

Metadata Requirements for SanGIS Data Layers

What is Metadata?

Metadata is “data about data”. It is information in addition to the spatial and tabular data that is required to make the data useful. Metadata is information you need to know in order to correctly use the data (www.gis.com). Metadata may describe the content of an item, the individual datum, or a collection of data including multiple content items. “Metadata (sometimes written 'meta data') is used to facilitate the understanding, use and management of data” (www.wikipedia.com). At a minimum, the metadata should include the source and projection of the data, the definitions of every attribute, and any disclaimers for the data.

SanGIS Requirement

All data submitted to SanGIS **must** include metadata. In the past SanGIS would create basic metadata on a one-page text document. To provide greater quality and usability of metadata, SanGIS now requires more thorough metadata submitted in a specific XML format. All spatial and tabular data submitted to SanGIS must have accompanying metadata completed using the FGDC ESRI stylesheet provided in ArcCatalog. (Refer to www.fgdc.gov/metadata/csdgm for complete information on this stylesheet). Metadata in this format enables it to be of immediate benefit to the user of the data during a GIS session or through export of the data. For example, right click on the data layer in ArcMap and then click on ‘Data’ → ‘View Item Description’ and scroll down to the FGDC Metadata for an immediate view of the metadata.

Creating and Editing Metadata

Please refer to the accompanying guide, ‘Required Metadata Elements for SanGIS Data Layers’, for step-by-step instructions in creating, adding, or editing metadata.

Required Metadata Elements for SanGIS Data Layers

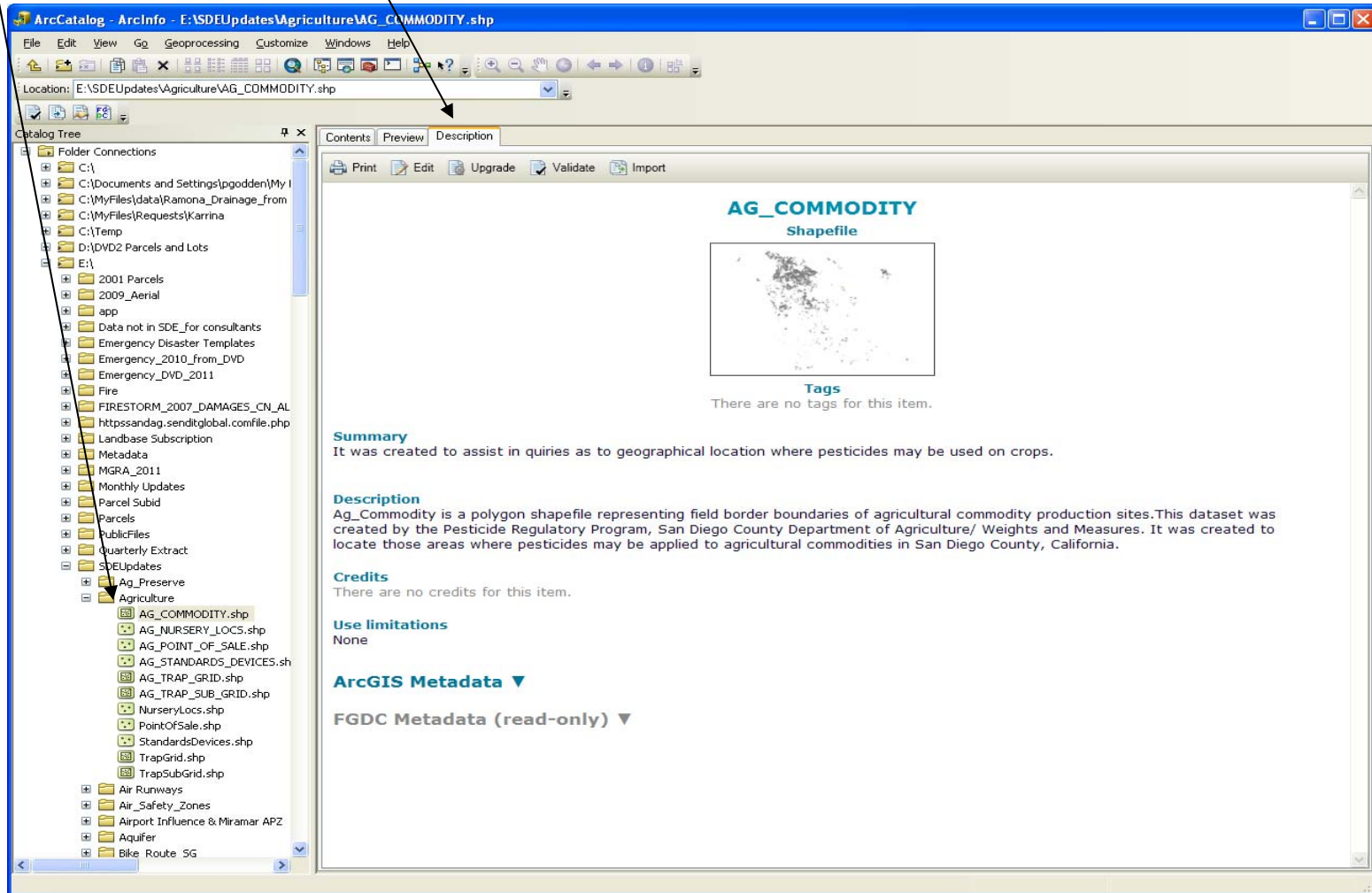
- This document was created to provide a guide for what metadata elements are required when data is submitted to SanGIS to be posted to the SanGIS SDE database. The metadata stylesheet is FGDC ESRI (ArcCatalog).
- Each required element is indicated with a **red arrow** and **red text** stating **REQUIRED**. Explanations and definitions are included for some required elements. The instructions are ordered from the first menu (Identification) to the last (Metadata Reference).
- Date Created: 1/23/2007
- By: David Lindsay, County of San Diego, 619.694.2826
- For: City/County Data submittal
- Revised By: Peg Godden, SanGIS, 858.874.7005 11/20/2007
- Revised By: Peg Godden, SanGIS, 858.874.7005 02/16/2012 – revised for ArcGIS Version 10.

Metadata in ArcGIS Version 10

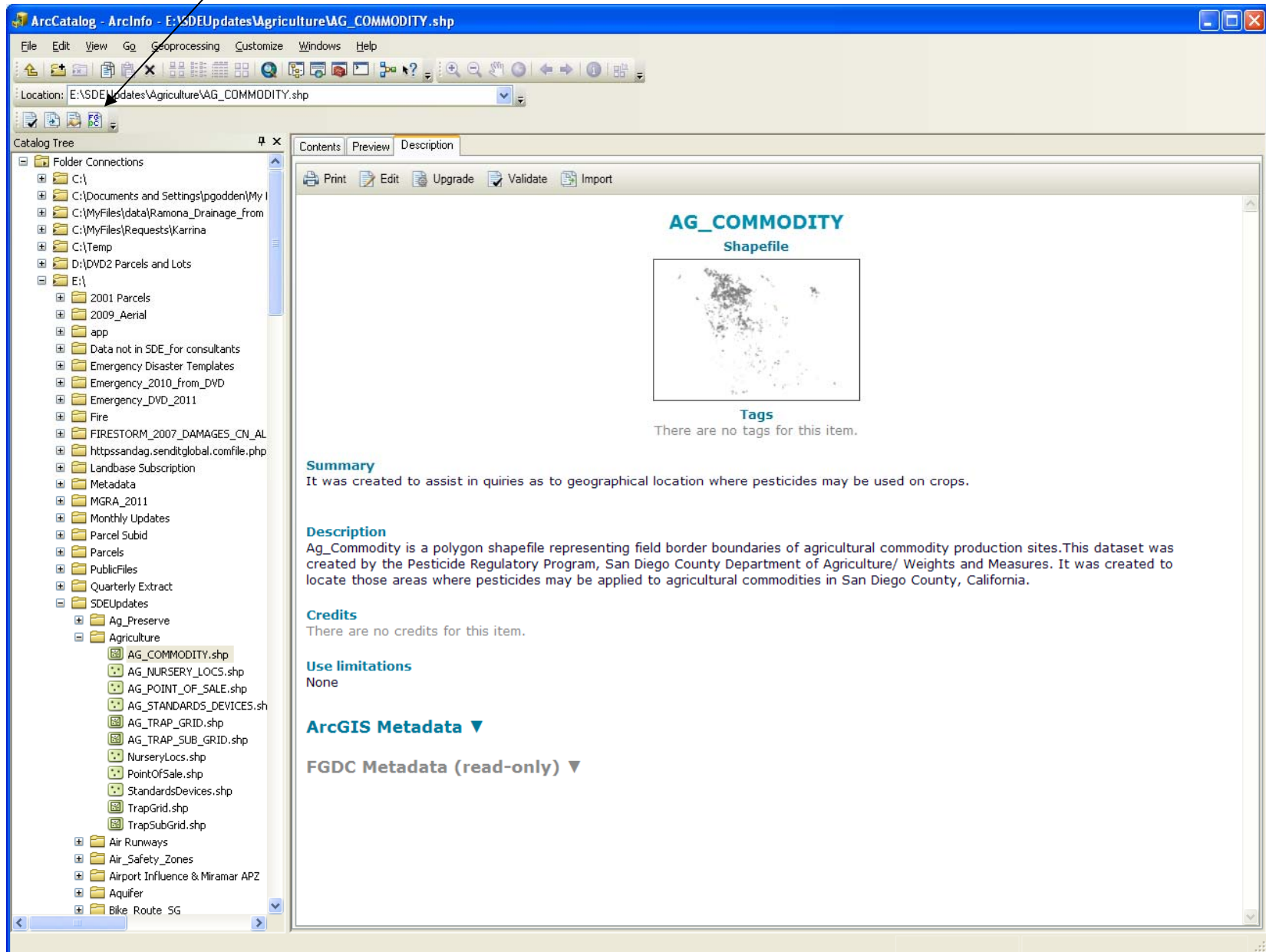
Metadata in ArcGIS changed greatly in Version 10. There is ArcGIS metadata and FGDC metadata. These instructions are for completing the FGDC metadata. A tool was developed to create/edit the FGDC metadata. To download the tool, go to <http://blogs.esri.com/dev/blogs/arcgisdesktop/archive/2010/06/25/fgdc-metadata-editor-for-arcgis-10.aspx>. Follow the instructions to download and add the FGDC toolbar to ArcCatalog.

