

**For:** State and County Offices

**In and Out Farm Transfers in the ArcGIS/ArcSDE Environment**

**Approved by:** Acting Deputy Administrator, Farm Programs



**1 Overview**

**A Background**

Notice CM-534 provided policy and procedure for handling in and out farm transfers in the ArcGIS/ArcSDE environment. A revision to 3-CM requires that Notice CM-534 be updated, and discussion has led to some desired changes in the policy and procedure about in and out farm transfers in the geospatial data realm.

**Note:** This notice does **not** apply to nondigitized areas.

**B Purpose**

This notice informs State and County Offices:

- of updated policy/procedure for in and out farm transfers within the ArcGIS/ArcSDE environment such as shapefile naming conventions and out transfer shapefile management
- that this Notice replaces procedure in 8-CM, paragraph 137
- that Notice CM-534 is obsolete.

**2 Policy About In and Out Farm Transfers Within ArcGIS/ArcSDE**

**A In and Out Farm Transfers Within ArcGIS/ArcSDE**

The transfer of farm records from 1 service center to another requires that both the transferring and receiving County Offices take specific actions related to the geospatial common land unit (CLU) data. The receiving County Office **must** add the received digital records, including CLU and wetlands points to the official digitized/certified CLU layer and maintain this data as long as the land is administered by the receiving County Office.

<b>Disposal Date</b>	<b>Distribution</b>
February 1, 2007 10-20-06	State Offices; State Offices relay to County Offices

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**2 Policy About In and Out Farm Transfers Within ArcGIS/ArcSDE (Continued)**

**A In and Out Farm Transfers Within ArcGIS/ArcSDE (Continued)**

The transferring County Office shall remove transferred digital records from the official CLU layer and create a separate out-transfer shapefile for record keeping purposes. CLU **must** be certified in both the transferring and receiving County Offices for the farm transfer to be official. In the event 1 County Office is certified and the other is not, see 3-CM, paragraph 64.

Procedure in this notice shall apply to **all** existing transferred land and any future in and out farm transfers. Adherence to this procedure is necessary as other methods of processing in and out farm transfers in this environment may lead to database integrity issues.

Digital in and out farm transfers are examples of CLU maintenance and the responsibility for completing transfers is with County Offices, **not** with the State Office or State GIS Specialist. Transferring County Offices are responsible for the initial digitizing of transferred land.

Policy for all in and out farm transfers not involving digital records is provided in 3-CM, paragraphs 62 through 70.

**3 Procedure for In and Out Farm Transfers Within ArcGIS/ArcSDE**

**A In and Out Farm Transfers Directory Tree Structure**

**Before** working with digital records for in and out farm transfers, 1 in and 1 out farm transfers folder shall be set up to organize and store files. These working folders shall be on the server and accessible by **all** FSA Service Center employees. Each Service Center’s local Geodata Administrator shall create the in and the out farm transfers working directories within the current geodata directoy tree structure according to the following table.

<b>Step</b>	<b>Action</b>
1	Open Windows Explorer and maneuver to directory tree folder “ <b>f:/geodata/project_data/fsa</b> ”.  <b>Note:</b> For assistance on browsing to folders in a directory tree, contact your State GIS Specialist/Coordinator.
2	Once in the “ <b>FSA</b> ” folder, create a new folder that will be contained within the “ <b>FSA</b> ” folder. Name the new folder “ <b>out_transfers</b> ”.  <b>Note:</b> For assistance on creating folders, contact your State GIS Specialist/Coordinator.
3	Create another folder within the “ <b>FSA</b> ” folder called “ <b>in_transfers</b> ”.

