

## OJT Training Module Cover Sheet

**Title:** Using the Autopopulation Toolbar

**Type:**     Skill     Knowledge

**Performance Objective:**

Trainee will be able to use the Auto-population buttons on the SRITB ArcGIS Extension toolbar to initiate the population of a description using Pedon PC, or add location data to a description edited previously.

**Trainer Preparation:**

Make sure the participants have machines that they have write permission to the C drive and access to the internet.

**Special Requirements:**

- CCE configuration to ensure that Microsoft Access is compatible with Pedon PC.
- A version of Pedon PC must be installed on the computer for this module.
- SRITB 1.1.18 must be installed and configured to point to the Pedon PC application.

**Prerequisite Modules:**

- Pedon PC setup
- Customizing Choice Lists
- Pedon PC Setup with GPS.

**Procedure:**

- Trainer will use as a job aid to help prepare for this task.
- Trainer can then use this job aid as a training module to accomplish the task.

**Notes/Purpose:**

The purpose is for the trainee to learn how to use the Autopopulation buttons on the SRITB toolbar.

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# Using Auto-Population Toolbar

- **The SRITB toolbar gives you the ability to auto-populate site information in Pedon PC using data in ArcMap**
- **Populates the documentation point layer in your geodatabase**
- **Populates previously recorded descriptions with site data**
- **Starts Pedon PC from a GIS environment**
- **When used with a GPS, it intersects the GPS location with data in ArcMap**

**Step 1. You will need to have your IT person install the CCE certified SRITB Toolbar version 1.1.18. (NOT the fix for the old SMS push!!)**

**After the SRITB Toolbar has been installed:**

**Step 2. Download layers from the Geospatial Data Gateway or use data from the original Beta Test of the autopopulation toolbr.**

- 1. Soil Survey Area**
- 2. 24K Quad Index**
- 3. County boundaries by state (Does not currently work as of 11/30/2010)**
- 4. MLRA layer**

## Step 2a. Browse to the Gateway site

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

## Step 2b. Choose "Login"

The screenshot shows the USDA Geospatial Data Gateway website in a Windows Internet Explorer browser window. The browser's address bar displays the URL <http://datagateway.nrcs.usda.gov>. The website header features the USDA logo and the text "United States Department of Agriculture Natural Resources Conservation Service" above the main title "GEOSPATIAL DATA GATEWAY". Below the title is a banner image with several map thumbnails. A navigation menu is located below the banner, with the "Login" link circled in red. Other menu items include "Home", "Check Order", "Status Maps", "News", "Data Policy", "FAQ", "Help", "Admin", and "Contact Us".

The main content area includes a search box, a "Browse by Subject" sidebar with categories like "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", and "National Map Viewer 2.0 US Census Bureau". The central content area has a "Welcome to GDG" heading and a large image of a natural rock archway. Below the image is the text: "the one stop source for environmental and natural resource data". To the right of the image is a "GET DATA" button and a "Place a Data Order GDG" button. Below the main content is a section titled "I Want To..." with options: "Order by County/Countries" and "Order by State".

The Windows taskbar at the bottom shows the Start button, several open applications (Office, 2 W..., 4 M..., 2 In..., Micro..., pedo..., Micro...), and the system tray with the time 9:42 AM and date 10/10/2006.

## Step 2c. Choose “Agree and continue the eAuthentication Login”

USDA Web Services Log-In - Windows Internet Explorer

File Edit View Favorites Tools Help

https://pws.sc.egov.usda.gov/login/login.aspx?TYPE=33554433&REALMOID=06-dd0f90eb-352f-4cbc-ada5-4f2c597fb: Live Search

USDA Web Services Log-In x U.S. Department of Agricult...

USDA United States Department of Agriculture  
USDA eAuthentication

login : YZ  
password :

Home About eAuthentication Help Contact Us Find an LRA

\*\*\*\*\*WARNING\*\*\*\*\*

- You are accessing a U.S. Government information system, which includes (1) this computer, (2) this computer network, (3) all computers connected to this network, and (4) all devices and storage media attached to this network or to a computer on this network. This information system is provided for U.S. Government-authorized use only.
- Unauthorized or improper use of this system may result in disciplinary action, as well as civil and criminal penalties.
- By using this information system, you understand and consent to the following:
  - You have no reasonable expectation of privacy regarding any communications or data transiting or stored on this information system. At any time, the government may for any lawful government purpose monitor, intercept, search and seize any communication or data transiting or stored on this information system. [USDA Web Service Log-In](#)
  - Any communications or data transiting or stored on this information system may be disclosed or used for any lawful government purpose.
  - Your consent is final and irrevocable. You may not rely on any statements or informal policies purporting to provide you with any expectation of privacy regarding communications on this system, whether oral or written, by your supervisor or any other official, except USDA's Chief Information Officer.

\*\*\*\*\*WARNING\*\*\*\*\*

Cancel I Agree

Done Local intranet 100%

Start Office... 2 W... M... 2 In... Micro... pedo... Micro... TSD 9:44 A

# Step 2d. Type in your eAuthentication

## Step 2e. Follow the directions to “Get Data”

The screenshot shows the USDA Geospatial Data Gateway website. The browser window title is "USDA:NRCS:Geospatial Data Gateway:Home - Windows Internet Explorer". The address bar shows "http://datagateway.nrcs.usda.gov/GDGHome.aspx". The website header includes the USDA logo and the text "United States Department of Agriculture Natural Resources Conservation Service". The main heading is "GEOSPATIAL DATA GATEWAY". Below the heading is a navigation menu with links: Home, Logout, Check Order, Status Maps, News, Data Policy, FAQ, Help, Admin, and Contact Us. On the left side, there is a "Search" box with a "Go" button and a "Browse by Subject" list. The main content area features a large image of a natural rock archway with the text "GEOSPATIAL DATA GATEWAY" overlaid. Below the image, it says "the one stop source for environmental and natural resource data" and "The Geospatial Data Gateway (GDG) is the One Stop Source for environmental and natural resources data, at anytime, from anywhere, to anyone. The Gateway allows you to choose your area of interest, browse and select data from our catalog, customize the format, and have it downloaded or shipped on CD-ROM." To the right of the main content, there is a "GET DATA" button and a "Place a Data Order GDG" button. Below that, there is a "I Want To..." section with radio buttons for "Order by County/Countries" and "Order by State". The browser's taskbar at the bottom shows various open applications and the system clock at 9:47 AM.