Metadata is Created/Edited in ArcCatalog

- 1) Export the data to shapefiles or a Geodatabase in ArcMap if the data isn't already in that format.
- 2) Open ArcCatalog.
- 3) Locate and click on your file.
- 4) Click on the Description tab.



- 5) Click on the Edit Metadata icon  on the toolbar you added. A Metadata Editor window appears.



- 6) Click on Identification and then the General tab. Be sure to enter information in each form where the red required arrow appears (**REQUIRED**).

Metadata Editor

Identification | Data Quality | Data Organization | Spatial Reference | Entity Attribute | Distribution | Metadata Reference

General | Contact | Citation | Time Period | Status | Spatial Domain | Keywords | Browse Graphic | Security | Cross Reference

Description

Abstract: **REQUIRED: A brief narrative summary of the data set.** **REQUIRED* (See Below)**

Purpose: **REQUIRED: A summary of the intentions with which the data set was developed.** **REQUIRED**

Language:

Supplemental Information:

Access Constraints: **REQUIRED: Restrictions and legal prerequisites for accessing the data set.** **REQUIRED**

Use Constraints: **REQUIRED: Restrictions and legal prerequisites for using the data set after access is granted** **REQUIRED**

Data Set Credit:

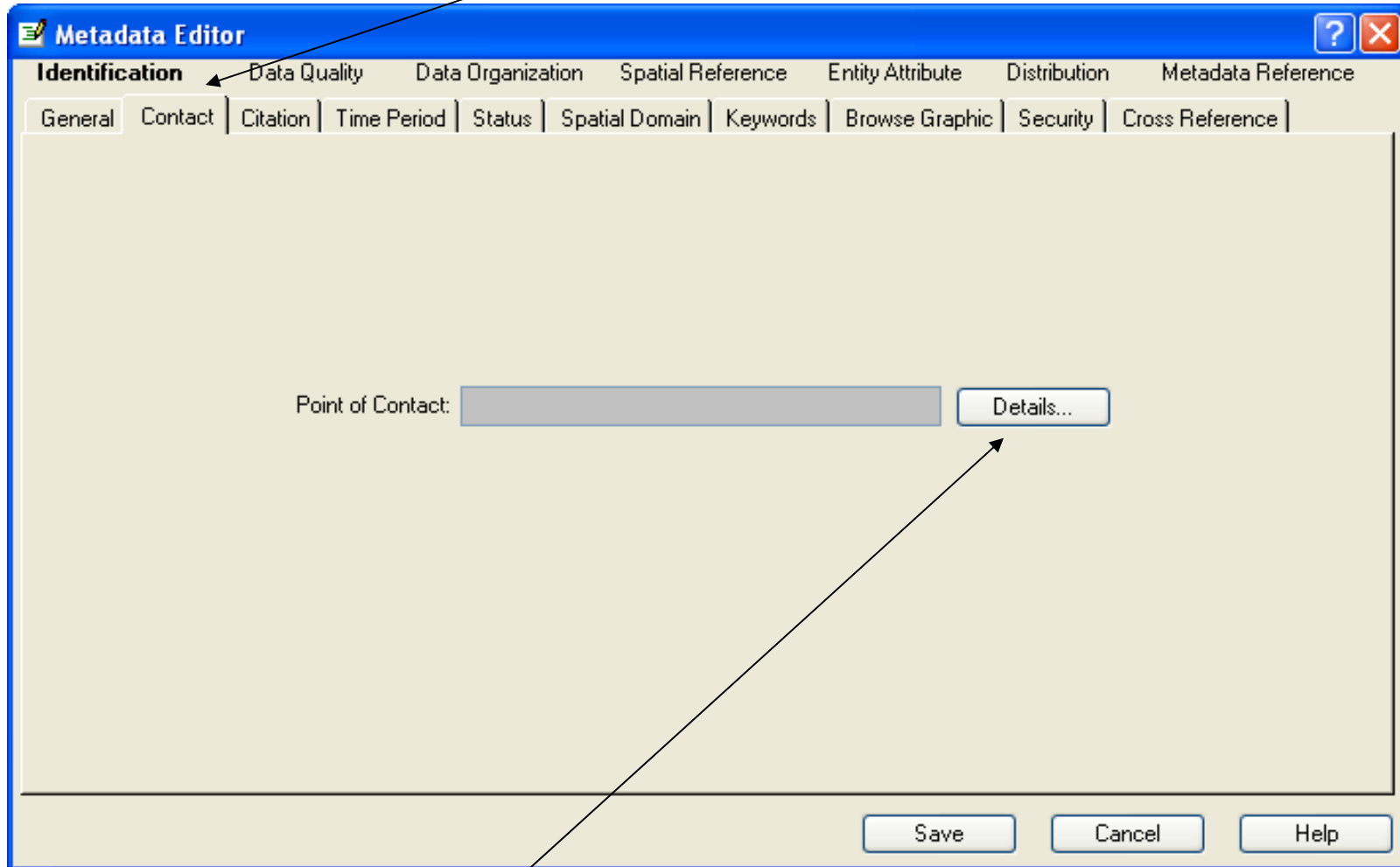
Native Data Set Environment:

Native Data Set Format:

Save Cancel Help

**The abstract should include information concerning the geographic extent of the file (e.g. Regional, Unincorporated, City of Santee, etc)*

7) Next click on the Contact tab.



8) Click on the Details button.

- 9) Enter information in the required areas and optionally non-required information elsewhere for the General tab.

Metadata Editor

Identification | Data Quality | Data Organization | Spatial Reference | Entity Attribute | Distribution | Metadata Reference

General | Contact | Citation | Time Period | Status | Spatial Domain | Keywords | Browse Graphic | Security | Cross Reference

Contact Information

Primary Contact

REQUIRED or Person: **REQUIRED**

REQUIRED Organization: **REQUIRED**

REQUIRED Position: **REQUIRED**

General | Address

Contact Voice Telephone: **REQUIRED**
+ x |<|>|>> Contact Phone (+) of 0

Contact Fax Number:
+ x |<|>|>> Contact Fax (+) of 0

Contact Email Address: **REQUIRED (If Person)**
+ x |<|>|>> Contact Email (+) of 0

Contact TDD/TTY Telephone:
+ x |<|>|>> Contact TDD/TTY (+) of 0

Hours of Service:

Contact Instructions:

OK

Note: It is preferred that the organization be the primary contact. Rather than naming a person, enter a position and the contact information for that position. Ex: Use the GIS manager position responsible for data updates.

