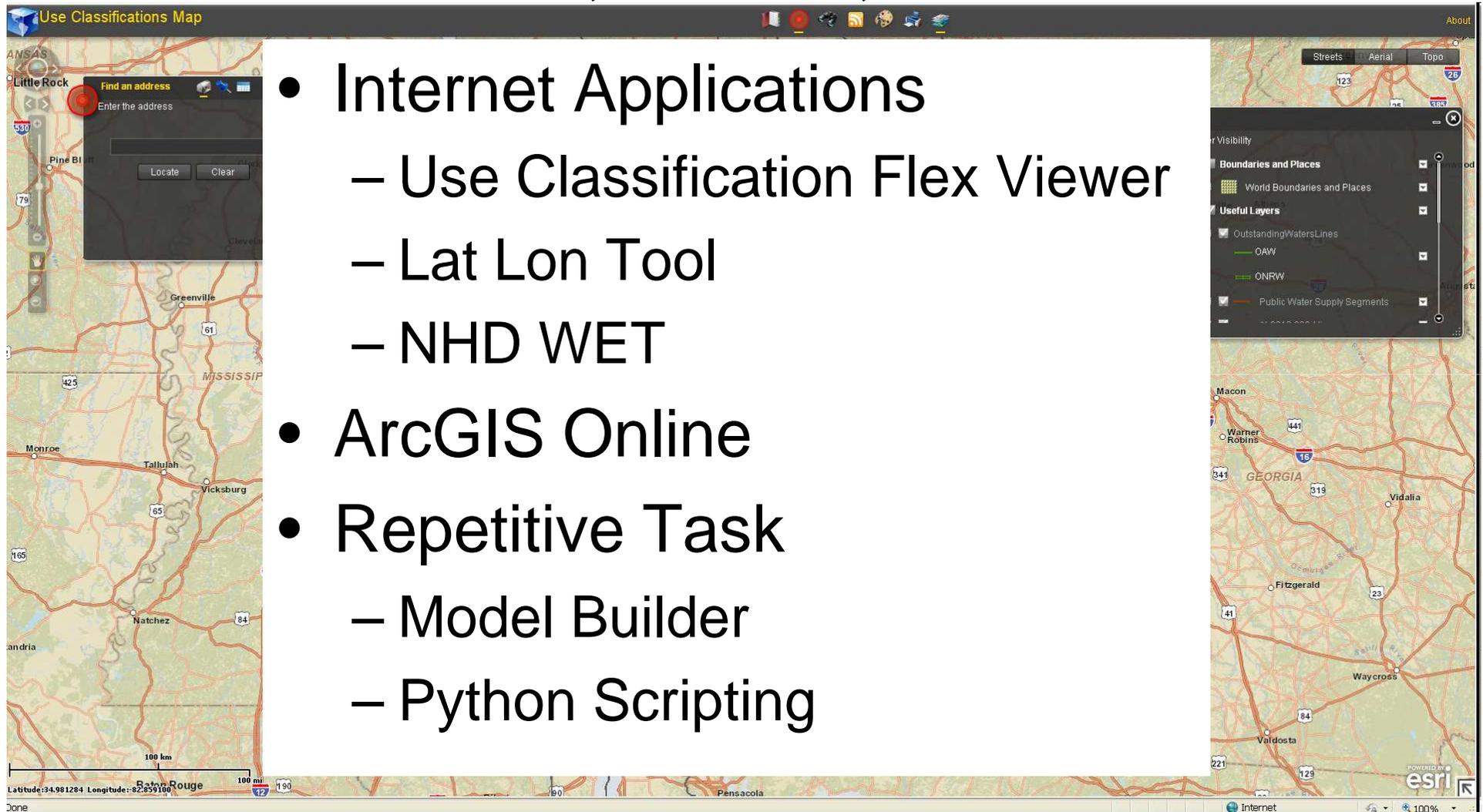




GIS: A Fluid Tool for Water Resource Management

By
Lynn Ford
ADEM

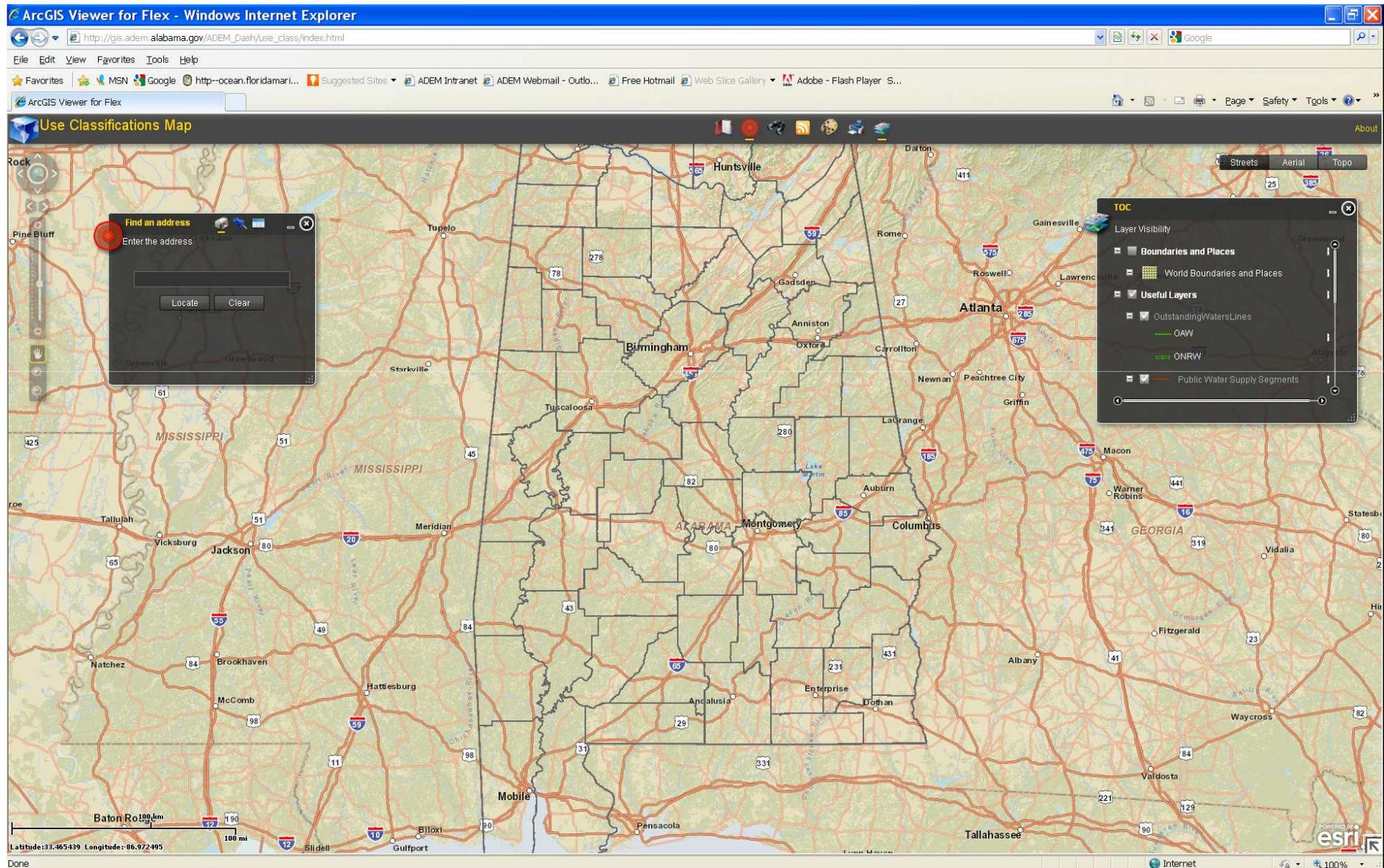
Tools, Tools, Tools



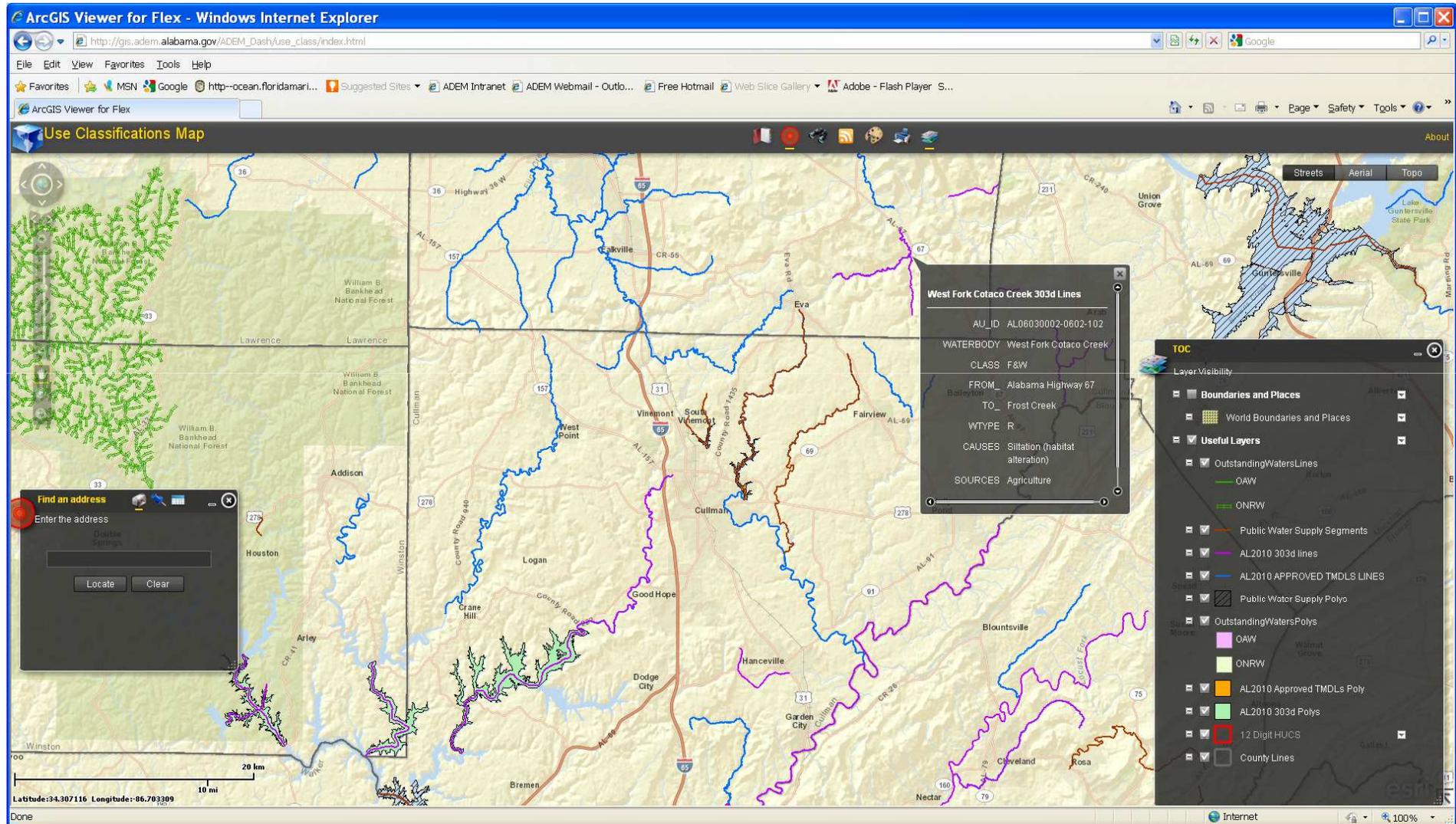
The screenshot displays the ArcGIS Online interface. On the left, a search panel titled "Find an address" is open, showing a search bar and "Locate" and "Clear" buttons. The main map area shows a region in the Mississippi Delta, with cities like Little Rock, Greenville, and Vicksburg visible. On the right, a "Useful Layers" panel is open, showing layers such as "World Boundaries and Places", "Outstanding Waters Lines", "OAW", "ONRW", and "Public Water Supply Segments". The map is styled with a "Topo" theme. The bottom of the interface shows the Esri logo and a "POWERED BY esri" watermark.

- Internet Applications
 - Use Classification Flex Viewer
 - Lat Lon Tool
 - NHD WET
- ArcGIS Online
- Repetitive Task
 - Model Builder
 - Python Scripting

ADEM Use Classification Map



ADEM Use Classification Map



Attributes

