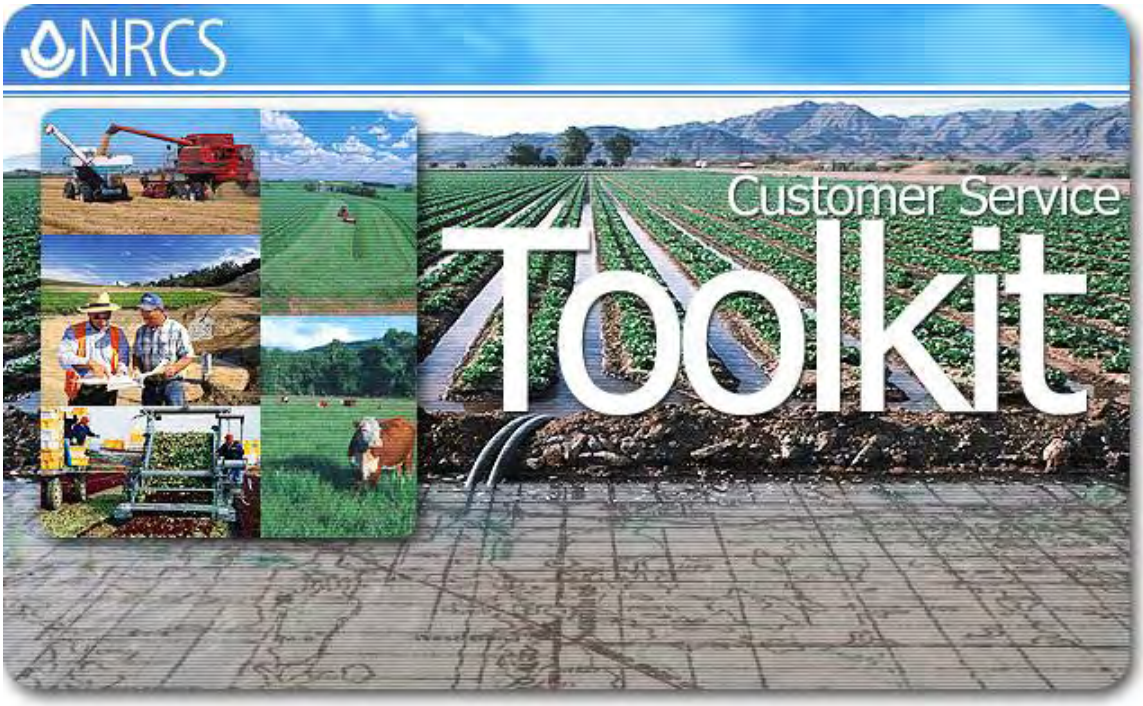

Engineering with Toolkit

DRAFT

Table of Contents

Cover…… 1
Table of Contents …… 2
Overview of Toolkit Tools …… 3
Starting Toolkit & Transferring Customers …….. 4-5
Downloading GPS Data with DNR Garmin …… 6
GPSi Handout …….. 7
Drawing Pool Areas …… 8-9
Drawing Drainage Areas …… 10-11
Drawing Flow Length ……... 12-13
Printing Drainage Area and Flow Length Maps 14-15
To print a Pool Area Map …… 16
Drainage Area Soils Map …… 17-18
Saving Projects …… 19

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Overview Toolkit Tools

ArcGIS Tools	Icon	Purpose
Zoom to Plan		• Zooms to the extent of the customer's planned land units.
Select a Plan		• Adds the customer's plan layers, including planned land units and practice layers, to the view.
Import Legacy Shapefiles		• Allows users to import existing land unit shapefiles into the Toolkit 2004 geodatabase.
Total Acres		• Calculates the acres of one or more polygons such as fields, ponds or easements. • Provides the total length of the perimeters. • Calculates lengths for line features such as fence or pipelines and give a total count for the number of features selected for any layer type (point, line or polygon).
Map Products		• Creates a map with a heading, a legend, a scale bar, and a north arrow.
Map Labels		• Allows user to create labels for all vector layers.
Soils Map/Inventory		• Creates a soils map for a customer's land units and provides a soils inventory report for the selected area.
Buffer		• Draws a polygon of a specified width either inside or outside of an area or around a point or line. • Allows buffers to be created on one side of a line.
Attribute Tool		• Inputs information about various layers into the corresponding table including Land Units, Practice Layers and Resource Inventory layers.
New Toolkit Layer		• Creates new layers including Planned Land Units, Practice and Resource Inventory Layers. • Builds new layers and adds them to the view.
Toolkit Digitizer		• Allows a user to add or edit features for any type of layer.
Digitizing Off		• Indicates that the digitizing (i.e., Edit Mode) is off.
Digitizing On		• Indicates that the digitizing is in Edit Mode.

