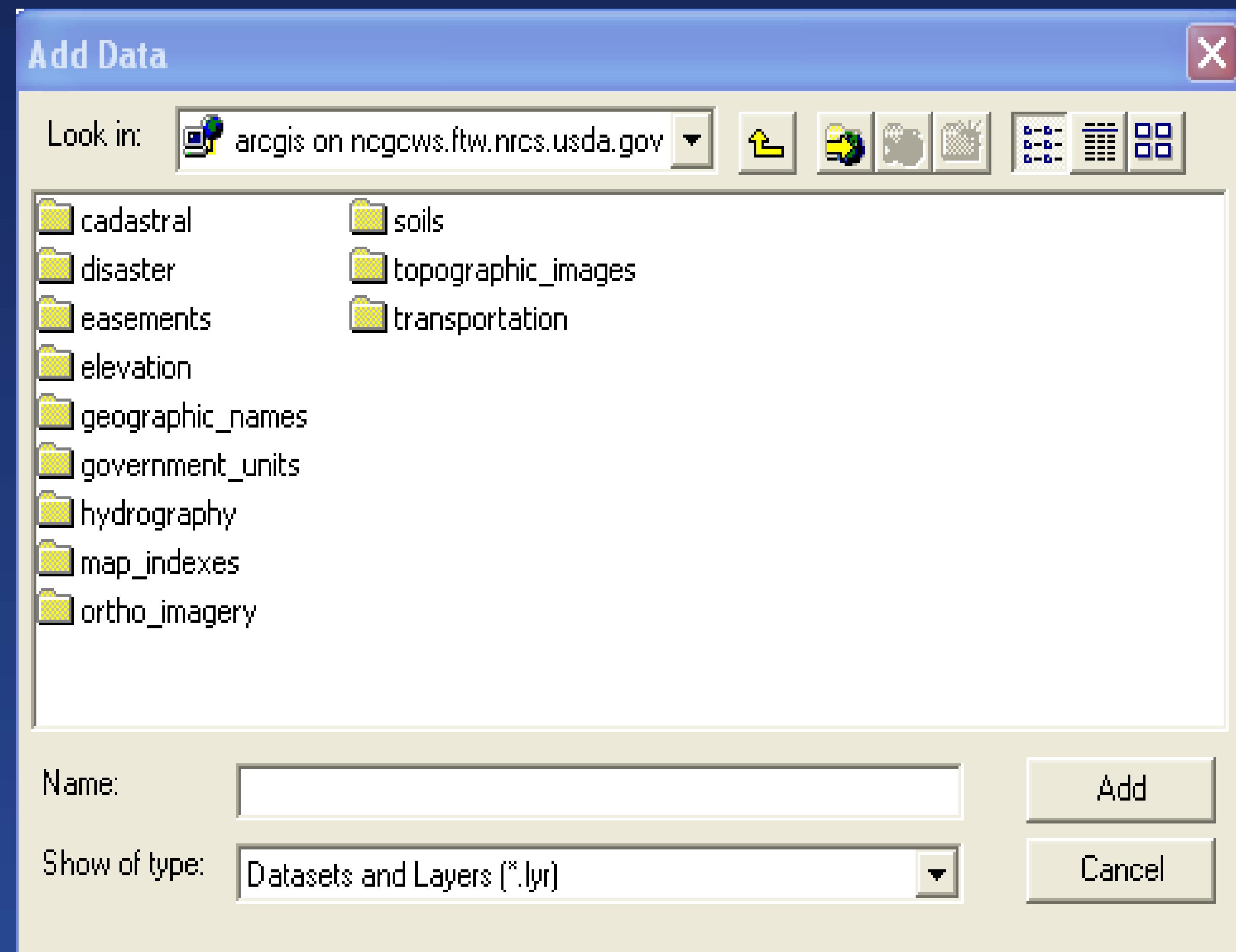
To provide consumers with accessible, always available, up-to-date, authoritative, and trusted geospatial data and value-added cartography and geospatial services:

Key Services

- Mapping sciences (cartography, GIS, remote sensing, PNT technology)
- Aerial photography, elevation data, imagery, remote sensing, global positioning systems, training, and **Web Services (ArcMap and URL Internet access)**
- Natural resources data, geospatial technology, National Resources Inventory
- **Provide support for Soil Survey**, Engineering, Conservation Planning (CDSI), and Other agency programs
- Geospatial Data Warehousing & Distribution

Web Services

In 2007, NGMC (former NCGC) began to inventory our data themes and expand the availability for increased NRCS programs use



<http://ncgcweb.ftw.nrcc.usda.gov/>

“GeoPortal”

The GeoPortal
provides access
to NRCS Web
Services

The screenshot shows the USDA GeoPortal homepage. At the top, there's a navigation bar with links for File, Edit, View, Favorites, Tools, Help, and a search bar containing the URL <http://ncgcweb.ftw.nrcc.usda.gov/>. Below the navigation bar is a toolbar with icons for Back, Forward, Stop, Refresh, Home, and Print. The main header features the USDA logo and the text "United States Department of Agriculture" next to it. To the right of the header is the word "GeoPortal". Below the header is a banner displaying nine small images related to agriculture and remote sensing. A green sidebar on the left contains links for "Search GeoPortal" (with a search input field and "Go" button), "GeoObserver" (with a "Easements" link), "Data Themes" (with links for "Climate", "Elevation", "Easements", "Hydrography", "Imagery", and "Soils"), and "Communities" (with links for "Conservation Delivery Streamlining Initiative" and "Major Land Resource Areas"). The main content area has a title "Welcome to GeoPortal" and a paragraph explaining that the portal provides an entry point to access remote sensing, geospatial static and in-situ data, information, tools, and services. It also describes two search methods: Free Text (enter terms into the search field) and Browse via Theme, Program Areas or Community (filter resources in the left side menu). A sidebar on the right titled "I Want To..." lists options like "Find GeoData", "Use ArcMap to Find GeoData", and "Order Maps, Media or Photographs". Another sidebar titled "More Data Resources" lists "geodata.gov" and "Geospatial Data Gateway". A final sidebar titled "Services" lists "Live Data". At the bottom of the page, there are links for USDA.gov, NCGC, APFO, FOIA, Accessibility Statement, Privacy Policy, Nondiscrimination Statement, Information Quality, FirstGov, and White House.

Registry of Web Services – USDA GeoPortal

Access to more than 50 Web Services

Step One, Log on to:

<http://ncgcweb.ftw.nrcc.usda.gov/>

Step Two,
In the Search GeoPortal window
enter a data theme, Example:
“Elevation,” and Click the Go Button!

The screenshot shows the USDA GeoPortal homepage. At the top left is the USDA logo and the text "United States Department of Agriculture". To the right is a green header bar with the text "GeoPortal". Below the header is a row of nine small images representing different geospatial data themes. A navigation menu at the bottom includes "Home", "About GeoPortal", "Help", and "Contact Us". On the left, a sidebar titled "Search GeoPortal" contains a search input field with "elevation" and a "Go" button. The main content area features a large heading "Welcome to GeoPortal" and a paragraph explaining the portal's purpose. To the right are three vertical boxes: "I Want To...", "More Data Resources", and "Services", each listing links related to geospatial data and services.

Welcome to GeoPortal

The USDA GeoPortal provides an entry point to access remote sensing, geospatial static and in-situ data, information, tools, and services.

The USDA GeoPortal provides two main ways to initiate a search for geospatial resources:

- Free Text - Enter terms into the search field
- Browse via Theme, Program Areas or Community - Filter resources in the left side menu according to the program or community needs

I Want To...

- o Find GeoData
- o Use ArcMap to Find GeoData
- o Order Maps, Media or Photographs

More Data Resources

- o [geodata.gov](#)
- o [Geospatial Data Gateway](#)

Services

- o [Live Data](#)

USDA.gov | NCGC | APFO
FOIA | Accessibility Statement | Privacy Policy | Nondiscrimination Statement | Information Quality | FirstGov | White House

Registry of Web Services – USDA GeoPortal

Step Three

On the menu bar
Click on “Live Data”



USDA United States Department of Agriculture GeoPortal

Home About GeoPortal Help Contact Us

Search Data Themes Programs Communities Live Data Login

Search

elevation Results 1-4 of 4 record(s)

Expand results [Zoom To Results](#) [Zoom To Searched Area](#)

Shaded Relief Web Services Access Summary

Shaded Relief Map Service

Shaded Relief Map Service

USDA Gateway Web Site

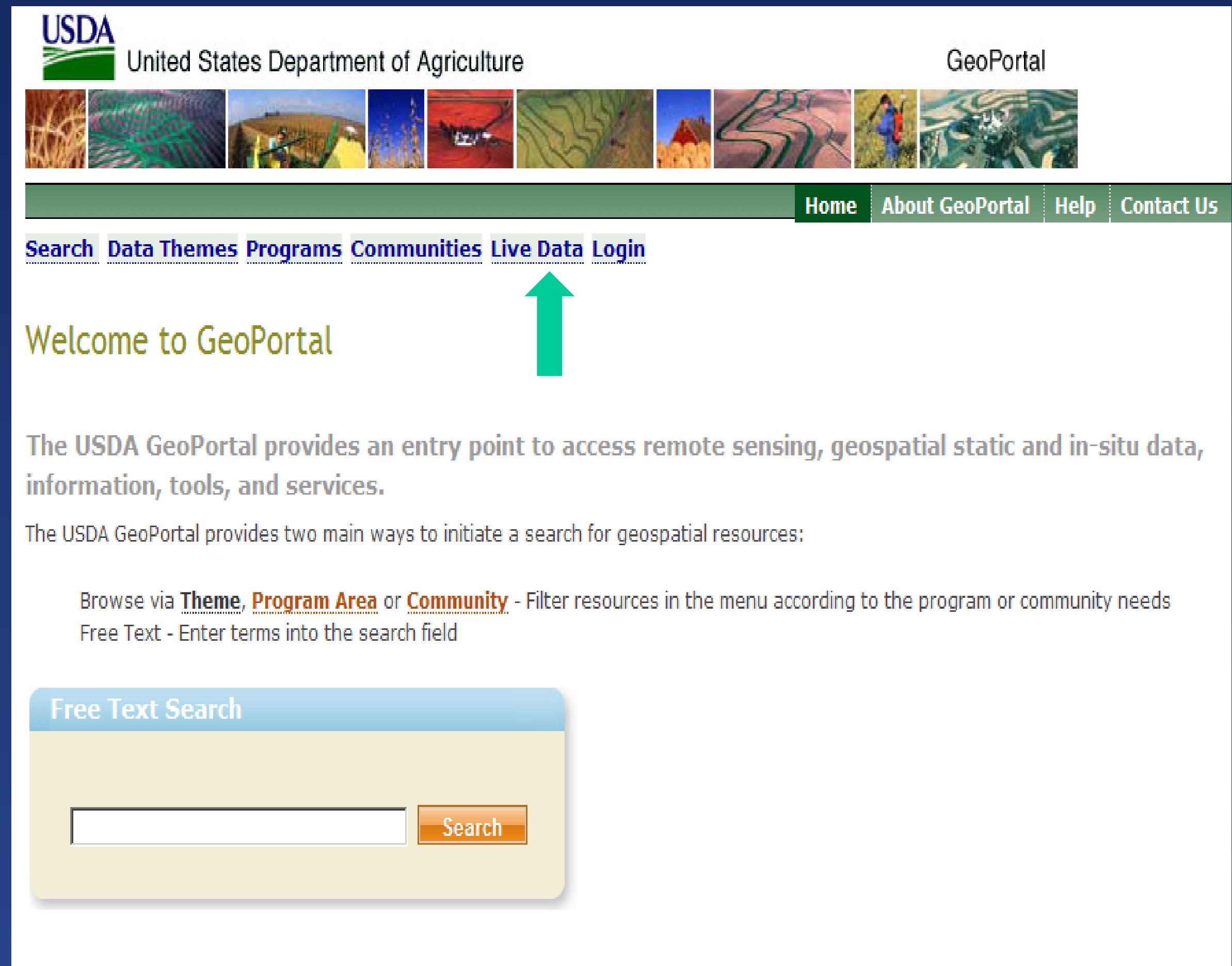
See results through REST
API: [GEORSS](#) [ATOM](#) [HTML](#) [FRAGMENT](#) [KML](#) [JSON](#)

This Geoportal was built using the ArcGIS Server Geoportal Extension 9.3.1. Please read the [Disclaimer](#) and [Privacy](#) or [Contact Us](#).

Registry of Web Services – USDA GeoPortal

Step Three

On the menu bar
Click on “Live Data”



The screenshot shows the USDA GeoPortal homepage. At the top, there is a navigation bar with links for Home, About GeoPortal, Help, and Contact Us. Below the navigation bar, there is a menu bar with links for Search, Data Themes, Programs, Communities, Live Data, and Login. A large green arrow points upwards from the bottom of the slide towards the "Live Data" link in the menu bar. The main content area features a welcome message "Welcome to GeoPortal" and a brief description of what the portal offers. At the bottom, there is a search interface titled "Free Text Search" with a search input field and a "Search" button.

United States Department of Agriculture

GeoPortal

Home | About GeoPortal | Help | Contact Us

Search | Data Themes | Programs | Communities | **Live Data** | Login

Welcome to GeoPortal

The USDA GeoPortal provides an entry point to access remote sensing, geospatial static and in-situ data, information, tools, and services.

The USDA GeoPortal provides two main ways to initiate a search for geospatial resources:

Browse via **Theme**, **Program Area** or **Community** - Filter resources in the menu according to the program or community needs
Free Text - Enter terms into the search field

Free Text Search

 Search

Registry of Web Services – USDA GeoPortal

The screenshot shows the USDA GeoPortal homepage. At the top, there is a navigation bar with links for Home, About GeoPortal, Help, and Contact Us. Below the navigation bar, there is a section titled "Live Data and Maps" which lists various map services. Each service entry includes a thumbnail image, the service name, a brief description, and three buttons: "Open", "Preview", "Details", and "Metadata".

- 2011 Mississippi River Flood Image Map Service**
SPOT and Landsat imagery from May 2011 showing flood disaster extents along the Mississippi River
[Open](#) [Preview](#) [Details](#) [Metadata](#)
- 2011 Mississippi River Flood Image Map Service (WMS)**
SPOT and Landsat imagery from May 2011 showing flood disaster extents along the Mississippi River
[Open](#) [Preview](#) [Details](#) [Metadata](#)
- Alaska Multiresolution RGB Image Map Service**
Natural Color digital Orthoimagery for Alaska including the Aleutian Islands in Alaska Albers Projection. The Orthoimagery is from several sources including Landsat Pan-Sharpened 15-meter, 1-meter (satellite and airborne), and 1-foot USGS High Resolution....
[Open](#) [Preview](#) [Details](#) [Metadata](#)
- American Samoa .6M CIR Image Map Service**
Color Infrared (CIR) .6-meter digital Orthoimagery of portions of American Samoa. Includes material (c) 2003-2004 DigitalGlobe, Inc. ALL RIGHTS RESERVED. Distribution limited to partners and cooperators. Image acquisition dates range from 2003-2004.
[Open](#) [Preview](#) [Details](#) [Metadata](#)
- American Samoa .6M RGB Image Map Service**
Natural Color .6-meter digital Orthoimagery of portions of American Samoa. Includes material (c) 2003-2004 DigitalGlobe, Inc. ALL RIGHTS RESERVED. Distribution limited to partners and cooperators. Image acquisition dates range from 2003-2004.
[Open](#) [Preview](#) [Details](#) [Metadata](#)
- CNMI .6M CIR Image Map Service**
Color Infrared (CIR) digital Orthoimagery of portions of The Commonwealth of Northern Mariana Islands (CNMI) in UTM Zone 55, WGS84. Image acquisition dates range from 2005-2006. Includes material (c) 2005-2006 DigitalGlobe, Inc. ALL RIGHTS RESERVED. Dis...
[Open](#) [Preview](#) [Details](#) [Metadata](#)
- CNMI .6M RGB Image Map Service**
Natural Color .6-meter digital Orthoimagery of portions of The Commonwealth of Northern Mariana Islands (CNMI) in UTM Zone 55, WGS84. Image acquisition dates range from 2003-2006. Includes material (c) 2002-2006 DigitalGlobe, Inc. ALL RIGHTS RESERVED. ...
[Open](#) [Preview](#) [Details](#) [Metadata](#)
- Congressional Districts Map Service**
The data was merged into one seamless dataset by NRCS. For the 111th Congress, since geometry did not change from the 110th, only attributes (names) needed to be changed.
[Open](#) [Preview](#) [Details](#) [Metadata](#)
- County Boundaries Map Service**
County boundaries based on TIGER at 1:100,000 scale
[Open](#) [Preview](#) [Details](#) [Metadata](#)
- County Boundaries with Labels Map Service**
County boundaries based on TIGER at 1:100,000 scale. Labels are enabled on the detailed county boundary above 1:577,144.
[Open](#) [Preview](#) [Details](#) [Metadata](#)

NGMC Image Server Web Services

Add Image Server Connection

Server Name:

Name	Geographic_...	Pixel_Source	Pixel_Unit	C
AK				
Components				
DRG				
Easements				
FwNRCSAGSP01				
HI				

Only show services available in the current view's extent

Title:

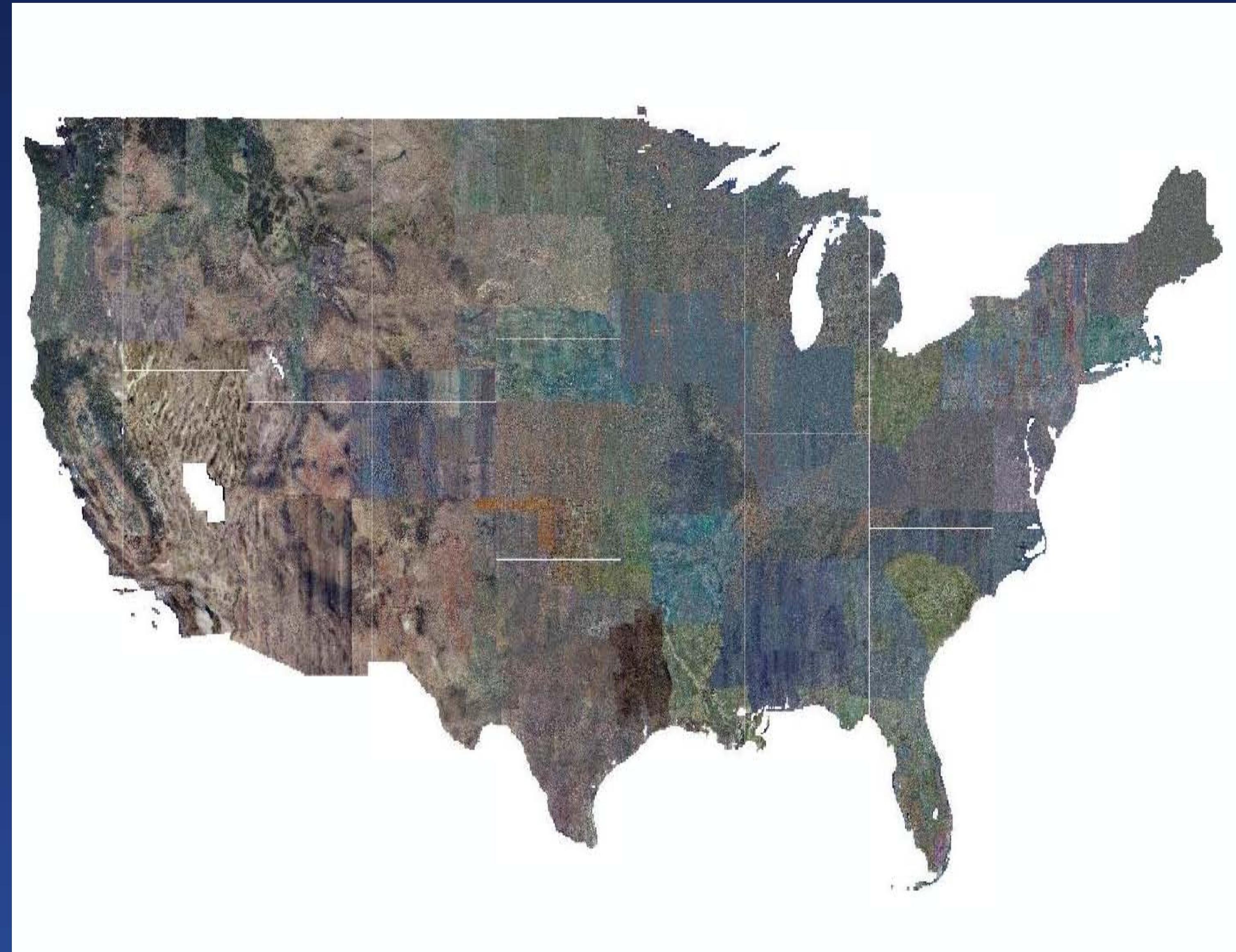
Selected Services:

Current Image Service Connections (ArcMap)

Name	Geographic_...	Pixel_Source	Pixel_Unit	C
AK				
Components				
DRG				
Easements				
FwNRCSAGSP01				
HI				
IFSAR				
MSRiverFlood201105				
NAIP				
PacificBasin				
USA_HighRes				
WEB1				
WebSoilSurvey				
Landsat_321	USA, includin...	Landsat	False Color	U
Landsat_432	USA, includin...	Landsat	False Color	U
Landsat_453	USA, includin...	Landsat	False Color	U
MODIS	CONUS	MODIS	True Color	R
USA_Hillshade10m	USA mainland			G
USA_Hillshade_10m_USGS				G
USA_NLCD_2001	Conterminous ...	Landsat and ...	Color	R

2009 and 2010 NAIP IMAGERY

NGMC (former NCGC) began to serve NAIP imagery in 2007 as part our discovery business in order to provide an authoritative image base to assist NRCS program areas with visualization and area wide assessments.



NAIP 2010, Northeast Minnesota
What ground features can you identify easier with CIR Imagery?

Natural Color (Bands 1,2,3)



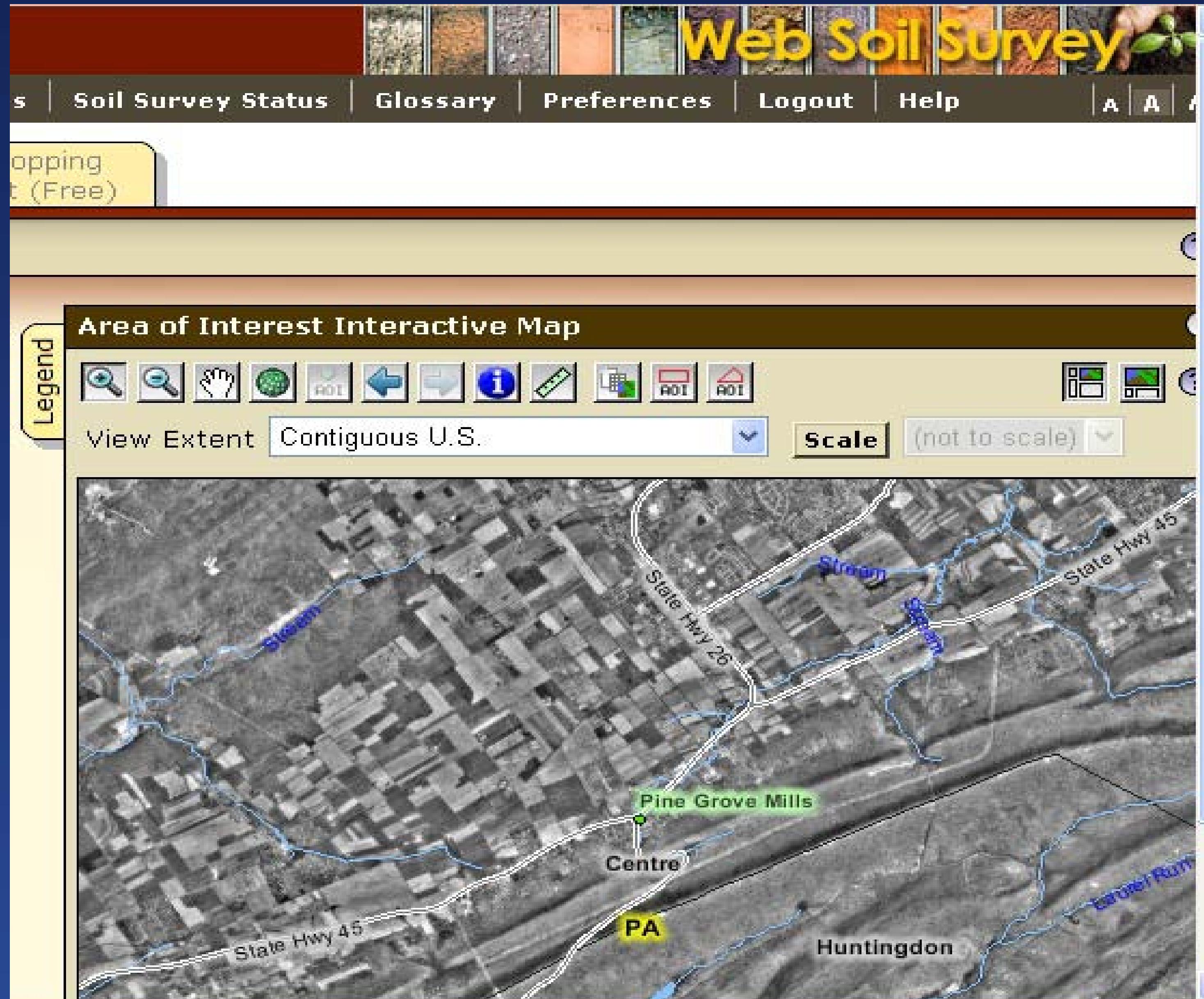
Color Infrared/CIR (Bands 2,3,4)



Ground Feature Type

- | | |
|--|--------------------------------------|
| 1) Hydric Soil with Vegetation | 3) Mixed Hardwood/Coniferous Forests |
| 2) Hydric Soil with Submerged Vegetation | 4) Hardwood Forest |
| 5) Coniferous Forest | |

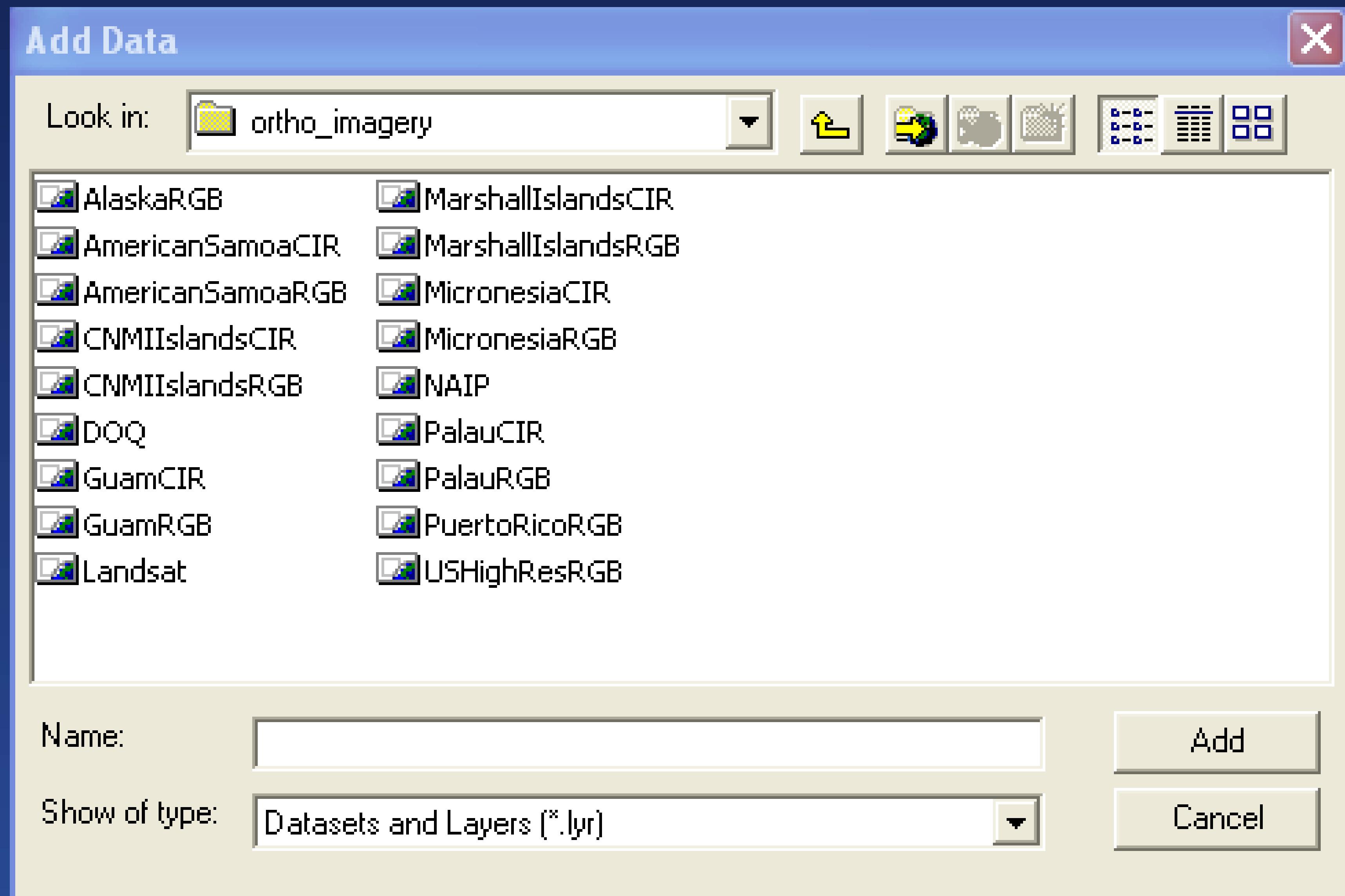
Web Soil Survey (WSS) Imagery



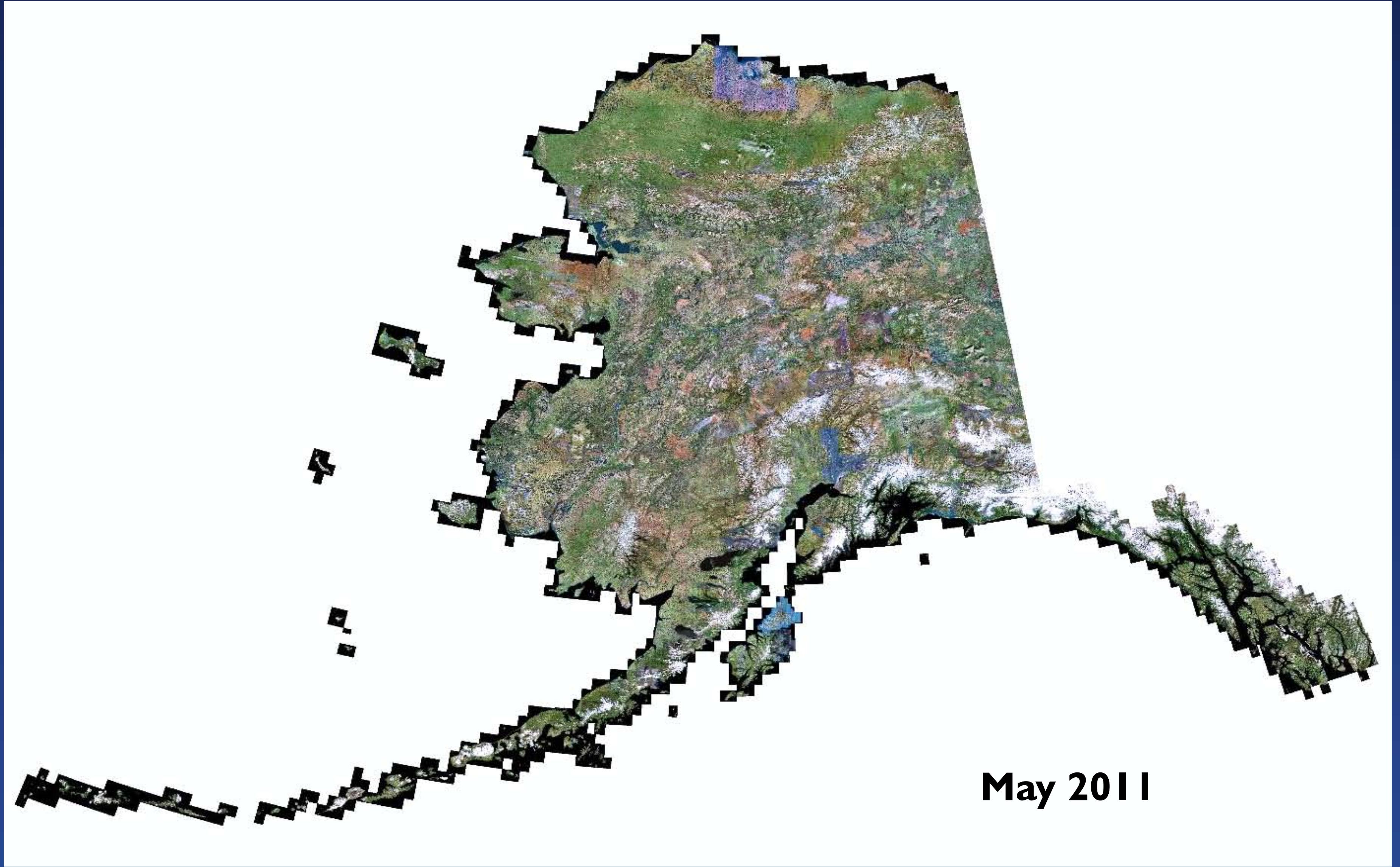
Some states only had black and white imagery on the WSS

NCGC partnered with the SSD and ITC to use NAIP as the official back ground imagery for the Web Soil Survey