The screenshot displays the ArcGIS Viewer for Flex interface within a Windows Internet Explorer browser. The browser's address bar shows the URL `http://gis.adem.alabama.gov/ADEM_Dash/use_class/index.html`. The map area shows a topographic view of a region in Alabama, with various water bodies and land parcels. A popup window is open over a specific feature, displaying the following attributes:

Attribute	Value
AU_ID	AL03160110-0505-102
WATERBODY	Ryan Creek
CLASS	S/F&W
FROM	Coon Creek
TO	Rock Creek
WTYPE	L
CAUSES	Metals (Mercury)
SOURCES	Atmospheric deposition

Below the popup, a 'Zoom to' button is visible. On the right side of the map, the Table of Contents (TOC) panel is open, showing a list of layers with checkboxes for visibility. The layers include:

- Boundaries and Places
 - World Boundaries and Places
- Useful Layers
 - OutstandingWatersLines
 - OAW
 - ONRW
 - Public Water Supply Segments
 - AL2010 303d lines
 - AL2010 APPROVED TMDLS LINES
 - Public Water Supply Poly
 - OutstandingWatersPolys
 - OAW
 - ONRW
 - AL2010 Approved TMDLS Poly
 - AL2010 303d Polys
 - 12 Digit HUCS
 - County Lines

The interface also includes a search box on the left with the text 'Find an address' and 'Enter the address', and a scale bar at the bottom left showing 20 km and 10 mi. The status bar at the bottom indicates 'Done' and 'Internet'.

