

## 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**

These are the benefits of the Auto-Population Toolbar.

**Step 1. You will need to have your IT person install the CCE certified SRITB Toolbar version 1.1.18.**

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

**Step 2. Download layers from the Geospatial Data Gateway.**

- 1. Soil Survey Area**
- 2. 24K Quad Index**
- 3. County boundaries by state**
- 4. MLRA layer**

The Autopopulation toolbar reads from the first layers that it encounters in the map index. If the point intersects with the layer and the appropriate headers are in the attribute table, the data is extracted and placed in Pedon PC. If the layer has the name and attribute fields that the autopopulation tool is looking for, but does not intersect the point, no data is returned and the field remains null in Pedon PC.

### Step 2a. Browse to the Gateway site

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

### Step 2b. Choose "Login"



## Step 2c. Choose "Continue to eAuthentication Login"

The screenshot shows the Geospatial Data Gateway website. At the top, there is a navigation bar with links for Home, News, FAQ, About, Help, and Contact, along with the date Nov 31 Oct 2007 and the text NRCS + FSA + RD. Below the navigation bar is a green header with the text "Login Information". The main content area is black and contains the following text:

The Geospatial Resource Data Gateway now requires logins via the USDA eAuthentication system to obtain certain datasets. These datasets are indicated on the **Status Maps page**.

If you do not have a USDA eAuthentication login, you may obtain information about creating one at the **eAuthentication Home Page**.

Public inquiries for data that is now protected with eAuthentication should direct requests to **Geodata.Gov**.

At the bottom of the main content area, there are two buttons: "Continue to eAuthentication Login" (highlighted with a red oval) and "Return to Geospatial Resource Data Gateway Homepage".

Step 2d. Type in your eAuthentication and  
you will then get this screen



**Step 2e. Choose "Quick County for soils Data, and Quick State for County Boundaries , Quad Indexes, and MLRA" (Separate operations)**

USDA Geospatial Data Gateway

Home News FAQ About Help Contact Nov 21 04 NRCS - FSA - RD

**S1**

**Step 1**

**Instructions**

Locate your area of interest using the zoom, fly, zoom out, center, move, place search, or Minimum Bounding Rectangle controls, then click **Define Order Area** to proceed to Step 2.

Alternatively, select a county, county(s), or a state with a control below that will go directly to Step 2.

Quick County  
Quick County(s)  
Quick State



**Step 2f. Choose a county or state i.e. NE Nebraska**

Quick State

State

NE Nebraska

OK Cancel

## Step 2g. Choose products by checking boxes and then press "Continue to Step 3"

You will need quadrangle indexes, county boundaries and the Major Land Resource Areas by state.

The image displays two screenshots of the USDA Geospatial Data Gateway interface, illustrating the product selection process in Step 2.

**Top Screenshot:** The interface shows the "Available Products for the Selected Area" section. A list of products is displayed, including "Quadrangle Index: 1:24,000 (3 maps 0.99 MB)", which is highlighted in yellow. A red circle highlights the "Continue to Step 3" button. The "Instructions" section on the left states: "Add a product to your shopping cart by clicking the box alongside its title. When satisfied with your selections, press the Continue button to proceed to Step 3."

**Bottom Screenshot:** This screenshot shows a different set of products, including "TIGER 2002 State" and "TIGER 2002 County". A red circle highlights the "Continue to Step 3" button. The "Instructions" section on the left states: "Add a product to your shopping cart by clicking the box alongside its title. When satisfied with your selections, press the Continue button to proceed to Step 3. Also, highlight a product to click Preview Map(s) & Metadata for preview images and metadata or Area Details Description for general."

## Step 2h. Default specifications for the order are OK. Then press "Continue to Step4"

**S3**  
**Step 3**  
**Instructions**  
From the dropdown lists, choose the desired format for the data you have requested. When satisfied with your selections, press the Continue button to proceed to Step 4: Shipping Information.

**Format for Vector Data (DIRCNTY\_QD24K\_QD100K)**

|   |                             |
|---|-----------------------------|
| Vector Projection<br>(See the Instructions Available Table) | Geographic (Lat,Long) NAD83 |
| Vector Extent<br>(See the Extent Options Table)             | Standard Extent             |
| Vector File Format  | One ESRI Shape File         |

**\* NOTE:**  
Choosing ESRI Coverage or ASCII Export format applies to SSURGO data themes ONLY and significantly delays order fulfillment. All other products are delivered as ESRI Shape File(s). The option "One ESRI Shape File" does not apply to SUU and SSURGO.