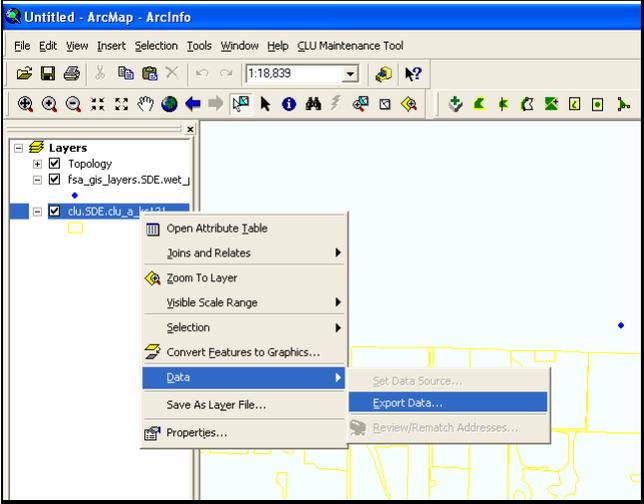
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**3 Procedure for In and Out Farm Transfers Within ArcGIS/ArcSDE (Continued)**

**B Query of CLU's To Be Transferred**

The following table provides instructions for:

- transferring County Offices to query out the polygons (fields, tracts, or farms) to be transferred to the receiving County Office
- converting the out-transferred polygons to an out-transfer shapefile, separate from the official CLU layer.

Step	Action
1	Verify that a current backup of the CLU layer exist <b>before</b> working with in and out farm transfers.  <b>Note:</b> Contact the State GIS Specialist for assistance, if needed.
2	Start the ArcGIS CLU Maintenance Tool and load the necessary files (that is CLU, CRP Table, Wetlands, etc.).
3	Click the CLU Maintenance Tool drop-down menu and check (✓) the box next to Maintenance Toolbar to open the CLU Maintenance Toolbar.
4	Use the “search” tool (green binoculars) or the “select features” tool to select the polygons to be transferred.
5	Use the CRP Toolbar to “Join the CRP Table to the CLU Attribute Table”.  <b>Note:</b> See the CLU Maintenance Tool User Guide for assistance if needed.
6	Right click the CLU layer name in the ArcGIS table of contents, highlight “Data”, and CLICK “Export Data”.
	
7	In the Export Data pop-up window, select “To export the selected features”. Ensure that the radial button, “Use the same coordinate system as this layer’s coordinate system”, is selected. Click the folder button to browse to a location to save the exported data. Go to Step 8.

3 Procedure for In and Out Farm Transfers Within ArcGIS/ArcSDE (Continued)

B Query of CLU's To Be Transferred (Continued)

Step	Action
8	<p>In the Saving Data window, browse to “f:/geodata/project_data/fsa/out_transfers” and make ensure that “Save as Type” is set to “shapefile”.</p> <p>The naming convention will be “ot_&lt;st&gt;&lt;nnn&gt;_clu_a_&lt;st&gt;&lt;nnn&gt;_&lt;mmddy&gt;.shp”</p> <ul style="list-style-type: none"> <li>• “ot” is short for out transfer.</li> <li>• The 1<sup>st</sup> “&lt;st&gt;&lt;nnn&gt;” is the State abbreviation and county code of the <b>receiving</b> County Office.</li> <li>• “clu_a” indicates it is a CLU shapefile.</li> <li>• The 2<sup>nd</sup> “&lt;st&gt;&lt;nnn&gt;” is the State abbreviation and county code of the <b>transferring</b> County Office.</li> <li>• &lt;mmddy&gt; is the date the shapefile was created</li> </ul> <p><b>Example:</b> “ot_mn141_clu_a_mn143_040106.shp”</p> <p>Once the new shapefile is named correctly, CLICK “OK”.</p> <p><b>Note:</b> Because of “Join the CRP Table to the CLU Attribute Table” in step 5, the .dbf table associated with this shapefile will also contain CRP information associated with the transferred land.</p>