- Currently the only layers that work with the autopopulation tool from the Gateway are the MLRA layer, the Soil Survey Area (soilmu\_a), and the 24K quad index.

**An alternate Site for a National Coverage of the MLRA layer is available.**

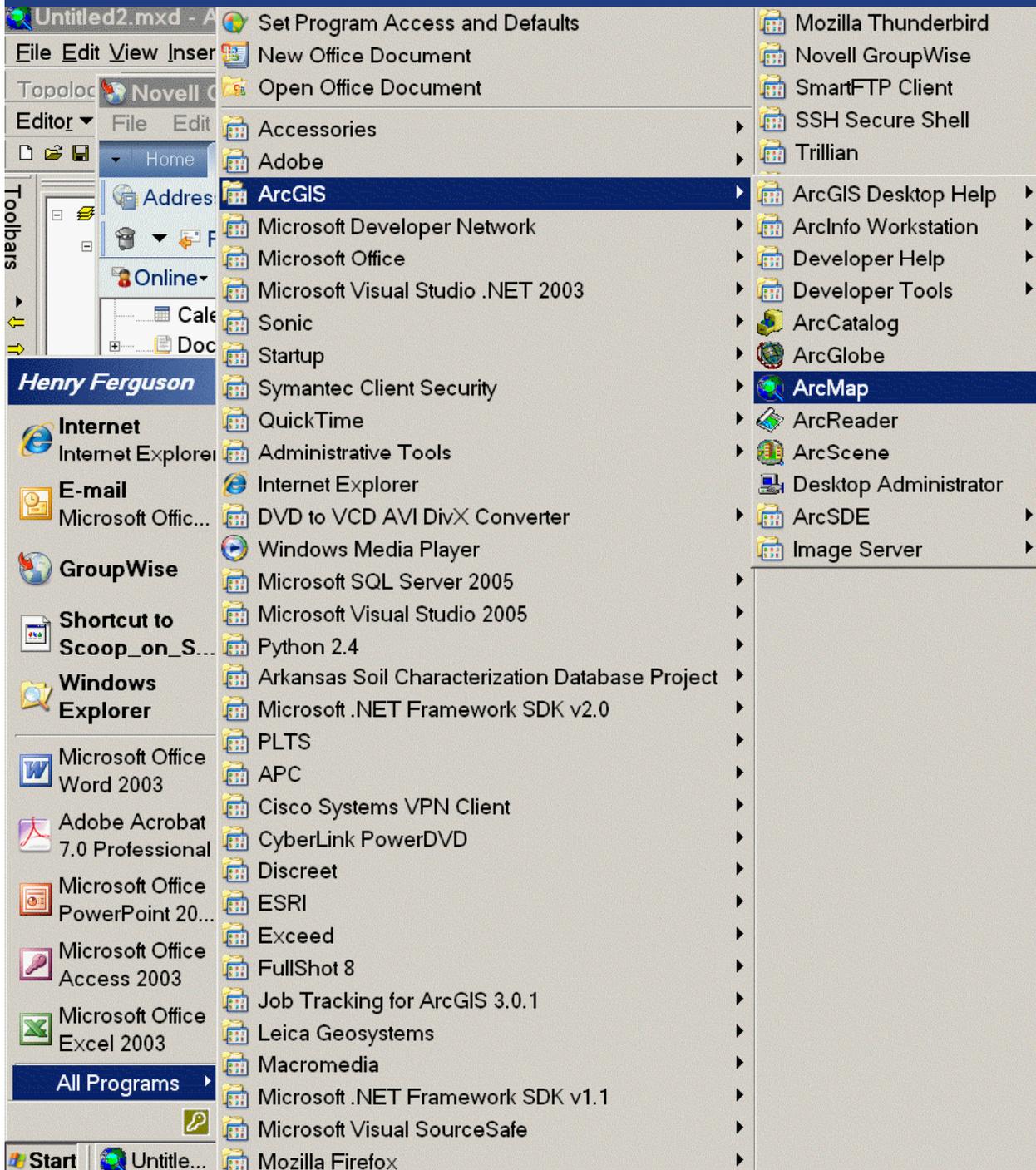
**<ftp://ftp-fc.sc.egov.usda.gov/NSSC/MLRA>**

**If you need shapefiles for the entire country the Beta Test Layers still work fine and are available to populate State, County, MLRA, and Quad Name. A separate zip file is available called SoilSurveyAreas for the Non-MLRA Soil Survey Area layer. These layers are available from this link:**

**<http://www2.ngdc.wvu.edu/~hferguson/files/autopopdata/>**

**Step 3. Unzip the files that you downloaded**

## Step 4. Start ArcMap



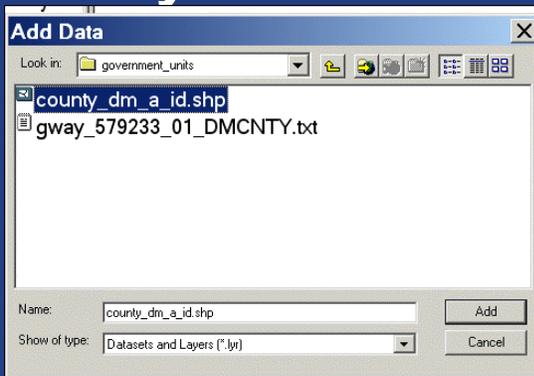
The screenshot shows a Windows Start menu with the 'All Programs' list expanded. The 'ArcGIS' folder is selected, and its sub-items are displayed. 'ArcMap' is highlighted in blue. The taskbar at the bottom shows the Start button and an open window titled 'Untitled2.mxd - A'.