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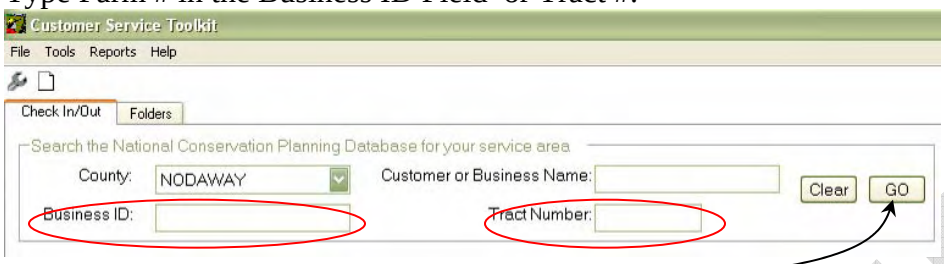
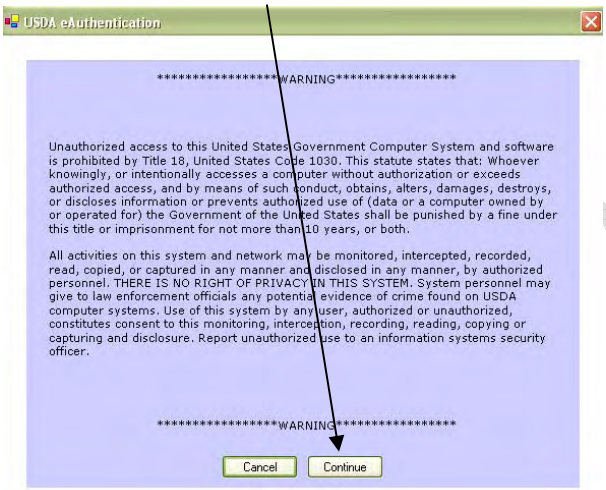
Starting Toolkit and Transferring the Customer

Double click Toolkit 2004 Icon

Type Farm # in the Business ID Field or Tract #.

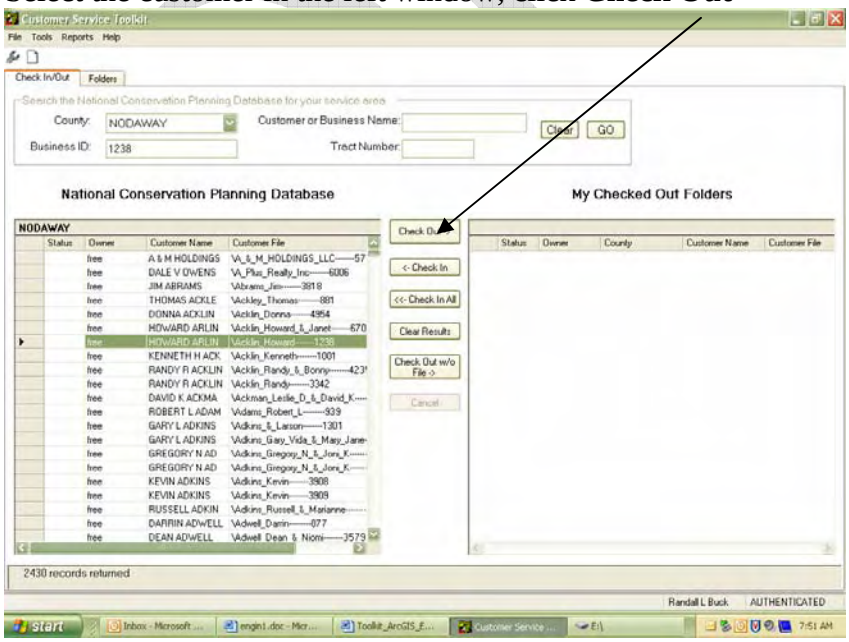


Click **GO** then **Continue**.



You need to login with your *eAuthentication* log-in and password

Select the customer in the left window, click **Check Out**



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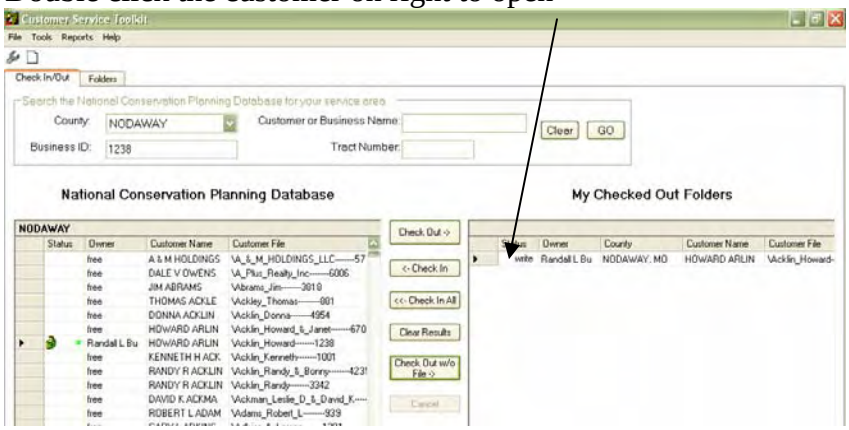
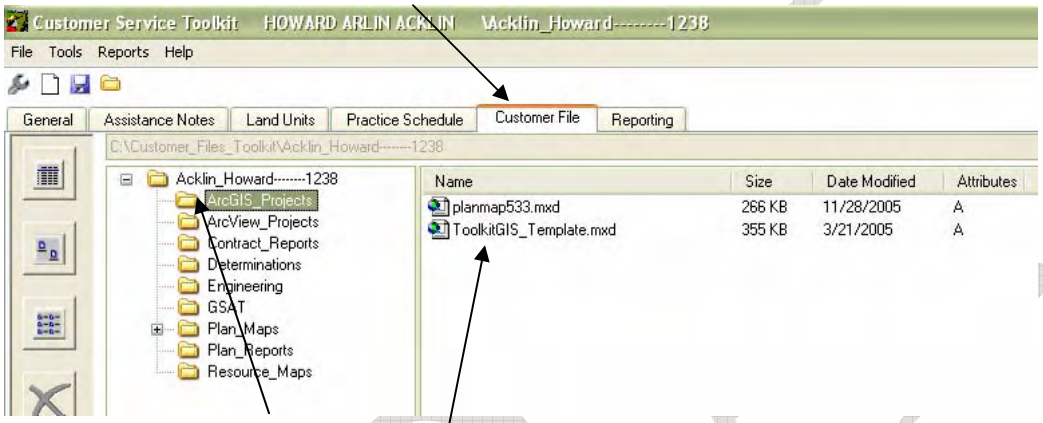
Double click the customer on right to open



