UNITED STATES DEPARTMENT OF AGRICULTURE
Farm Service Agency
Washington, DC 20250

Geospatial Information Systems 1-GIS	Amendment 4

Approved by: Acting Deputy Administrator, Farm Programs

Amendment Transmittal

A Reasons for Amendment

Paragraph 500 has been amended to correct the name of CRM Farm Records.

Paragraph 817 has been amended to change the point of contact for the ArcGIS Online administrator.

Exhibit 16 has been amended to update the PDD SharePoint Site.

Exhibit 86 has been amended to update the Citrix instructions from Citrix Receiver to Citrix Workspace.

Exhibit 87 has been amended to correct GET instructions for Windows 11.

Exhibit 88 has been amended to correct CLU Maintenance Tool instructions for Windows 11.

Exhibit 98 has been amended to correct DRT instructions for Citrix Workspace and Windows 11.

Exhibits 100, 118, 119, 120, 121, 122, 123, 124, 125, 126, 126.1, 127, 128, 128.1, 129, and 130 have been amended to correct toolbox instructions for ArcGIS Pro.

Exhibit 177 has been amended to change the point of contact for the ArcGIS Online administrator.

Page Control Chart		
TC	**Text**	**Exhibit**
9, 10	7-1, 7-2 10-5, 10-6	16, pages 1, 2 86, pages 1-6 87, pages 1, 2 88, page 1 98, pages 1, 2 100, pages 1, 2 118, pages 1, 2 119, pages 1, 2

Page Control Chart (Continued)		
TC	**Text**	**Exhibit**
		120, pages 1, 2 page 3 (add) 121, pages 1, 2 page 3 122, pages 1, 2 123, page 1 124, page 1 125, pages 1, 2 126, pages 1, 2 page 3 126.1, page 1 127, pages 1, 2 128, pages 1, 2 page, 3 128.1, pages 1, 2 page 3 (add) 129, pages 1, 2 130, pages 1-4 177. pages 1, 2

Exhibits (Continued)

Exhibits (Continued)

Part 7 GIS Tool Support

Section 1 Enterprise Applications

500 Overview

A GIS Tools Overview

FSA has developed custom tools and applications to manage its Geospatial Data Portfolio. These tools and applications are used to create standardized datasets and maintain uniformity between States. Tools and applications are developed and distributed through a variety of methods, including enterprise web-based applications, customizations of existing commercial software, or scripts.

B CRM Farm Records

*** * *** CRM Farm Records *** * *** is an enterprise application that integrates Farm Records, CLU, and wetland point data. Farm Records and the CLU are maintained through *** * *** CRM Farm Records *** * ***. FSA wetland point data maintenance is performed using the Wetlands Toolbar in the Citrix CLU Maintenance Tool.

Edits to the CLU in CRM Farm Records *** * *** occur based on a variety of FSA program tasks, including:

- farm transfers
- reconstitutions
- adding new participating farms
- changes in program participation
- NRCS HELC or WC determinations
- land use changes
- measurement services
- corrections for topological errors.

See 10-CM for further information on CRM Farm Records maintenance.

501 Citrix

A Overview

The Citrix Environment provides access to an individual virtual desktop on an application server. The hosted desktop environment allows users to access published applications without requiring advanced end-user equipment and allows centralized administration of software and data.

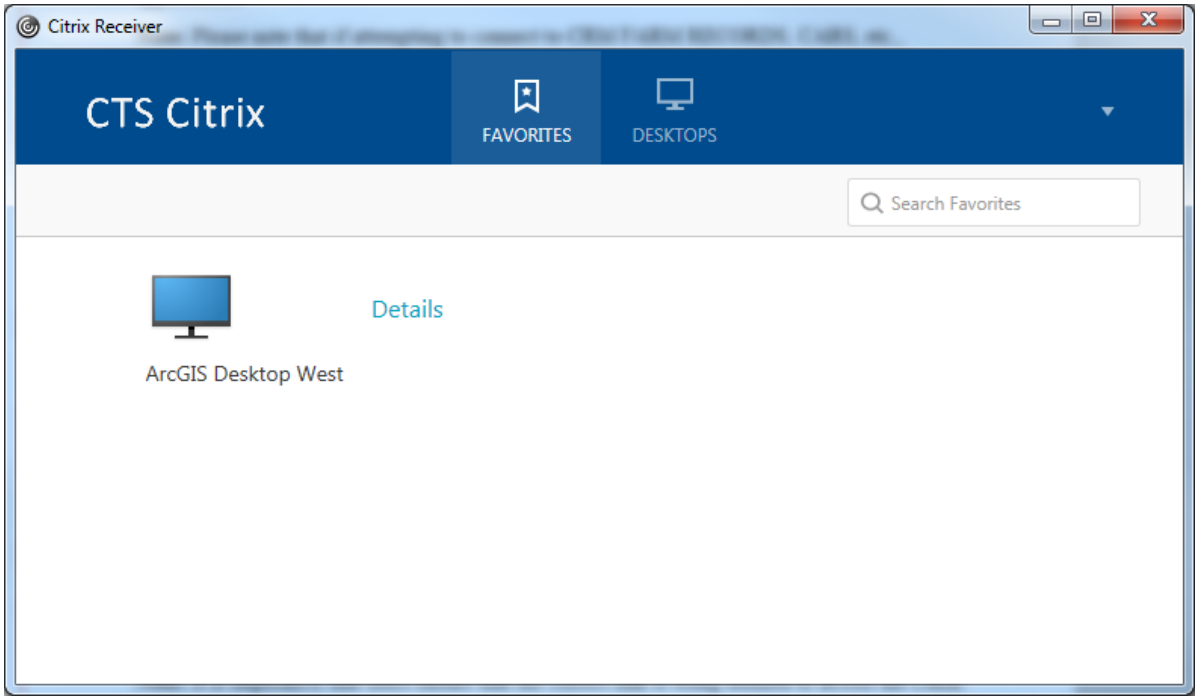
The Citrix Environment provides access to ArcGIS, Microsoft Office and other applications.

Note: Users will not access FSA Web Applications through Citrix. Use the locally installed version of Internet Explorer to access these applications.

To access the Citrix Environment, users must have the latest version of Citrix Receiver installed on their workstation. The latest version of Citrix Receiver can be installed from the Application Catalog at **http://aagmokcc3db3/CMApplicationCatalog/#/SoftwareLibrary/AppListPageView.xaml**.

Elevated permissions are not required to install Citrix Receiver.

The following is an example of the Citrix Receiver Screen.



817 Administration of AGOL (Continued)

C Administration and User Roles (Continued)

Role	Description
Administrator	The Administrator role is required to: • add users • create their roles in the organization • oversee the FSA subscription content and credit usage. An administrator can also: • track the credit usage in the organization • define custom roles for the organization which aggregate unique combinations of user and publisher functionality. **Note:** For security purposes, only the administrator can make maps and data (items) public.

D Managing and Requesting User Roles

All requests for AGOL access will be managed by the State GIS Specialist. The State GIS Specialist will:

- determine the experience level and the functionality the requesting user will need, such as view only, user, publisher

- requesting information will include FSA employee name, e-mail address, and access level

- ***--send requests for access to the FSA AGOL Administrator at patsy.hudson@usda.gov--***

- keep a list of all requests for access in each State.

Note: Occasionally, new users will not be able to respond to e-mail AGOL invites within the 2-week activation period. This may require several rounds of invitations.

817 Administration of AGOL (Continued)

E Groups

Groups are a feature of AGOL that provide access control. Groups can be set up within the organizational account. Maps and the data they contain can be shared to specific groups only, to the entire organization, or to everyone (public). Note for security purposes only the administrator can make items public. See subparagraph F for information about requesting to make items public.

A group in AGOL for organizations can be created by 1 of the following:

- user
- publisher
- administrator.

Each member of a group must have an AGOL account.

Example: A Division, Branch, Section, program, or project workgroup might have data that should not be shared with anyone outside their group. Each group can then be open to the account holders appropriate to that group, and closed to everyone else. The map publisher decides who can view the map by selecting the "share" the map a specific group or groups, or only FSA's organizational subscription (anyone in FSA who has an FSA AGOL account).

F Requesting Approval to Publish

For any item to be shared publicly, the State GIS Specialist should contact the FSA AGOL administrator. All items will be reviewed by the AGOL administrator and National Office before publishing.

Accessing Farm Records and Other Data

A Background

Farm Records and Conservation data for use with custom geospatial tools is available for download through EDW at **https://fsadw.nitckc.usda.gov/**.

B Requirements

Users must have access privileges to EDW. Refer to 12-CM.

C PDD * * * SharePoint Instructions

***--**The PDD SharePoint site provides access to common documents and software issue reporting. The site can be accessed at https://usdagcc.sharepoint.com/sites/FPAC-FSA-DAFP-PDD/SitePages/Home.aspx.

To report issues with custom ArcGIS tools, State Offices should submit a case through the FSA Farm Programs Software Issues SharePoint, which can be accessed through a link on the PDD SharePoint site.

Note: Access to the FSA Farm Programs Software Issues SharePoint site is granted only to State Office employees, County Office should not request access and should report issues to their State Office.**--***

Accessing Farm Records and Other Data (Continued)

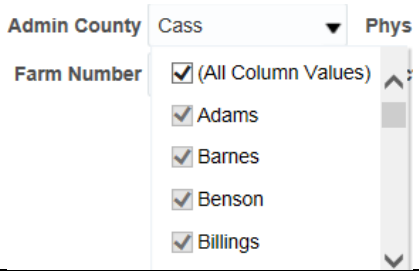
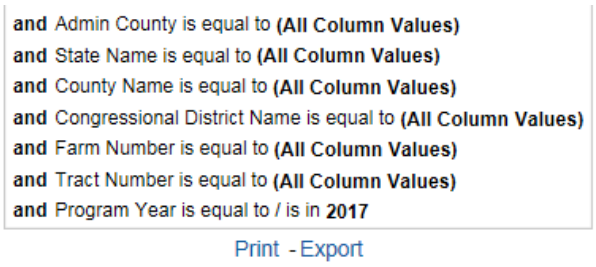
D EDW Access Instructions

***--**Refer to 12-CM for EDW access instructions.

* * *

E Export CRP Conservation Contract File From EDW

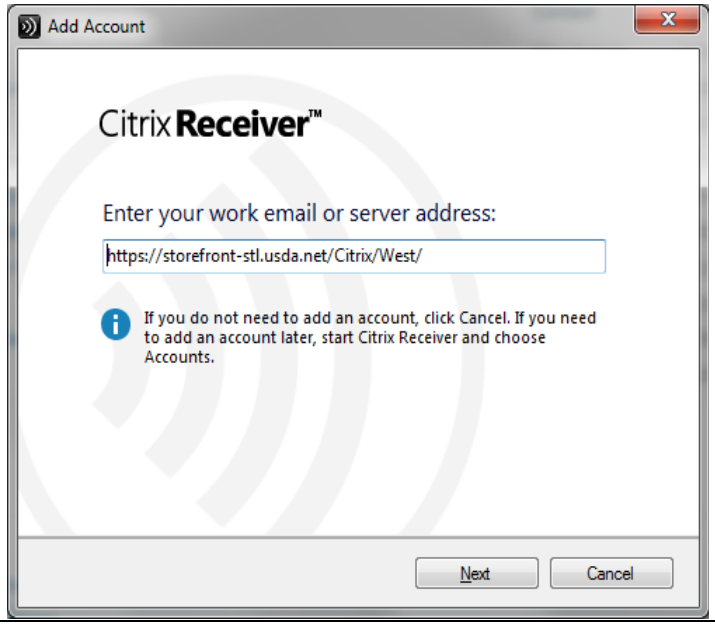
The CRP Conservation Contract File is joined to the CLU layer to create a CRP layer for comparison with CCMS data and to create maps of conservation practices.

Step	Instructions
1	From the OBIEE Reports/Dashboards page, CLICK "Farm Records" and "Farm Records Conservation Detail".
2	Change the "Admin State" drop-down menu to the appropriate State.
3	Change the "Admin County" drop-down menu to "All Column Values". 
4	CLICK "**Apply**".
5	Scroll to the bottom of the report and CLICK "Export". 
6	CLICK "Data" and "CSV Format".

Access Citrix

*--A Initial Setup of the Citrix Workspace

These instructions identify the steps to set up the Citrix Environment for the first time on any--* machine to identify the correct domain. Any questions regarding accessing Citrix Environment should be directed to the State GIS Specialist.

Step	Instructions
1	*--Right-click the "Citrix Workspace" icon in the Windows System Tray  . Users may need to click the arrow to expand hidden icons. **Note:** Users may choose to drag the "Citrix Workspace" icon to the system tray--* (to the right of the arrow). This will eliminate the need to click the arrow to access the icon in the future.
2	CLICK "**Open**".
3	ENTER "**https://storefront-kcc.usda.net/Citrix/West**" in the Add Account window. 
4	CLICK "**Next**".
5	Enter the LincPass PIN when prompted.
6	CLICK "Desktops" at the top of the Citrix Receiver Screen.

Access Citrix (Continued)

***--A Initial Setup of the Citrix Workspace (Continued)**

Step	Instructions
7	Click the "Star" icon next to FSA GISO PROD.  FSA GISO PROD will be added to the Favorites Screen for future use. **Note:** The "Star" icon only needs to be clicked once to add to the Favorites screen. This step does not need to be repeated once the desktop has been added.
8	CLICK "FSA GISO PROD". A new Citrix Desktop Viewer window will display. **Note:** The new window may display behind other open windows on the desktop.

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Access Citrix (Continued)

* * *

--B Opening Citrix Workspace After Initial Setup Complete--

These instructions identify the steps to open the Citrix Environment after the initial setup is complete.