Program Name	Category
Set Program Access and Defaults	System
New Office Document	Microsoft Office
Open Office Document	Microsoft Office
Accessories	System
Adobe	System
<b>ArcGIS</b>	<b>System</b>
Microsoft Developer Network	System
Microsoft Office	System
Microsoft Visual Studio .NET 2003	System
Sonic	System
Startup	System
Symantec Client Security	System
QuickTime	System
Administrative Tools	System
Internet Explorer	System
DVD to VCD AVI DivX Converter	System
Windows Media Player	System
Microsoft SQL Server 2005	System
Microsoft Visual Studio 2005	System
Python 2.4	System
Arkansas Soil Characterization Database Project	System
Microsoft .NET Framework SDK v2.0	System
PLTS	System
APC	System
Cisco Systems VPN Client	System
CyberLink PowerDVD	System
Discreet	System
ESRI	System
Exceed	System
FullShot 8	System
Job Tracking for ArcGIS 3.0.1	System
Leica Geosystems	System
Macromedia	System
Microsoft .NET Framework SDK v1.1	System
Microsoft Visual SourceSafe	System
Mozilla Firefox	System
Mozilla Thunderbird	System
Novell GroupWise	System
SmartFTP Client	System
SSH Secure Shell	System
Trillian	System
ArcGIS Desktop Help	ArcGIS
ArcInfo Workstation	ArcGIS
Developer Help	ArcGIS
Developer Tools	ArcGIS
ArcCatalog	ArcGIS
ArcGlobe	ArcGIS
<b>ArcMap</b>	<b>ArcGIS</b>
ArcReader	ArcGIS
ArcScene	ArcGIS
Desktop Administrator	ArcGIS
ArcSDE	ArcGIS
Image Server	ArcGIS

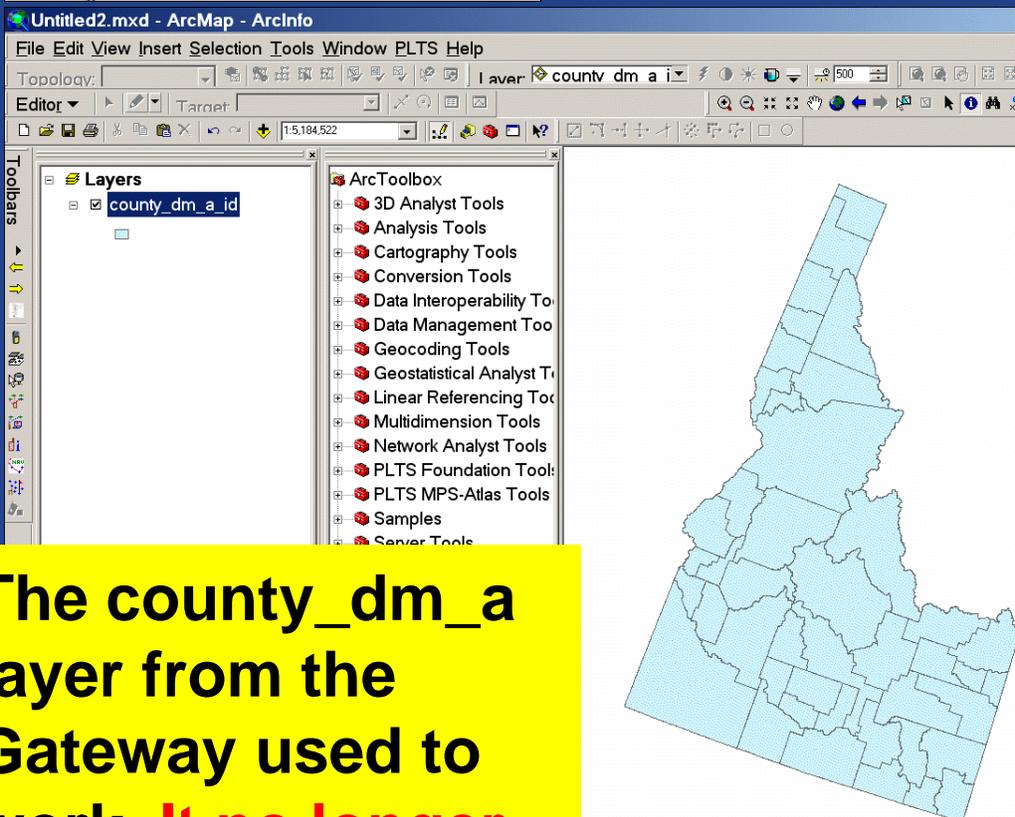
## Step 5. Add layers to ArcMap



Use this button in ArcMap to add layers to ArcMap



Autopopulation uses a specifically named layers to populate Pedon PC.



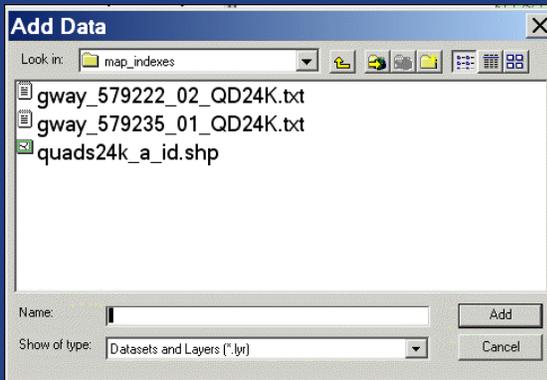
The county\_dm\_a layer from the Gateway used to work. It no longer works so seek an alternate source.