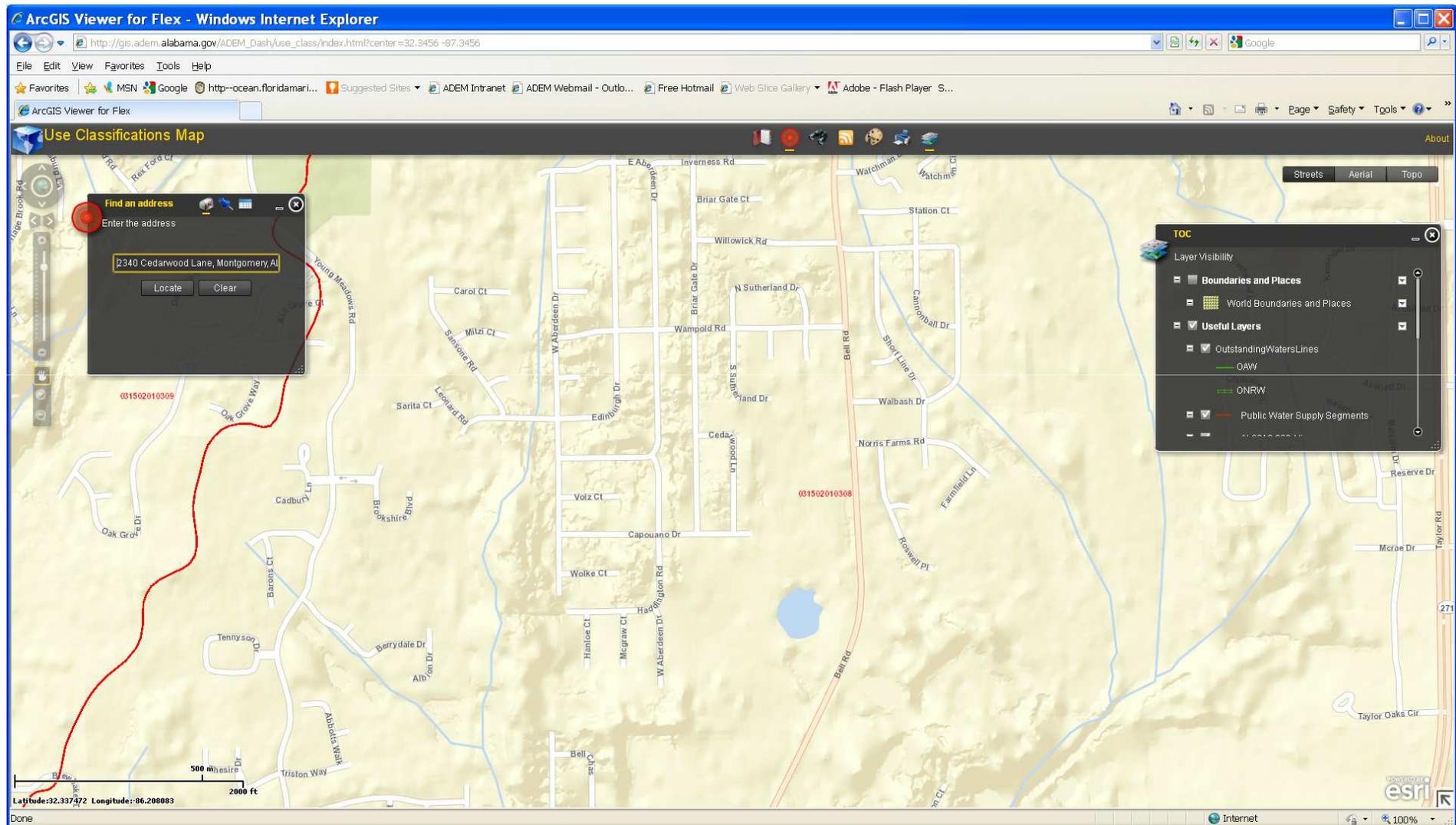
Tools

The screenshot shows the ArcGIS Viewer for Flex interface within a Windows Internet Explorer browser. The browser's address bar displays the URL: `http://gis.adem.alabama.gov/ADEM_Dash/use_class/index.html`. The browser's menu bar includes File, Edit, View, Favorites, Tools, and Help. The browser's toolbar shows various icons for navigation and search. The main content area displays a map titled "Use Classifications Map". The map shows a geographic area with various layers, including boundaries, water features, and roads. A "Find an address" dialog box is open on the left side of the map, and a "TOC" (Table of Contents) panel is open on the right side. The TOC panel lists the following layers:

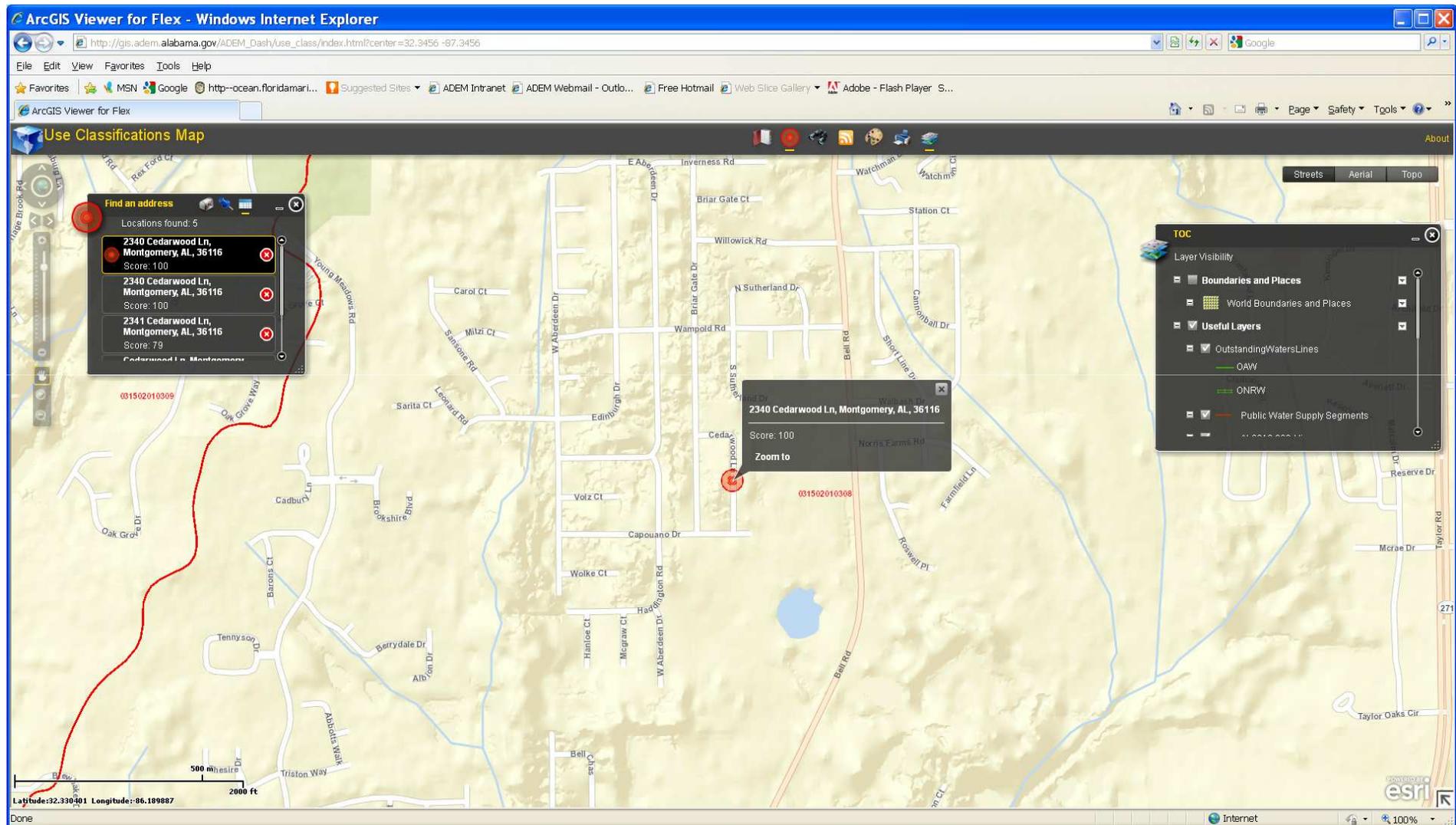
- Boundaries and Places
 - World Boundaries and Places
- Useful Layers
 - OutstandingWatersLines
 - OAW
 - ONRW
 - Public Water Supply Segments
 - AL2010 303d lines
 - AL2010 APPROVED TMDLS LINES
 - Public Water Supply Poly
 - OutstandingWatersPolys
 - OAW
 - ONRW
 - AL2010 Approved TMDLS Poly
 - AL2010 303d Polys
 - 12 Digit HUCS
 - County Lines

The map also includes a "Draw and Measure" tool, a "Find an address" dialog box, and a "TOC" panel. The browser's status bar shows "Done" and "Internet".