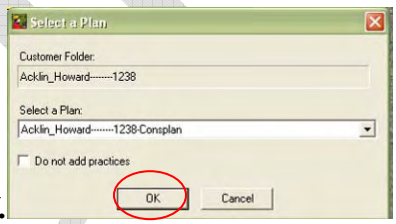
Click on the **Customer File Tab**.



Single click **ArcGIS_Projects**

Double click **ToolkitGIS_Template** or appropriate project to start ArcMap.

Click on **Cyber Farmer** .



Select the plan and click ***OK.***

Click on **Zoom In** button then click and draw box around tract that you are working with.

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DOWN LOADING DNR GARMIN GPS DATA

Insert Tech Note MO-1 after it's revised.

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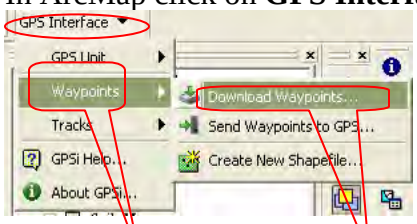
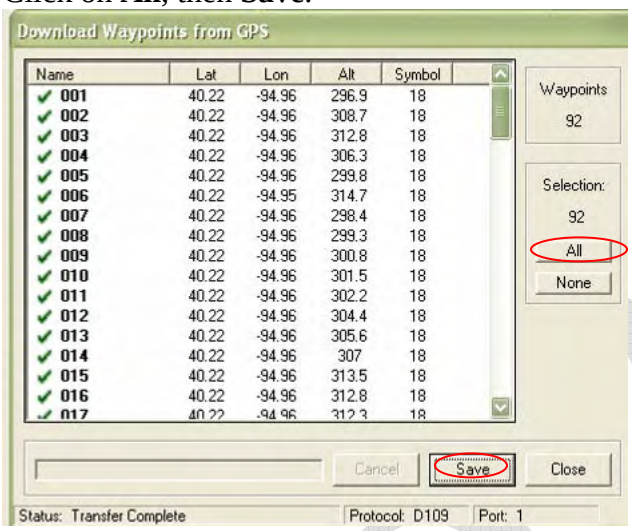
GPSi HANDOUT

In ArcMap click on **GPS Interface**.



Select **Waypoints** then **Download Waypoints…**

Click on **All**, then **Save**.



Check the file location C:\Customer_Files_Toolkit\toolkit customer\Resource_Maps.

Enter File name (such as Structure Waypoints 2006).

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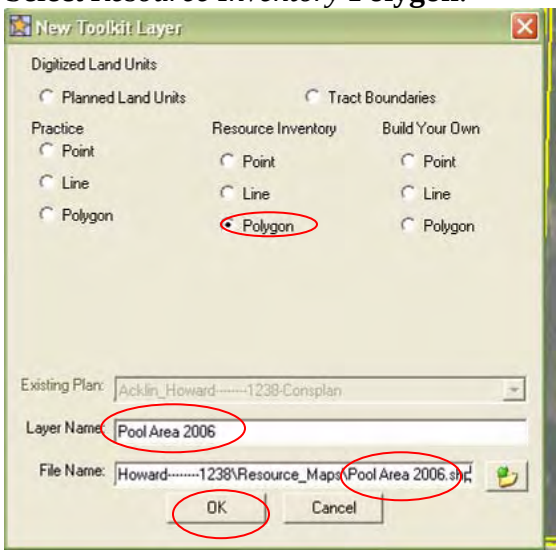
DRAWING POOL AREAS

Right click on *GPS waypoint file* in the table of contents and select

Set scale to 1:4800

Click on New Toolkit Layer

Select *Resource Inventory* **Polygon**.



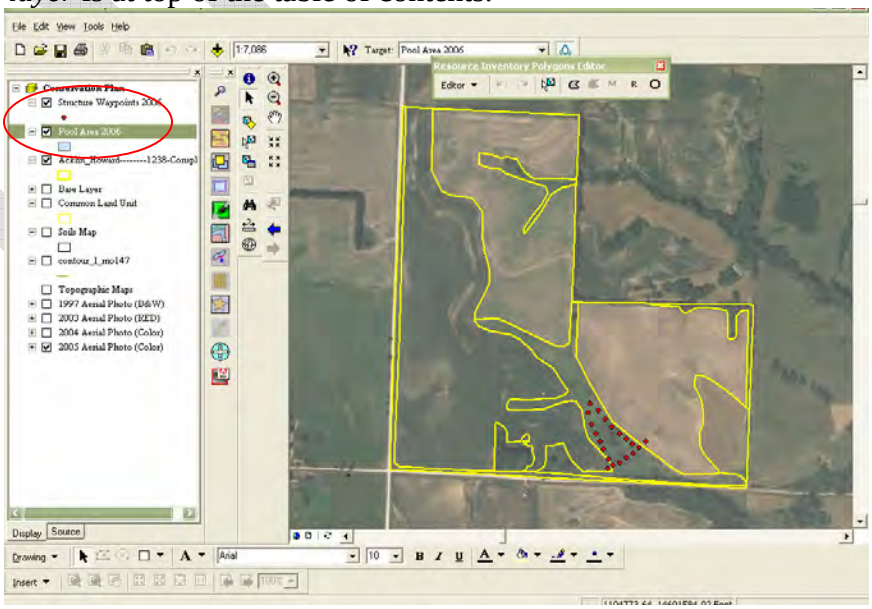
Change *Layer Name* to **Pool Area 2006**.