C Query of Wetland Points To Be Transferred

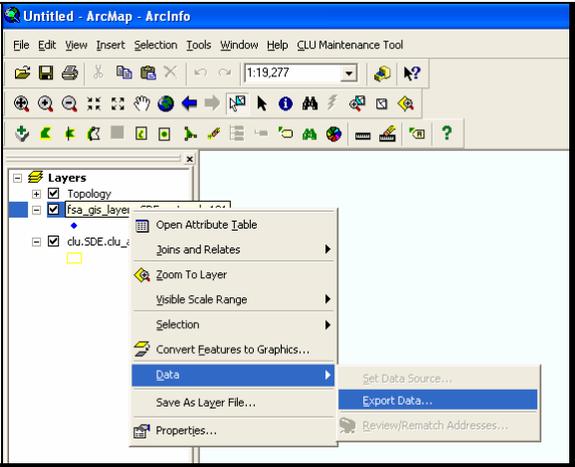
The following table provides steps for:

- transferring County Offices to query out wetland points to be transferred to the receiving County Office
- converting out-transferred wetlands to an out-transfer wetlands point shapefile, separate from the official wetland layer.

Step	Action
1	<p>Verify that a current backup of the CLU layer exist <b>before</b> working with in and out farm transfers.</p> <p><b>Note:</b> Contact your State GIS Specialist for assistance if needed.</p>
2	<p>If necessary, start the ArcGIS CLU Maintenance Tool and load the necessary files (that is CLU, CRP Table, Wetlands, etc.).</p>
3	<p>CLICK “CLU Maintenance Tool” drop-down menu and check (✓) the box next to Maintenance Toolbar to open the CLU Maintenance Toolbar.</p>

3 Procedure for In and Out Farm Transfers Within ArcGIS/ArcSDE (Continued)

C Query of Wetland Points To Be Transferred (Continued)

Step	Action
4	Use the “select features” tool to select any wetlands lying within the area being transferred.
5	<p>Right click the wetlands layer name in the ArcGIS table of contents, highlight “Data”, and CLICK “Export Data”.</p> 
6	In the Export Data pop-up window, select “To export the selected features”. Ensure that the radial button, “Use the same coordinate system as this layer’s coordinate system”, is selected. Click the folder button to browse to a location to save the exported data. Go to Step 8.
7	<p>In the Saving Data window, browse to <b>f:/geodata/project_data/fsa/out_transfers</b> and ensure that “Save as Type” is set to “shapefile”.</p> <p>The naming convention will be  <b>ot_&lt;st&gt;&lt;nnn&gt;_wet_p_&lt;st&gt;&lt;nnn&gt;_&lt;mmddyy&gt;.shp.</b></p> <ul style="list-style-type: none"> <li>• “ot” is short for out transfer.</li> <li>• The 1<sup>st</sup> “&lt;st&gt;&lt;nnn&gt;” is the State abbreviation and county code of the <b>receiving</b> County Office.</li> <li>• “wet_p” indicates it is a wetland points file.</li> <li>• The 2<sup>nd</sup> “&lt;st&gt;&lt;nnn&gt;” is the State abbreviation and county code of the <b>transferring</b> County Office.</li> <li>• &lt;mmddyy&gt; is the date the shapefile was created.</li> </ul> <p><b>Example:</b> “ot_mn141_wet_p_mn143_040106.shp”</p> <p>Once the new shapefile is named correctly, CLICK “OK”.</p>

**3 Procedure for In and Out Farm Transfers Within ArcGIS/ArcSDE (Continued)**

**D Sending Out-Transfer Data To Receiving County Offices**

The data shall be exchanged by either of the following:

- e-mail
- compact disc (CD).

Both the CLU shapefile and wetlands shapefile **must** be shipped to the receiving County Office.

When dealing with CLU or wetlands data, there are a minimum of 4 files associated with any 1 CLU or wetlands shapefile. The file extensions of the 4 files are .shp, .dbf, .shx, and .prj. **These files must be named exactly the same and must all be sent for the shapefile to function.** It is recommended that any renaming of shapefiles be completed through ArcCatalog. Contact your State GIS Specialist/Coordinator if assistance is needed.