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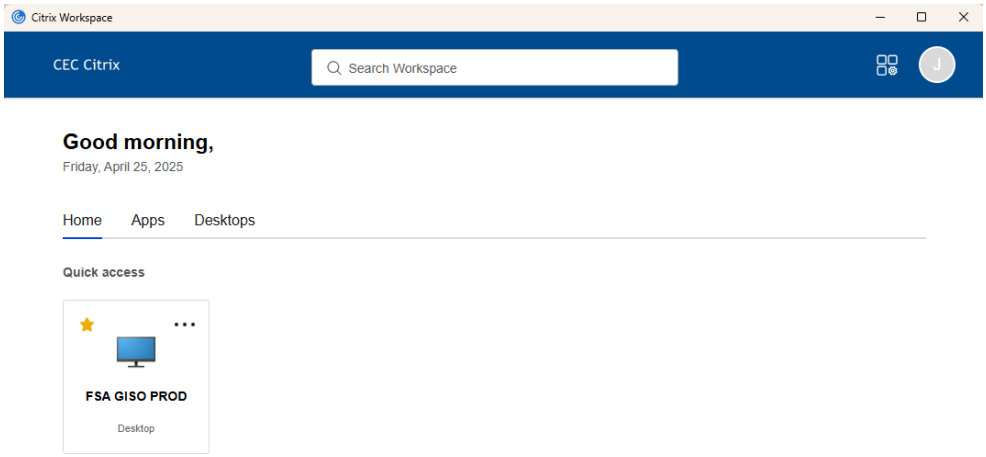
Step	Instructions
1	Right-click the "Citrix Workspace" icon in the Windows System Tray  . Users may need to click the arrow to expand hidden icons.
2	CLICK "Open".
3	Enter the LincPass PIN if prompted.
4	Click the "FSA GISO PROD" icon on the Citrix Reciever window. 
5	A new Citrix Desktop Viewer window will display. **Note:** The new window may display behind other open windows on the desktop.

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Access Citrix (Continued)

C Restarting Citrix

At times there may be a need to restart the Citrix Environment. This will terminate any open sessions for the user including any open applications within Citrix. Unsaved changes in any open application will be lost.

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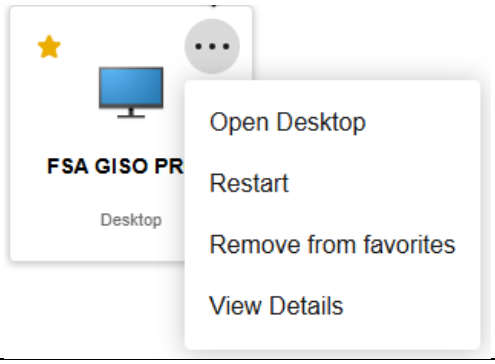
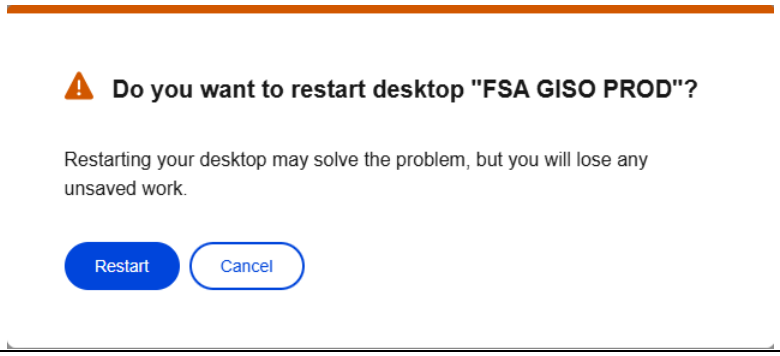
Step	Instructions
1	If open, close the Citrix Environment window.
2	CLICK "More Options" next to the FSA GISO PROD. 
3	CLICK "Restart".
4	CLICK "Restart" again when prompted to confirm. 
5	If prompted, enter the LincPass PIN. Once Citrix Environment has restarted, a new Citrix Receiver window will display.

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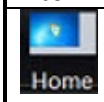
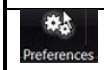
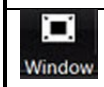
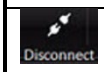
Access Citrix (Continued)

--D Citrix Workspace Drop-Down Menu--

Menu items at the top of the Citrix window are described in the following table.

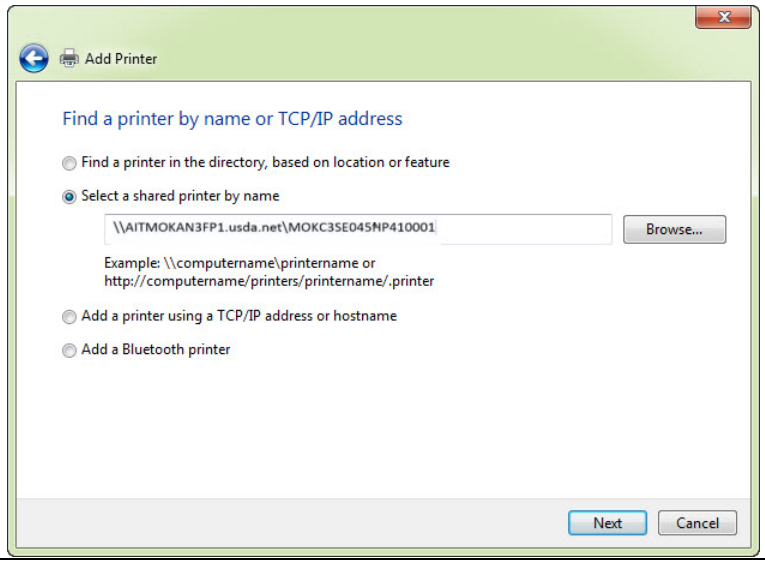
Item	Description
	The "**Home**" button minimizes the Citrix window and returns users to the local desktop. Click the Citrix application in the Windows Task Bar to return to the Citrix session.
	The "**Ctrl+Alt+Del**" drop-down button functions sends the keyboard command to the Citrix environment. This may be necessary to access the Task Manager or to prompt a login screen.
	The "**Preferences**" button provides settings for Citrix Receiver Client behavior, including: • local file access permissions • camera and microphone access • display settings.
	The "**Window**" button restores the Citrix Receiver window to its original size. After clicking this button, the drop-down menu changes the "**Window**" button into a "**Full-screen**" button, which expands the Citrix Receiver window to full screen resolution and will hide the local desktop.
	Pressing the "**Disconnect**" button will close the Citrix Receiver window but maintain the user's Citrix session. **Note:** The "Disconnect" button functions the same way as the "X" in the corner of the Citrix window.

Access Citrix (Continued)

E Printing in Citrix

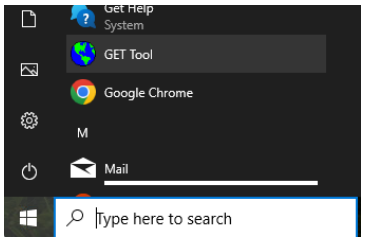
The Citrix Universal Print Driver is automatically available with the installation of Citrix Receiver v14 and does not require any installation by Citrix users. The Citrix UPD will automatically print to the default printer, but all printers will be created.

If a user finds that a desired printer is not available within Citrix.

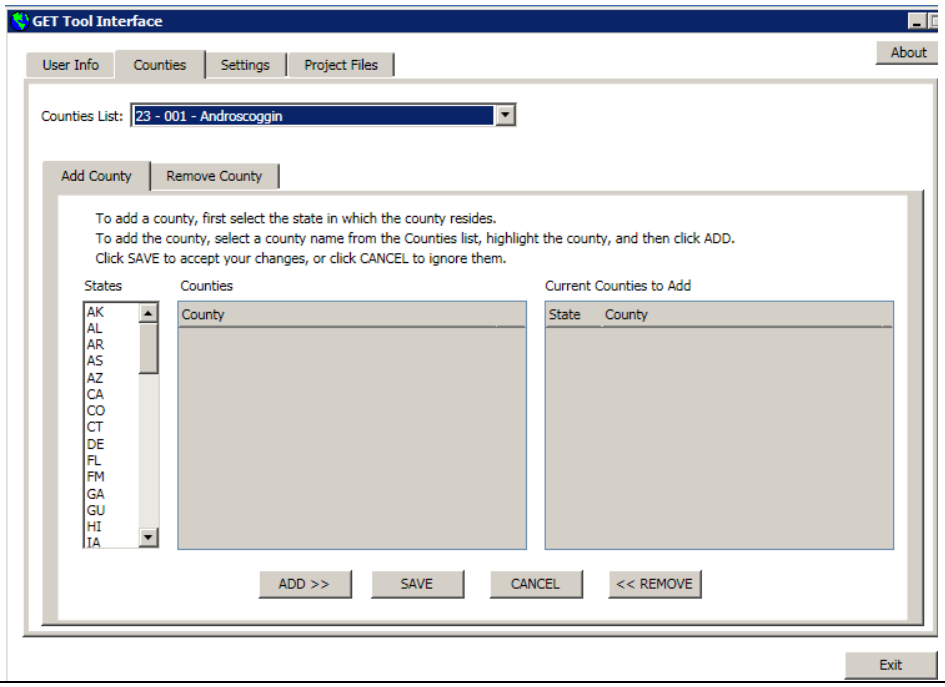
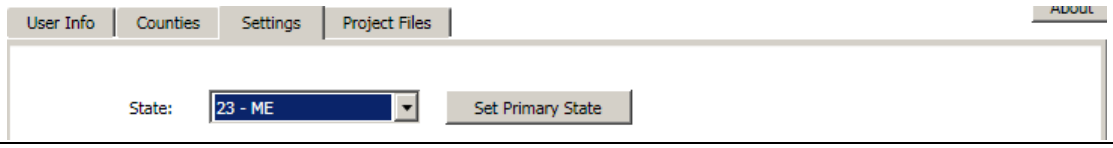
Step	Instructions
1	*--In Citrix, CLICK "Start", "Settings", and "Devices".
2	CLICK "Printers and Scanners".
3	CLICK "Add a printer or scanner".--*
4	CLICK "The printer that I want isn't listed".
5	Click the "Select a shared printer by name" radio button.
6	Enter the printer name and location. 
7	CLICK "**Next**". **Note:** Users may need to install a printer driver when adding the printer.
8	CLICK "**Finish**" to complete installation of the printer.

Configuring GET

GET allows users to change default settings for the CLU Maintenance Tool and TERRA. This setup will only need to be done once. GET will be configured with the following instructions.

Step	Instructions
1	From the Citrix environment, CLICK "Start" * * * and "GET Tool". *--  --* **Note:** A shortcut to the GET application may be added to the desktop within Citrix. See **paragraph 501** for Citrix access.
2	GET will open on the "User Info" tab. User login information will automatically populate based on information in CBS. Click the "**Counties**" tab.
3	The "Counties" tab allows the user to add an administrative county to CLU Maintenance Tool and TERRA. In the "States" list box, click the 2-letter abbreviation of the administrative State.
4	Select the county from the "Counties" list box. **Note:** Only add the administrative counties the user is authorized to work in. Counties where land physically located in another county but administered by the user's county does not need to be added separately.
5	CLICK "**Add**".

Configuring GET (Continued)

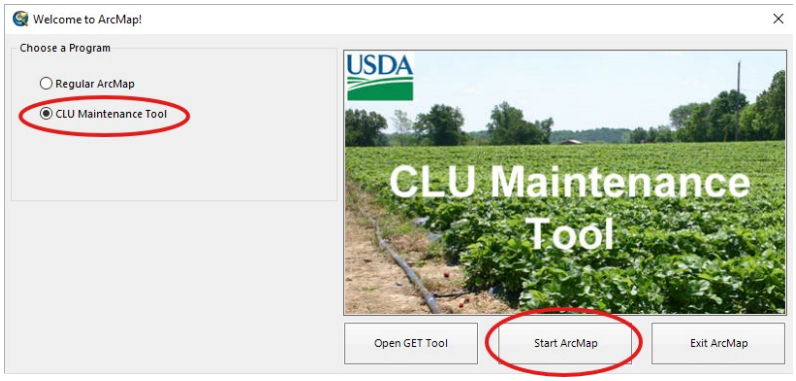
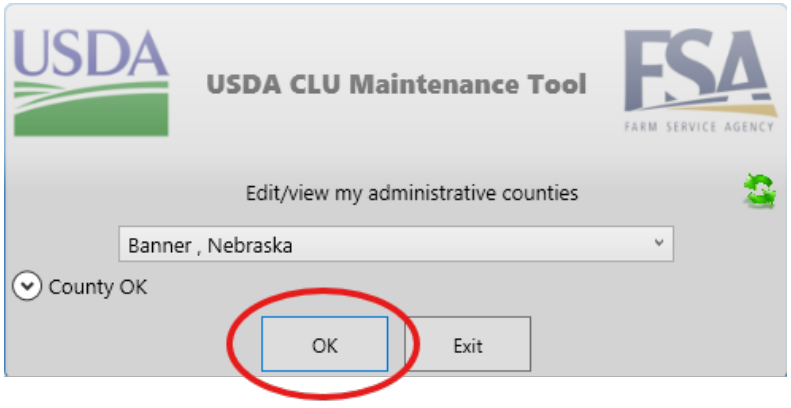
Step	Instructions
6	CLICK "**Save**" to save the changes. 
7	Click the "**Settings**" tab. The "Settings" tab allows users to change default directories for CLU Maintenance Tool and TERRA. Do not change settings unless instructed by the State GIS Specialist.
8	Ensure that the Primary Administrative State is selected in the "State" drop-down menu. CLICK "**Set Primary State**". 
9	CLICK "**Save Settings**".
10	CLICK "**Exit**".

Accessing CLU Maintenance Tool

A Open the CLU Maintenance Tool Within the Citrix Desktop

After accessing the Citrix Desktop the CLU Maintenance Tool can be opened from the Start Menu or a desktop shortcut.

*--

Step	Instructions
1	From the Citrix Desktop, CLICK "Start", "ArcGIS", and "ArcMap 10.8.2". A shortcut to ArcMap may also be created on the user desktop. See **paragraph 501** for Citrix access. **Note:** A saved county map document that includes the CLU Maintenance Tool, county CLU and wetland feature classes, and all other feature classes as needed for State mapping or tasks can also be opened.
2	In the Splash Screen, CLICK "CLU Maintenance Tool".
3	CLICK "**Start Using ArcMap**". *-- 
4	CLICK "**Yes**" when prompted to log in.
5	Select the applicable county and CLICK "**OK**".  The CLU, wetland, and imagery for the selected county will load into ArcMap.