Then with mouse, highlight **Pool Area 2006** you just typed, then on the keyboard type **Ctrl + C**

Then highlight **"res_inv_poly"** in the *File Name* then **Ctrl + V** to paste**,** then click **OK**.

Drag *Resource Inventory Polygon Editor* out of the way.

Be sure the *GPS point layer* is at top of the table of contents.



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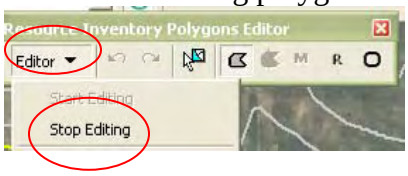
Click on

Add Feature Button on the Editor bar to draw first polygon.

Note: When drawing pool areas start at *highest* contour then work your way down. Draw the *largest* first. Instead of double clicking to complete a polygon left click *once* on last point then *right click* off last point and *finish sketch*. Repeat for each additional contour.

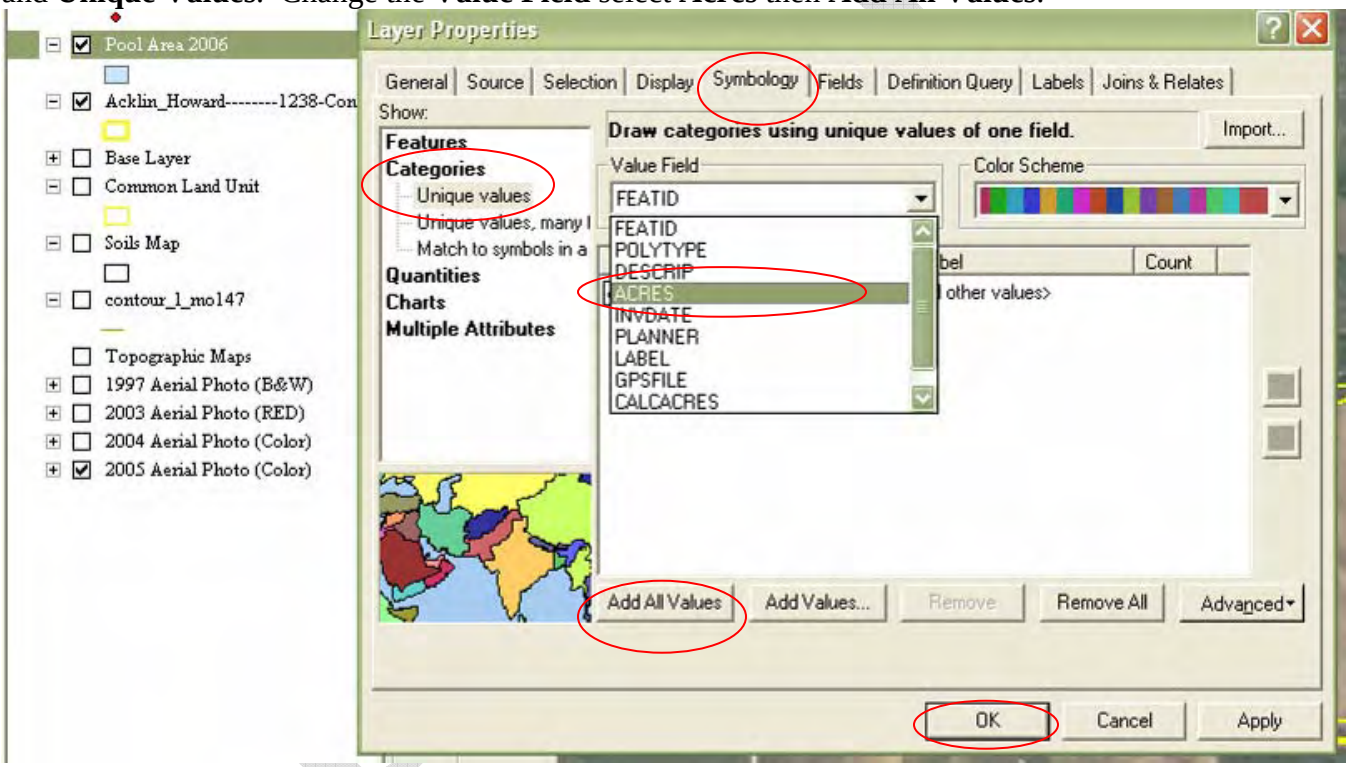
When done editing polygons click on the **Editor** pull down and **Stop Editing**.



When asked *Do you want to save your edits?* **Yes**

To Calculate Area

Double click on *Pool Area 2006* in the table of contents, click on the **Symbology** Tab, then click on **Categories** and **Unique Values**. Change the **Value Field** select **Acres** then **Add All Values**.



Then **OK.**

Right click on the layer name in the table of contents and click on **Save Symbology**.

