

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 metadata’ for an immediate view of the metadata.

Creating and Editing Metadata

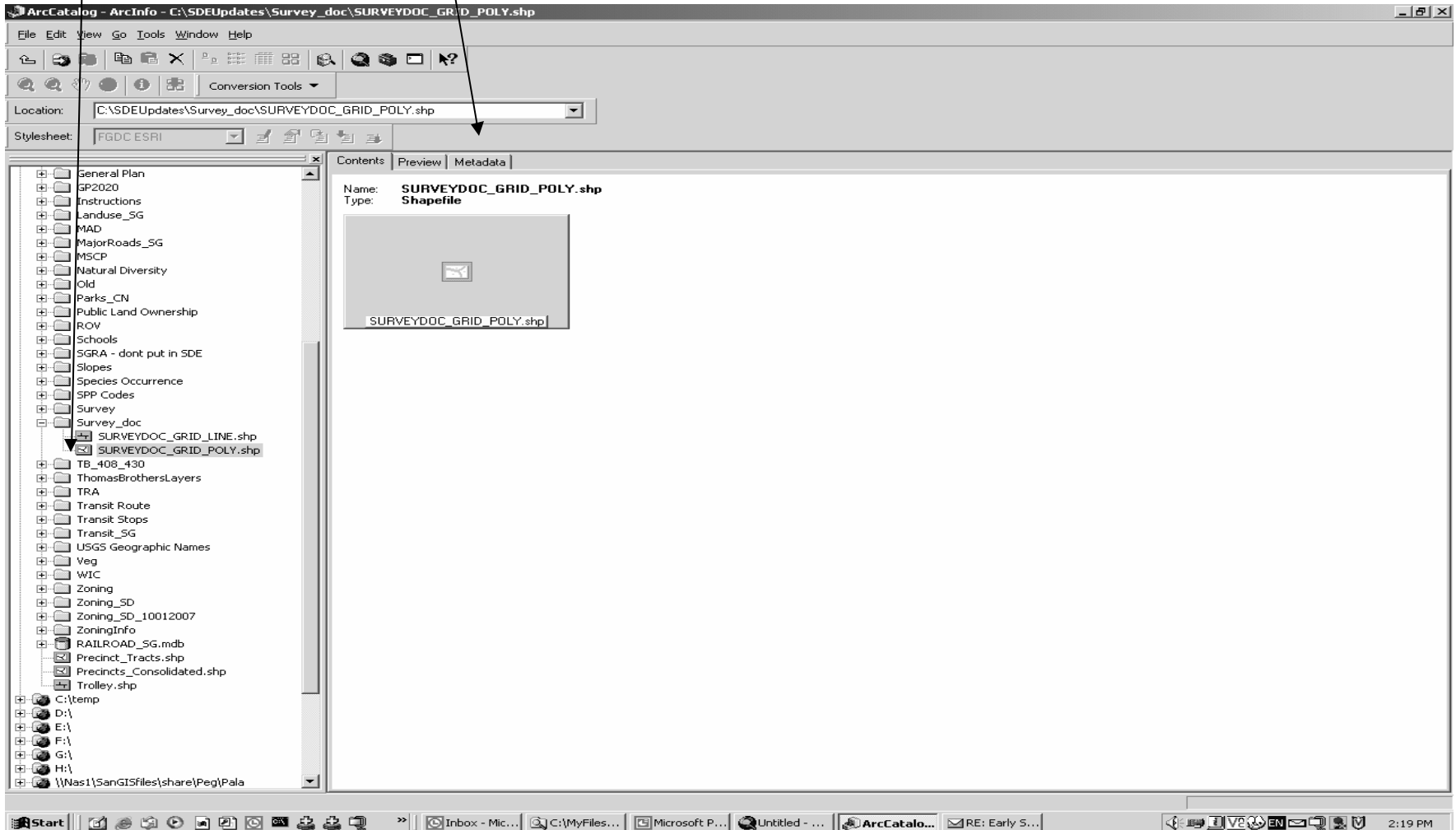
Please refer to the accompanying guide, Required Metadata Elements for SanGIS Data Layers, for step-by-step instructions in creating, adding, or editing metadata.