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ArcGIS Data Remediation Tool

A Introduction

The ArcGIS DRT allows authorized data remediation administrators to correct or revise attributes in the county CLU layers through the Citrix environment rather than in CRM Farm Records.

Important: DRT should only be used to make corrections because of problems that have occurred in CRM Farm Records. Using DRT to circumvent any program requirement such as completing a reconstitution or nonagricultural determination is not authorized.

B Instructions to Access DRT

These instructions identify the steps to access the ArcGIS DRT within Citrix.

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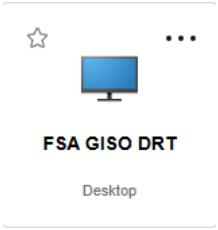
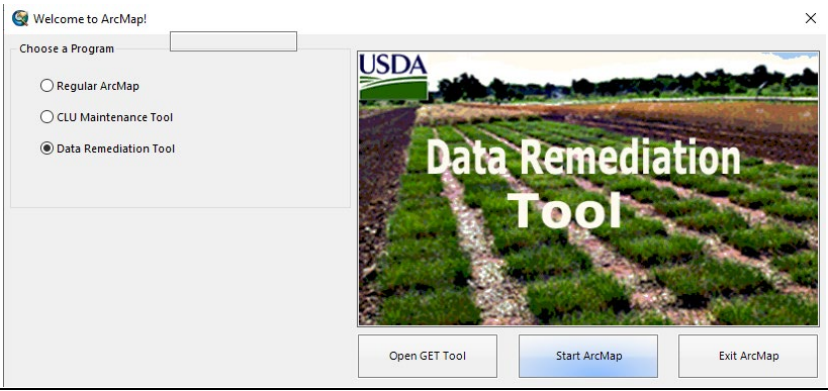
Step	Instructions
1	Open Citrix Receiver. See **paragraph 501** for Citrix access.
2	Open the FSA GISO DRT desktop. 
3	Logon using LincPass credentials when prompted.
4	From the Citrix desktop, CLICK "Start", "ArcGIS", and "ArcMap 10.8.2". A shortcut to ArcMap may also be created on the user desktop.
5	Select the **Data Remediation Tool** on the Welcome to ArcMap Screen and then CLICK "**Start Using ArcMap**". 

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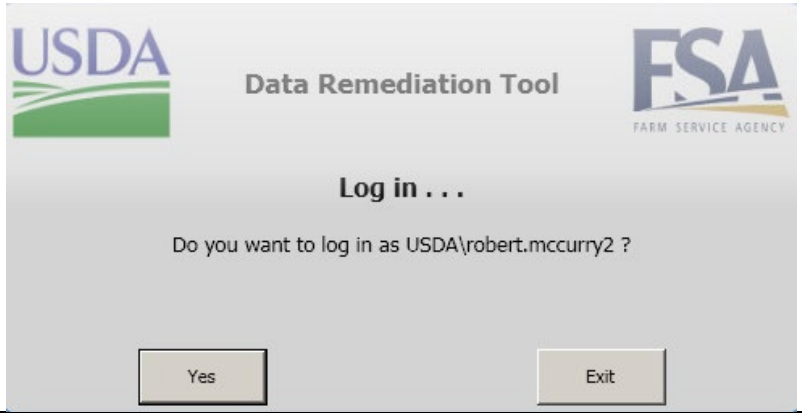
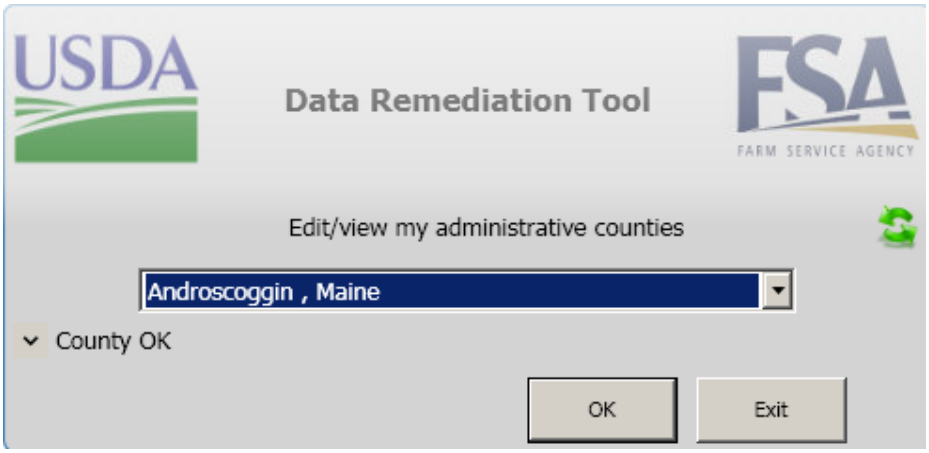
ArcGIS Data Remediation Tool (Continued)

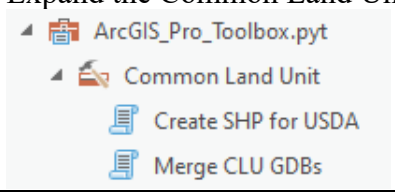
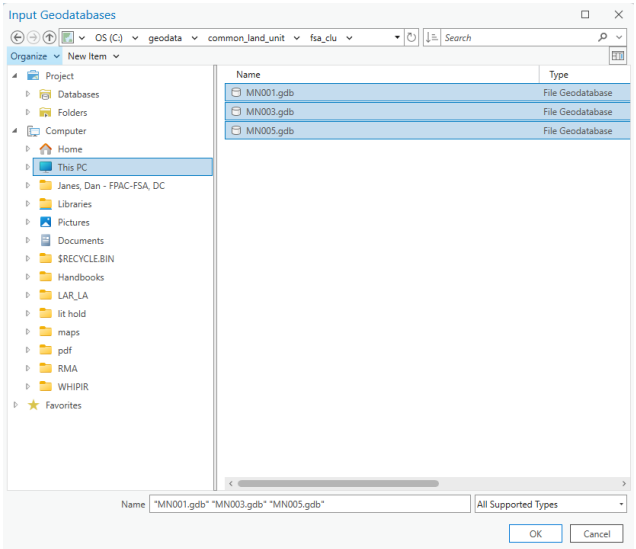
B Instructions to Access DRT (Continued)

Step	Instructions
6	CLICK "**Yes**" to login. 
7	Select the administrative county to edit from the drop-down menu and CLICK "**OK**".  **Note:** The **Pick a County** form is populated with available counties that have been added during the GET Tool setup process. See **Exhibit 87** for GET instructions.

Create SHP for USDA

These instructions outline the process to create SHP for USDA.

*--

Step	Instructions
1	If not done already, download and extract the Arc GIS_Pro_Toolbox_v3.zip file to C:\Geodata. The State Office CLU Tools (ArcGIS_Pro_Toolbox.pyt) file should be saved in C:\Geodata\PythonMapSeries.
2	Start ArcGIS Pro.
3	Open the Catalog window.
4	In the Catalog window, navigate to C:\Geodata\PythonMapSeries.
5	Expand the ArcGIS_Pro_Toolbox toolbox.
6	Expand the Common Land Unit toolset. 
7	Double-click on "Create SHP for USDA".
8	Click the "Browse" button  next to Input Geodatabases.
9	Navigate to the folder that contains the exported file geodatabases.
10	Select all the desired file geodatabases. 
11	CLICK "**OK**".
12	Click the "Browse" button  next to the Output folder.

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Create SHP for USDA (Continued)

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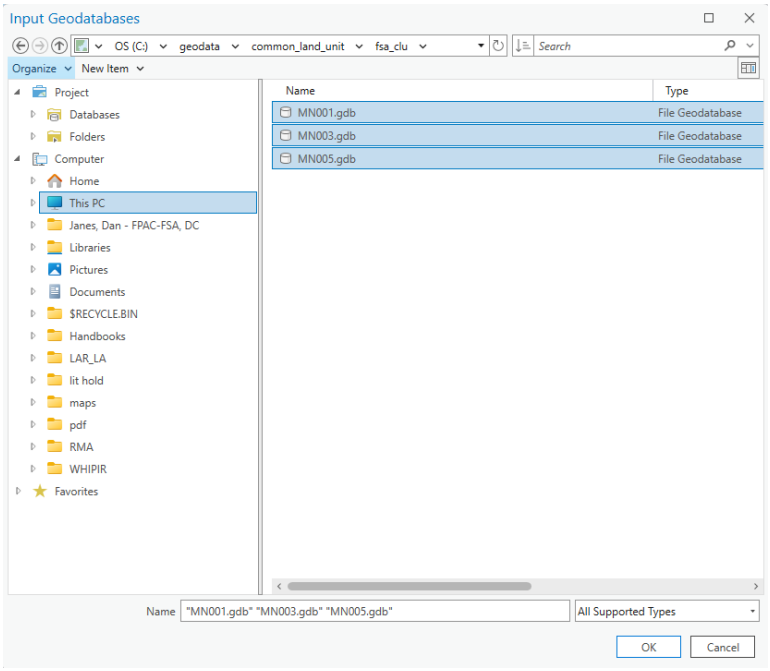
Step	Instructions
13	Browse to C:\Geodata\Common_Land Unit\. 
14	Select the fsa_clu folder.
15	CLICK "**OK**" to close the Output Folder window.
16	CLICK "**Run**" to execute the tool.

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Split Farm Records Contact File by County

These instructions split the farm records contact file by county.

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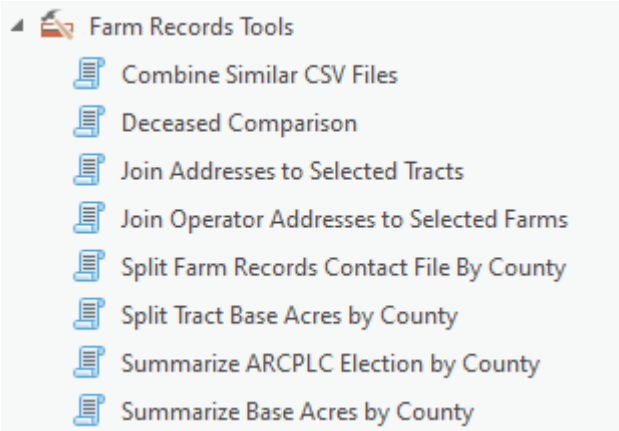
Step	Instructions
1	If not done already, download and extract the Arc GIS_Pro_Toolbox_v3.zip file to C:\Geodata. The State Office CLU Tools (ArcGIS_Pro_Toolbox.pyt) file should be saved in C:\Geodata\PythonMapSeries.
2	Start ArcGIS Pro.
3	Open the Catalog window.
4	In the Catalog window, navigate to C:\Geodata\PythonMapSeries.
5	Expand the ArcGIS_Pro_Toolbox toolbox.
6	Expand the Farm Records Tools toolbox. 
7	Double-click the "Split Farm Records Contact File By County" tool.
8	Click the "Browse" button  next to Farm Address Text File.
9	Navigate to c:\geodata\project_data\fsa\frs and CLICK "Farm Records Contact All View Download Report.csv".
10	CLICK "**OK**".
11	Click the "Browse" button  next to Output Folder.

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Split Farm Records Contact File by County (Continued)

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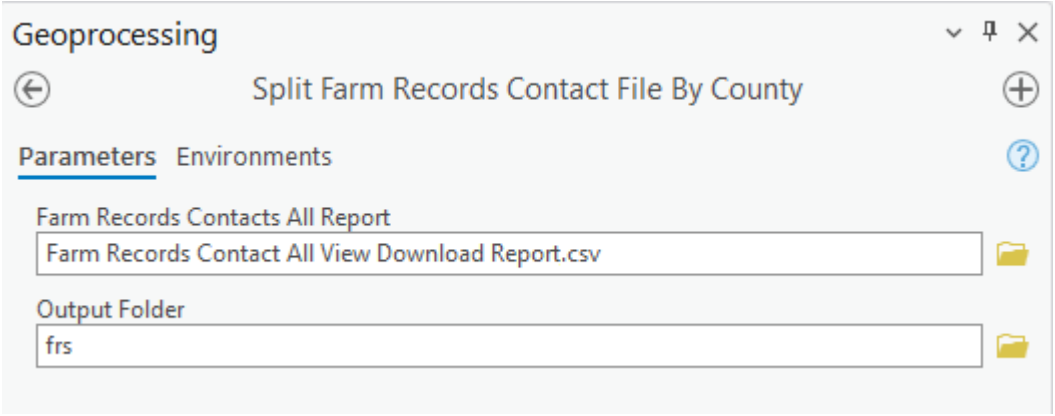
Step	Instructions
12	Navigate to c:\geodata\project_data\fsa.
13	Select the frs folder and CLICK "**OK**". 
14	CLICK "**RUN**" to run the tool.
15	CSV files containing the farm records data will be exported to c:\geodata\project_data\fsa\frs. An additional file, schema.ini, is also created to allow ArcGIS to read the farm number and other numeric data as text fields, allowing data to be joined to the CLU based on farm number.

--*

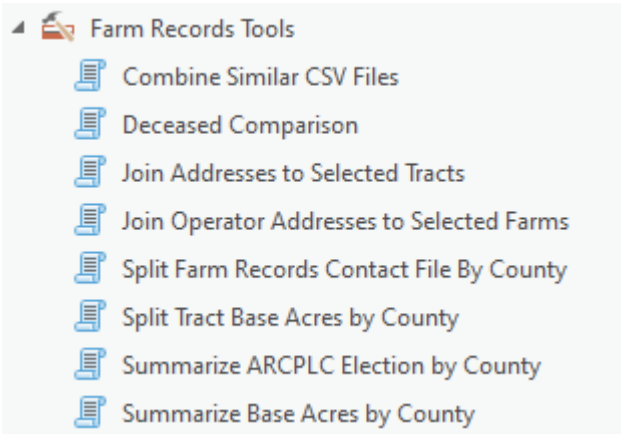
Combine Similar CSV Files Tool

A Introduction

The Combine Similar CSV Files tool combines CSV files that have identical attributes into a single output file. This tool enables users to combine downloads from EDW into single statewide datasets that can be used with other tools in the Statewide CLU toolbox.