The transferring County Office shall keep a copy of the out-transferred CLU and wetland shapefiles in “**f:/geodata/project\_data/fsa/out\_transfers**”.

**E Deleting Transferred Data from the Transferring County Office’s Official CLU Layer**

The transferring County Office’s official CLU layer shall no longer contain out-transferred CLU’s. CLU’s shall be maintained in the receiving County Office’s CLU layer to ensure that there are no duplicate records.

Step	Action
1	Verify that a current backup of the CLU layer exist <b>before</b> working with in and out farm transfers.  <b>Note:</b> Contact your State GIS Specialist for assistance if needed.
2	If necessary, start the ArcGIS CLU Maintenance Tool and load the necessary files (that is CLU, CRP Table, Wetlands, etc.).
3	Click the CLU Maintenance Tool drop-down menu and check (✓) the box next to the Maintenance Toolbar to open the CLU Maintenance Toolbar.
4	Use the search tool (green binoculars) or the select features tool, to select the polygons that have been transferred.
5	Use the delete feature tool to delete the transferred polygons from the CLU layer.  <b>Note:</b> See the CLU Maintenance Tool User Guide for assistance if needed.  If a CRP record is associated with a polygon, the record shall be deleted along with the polygon.

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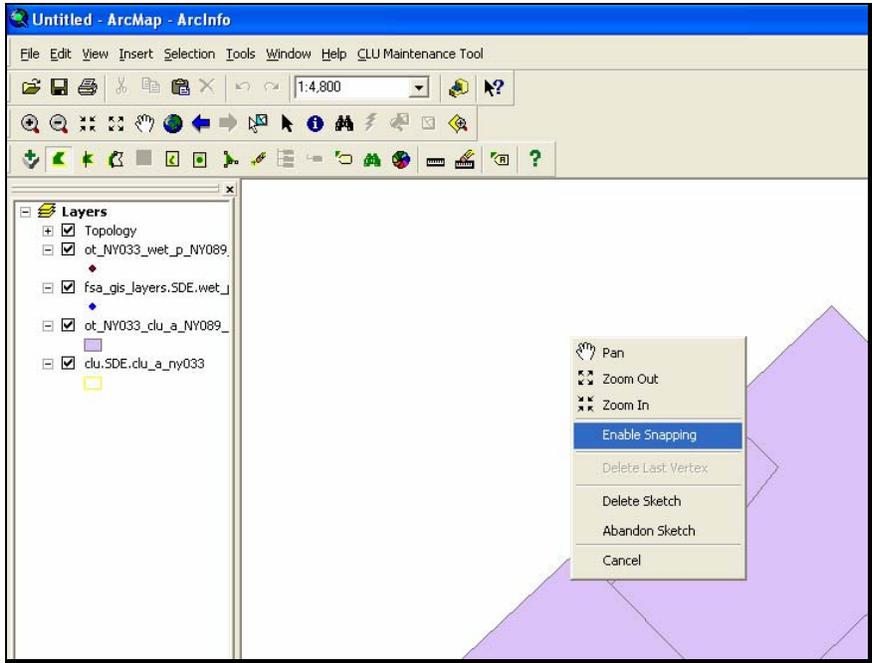
3 Procedure for In and Out Farm Transfers Within ArcGIS/ArcSDE (Continued)

F Adding Transferred CLU's to the Receiving County Office's CLU Layer

The following table:

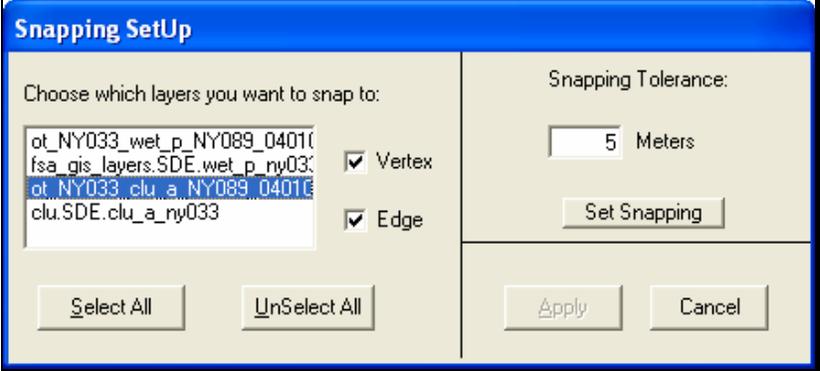
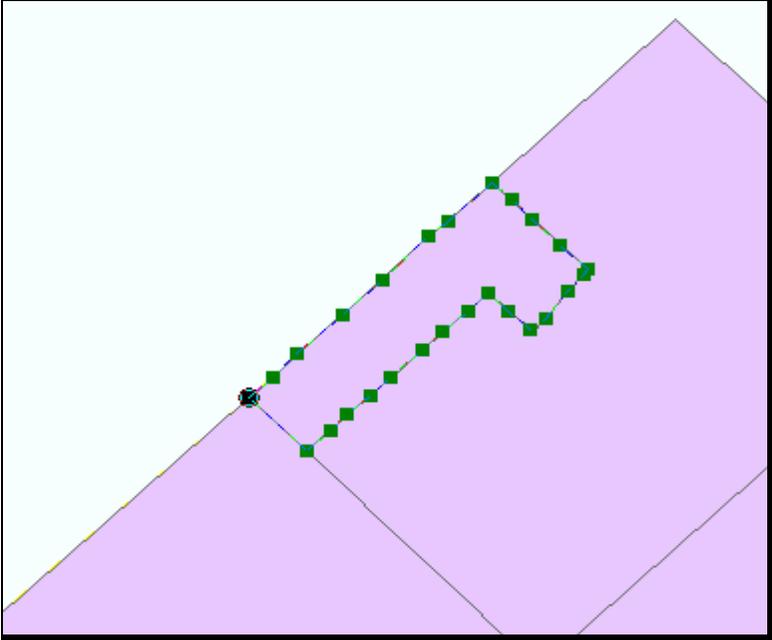
- explains how the receiving County Office shall add transferred CLU's into the official CLU layer
- requires users to add transfer polygons to official CLU layers by “tracing” over polygons sent from County Offices.

Step	Action
1	Verify that a current backup of the CLU layer exist <b>before</b> working with in and out farm transfers.  <b>Note:</b> Contact your State GIS Specialist for assistance if needed.
2	Save the zip files or shapefiles received from the transferring County Office in <b>f:/geodata/project_data/fsa/in_transfers</b> .
3	If necessary, start the ArcGIS CLU Maintenance Tool and load the necessary files (that is CLU, CRP Table, Wetlands, etc.).
4	Click the CLU Maintenance Tool drop-down menu and check (✓) the box next to Maintenance Toolbar to open the CLU Maintenance Toolbar.
5	Open the CLU Control Panel and add the transferring County Office's transfer shapefile(s) in the “Other Layers” option.
6	Zoom in to the transfer CLU's at a scale of at least 1:4800.
7	Click the Add Polygon Tool, right click anywhere in the view, and CLICK “Enable Snapping”.