**Format for All Data**

**Compression:** All themes and maps delivered via FTP are in zip format.  
**NOTE:** CD orders and products larger than 2.14 GB are not compressed into a single archive.

**Continue to Step4**

## Step 2i. Fill out your shipping information and press continue to step 5.

USDA Geospatial Data Gateway

Home News FAQ About Help Contact Nov 31 2011 NRCS | FSA | RD

S4

**Step 4**

**Instructions**  
First select the method of delivery. Then provide shipping information so that you can be notified when your order is done. The information must be complete and accurate for you to be contacted.

**Note:** FTP download times can be significant for many orders.

Options  
 Save Values  
Privacy Statement

**Continue to Step 5**

S1: Locate Area S2: Select Products S3: Data Format S4: Shipping Info S5: Confirm Order

### Shipping Information for the Current Order

Delivery Method  
 FTP Download  CDROM  DVD

Delivery Information (\* means required)

|                      |                             |
|----------------------|-----------------------------|
| * First Name         | henry                       |
| * Last Name          | ferguson                    |
| * Email              | henry.ferguson@mail.wvu.edu |
| * Confirm Email      | henry.ferguson@mail.wvu.edu |
| Organization/ESIP ID | USDA                        |
| * Address            | 157 Clark Hall Annex        |
| Address              |                             |
| * City               | morgantown                  |
| * State              | WV                          |
| * Zip                | 26505                       |
| * Phone              | 304-290-2159                |
| Fax                  |                             |

## Step 2j. Confirm the order and press "Place Order".

**S5**  
**Step 5**  
**Instructions**  
Review current information. If any errors are present you may return to any previous step to correct. If the information is correct, the order may be submitted for processing.  
You will receive an order number on the next page, which may take a few minutes to appear. Please see below.

**Please Press**  
**Place Order**

**Order Confirmation**

**Data Format**

|               |                             |  |  |
|---------------|-----------------------------|--|--|
| Projection    | Geographic (Lat/Long) NAD83 |  |  |
| Extent        | Standard                    |  |  |
| Compression   | Zip                         |  |  |
| Vector Format | One Shape File              |  |  |

**Shipping Info**

|               |                             |                 |     |
|---------------|-----------------------------|-----------------|-----|
| Name          | henry ferguson              |                 |     |
| Organization  | USDA                        |                 |     |
| Email         | henry.ferguson@mail.wvu.edu |                 |     |
| Address       | 157 Clark Hall Annex        |                 |     |
| City, ST, Zip | morgantown, wv 26505        | Delivery Method | FTP |
| Phone         | 304-290-2159                | Fax             | -   |
| Order Area    | *, Nebraska                 |                 |     |

**Estimated total downloaded size: 2.13 megabytes.**  
**Estimated time for this order to be completed is: 3 Minute (s)**

See the Download Times Table for estimated FTP download times for this amount of data.

| Products Ordered |                                     |      |           |
|------------------|-------------------------------------|------|-----------|
| Item             | Product                             | Maps | Megabytes |
| 1                | Dynamap: Counties by State          | 1    | 1.10      |
| 2                | Quadrangle Index 1:24,000           | 93   | 348       |
| 3                | Quadrangle Index 1:100,000 by State | 1    | .03       |

Step 2k. For small orders you may wait a few seconds or minutes and press the Gateway Order Number. Often your order will be processed in a very short amount of time.

The screenshot shows the Geospatial Data Gateway website interface. At the top, there is a navigation bar with links for Home, News, FAQ, About, Help, and Contact, along with the date 'Nov 21 06' and the text 'NRCS + FSA + RD'. Below this is a 'Gateway Order Confirmation' page. On the left, a yellow banner reads 'FIN Order Placed'. The main content area features a graphic of a globe with data layers and the text 'the one stop source of natural resources data'. To the right, a green box contains the following text:

**Thank You for using the Geospatial Data Gateway**

Gateway Order # **379222** has been generated.

You will receive e-mail notification that your order is complete in as little as 2 Minute(s).

This time is a minimum and is dependent on order volume and system maintenance, and as a result, is not exact.

Check Order allows download of items completed before notification.