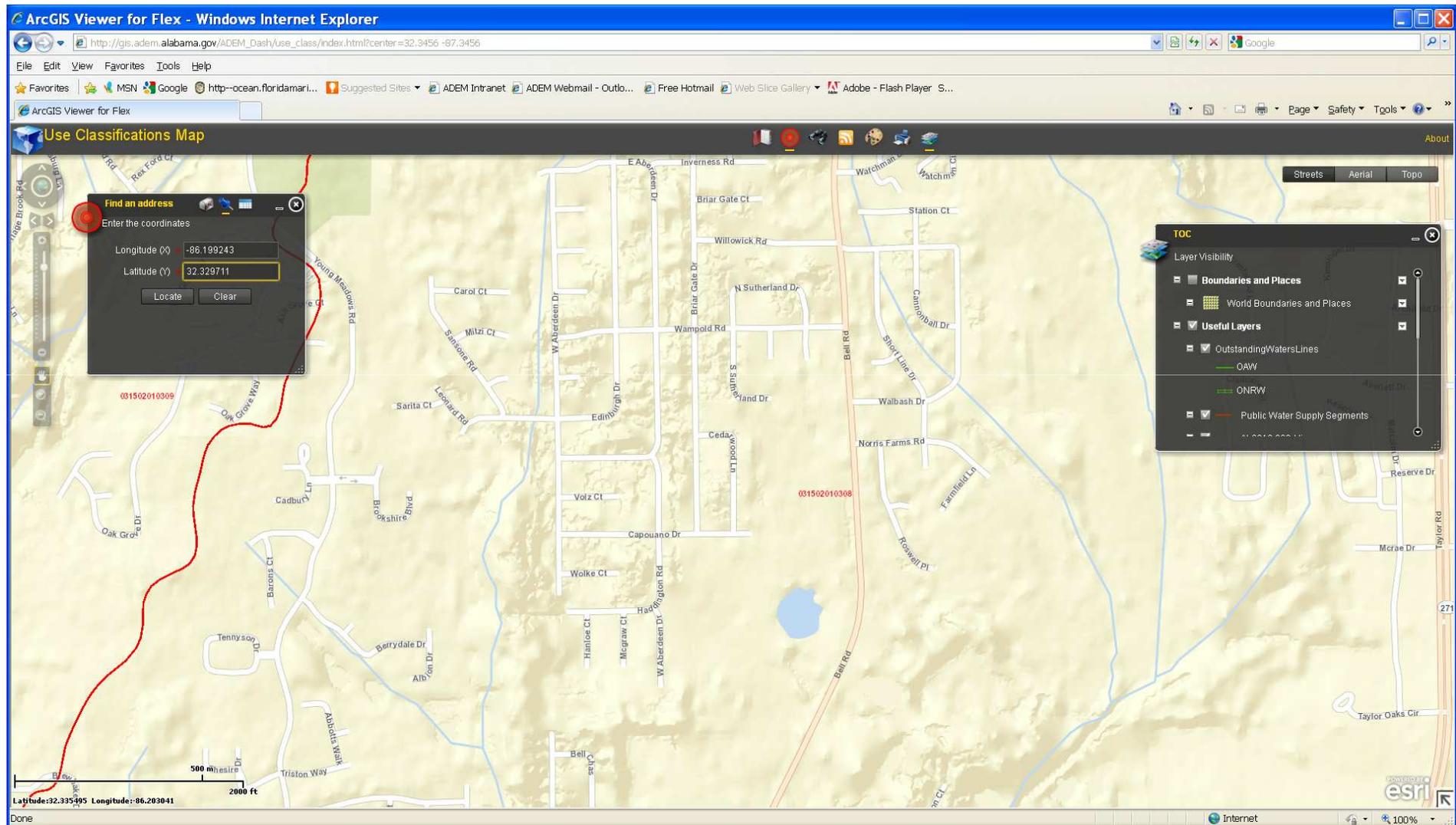
Find Location Tools - Address



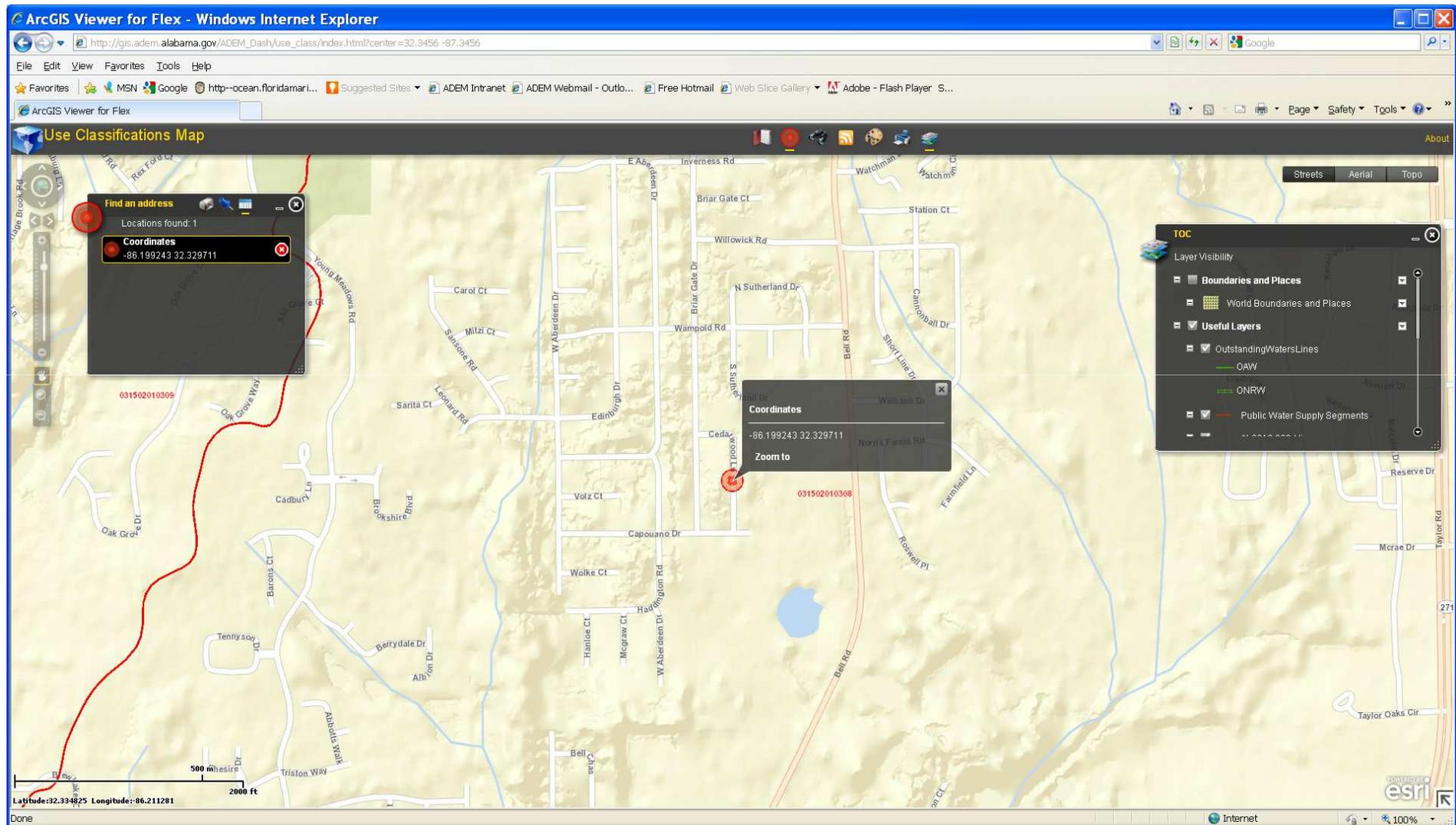
Find Location Tools - Address



Find Location Tools - Lat & Lon



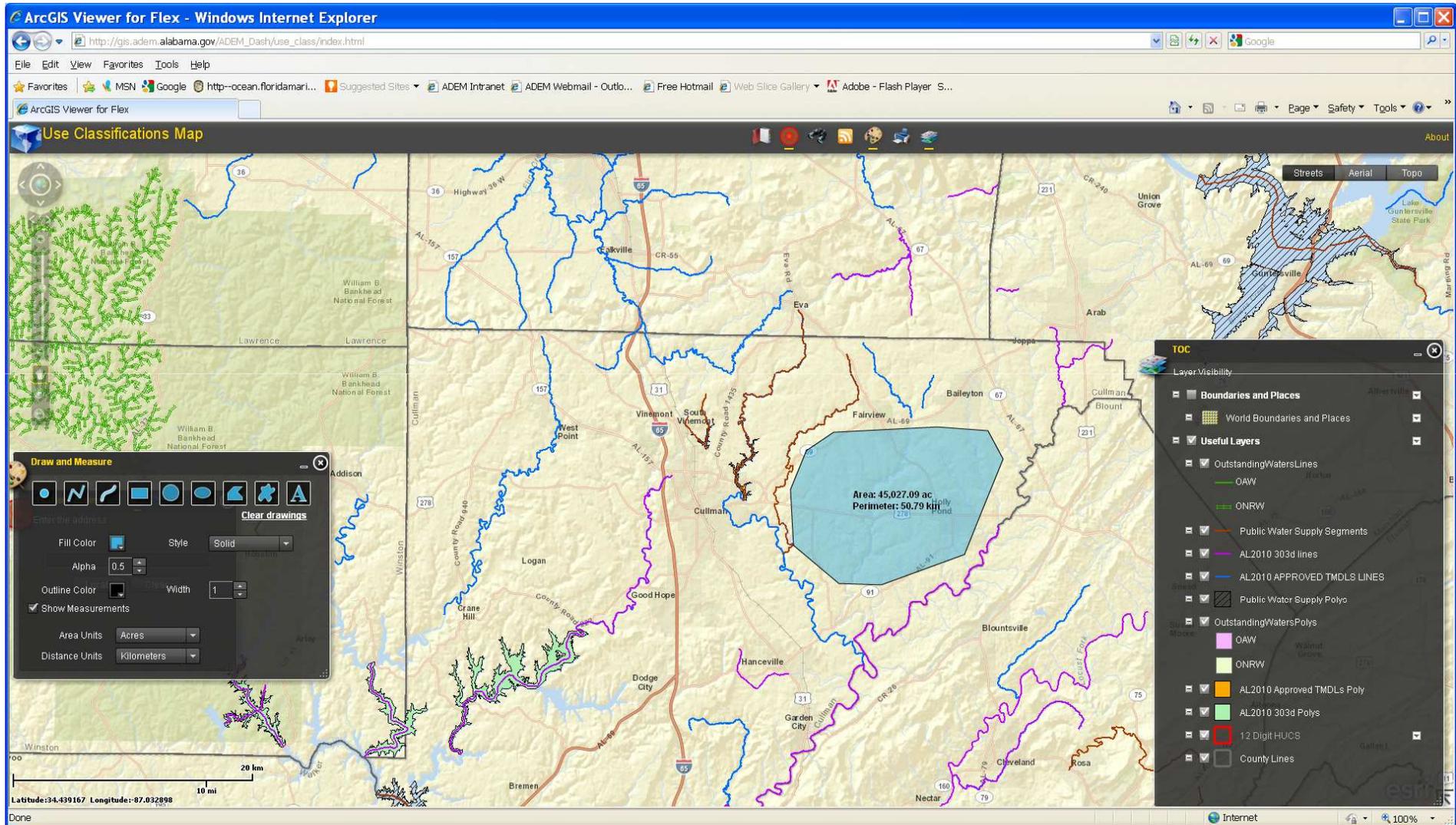
Find Location Tools - Lat & Lon



Draw and Measure Tools

The screenshot displays the ArcGIS Viewer for Flex interface within a Windows Internet Explorer browser. The browser's address bar shows the URL http://gis.adem.alabama.gov/ADEM_Dash/use_class/index.html. The main map area shows a topographic view of a region in Alabama, including cities like Cullman, Vinemont, and Fairview, and various water bodies and roads. A 'Draw and Measure' tool panel is open in the bottom-left corner, featuring icons for drawing points, lines, polygons, and text. It includes settings for 'Fill Color', 'Alpha' (set to 0.5), 'Outline Color', 'Width' (set to 1), and options for 'Show Measurements', 'Area Units' (Square kilo...), and 'Distance Units' (Kilometers). A scale bar at the bottom left indicates 20 km and 10 mi, with coordinates Latitude: 34.102680 and Longitude: -87.468232. On the right side, a 'TOC' (Table of Contents) panel is visible, listing layers such as 'Boundaries and Places', 'Useful Layers', 'OutstandingWatersLines', 'Public Water Supply Segments', 'AL2010 APPROVED TMDLS LINES', 'Public Water Supply Poly', 'OutstandingWatersPolys', 'AL2010 Approved TMDLS Poly', 'AL2010 303d Polys', '12 Digit HUCS', and 'County Lines'. The interface also includes a navigation toolbar at the top and a status bar at the bottom.

Polygon with Measurement Shown



Aerial Background

The screenshot displays the ArcGIS Viewer for Flex interface within a Windows Internet Explorer browser. The browser's address bar shows the URL http://gis.adem.alabama.gov/ADEM_Dash/use_class/index.html. The main map area shows an aerial background with various colored overlays representing water features and boundaries. A prominent blue polygon is drawn on the map, with a text box indicating its area and perimeter: "Area: 45,027.09 ac" and "Perimeter: 50.79 km".

In the bottom-left corner, the "Draw and Measure" tool is active, showing options for fill color, style (set to "Solid"), alpha (0.5), outline color, and width (1). It also includes checkboxes for "Show Measurements" and dropdown menus for "Area Units" (set to "Acres") and "Distance Units" (set to "Kilometers").

On the right side, the "TOC" (Table of Contents) panel is visible, listing several layers under "Useful Layers":

- OutstandingWatersLines
 - OAW
 - ONRW
- Public Water Supply Segments
- AL2010 303d lines
- AL2010 APPROVED TMDLS LINES
- Public Water Supply Poly
- OutstandingWatersPolys
 - OAW
 - ONRW
- AL2010 Approved TMDLs Poly
- AL2010 303d Polys
- 12 Digit HUCS
- County Lines

The interface also includes a scale bar at the bottom left showing 0, 10, and 20 km, and a status bar at the bottom with the text "Done" and "Internet".