B Tool Instructions

These instructions are for the Combine Similar CSV Files tool.
*--

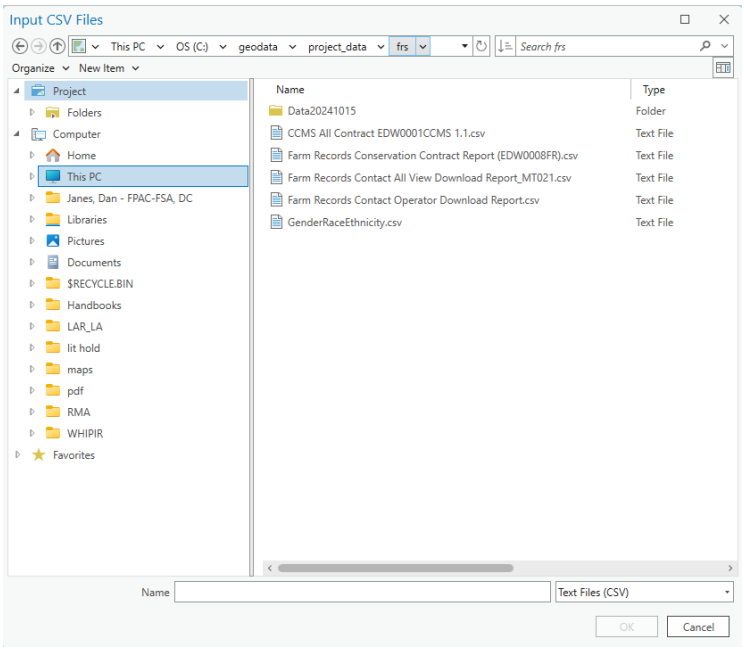
Step	Instructions
1	If not done already, download and extract the Arc GIS_Pro_Toolbox_v3.zip file to C:\Geodata. The State Office CLU Tools (ArcGIS_Pro_Toolbox.pyt) file should be saved in C:\Geodata\PythonMapSeries.
2	Start ArcGIS Pro.
3	Open the Catalog window.
4	In the Catalog window, navigate to C:\Geodata\PythonMapSeries.
5	Expand the ArcGIS_Pro_Toolbox toolbox.
6	Expand the Farm Records Tools toolbox. 
7	Double-click “Combine Similar CSV Files”.
8	Click the “Browse” button  next to Input CSV Files.
9	Browse to the directory that contains the CSV files to be combined.

--*

Combine Similar CSV Files Tool (Continued)

B Tool Instructions (Continued)

*--

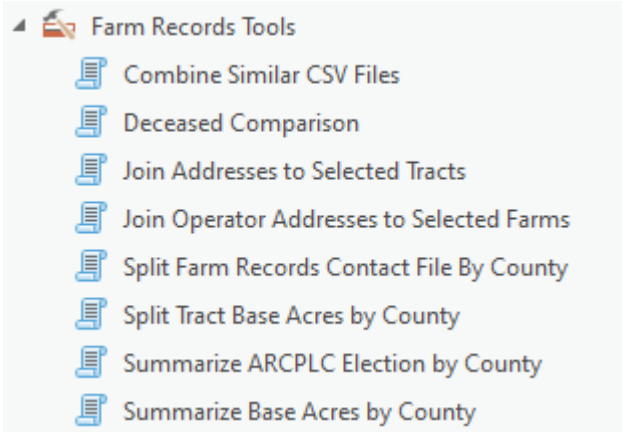
Step	Instructions
10	Select all desired CSV files and CLICK "OK". 
11	Specify the output file name.
12	Click the "Browse" button  next to Output folder.
13	Select the "Output" folder.
14	CLICK "Run" to run the tool.

--*

--Join Operator Addresses to Selected Farms--

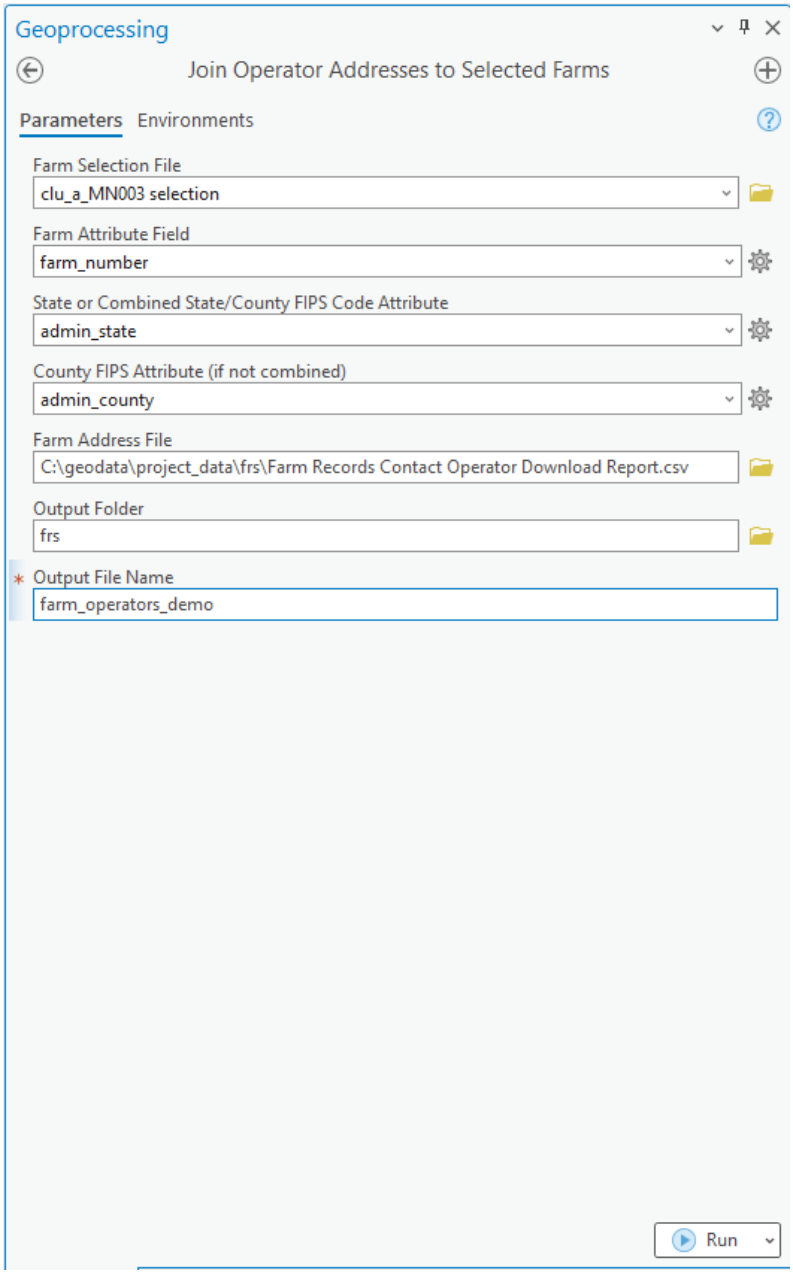
These instructions join operator addresses to selected farms.

***--**

Step	Instructions
1	If not done already, download and extract the Arc GIS_Pro_Toolbox_v3.zip file to C:\Geodata. The State Office CLU Tools (ArcGIS_Pro_Toolbox.pyt) file should be saved in C:\Geodata\PythonMapSeries.
2	Start ArcGIS Pro.
3	Open the Catalog window.
4	In the Catalog window, navigate to C:\Geodata\PythonMapSeries.
5	Expand the ArcGIS_Pro_Toolbox toolbox.
6	Expand the Farm Records Tools toolbox. 

--*

***--Join Operator Addresses to Selected Farms (Continued)**

Step	Instructions
7	Double-click the "**Join Operator Addresses to Selected Farms**" tool. 
8	The "Farm Selection File" can be populated with a layer from ArcGIS Pro or a table containing a list of farms. For an ArcGIS Pro layer, use the drop-down menu to select the layer. Otherwise, click the "Browse" button next to "Farm Selection File".

--*

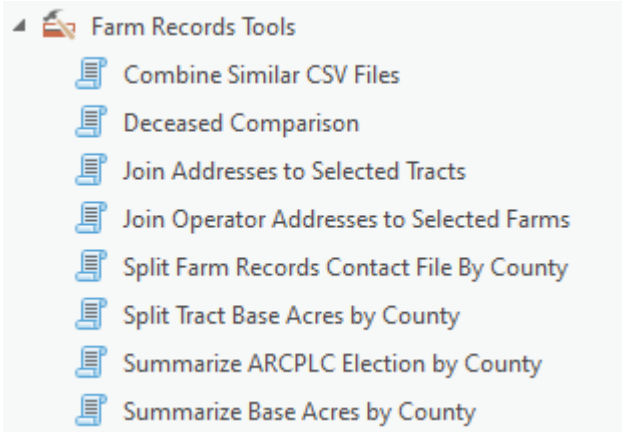
***--Join Operator Addresses to Selected Farms (Continued)**

Step	Instructions
9	Change the "Farm Attribute Field" drop-down menu to match the attribute in the farm selection file that contains the farm number.
10	Change the "State or Combined State/County FIPS Code Attribute" drop-down menu to the attribute from the farm selection file that represents the State code or combined State/county code. **Note:** If the attribute only represents the State code, the county FIPS attribute must be specified separately.
11	If the State or Combined FIPS Code Attribute only contains the State code, change the drop-down menu for the "County FIPS Attribute" to the attribute in the farm selection file that represents the county code.
12	Click the "Browse" button  next to Farm Address file. Navigate to c:\geodata\project_data\fsa\frs and add the Farm Records Operator Contact file.
13	CLICK "**OK**".
14	Click the "Browse" button  next to the Output folder.
15	Navigate to c:\geodata\project_data\fsa.
16	Select the FRS folder and CLICK "**OK**".
17	CLICK "**RUN**" to run the tool.

Join Addresses to Selected Tracts

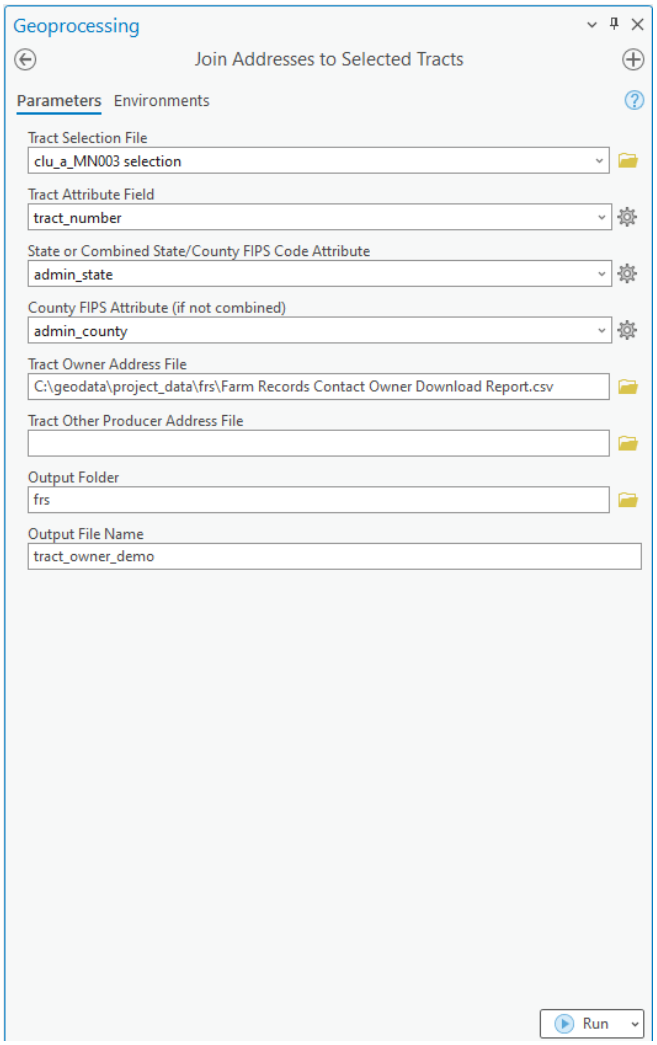
These instructions join addresses to selected tracts.

*--

Step	Instructions
1	If not done already, download and extract the Arc GIS_Pro_Toolbox_v3.zip file to C:\Geodata. The State Office CLU Tools (ArcGIS_Pro_Toolbox.pyt) file should be saved in C:\Geodata\PythonMapSeries.
2	Start ArcGIS Pro.
3	Open the Catalog window.
4	In the Catalog window, navigate to C:\Geodata\PythonMapSeries.
5	Expand the ArcGIS_Pro_Toolbox toolbox.
6	Expand the Farm Records Tools toolbox. 

--*

Join Addresses to Selected Tracts (Continued)

Step	Instructions
7	Double-click the "**Join Addresses to Selected Tracts**" tool. *--  --*
8	The "Tract Selection File" can be populated with a layer from ArcMap or a table containing a list of tracts. For an ArcMap layer, use the drop-down menu to select the layer. Otherwise, click the "Browse" button next to "Tract Selection File".
9	Change the "Tract Attribute Field" drop-down menu to match the attribute in the tract selection file that contains the tract number.
10	Change the "State or Combined State/County FIPS Code Attribute" drop-down menu to the attribute from the tract selection file that represents the State code or combined State/county code. **Note:** If the attribute only represents the State code, the county FIPS attribute must be specified separately.
11	If the State or Combined FIPS Code Attribute only contains the State code, change the drop-down menu for the "County FIPS Attribute" to the attribute in the tract selection file that represents the county code.