**Area and Mapunit Overlap:**

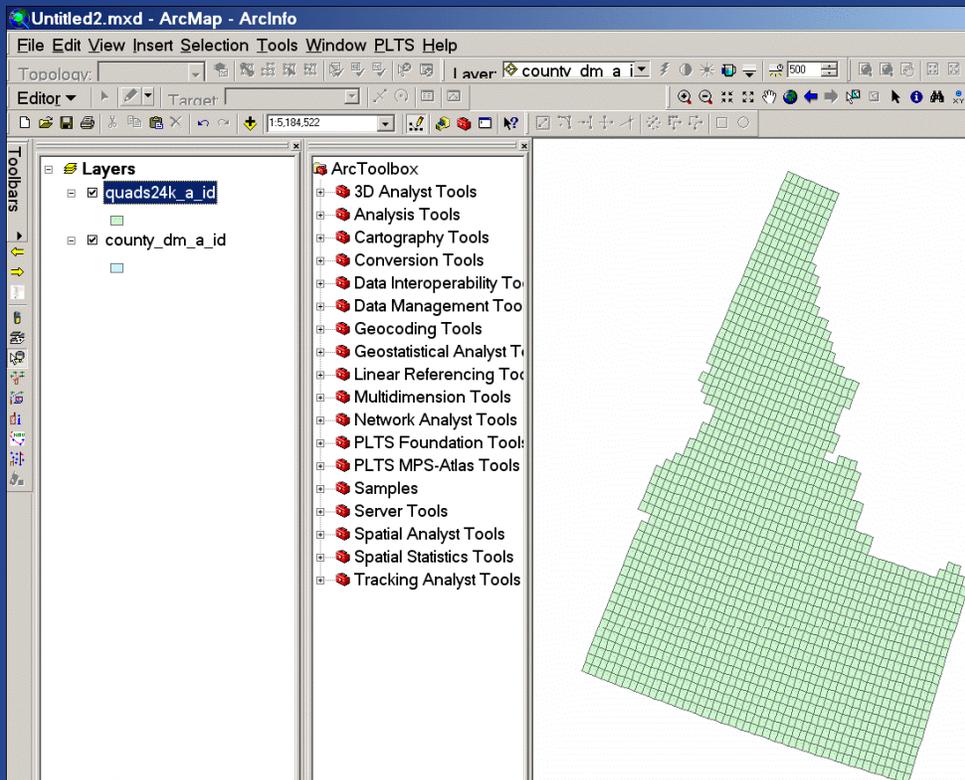
First select the Area Type Name: Then select the Area Name:

	Area Type Name	Area Name
▶ +	County or Parish	Owyhee
+ *	State or Territory	Idaho
*		

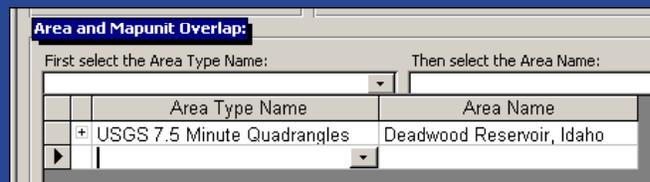
## Step 5. Add layers to ArcMap



Use this button in ArcMap to add layers to ArcMap



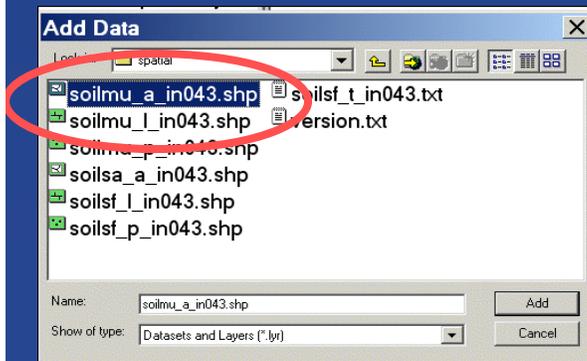
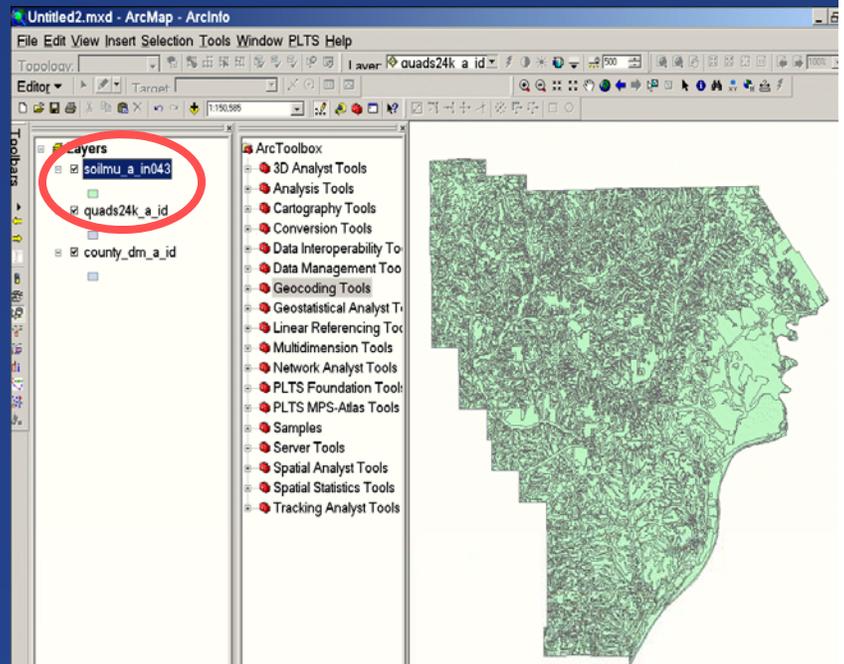
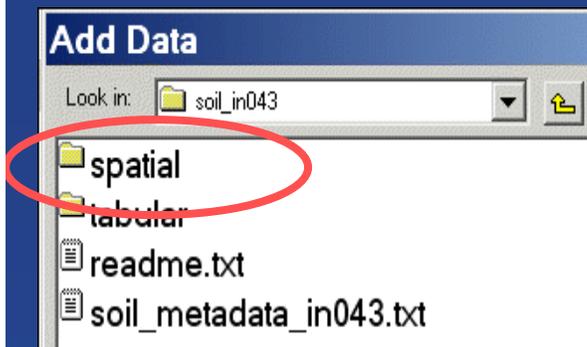
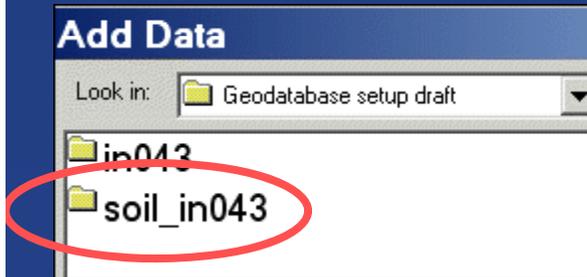
The quads24K\_a layer is used to populate the quad name in the Area and Mapunit Overlay Tab.



