



# Mapping and Data Management



Longleaf Pine  
Stand Dynamics  
Laboratory

Presented by

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School of Forestry and Wildlife Sciences



Alabama Forest Landowners Annual Meeting  
April 6, 2013



*Alabama A&M and  
Auburn Universities*

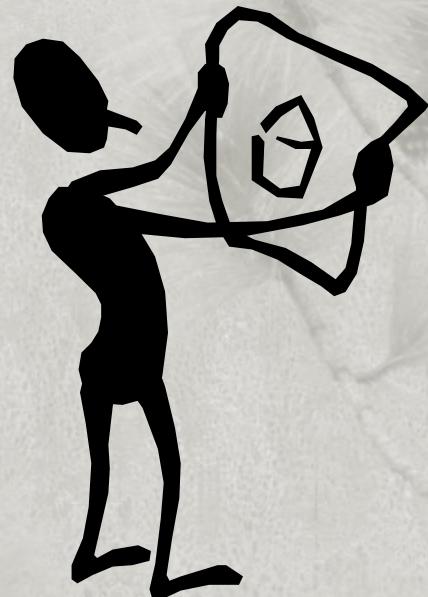
# Spatial Opportunities

- Emerging technology
- Basic navigation
- Identify site and stand locations
- Planning and management activities
- Storing and sharing information
- Tools often available online and free



# Why Are You Interested in Maps?

- Online mapping and spatial resources
  - Simple Monitoring and Planning
  - Natural Resource Management
- Property searches
  - Tax and appraisal information
- Historical information
  - Land patents
  - Survey notes
- Data management and record keeping



# Identify Areas of Interest

- Property boundaries
- Timber stands
- Roads
- Gates
- Streamside Management Zones (SMZs)
- Stream Crossings
- Logging decks and hazards
- Wildlife food plots
- Burn plans
- Pastures
- Hunting leases
- Agroforestry/silvopasture areas

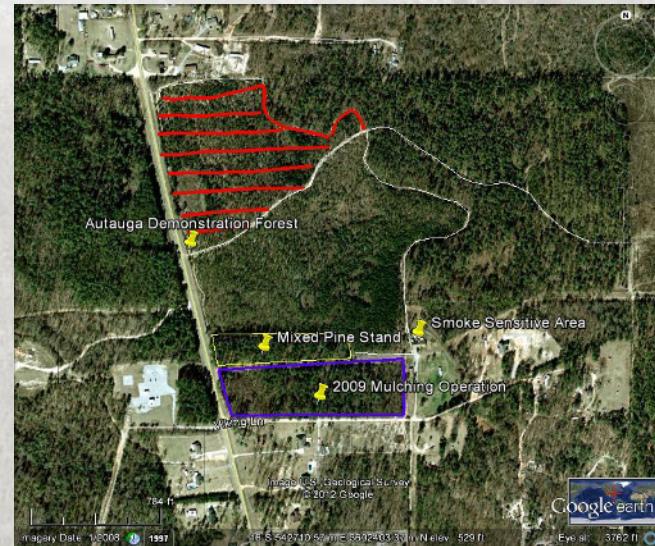
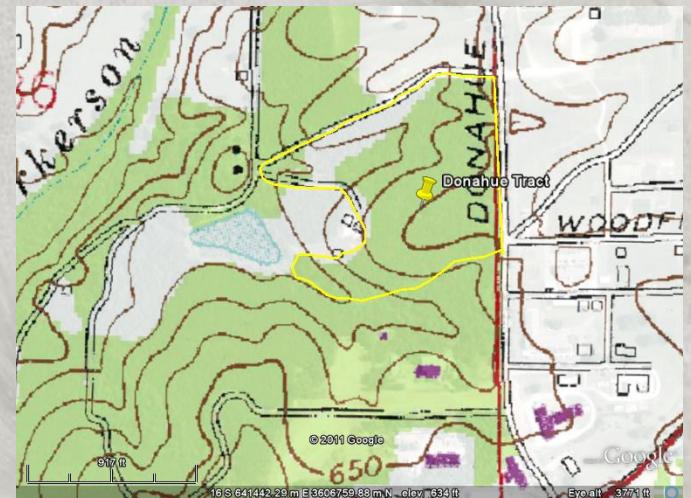