3 Procedure for In and Out Farm Transfers Within ArcGIS/ArcSDE (Continued)

F Adding Transferred CLU's to the Receiving County Office's CLU Layer (Continued)

Step	Action
8	<p>In the “Snapping SetUp” window, select “To snap to the transfer shapefile sent by the transferring County Office”, check (✓) both the vertex and edge boxes, and set the “Snapping Tolerance” to 5 meters. CLICK “Apply”.</p> 
9	<p>Carefully digitize the polygons by “tracing” over the shapefile. The tool will “snap” to the shapefile if within 5 meters of the line work. Snapping allows the user to create a CLU that corresponds exactly to the shapefile.</p> 
10	<p>Users must add attributes <b>after</b> digitizing is complete for new CLU's. Attribute the polygon according to the farm/tract numbers for receiving County Offices. Ensure that fields are digitized and numbered correctly, and ensure that all polygons are assigned a land class code.</p>
11	<p>Update CRP Table with CRP contract attributes after CRP contracts have been transferred to the receiving county and new contract numbers assigned. For guidance see 3-CM, paragraphs 67 and 68 and 1-CRP.</p>

3 Procedure for In and Out Farm Transfers Within ArcGIS/ArcSDE (Continued)

G Adding Transferred Wetland Points to Receiving County Office’s CLU Layer

The following table:

- explains how receiving County Offices shall add transferred wetland points to their official wetland layer
- requires users to add transferred points to the official wetland layer by digitizing wetland points on top of the points sent from the County Office.

Step	Action
1	Verify that a current backup of the CLU layer exist <b>before</b> working with in and out farm transfers.  <b>Note:</b> Contact your State GIS Specialist for assistance if needed.
2	Save zip files or shapefiles received from the transferring County Office in <b>f:/geodata/project_data/fsa/in_transfers</b> .
3	If necessary, start the ArcGIS CLU Maintenance Tool and load the necessary files (i.e., CLU, CRP Table, Wetlands, etc.).
4	Click the CLU Maintenance Tool drop-down menu and check (✓) the box next to the Maintenance Toolbar to open the CLU Maintenance Toolbar.
5	Open the CLU Control Panel and add the transferring County Office’s wetland points transfer shapefiles in the “Other Layers” option.
6	Zoom in to a wetland point at a scale of at least 1:1000.
7	Open the CLU Maintenance Tool Wetland Toolbar.
8	Click the Add Point Tool.
9	Add a point as close as possible to the point in the shapefile.
10	Attribute the point as necessary in the Wetland Attribute Data Entry window which will open <b>after</b> the point is added.
11	Repeat steps 6 through 10 for each wetland point involved in the transfer.

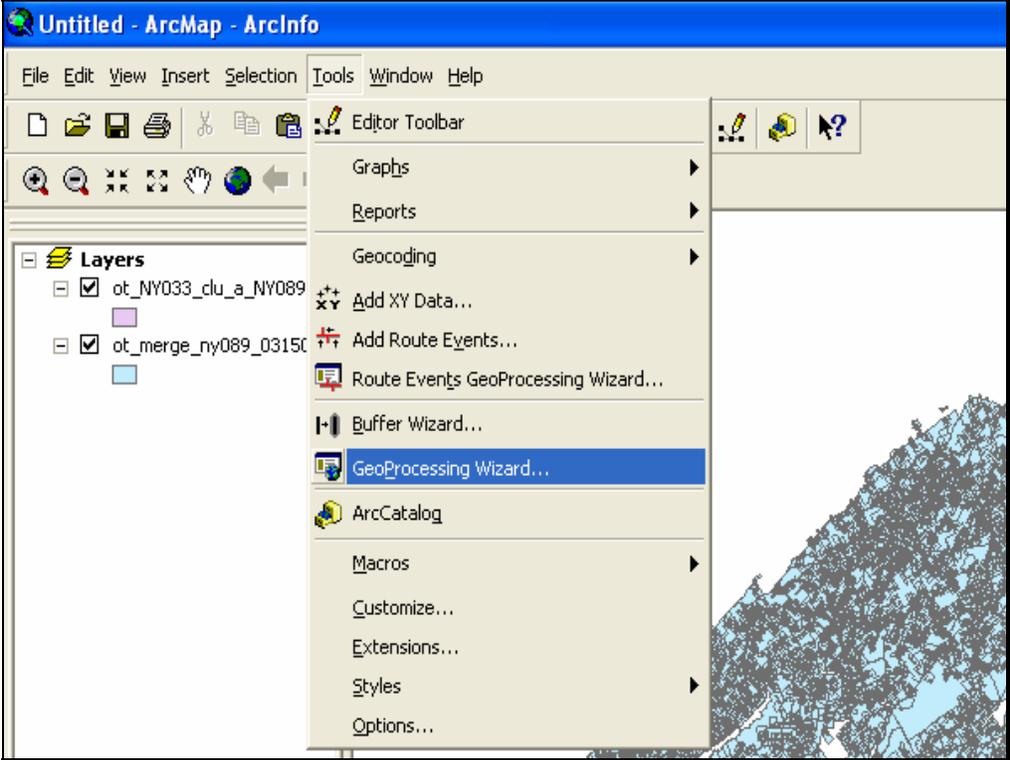
3 Procedure for In and Out Farm Transfers Within ArcGIS/ArcSDE (Continued)