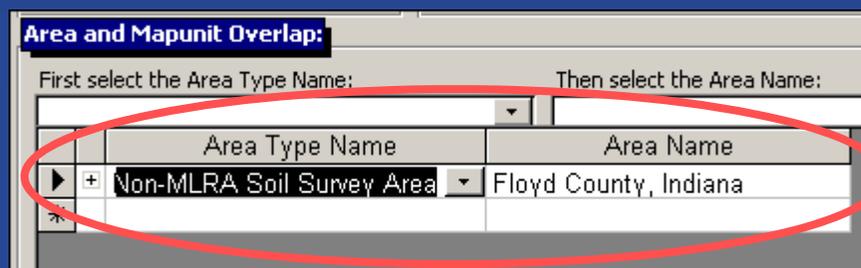
## Step 5. Add layers to ArcMap



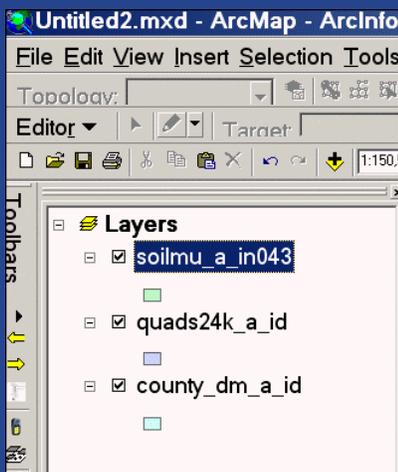
Use this button in ArcMap to add layers to ArcMap



The soilmu\_a layer is used to populate the Non-MLRA Soil Survey Area Name in the Area and Mapunit Overlap Tab in Pedon PC.



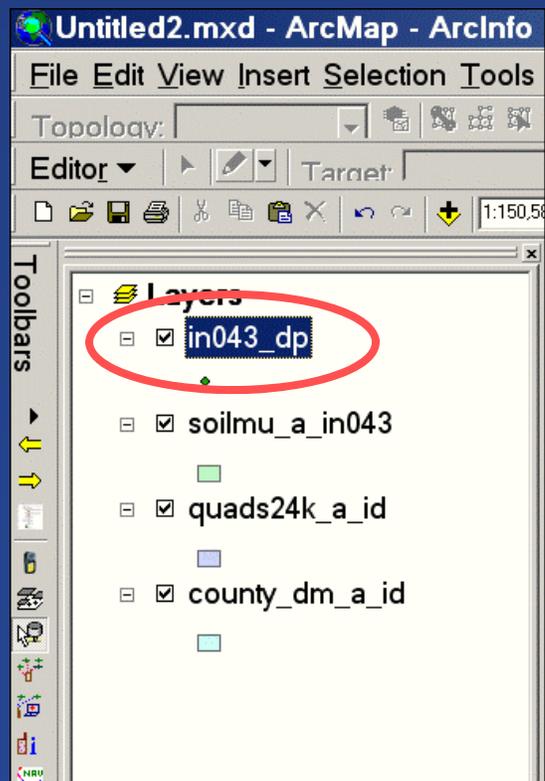
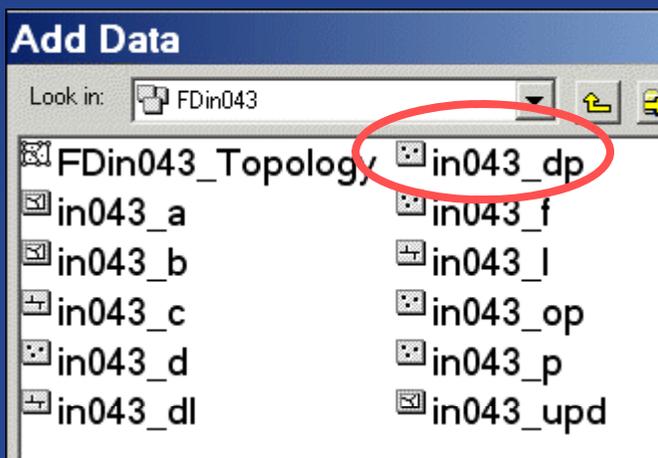
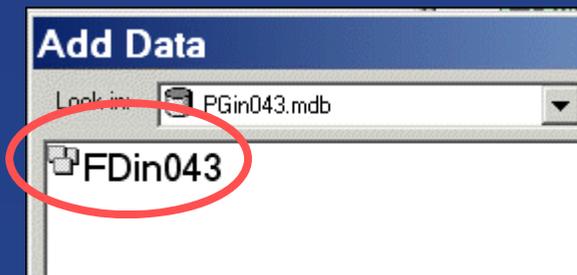
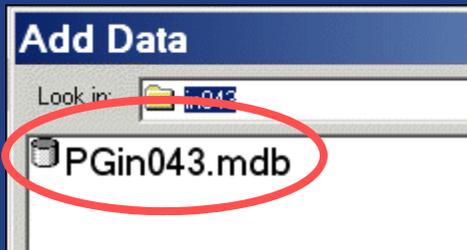
If you are working in more than one soil survey area, the soilmu\_a for the area the point is in must be at the top of the Table Of Contents (Layers). The first layer in the Table of Contents is the soils layer that is used to autopopulate the Area Overlap Table with the Soil Survey Area information in Pedon PC. If the point falls outside that layer, no data is populated.



In this example, if the point is in Floyd County, Indiana, the Non-Mlra soil survey area will be populated. If the point is in Idaho, then the quad name, county name, and state name will be populated. If the point is outside of these layers, then none of the area overlap information will be populated.

## Step 5. Add layers to ArcMap

Add documentation points layer from the Geodatabase\*



\* Prerequisite – Run the Geodatabase Setup Model. See Job Sheet – Geodatabase Setup Update Model.

# Step 5. The Gateway data will populate three overlap tables. The Beta Test and SoilSurvey Area layers will populate five overlap tables.