Required Metadata Elements for SanGIS Data Layers

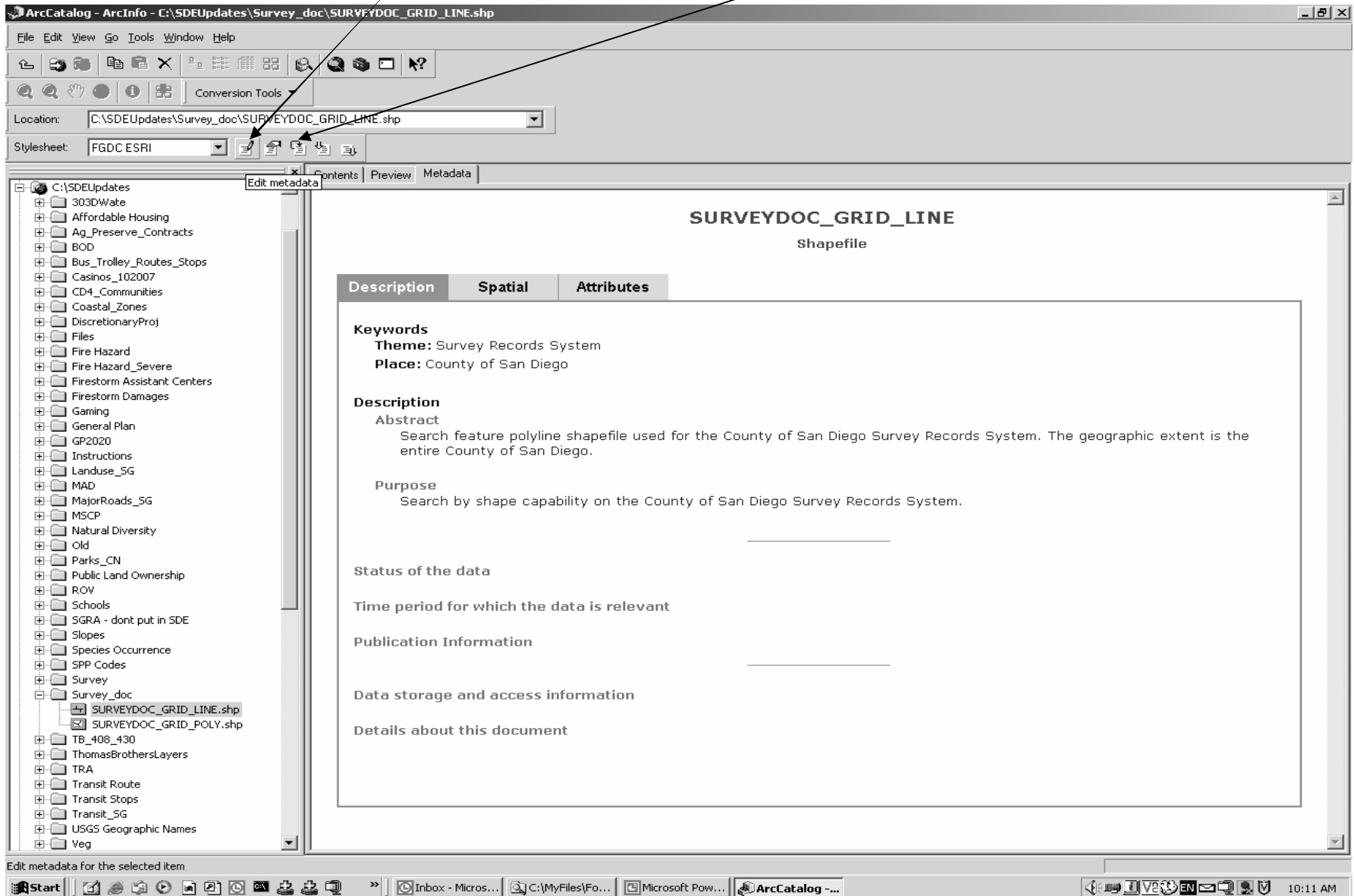
- This document was created to provide a guide for what metadata elements are required when the City of San Diego and the County of San Diego submit data to be posted to the SanGIS SDE database. The metadata stylesheet is FGDC ESRI (ArcCatalog).
- Each required element is indicated with a red arrow and 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

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 metadata tab.



- 5) Click on the Edit Metadata icon or the Create\Update Metadata icon if metadata has not been created.