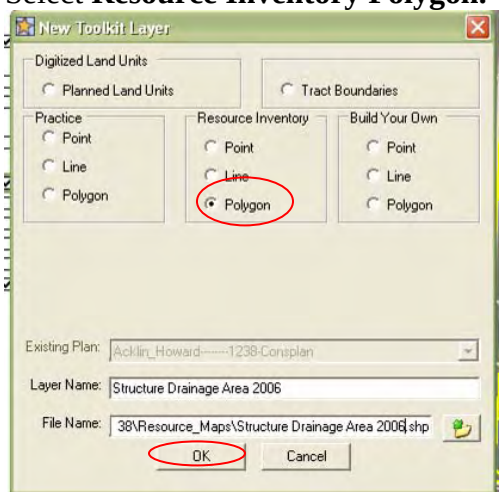
DRAWING DRAINAGE AREAS

Set scale to 1:4800

Turn on **Topographic Maps** or **Contour Lines**.

Click on **New Toolkit Layer.**

Select **Resource Inventory Polygon.**

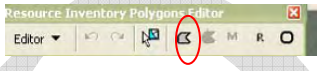


Change Layer Name to **Structure Drainage Area Date**

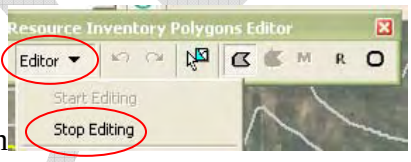
Highlight *Layer Name* then **Ctrl + C,** "Copy".

Highlight *res_inv_poly* in the *File Name* then **Ctrl + V**, "Paste".

Click **OK**.

Click on 

Add Feature Button and draw polygon, this time double click to end.

Click on the **Editor** pull down 

Select **Stop Editing**

*Save Edits***. Yes.**

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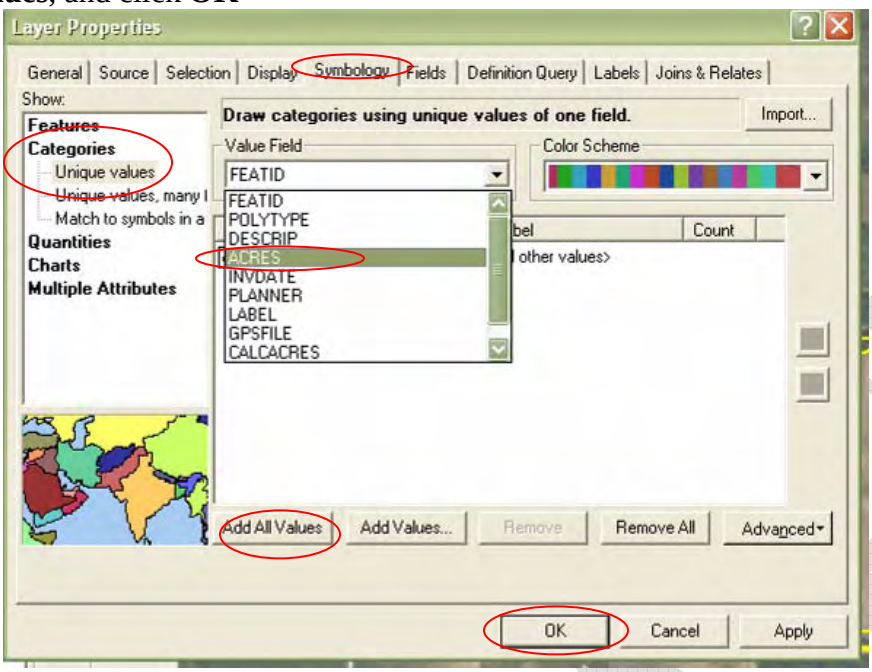
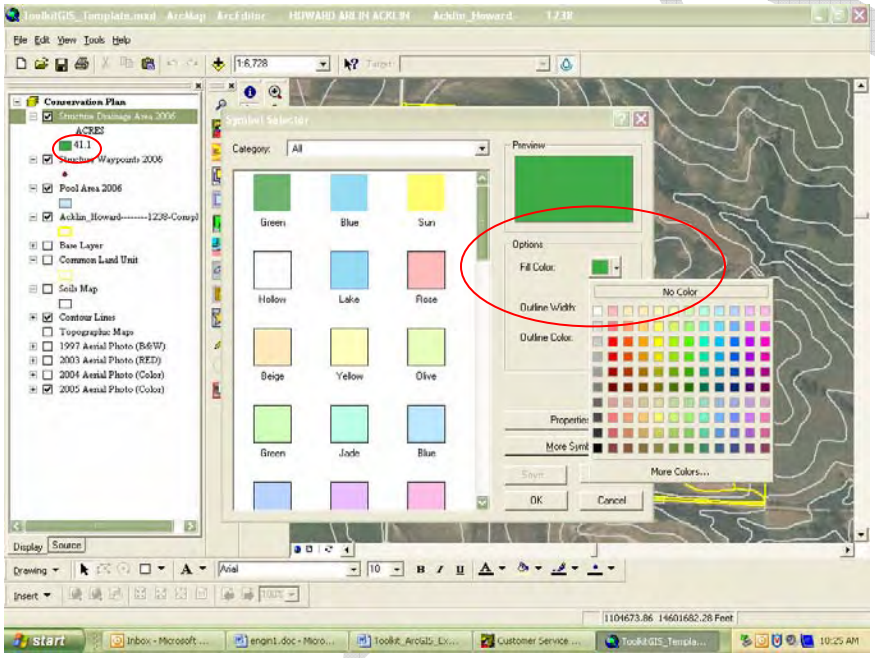
Double click on **Structure Drainage Area 2006** in the *Table of Contents* to open *Layer Properties* window.