10) Enter information in the required areas and optionally non-required information elsewhere for the Address tab.

The screenshot shows the Metadata Editor application with the Contact Information dialog box open. The Address tab is selected, and several fields are marked as required with red arrows and the word "REQUIRED".

Contact Information Dialog Box:

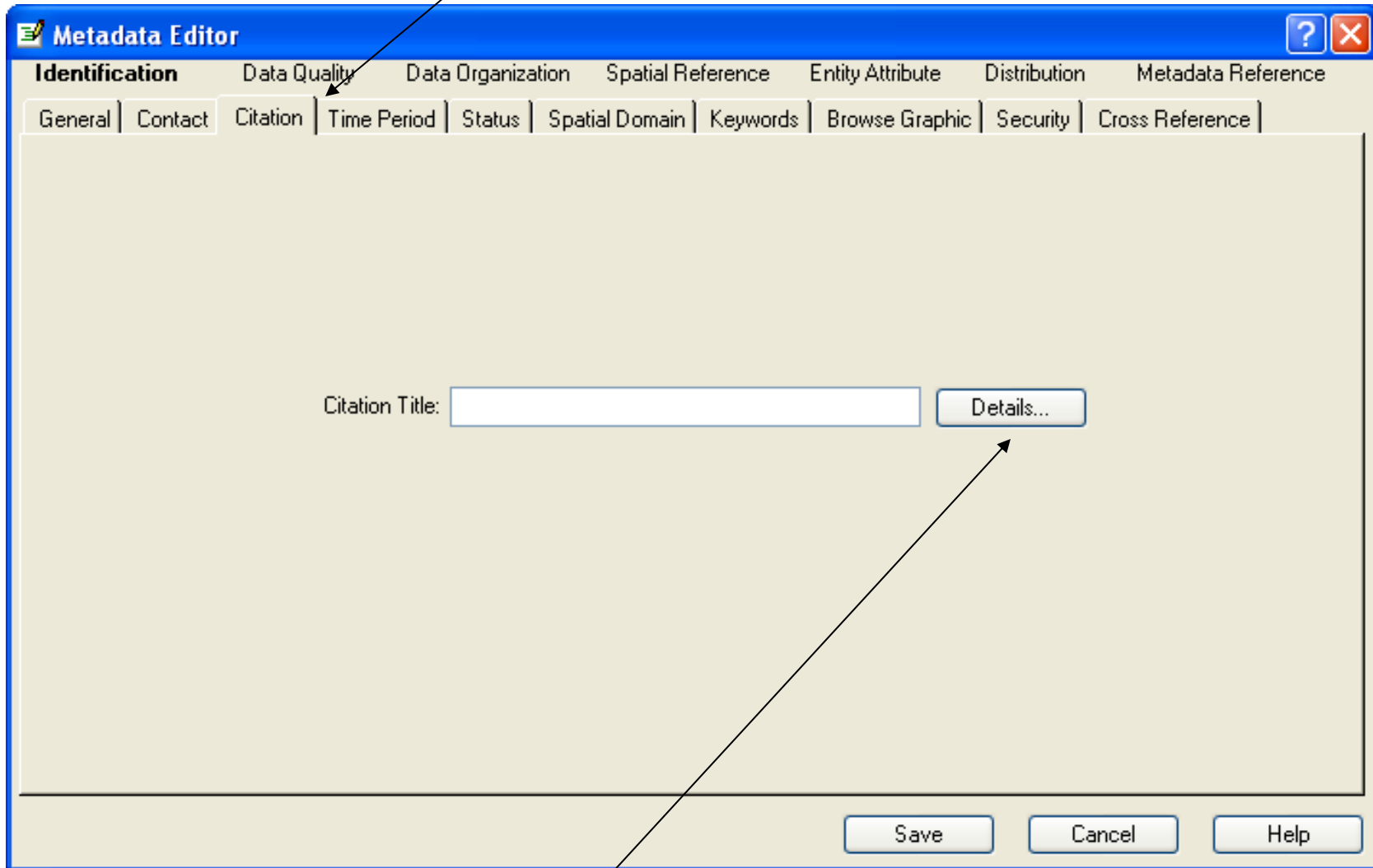
- Primary Contact:** A radio button is selected, with a red arrow pointing to it and the text "REQUIRED or".
- Person:** Text input field with a red arrow pointing to it and the text "REQUIRED".
- Organization:** Text input field with a red arrow pointing to it and the text "REQUIRED".
- Position:** Text input field with a red arrow pointing to it and the text "REQUIRED".

Address Tab:

- Address Type:** Dropdown menu set to "mailing and physical address" with a red arrow pointing to it and the text "REQUIRED".
- Address:** Text input field with a red arrow pointing to it and the text "REQUIRED". Below the field are navigation buttons (+, X, left arrow, right arrow) and the text "Line of Address (+) of 0".
- City:** Text input field with a red arrow pointing to it and the text "REQUIRED".
- State or Province:** Text input field with a red arrow pointing to it and the text "REQUIRED".
- Postal Code:** Text input field with a red arrow pointing to it and the text "REQUIRED".
- Country:** Text input field with a red arrow pointing to it and the text "REQUIRED".

At the bottom of the dialog box, there are navigation buttons (+, X, left arrow, right arrow) and the text "Address (+) of 0". An "OK" button is located at the bottom right of the dialog box.

11) Click on the Citation tab.



12) Click on the Details button.

13) Enter required information and optionally non-required information.

The screenshot shows the 'Metadata Editor' application window. The 'Identification' tab is active, and the 'Citation' sub-tab is selected. The 'Citation information' dialog box is open, showing the 'Series/Publication Information' sub-tab. The following fields are marked as 'REQUIRED' with red arrows:

- Title: (Note: automatically populated)
- Originator:
- Publication Date:
- Geospatial Data Presentation Form:

Other fields include 'Publication Time', 'Edition', and 'Online Linkage', which are not marked as required. The 'Other Citation Details' field is a large text area. The 'Originator (+) of 0' and 'Online Linkage (+) of 0' labels indicate the number of items in the respective lists. An 'OK' button is located at the bottom right of the dialog box.

14) Next click on the Time Period tab and fill in the required information.

Editing 'red_cross_closetocountyfacs'

Identification | Data Quality | Data Organization | Spatial Reference | Entity Attribute | Distribution | Metadata Reference

General | Contact | Citation | Time Period | Status | Spatial Domain | Keywords | Browse Graphic | Security | Cross Reference

Currentness Reference: REQUIRED: The basis on which the time peri [dropdown] ← REQUIRED