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

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

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: en

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:

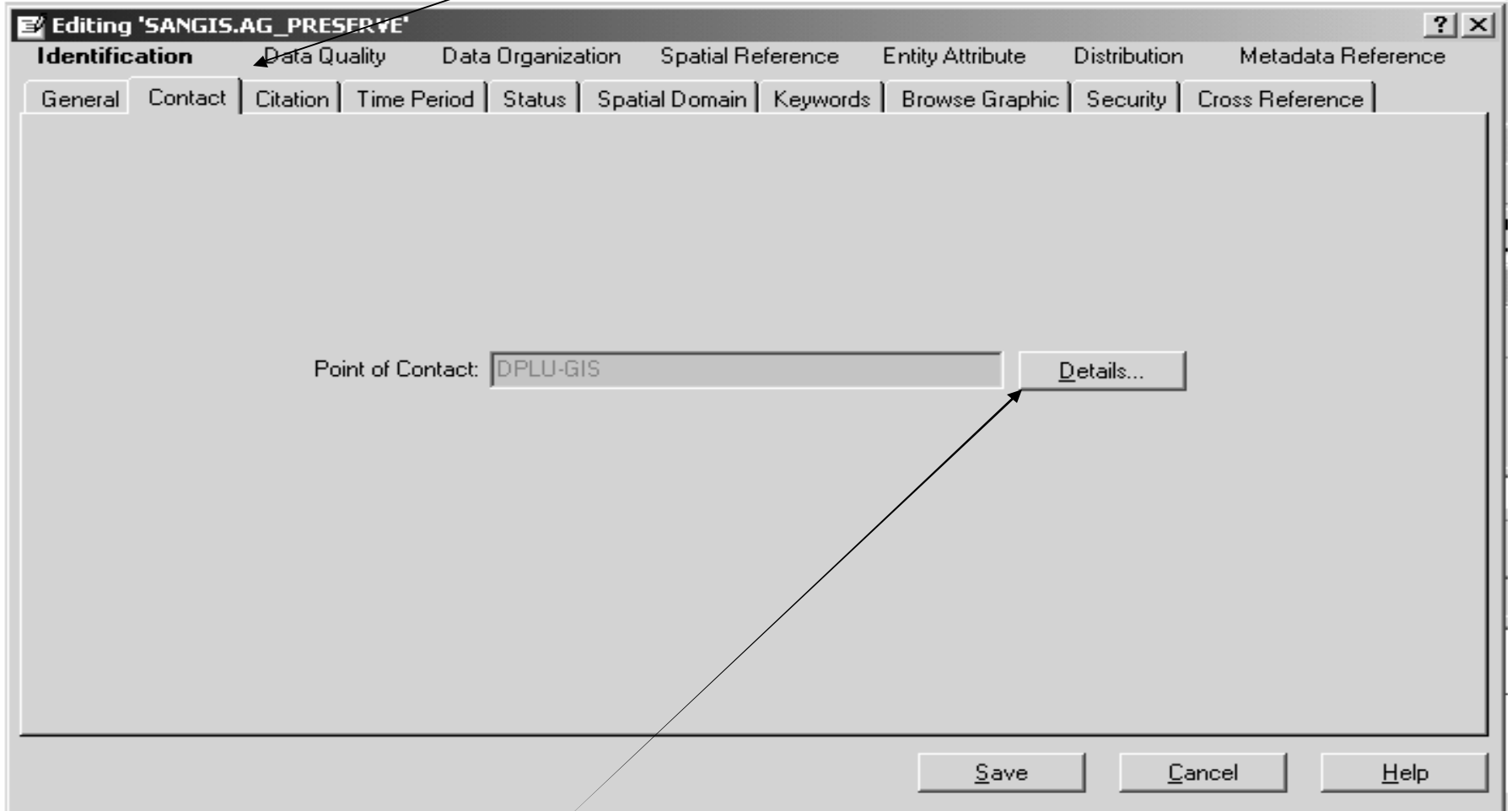
Native Data Set Environment: Microsoft Windows 2000 Version 5.0 (Build 2195) Service Pack 4; ESRI ArcCatalog 9.1.0.722

Native Data Set Format: Shapefile **REQUIRED**

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.