Join Addresses to Selected Tracts (Continued)

*--

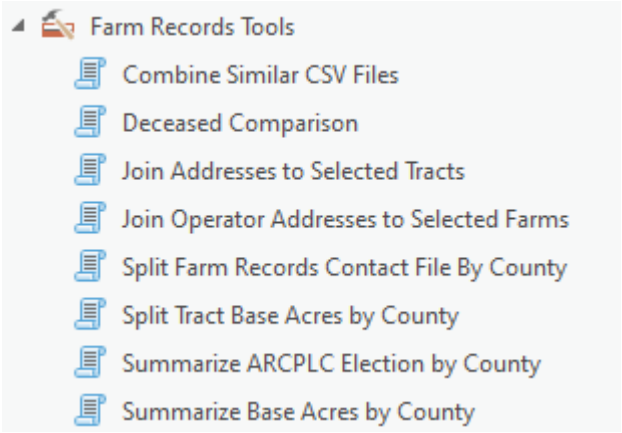
Step	Instructions
12	Addresses can be joined for tract owners, tract operators, or both. For owners, click the "Browse" button  next to Tract Owner Address file. Navigate to c:\geodata\project_data\fsa\frs and add the Farm Records Contact Owner file. For other producers, click the "Browse" button  next to Tract Other Producer Address file. Navigate to c:\geodata\project_data\fsa\frs and add the Farm Records Contact Other Producer file.
13	CLICK "**OK**".
14	Click the "Browse" button  next to the Output folder.
15	Navigate to c:\geodata\project_data\fsa.
16	Select the FRS folder and CLICK "**OK**".
17	CLICK "**RUN**" to run the tool.

--*

Split Tract Base Acres by County

These instructions split tract base acres by county.

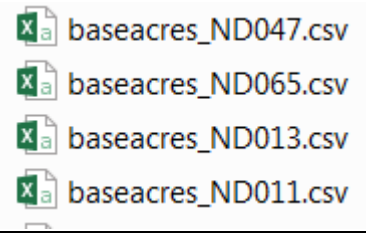
*--

Step	Instructions
1	If not done already, download and extract the Arc GIS_Pro_Toolbox_v3.zip file to C:\Geodata. The State Office CLU Tools (ArcGIS_Pro_Toolbox.pyt) file should be saved in C:\Geodata\PythonMapSeries.
2	Start ArcGIS Pro.
3	Open the Catalog window.
4	In the Catalog window, navigate to C:\Geodata\PythonMapSeries.
5	Expand the ArcGIS_Pro_Toolbox toolbox.
6	Expand the Farm Records Tools toolbox. 
7	Double-click the "Split Tract Base Acres By County" script tool.
8	Click the "Browse" button  next to Tract Base Acre Text File.
9	Navigate to c:\geodata\project_data\fsa\frs and CLICK "Farm Records by Crop Level Tract.csv".
10	CLICK "**OK**".
11	Click the "Browse" button  next to the Output Folder.
12	Navigate to c:\geodata\project_data\fsa\frs.
13	Click once on the frs folder and CLICK "**OK**".

--*

Split Tract Base Acres by County (Continued)

*--

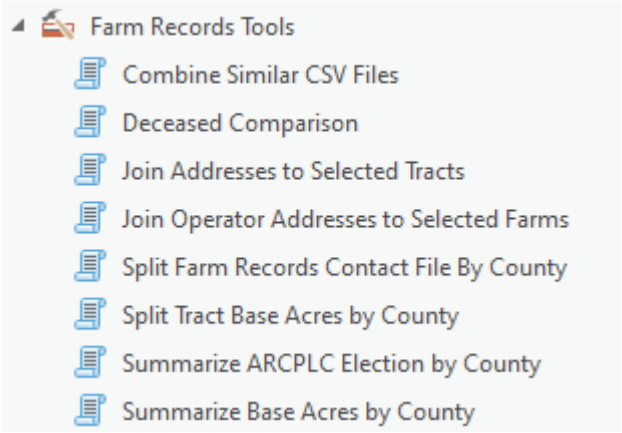
Step	Instructions
14	CLICK "**RUN**" to run the tool.
15	CSV files containing the farm records data will be exported to c:\geodata\project_data\fsa\frs. An additional file, schema.ini, is also created to allow ArcGIS to read the tract number and other numeric data as text fields, allowing data to be joined to the CLU based on tract number. 

--*

Summarize Base Acres by County

These instructions summarize base acres by county.

*--

Step	Instructions
1	If not done already, download and extract the Arc GIS_Pro_Toolbox_v3.zip file to C:\Geodata. The State Office CLU Tools (ArcGIS_Pro_Toolbox.pyt) file should be saved in C:\Geodata\PythonMapSeries.
2	Start ArcGIS Pro.
3	Open the Catalog window.
4	In the Catalog window, navigate to C:\Geodata\PythonMapSeries.
5	Expand the ArcGIS_Pro_Toolbox toolbox.
6	Expand the Farm Records Tools toolbox. 
7	Double-click the "Summarize Base Acres by County" script tool.
8	Click the "Browse" button  next to Tract Address Text File.
9	Navigate to c:\geodata\project_data\fsa\frs and CLICK "Farm Records by Crop Level Tract.csv".
10	CLICK "**OK**".
11	Click the "Browse" button  next to the Output Folder.
12	Navigate to c:\geodata\project_data\fsa\frs.
13	Click once on the frs folder and CLICK "**OK**".
14	CLICK "**RUN**" to run the tool.

--*

Summarize ARCPLC Election by County

Instructions to run the Summarize ARCPLC Election by County tool.

Note: The Farm Records by Crop Level Tract file must be exported from EDW before running this tool.

*--

Step	Instructions
1	If not done already, download and extract the Arc GIS_Pro_Toolbox_v3.zip file to C:\Geodata. The State Office CLU Tools (ArcGIS_Pro_Toolbox.pyt) file should be saved in C:\Geodata\PythonMapSeries.
2	Start ArcGIS Pro.
3	Open the Catalog window.
4	In the Catalog window, navigate to C:\Geodata\PythonMapSeries.
5	Expand the ArcGIS_Pro_Toolbox toolbox.
6	Expand the Farm Records Tools toolbox. 
7	Double-click on “Summarize ARCPLC Election By County”.
8	Click the “Browse” button  next to Farm Records by Crop Level Tract File.
9	Navigate to c:\geodata\project_data\fsa\frs and CLICK “Farm Records by Crop Level Tract (EDW0005DFR).csv”.
10	CLICK “**OK**”.
11	Click the “Browse” button  next to the Output folder.
12	Navigate to c:\geodata\project_data\fsa.
13	Click once on the frs folder and CLICK “**OK**”.
14	CLICK “**RUN**” to run the tool.
15	A CSV file named arcplc_election_summary.csv will be exported to c:\geodata\project_data\fsa\frs.

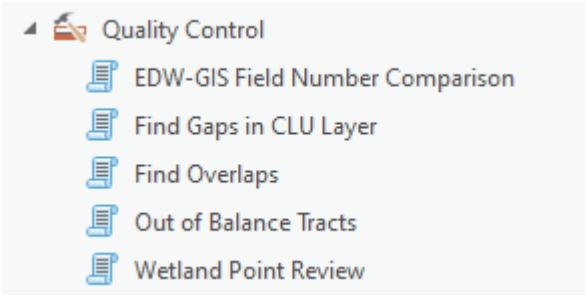
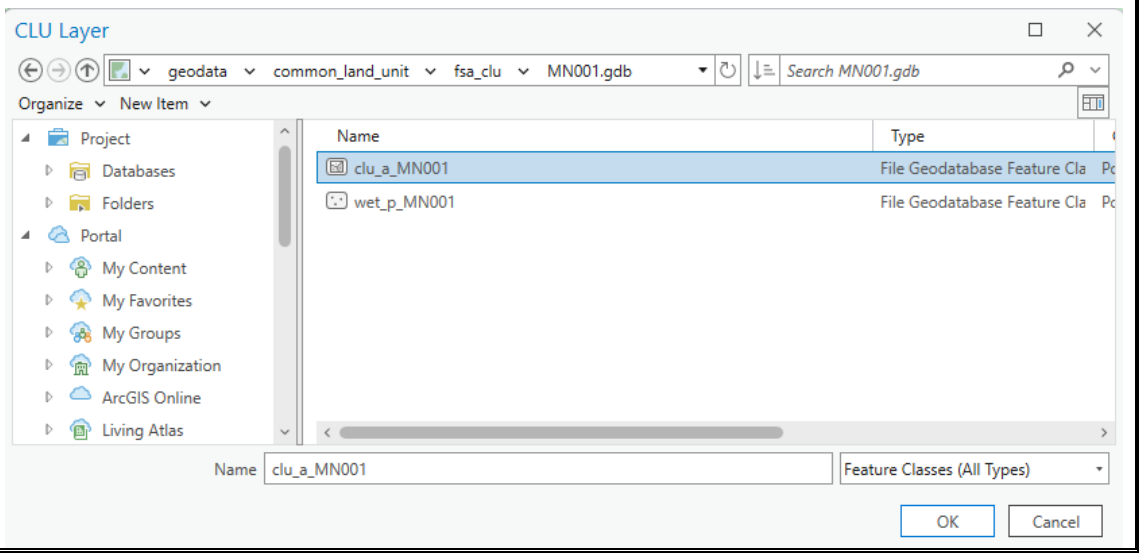
--*

Find Overlaps Tool

A Tool Instructions

Use these instructions for the Find Overlaps tool.

*--

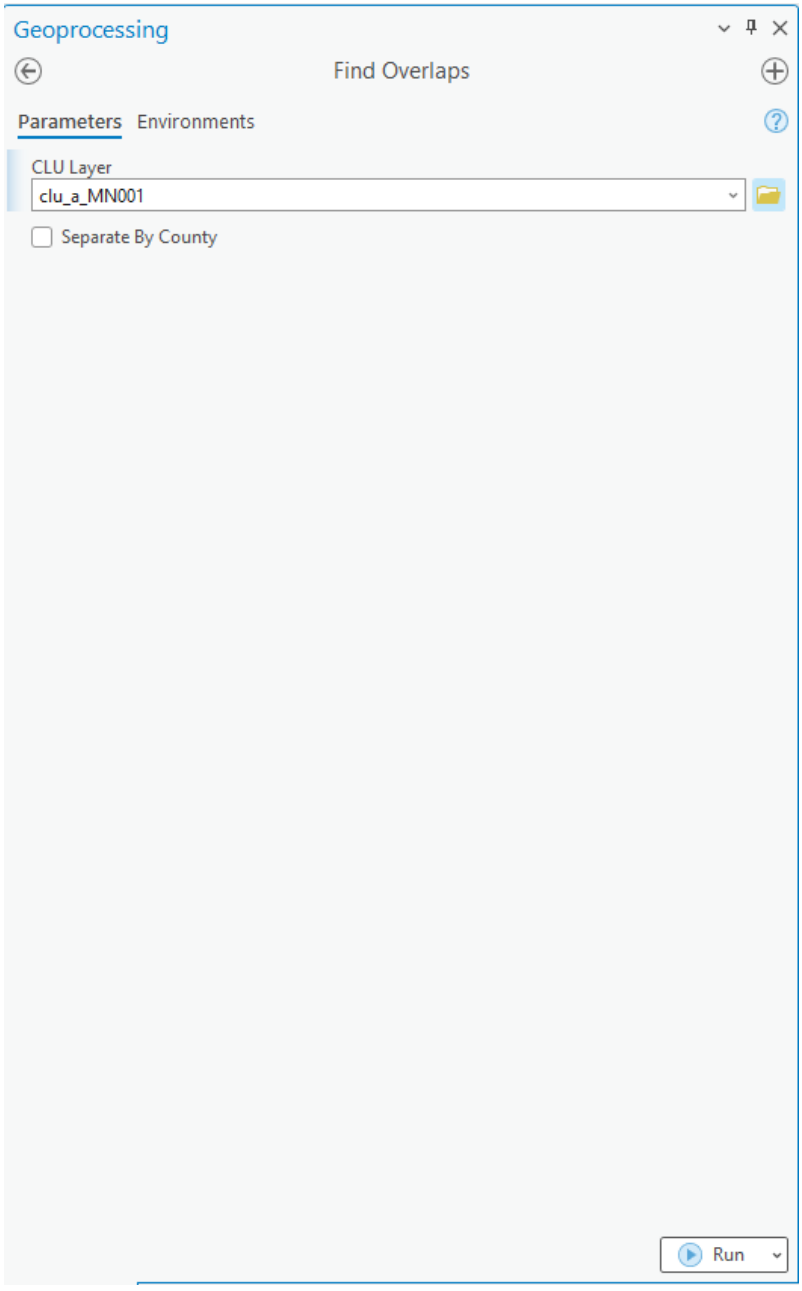
Step	Instructions
1	If not done already, download and extract the Arc GIS_Pro_Toolbox_v3.zip file to C:\Geodata. The State Office CLU Tools (ArcGIS_Pro_Toolbox.pyt) file should be saved in C:\Geodata\PythonMapSeries.
2	Start ArcGIS Pro.
3	Open the Catalog window.
4	In the Catalog window, navigate to C:\Geodata\PythonMapSeries.
5	Expand the ArcGIS_Pro_Toolbox toolbox.
6	Expand the Quality Control toolset. 
7	Double-click on “Find Overlaps”.
8	Click the “Browse” button  next to CLU Layer.
9	Navigate to the folder that contains the exported file geodatabases.
10	Select the desired CLU feature class and CLICK “**OK**”. 