As a matter of etiquette, please download this order **BEFORE** placing any more orders. **DO NOT** place several orders in sequence. This way, other users will have an opportunity to place and download orders.

You may return to the [Geospatial Data Gateway](#).

## Step 2!. Click on each green box to download your order. (Choose save and give a location)

USDA Geospatial Data Gateway

Home About News Help Contact Nov 7, 2007 NRCS + FSA + RD

|            |                |                |  |
|------------|----------------|----------------|--|
| Order:     | 579222         | Time Received: | 11/02/2007 9:02:00 AM                          |
|            |                | Time Finished: | 11/02/2007 9:02:20 AM                          |
| Placed by: | harry ferguson | Order Type:    | Quick Order: All Counties, Nebraska            |
|            |                | Delivery Type: | FTP<br>(Having a problem with FTP? See FAQ-24) |

Clipping: Standard    Projection: Geographic NAD83    Vector/Image Format: One Shape File/None    Compression: Zip

| Item      | Description                         | Size(Disk/Zip) | Count (Rows/Files) | Status                 |
|-----------|-------------------------------------|----------------|--------------------|------------------------|
| 579222_01 | Dynarep: Counties by State          | 1.10/0.67 MB   | 1/5                | Success (Download Now) |
| 579222_02 | Quadrangle Index 1:24,000           | 0.78/0.09 MB   | 1/7                | Success (Download Now) |
| 579222_03 | Quadrangle Index 1:100,000 by State | 0.05/0.01 MB   | 1/7                | Success (Download Now) |

Total Order Size: 1.93 Mbytes

Enter Order ID # [ ]    CHECK

Enter Email: harry.ferguson@mail.wvu.edu

**File Download**

Do you want to open or save this file?

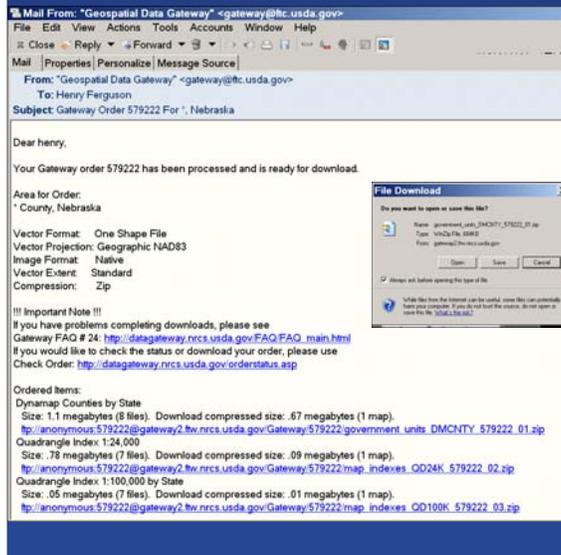
Name: government\_data\_ZMCHTY\_579222\_01.zip  
Type: WinZip File (ZIP)  
From: gateway2.nrcs.usda.gov

Open    Save    Cancel

Always ask before opening this type of file

While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. (MSN's Site List)

## Step 2!. Or wait for the email to download your order. (Choose save and give a location)



The screenshot shows an email interface with a blue header bar. The email is from "Geospatial Data Gateway" and is addressed to Henry Ferguson. The subject is "Gateway Order 579222 For ", Nebraska. The email body contains the following text:

Dear henry,

Your Gateway order 579222 has been processed and is ready for download.

Area for Order:  
\* County, Nebraska

Vector Format: One Shape File  
Vector Projection: Geographic NAD83  
Image Format: Native  
Vector Extent: Standard  
Compression: Zip

!!! Important Note !!!  
If you have problems completing downloads, please see  
Gateway FAQ # 24: [http://datagateway.nrcs.usda.gov/FAQ/FAQ\\_main.html](http://datagateway.nrcs.usda.gov/FAQ/FAQ_main.html)  
If you would like to check the status or download your order, please use  
Check Order: <http://datagateway.nrcs.usda.gov/orderstatus.asp>

Ordered Items:

Dynamap Counties by State  
Size: 1.1 megabytes (8 files). Download compressed size: .67 megabytes (1 map).  
[http://anonymous.579222@gateway2.hw.nrcs.usda.gov/Gateway579222/government\\_units\\_DMCNTY\\_579222\\_01.zip](http://anonymous.579222@gateway2.hw.nrcs.usda.gov/Gateway579222/government_units_DMCNTY_579222_01.zip)  
Quadrangle Index: 1:24,000  
Size: .78 megabytes (7 files). Download compressed size: .09 megabytes (1 map).  
[http://anonymous.579222@gateway2.hw.nrcs.usda.gov/Gateway579222/map\\_indexes\\_QD24K\\_579222\\_02.zip](http://anonymous.579222@gateway2.hw.nrcs.usda.gov/Gateway579222/map_indexes_QD24K_579222_02.zip)  
Quadrangle Index: 1:100,000 by State  
Size: .05 megabytes (7 files). Download compressed size: .01 megabytes (1 map).  
[http://anonymous.579222@gateway2.hw.nrcs.usda.gov/Gateway579222/map\\_indexes\\_OD100K\\_579222\\_03.zip](http://anonymous.579222@gateway2.hw.nrcs.usda.gov/Gateway579222/map_indexes_OD100K_579222_03.zip)

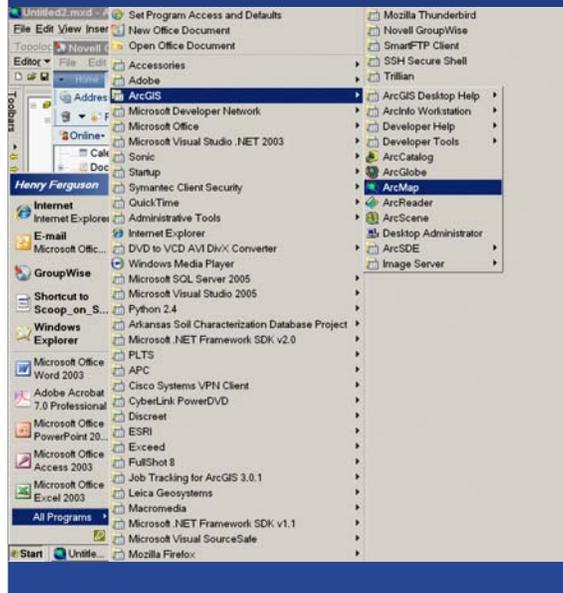
A "File Download" dialog box is open over the email content, showing the file name "government\_units\_DMCNTY\_579222\_01.zip" and the "Save" button is highlighted.

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

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

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

## Step 4. Start ArcMap



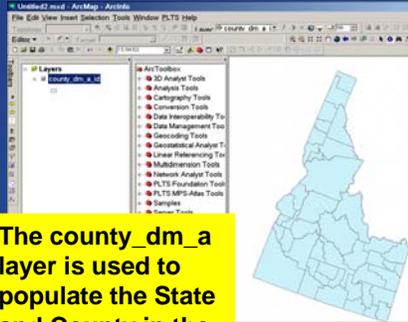
## Step 5. Add layers to ArcMap



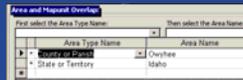
Use this button in ArcMap to add layers to ArcMap



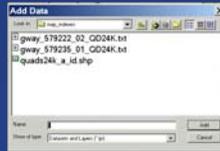
Autopopulation uses a specifically named layers to populate Pedon PC.



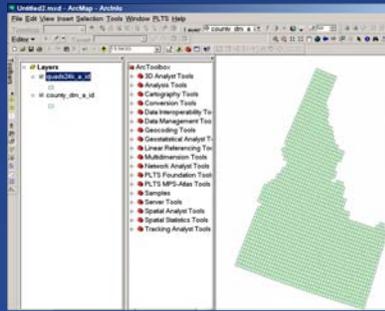
The county\_dm\_a layer is used to populate the State and County in the Area and Mapunit Overlap Tab.



## 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.



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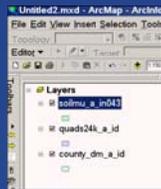
### Step 5. Add layers to ArcMap

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 Overlay Tab in Pedon PC.

| Area Type Name            | Area Name             |
|---------------------------|-----------------------|
| Non-MLRA Soil Survey Area | Floyd County, Indiana |

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.