Image US Geological Survey © 2012 Google

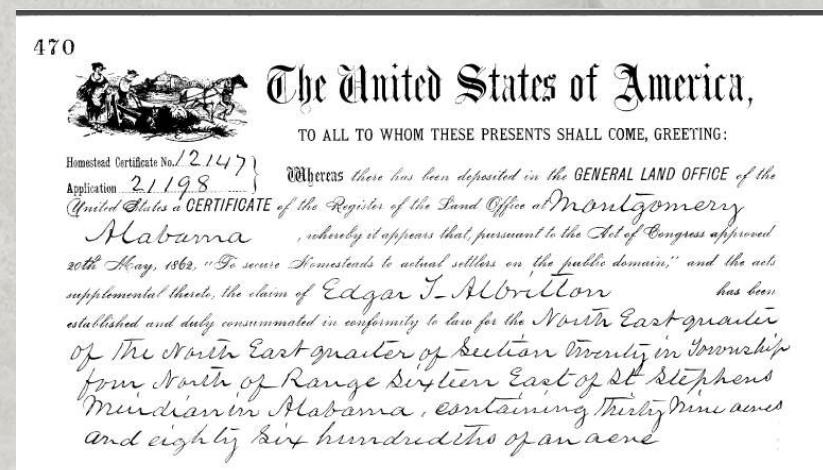
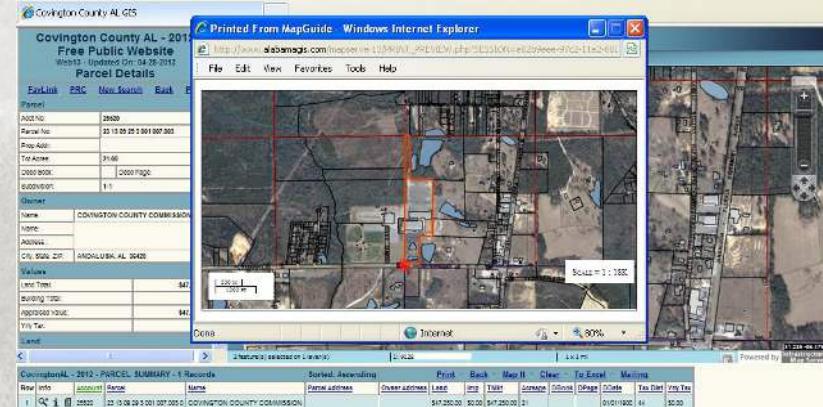
# Basic Types of Maps

- Stand map
- Aerial photography
- Topographic
- Soils information



# Other Types of Information

- Parcel data and tax information
- Historical aerial photographs
- Land patent or surveyors notes



# Mapping Opportunities

- Have you ever been interested in making maps for your property?
- Are you worried it will be too technical or complicated?
- Do you have a computer and internet access?



# Online Mapping and Spatial Resources



AUBURN  
UNIVERSITY

# Mapping Your Land: An Overview for Landowners

Online Mapping and Spatial Resources  
for the Private Forest Landowner



Longleaf Pine  
Stand Dynamics  
Laboratory



AUBURN  
UNIVERSITY  
[www.auburn.edu](http://www.auburn.edu)



# Online Mapping and Spatial Resources for the Private Forest Landowner

- Funding from an Alabama Forests Forever Grant
- 225 copies printed
- See Longleaf Pine Stand Dynamics Lab website:  
<http://www.lpsdl.auburn.edu/>
- Booklet available online at:  
[http://www.lpsdl.auburn.edu/pdfs/MappingBook  
FINAL.pdf](http://www.lpsdl.auburn.edu/pdfs/MappingBook_FINAL.pdf)

# How to Use this Booklet

- Designed for private landowners and conservation professionals
- Provides tutorial information with to help users to make maps, acquire, and store data for an area of interest
- Focus on stand maps, aerial photography, topographic, and soils information
- 5 sections, each with keywords, homepage links, tutorial information, examples, screen-shots, and tips

# Section 1: USDA Natural Resources Conservation Service (NRCS) Web Soil Survey

Web Soil Survey - Windows Internet Explorer

http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

File Edit View Favorites Tools Help

Favorites New Tab (2) Google Web Slice Gallery Suggested Sites New Tab

Web Soil Survey

USDA United States Department of Agriculture Natural Resources Conservation Service

Web Soil Survey

Contact Us Download Soils Data Archived Soil Surveys Soil Survey Status Glossary Preferences Link Logout Help A A A

Area of Interest (AOI) Soil Map Soil Data Explorer Shopping Cart (Free)

Search

Area of Interest

Import AOI

Quick Navigation

Address

State and County

Soil Survey Area

Latitude and Longitude

PLSS (Section, Township, Range)