--*

Find Overlaps Tool (Continued)

A Tool Instructions (Continued)

*--

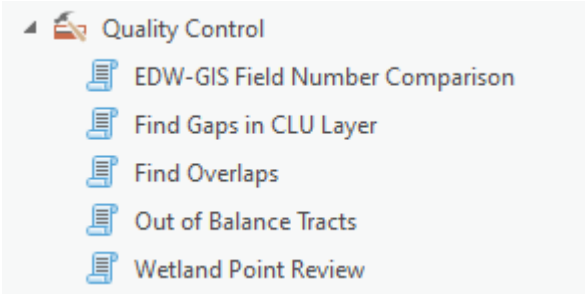
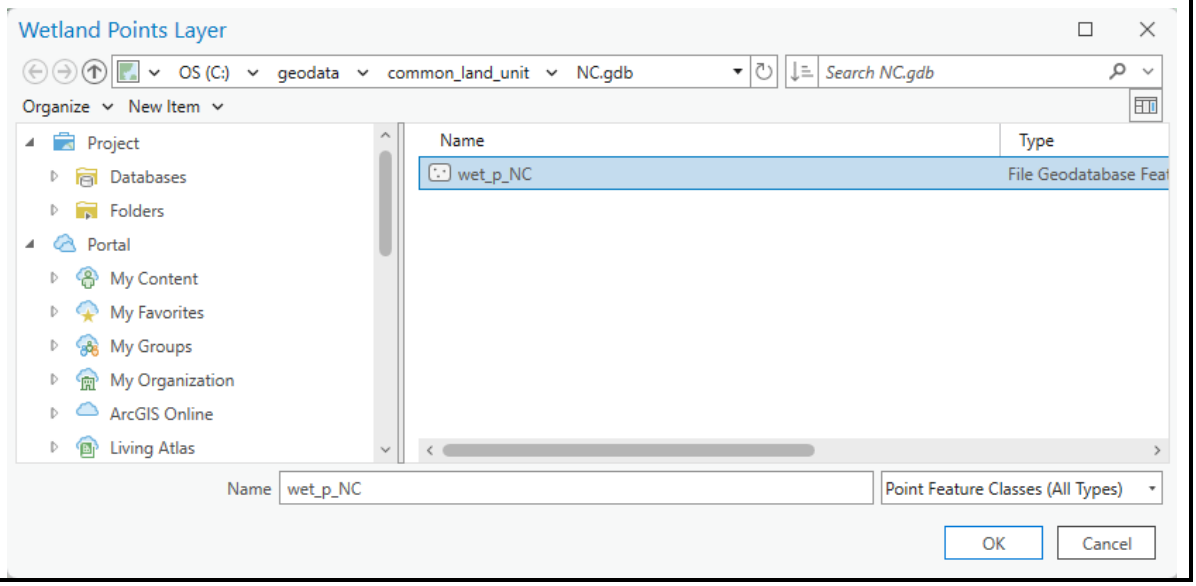
Step	Instructions
11	CLICK "**RUN**" to run the tool.  **Note:** If the "Separate By County" box is checked then the output shapefiles will have the county ID included in the shapefile name. This will still be the case even if only 1 county CLU was selected as the input.

--*

Wetland Point Review

Use these instructions for the wetland point review.

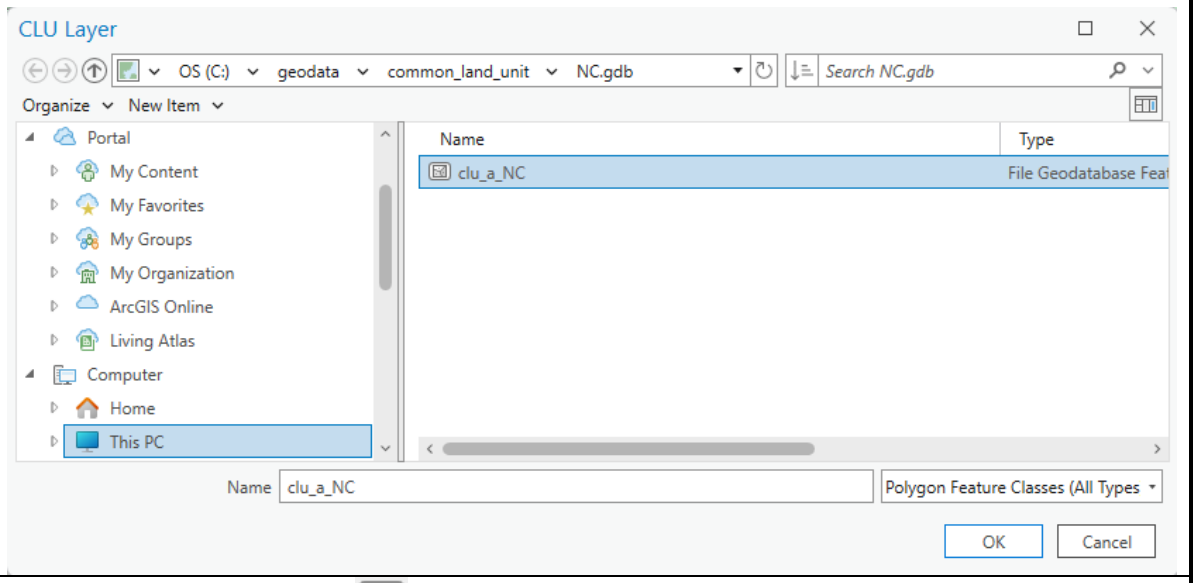
*--

Step	Instructions
1	If not done already, download and extract the Arc GIS_Pro_Toolbox_v3.zip file to C:\Geodata. The State Office CLU Tools (ArcGIS_Pro_Toolbox.pyt) file should be saved in C:\Geodata\PythonMapSeries.
2	Start ArcGIS Pro.
3	Open the Catalog window.
4	In the Catalog window, navigate to C:\Geodata\PythonMapSeries.
5	Expand the ArcGIS_Pro_Toolbox toolbox.
6	Expand the Quality Control toolset. 
7	Double-click on "Wetland Point Review".
8	Click the "Browse" button  next to Wetland Points Layer.
9	Navigate to the folder that contains the Statewide Wetland layer. See **Exhibit 21**.
10	Select the desired wetland feature class and CLICK "**OK**". 

--*

Wetland Point Review (Continued)

*--

Step	Instructions
11	Click the "Browse" button  next to CLU Layer.
12	Navigate to the folder that contains the Statewide CLU layer. See **Exhibit 17**.
13	Select the statewide CLU feature class and CLICK "**OK**". 
14	Click the "Browse" button  next to the Output folder.
15	Navigate to c:\geodata\common_land_unit.
16	Click on fsa_clu and CLICK "**OK**".

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Wetland Point Review (Continued)

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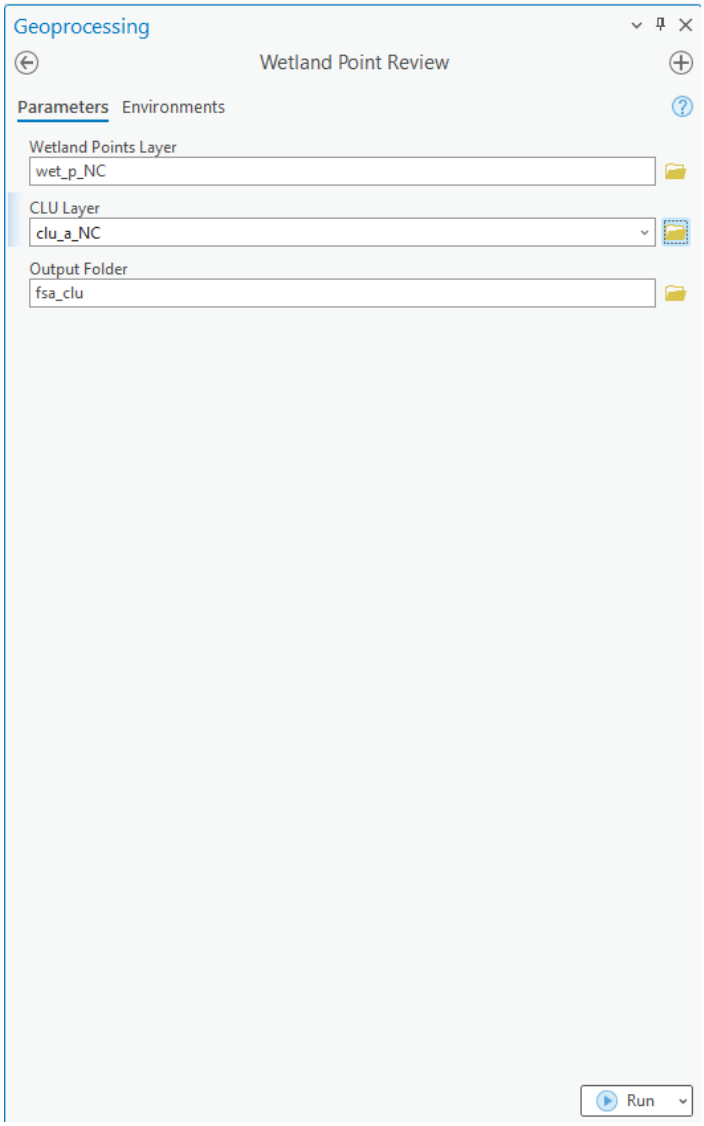
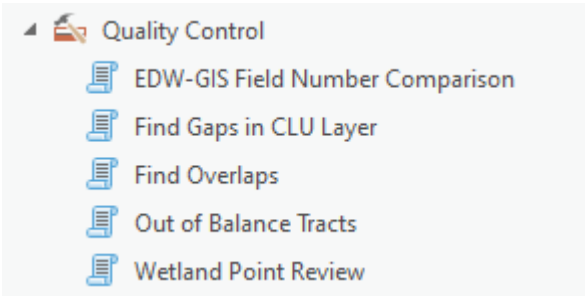
Step	Instructions
17	CLICK "**RUN**" to run the tool.  A text file will be created in the output directory named wetPtAdmnReview_<yyyymmdd>_<hhmmss>.txt. The text file contains a list of all county codes and the number of errors found in each county. Counties with errors should run the Wetland QC tool on the QC Toolbar in CLU Maintenance Tool.

--*

Find Gaps in CLU Layer Tool

Follow instructions for using the Find Gaps in CLU Layer Tool according to the following table.

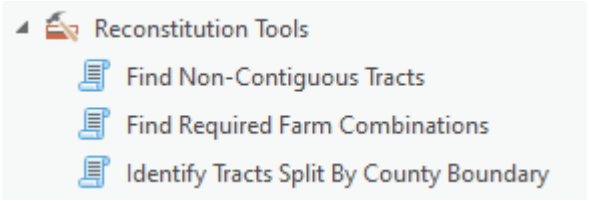
Step	Instructions
1	If not done already, download and extract the Arc GIS_Pro_Toolbox_v3.zip file to C:\Geodata. The State Office CLU Tools (ArcGIS_Pro_Toolbox.pyt) file should be saved in C:\Geodata\PythonMapSeries.
2	Start ArcGIS Pro.
3	Open the Catalog window.
4	In the Catalog window, navigate to C:\Geodata\PythonMapSeries.
5	Expand the ArcGIS_Pro_Toolbox toolbox.
6	Expand the Quality Control toolset. 
7	Double click on the "Find Gaps in CLU Layer" script tool.
8	Click the Browse button  next to Input Geodatabase.
9	Navigate to c:\geodata\common_land_unit\fsa_clu and select the file geodatabase containing the CLU to analyze. **Note:** This tool can be run on an individual county or on a merged statewide CLU.
10	Click **[OK].**
11	Click **[Run]** to run the tool.
12	A new feature class named “qc_gaps_clu_a_<ST>” will be added to the input geodatabase identified in step 9.
13	Add the resulting feature class to ArcMap to review potential gaps. A definition query should be applied using the “Acres” attribute to limit the results to larger areas.
14	The State GIS Specialist should review areas of concern with county staff to ensure CLU is accurately digitized.

--*

Find Non-Contiguous Tracts Tool

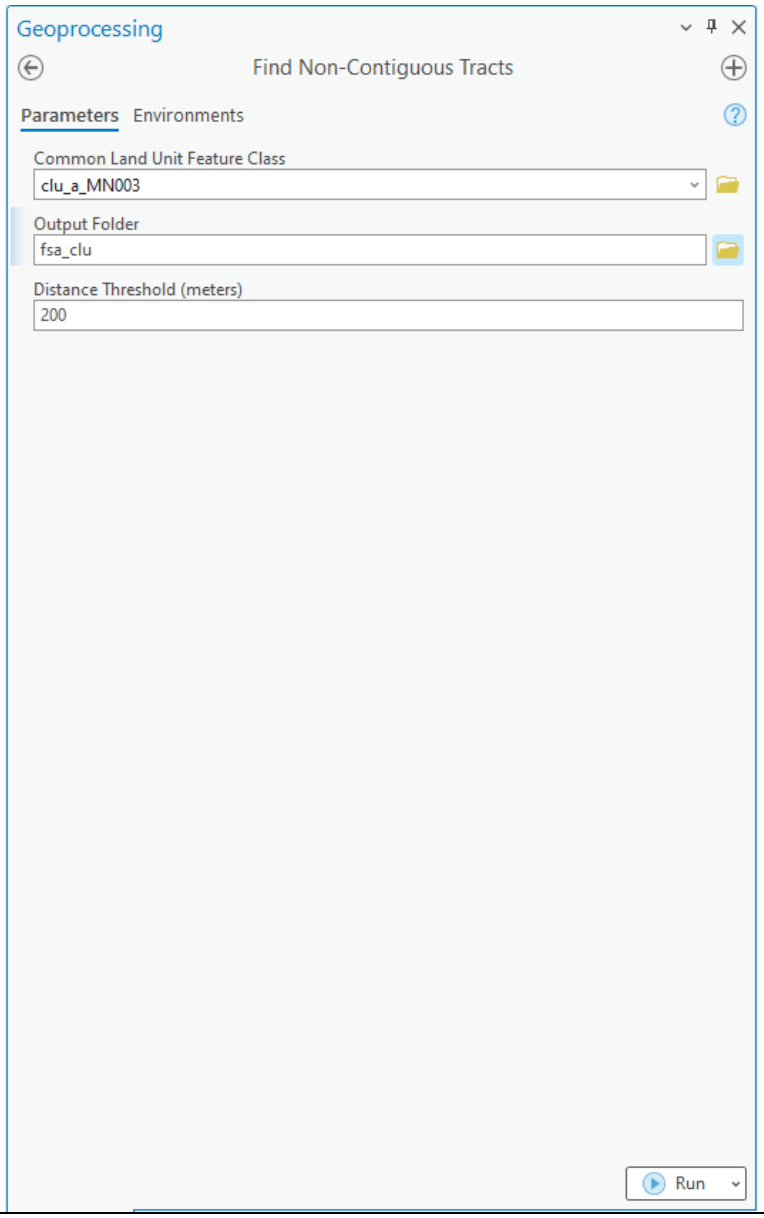
Use these instructions for the Find Non-Contiguous Tracts tool.

