

For: State and County Offices

Update on Overlaps in the ArcGIS/ArcSDE Common Land Unit (CLU) Layer

Approved by: Acting Deputy Administrator, Farm Programs



1 Overview

A Background

Migration of geospatial CLU data from the ArcView/shapefile environment to the ArcGIS/ArcSDE layer environment is nearly complete. The ArcGIS/ArcSDE environment:

- assists in maintaining integrity of CLU line work data through topology rules built into the software
- prevents things such as overlaps, slivers, etc. to be loaded into the system or created within the layer.

Note: Notice CP-608 stated that overlaps are occurring in the ArcGIS/ArcSDE CLU layer.

Overlaps are errors in topology of the CLU layer that cause problems in editing and managing CLU data. Unexpected overlaps have recently been reported in many County Offices and need to be fixed. The National Office personnel is researching the exact cause of these overlaps.

Note: Notice CP-608 implied that overlaps were not fixable in the ArcGIS/ArcSDE environment. However, research has proven that many overlaps are fixable.

B Purpose

This notice informs State and County Offices of the following:

- recognized types of overlaps occurring in the ArcGIS/ArcSDE CLU layer
- possible solutions to these overlaps
- actions that should be taken.

Note: This notice does **not** apply to any Service Centers that have **not** migrated to ArcGIS/ArcSDE.

Disposal Date	Distribution
February 1, 2007	State Offices; State Offices relay to County Offices

Notice CP-612

2 Overlaps in the ArcGIS/ArcSDE CLU Layer

A Types of Overlaps and Possible Solutions

The currently recognized types of overlaps and possible solutions are listed in the following table. Overlap fixes will be attempted by State GIS Specialists/Coordinators or a coordinated effort between State GIS Specialists/Coordinators and County Office employees as indicated in paragraph 3.

Overlap Type	Background and Solution	
Existing Voids	This type of overlap involves the slight shift of a polygon, possibly caused by small voids that exist in the data-set. Do the following to fix existing voids.	
	Step	Action
	1	Merge the polygons in the affected area together to expose the small voids, which will more than likely appear to be small line segments Note: Users may need to zoom in significantly to be able to work with these voids.
	2	Use the vertex editor to select the voids and expand the voids.
	3	Use the append polygon tool to draw a line across the voids to make them a polygon.
	4	Merge the new polygons to the previously existing polygons and re-digitize the line work to match the original CLU boundaries and acreages.
5	Run the multi-part polygon quality control tool which is found in the Maintenance Tool v3.0.6 or higher after fixing this type of overlap.	
Duplicate Polygons	This type of overlap has a duplicate polygon existing in the database. This will literally appear to be 1 polygon with 2 records associated with it in the attribute table. However, it is in fact 2 duplicate polygons, 1 lying directly on top of the other. It occurs when a user is editing the attributes of that polygon and encounters a stack-sequence error. To create the overlap polygon the user would have to save the edits after the stack sequence error occurred. Instances where many duplicate polygons exist within a CLU layer have also been found, but the cause of this is yet unknown. To fix duplicate polygons, select the duplicate polygons and merge them.	
Single Polygon Overlays Multiple Polygons	This type of overlap occurs when 1 polygon overlays multiple polygons. It is possibly created in the same fashion as the duplicate polygon overlap. To fix this type of overlap, select the overlapping polygons, merge them, and re-digitize the line work to match the original CLU boundaries and acreages.	

B Overlap Solutions Videos

Videos demonstrating solutions for overlaps that are fixable within the Maintenance Tool will soon be available on the GIS web site at <http://fsagis.usda.gov/trainingcal/>.

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3 State and County Office Action

A State Office Action

State Offices shall:

- attempt to fix overlaps found in their County Offices or coordinate with County Office employees to fix the overlaps
- file a help desk ticket if overlaps cannot be fixed
- send a **report** with the following information to Todd Anderson at **todd.anderson@wdc.usda.gov** and Dan Culli at **daniel.culli@wdc.usda.gov** by December 1, 2006:
 - County Offices names
 - State and county codes
 - number of overlaps fixed
 - number of overlaps that cannot be fixed
- instruct County Offices to run the overlap quality control tool found in the ArcGIS CLU Maintenance Tool v3.0.6 or higher on a regular basis
- contact Todd Anderson at **todd.anderson@wdc.usda.gov** and/or Dan Culli at **daniel.culli@wdc.usda.gov** for further assistance.

B County Office Action

County Offices shall:

- follow the instruction of their State GIS Specialist/Coordinator about this notice
- contact their State GIS Specialist/Coordinator for assistance with this notice.