Web Services (Arc Map) to Support NRCS Imagery for Programs Use

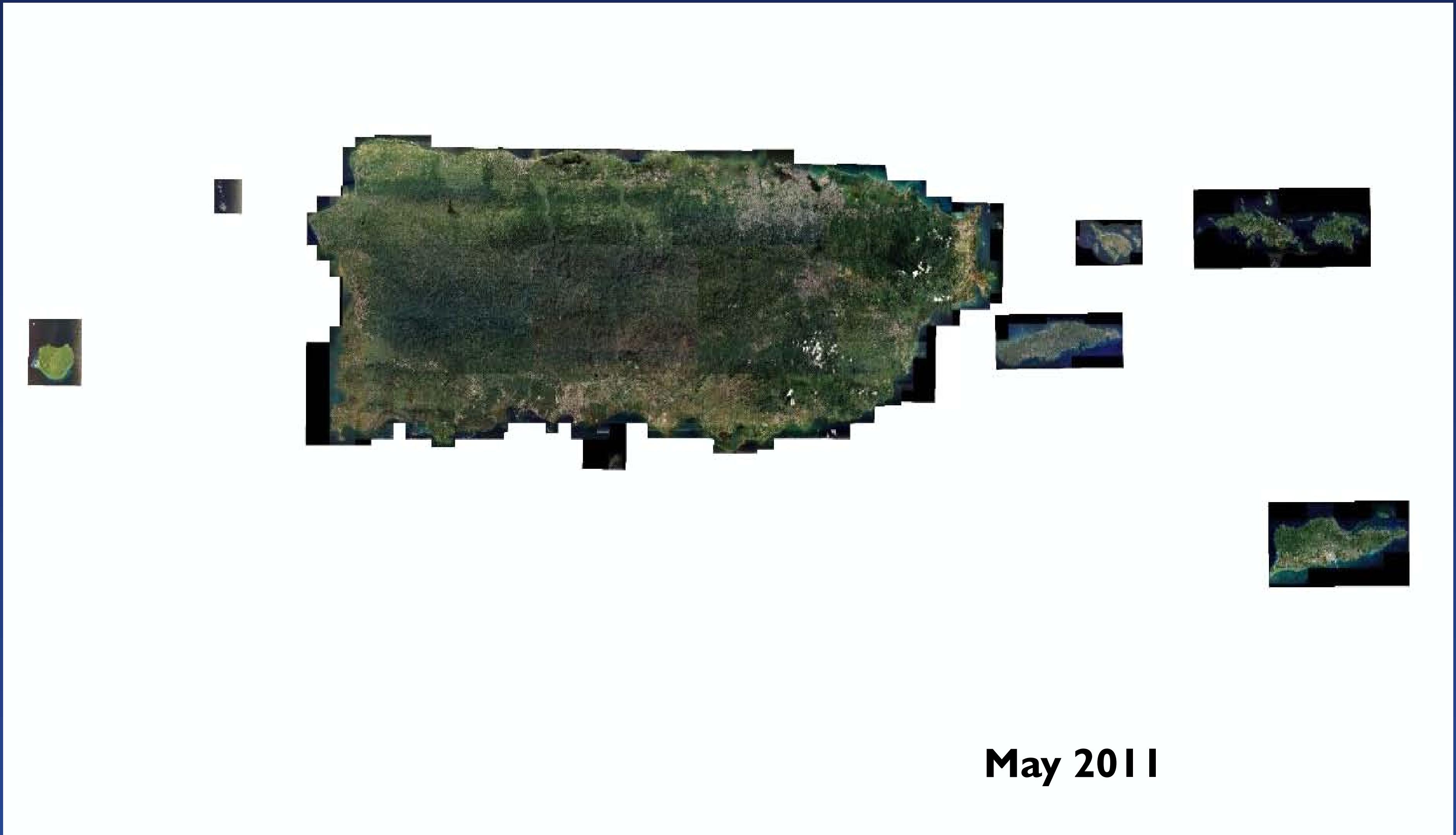


Alaska Web Service

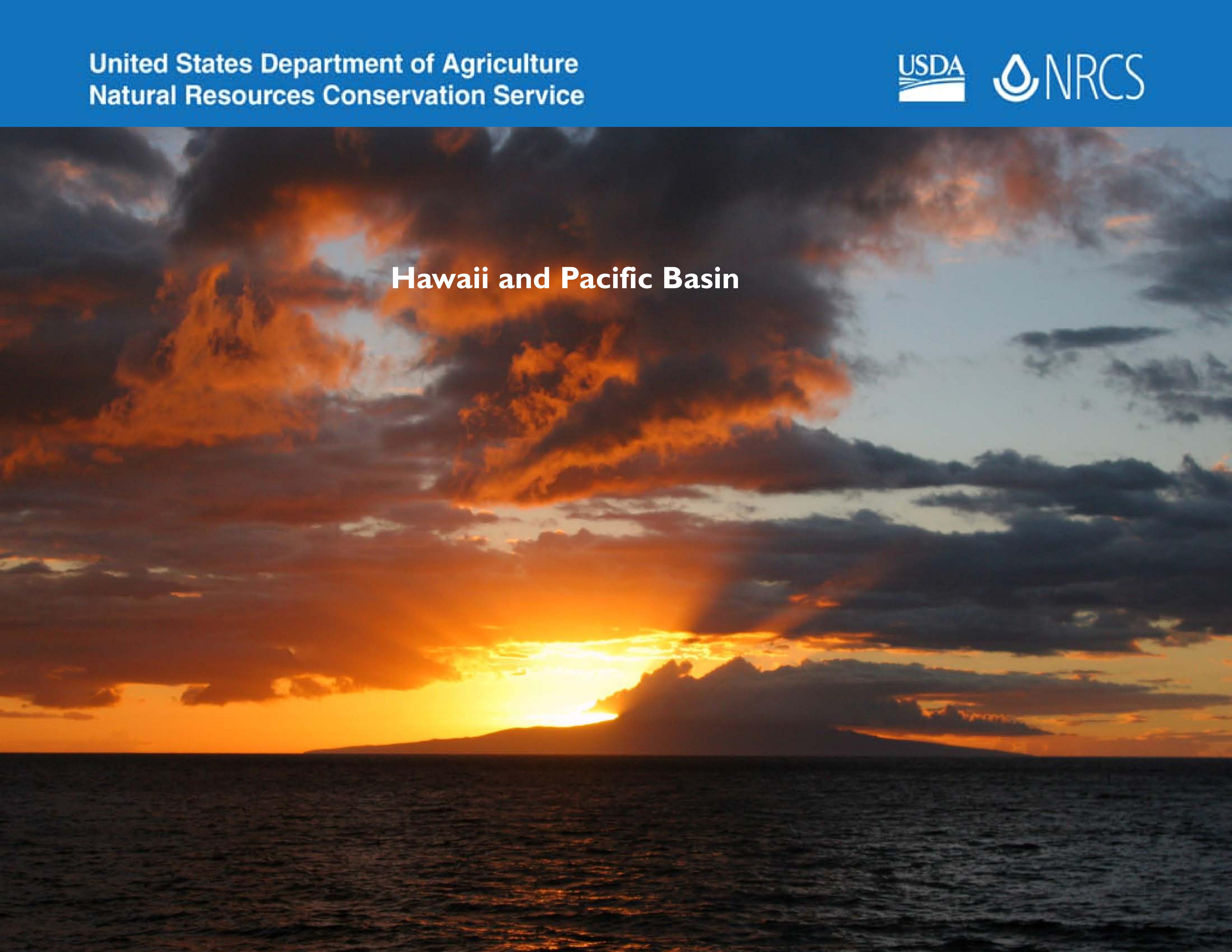


May 2011

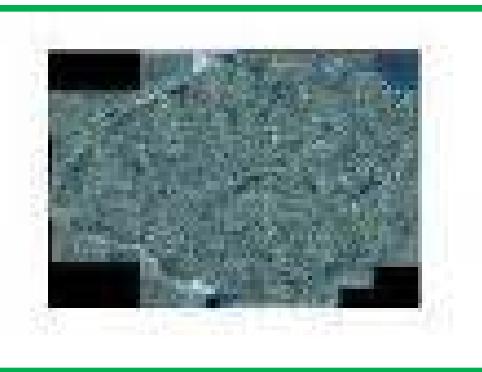
Puerto Rico and Virgin Islands Web Service



May 2011



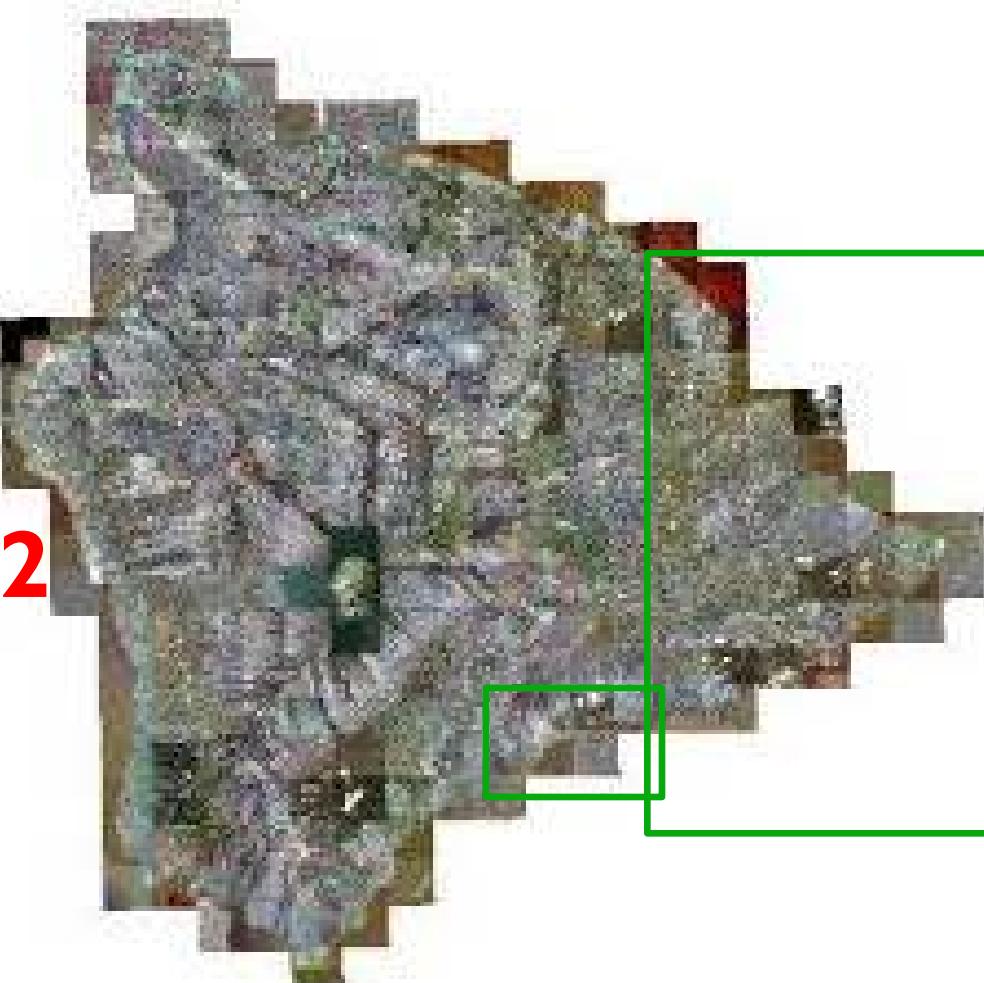
Hawaii and Pacific Basin



Hawaiian Islands Orthoimagery Status
DigitalGlobe WorldView-2 Status
April 2011

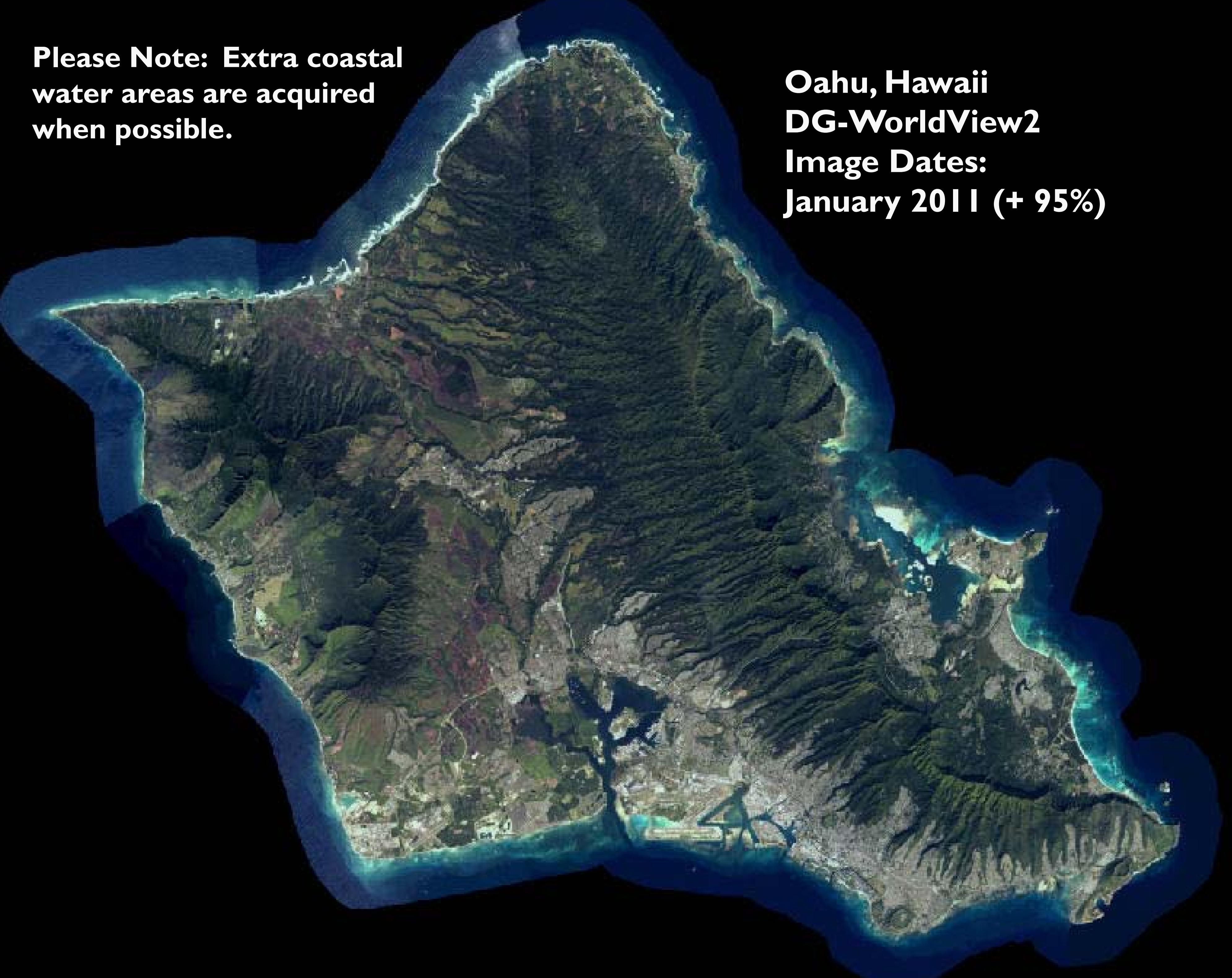


Orthoimagery Delivered and Accepted
Oahu, Kauai, Niihau, Kahoolawe, Maui
and the East End of Hawaii



- USGS, State of Hawaii and USDA have contracted for complete coverage of all 8 major Hawaiian Islands with DigitalGlobe/WorldView-2 Satellite Orthoimagery.
- Hawaii will be first state with complete collection with DigitalGlobe – WorldView-2 (.5 Meter GSD), 8 Band Multi-Spectral Imagery!

Please Note: Extra coastal water areas are acquired when possible.



Oahu, Hawaii
DG-WorldView2
Image Dates:
January 2011 (+ 95%)

File Utility View AOI Raster Help



Oahu, East Coast
DG-WV2
January 2011



Set Layer Combinations for g:/hawaii_orthoimagery_wv2/oahu_wv2_8_final_2011

<input checked="" type="checkbox"/> Red :	oahu_wv2_2011_ps_16bit_8band	<input type="button" value="..."/>	(:Layer_4)	<input type="button" value="..."/>	4
<input checked="" type="checkbox"/> Green :	oahu_wv2_2011_ps_16bit_8band	<input type="button" value="..."/>	(:Layer_3)	<input type="button" value="..."/>	3
<input checked="" type="checkbox"/> Blue :	oahu_wv2_2011_ps_16bit_8band	<input type="button" value="..."/>	(:Layer_2)	<input type="button" value="..."/>	2
<input checked="" type="checkbox"/> Auto Apply					

OK Apply Close Help



Satellite Imagery:

- Always collected at same everyday (10:30 Local Time).
- NADIR was fairly good on some/most of Oahu.

Maui, New Version, 2/07/2011



Kauai
DG-WV-2



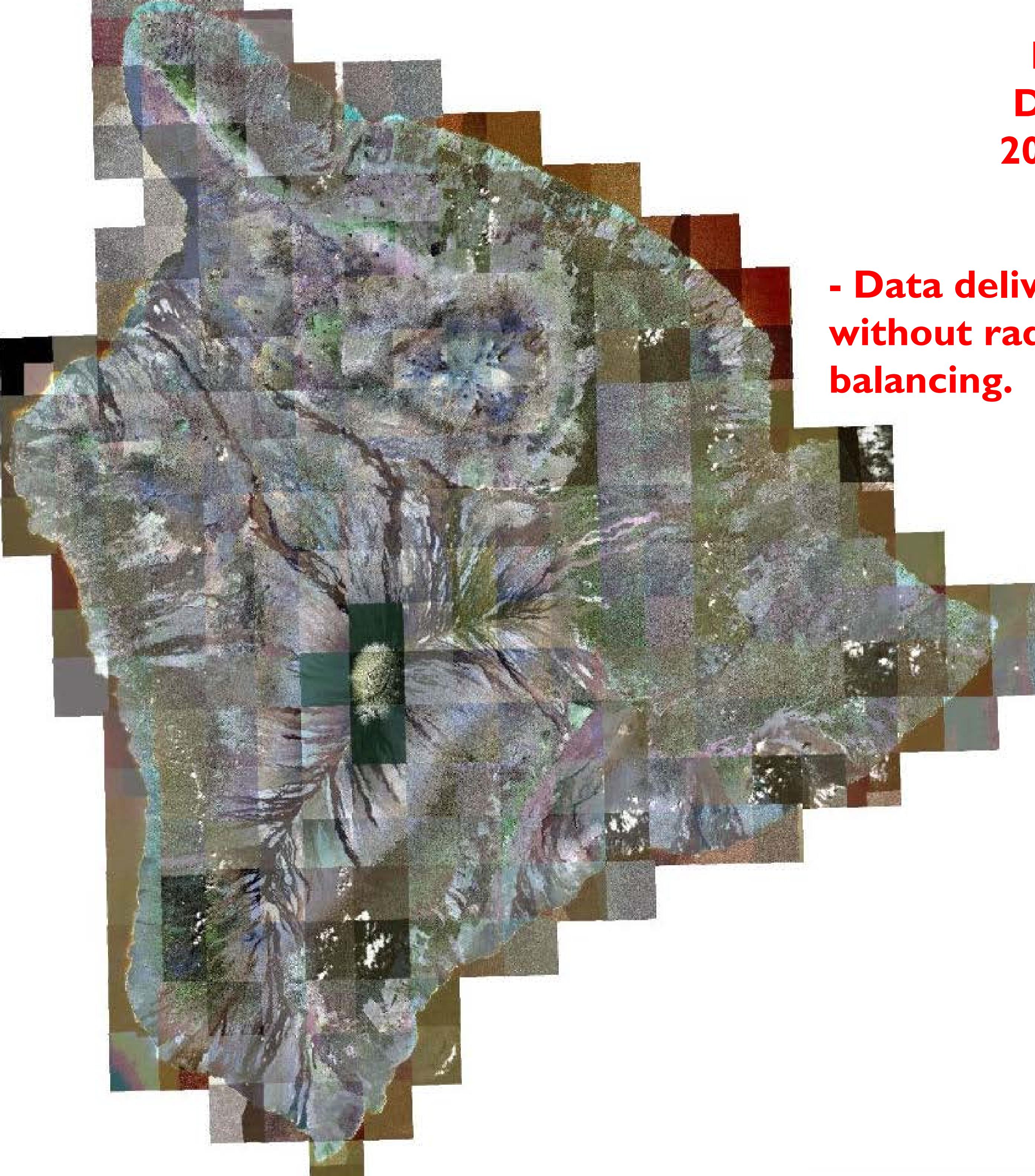
United States Department of Agriculture
Natural Resources Conservation Service

Hawaii
DG-WV2, Partial

Volcano's National Park (4 Band)



East End, Hilo



Hawaii
DG-QB2
2003-2008

- Data delivered by DOQQ
without radiometric
balancing.