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

Contact Information

Primary Contact: **REQUIRED or**

Person **← REQUIRED**

Organization **← REQUIRED**

Person: **← REQUIRED**

Organization: **← 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

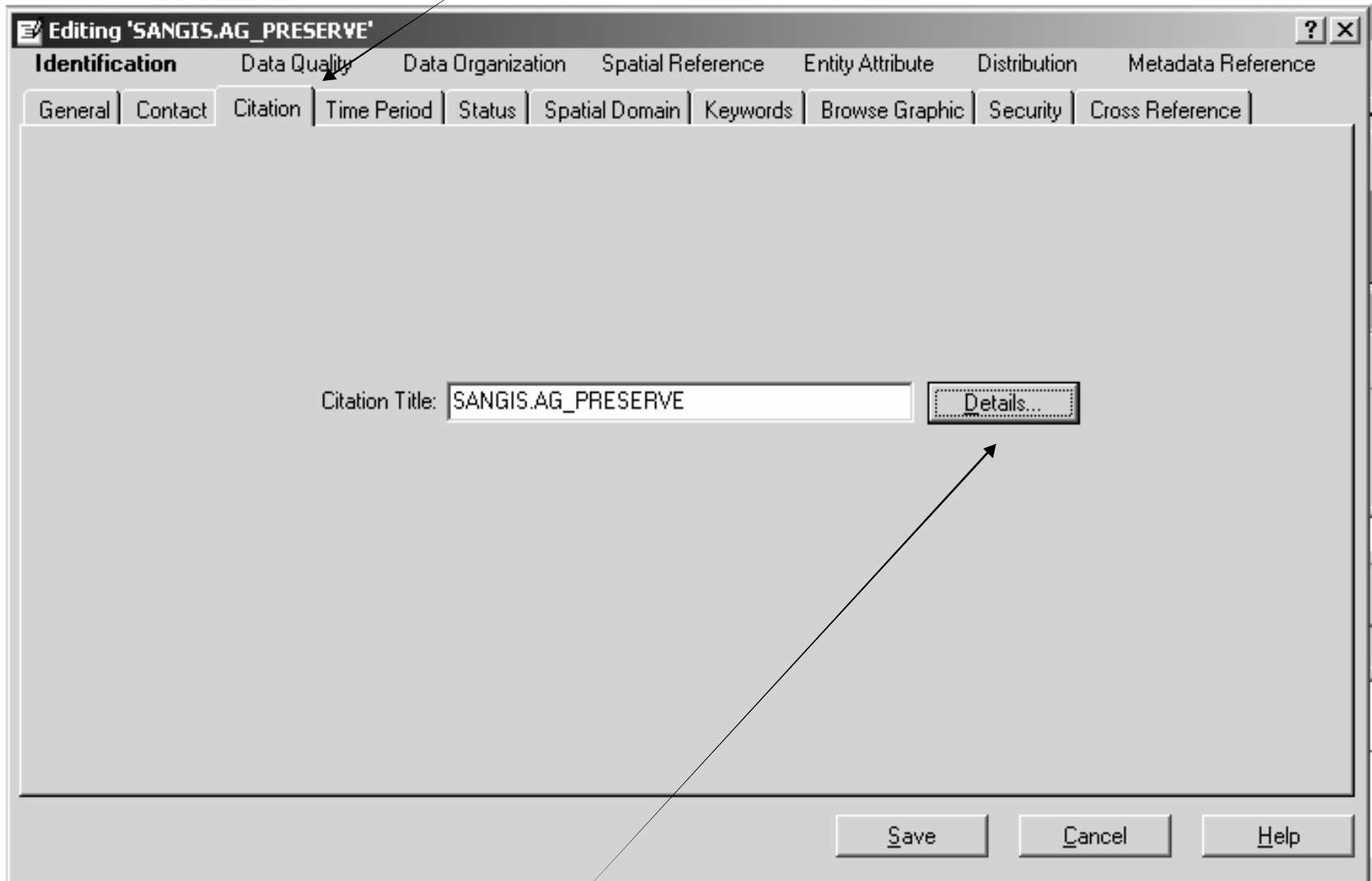
Hours of Service:

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) Click on the Citation tab.



11) Click on the Details button.

12) Enter required information and optionally non-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

Citation information

General | Series/Publication Information

Title: red_cross_closetocountyfacs **REQUIRED** (Note: automatically populated)

Originator: REQUIRED: The name of an organization or individual that developed the data set. **REQUIRED**

+ X [Navigation] Originator 1 of 1

Publication Date: REQUIRED: The date when the data set is pu... **REQUIRED**

Publication Time: [Dropdown]

Edition: [Text]

Geospatial Data Presentation Form: vector digital data **REQUIRED**

Online Linkage: \\COSDI328\Users328b\LUEG\SANGIS\dlindsa1\GISManager\Departments\OES\red_cross_analysis\

+ X [Navigation] Online Linkage 1 of 1

Under Citation Details: [Text Area]