Single Date/Time Multiple Dates/Times Range of Dates/Times ← REQUIRED

Calendar Date Time of Day

REQUIRED: The year ([dropdown]) [dropdown] ← REQUIRED

Save Cancel Help

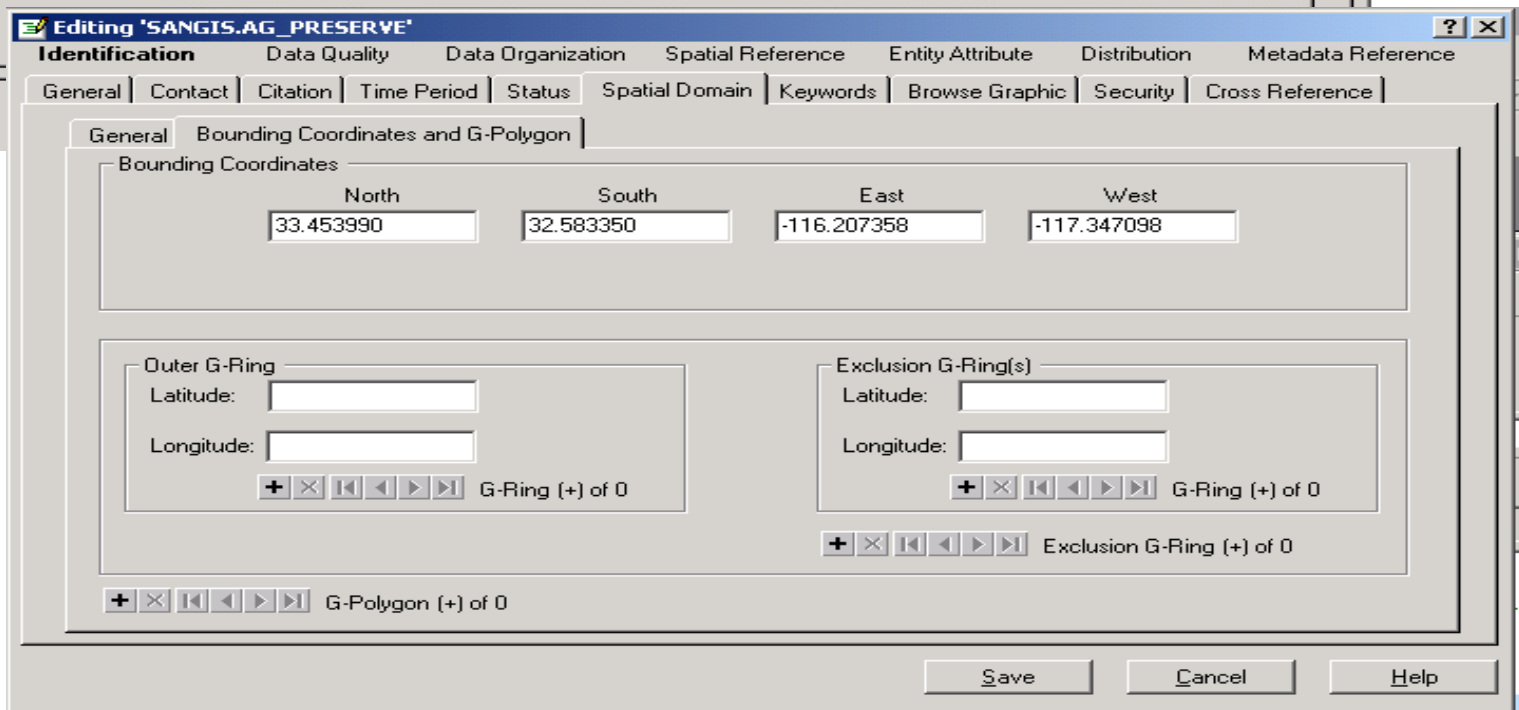
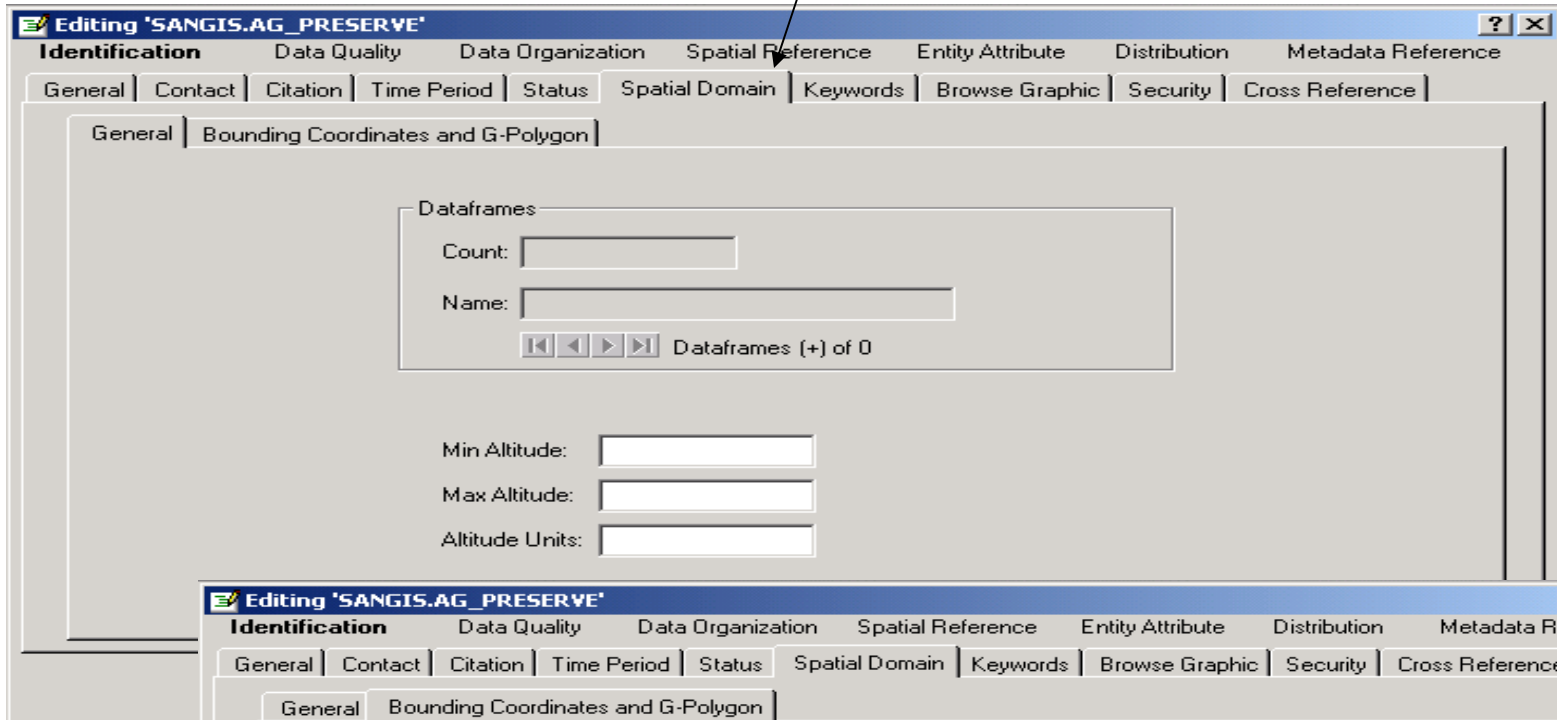
15) Click on the Status tab and enter the required information.

The screenshot shows a software dialog box titled "Editing 'red_cross_closetocountyfac'". The "Status" tab is selected, indicated by an arrow from the instruction above. The dialog has a menu bar with "Identification", "Data Quality", "Data Organization", "Spatial Reference", "Entity Attribute", "Distribution", and "Metadata Reference". Below the menu bar is a row of sub-tabs: "General", "Contact", "Citation", "Time Period", "Status", "Spatial Domain", "Keywords", "Browse Graphic", "Security", and "Cross Reference". The main area contains two dropdown menus. The first is labeled "Progress:" and has the text "REQUIRED: The state of the data set." selected. The second is labeled "Update Frequency:" and has the text "REQUIRED: The frequency with which change" selected. Red arrows point to the right of each dropdown menu, with the word "REQUIRED" written in red above each arrow. At the bottom of the dialog are three buttons: "Save", "Cancel", and "Help".