Symbology tab, then select **Categories, Unique Value**. Change the *Value Field* to **Acres,** click on **Add All Values**, and click **OK**



To make hollow Fill Color click once on the *SYMBOL* next to the drainage area number



In *Options* change the *Fill Color* to *No Color* and *Outline Width* to **1.5** and *Outline Color* to a bright contrasting color.

Click **OK**

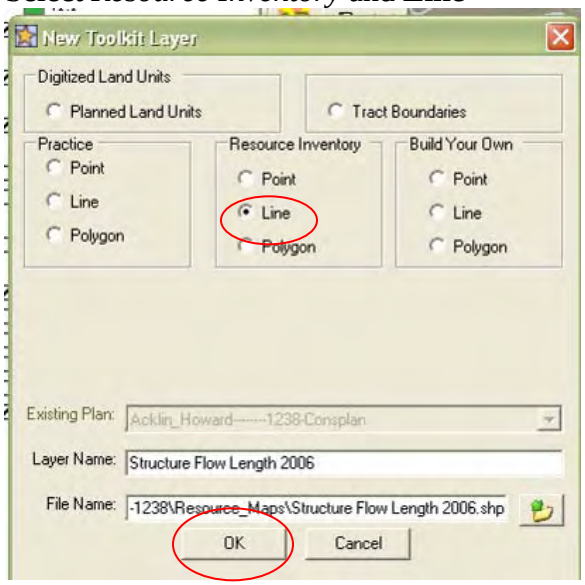
Right click on the layer name and click on **Save Symbology**

Drawing Flow Length

Set scale to 1:4800

Click New Toolkit Layer

Select *Resource Inventory* and **Line**



Change *Layer Name* to **Structure Flow Length Date**

Highlight the *Layer Name* you just typed and press **Ctrl + C**

Highlight **res_inv_line** in the *File Name* press **Ctrl + V**

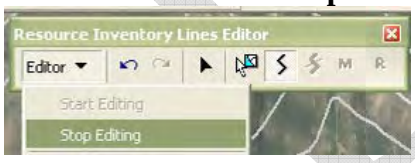
Click **OK**

Drag *Resource Inventory Line Editor* bar out of the way

Click on **Add Feature** button

Then draw in flow length be sure to double click to end

Click on **Editor** then **Stop Editing**



Do you want to save your edits? **Yes**.

To measure flow length click on **Feature Summary** button

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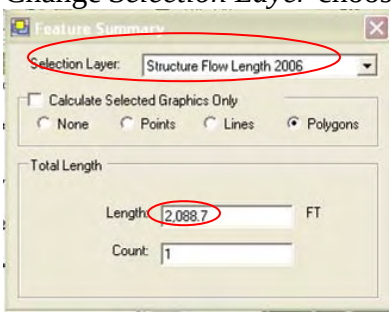
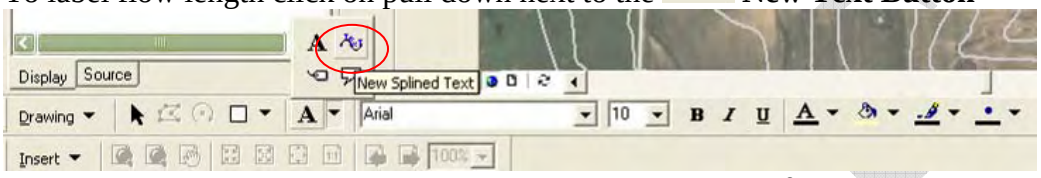
Change *Selection Layer* choose *Structure Flow Length Date* then click on flow length line in *Data View*



Use cursor to highlight *Length* **Ctrl + C**

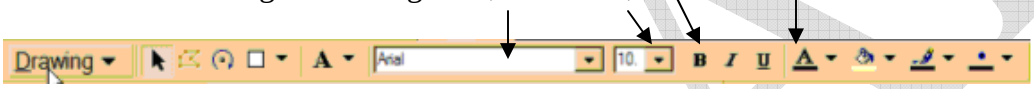
Click on **X** to close window

To label flow length click on pull down next to the **New Text Button**



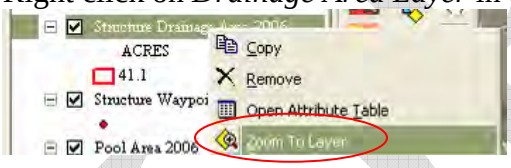
Select **New Splined Text** then click once to draw line along flow line and double click to end when text box appears press **Ctrl + V** then **Enter**

Note: You can change text using Font, Font Size, Bold and Colors



Click on **Clear Selected Features** button to make the flow line appear correct color.