H Out-Transfer Shapefile Management in Transferring County Offices

Transferring counties have 2 options concerning management of their out transfer Shapefiles.

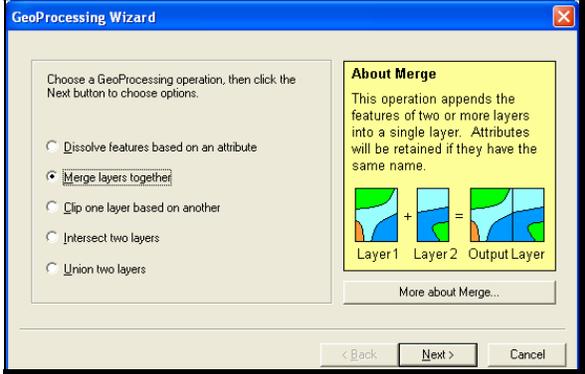
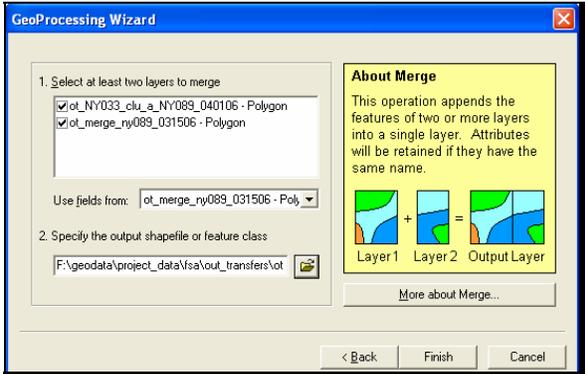
- Maintain each transfer as an individual shapefile in the **f:/geodata/project\_data/fsa/out\_transfers** folder.
- Merge the individual transfer shapefiles into a single out-transfer shapefile. This file shall be stored in **f:/geodata/project\_data/fsa/out\_transfers**. The naming convention shall be **ot\_merge\_<st><nnn>\_<mmddyy>.shp** where **<st><nnn>** is the State abbreviation and county code of the **transferring** County Office, and **<mmddyy>** is the date the merge shapefile was created.

Shapefile merging shall be completed as follows:

Step	Action
1	Start regular ArcMap ( <b>not</b> the CLU Maintenance Tool).
2	Bring the out transfer shapefiles to be merged into ArcMap by pressing the add layers button  , browsing to <b>f:/geodata/project_data/fsa/out_transfers</b> , and selecting the appropriate shapefiles.
3	Click the Tools drop down menu and then CLICK “GeoProcessing Wizard”. 