OK

13) 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 **REQUIRED**

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

Calendar Date Time of Day

REQUIRED: The year (**REQUIRED**

Save Cancel Help

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

The screenshot shows a software window titled "Editing 'red_cross_closetocountyfacs'". The window has a menu bar with the following options: Identification, Data Quality, Data Organization, Spatial Reference, Entity Attribute, Distribution, and Metadata Reference. Below the menu bar is a tabbed interface with the following tabs: General, Contact, Citation, Time Period, Status, Spatial Domain, Keywords, Browse Graphic, Security, and Cross Reference. The "Status" tab is currently selected. The main content area of the window contains two fields:

- Progress:** A dropdown menu with the text "REQUIRED: The state of the data set." and a downward arrow. An arrow points to this field from the word "REQUIRED" written in bold, italicized text to its right.
- Update Frequency:** A dropdown menu with the text "REQUIRED: The frequency with which change" and a downward arrow. An arrow points to this field from the word "REQUIRED" written in bold, italicized text to its right.

At the bottom of the window, there are three buttons: "Save", "Cancel", and "Help".

The data in the Spatial Domain tab automatically populates.

Editing 'SANGIS.AG_PRESERVE'

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

General Bounding Coordinates and G-Polygon

Dataframes

Count:

Name:

Dataframes (+) of 0

Min Altitude:

Max Altitude:

Altitude Units:

Editing 'SANGIS.AG_PRESERVE'

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

General Bounding Coordinates and G-Polygon

Bounding Coordinates

North	South	East	West
<input type="text" value="33.453990"/>	<input type="text" value="32.583350"/>	<input type="text" value="-116.207358"/>	<input type="text" value="-117.347098"/>

Outer G-Ring

Latitude:

Longitude:

G-Ring (+) of 0

Exclusion G-Ring(s)

Latitude:

Longitude:

G-Ring (+) of 0

Exclusion G-Ring (+) of 0

G-Polygon (+) of 0

15) Click on the Keywords tab and enter at least 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