Bureau of Land Management

Department of Defense

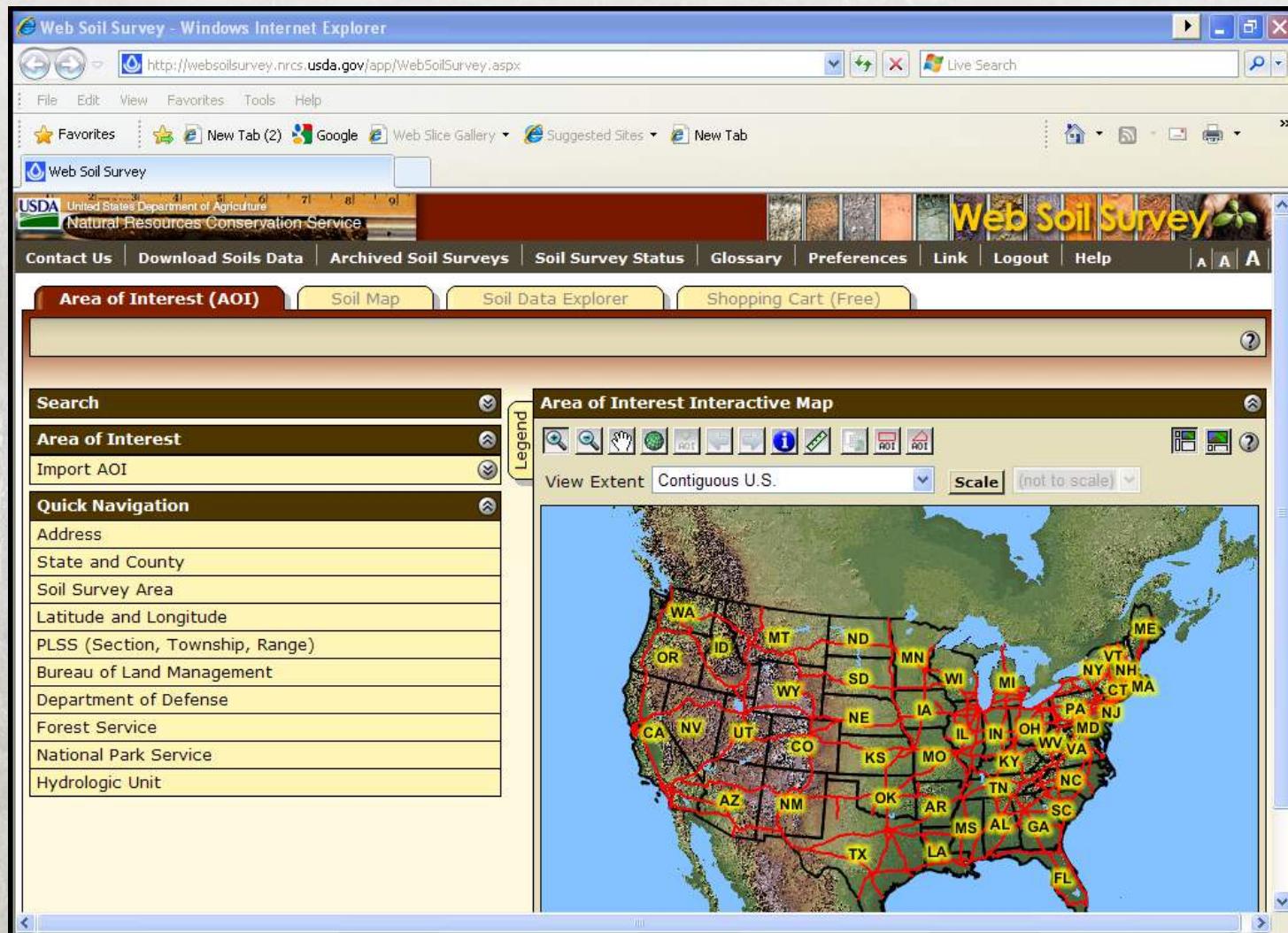
Forest Service

National Park Service

Hydrologic Unit

Area of Interest Interactive Map

View Extent Contiguous U.S. Scale (not to scale)



# Section 1: USDA Natural Resources Conservation Service (NRCS) Web Soil Survey

- Online application
- Locate a piece of property or an area of interest
- Create a boundary for the area of interest
- Display soil information with aerial photographs and/or topographic layers as backgrounds
- Create maps
- Create basic or detailed soil reports



Map Scale: 1:100 if printed on A-size (8.5" x 11") sheet.