USGS Topo Background

The screenshot displays the ArcGIS Viewer for Flex interface within a Windows Internet Explorer browser. The browser's address bar shows the URL: http://gis.adem.alabama.gov/ADEM_Dash/use_class/index.html. The browser's menu bar includes File, Edit, View, Favorites, Tools, and Help. The browser's toolbar shows various navigation and utility icons. The main content area is titled "Use Classifications Map" and displays a topographic map of a region in Alabama. A large blue polygon is overlaid on the map, representing a specific area. The polygon is labeled with the text "Area: 45,027.09 ac" and "Perimeter: 50.79 km". The map shows various geographical features, including roads, rivers, and terrain. The interface includes a "Draw and Measure" tool in the bottom-left corner, which allows users to draw shapes and measure their area and perimeter. The tool includes options for Fill Color, Style, Alpha, Outline Color, Width, Area Units (Acres), and Distance Units (Kilometers). A "TOC" (Table of Contents) panel is visible on the right side of the map, listing various layers and their visibility status. The layers include "Boundaries and Places", "Useful Layers", "OutstandingWatersLines", "Public Water Supply Segments", "AL2010 303d lines", "AL2010 APPROVED TMDLS LINES", "Public Water Supply Polys", "OutstandingWatersPolys", "AL2010 Approved TMDLs Poly", "AL2010 303d Polys", "12 Digit HUCs", and "County Lines". The browser's status bar at the bottom shows "Done" and "Internet".

Scale Dependency

The screenshot displays the ArcGIS Viewer for Flex interface in a Windows Internet Explorer browser. The main map area shows a topographic map with a blue polygon overlay. A tooltip window is open over the polygon, displaying the following information:

- 031601090104 HUCs
- HUC_12 031601090104
- HU_12_NAME Eightmile Creek
- HU_10_NAME Upper Mulberry Fork
- Zoom to

In the bottom-left corner, a 'Draw and Measure' tool is active, showing the following measurements for the selected polygon:

- Area: 45,027.25 ac
- Perimeter: 50.79 Km

The tool also includes options for Fill Color, Alpha (0.5), Outline Color, Width (1), Show Measurements, Area Units (Acres), and Distance Units (Kilometers).

On the right side, a Table of Contents (TOC) panel is visible, listing various layers and their visibility status:

- Boundaries and Places
 - World Boundaries and Places
- Useful Layers
 - OutstandingWatersLines
 - OAW
 - ONRW
 - Public Water Supply Segments
 - AL2010 303d lines
 - AL2010 APPROVED TMDLS LINES
 - Public Water Supply Polys
 - OutstandingWatersPolys
 - OAW
 - ONRW
 - AL2010 Approved TMDLS Poly
 - AL2010 303d Polys
 - 12 Digit HUCS
 - County Lines

The browser address bar shows the URL: http://gis.adem.alabama.gov/ADEM_Dash/use_class/index.html. The browser title is 'ArcGIS Viewer for Flex - Windows Internet Explorer'. The status bar at the bottom indicates 'Done' and 'Internet'.