Progress: **REQUIRED**

Update Frequency: **REQUIRED**

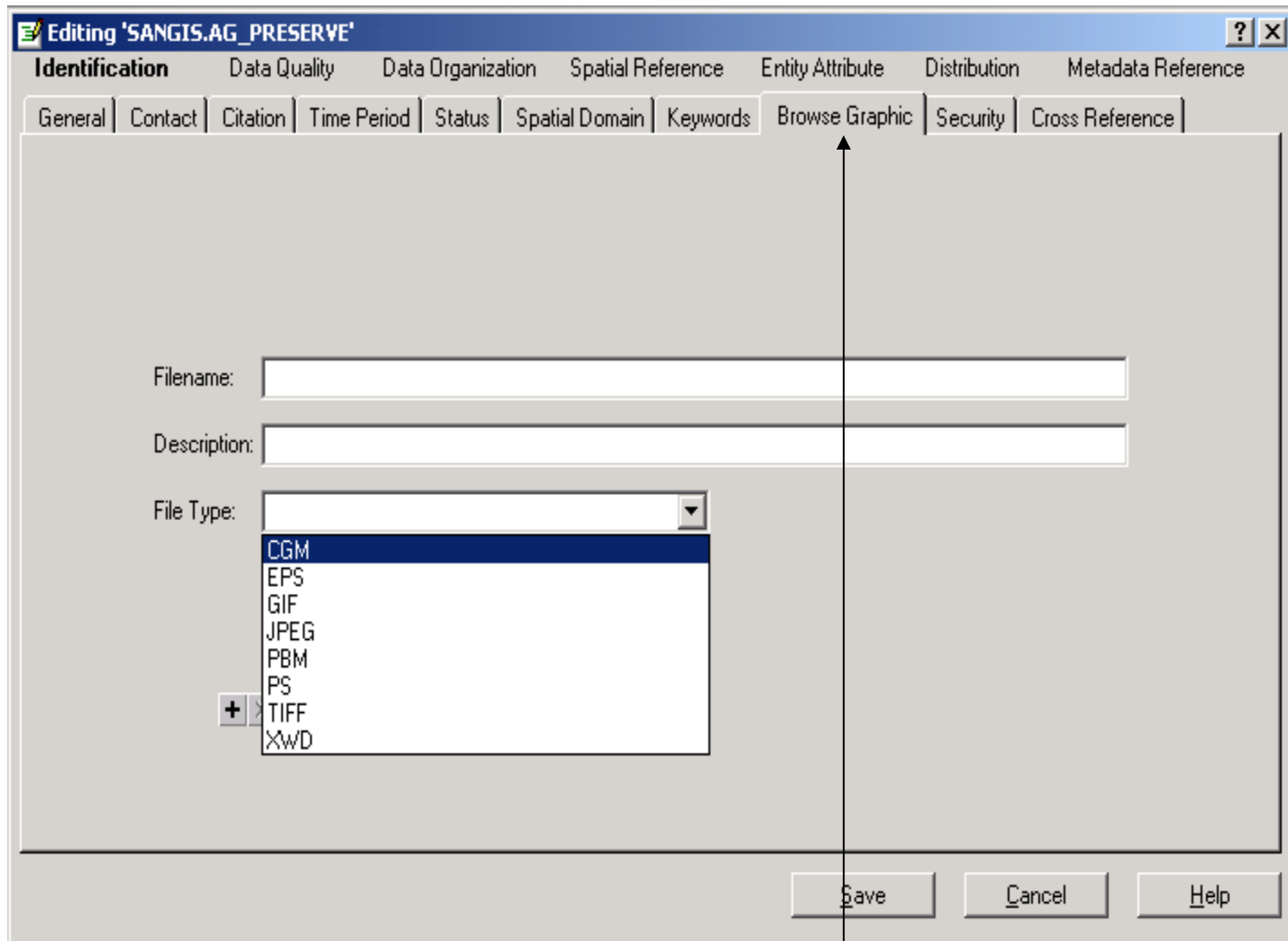
16) The data in the Spatial Domain tab automatically populates.



17) Click on the Keywords tab and enter at least the required information.

The screenshot shows a software dialog box titled "Editing 'red_cross_closetocountyfacs'". The "Keywords" tab is selected. The "Theme" section contains a "Keyword" field with the text "REQUIRED: Common-use word or phrase use" and a "Thesaurus" field with "REQUIRED: Reference to a formally registered". Red arrows point to the word "REQUIRED" in both fields. The "Place" section has a "Keyword" field with "REQUIRED* (See Below)" and an empty "Thesaurus" field. The "Stratum" and "Temporal" sections each have empty "Keyword" and "Thesaurus" fields. At the bottom are "Save", "Cancel", and "Help" buttons.

**The place should indicate the geographic extent of the file (e.g. Regional, Unincorporated, City of San Diego, etc)*



18) Information in the Browse Graphics tab is not required.

19) Click on the Security tab and enter the required information.

Editing 'red_cross_closetocountyfac'

Identification | Data Quality | Data Organization | Spatial Reference | Entity Attribute | Distribution | Metadata Reference

General | Contact | Citation | Time Period | Status | Spatial Domain | Keywords | Browse Graphic | Security | Cross Reference

Security Classification System:

Security Classification: **REQUIRED (*SEE BELOW)**

Security Handling Description: **REQUIRED (**SEE BELOW)**

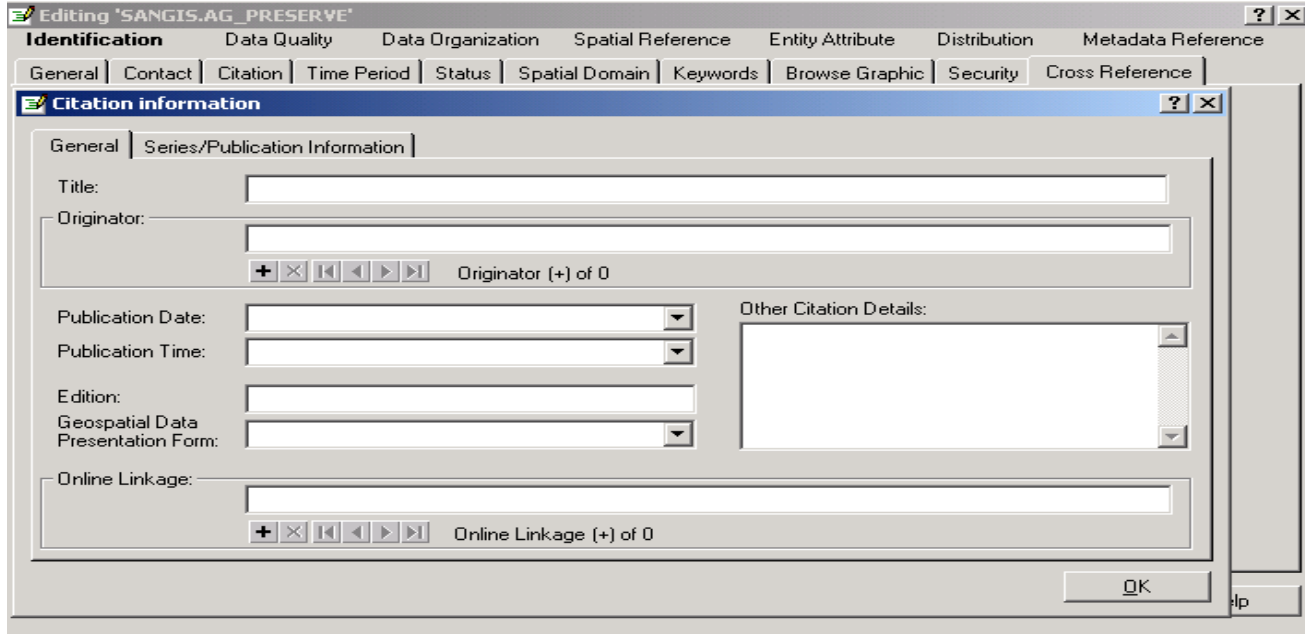
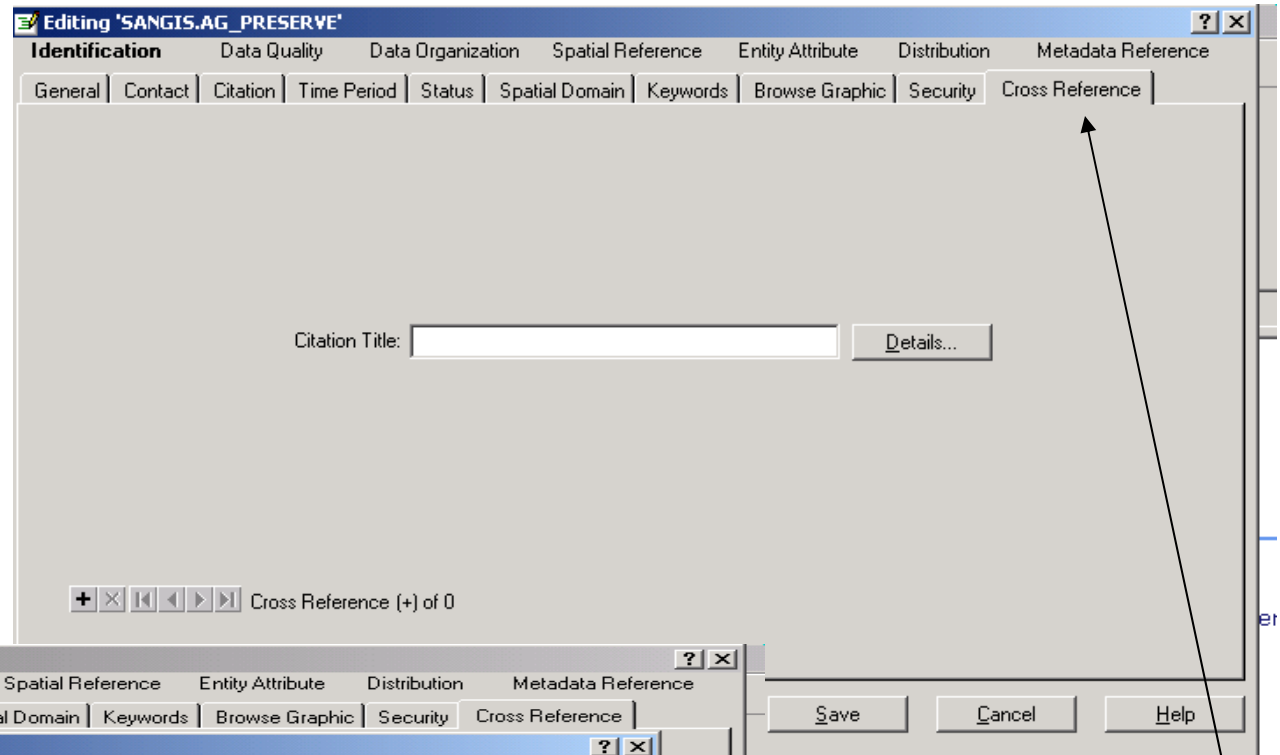
Confidential
Restricted
Secret
Sensitive
Top secret
Unclassified