0 40 80 120 160 200  
Meters  
0 150 300 600 900  
Feet

Soil Map—Lee County, Alabama

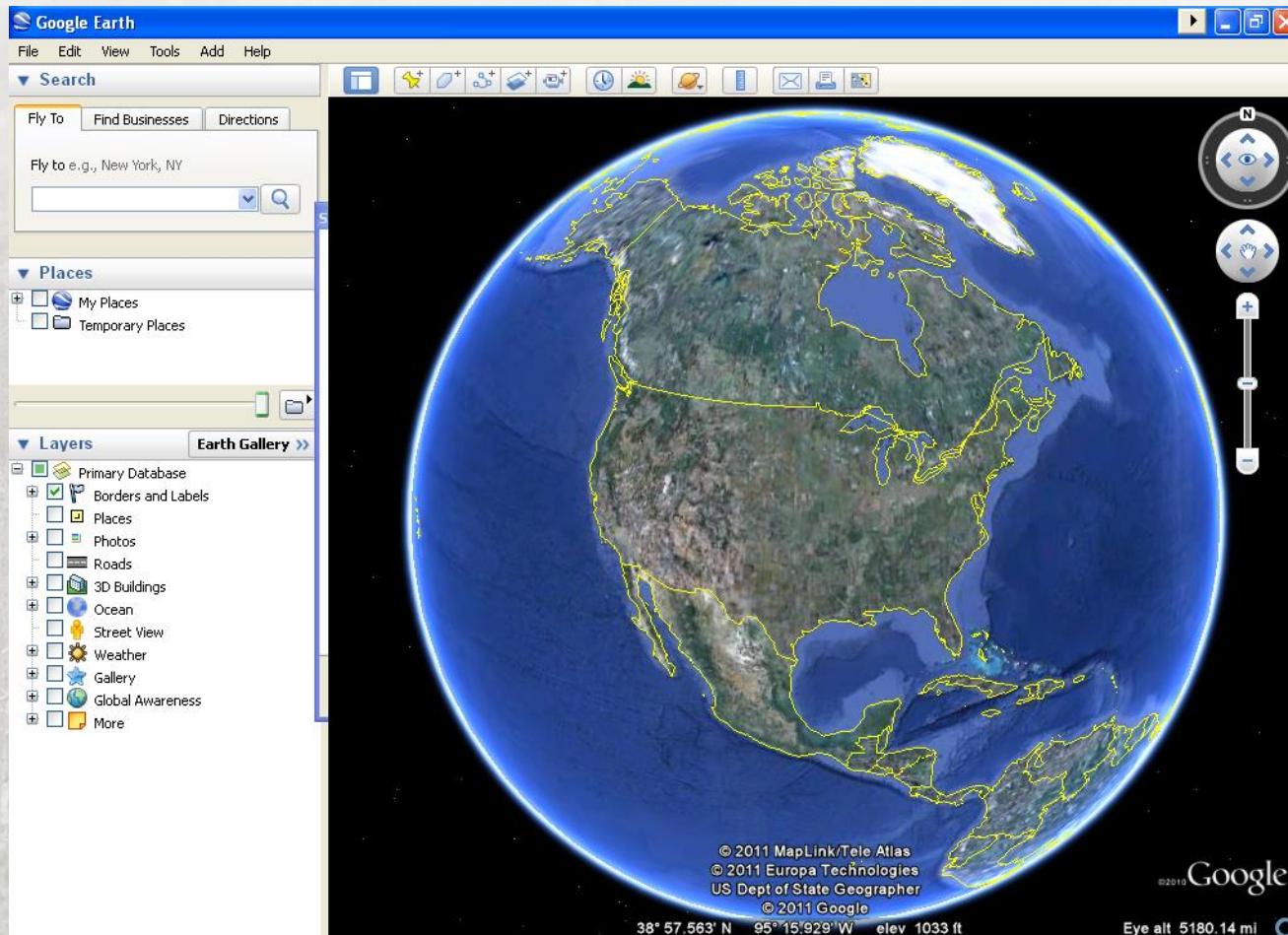
Donahue Tract

## Map Unit Legend

Lee County, Alabama (AL001)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
24	Maryon loamy sand, 1 to 6 percent slopes	17.6	79.8%
25	Maryon loamy sand, 6 to 10 percent slopes	4.5	20.2%
Totals for Area of Interest			22.1 100.0%

Natural Resources  
Conservation ServiceWeb Soil Survey  
National Cooperative Soil Survey5/24/2011  
Page 1 of 3

# Section 2: Google Earth



© 2011 MapLink/Tele Atlas, © 2011 Europa Technologies,  
US Dept of State Geographer, © 2011 Google

# Section 2: Google Earth

- Requires downloading a program
- Locate a piece of property or area of interest
- Store location and description information
- Create maps
- Opportunities for improved communication