RCS

Guam, 2/07/2011

	<input type="checkbox"/>	<input checked="" type="checkbox"/> 3 View	<input type="checkbox"/> 1030010009CF2A00	WV02	2011/02/05	17.43°	15.33°	55.25°	1%	4%	Pan_MS1_MS2
	<input type="checkbox"/>	<input checked="" type="checkbox"/> 2 View	<input type="checkbox"/> 103001000912DC00	WV02	2011/02/05	15.07°	14.25°	55.18°	1%	3%	Pan_MS1_MS2
	<input type="checkbox"/>	<input checked="" type="checkbox"/> 1 View	<input type="checkbox"/> 1030010009C2DA00	WV02	2011/02/05	17.90°	17.74°	55.25°	0%	1%	Pan_MS1_MS2
	<input type="checkbox"/>	<input type="checkbox"/> View	<input type="checkbox"/> 1030010009B7C100	WV02	2011/02/05	19.31°	17.89°	55.08°	0%	0%	Pan_MS1_MS2
	<input type="checkbox"/>	<input type="checkbox"/> View	<input type="checkbox"/> 1030010009C10B00	WV02	2011/02/05	15.12°	15.12°	55.1°	1%	1%	Pan_MS1_MS2
	<input type="checkbox"/>	<input type="checkbox"/> View	<input type="checkbox"/> 10300100096C6300	WV02	2011/02/05	21.17°	21.17°	55.1°	0%	0%	Pan_MS1_MS2

[Close](#)

Error on page.

Internet 100%

NORTH

6 0 6 12 km

WEST EAST

ZOOM IN + ZOOM OUT -

SOUTH

Please Note:
All data from 2/5/2011

Search Filter

Acquisition Date: 10/1/10 - 2/8/11
Off Nadir Angle: 0.0 - 25.0 degrees
Cloud Cover: 0 - 10 %

SEARCH MODIFY FILTER

Map Status

Lon: Area: 791 km²
Lat: Scale: 1:493,435

Pacific Ocean

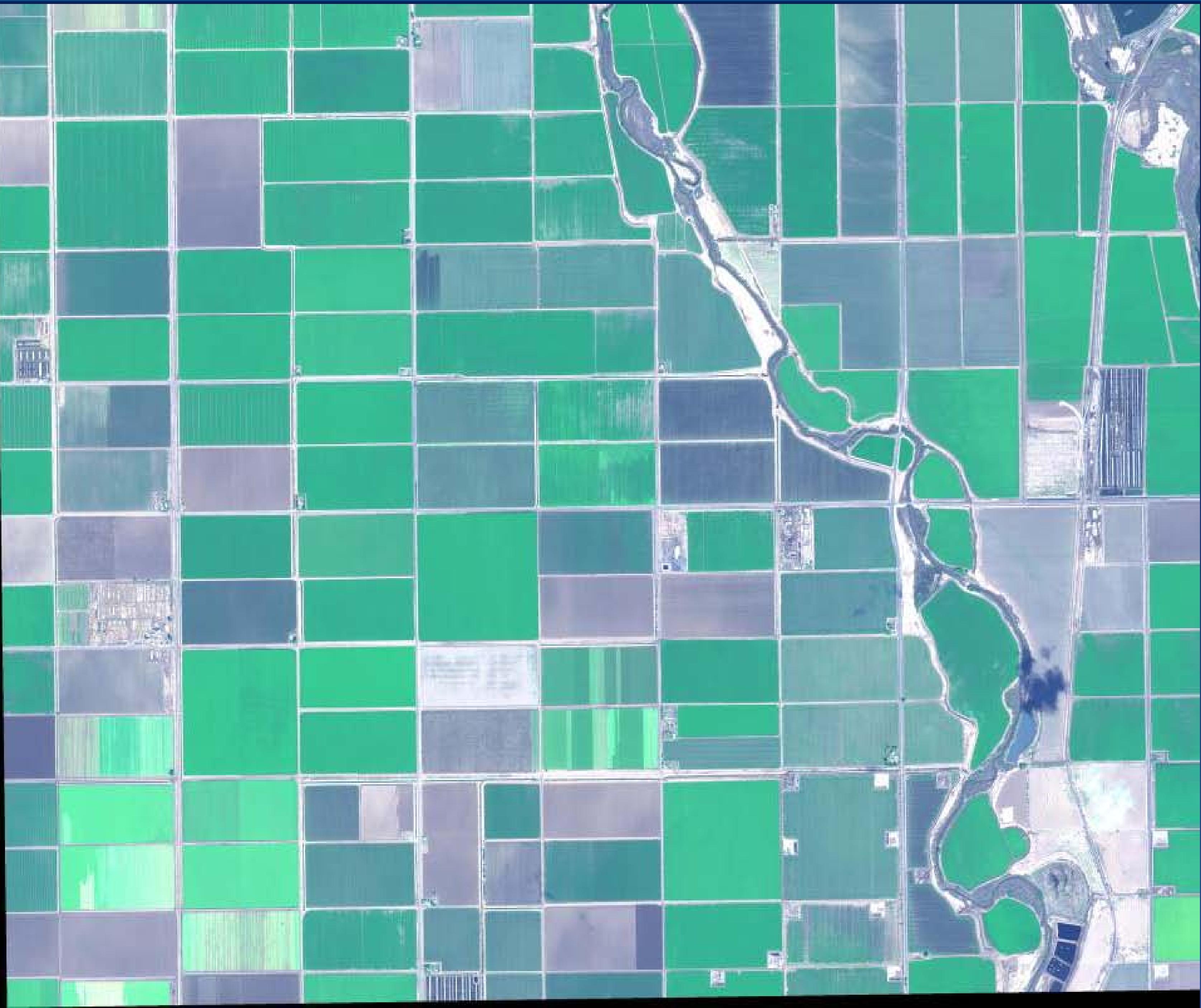
Indian Ocean

Submit ► Email an order inquiry to Customer Service.

Pacific Basin Status

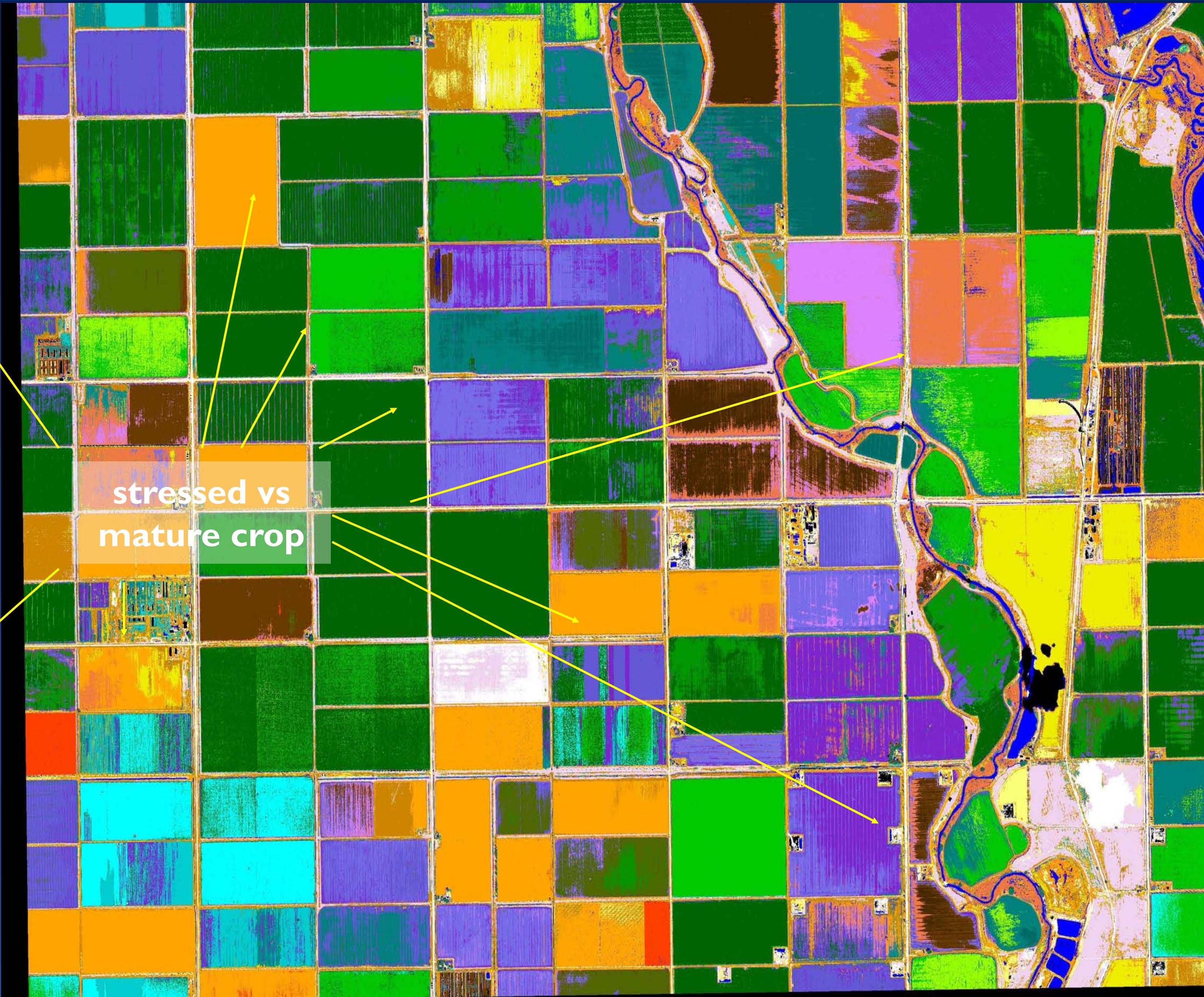
- USDA has collected approximately ~ 98% of all land mass within the jurisdiction of the United States:
 - Guam
 - Commonwealth of the Northern Mariana Islands
 - Northwestern Hawaiian Islands
 - Palau
 - American Samoa
 - Federated States of Micronesia
 - Marshall Islands
 - US Trusts (Palmyra, Wake, etc..)
- Most islands acquired also contain any visible shallow water reef areas.
- All data is Satellite 1 Meter or higher resolution (DG-QB2, DG-WV2, GeoEye-1)
- USDA upgraded most but not all DG-QB2 data to Enterprise Premium License in Fall 2009.
- Funding would not allow complete Enterprise Premium Licenses in Pacific Basin.
- Enterprise Premium (100% DG-QB2, DG-WV2) for: Guam, CNMI, Palau, American Samoa, NWHI (except I)
- The following have a mixture Enterprise Premium and NGA NextView/Civil Government: Marshall Islands, Federated States of Micronesia and US Trusts.

WorldView-2
True Color
0.6 meter, 8 band
to expand field
remote activities

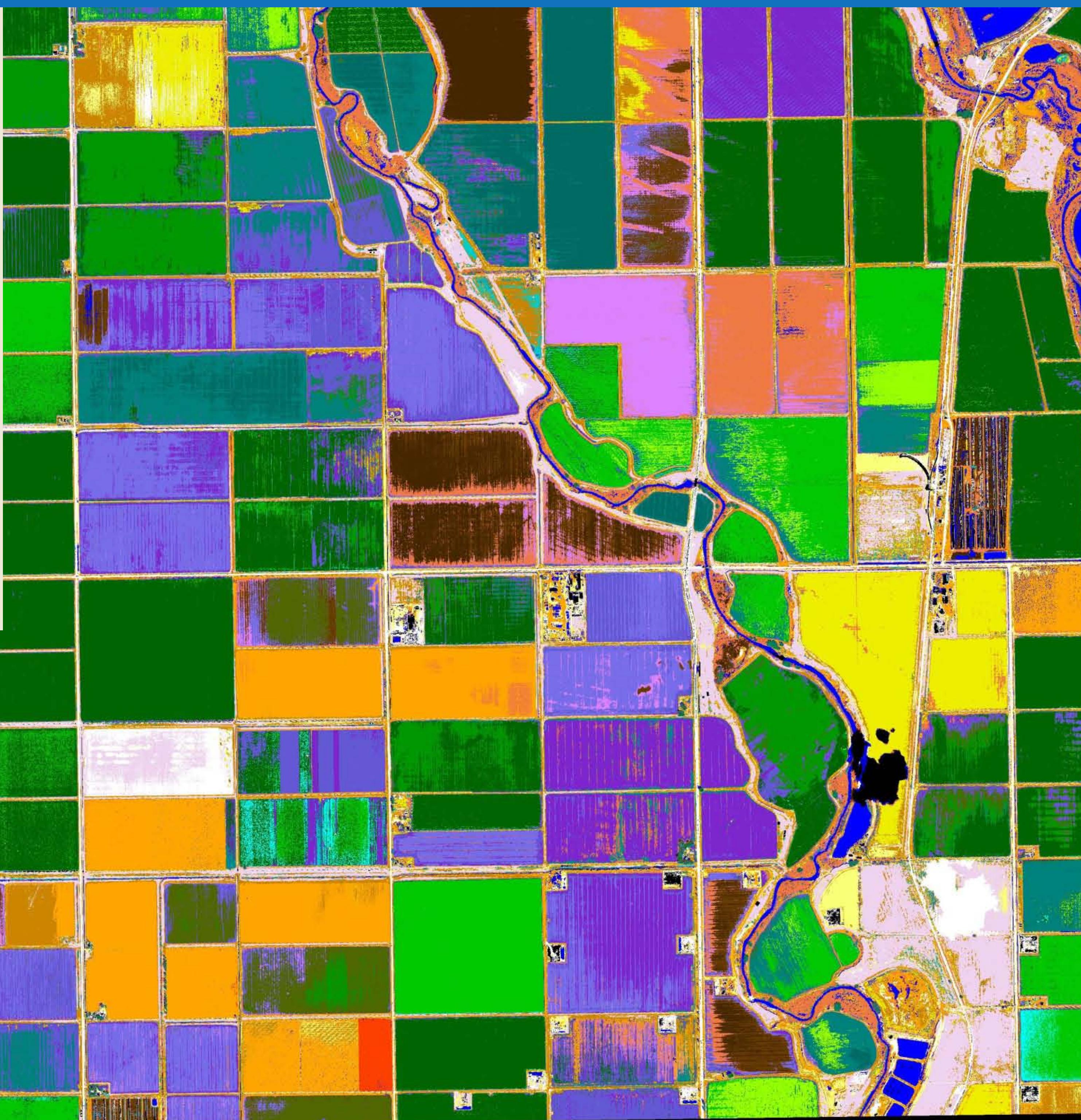


WorldView-2 uses reflectance returns to provide an array of soil and plant condition indicators