*--

Step	Instructions
1	If not done already, download and extract the Arc GIS_Pro_Toolbox_v3.zip file to C:\Geodata. The State Office CLU Tools (ArcGIS_Pro_Toolbox.pyt) file should be saved in C:\Geodata\PythonMapSeries.
2	Start ArcGIS Pro.
3	Open the Catalog window.
4	In the Catalog window, navigate to C:\Geodata\PythonMapSeries.
5	Expand the ArcGIS_Pro_Toolbox toolbox.
6	Expand the Reconstitution Tools toolset. 
7	Double-click the "Find Non-Contiguous Tracts" script tool.
8	Click the "Browse" button  next to Common Land Unit Feature Class.
9	Navigate to the desired State or county CLU file geodatabase and select the CLU feature class.
10	CLICK "**OK**".
11	Click the "Browse" button  next to the Output folder.
12	Navigate to c:\geodata\project_data\fsa.
13	Click once on the frs folder and CLICK "**OK**".

*--

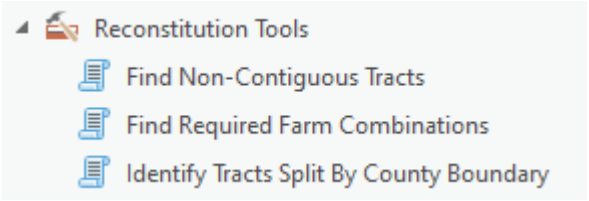
Find Non-Contiguous Tracts Tool (Continued)

Step	Instructions
14	Change the Distance Threshold as needed. A smaller threshold will potentially identify more noncontiguous tracts. It is recommended to leave the threshold set at 200 meters for at least the first run of the tool.
15	CLICK "**Run**" to run the tool. 
16	A file named noncontiguous_tracts.csv will be created in the output folder. This file will contain a list of State and county administrative codes, as well as farm and tract numbers of tracts that are found to be noncontiguous. The results may be provided to the County Office for follow-up either as a list, or maps may be made of the tracts.

Find Required Farm Combinations Tool

Use these instructions for the Find Required Farm Combinations tool.

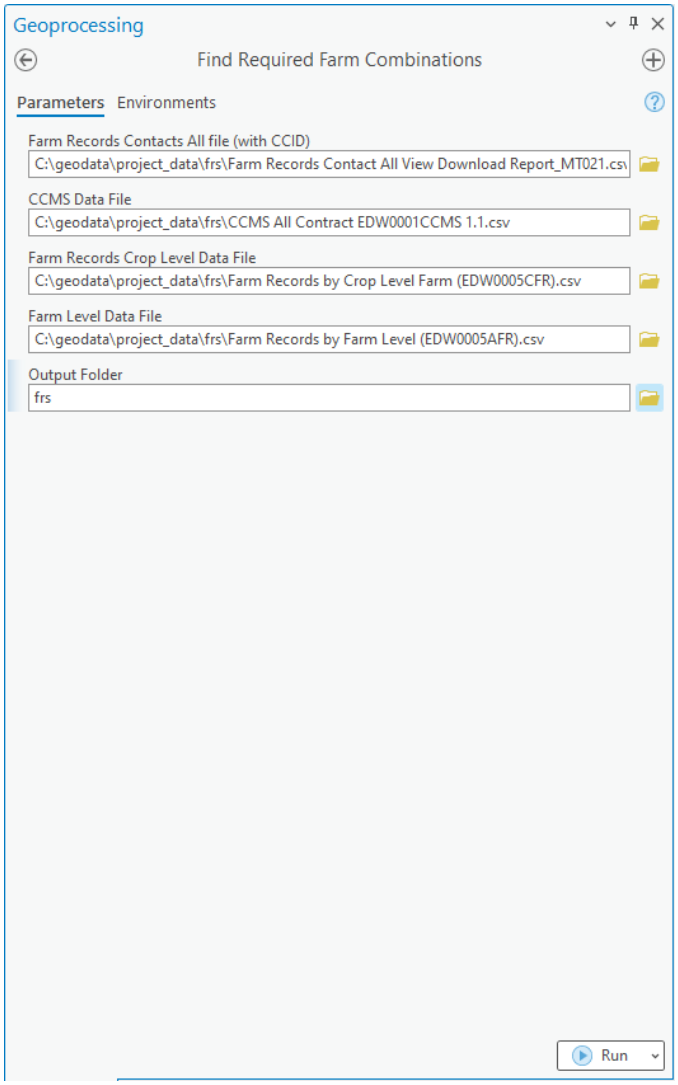
*--

Step	Instructions
1	If not done already, download and extract the Arc GIS_Pro_Toolbox_v3.zip file to C:\Geodata. The State Office CLU Tools (ArcGIS_Pro_Toolbox.pyt) file should be saved in C:\Geodata\PythonMapSeries.
2	Start ArcGIS Pro.
3	Open the Catalog window.
4	In the Catalog window, navigate to C:\Geodata\PythonMapSeries.
5	Expand the ArcGIS_Pro_Toolbox toolbox.
6	Expand the Reconstitution Tools toolset. 
7	Double-click the "Find Required Farm Combinations" script tool.
8	Click the "Browse" button  next to Farm Operator Details File.
9	Navigate to c:\geodata\project_data\fsa\frs and CLICK "Farm Records Contact All View Download Report.csv".
10	CLICK "**OK**".
11	Click the "Browse" button  next to CCMS Data File.
12	Navigate to c:\geodata\conservation and CLICK "CCMS All Contract EDW0001CCMS 1.1.csv".
13	CLICK "**OK**".
14	Click the "Browse" button  next to Farm Crop Level Data File.
15	Navigate to c:\geodata\project_data\fsa\frs and CLICK "Farm Records by Crop Level Farm (EDW0005CFR).csv".

--*

Find Required Farm Combinations Tool (Continued)

*--

Step	Instructions
16	CLICK "**OK**".
17	Click the Browse button next to Farm Level Data File.
18	Navigate to c:\geodata\project_data\fsa\frs and select Farm Records by Farm Level (EDW0005AFR).csv.
19	Click **[OK].**
20	Click the Browse button next to Output Folder.
21	Navigate to c:\geodata\project_data\fsa.
22	Click once on the frs folder and click **[OK]**. **Note:** Users may wish to create a "required_recons" subfolder to store the output.
23	Click **[Run]** to run the tool. 

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Find Required Farm Combinations Tool (Continued)

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<table>
<tr><th>Step</th><th>Instructions</th></tr>
<tr><td>24</td><td>HTM files containing a list of required farm combinations will be exported to the specified output folder. Records will be listed by operator name, with an ARCPLC notification message indicating enrollment status and whether farms are participating in CRP. For each farm, the tract(s) and owner(s) will be listed.

<table>
<tr><td>JOHN DOE</td><td colspan="3">ARCPLC: More than one program elected – All farms listed can be combined</td></tr>
<tr><td></td><td colspan="3">No farms in CRP</td></tr>
<tr><td></td><td>10858</td><td>13167</td><td>JOHN DOE</td></tr>
<tr><td></td><td></td><td></td><td>JANE DOE</td></tr>
<tr><td></td><td>11846</td><td>6865</td><td>JOHN DOE</td></tr>
<tr><td></td><td></td><td></td><td>JANE DOE</td></tr>
<tr><td></td><td></td><td>6907</td><td>JOHN DOE</td></tr>
<tr><td></td><td></td><td></td><td>JANE DOE</td></tr>
</table>

Note: Farms with an ARCPLC election but no base acres may appear on the report as a required combination. These farms should be manually reviewed to determine whether farms can be combined.</td></tr>
<tr><td>25</td><td>An additional file named required_recons_<ST>.csv, where <ST> is the state abbreviation, is created in the output folder. This CSV file provides a summary by county of the number of farms, number of operators, number of multi-farm operators and number of operators with required farm combinations.

This table can be joined to a county boundary dataset to provide a map of required farm combination data.</td></tr>
</table>

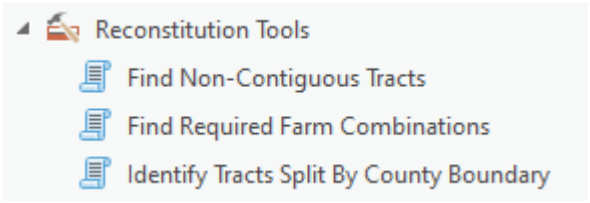
--*

Identify Tracts Split by County Boundary

Tracts that contain land that is physically located in multiple counties and is both greater than 10 acres in all physical locations and greater than 5 percent of the overall tract acreage must be separated according to 10-CM. The "Identify Tracts Split by County Boundary" tool provides a method for GIS users to identify tracts administered by a State or county that meet these criteria.

A Tool Execution

*--

Step	Instructions
1	If not done already, download and extract the Arc GIS_Pro_Toolbox_v3.zip file to C:\Geodata. The State Office CLU Tools (ArcGIS_Pro_Toolbox.pyt) file should be saved in C:\Geodata\PythonMapSeries.
2	Start ArcGIS Pro.
3	Open the Catalog window.
4	In the Catalog window, navigate to C:\Geodata\PythonMapSeries.
5	Expand the ArcGIS_Pro_Toolbox toolbox.
6	Expand the Reconstitution Tools toolset. 
7	Double click on the "Identify Tracts Split By County Boundary" tool.
8	Click the "Browse" button next to "County Boundary Feature Class".
9	Navigate to C:\Geodata\Government_Units\fsa_counties_dd22_NonGeneralized.gdb.
10	Double click on the FSA_Counties_dd22_NonGeneralized feature dataset.
11	Under the feature dataset, select the FSA_Counties_dd22_NonGeneralized feature class.
12	Click "OK".
13	Change the "State County FIPS Code Attribute" dropdown to "FSA_STCOU".
14	Click the "Browse" button next to "Input CLU Layer".
15	Navigate to C:\Geodata\Common_Land_Unit\fsa_clu or the folder where the desired CLU file geodatabase is stored.

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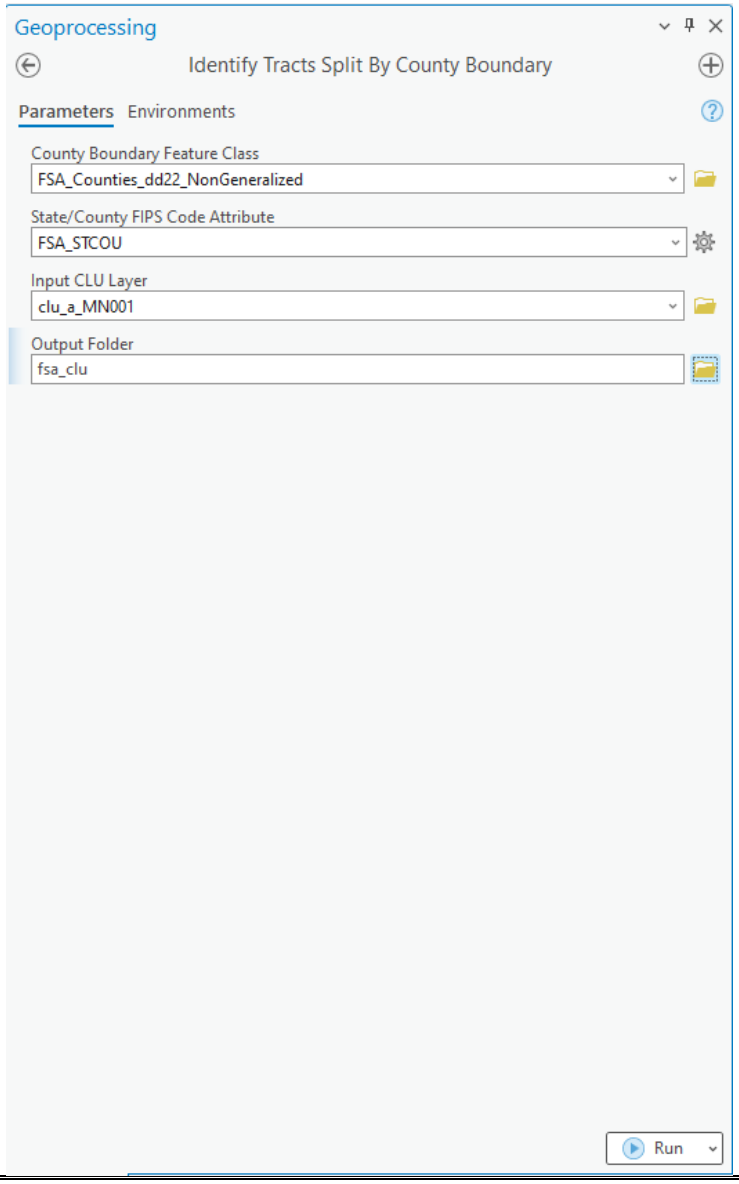
Identify Tracts Split by County Boundary (Continued)

A Tool Execution

*--

Step	Instructions
16	Select the CLU feature class from the file geodatabase.
17	Click "OK".
18	Use either the "Browse" button or type the folder location in the "Output Folder" input box. The output file will usually be set to C:\Geodata\project_data\fsa.
19	Click "Run" to run the tool. 

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Identify Tracts Split by County Boundary (Continued)

B Review Results

Files created by the "Identify Tracts Split by County Boundary" tool will be stored in the output folder as specified in the tool.