# Section 2: Google Earth

## Developing a Database

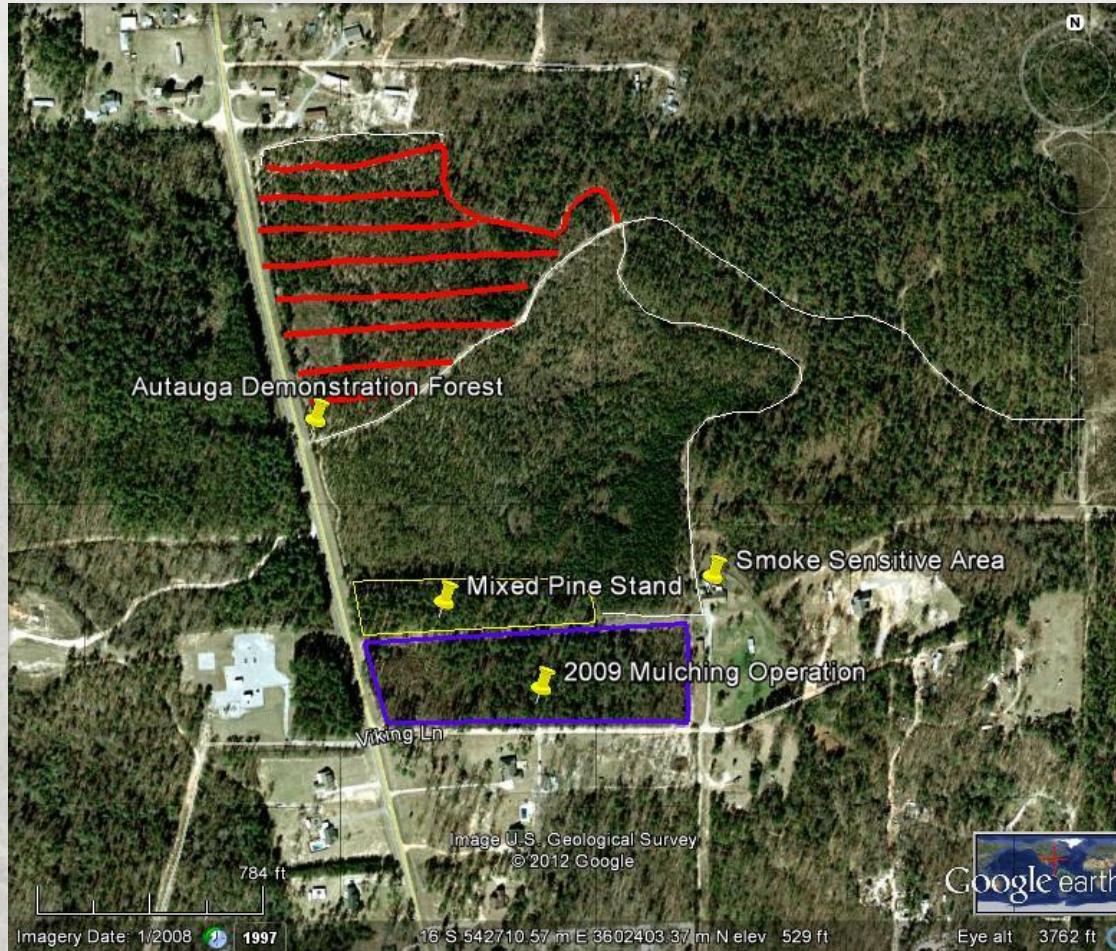


Image US Geological Survey © 2012 Google

# Section 3: Alabama Historic Aerial Photo Archive

**Aerial Photography of Alabama - Windows Internet Explorer**

http://alabamamaps.ua.edu/aerials/index.html

File Edit View Favorites Tools Help

Favorites New Tab Google Web Slice Gallery Suggested Sites

Aerial Photography of Alabama

Home | Help | Graphics Tutorial | Aerial Photography | Historical Maps | Contemporary Maps | About this site | Feedback

**Air Photo Archive**

<http://alabamamaps.ua.edu>

Autauga  
Baldwin  
Barbour  
Bibb  
Blount  
Bullock  
Butler  
Calhoun  
Chambers  
Cherokee  
Chilton  
Choctaw  
Clarke  
Clay  
Cleburne  
Coffee  
Colbert  
Conecuh  
Coosa  
Covington  
Crenshaw  
Cullman  
Dallas  
DeKalb  
Elmore  
Escambia  
Etowah  
Fayette  
Franklin  
Geneva  
Greene  
Hale  
Henry  
Houston  
Jackson  
Jefferson  
Lamar  
Lauderdale  
Lawrence  
Lee  
Limestone  
Lowndes  
Macon  
Madison  
Marengo  
Marion  
Marshall  
Mobile  
Monroe  
Montgomery  
Morgan  
Perry  
Pickens  
Pike  
Randolph  
Russell  
St. Clair  
Shelby  
Sumter  
Talladega  
Tallapoosa  
Tuscaloosa  
Walker  
Washington  
Wilcox  
Winston  
Dale