Right click on *Drainage Area Layer* in the Table of Contents and **Zoom to Layer**



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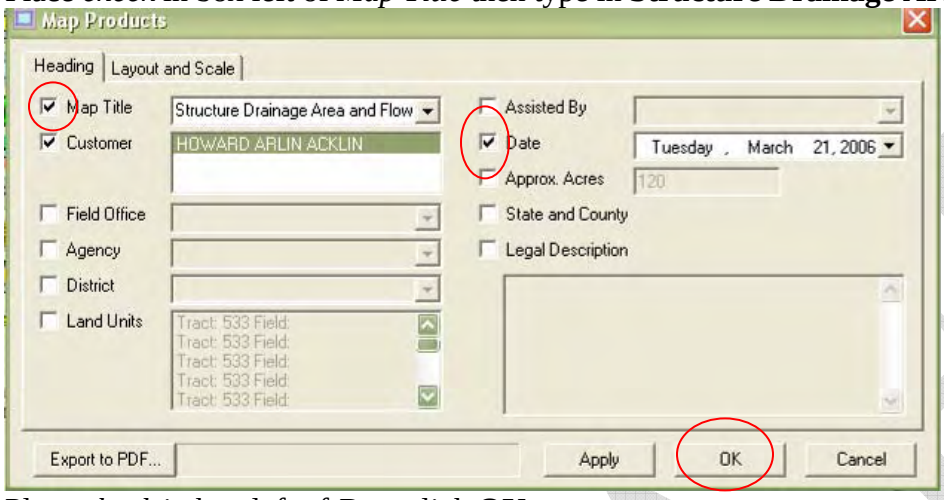
Printing Drainage Area and Flow Length Maps

Un-check the *Pool Area Layer* so it is not visible and set scale so you see your entire map area.

Click on the **Map Products Button**

Place *check* in box left of *Map Title* then type in **Structure Drainage Area and Flow Length**

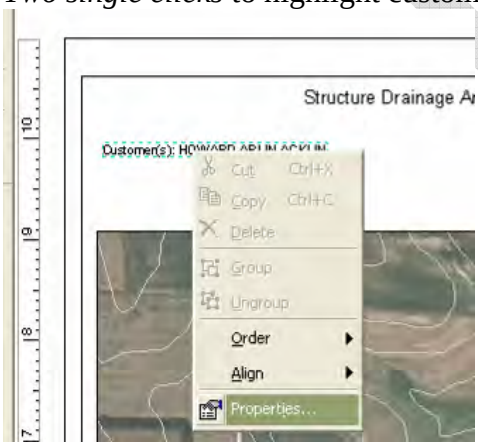


Place *check* in box left of *Date* click **OK**

Do you want to save the map?
(A PDF map will be generated and exported to the resource maps folder in the customer's folder)
Choose **No**

Note: You will want to change the layout. After you have made you changes you may want to export the layout to save a copy.

Two single clicks to highlight customers name and right click select **Properties**.



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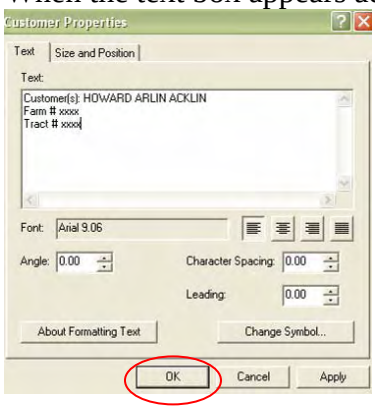
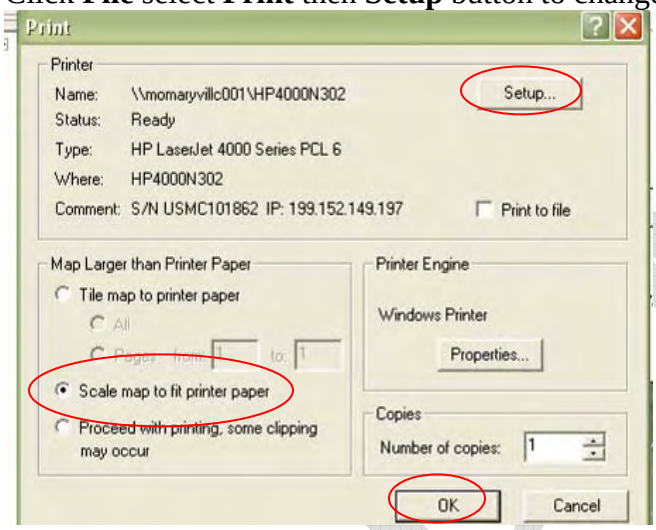
When the text box appears add the Tract and Farm numbers click **OK**



* Note: you may need to adjust the placement of the legend and scale bar.

Click **File** select **Print** then **Setup** button to change printer if necessary and click **OK**



Select **Scale Map to fit printer paper** click **OK**

(Note: If you are printing your map at a specific scale you will click on *Proceed with printing, some clipping may occur*)

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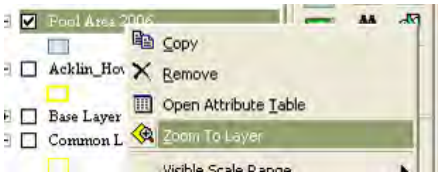
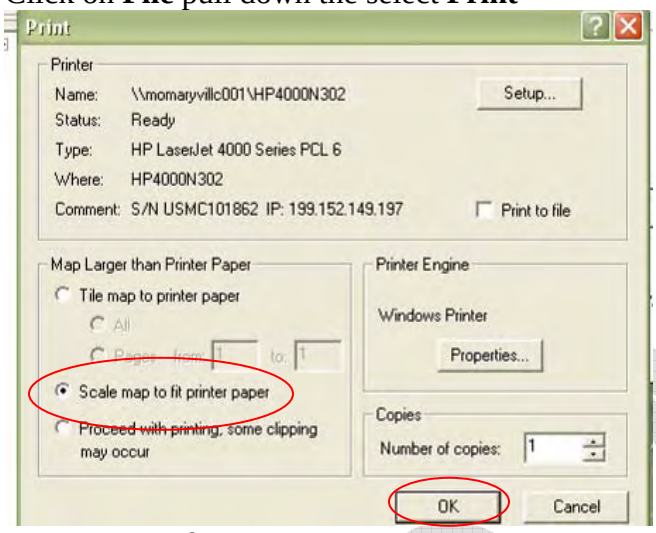
To print a Pool Area Map

Uncheck the Topographic or Contours layers and the Drainage Areas and Flow Length layers.