3 Procedure for In and Out Farm Transfers Within ArcGIS/ArcSDE (Continued)

H Out-Transfer Shapefile Management in Transferring County Offices (Continued)

Step	Action
4	<p>In the GeoProcessing Wizard window, select “Merge layers together” and CLICK “Next”.</p>  <p>The screenshot shows the 'GeoProcessing Wizard' dialog box. On the left, there are five radio button options: 'Dissolve features based on an attribute', 'Merge layers together' (which is selected), 'Clip one layer based on another', 'Intersect two layers', and 'Union two layers'. On the right, there is an 'About Merge' section with a diagram showing two layers (Layer 1 and Layer 2) being combined into an 'Output Layer'. The 'Next &gt;' button is highlighted.</p>
5	<p>In the next window, select 2 or more shapefiles to merge.</p> <p><b>Note:</b> The 1st time an out-transfer merge is performed, the files to be merged will be 1 or more individual out-transfer shapefiles. Subsequent merges will consist of the county’s merged out-transfer shapefile (ot_merge_&lt;st&gt;&lt;nnn&gt;_&lt;mmddyy&gt;.shp) and 2 or more individual out-transfer shapefiles.</p> <p>Assuming all previous steps were followed correctly (including the CRP join in subparagraph 3 B, step 5), the “Use fields from” option may be set to any of the shapefiles being merged.</p> <p>Click the folder button to “Specify the output shapefile or feature class”. Browse to <b>f:/geodata/project_data/fsa/out_transfers</b>, name the file according to the naming convention in subparagraph H, and CLICK “Save”. CLICK “finish” to run the merge.</p>  <p>The screenshot shows the 'GeoProcessing Wizard' dialog box at a later stage. Under '1. Select at least two layers to merge', two layers are listed with checked boxes: 'ot_NY033_cfu_a_NY089_040106 - Polygon' and 'ot_merge_ry089_031506 - Polygon'. Below this, the 'Use fields from:' dropdown is set to 'ot_merge_ry089_031506 - Poly'. Under '2. Specify the output shapefile or feature class', the path 'F:\geodata\project_data\fsa\out_transfers\ot' is entered in the text box. The 'Finish' button is highlighted.</p> <p>The newly created shapefile is automatically placed in the ArcMap table of contents and displayed in the data view.</p>

### 3 Procedure for In and Out Farm Transfers Within ArcGIS/ArcSDE (Continued)

#### I Returning Transferred Land to Transferring County Offices

The provisions of subparagraph I shall be followed if land transferred to a county is subsequently transferred back to the original transferring county.

**Note:** In subparagraph I, the receiving County Office and the transferring County Office still refer to the original receiving County Office and the original transferring County Office.

If there are changes to the line work and acreage while the land is administered outside its transferring County Office, then the:

- receiving County Offices shall follow the steps in subparagraphs B, C, D, and E, and send necessary data back to the transferring County Office
- transferring County Offices shall:
  - follow the steps in subparagraphs F and G
  - verify CLU's with line work and acreage changes that were made while the land was administered outside the transferring county.

If there are **no** changes to the line work and acreage while the land is administered outside its transferring County Office **and** the transferring County Office does not still have a copy of the shapefile of the transferred land, then the:

- receiving County Offices shall follow the steps in subparagraphs B, C, D, and E, and send necessary data back to the transferring County Office
- transferring County Offices shall follow the steps in subparagraphs F and G.

If there were **no** changes to the line work and acreage while the land was administered outside its transferring County Office **and** the transferring County Office still has a copy of the shapefile of the transferred land, then the:

- receiving County Offices may delete the CLU from their layer, or may choose to save a shapefile of the land being transferred but does **not** need to send it to the transferring County Office
- transferring County Offices shall follow the steps in subparagraphs F and G using the shapefile which was created when CLU's were originally transferred out of the County Office.

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### 4 Action

#### A State Office Action

State Offices shall:

- contact Dan Culli in the National Office at **daniel.culli@wdc.usda.gov** or at 202-690-1942 with questions or concerns about this notice
- assist County Offices with questions or concerns about this notice.

#### B County Office Action

County Offices shall:

- follow this notice and 3-CM for in and out farm transfers that have associated digital records
- contact State GIS Specialists/Coordinators for assistance with questions or concerns about this notice.