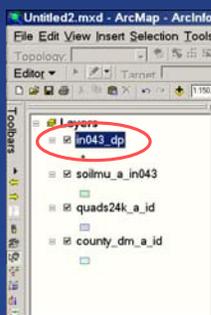
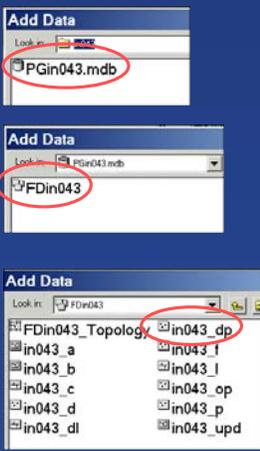
If you have soilmu\_a layers for more than one soil survey area the auto-population tool looks for the match in the first layer. If your point is not in that first layer, then it will fail to find a match and return no data.

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### Step 5. Add layers to ArcMap

Add documentation points layer from the Geodatabase\*

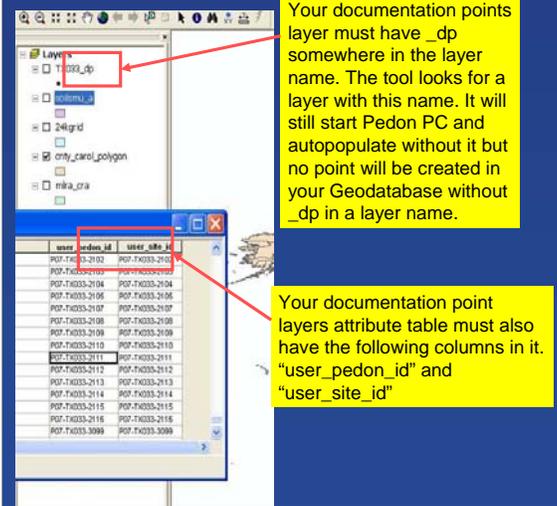


\* Prerequisite – Run the Geodatabase Setup Model. See Job Sheet – Geodatabase Setup Update Model.

If you have soilmu\_a layers for more than one soil survey area the auto-population tool looks for the match in the first layer. If your point is not in that first layer, then it will fail to find a match and return no data.

## 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.



The screenshot shows the ArcGIS interface. In the 'Layers' panel, a layer named 'T1002\_dp' is highlighted with a red box. A red arrow points from this layer to a yellow text box. Another red arrow points from the 'user\_pedon\_id' and 'user\_site\_id' columns in the attribute table to another yellow text box.

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"

| user_pedon_id  | user_site_id   |
|----------------|----------------|
| POP-FW03-2102  | POP-FW033-2102 |
| POP-FW033-2104 | POP-FW033-2104 |
| POP-FW033-2106 | POP-FW033-2106 |
| POP-FW033-2107 | POP-FW033-2107 |
| POP-FW033-2108 | POP-FW033-2108 |
| POP-FW033-2109 | POP-FW033-2109 |
| POP-FW033-2110 | POP-FW033-2110 |
| POP-FW033-2111 | POP-FW033-2111 |
| POP-FW033-2112 | POP-FW033-2112 |
| POP-FW033-2113 | POP-FW033-2113 |
| POP-FW033-2114 | POP-FW033-2114 |
| POP-FW033-2115 | POP-FW033-2115 |
| POP-FW033-2116 | POP-FW033-2116 |
| POP-FW033-3099 | POP-FW033-3099 |

The documentation points layer is created during the Geodatabase setup process. Refer to the Geodatabase Setup Update Job Aid for setup of the Geodatabase.

It is possible to create your own documentation points layer which will work with the auto-population tool by creating a layer with a name that ends in \_dp and includes an attribute table with the fields "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.

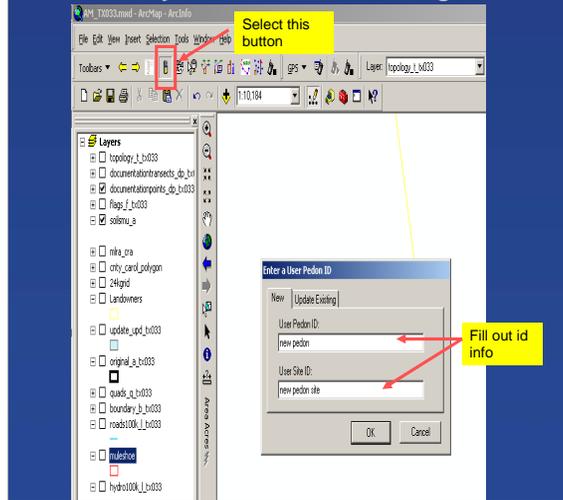
This button starts Pedon PC by selecting a point that is already digitized in ArcMap. A GPS is not needed.