Passing Lat & Lon In URL

The screenshot displays a web browser window titled "ArcGIS Viewer for Flex - Windows Internet Explorer". The address bar shows the URL: `http://gis.adem.alabama.gov/ADEM_Dash/use_class/index.html?center=32.3456,-87.3456`. The browser's address bar and menu bar are visible at the top. Below the browser window, the ArcGIS Viewer interface is shown. The main map area displays a topographic map of a region in Alabama, with various geographical features and administrative boundaries. A search dialog box is open on the left side of the map, with the text "Find an address" and "Enter the address" visible. A "Locate" button is present in the dialog. On the right side of the map, a Table of Contents (TOC) panel is open, showing a list of layers including "Boundaries and Places", "World Boundaries and Places", "Useful Layers", "Outstanding Waters Lines", "OAW", "ONRW", and "Public Water Supply Segments". The map includes a scale bar at the bottom left, showing 5 miles and 10 kilometers. The status bar at the bottom of the browser window shows "Done" and "Internet".

Lat Lon Info Tool

The screenshot displays a web browser window titled "Lat and Lon Info - Windows Internet Explorer". The address bar shows the URL http://qis.adem.alabama.gov/adem_dash/latlonout.html. The browser's menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The toolbar contains icons for "Favorites", "MSN", "Google", and a search bar. Below the toolbar, there are several "Suggested Sites" including "http--ocean.floridamarine...", "ADEM Intranet", "ADEM Webmail - Outlo...", "Free Hotmail", "Web Slice Gallery", and "Adobe - Flash Player S...".

The main content area features a map of Alabama with county boundaries highlighted in green. Major cities such as Birmingham, Montgomery, Columbus, and Atlanta are labeled. A scale bar at the bottom left indicates 100 km and 100 miles. In the bottom right corner, the ADEM logo is visible with the text "Alabama Department of Environmental Management".

Overlaid on the map are two green boxes. The box on the left, titled "Lat and Lon Info", contains the text "Alabama Department of Environmental Management", a "Streets" dropdown menu, a "USGS Topo" dropdown menu, and a "Slide Slider to Change Background, ksdala". The box on the right contains input fields for "Latitude:" and "Longitude:", and a "Locate Using Coordinates" button.

NHD WET

National Hydrography Dataset-Web Editing Tool

The screenshot shows the NHD WET website in a Windows Internet Explorer browser window. The browser's address bar displays the URL <http://nhd-wet.alabama.gov/>. The website's main header features the NHD WET logo and the text "National Hydrography Dataset - Web Editing Tool". A navigation menu includes links for HOME, Attribute Editor, Redline Tool, Map Editor, and Contact Info. The left sidebar contains three main sections: "Account" (logged in as jlynnford), "Alabama Information" (with the state seal), and "Resources And Related Sites" (listing ADECA, NHD Stewardship, and USGS NHD). The main content area is divided into three sections: "ANNOUNCEMENTS" (with links for Latest News, Email This News, RSS Feed, Twitter, and Facebook), "HELP TOPICS / WIKI" (with links for Intro Video, Knowledge Base, Technical Articles, and FAQ), and "USER FORUMS" (with links for New Forums and Search The Archives). A footer section contains "CONTACT US" information for ADECA, "SUGGESTIONS?" text, and "HELP TOPICS" with links to Knowledge Base, Technical Articles, and FAQ. The browser's status bar at the bottom shows "Internet" and a 100% zoom level.

NHD WET
National Hydrography Dataset - Web Editing Tool

EMAIL @ NHD-WET

HOME Attribute Editor Redline Tool Map Editor Contact Info

NHD WET
Account Login
Logged in as **jlynnford**
[Edit Profile](#) | [Logout](#)
[Communications](#)

 **NHD WET**
Alabama
Information

Resources
And Related Sites
[ADECA](#)
[NHD Stewardship](#)
[USGS NHD](#)

ANNOUNCEMENTS
[Latest News](#) | [Email This News](#) | [RSS Feed](#) | [Twitter](#) | [Facebook](#)
Jun 07: [Development Site Transition to Beta Phase](#)
Mar 25: [Development Site Users Refresh](#)
Dec 23: [Announcements System Online](#)

HELP TOPICS / WIKI
[Intro Video](#)
[Knowledge Base](#)
[Technical Articles](#)
[FAQ](#)

USER FORUMS
[New Forums](#)
[Search The Archives](#)

NHD WET National Hydrography Dataset Web Editing Tool

CONTACT US
ADECA
P.O. Box 5690
Montgomery, AL 36103
(334) 242-5100

SUGGESTIONS?
This site has been built to better help you! Please [send us](#) any feedback so we can improve this site for you.

HELP TOPICS
[Knowledge Base](#)
[Technical Articles](#)
[FAQ](#)

Internet 100%

NHD WET

NHD-Wet was designed to provide users with local knowledge to edit NHD.

NHD allows users to edit attributes, lines, and polygons in the NHD.

Edits are usually sent to a queue for review and approval before inclusion into the NHD.

Potential users must contact ADECA to create an account with appropriate access.

NHD WET

http://nhd-wet.alabama.gov/mapping/app/index.swf?id=8c9868a2-6348-4825-9dee-b5f1606dd80d&huc=03 - Windows Internet Explorer

http://nhd-wet.alabama.gov/mapping/app/index.swf?id=8c9868a2-6348-4825-9dee-b5f1606dd80d&huc=03160107

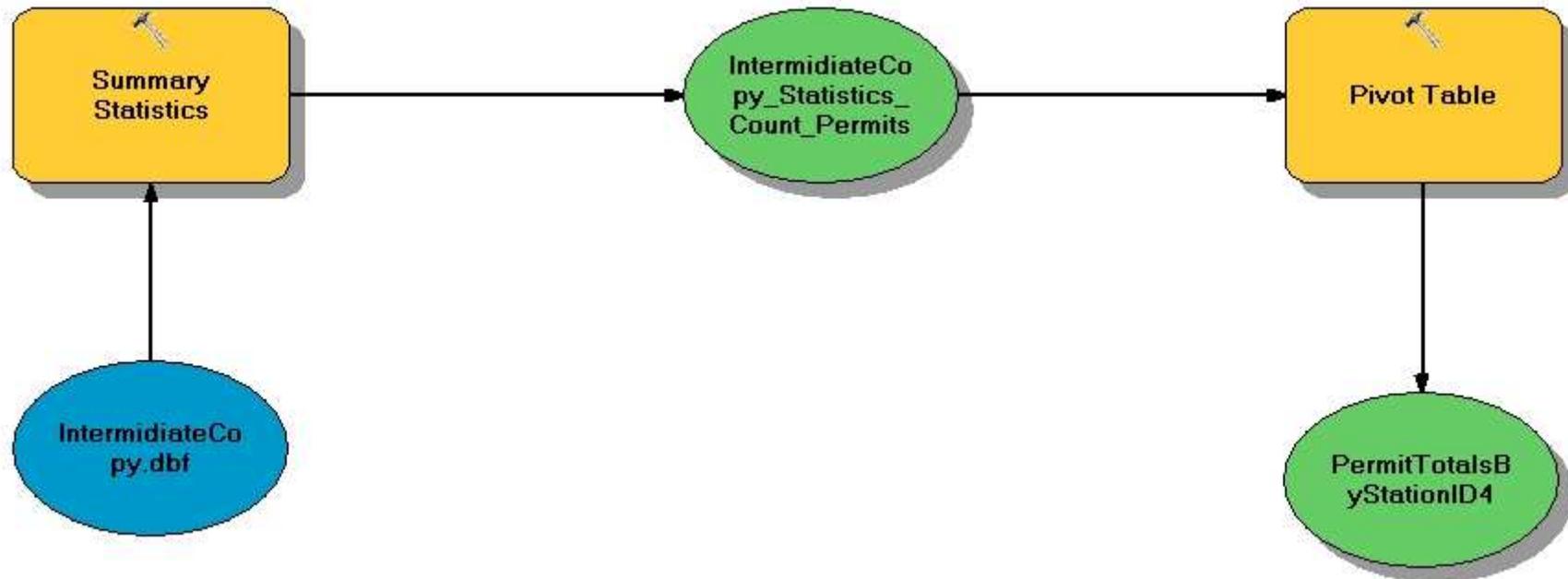
File Edit View Favorites Tools Help

Favorites MSN Google http--ocean.floridamar... Suggested Sites ADEM Intranet ADEM Webmail - Outlo... Free Hotmail Web Slice Gallery Adobe - Flash Player S...