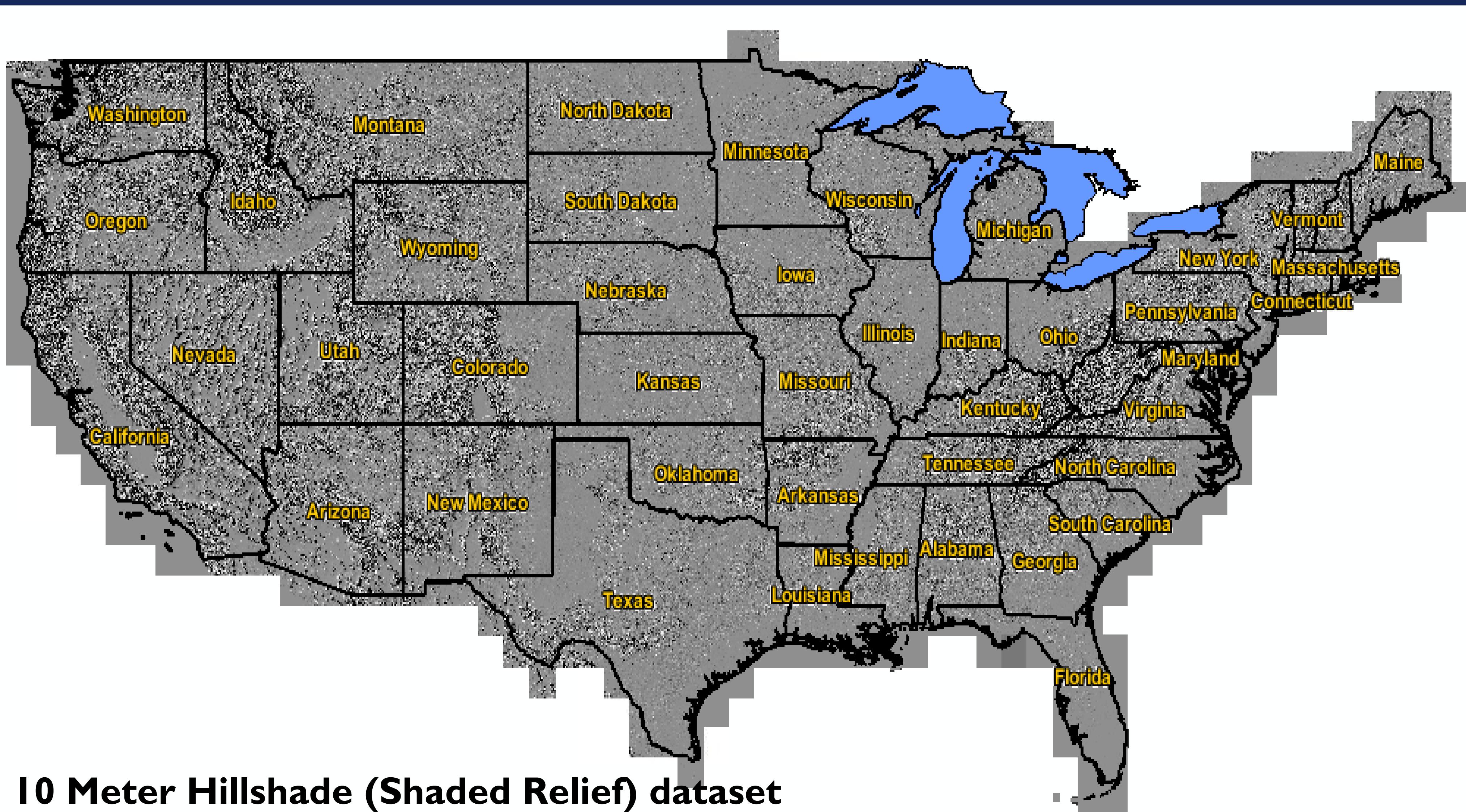
WorldView-2
land covers
Salton Sea
Feb 20, 2010



<input type="checkbox"/> On	<input checked="" type="checkbox"/>	unclassified
<input type="checkbox"/> On	<input type="checkbox"/>	eluvial
<input type="checkbox"/> On	<input type="checkbox"/>	bush
<input type="checkbox"/> On	<input type="checkbox"/>	crop A
<input type="checkbox"/> On	<input type="checkbox"/>	crop A cut
<input type="checkbox"/> On	<input type="checkbox"/>	crop B
<input type="checkbox"/> On	<input type="checkbox"/>	crop B moist
<input type="checkbox"/> On	<input type="checkbox"/>	crop C
<input type="checkbox"/> On	<input type="checkbox"/>	crop D
<input type="checkbox"/> On	<input type="checkbox"/>	crop D mature
<input type="checkbox"/> On	<input type="checkbox"/>	crop E
<input type="checkbox"/> On	<input type="checkbox"/>	crop F dry
<input type="checkbox"/> On	<input type="checkbox"/>	crop F moist
<input type="checkbox"/> On	<input type="checkbox"/>	crop G
<input type="checkbox"/> On	<input type="checkbox"/>	crop H
<input type="checkbox"/> On	<input type="checkbox"/>	crop I
<input type="checkbox"/> On	<input type="checkbox"/>	crop J
<input type="checkbox"/> On	<input type="checkbox"/>	dry dirt surface
<input type="checkbox"/> On	<input type="checkbox"/>	man-made
<input type="checkbox"/> On	<input type="checkbox"/>	soil A
<input type="checkbox"/> On	<input type="checkbox"/>	soil B wet
<input type="checkbox"/> On	<input type="checkbox"/>	soil C
<input type="checkbox"/> On	<input type="checkbox"/>	soil D
<input type="checkbox"/> On	<input type="checkbox"/>	soil E
<input type="checkbox"/> On	<input type="checkbox"/>	soil F freshly tilled
<input type="checkbox"/> On	<input type="checkbox"/>	soil G sandy
<input type="checkbox"/> On	<input type="checkbox"/>	soil G wet
<input type="checkbox"/> On	<input type="checkbox"/>	water



Elevation Data - Hillshade



State Geology Layer

NGMC worked with the Gateway Team to add the State Geology Layer on the Gateway in 2010 to support the soil survey MLRA update Inventory

Is there a business requirement to make the State Geology Layer available in a Web Service?

The screenshot shows the homepage of the Geospatial Data Gateway (GDG). At the top, the USDA and NRCS logos are visible. The main title "GEOSPATIAL DATA GATEWAY" is prominently displayed in large white letters against a blue banner. Below the banner is a collage of various geospatial data images, including satellite imagery, maps, and geological features. A navigation bar at the top includes links for Home, Login, Check Order, Status Maps, News, Data Policy, FAQ, Help, Admin, and Contact Us. On the left side, there is a sidebar with a "Search" field, a "Go" button, and a "Browse by Subject" menu. The menu items include: Natural Resources Conservation Service, Farm Services Agency, Rural Development, National Cartography & Geospatial Center (NCGC), Aerial Photography Field Office (APFO), Web Soil Survey, Soil Data Mart, Geospatial One Stop, APFO Customer Order Entry System, USGS Maps, Imagery and Publications, National Atlas, National Map Viewer 2.0, US Census Bureau Geography, Download 2009 TIGER/Line Shapefiles, and eFOTG. The central content area features a large image of Delicate Arch in Arches National Park, with the text "Welcome to GDG" and "GEOSPATIAL DATA GATEWAY". Below the image, a subtitle reads "the one stop source for environmental and natural resource data". A descriptive paragraph explains that the GDG is a one-stop source for environmental and natural resources data, available anytime from anywhere. It mentions the partnership between SCA, NRCS, FSA, and RD. A "System Status" section shows a clock icon and a note about system status. A "Please Note" message at the bottom indicates the date and time as 6/2/2010 9:29:07 AM MST. On the right side, there is a "GET DATA" button and a "Place a Data Order" link. A sidebar titled "I Want To..." lists several options for ordering data.

- Order by County/Counties
- Order by State
- Order by Place
- Order by Bounding Rectangle (Latitude and Longitude)
- Order by Interactive Map - Custom Area Of Interest(AOI)
- Find Available Data for

State Geology Layer

WHAT

Here are the available map layers for your selected area of interest.

- 2008 National Ag. Imagery Program Mosaic, 254 maps 307914.918 MB
- 2010 National Ag. Imagery Program Mosaic, 254 maps 230678.666 MB

Geographic Names

- Geographic Names - Populated Places, 254 maps 5.290 MB
- Geographic Names - Non-Populated Places, 254 maps 51.577 MB

Land Use Land Cover

- National Land Cover Dataset by State, 1 map 1682.567 MB
- Cropland Data Layer by State, 1 map 81.486 MB

Geology

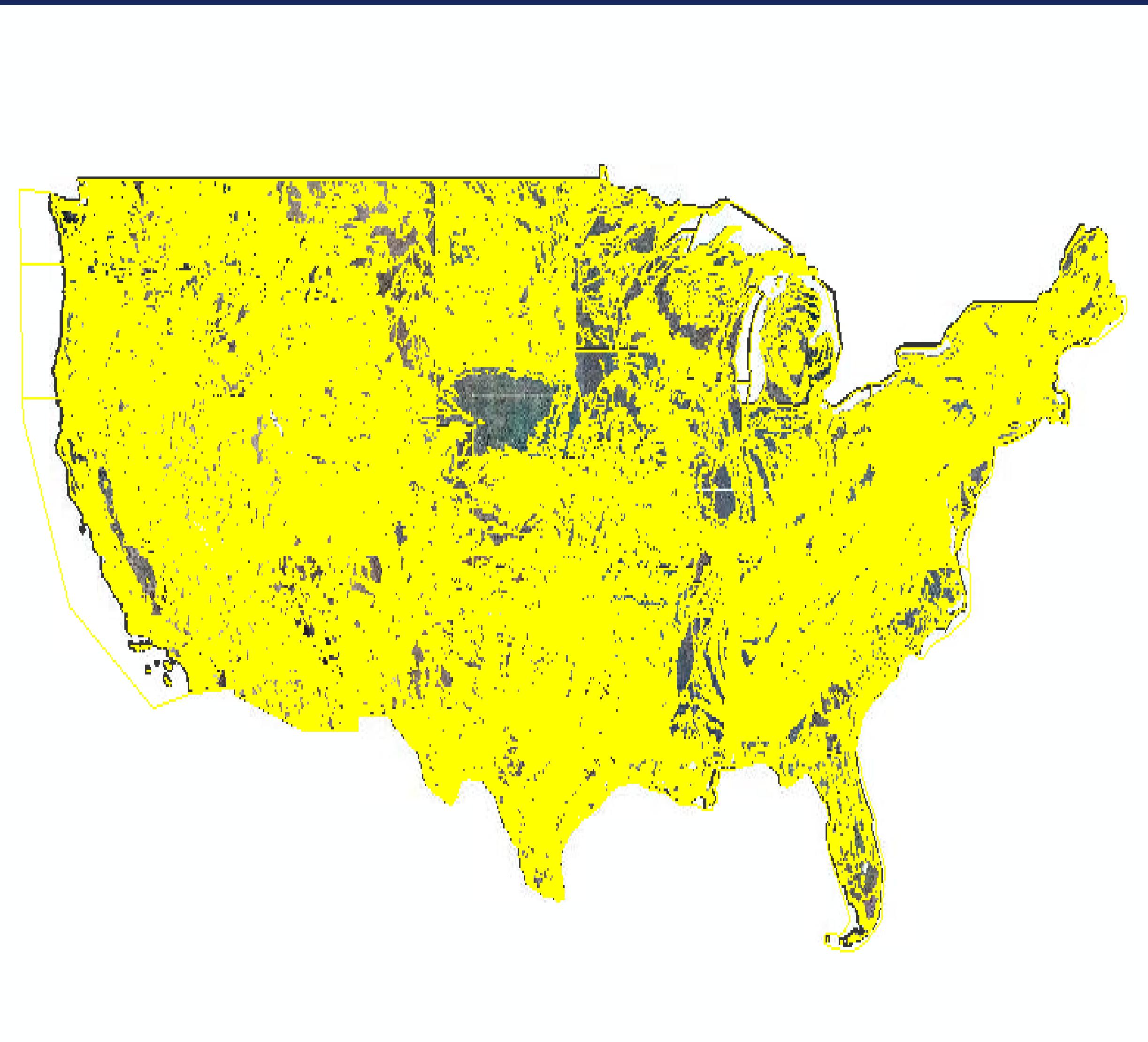
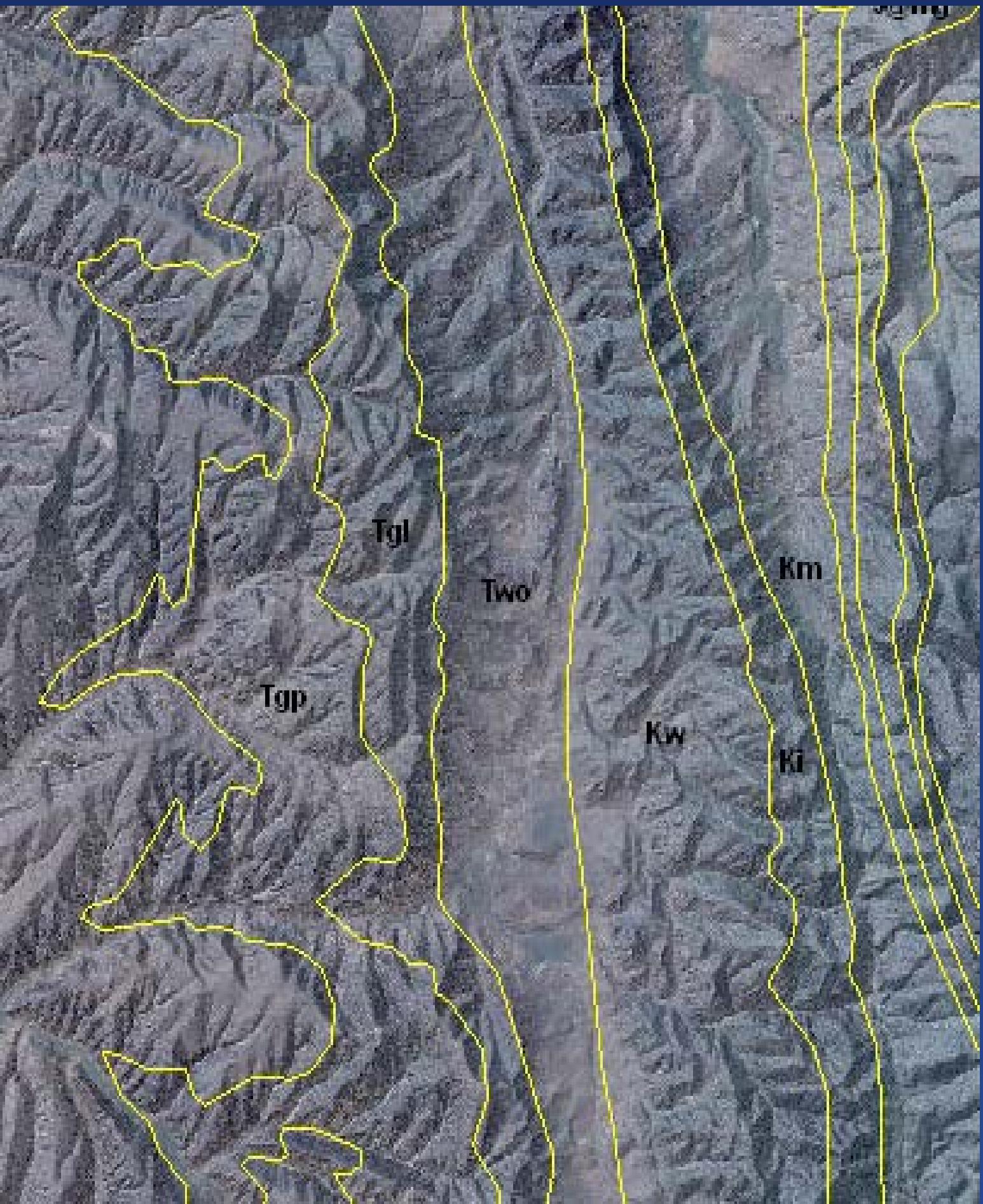
- National scale Geology by State, 1 map 80.591 MB

Soils

- Major Land Resource Areas by State, 1 map 3.578 MB
- Common Resource Areas by State, 1 map 4.093 MB
- Soil Survey Spatial and Tabular Data (SSURGO 2.2), 232 maps 7345.210 MB
- Soil Survey Tabular Data Only, 233 maps 4570.250 MB
- U.S. General Soil Map (STATSGO) - State Subset, 1 map 50.005 MB

Geology_USA48

AOI in Colorado



Connecting to Services

- Connect to services through ArcCatalog or ArcMap by adding an ArcGIS connection to:
<http://ncgcws.ftw.nrcc.usda.gov/arcgis/services>
When connected, click on folder to view data.
- When using Image Server Plug-in (fast connection) to access the imagery, the connection can be in ArcMap. Click the “Add Image Server Connection” button and enter:
<http://ncgcimg01.ftw.nrcc.usda.gov:10010/>
- Note: The Image Server Plug-in is standard in ArcGIS 9.3. In ArcGIS 9.2, NRCS users must request ITS installation.

NRCS CDSI EQIP (FA) Ranking Pilot – Eight States

The purpose of the pilot is to demonstrate a GIS solution to automate financial assistance (FA) using a ranking tool and provision priority national, state and local data layers in a scientific manner based on resource concerns to support area-wide assessments and conservation planning.

Objectives includes:

- Test the applicability of NRCS' new resource concerns and planning criteria list
- Evaluate the concept of automated ranking for financial assistance using state and local criteria in a geospatial environment
- Capture and evaluate time savings for the ranking of EQIP applications
- Test and evaluate geospatial data provisioning options, methodologies, and services to support automated FA ranking and conservation planning functions

Select
EPA: 303d waters Pesticides, Salinity, Nutrients, Sediment impairments by HUC 12
EPA: 303d Waters w Nutrients, Phosphorus or Sediment Impairments by 50ft 2010
EPA: 8 Hour Ozone Non Attainment Areas - 1997
EPA: Particulate Matter 2.5 Areas - 2006
FEMA: 100 yr floodplain
FWS: Wildlife Refuges with 180ft and 300ft Buffers
NPS: 50 Mile Buffer of Class I Federal Lands - 2007
NRCS: Easements (buffered at 180 and 300) - 2011
NRCS: Soils
NRCS: USDA Prism Annual Precip
States: AL Land Cover
States: AL Land Use
States: AL Out Natural Resource Waters
States: AL Outstanding Waters
States: AL TE Species - 2010
States: AL Wild Scenic Rivers
States: CA Anadromous Fish
States: CA CRCC Priority Areas - 2010
States: CA Public Use Buffers All - 2011
States: CO BLM - 2006
States: CO Geo Poli WBD
States: CO Greater Sage Grouse Core - 2010
States: CO Greater Sage Grouse Overall Minus Core - 2010
States: CO RMBO Playa 30ft - 2009

More than 50 priority data layers, including the **SSURGO Layer (Attributes)** were integrated into the CDSI EQIP FA Ranking Tool

States: CO Salinity Geology - 2010
States: CO Salinity Project Areas - 2008
States: CO Sparrow - 2009
States: IN Karst
States: IN Land Use / Land Coverage - 2011
States: KS CRP - 2009
States: KY DOW Identified Watersheds - 2004
States: KY DOW Impaired Waterbodies - 2004
States: KY DOW Wellhead Protection Areas - 2004
States: KY Forest Priority Areas - 2010
States: KY Forestland Bird Cons Areas - 2005
States: KY Grassland Bird Cons Areas - 2005
States: KY USGS Sinksheds - 2005
States: OR Groundwater Mngmt Areas - 2008
States: OR Groundwater Vulnerability - 2003
States: OR Juniper Removal Potential - 2011
States: OR Sage Grouse Habitat - 2011
States: OR Tualatin Stream Reach Rating - 2005
States: OR WERI - 2011
States: UT BLM USFS Buffers
States: UT Habitat Gap
States: UT Invasives Cheatgrass - 2007
States: UT Lakes 305B WBD
States: UT Sage Grouse - 2011
States: UT Sensitive Wildlife
States: UT Shallow Groundwater SGID 500 - 1988

CDSI Services Description

- NGMC received a file geodatabase with 24 pre-processed soils interps for 8 pilot states based on requests from the states (as needed for the ranking pilot)
- The data was loaded into SQL Server 2008 / ArcSDE
- NGMC created a service for each of the eight CDSI EQIP Ranking Tool Pilot states (AL, CA, CO, IN, KS, KY, NE, OR, UT) in ArcGIS Server 10
- The service contains 24 web service layers, each representing one of the soil interps
- Each Interp can be viewed as a separate sublayer in the service

4. Accessing the Data - via the NRCS Ranking Mart or Internet Map Service

Accessing the Data

Access via the NRCS Ranking Mart

Start Internet Explorer and go to <http://web1.ftw.nrcs.usda.gov/nrcsrankingmart>

Or

Access via the Internet Map Service Using a GIS such as ArcCatalog or ArcMap

There are web services available using this method.