Save Cancel Help

****Use the following classifications:***

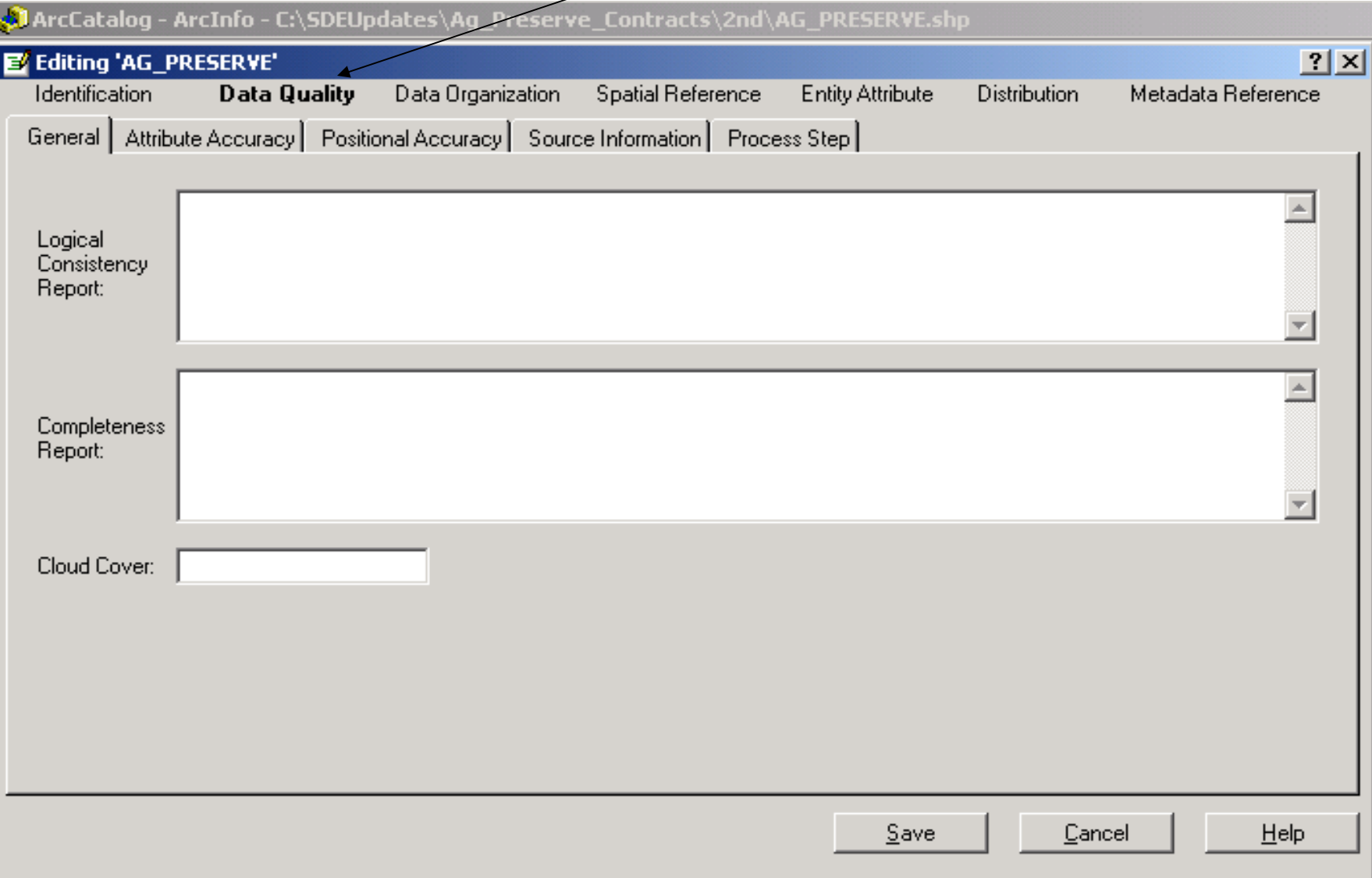
- Unclassified: no restrictions, distribution to all City/County departments***
- Restricted: no distribution to departments except under the terms stated in the security handling description below***

*****Security Handling Description: if the layer is restricted by some local, state, or federal law or otherwise not distributable to the City/County departments, describe the reasons and types of security measures necessary to protect the data***



20) Information for the Cross Reference tab is not required.

21) Enter optional information in all tabs of Data Quality.



22) Click on Data Quality and then the Source Information tab and General tab to enter this information. This is no longer required.

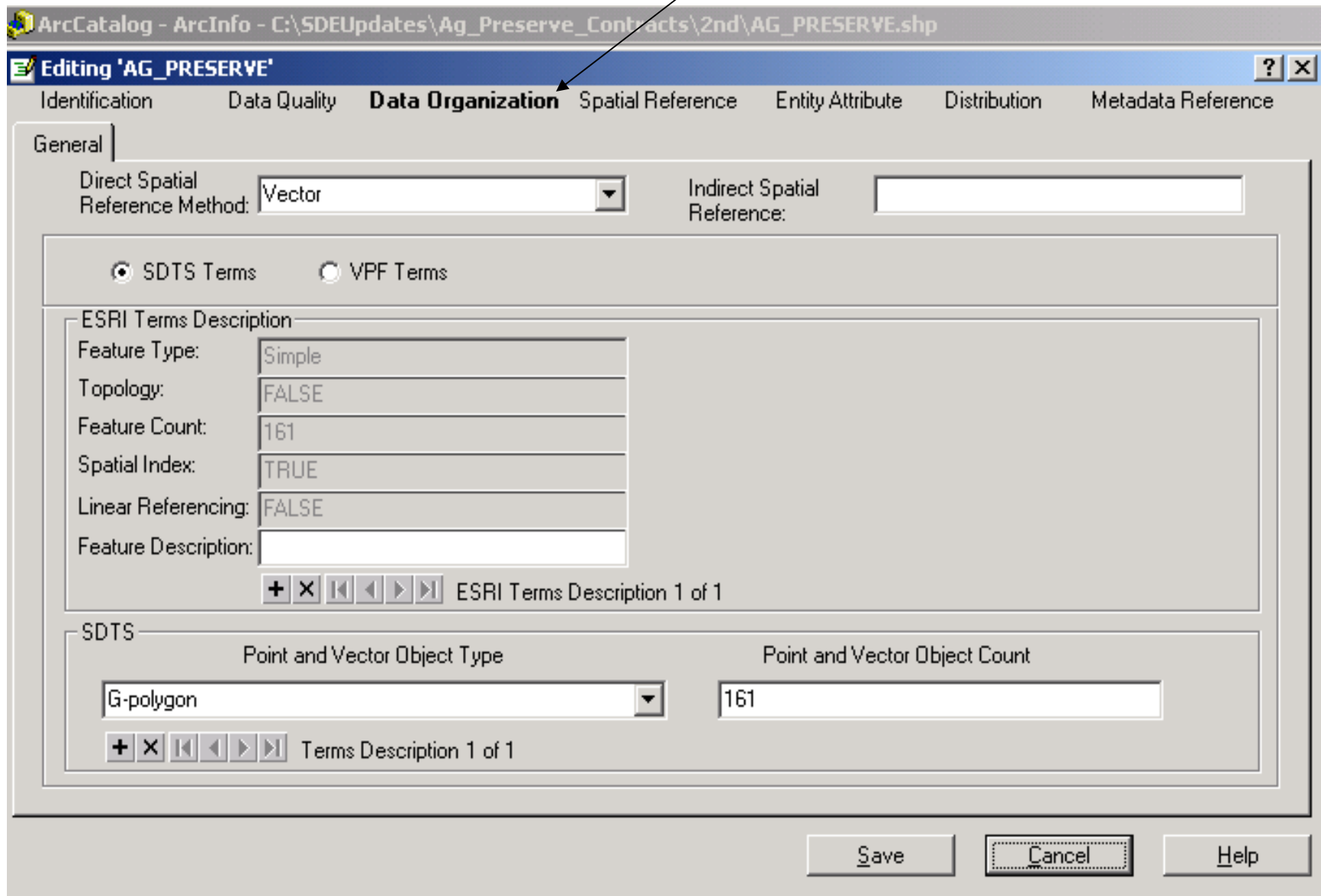
The screenshot shows a software dialog box titled "Editing 'red_cross_closetocountyfac'". The "Data Quality" tab is selected, and within it, the "Source Information" sub-tab is active. The "General" sub-tab is also selected, displaying four input fields:

- Source Scale Denominator: **REQUIRED* (See Below)**
- Type of Source Media: **REQUIRED**
- Source Citation Abbreviation: **REQUIRED**
- Source Contribution: **REQUIRED**

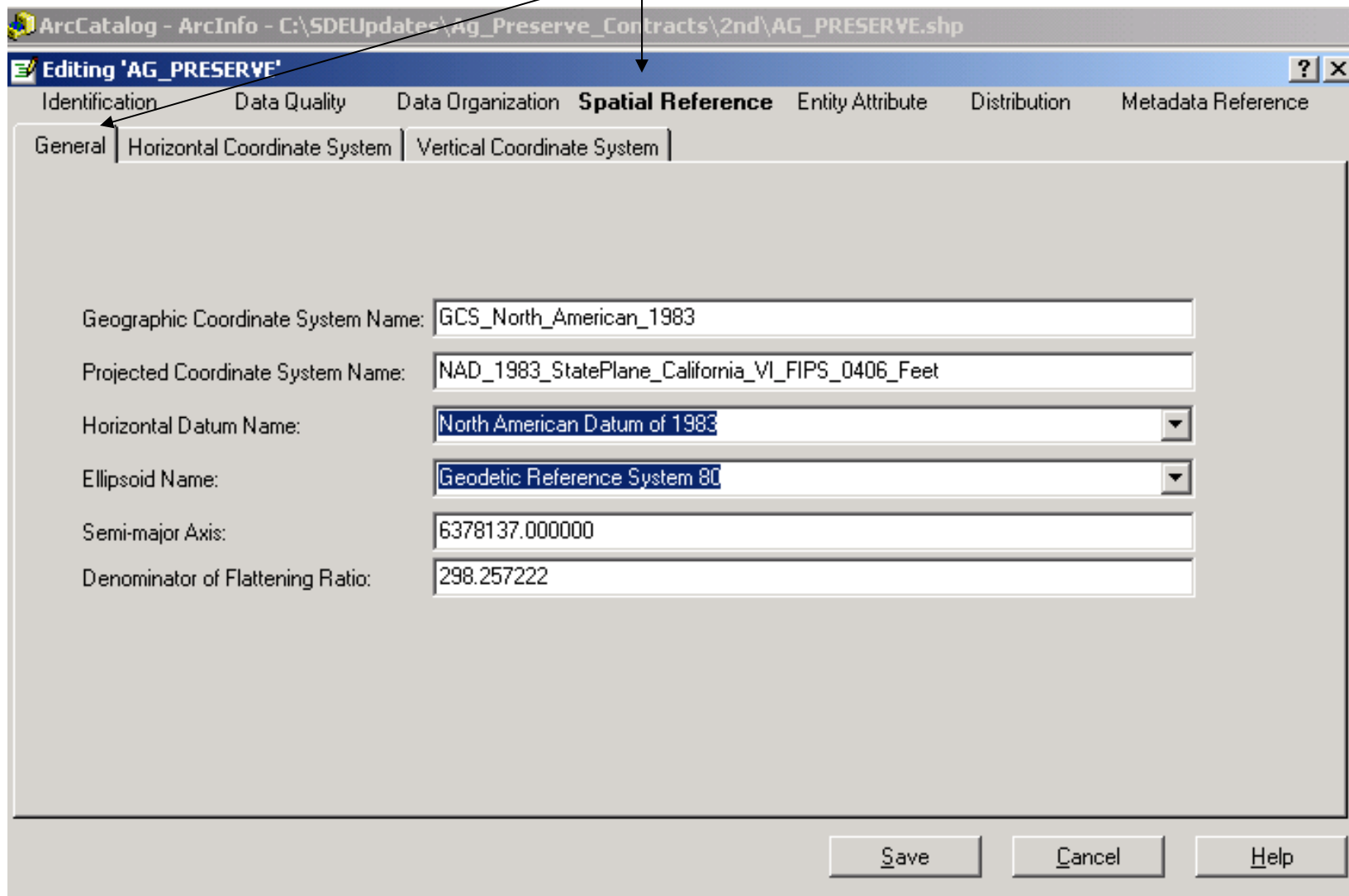
A large, semi-transparent "OPTIONAL" watermark is overlaid across the center of the dialog. At the bottom, there are "Save", "Cancel", and "Help" buttons. The status bar at the bottom left indicates "Source (+) of 0".

**The denominator of the representative fraction on a map (for example, on a 1:24,000-scale map, the Source Scale Denominator is 24000).*

23) The information entered under Data Organization is optional.



24) The information under Spatial Reference, General tab is automatically populated. The information under the other tabs is optional.



25) Click on Entity Attribute and then the Detailed Description and Attribute tabs.

The screenshot shows the 'Editing red_cross_closetocountyfac' dialog box. The 'Entity Attribute' tab is selected, and the 'Detailed Description' sub-tab is active. The 'Attribute' sub-tab is also visible. The 'General' sub-tab is selected, showing the following fields:

Label:	FID	Value Accuracy:	
Type:	OID	Value Accuracy Explanation:	
Width:	4	Value Measurement:	
Precision:	0	Frequency:	
Indexed:			
Definition:	Internal feature number.		
Definition Source:	ESRI		

Red arrows point to the 'Definition' and 'Definition Source' fields, both labeled 'REQUIRED'. The dialog also shows navigation buttons for 'Attribute 1 of 38' and 'Detailed Description 1 of 1'. At the bottom, there are 'Save', 'Cancel', and 'Help' buttons.

Fill in the Definition and Definition Source for each attribute. To page through the attributes, click on the forward button.

26) Next click on the Overview Description tab and enter any information that is pertinent. Valid values for attributes is especially useful entered here.

Editing 'red_cross_closetocountyfac'

Identification Data Quality Data Organization Spatial Reference **Entity Attribute** Distribution Metadata Reference

Detailed Description Overview Description

Dataset Overview: **Enter a summary of, and citation to detailed description of, the information content of the data set.**

Entity and Attribute Overview: **Use this to give a detailed summary of the information contained in the data set**

Entity and Attribute Detail Citation: **Reference to the complete description of the entity types, attributes, and attribute values for the data set. Enter valid values for the attributes here.**