## Results using Data Gateway Layers

**Pedon Tablet Form**

**Search by User Site ID:** ssssssss  Check to Search by Pedon

**PEDON DESCRIPTION** [Customize Choice Lists](#) [Metric/Engl Calculation](#)  
[Copy a Pedon](#)

site-->siteobs-->pedon-->phorizon

**Area and Mapunit Overlap:**

First select the Area Type Name: Then select the Area Name: (The Choice List used is from Setup >> Update Supp

Area Type Name	Area Name
Non-MLRA Soil Survey Area	Lancaster County, Nebras
MLRA	Nebraska and Kansas Lo
USGS 7.5 Minute Quadrangl	Lincoln, Nebraska
*	

**Location Description:**

**Site Observation:** Selecting a site observation record will affect the pedon tab because the site observation table is the parent table f

Rec ID | ObsDateKnd - Observation | ObsDate - Observation Date | PhID - Air | SurfKnd - | SurfD

Record: 33 of 33 | Unfiltered | Search

## Results using Beta Test Layers

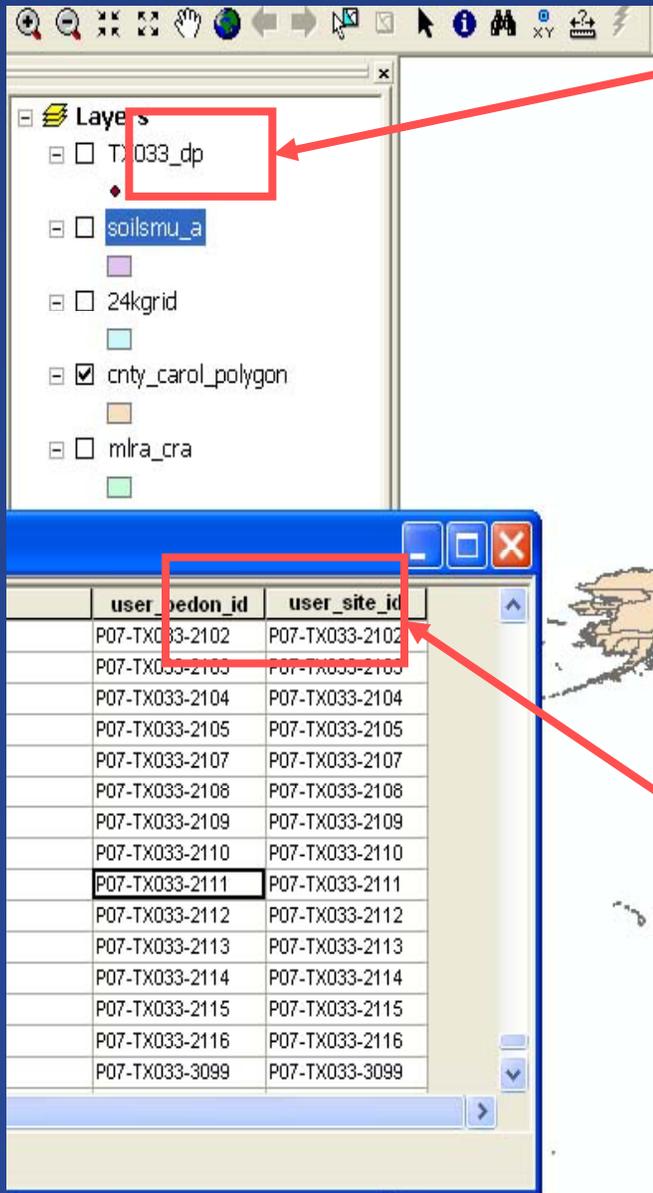
**Area and Mapunit Overlap:**

First select the Area Type Name: Then select the Area Name: (The Choice List used is from Setup >>

Area Type Name	Area Name
Non-MLRA Soil Survey Area	Routt Area, Colorado, Parts of Rio Blanco and Routt Counties
MLRA	Cool Central Desertic Basins and Plateaus
County or Parish	Routt
State or Territory	Colorado
USGS 7.5 Minute Quadrangl	Hooker Mountain, Colorado
*	

# Explanation of the \_dp (documentation points layer)

The auto population tool will also create a point in the documentation points layer. This data does not make it into NASIS. Only data in the pedon.mdb file is uploaded to NASIS at this time.

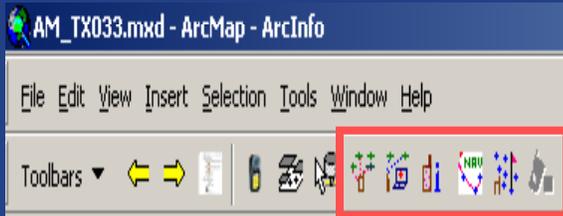


Your documentation points layer must have \_dp somewhere in the layer name. The tool looks for a layer with this name. It will still start Pedon PC and autopopulate without it but no point will be created in your geodatabase without \_dp in a layer name.

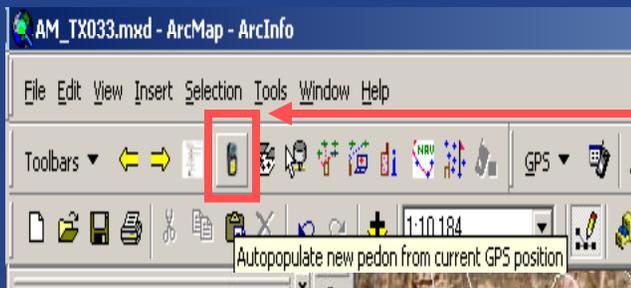
Your documentation point layers attribute table must also have the following columns in it. "user\_pedon\_id" and "user\_site\_id"

## Step 6. Choose the button to start autopopulation

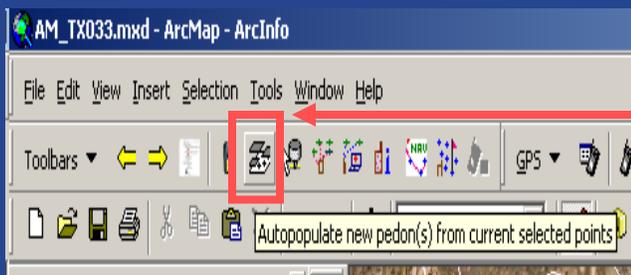
The autopopulation tool is part of the SRITB digital editing toolbar. You toggle through the different tools using the yellow arrows. The autopopulation part of the toolbar has several GPS functions in addition to the pedon autopopulation part of the toolbar.



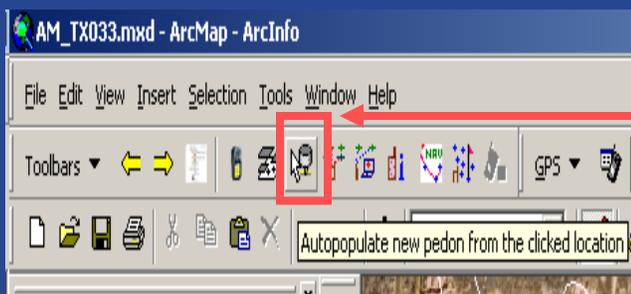
These buttons are used for setting up the GPS connection.