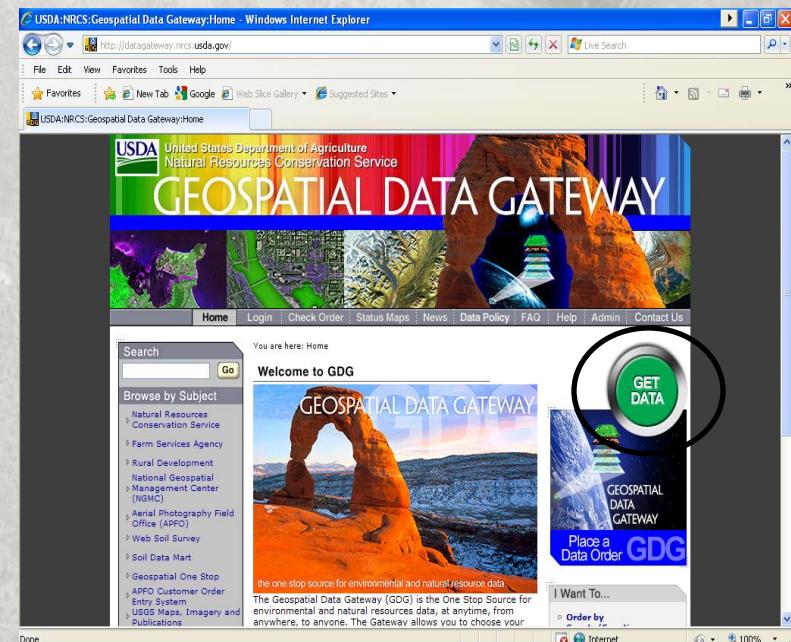
## Section 3: Alabama Historic Aerial Photo Archive

- Online application
- View historical aerial photographs
- Order digital copies



# Section 4: NRCS Geospatial Data Gateway

- Online application to search for data
- Requires a Geographic Information System (GIS) or viewer
- For more advanced users
- Search for data (examples include aerial imagery, topographic maps, elevation information, soils, land use land cover, geology, climate data, etc.)



# Section 5: USDA National Agroforestry Center (NAC) CanVis

- Requires downloading a program or requesting a CD or DVD
- Create visual simulations of potential management options using digital photographs
- Excellent online tutorials and help menus



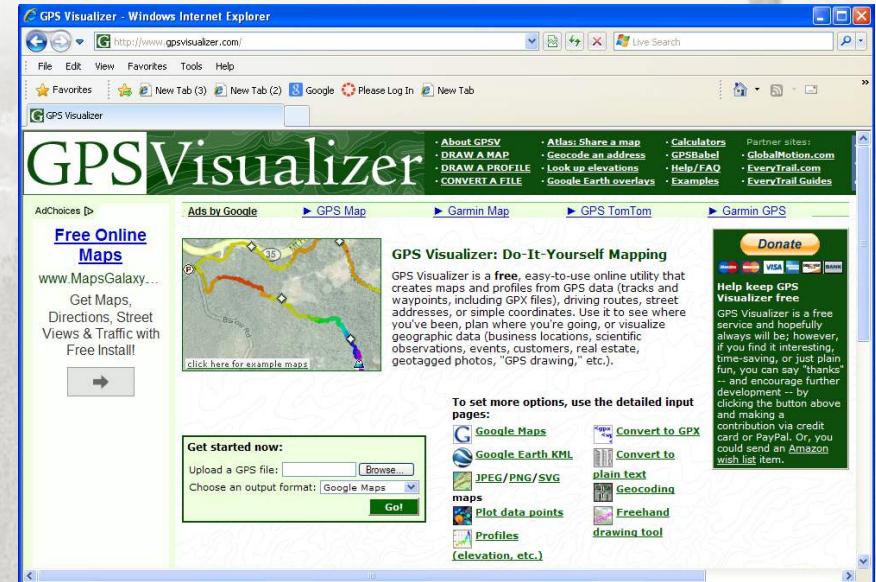
# CanVis Examples



<http://www.unl.edu/nac/simulation/examples.htm>

# Plenty of Additional Options

- Global Positioning System (GPS) Visualizer
- DRN GARMIN/DNR GPS
- Forest\*A\*Syst
- Use your favorite search engine



# Property Searches and Information

# Property Searches and Tax Information

Alabama Assessor and Property Tax Records Search ...

Home Free Searches Blog Tools

 Alabama Assessor and Property Tax Records Directory 

Google Custom Search  Page 1 [>> Next Page](#)

Search public records by Alabama county  Search public records by Alabama town or zip code  Search public records by category  Search public records in other states

- Choose an Alabama County  - Choose a Public Record Category  - Choose a State--

## About Assessor and Property Tax Records in Alabama

Each of Alabama's counties contains an Assessor office which is responsible for real and personal property tax records. Land and land improvements are considered real property while mobile property is classified as personal property.