ArcGIS Viewer for Flex http://nhd-wet.alaba... X

Done Internet 100%

ArcMap - Model Builder

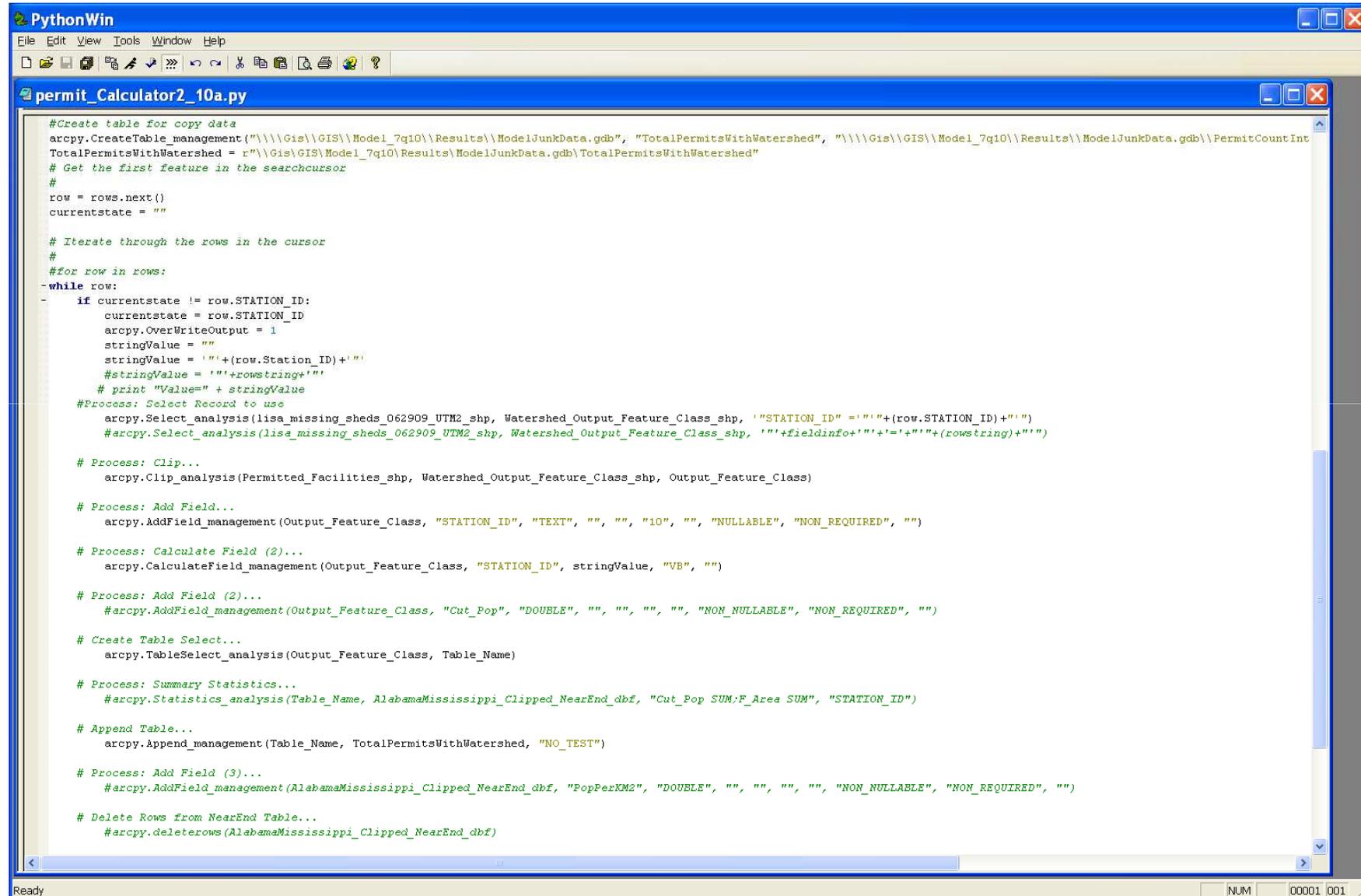


Excellent For Repetitive Task

Drag and Drop Tools to Create Model

Create Scripts From Models

Python Scripts



```
PythonWin
File Edit View Tools Window Help
permit_Calculator2_10a.py

#Create table for copy data
arcpy.CreateTable_management("\\\\\\Gis\\GIS\\Model_7q10\\Results\\ModelJunkData.gdb", "TotalPermitsWithWatershed", "\\\\\\Gis\\GIS\\Model_7q10\\Results\\ModelJunkData.gdb\\PermitCountInt
TotalPermitsWithWatershed = r"\\Gis\\GIS\\Model_7q10\\Results\\ModelJunkData.gdb\\TotalPermitsWithWatershed"
# Get the first feature in the searchcursor
#
row = rows.next()
currentstate = ""

# Iterate through the rows in the cursor
#
#For row in rows:
-while row:
-    if currentstate != row.STATION_ID:
        currentstate = row.STATION_ID
        arcpy.OverWriteOutput = 1
        stringValue = ""
        stringValue = ""+(row.Station_ID)+"'
        #stringValue = '''+rowstring+'''
        # print "Value=" + stringValue
        #Process: Select Record to use
        arcpy.Select_analysis(lisa_missing_sheds_062909_UTM2_shp, Watershed_Output_Feature_Class_shp, '"STATION_ID" ='+(row.STATION_ID)+'')
        #arcpy.Select_analysis(lisa_missing_sheds_062909_UTM2_shp, Watershed_Output_Feature_Class_shp, '''+fieldinfo+''+'+'+(rowstring)+'')

        # Process: Clip...
        arcpy.Clip_analysis(Permitted_Facilities_shp, Watershed_Output_Feature_Class_shp, Output_Feature_Class)

        # Process: Add Field...
        arcpy.AddField_management(Output_Feature_Class, "STATION_ID", "TEXT", "", "", "10", "", "NULLABLE", "NON_REQUIRED", "")

        # Process: Calculate Field (2)...
        arcpy.CalculateField_management(Output_Feature_Class, "STATION_ID", stringValue, "VB", "")

        # Process: Add Field (2)...
        #arcpy.AddField_management(Output_Feature_Class, "Cut_Pop", "DOUBLE", "", "", "", "", "NON_NULLABLE", "NON_REQUIRED", "")

        # Create Table Select...
        arcpy.TableSelect_analysis(Output_Feature_Class, Table_Name)

        # Process: Summary Statistics...
        #arcpy.Statistics_analysis(Table_Name, AlabamaMississippi_Clipped_NearEnd_dbf, "Cut_Pop SUM:F_Area SUM", "STATION_ID")

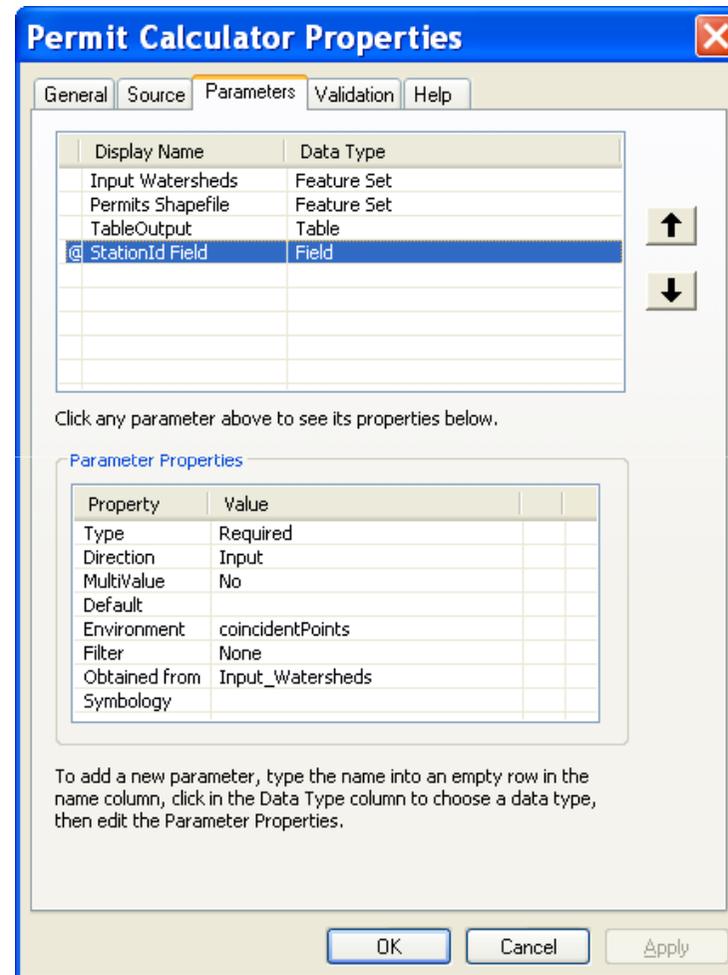
        # Append Table...
        arcpy.Append_management(Table_Name, TotalPermitsWithWatershed, "NO_TEST")

        # Process: Add Field (3)...
        #arcpy.AddField_management(AlabamaMississippi_Clipped_NearEnd_dbf, "PopPerKM2", "DOUBLE", "", "", "", "", "NON_NULLABLE", "NON_REQUIRED", "")

        # Delete Rows from NearEnd Table...
        #arcpy.deleterows(AlabamaMississippi_Clipped_NearEnd_dbf)
```