Place check next to the Pool Areas Layer and **right click** on the layer and select **Zoom to Layer**



Click on **File** pull down the select **Print**



Scale Map to fit printer paper then click on **OK**

Click on the *Data View* Button

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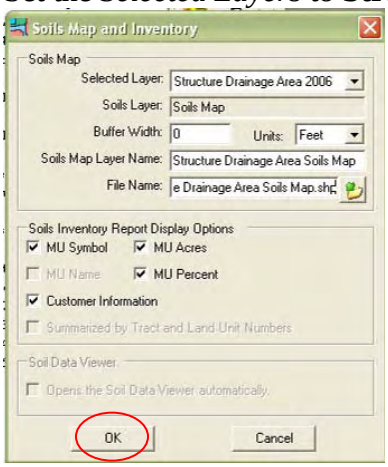
Drainage Area Soils

Uncheck Pool Areas Layer turn on Drainage Area layer. Right click on Drainage Area layer and

Click on Soils Map and Inventory button

Set the *Selected Layers* to **Structure Drainage Area** layer



Change *Soils Map Layer Name* to **Structure Drainage Area Soils Map** highlight the layer name you just typed and press **Ctrl + C** "Copy"

Click in the *File Name* and highlight soils_map_out(1) then press **Ctrl + V** "Paste"

Click **OK**

To print the *Inventory Report* click on the **File** pull down and select **Print** then **OK**

Click on the **X** in the upper right to close the browser.

* Note this file is automatically saved as an HTML file in the Resource Maps folder

Click on the *ArcMap* project at the bottom of your screen

Double click on the Drainage Area Soils Map Layer to open the properties window

Symbology tab, select **Categories, Unique Value** change the *Value Field* to **MUSYM**

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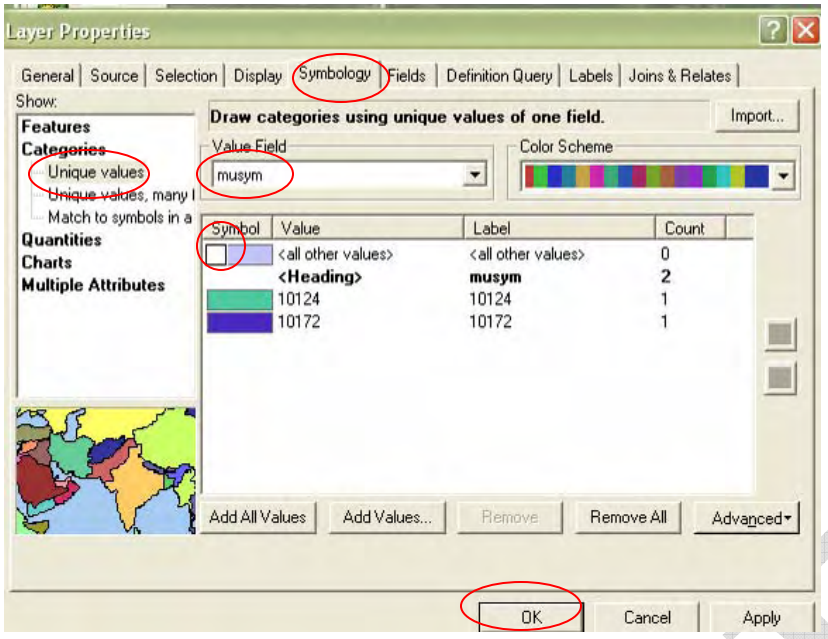

Click on **Add All Values** uncheck **<all other values>** then click **OK**

Click on the **Layout** button

Click on **File** pull down the select **Print** to print the layout.

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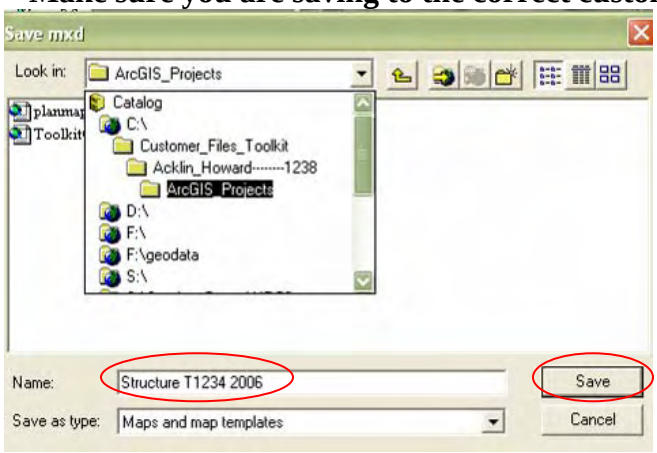
Saving the Project

Click on the **File** pull down then select **Save As…** enter a descriptive name i.e. **Structure Tract Date** (Structure T1234 2006) then click **Save**

*** Make sure you are saving to the correct customers folder.**



To close ArcGIS click on the red **X** in the upper right

Close the customer by clicking on the black **X** then select the customer on the right and check them back in.

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