Many counties maintain an online searchable database to find property tax and assessment records. One can typically search using an interactive map, by parcel number, address, or owner name. Counties without an online database can be contacted via phone, fax, mail, or in person.

### Advertising

[Search AL Public Records](#)

[AL Marriage Records](#)

[AL Divorce Records](#)

[AL Criminal Records](#)

[AL Death Records](#)

### Public Records Search

Advertising

First Name:

Last Name:

State:

Alabama

Select Record Type:  Public  Background Checks  Marriage  Divorce  Criminal  Birth  Death  Vital

# Lee County, AL Online Assessment and Appraisal Record Search

Lee County

ALABAMA

<http://www.leeccountyrevenuecommissioner.com/>

## Lee County, Alabama

Search Page

Welcome to the Lee County, Alabama online Assessment and Appraisal record search. This search engine provides property tax and appraisal information of record in Lee County, Alabama. This information is updated frequently for the current tax year, but may not reflect actual, up-to-date courthouse records.

To begin your search, choose the link below.

[Assessment and Real Property Appraisal](#)

[Current Year Real Estate Tax Info](#)

[Lee County Property Maps](#)

[Pay Property Tax Online](#)



Another Service From:  
**Oline W. Price, ACTA**  
Revenue Commissioner

# Lee County, AL Online GIS Website

## Flagship GIS, Inc.

Lee County GIS

LeeWeb

Map Tools Selection Tools Search Options Reports Overlays Flagship Tools

Print · Zoom · Back

43-05-07-26-0-000-017.000

St Addr: 0

Pin: 004972 Account: 823

Tax Dist: Auburn Exemption:

Subdiv: NA

NbrHood: AUBURN UNIVERSTIY

Ownership

AUBURN UNIVERSITY  
AUBURN UNIVERSITY

AUBURN, AL 36849

Deed: Book: 0000 Page: 0000000

Prev:

Appraised Value Information

Building	\$0.00
Misc Improvements	\$0.00

1 : 9,835 5,908 x 2,493 (ft)

Row	Tools	Pin	Parcel	Name	Location	TL Bldg	TL Imp	TL Land	TL Mkt	
1	Q+ i	004971	05-07-25-0-000-002.001	AUBURN UNIVERSITY	0	\$0.00	\$0.00	\$2,810.00	\$2,810.00	1
2	Q+ i	004097	05-07-25-0-000-003.000	AUBURN UNIVERSITY	0 AL HWY 147 N	\$0.00	\$0.00	\$2,475,000.00	\$2,475,000.00	0
3	Q+ i	004972	05-07-26-0-000-017.000	AUBURN UNIVERSITY	0	\$0.00	\$0.00	\$357,500.00	\$357,500.00	0
4	Q+ i	004098	05-07-35-0-000-001.000	AUBURN UNIVERSITY	0 LEE RD 0085	\$0.00	\$0.00	\$2,618,550.00	\$2,618,550.00	0
5	Q+ i	004099	05-07-36-0-000-002.000	AUBURN UNIVERSITY	0 US HWY 280 W	\$0.00	\$0.00	\$2,811,600.00	\$2,811,600.00	0
6	Q+ i	004973	08-01-01-0-000-001.000	AUBURN UNIVERSITY	0 N & S OF CO RD 54	\$0.00	\$0.00	\$2,182,500.00	\$2,182,500.00	0
7	Q+ i	004974	08-01-02-1-000-001.000	AUBURN UNIVERSITY	0 LEE RD 0091	\$0.00	\$0.00	\$235,130.00	\$235,130.00	0

Map showing a satellite view of a property in Auburn, AL. The property is highlighted with a pink border and contains several green and blue boundary lines. A red buffer zone is drawn around the property. A blue line with arrows indicates a road or path. The map includes a scale bar of 1:9,835 and dimensions of 5,908 x 2,493 (ft).

# US Dept of the Interior

# Bureau of Land Management

# General Land Office Records

- Online application
- Information about:
  - Land Patents
  - Survey Plats and Field Notes
  - Land Status Records
  - New Mapping Feature\*



# Search Documents by Location

Search - BLM GLO Records - Windows Internet Explorer

http://www.glorecords.blm.gov/search/default.aspx#searchTabIndex=1

File Edit View Favorites Tools Help

Favorites New Tab (3) New Tab (2) Google Please Log In New Tab

Search - BLM GLO Records

Search Documents Reference Center Support Shopping Cart

Search Documents

Search Documents By Type Search Documents By Location Search Documents By Identifier

Mapped Townships

	Land Description	Search
<input checked="" type="checkbox"/>	ALABAMA, St Stephens Twp 19.0N Rng 27.0E	Search

To search for documents by location:

1. Right-click on the map location.
2. Select Map Township.
  - The township will be drawn on the map.
  - The township will appear in the panel above.
3. Click Search next to the desired township.