This button uses a connection to the GPS to start Pedon PC. You must have the GPS connected and feeding data for this to work.



This button starts Pedon PC by selecting a point that is already digitized in Arcmap. A GPS is not needed.



This button starts Pedon PC by clicking on a location in Arcmap. A GPS is not needed.

## Step 7. Fill out the User Pedon ID and User Site ID for the point

By clicking the GPS button the “Enter a User Pedon ID” screen appears. Fill out your ID data and click OK. In a few seconds Pedon PC will open up and several items on the Site tab will be filled out. Then you can start describing.

The image shows a screenshot of the ArcMap software interface. The title bar reads "AM\_TX033.mxd - ArcMap - ArcInfo". The menu bar includes File, Edit, View, Insert, Selection, Tools, Window, and Help. A toolbar contains various icons, with the GPS icon (a handheld device) highlighted by a red box and a yellow callout box that says "Select this button". Below the toolbar, a layer list is visible on the left, showing several layers such as "topology\_t\_tx033", "documentationtransects\_dp\_tx", "documentationpoints\_dp\_tx033", "flags\_f\_tx033", "soilsmu\_a", "mlra\_cra", "cnty\_carol\_polygon", "24kgrid", "Landowners", "update\_upd\_tx033", "original\_a\_tx033", "quads\_q\_tx033", "boundary\_b\_tx033", "roads100k\_tx033", "muleshoe", and "hydro100k\_tx033". The "muleshoe" layer is currently selected. In the foreground, a dialog box titled "Enter a User Pedon ID" is open. It has two tabs: "New" (selected) and "Update Existing". The dialog contains two text input fields: "User Pedon ID:" with the text "new pedon" and "User Site ID:" with the text "new pedon site". A yellow callout box on the right says "Fill out id info" with red arrows pointing to both input fields. At the bottom of the dialog are "OK" and "Cancel" buttons.

# Step 8. 50 to 100 key strokes of information are filled in using the autopopulation feature.

These are the items that will be filled out if you use the autopopulation toolbar and have the appropriate layers added to the map.

The screenshot displays the Microsoft Access 'Pedon Tablet Form' interface, which is integrated with ArcMap. The form is used for data entry and includes several key sections:

- Search by User Site ID:** (Read Only) MLRA 78 Pedon 232
- Coordinates:** Latitude: 33 02 35.8 north; Longitude: 101 04 25.3 west; UTM Easting: 306727.00 meters; UTM Northing: 3676477.00 meters; UTM Zone: 14; Datum: NAD83.
- Area and Mapunit Overlap:** A table with columns for Sym - Area Symbol, Name - Area Type Name, and Area Acres.

Sym - Area Symbol	Name - Area Type Name	Area Acres
Texas	State or Territory	
Garza	County or Parish	
Central Rolling Re	MLRA	
Interior Plains	Physiographic Division	

The map on the right shows a colorful geospatial dataset with a red box and an arrow pointing to a specific location, labeled "Points added to the geodatabase".

## Steps 7 Choose to use the “Selected Points Button, and Select a point in Arcmap using the selected features button.

The selected point button will name the site id based on a selected field in the attribute table. This ID can be edited in Pedon PC.

The screenshot displays the ArcMap software interface. The top toolbar contains various tools, with the 'Selected Features' tool (represented by a square with a diagonal line) highlighted by a red box. The map area shows a topographic map with several points labeled: P06-TX033-1024, P06-TX033-1022, and P06-TX033-1023. A dialog box titled 'Select an attribute field for User Site IDs' is open, showing a dropdown menu with 'site\_id' selected. The 'OK' button is highlighted with a red arrow.

Tool to select point

Select a point using arcmap tools.

Hit the dropdown and it will list the fields in the attribute table. Pick one.

Click OK and Pedon PC will open.

# Step 8. 50 to 100 key strokes of information are filled in using the autopopulation feature.

These are the items that will be filled out if you use the autopopulation toolbar and have the appropriate layers added to the map.

The screenshot displays two overlapping windows: Microsoft Access and ArcMap. The Microsoft Access window shows a 'Pedon Tablet Form' with the following sections:

- Search by User Site ID:** (Read Only) MLRA 78 Pedon 232
- Site and its Pedon Info:** User Site ID: S05-TX169-003
- Coordinates:** Latitude: 33 02 35.8 north; Longitude: 101 04 25.3 west; UTM Easting: 306727.00 meters; UTM Northing: 3676477.00 meters; UTM Zone: 14; Datum: NAD83
- Area and Mapunit Overlay:** A table with columns 'Sym - Area Symbol' and 'Name - Area Type Name'. The table contains the following data:

Sym - Area Symbol	Name - Area Type Name
Texas	State or Territory
Garza	County or Parish
Central Rolling Re	MLRA
Interior Plains	Physiographic Division
- Location Description:**
- Site Observation:** A table with columns 'ObsDateKind - Obs', 'ObsDate - Observation Da', 'PhiID - Air Pho', 'SurfKind', 'SurfDep', 'Micro', 'MicroElev', 'Std'. The table contains one row: 'actual site obs', '9/16/2005'.
- Site Observation Text:** A table with columns 'Kind', 'Cat - Categ', 'SubCat - \$', 'Text', 'Author', 'Date'. The table contains one row: 'miscellar', '1/9/2007'.

The ArcMap window shows a map with a colorful geospatial dataset. A red box highlights a specific location on the map, and a yellow callout box points to it with the text 'Points added to the geodatabase'.

## Step 7. Choose the button to autopopulate a pedon from a clicked location.

A dialog box appears and Pedon PC is populated based on the selected location.

The screenshot shows the ArcMap interface with a map of a field. A yellow callout box points to a button in the toolbar with the text "Select this button". A dialog box titled "Enter a User Pedon ID" is open, with a yellow callout box pointing to the input fields with the text "Fill out data". The dialog box has two tabs: "New" and "Update Existing". The "User Pedon ID:" field contains the text "new pedon". The "User Site ID:" field contains the text "Same as User Pedon ID". The "OK" and "Cancel" buttons are at the bottom of the dialog box. The map shows a point labeled "P06-TX033-1024" and a yellow callout box pointing to it with the text "Select this button".