Ready NUM 00001 001

Adding Python Scripts



Data-NRCS Data Gateway

USDA:NRCS:Geospatial Data Gateway:Order Data - Windows Internet Explorer

http://datagateway.nrcs.usda.gov/GDGOrder.aspx

United States Department of Agriculture
Natural Resources Conservation Service

GeoSpatialDataGateway

Last Modified: 8/17/2012 11:41:00 AM

Home Status Maps Help FAQ Contact Us

1-WHERE

2-WHAT

The list in the middle pane indicates the available map layers for your area of interest. The number of maps and total size of the map layers are listed next to the description. Clicking on the **i** icon will provide a pop-up window with that map layer's description. Use the **+** icon to get a list of individual maps for that map layer. Within the list of maps, use the **m** icon to get metadata for the specific map and the **o** icon for an individual map preview. You may collapse this map list with the **-** icon. Your selections will be added to the YOUR ORDER Panel on the far right.

You may change your map layers after this step but all of the subsequent choices made for your order will be removed.

Maps in layers that are "...by State" cover an entire state.

3-HOW

4-WHO

5-REVIEW

WHAT

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

Hydrography

- National Hydrography Dataset 1:24,000, 53 maps 1225.093 MB **i** **+**

Hydrologic Units

- 8 Digit Watershed Boundary Dataset, 53 maps 10.548 MB **i** **+**
- 10 Digit Watershed Boundary Dataset in HUC8, 53 maps 26.292 MB **i** **+**
- 12 Digit Watershed Boundary Dataset in HUC8, 53 maps 54.479 MB **i** **+**
- Watershed Boundary Dataset Lines for HUC2-12, 53 maps 72.691 MB **i** **+**

Land Use Land Cover

- National Land Cover Dataset by State, 1 map 245.365 MB **i** **+**
- Cropland Data Layer by State, 1 map 104.042 MB **i** **+**

Map Indexes

- Quadrangle Index 1:12,000, 67 maps 2.109 MB **i** **+**
- Quadrangle Index 1:24,000, 67 maps 0.708 MB **i** **+**
- Quadrangle Index 1:100,000 by State, 1 map 0.036 MB **i** **+**
- Quadrangle Index 1 Degree by State, 1 map 0.013 MB **i** **+**
- Quadrangle Index 1:250,000 by State, 1 map 0.010 MB **i** **+**

Ortho Imagery

- Digital Ortho County Mosaic of 7.5' quads by APFO, 67 maps 13427.769 MB **i** **+**
- DOQ Multi-County Mosaic by NRCS, 6 maps 3029.786 MB **i** **+**
- Digital Ortho County Mosaic of 7.5' quads by NRCS, 51 maps 20764.372 MB **i** **+**
- Digital Ortho 7.5' quads, 938 maps 9401.567 MB **i** **+**
- NAIP NCGC Derivative Mosaic, 67 maps 49240.447 MB **i** **+**
- 2005 National Aerial Imagery Program Mosaic, 49 maps 6908.364 MB **i** **+**

YOUR ORDER

Order Area (Where): All counties, Alabama

Order Map Layers (What):

Order Format (How): None
Order Projection (How): None
Order Inclusion (How): None
Order Delivery Method (How): None

Order Recipient (Who):

CONTINUE

Internet 100%

Data-ESRI

The screenshot shows the ArcGIS online search results for the query "alabama". The interface includes the ArcGIS online logo, a search bar with the text "alabama", and navigation options for "Data" and "Groups". The search results are displayed in a grid of 12 items, each with a thumbnail, title, description, and metadata. The items are arranged by relevance, and the results range from 1 to 100 of 135 total results.

Search: alabama Arranged by Relevance Results 1-100 of 135

- PLSS for State of Alabama**
Public Land Survey System for the State of Alabama
Map Service by *mvanhook* 7/14/2009 Details Add
- Alabama Seismic Hypocenters, AASG State Ge**
Seismic events throughout the state of Alabama
Map Service by *USGIN_Initiative* 5/1/2012 Details Add
- Alabama BoreholeTemperatures, AASG State**
Alabama Borehole Temperatures
Map Service by *USGIN_Initiative* 5/1/2012 Details Add
- Alabama Faults, AASG State Geothermal Data**
Alabama Faults
Map Service by *USGIN_Initiative* 11/29/2011 Details Add
- Southern U.S. Storm Imagery**
This image service features GeoEye IKONOS-2 imagery acquired April 28th, 2011 in response to tornados and flooding in the Southeastern United States of America.
Image Service by *esri_event* 5/1/2011 Details Add
- GeoEye IKONOS-2 Tuscaloosa, Alabama Torna**
Pre-Storm and Post-Storm images of Tuscaloosa Alabama Tornado April 28, 2011.
Map Service by *LisaV* 11/14/2011 Details Add
- Protected Areas - Alabama, May 2010 (Data B**
(A newer version of these data is now available, http://app.databasin.org/app/pages/datasetPage.jsp?id=d56650767b6d48ca82cf5f6c7006f89'tornados'
Layer Package by *consbio* 5/12/2011 Details Add
- Basemaps Alabama**
Basemaps for Alabama
Layer Package by *Fletcher* 5/15/2012 Details Add
- Alabama Wellheaders, AASG State Geotherm:**
Alabama Oil and Gas Well Headers
Map Service by *USGIN_Initiative* 5/1/2012 Details Add
- Alabama Counties**
alabama counties
Layer Package by *KeithCookeAU* 12/9/2011 Details Add
- Counties**
Alabama county boundaries and area layers derived from the US Census TIGER dataset.
- Alabama Oil and Gas Board**
Oil and Gas Map of Alabama

1 2 Next

Landsat 8 to launch 02/11/13



Landsat 8 is expected to be operational 90 days post launch.

Summary

GIS is a fluid tool that can fulfill very broad or very specific needs.

GIS applications can provide fast and easy results to complex questions.

In many cases GIS tools are the only reasonable tools for the task.

GIS tools can be used by GIS users or non-GIS users.

Users must seek to include GIS in their work flows if appropriate.

GIS data is available for free from ESRI, USDA, and NRCS.

The Alabama GIS Executive Council is working to help users.

Links to GIS Applications

ADEM Use Classifications Map URL

http://gis.adem.alabama.gov/ADEM_Dash/use_class/index.html

ADEM Use Classifications Map URL Format for Passing Lat and Lon

http://gis.adem.alabama.gov/ADEM_Dash/use_class/index.html?center=30.771531 -88.128129

ADEM Lat Lon Info Tool URL

http://gis.adem.alabama.gov/adem_dash/latlonout.html

NHD-Wet URL

<http://nhd-wet.alabama.gov/>

ArcGIS Online

<http://www.arcgis.com/about/>

NRCS Data Gateway

<http://datagateway.nrcs.usda.gov/GDGOrder.asp>