CHAMBERS  
LKE  
Opelika  
US-280  
Salem  
Auburn University  
E University DR

Map showing the location of Opelika, Alabama, with a township boundary highlighted in orange. The map also shows roads, rivers, and other geographical features. The URL in the address bar is http://www.glorecords.blm.gov/search/default.aspx#searchTabIndex=1.

# Example Land Patent for Lee County

Search Results - BLM GLO Records - Windows Internet Explorer  
http://www.glorecords.blm.gov/results/default.aspx?searchCriteria=type=patent&st=AL&cty=081&sp=true

File Edit View Favorites Tools Help  
Favorites New Tab (3) New Tab (2) Google Please Log In ArcGIS 10 Error no editable ... Arcview GIS and a UTM to S...  
Search Results - BLM GLO Records

U.S. DEPARTMENT OF THE INTERIOR PRIVATE CLAIMS BUREAU OF LAND MANAGEMENT General Land Office Records  
Search Documents Reference Center Support Shopping Cart  
Search Documents Results List  
Printer Friendly

Patents 1 ... 2 3 4 5 6 ... 100 Next  
Note: Your list may be incomplete due to an administrative limit of 2000 results. For suggestions on refining your search, [click here](#).

Image	Accession	Names	Date	Doc #	State	Meridian	Twp - Rng	Aliquots	Sec. #	County
	AL5010_247	ABERCROMBIE, CHARLES	7/29/1839	247	AL	St Stephens	018N - 026E	N½	17	Lee
	AL4370_017	ABERCROMBIE, JAMES	6/1/1849	9547	AL	St Stephens	017N - 029E	SE¼NE¼	12	Lee
	AL5030_137	ADAIR, JOHN D	12/16/1839	19	AL	St Stephens	018N - 028E	N½	2	Lee
	MY-0617-043	ADAMS, ELDRIDGE	6/27/1907	14239	AL	St Stephens	019N - 028E	SW¼SW¼	10	Lee
	AL4440_323	ADAMS, ELDRIDGE	3/1/1858	14042	AL	St Stephens	019N - 028E	E½SW¼	10	Lee
	AL1370_379	ADAMS, SAMUEL C	4/8/1837	2481	AL	St Stephens	017N - 027E	SW½SE¼	21	Lee
	AL1370_380	ADAMS, SAMUEL C	4/8/1837	2482	AL	St Stephens	017N - 027E	SE¼SE¼	21	Lee
	AL4250_067	ADAMS, SAMUEL C	4/10/1837	3679	AL	St Stephens	017N - 027E	E½NE¼	21	Lee

Search Results - BLM GLO Records - Windows Internet Explorer  
http://www.glorecords.blm.gov/default.aspx?accession=AL4370\_017&docClass=STA&sic=11

Please Log In ArcGIS 10 Error no editable ... Arcview GIS and a UTM to S...

Information on [certified copies](#). You can decide later whether or not to purchase the documents in your cart.

Comment Share

58.8%

THE UNITED STATES OF AMERICA, *ll*  
CERTIFICATE  
547.  
To all to whom these Presents shall come, Greeting:  
WHEREAS James Abercrombie of Russell County Alabama

has deposited in the GENERAL LAND OFFICE of the United States, a Certificate of the REGISTER OF THE LAND OFFICE at Montgomery whereby it appears that full payment has been made by the said James Abercrombie according to the provisions of the Act of Congress of the 24th of April, 1820, entitled "An act making further provision for the sale of the Public Lands," for the South East quarter of the North East quarter of section twelve in Township seventeen of Range twenty-nine, East, in the District of Lanes Subject to Sale at Montgomery, Alabama containing forty acres and twelve and a half hundredths of an Acre

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# Data Management

# Data Management and Record Keeping

- Can be very overwhelming!
- Definitely time consuming
- Spending time early in the process can help you in the long run (entropy!)
- Planning for the future

# Data Management and Record Keeping

- Determining information needs
  - Questions to answer
  - File types
  - Conversions
- Organization
  - Paper and digital storage
  - Linking data
  - Backup data
  - Security
  - Planning for the future



# Breakout Session

- Presentation and discussion topics
  - Online mapping applications and programs
  - Tax Assessor and Alabama GIS
  - US Dept of the Interior BLM Land Record Searches
  - Data Management
- Handouts
  - Copies of the Mapping Booklet
  - Handout of Links and Keywords

# Questions?