This button is used if you have layers of sufficient clarity that you can identify where you are in the field from the imagery or other layers loaded in ArcMap.

# Step 8. 50 to 100 key strokes of information are filled in using the autopopulation feature.

These are the items that will be filled out if you use the autopopulation toolbar and have the appropriate layers added to the map.

The screenshot displays two overlapping windows: Microsoft Access and ArcMap. The Microsoft Access window shows a 'Pedon Tablet Form' with the following sections:

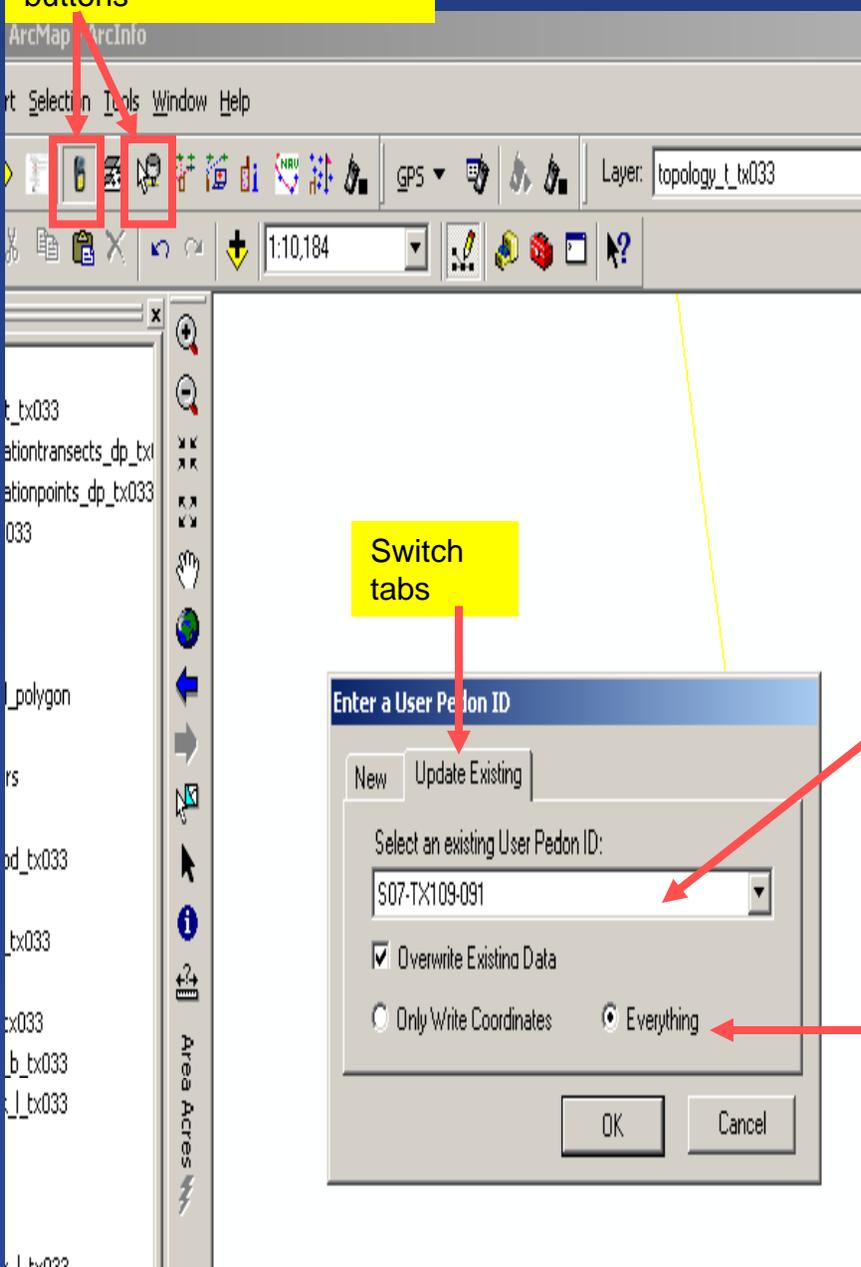
- Search by User Site ID:** (Read Only) MLRA 78 Pedon 232
- Coordinates:** Latitude: 33 02 35.8 north; Longitude: 101 04 25.3 west; UTM Easting: 306727.00 meters; UTM Northing: 3676477.00 meters; UTM Zone: 14; Datum: NAD83.
- Area and Mapunit Overlap:** A table with columns 'Sym - Area Symbol' and 'Name - Area Type Name'. The table contains the following data:

Sym - Area Symbol	Name - Area Type Name
+ Texas	State or Territory
+ Garza	County or Parish
+ Central Rolling Re	MLRA
+ Interior Plains	Physiographic Division
- Location Description:**
- Site Observation:** A table with columns 'ObsDateKind - ObsDate - Observation Date', 'PhiID - Air Photo', 'SurfKind', 'SurfDep', 'Micro', 'MicroElev', 'Std'. The first row contains 'actual site obs', '9/16/2005', and empty cells for the other columns.
- Site Observation Text:** A table with columns 'Kind', 'Cat - Categ', 'SubCat - \$', 'Text', 'Author', 'Date'. The first row contains 'miscellar', empty cells for 'SubCat - \$', 'Text', 'Author', and '1/9/2007'.

The ArcMap window shows a map with a colorful overlay. A yellow callout box with a red arrow points to a specific location on the map, containing the text: 'Points added to the geodatabase'.

Both the GPS and Point buttons have an additional tab. It is for updating an existing pedon. It is useful when you copy a pedon. Just select the pedon you created when you copied, overwrite the existing data because it has the old pedons location info. Click OK and Pedon PC opens to the pedon that was updated.

This function is in these two buttons



Switch tabs

The dropdown will list all the pedons in your database.

I go ahead and overwrite everything.

- It is important to remember that the data that is populated in Pedon PC can be uploaded into NASIS. The data that is populated in the \_dp layer is only temporary data which currently has no central location for upload. This is a good place to store data that should not be uploaded into a central location.

## **Step 9. Close Pedon PC after you complete the description**

- If you start another description using the toolbar and have Pedon PC already started, it opens a second Pedon PC session. Sometimes this causes a problem and Access will crash. The first session has a lock on the pedon.mdb file.**
- The best thing to do is to close Pedon PC and use the auto-population features to open a fresh session with each point.**