+ X ⏪ ⏩ Detail Citation (+) of 0

+ X ⏪ ⏩ Overview Description (+) of 0

Save Cancel Help

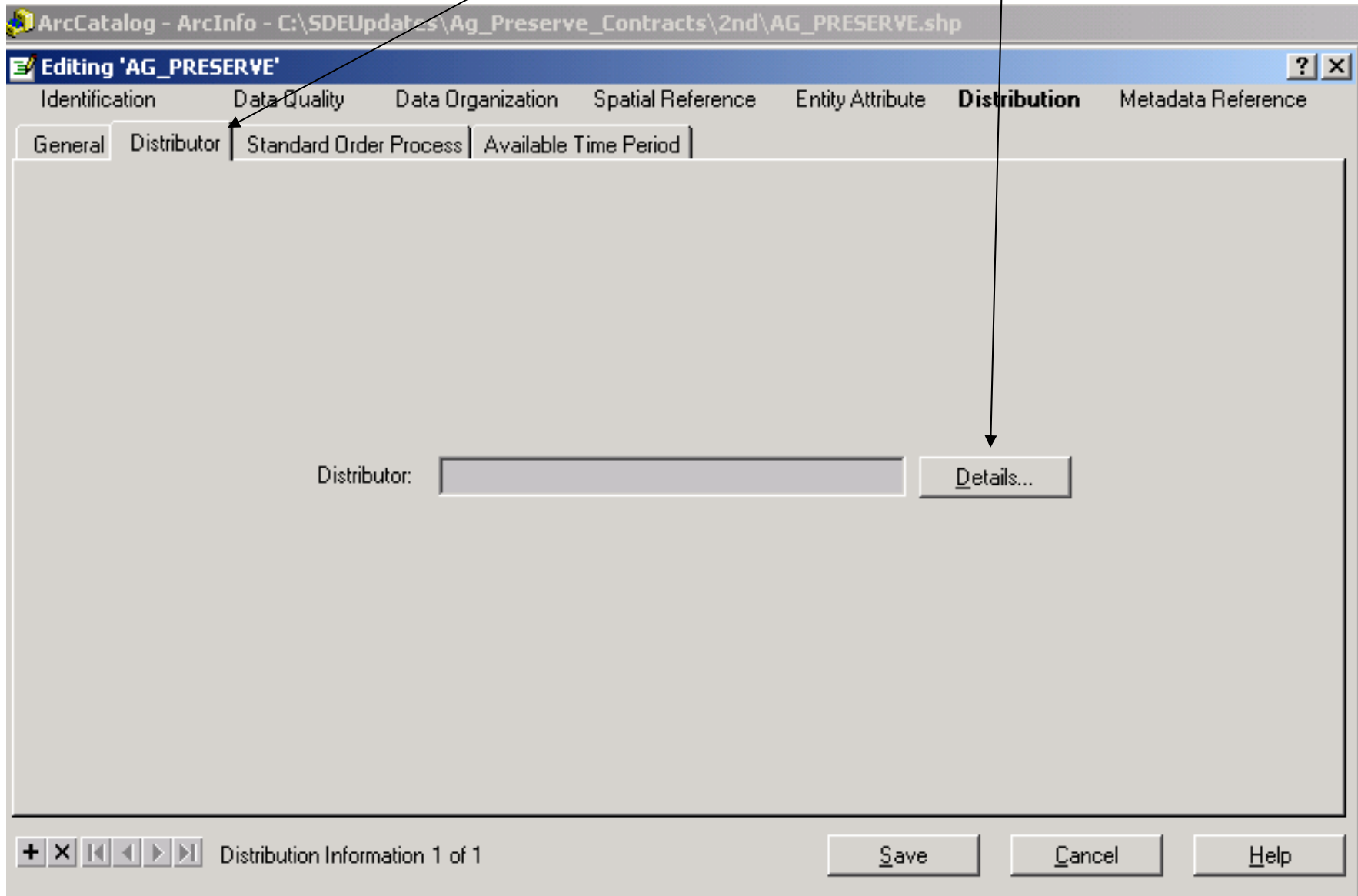
27) Click on Distribution and first the General tab to enter required information.

The screenshot shows a software window titled "Editing 'red_cross_closetocountyfacs'" with a menu bar containing "Identification", "Data Quality", "Data Organization", "Spatial Reference", "Entity Attribute", "Distribution", and "Metadata Reference". The "Distribution" menu item is selected, and its sub-menu is open, showing "General", "Distributor", "Standard Order Process", and "Available Time Period". The "General" sub-tab is active. The main area contains four input fields with the following labels and requirements:

- Resource Description:** Contains the text "Downloadable Data". A red arrow points to the word "REQUIRED" in red text next to the field.
- Distribution Liability:** A red arrow points to the word "REQUIRED" in red text next to the field.
- Custom Order Process:** An empty field.
- Technical Prerequisites:** A red arrow points to the text "REQUIRED (if applicable)" in red text next to the field.

At the bottom of the window, there are navigation buttons (+, X, left arrow, right arrow) and three buttons labeled "Save", "Cancel", and "Help". The status bar at the bottom indicates "Distribution Information 1 of 1".

28) Next click on the Distributor tab and then the Details button.



ArcCatalog - ArcInfo - C:\SDEUpdates\Ag_Preserve_Contracts\2nd\AG_PRESERVE.shp

Editing 'AG_PRESERVE'

Identification Data Quality Data Organization Spatial Reference Entity Attribute **Distribution** Metadata Reference

General Distributor Standard Order Process Available Time Period

Contact Information

Primary Contact

Person Person:

Organization **REQUIRED (*if applicable)** Organization: SanGIS **REQUIRED (*if applicable)** Position:

General **Address**

Contact Voice Telephone: **REQUIRED (*if applicable)** Contact Phone (+) of 0

Contact Fax Number: Contact Fax (+) of 0

Contact Email Address: Contact Email (+) of 0

Contact TDD/TTY Telephone: Contact TDD/TTY (+) of 0

Hours of Service:

Contact Instructions:

OK

***ONLY INCLUDE DISTRIBUTION CONTACT INFORMATION IF DIFFERENT THAN GENERAL CONTACT INFORMATION UNDER IDENTIFICATION MENU/CONTACT TAB. THIS WILL PROBABLY BE SanGIS. INFORMATION FOR THE OTHER TABS UNDER DISTRIBUTION IS OPTIONAL. IF THIS INFORMATION IS COMPLETED, ALSO CLICK ON THE ADDRESS TAB AND COMPLETE THAT INFORMATION.**

29) Click on Metadata Reference and then the General tab. Fill in the required information and then click on the Details button.

Editing 'red_cross_closetocountyfac'

Identification Data Quality Data Organization Spatial Reference Entity Attribute Distribution **Metadata Reference**

General Extensions

Metadata Date: 20070109

Metadata Standard Name: Intent Standards for Digital Geospatial Metadata

Metadata Standard Version: FGDC-STD-001-1998

Metadata Time Convention: local time

Language of Metadata: en

Contact: REQUIRED: The organization responsible for

Metadata Review Date: **REQUIRED**

Metadata Future Review Date: **REQUIRED**

Details... **REQUIRED**

Metadata Access Constraints:

Metadata Use Constraints:

Metadata Security Information

Classification System:

Classification:

Handling Information:

Save Cancel Help

30) Enter information in at least the required fields. It is preferred to enter information for a position in the organization rather than name a person.

The screenshot shows the ArcCatalog metadata editor for a shapefile named 'AG_PRESERVE'. The 'Contact Information' tab is active, and several fields are marked as required with red arrows and the word 'REQUIRED' in red text.

Required Fields:

- Primary Contact:** The 'Organization' radio button is selected and marked as 'REQUIRED'.
- Organization:** The text 'DPLU-GIS' is entered and marked as 'REQUIRED'.
- Position:** The text 'Senior GIS Analyst' is entered and marked as 'REQUIRED'.
- Contact Voice Telephone:** The number '858-694-2783' is entered and marked as 'REQUIRED'.

Other Fields:

- Person:** Empty text box, marked as 'REQUIRED or'.
- Hours of Service:** Empty text box.
- Contact Fax Number:** Empty text box.
- Contact Email Address:** Empty text box.
- Contact TDD/TTY Telephone:** Empty text box.
- Contact Instructions:** Empty text area.

The 'OK' button is visible at the bottom right of the dialog box.

31) Now click on the Address tab and fill in the required information. This completes the required information. All other information is optional.

ArcCatalog - ArcInfo - C:\SDEUpdates\Ag_Preserve_Contracts\2nd\AG_PRESERVE.shp

Editing 'AG_PRESERVE'

Identification Data Quality Data Organization Spatial Reference Entity Attribute Distribution **Metadata Reference**

General Extensions

Contact Information

Primary Contact

Person

Organization

Person: []

Organization: DPLU-GIS

Position: Senior GIS Analyst

General Address

Address Type: mailing and physical address **REQUIRED**

Address: 5201 Ruffin Rd, Suite B MS0650 **REQUIRED**

City: San Diego **REQUIRED**

State or Province: CA **REQUIRED**

Postal Code: 92123-1666 **REQUIRED**

Country: []

OK