Each service contains different data to allow advanced users to recombine and use the data as necessary to accomplish their work.

Data can be accessed through ArcCatalog 9.3 or ArcMap 9.3 by adding an ArcGIS Server connection.

In ArcCatalog, click on GIS Servers>Add ArcGIS Server in the catalog tree.

Select "Use GIS Services" and click "Next".

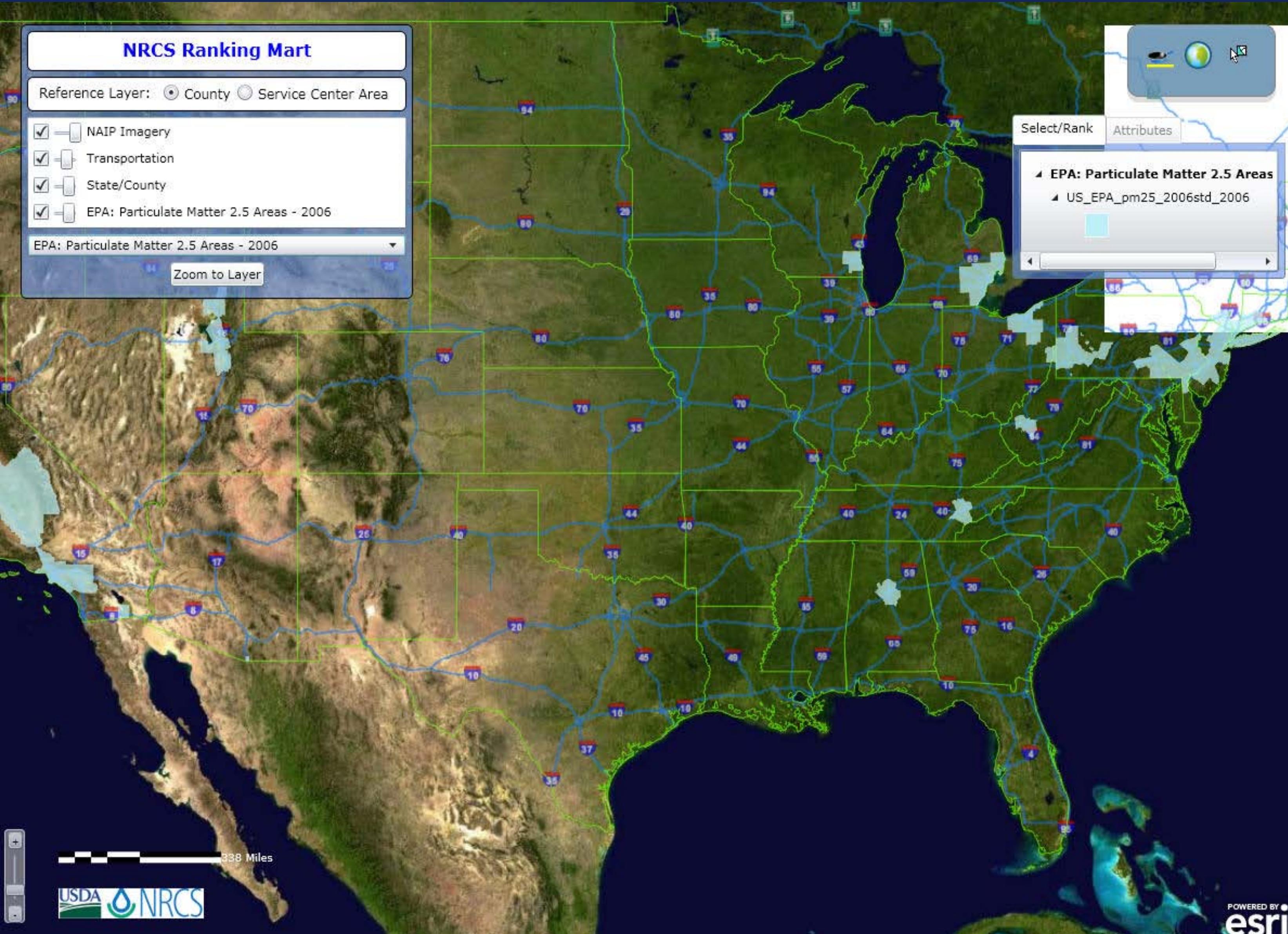
Choose "Internet" as the type of ArcGIS Server connection and enter <http://gisapps1.ftw.nrcs.usda.gov/arcgis/services>

Click "Finish".