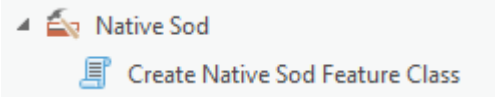
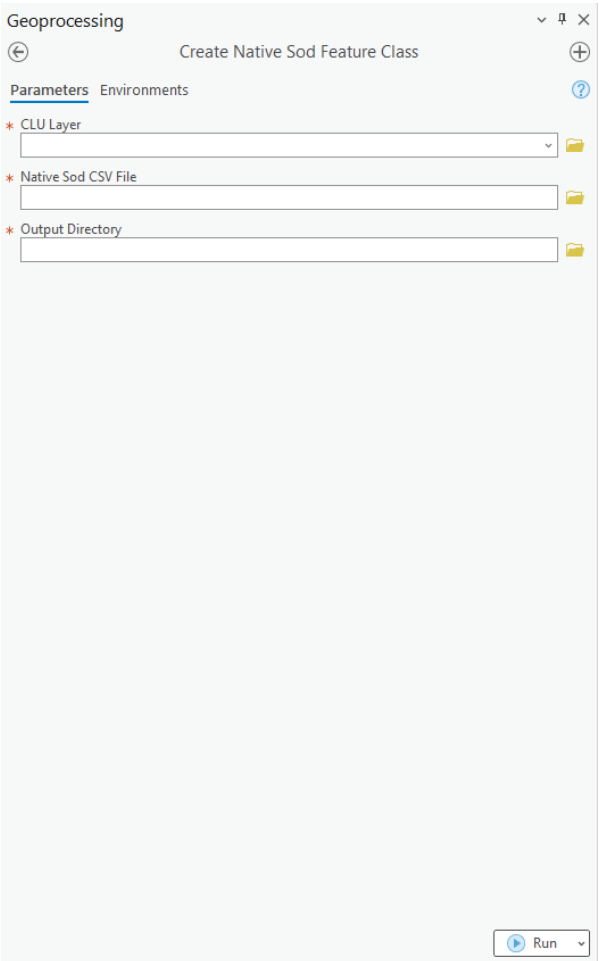
Step	Instructions
1	Open Windows Explorer.
2	Navigate to the output folder as specified in the tool, usually c:\geodata\project_data\fsa.
3	Double click on the file named "tracts_crossed_by_county_boundary_yyyymmdd.csv". The file will open in Microsoft Excel.
4	Review records in the spreadsheet and perform Farm Records corrections as necessary.

	A	B	C	D	E	F	G
1	admin_state	admin_county	tract_number	farm_number	fsa_stcou	area	percentage
2	35	7	1781	1052	35033	13875.24517	15.39398671
3	35	7	1781	1052	35007	76258.94443	84.6060133
4	35	31	2841	2574	35031	312.6773234	5.251018926
5	35	31	2841	2574	35006	5641.925519	94.74898071
6	35	9	4012	4335	35009	1341.577185	57.8295722
7	35	9	4012	4335	35041	820.8653234	35.38394288

Create Native Sod Feature Dataset Class

Use these instructions for the Create Native Sod Feature Dataset.

*--

Step	Instructions
1	If not done already, download and extract the Arc GIS_Pro_Toolbox_v3.zip file to C:\Geodata. The State Office CLU Tools (ArcGIS_Pro_Toolbox.pyt) file should be saved in C:\Geodata\PythonMapSeries.
2	Start ArcGIS Pro.
3	Open the Catalog window.
4	In the Catalog window, navigate to C:\Geodata\PythonMapSeries.
5	Expand the ArcGIS_Pro_Toolbox toolbox.
6	Expand the Native Sod toolset.
7	Double-click on "Create Native Feature Class". 
8	The Create Native Sod Feature Class window will open. 

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Create Native Sod Feature Class (Continued)

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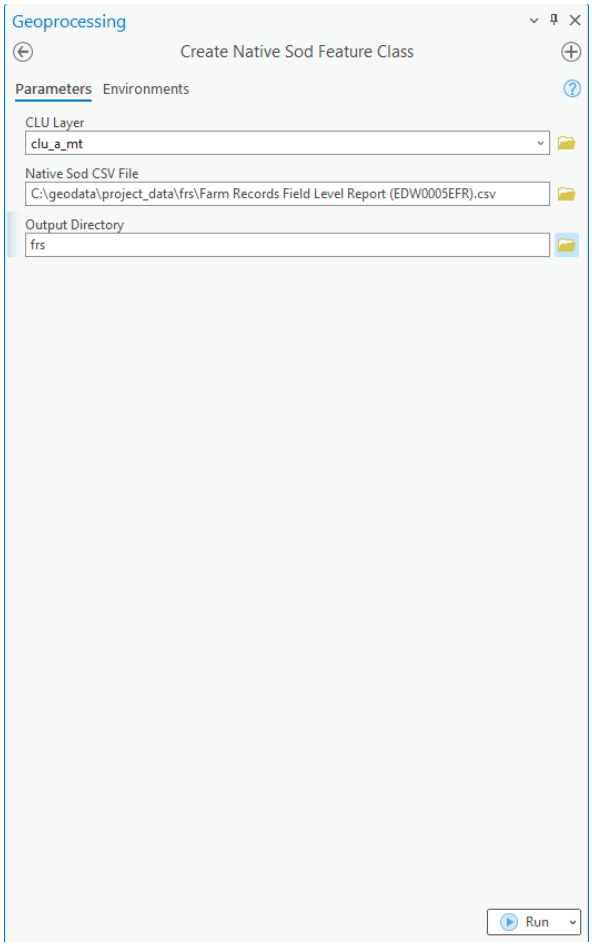
Step	Instructions
9	Click the "Browse" button next to CLU Layer.
10	Navigate to the desired State CLU file geodatabase and select the CLU feature class.
11	CLICK "**OK**".
12	Click the "Browse" button next to the Native Sod CSV File.
13	Select the Farm Records Field Level Report as downloaded from EDW, typically named Farm Records Field Level Report (EDW0005EFR).csv. See **Exhibit 16**.
14	CLICK "**OK**".
15	Click the "Browse" button next to the Output directory.
16	Navigate to C:\geodata\project_data\fsa.
17	Click on FRS and CLICK "**OK**".
18	CLICK "**Run**" to run the tool.  A native sod file geodatabase will be created in the specified output director. The data in the feature class can be mapped, summarized and used within PythonMapSeries to identify the native sod fields on producer maps.

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Create County Summary Pages Tool

A Introduction

The Create County Summary Pages tool creates a report summarizing the data from different sources. The report includes CLU statistics, compliance data, conservation data, top 10 commodities reported to FSA, and base acres using data from CLU, Farm Records, conservation, and crop data.

B Tool Instructions

Use these instructions for the Create County Summary Pages tool.

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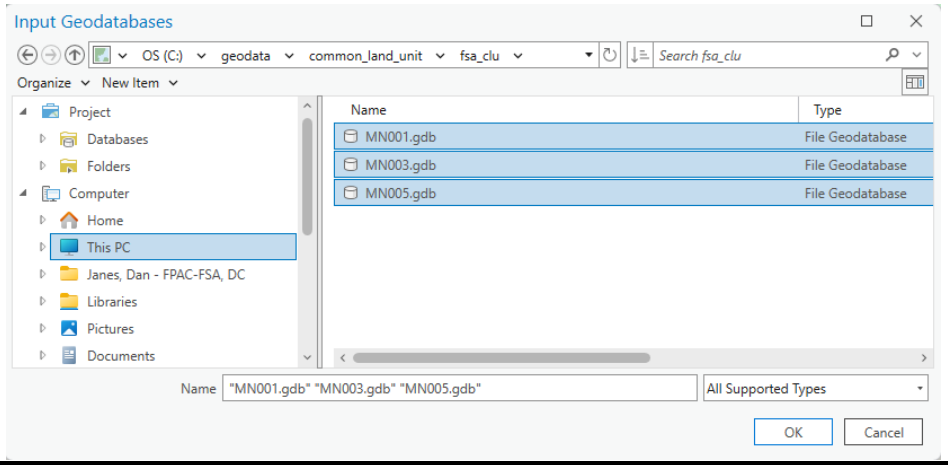
Step	Instructions
1	If not done already, download and extract the Arc GIS_Pro_Toolbox_v3.zip file to C:\Geodata. The State Office CLU Tools (ArcGIS_Pro_Toolbox.pyt) file should be saved in C:\Geodata\PythonMapSeries.
2	Start ArcGIS Pro.
3	Open the Catalog window.
4	In the Catalog window, navigate to C:\Geodata\PythonMapSeries.
5	Expand the ArcGIS_Pro_Toolbox toolbox.
6	Expand the County Summary toolbox. 
7	Double-click on “Create County Summary Pages”.
8	Click the “Browse” button  next to Input Geodatabases.
9	Browse to the directory that contains the exported file geodatabases.
10	Select all desired file geodatabases and CLICK “OK”. 

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Create County Summary Pages Tool (Continued)

B Tool Instructions (Continued)

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Step	Instructions
11	Click the "Browse" button  next to Farm Records by Crop Level Farm Data Table.
12	Navigate to C:\geodata\project_data\fsa\frs.
13	Select the file named "Farm Records by Crop Level Farm (EDW0005CFR).csv".
14	CLICK "OK".
15	Click the "Browse" button  next to Farm Records Contact All View Download Report.
16	Navigate to C:\geodata\project_data\fsa\frs.
17	Select the file named "Farm Records Contact All View Download Report.csv".
18	CLICK "OK".
19	Click the "Browse" button  next to Crop Data Table.
20	Navigate to c:\geodata\land_use_land_cover\fsa_compliance.
21	Select the crop data file for the appropriate program year.
22	Use the drop-down menu on the "Crop Year" line to select the crop year that is being summarized.
23	To include CRP in the summary pages, click the "Browse" button  next to Input CCMS Table, browse to the directory where the CCMS data file is located, and double-click the file to add it.

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Create County Summary Pages Tool (Continued)

B Tool Instructions (Continued)

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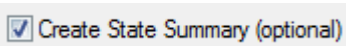
Step	Instructions
24	Use the drop-down menu on the State/County FIPS Code Attribute Menu to select a specific attribute field from the merged CLU layer added previously (optional).
25	Click the box next to "Create State Summary" to create a page containing a statewide summary. 
26	Click the "Browse" button  next to the Output folder.
27	Navigate to c:\geodata\project_data\fsa\frs.
28	Click once on the frs folder and CLICK "**OK**".
29	CLICK "**Run**" to run the tool.
30	Once complete the output directory will contain a folder with HTML documents summarizing data for each of the counties chosen. Resulting HTML documents can be combined into a PDF document using Adobe Acrobat.

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Create County Summary Pages Tool (Continued)

C Explanation of Data

The output report created by the Create County Summary Pages tool includes the following.

Report Item	Explanation	Data Source
Common Land Unit Statistics Section		
Farms in County	The count of unique farm numbers found in CLU for the county.	CLU
Tracts in County	The count of unique tract numbers found in CLU for the county.	CLU
Farm Operators and Other Tenants	A count of unique farm partner identifiers found in the MIDAS Farm Partner Detail record, plus all unique other tenants from the MIDAS Tract Partner Detail. Unique identifiers that are found in both datasets are only counted once.	Farm Partner Details, Tract Partner Details
Tract Owners	A count of unique tract partner identifiers found in the MIDAS Tract Partner Details report.	Tract Partner Details
All Customers	A count of all unique farm and tract partner identifiers found in MIDAS Farm Records. Unique identifiers that are found in both farm and tract records are only counted once.	Farm Partner Details, Tract Partner Details
Cropland Acres	The total of the CLU Calculated Acreage attribute for all CLU's that have a 3-CM Cropland attribute set to True.	CLU
Other Digitized Acres	The total of the CLU Calculated Acreage attribute for all CLU's that have a 3-CM Cropland attribute set to False.	CLU
Polygons in CLU	The total number of polygons digitized in the County CLU layer.	CLU
Date Last Updated	The highest value found in the "Last Change Date" attribute of the CLU layer. CLU data may have been exported more recently than the last change date.	CLU

ESRI E-Learning Access Instructions

A Introduction

ESRI provides unlimited access to their large collection of self-paced E-Learning resources. To get access, an ESRI account that is connected to the USDA FSA is needed. This guide provides step-by-step instructions for creating an account (if one is needed) and requesting access to the unlimited E-Learning training.

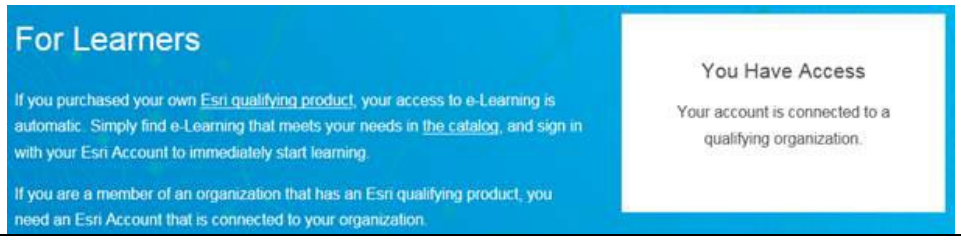
B Instructions for New Users With No ESRI Account

These instructions will allow a new user to set up an ESRI account that is connected to USDA-FSA.

Step	Instructions
1	Submit an e-mail request to the current FSA ESRI account administrator *--(Patsy Hudson – patsy.hudson@usda.gov).--* • Subject: Request for ESRI Unlimited E-Learning Access. • In the body of the e-mail request, include an official work e-mail address (or a list of e-mails if submitting multiple individuals). • Each user included in the body of the e-mail request, will receive a return e-mail *--from Patsy similar to the following example.--* **From:** My Esri [mailto:service@esri.com] **Sent:** Friday, March 17, 2017 10:34 AM **To:** <email address> **Subject:** Your Esri E-Learning Account **Access to Esri E-Learning** An administrator for your organization, **USDA Farm Service Agency**, has invited you to access e-Learning on the Esri Training website. E-Learning includes self-paced courses, seminars, videos, and other resources covering a wide variety of GIS and ArcGIS topics. Accept the invitation by clicking the button below. If you don't have an Esri account, you'll be prompted to create one. Once you have accepted your invitation, you can visit the Esri Training website at any time. If you have any questions, please contact Esri Customer Service at service@esri.com. Regards, Esri Customer Service Accept Invitation • CLICK "Accept Invitation" and follow the promts to create the account.
2	To Access the ESRI Account after it has been created, go to **https://www.esri.com/training/unlimited-esri-training/**.

ESRI E-Learning Access Instructions (Continued)

B Instructions for New Users With No ESRI Account (Continued)

Step	Instructions
3	CLICK "Sign In To Check". 
4	If the following screen is received, access to the Unlimited e-Learning resources was successful. 
5	If the following screen is received, request to have the account linked.