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

These are some pictures of the existing toolbars and the buttons used for auto-population.

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

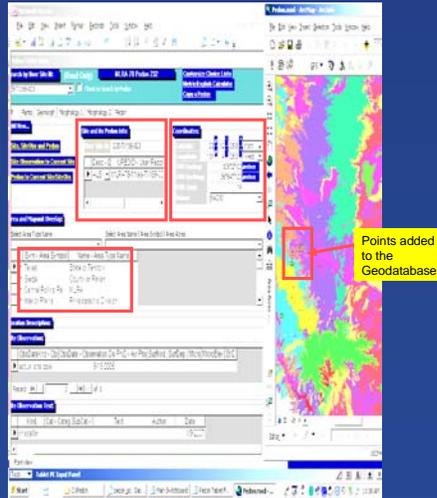
By clicking the GPS button the “Enter a User Pedon ID” screen appears. Fill out your ID data and click OK. In a few seconds Pedon PC will open up and several items on the Site tab will be filled out. Then you can start describing.



In this case, the data from the GPS is used to populate the location fields in Pedon PC. One point is filled out.

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.



**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.

Tool to select point

Select a point using ArcMap tools.

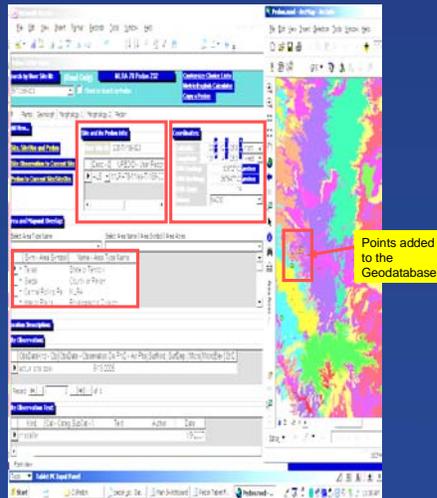
Hit the dropdown and it will list the fields in the attribute table. Pick one.

Click OK and Pedon PC will open.

This button is used if you already have a point in ArcMap that you are going to use for gathering additional data.

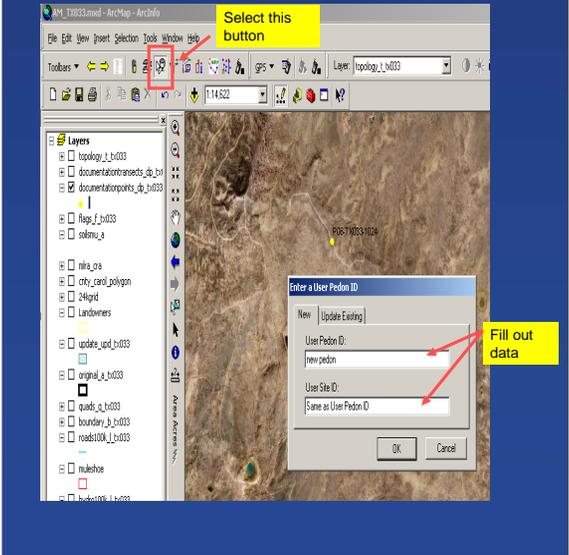
Step 8. 50 to 100 key strokes of information are filled in using the autopopulation feature.

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



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

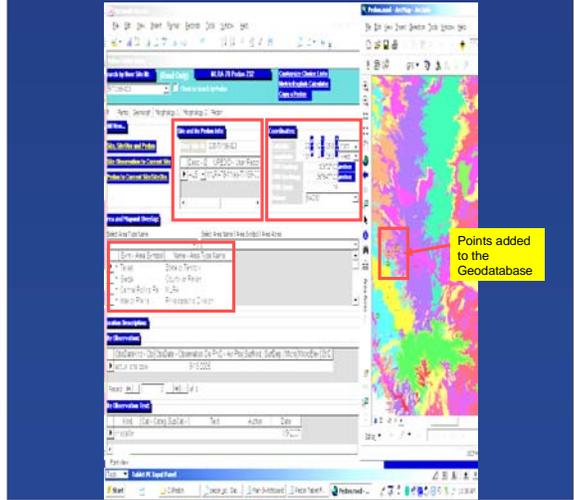
**A dialog box appears and Pedon PC is populated based on the selected location.**



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.



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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.**