4. Accessing the Data –

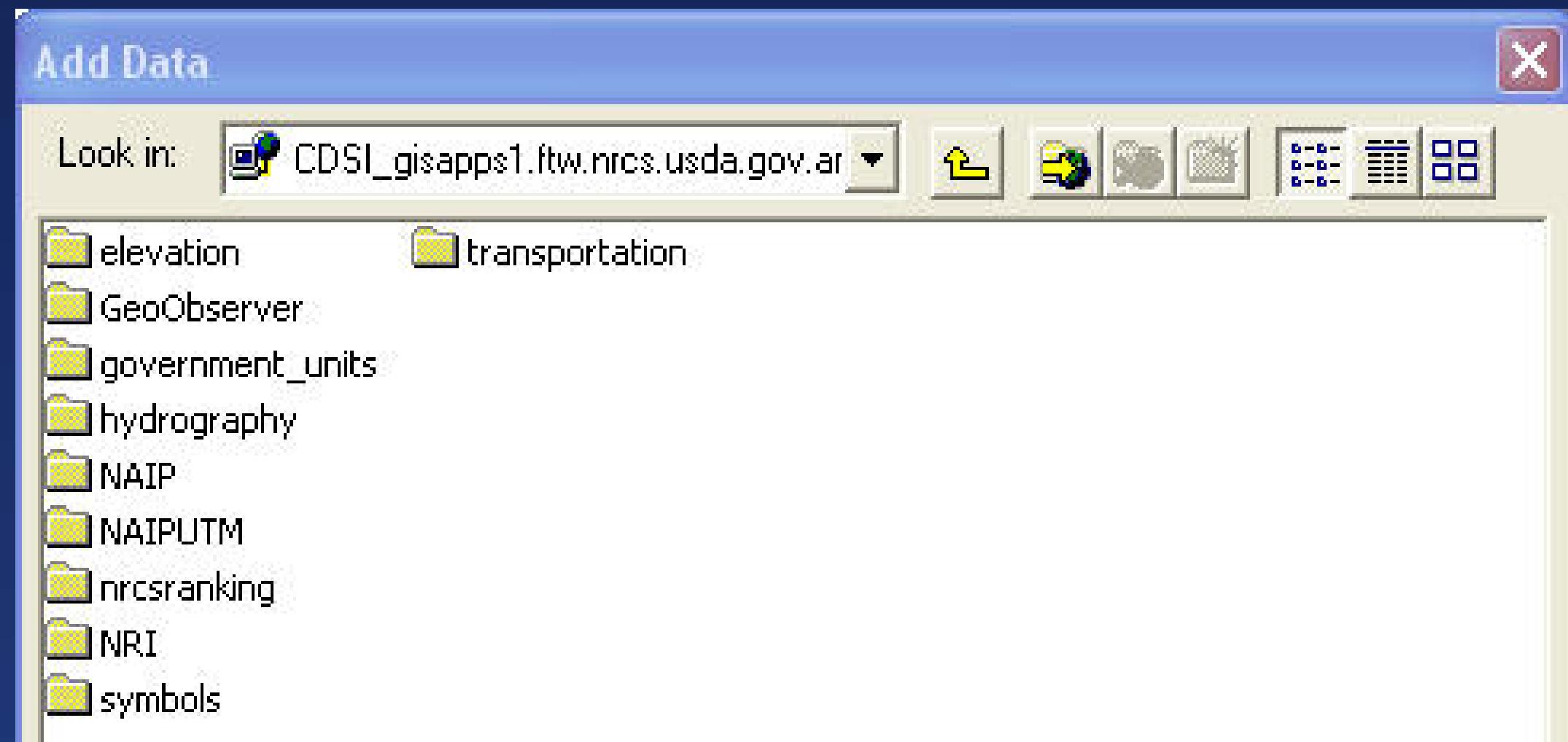
NRCS Ranking Mart

<http://web1.ftw.nrcs.usda.gov/nrcsrankingmart2/>

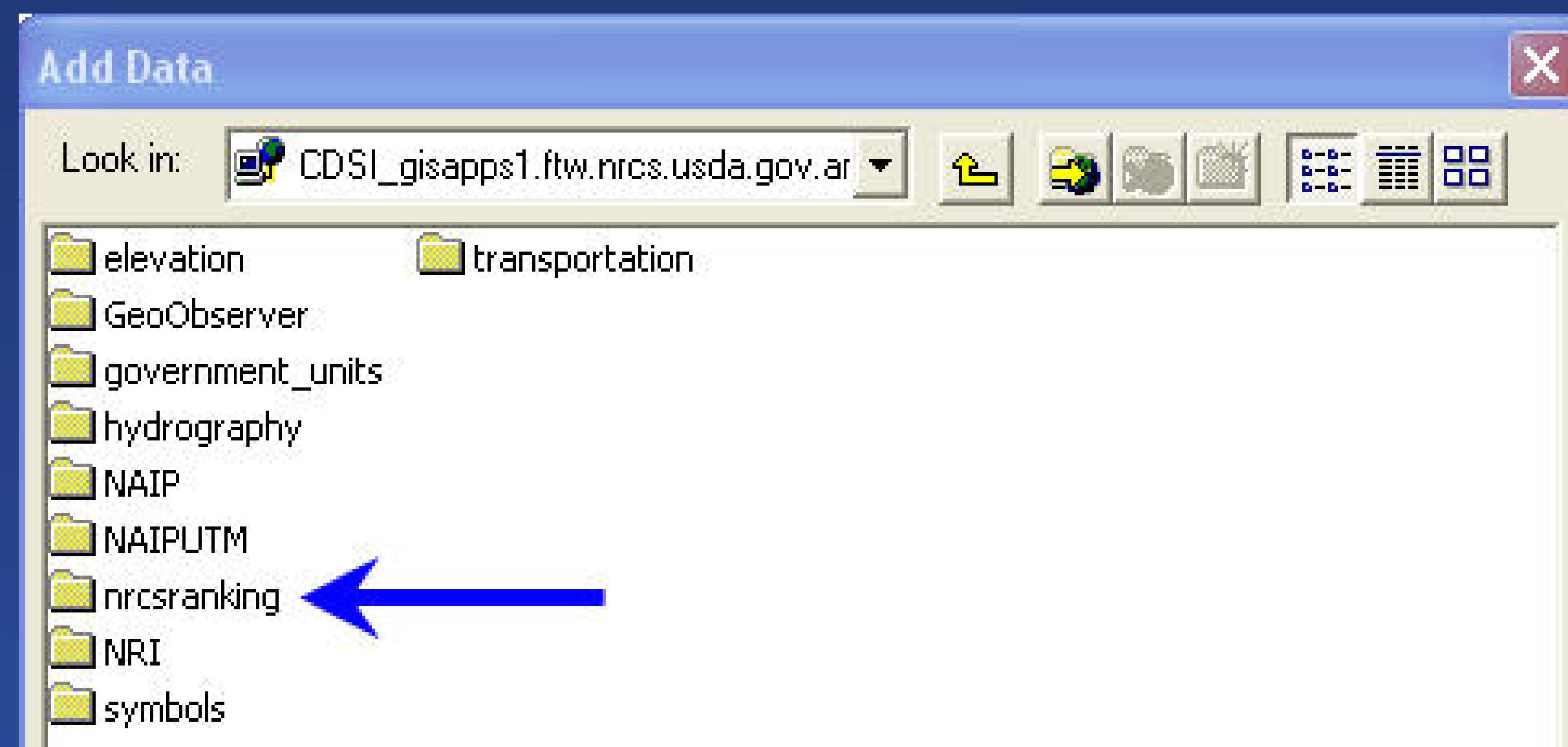


4. Accessing the Data

Web Map Service – Data Available using a GIS such as ArcMap



Data in nrcsraking is specific to the FA Ranking Pilot

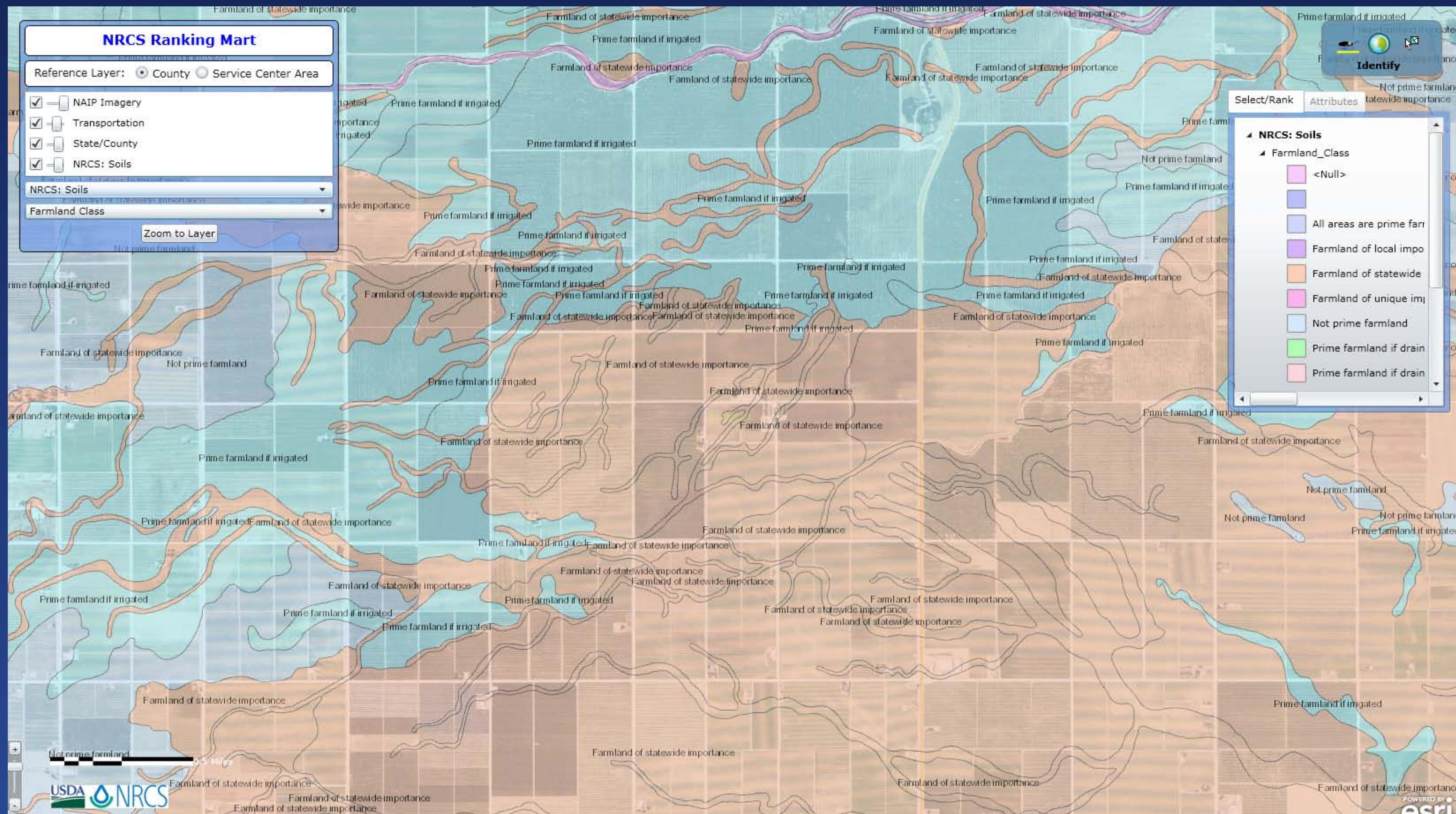


4. Accessing the Data

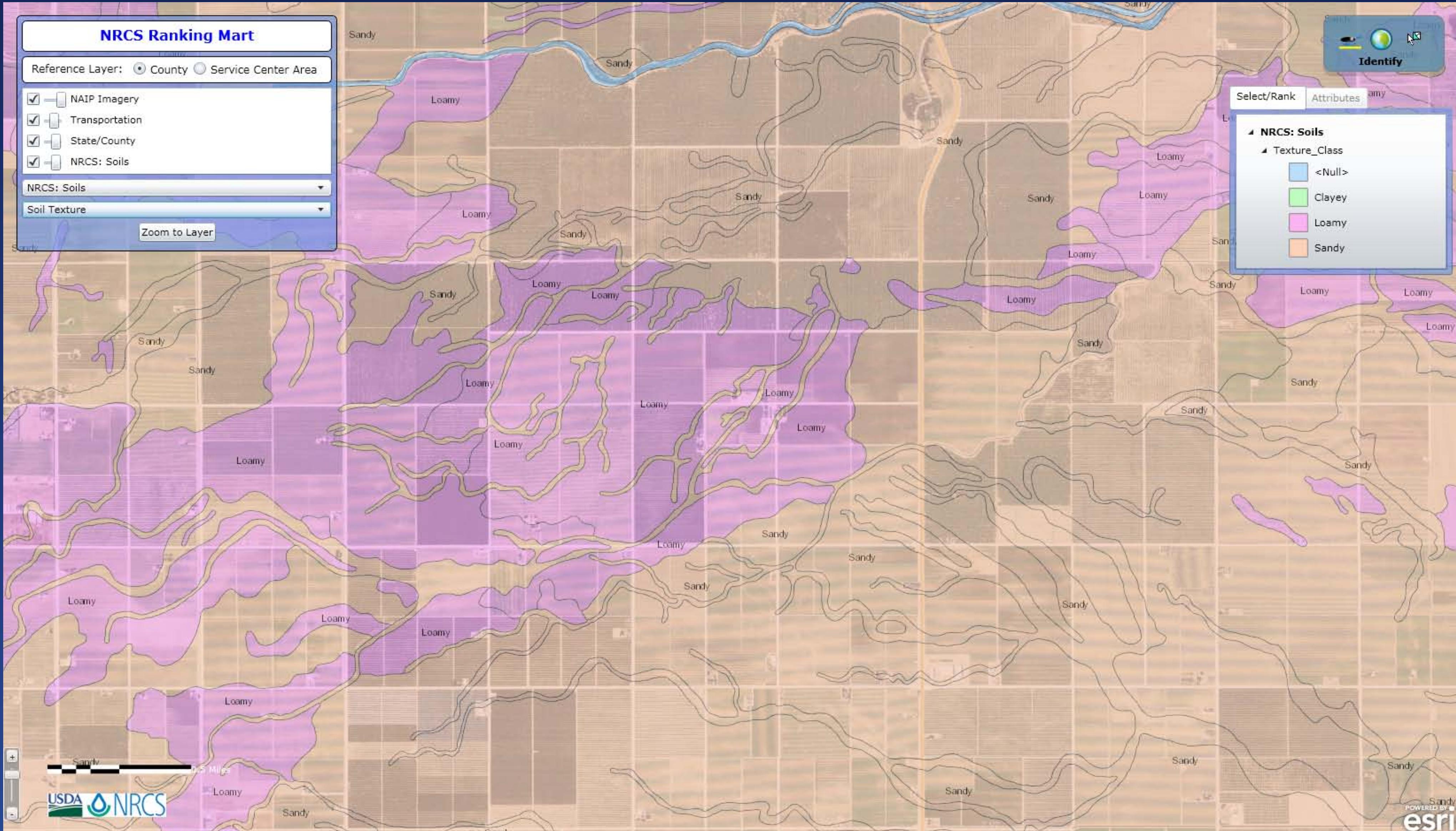
Data in **nrcsranking** is specific to the FA Ranking Pilot
Contents of **nrcsranking** :

Contents	Preview	Metadata
Name	Type	
epa	Map Service	
fema	Map Service	
fws	Map Service	
nps	Map Service	
nrcs	Map Service	
nrcs_soils_us_2010	Map Service	
reference	Map Service	
states	Map Service	
states_habitats	Map Service	

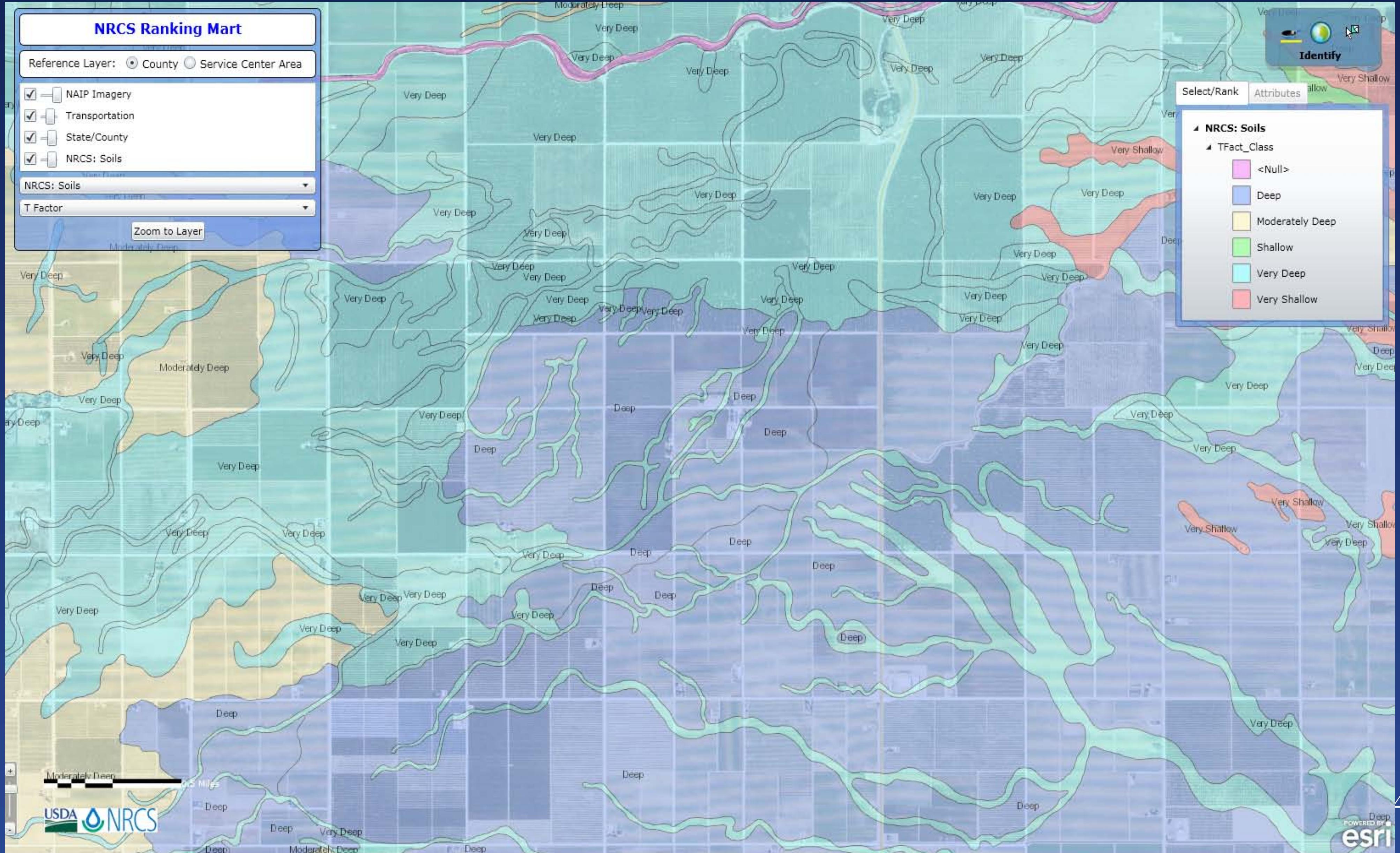
NRCS CDSI EQIP Ranking Mart Soil Attributes Farmland Class



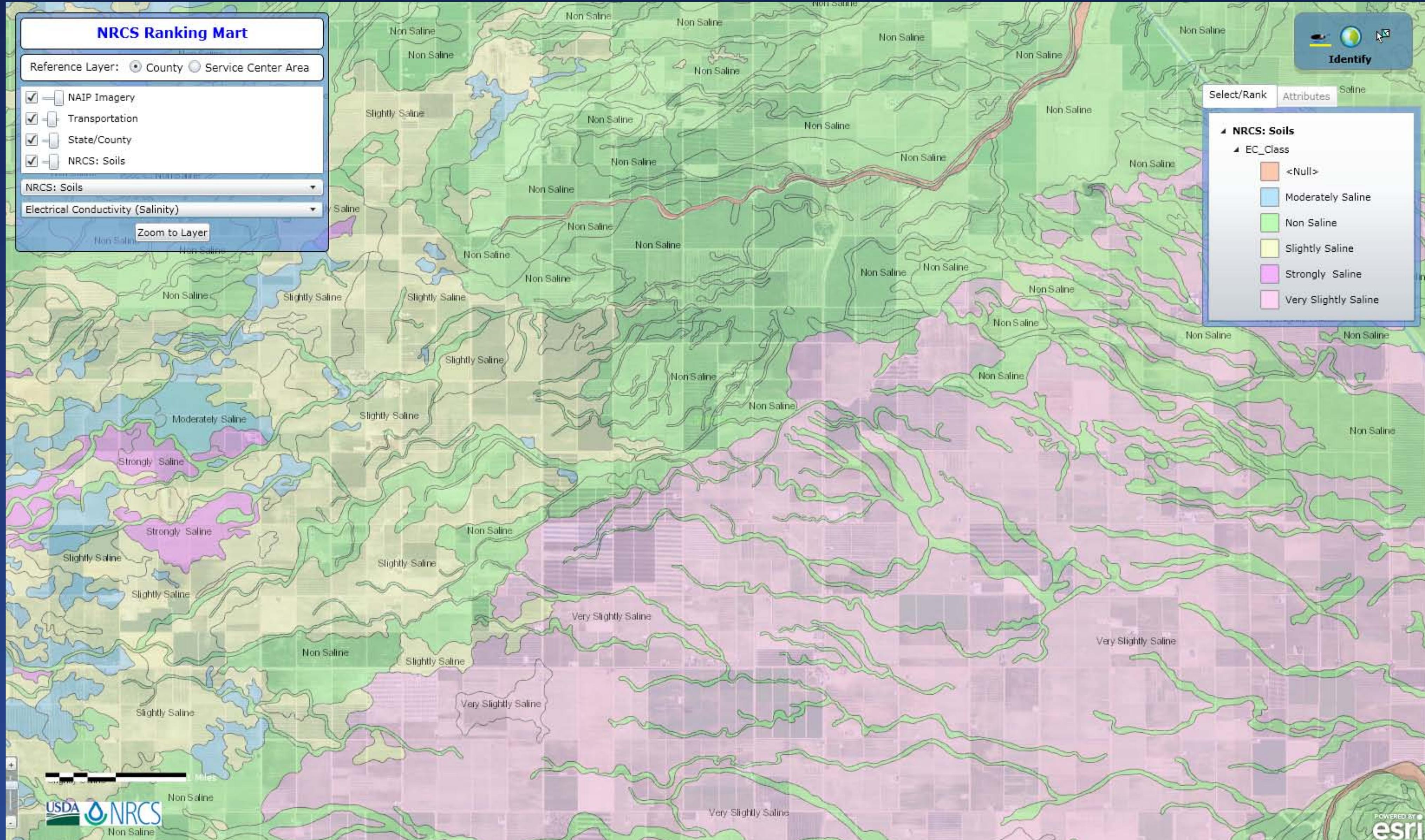
NRCS CDSI EQIP Ranking Mart Soil Attribute Soil Texture



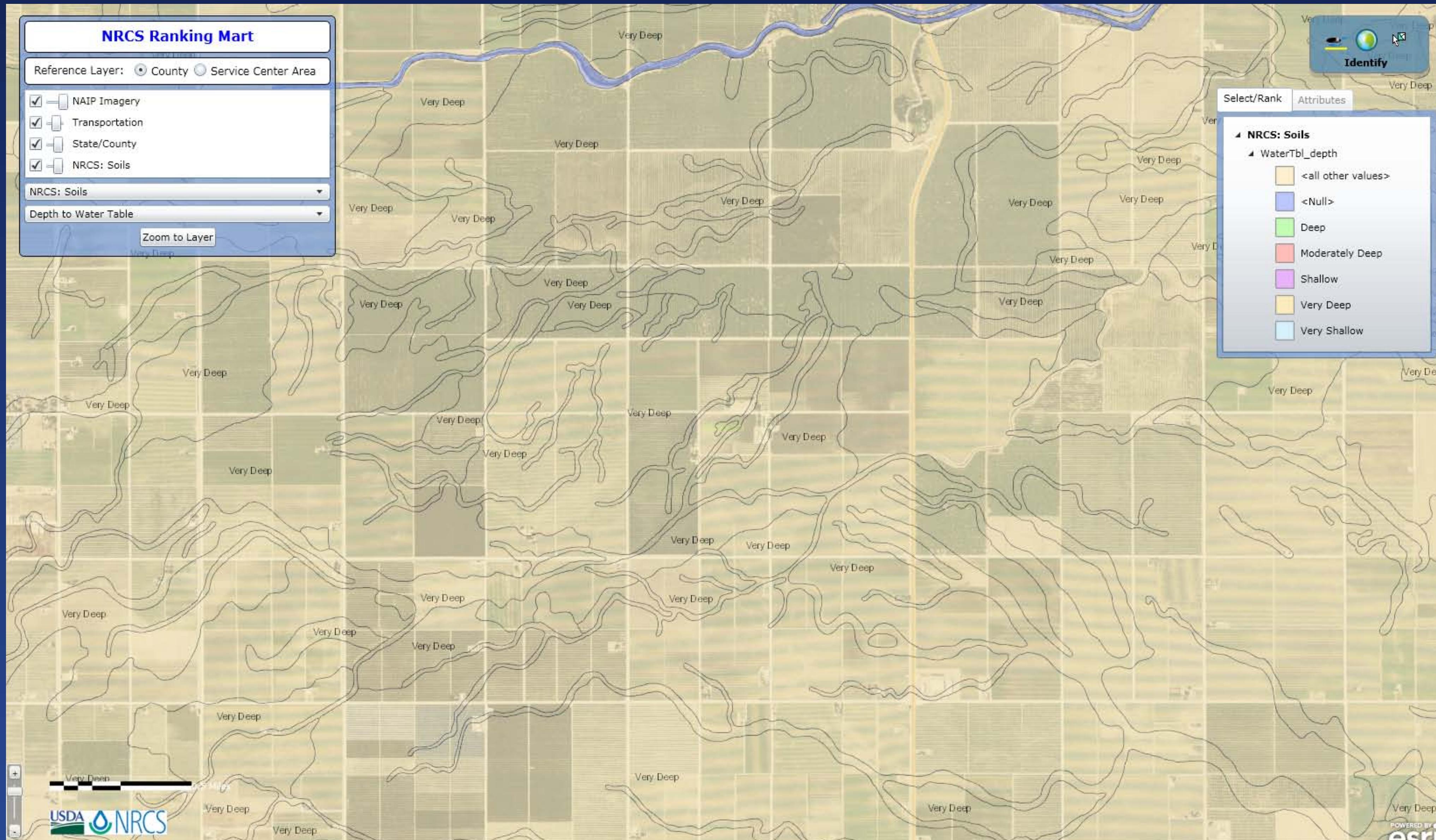
NRCS CDSI EQIP Ranking Mart Soil Attributes T Factor



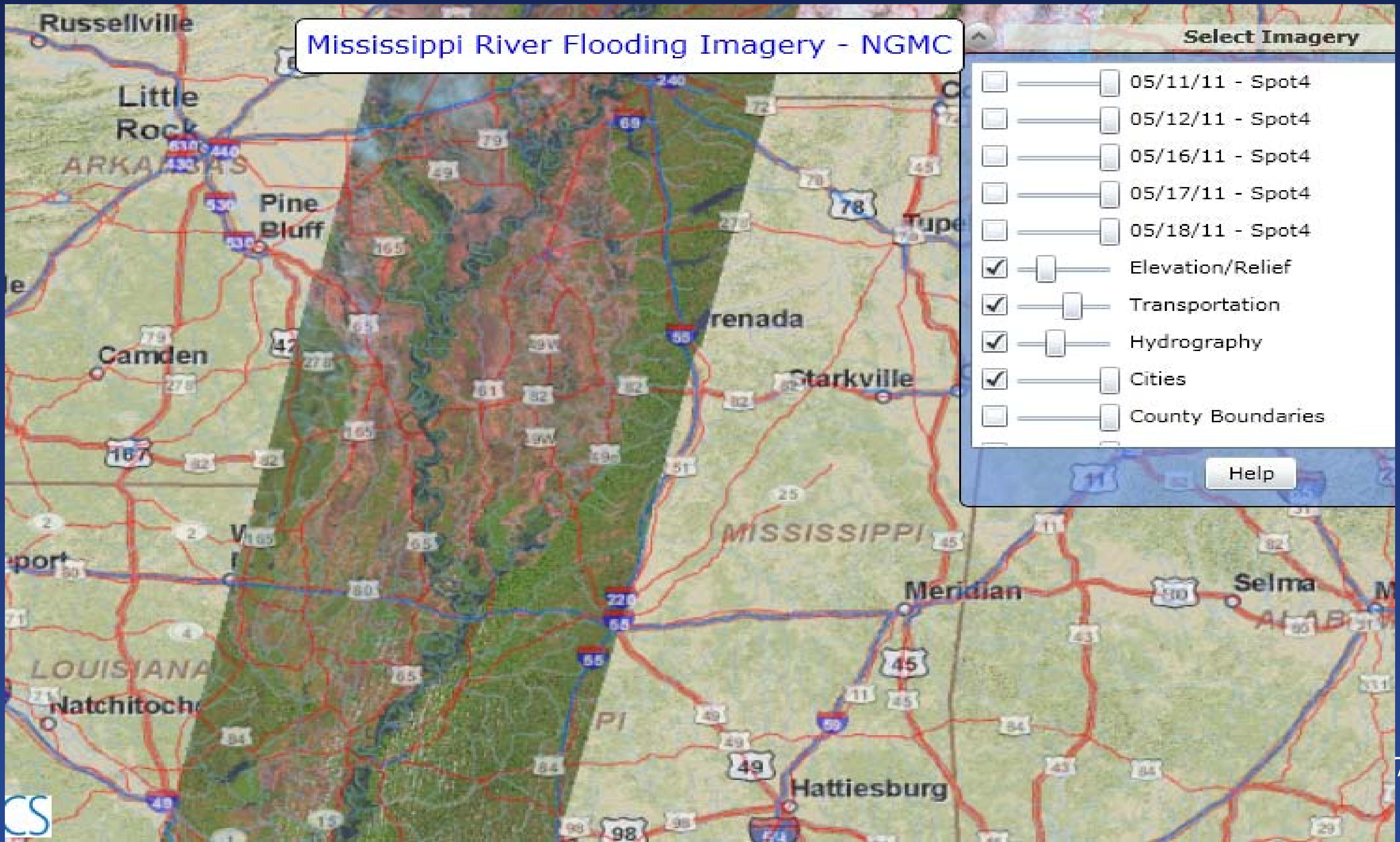
NRCS CDSI EQIP Ranking Mart Soil Attribute Salinity EC_Class



NRCS CDSI EQIP Ranking Mart Soil Attribute Depth to Water Table



Mississippi River Flooding



NGMC Web Services

Slides

NGMC Cache Tile Service

Slides



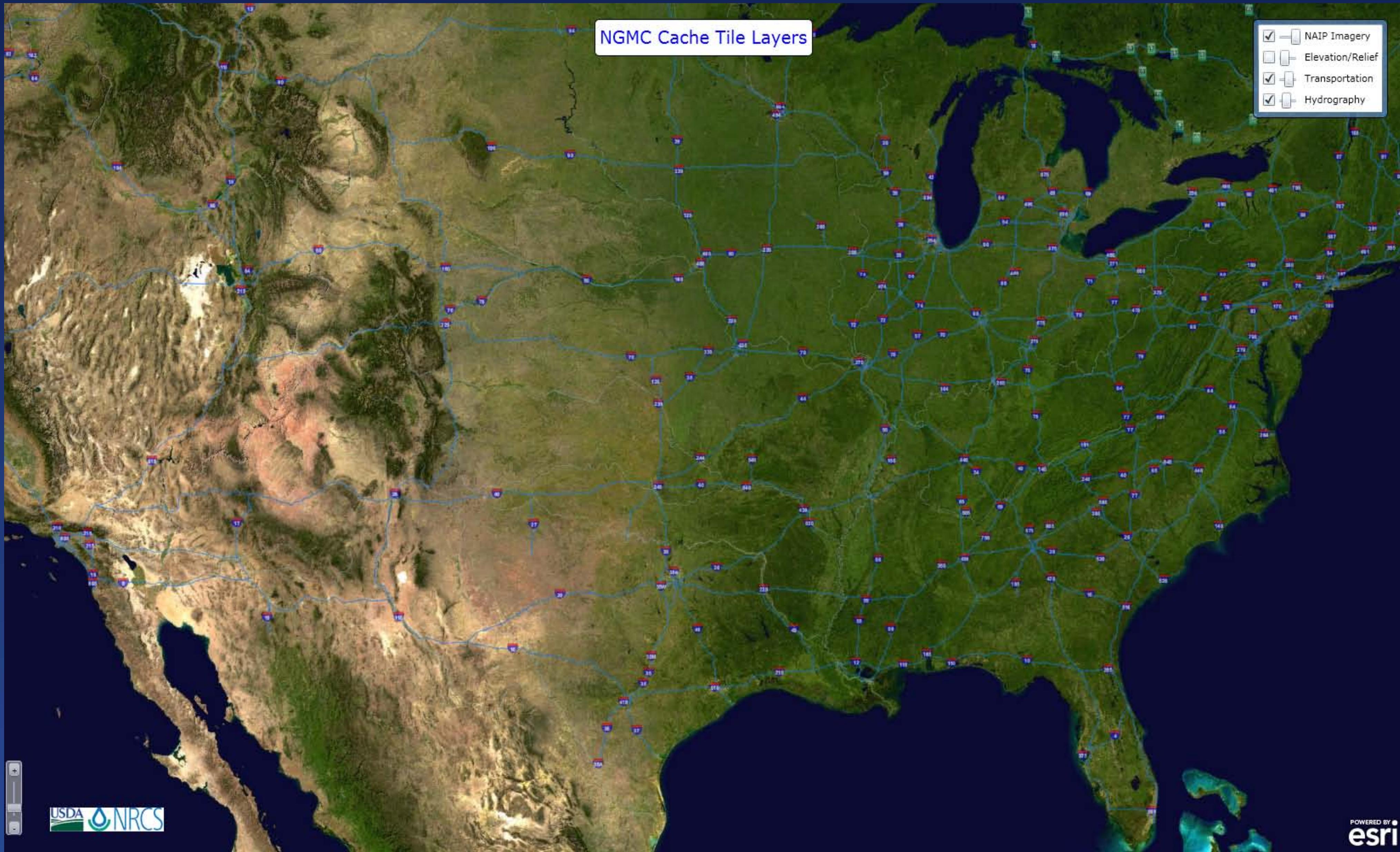
<http://web1.ftw.nrcs.usda.gov/cachetiles/>

The screenshot shows a web browser window displaying a map of the United States. The map includes satellite imagery, roads, and other geographical features. A callout box in the center of the map contains the text "NGMC Cache Tile Layers". To the right of the map is a legend box with four items:

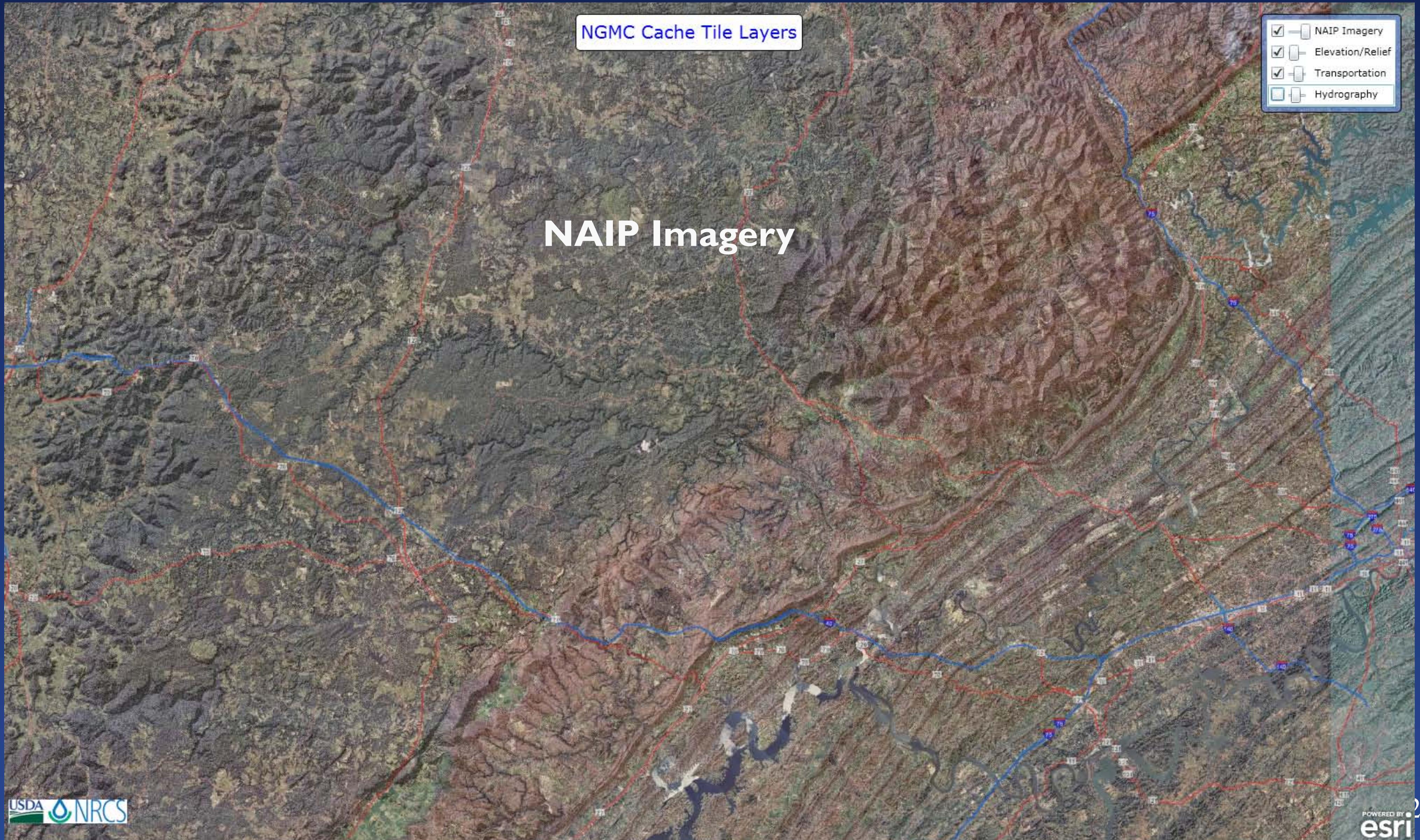
- NAIP Imagery
- Elevation/Relief
- Transportation
- Hydrography

The browser's address bar shows the URL <http://web1.ftw.nrcs.usda.gov/cachetiles/>. The title bar of the browser also displays this URL. The bottom left corner of the map area features the USDA and NRCS logos. The bottom right corner of the entire image has the text "POWERED BY esri" and the number "0".

NGMC Cache Tile Service



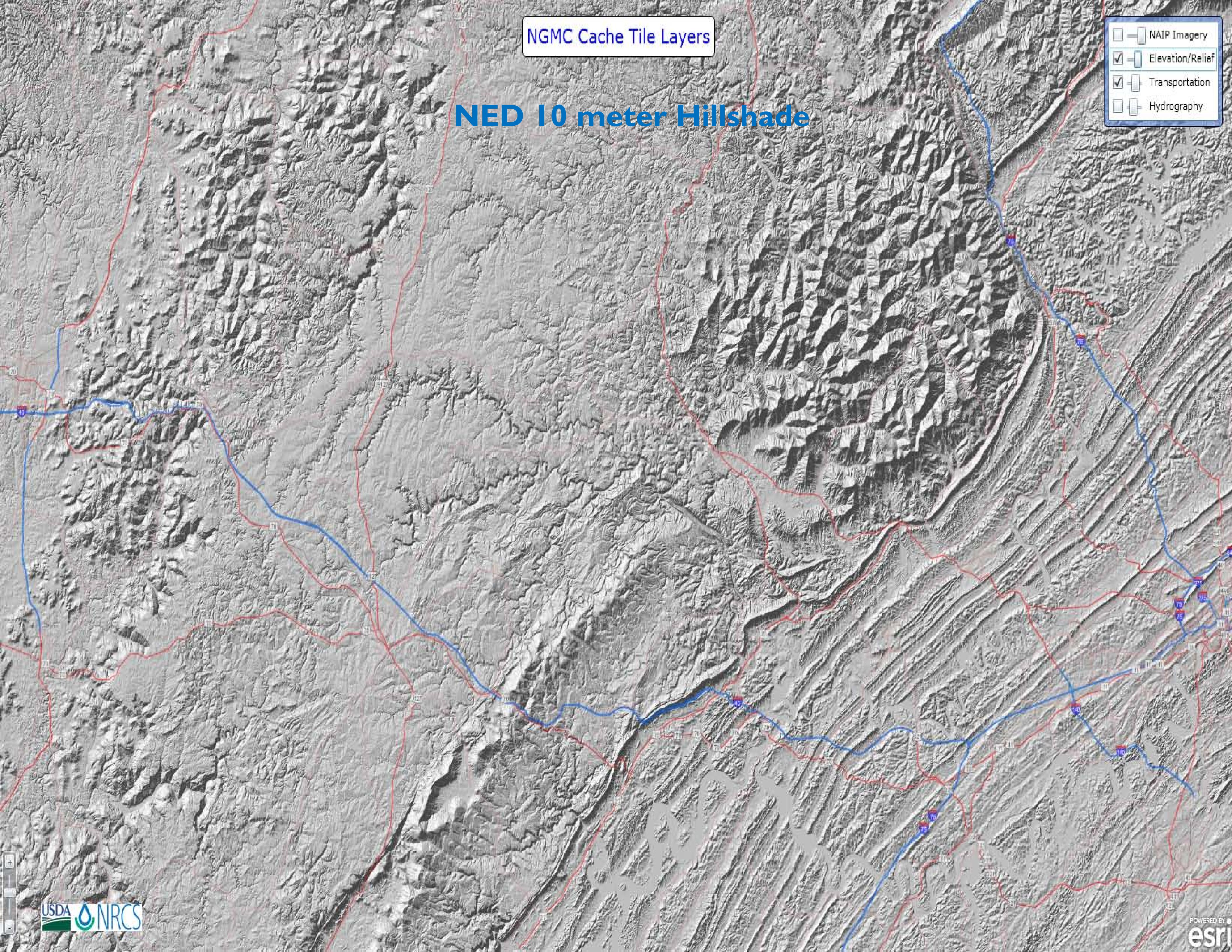
Eastern Oklahoma



NGMC Cache Tile Layers

NED 10 meter Hillshade

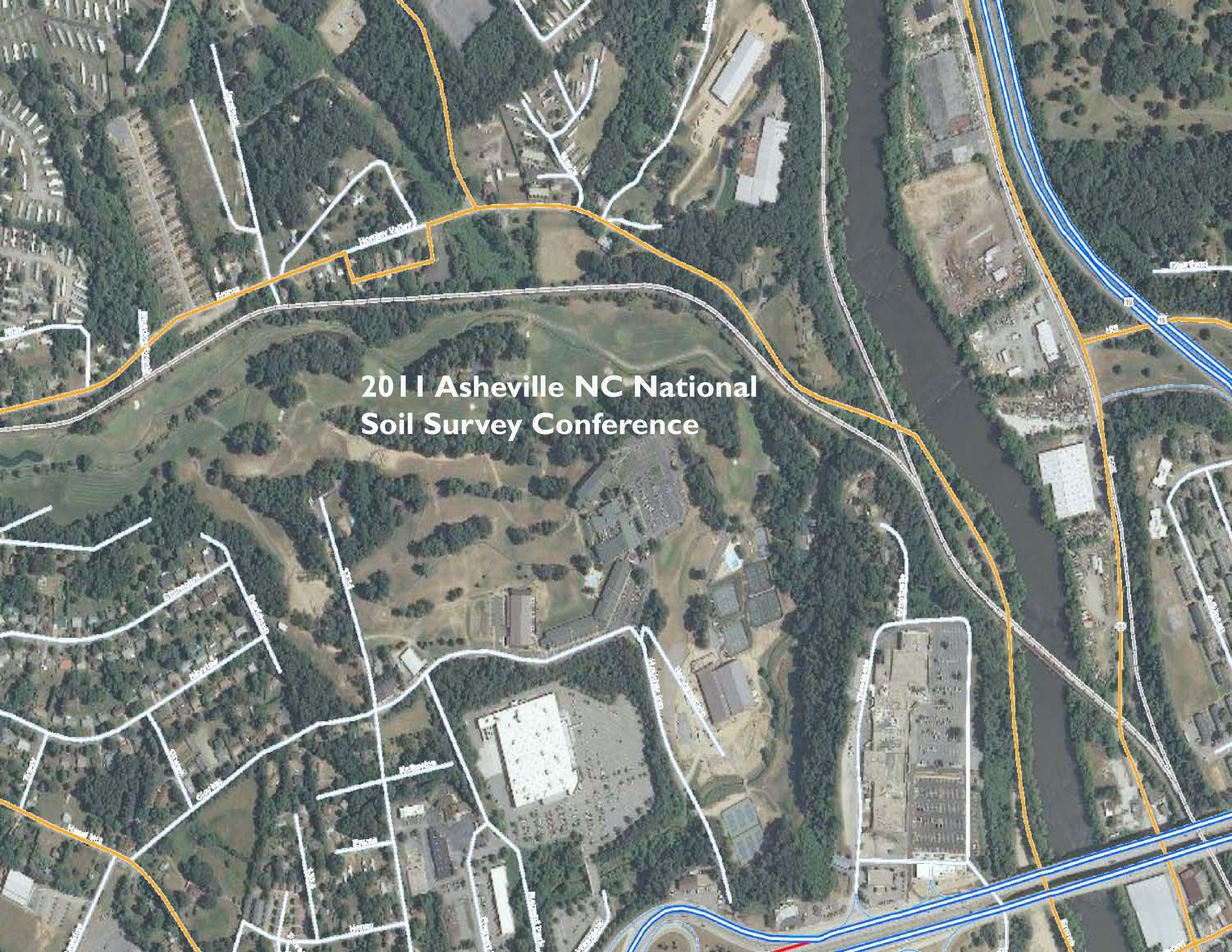
- NAIP Imagery
- Elevation/Relief
- Transportation
- Hydrography



NGMC Cache Tile Layers

Hydrography

- = NAIP Imagery
 - = Elevation/Relief
 - = Transportation
 - = Hydrography



**2011 Asheville NC National
Soil Survey Conference**

National Geospatial Management Center



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NGMC Home Page - <http://www.ncgc.nrcc.usda.gov>