Theme

Keyword: REQUIRED: Common-use word or phrase use **REQUIRED**

Thesaurus: REQUIRED: Reference to a formally registered **REQUIRED**

Place

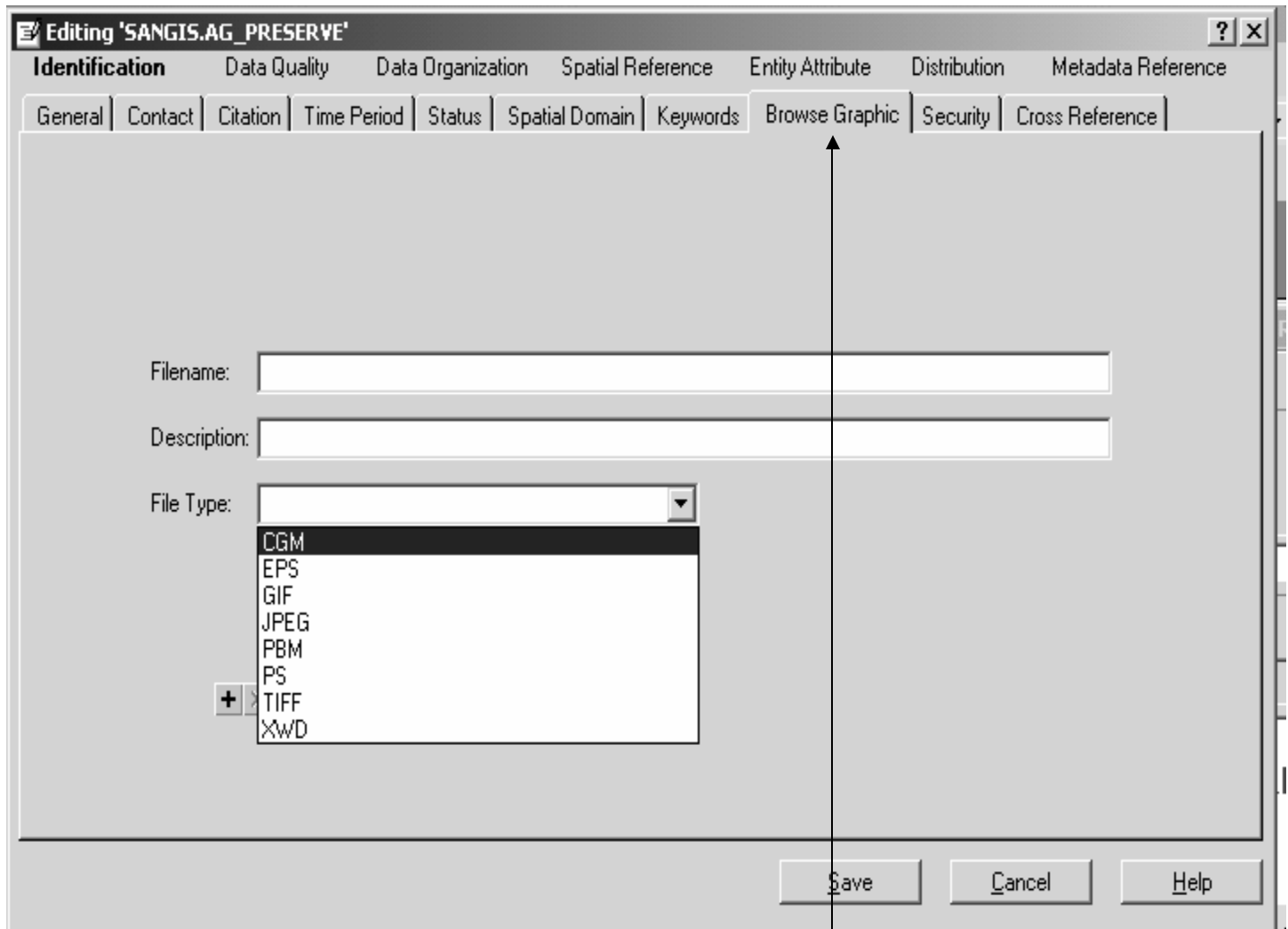
Keyword: **REQUIRED* (See Below)**

Stratum

Temporal

Save | Cancel | Help

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



Information in the Browse Graphics tab is not required.

16) Click on the Security tab and enter 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

Security Classification System:

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

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

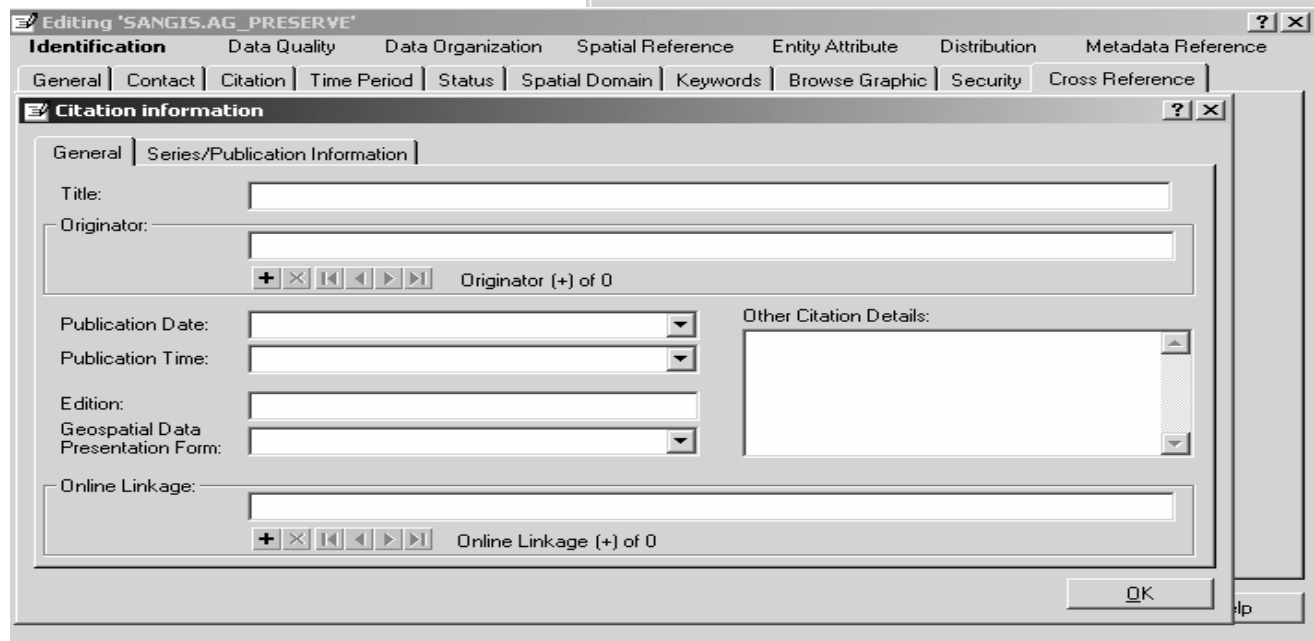
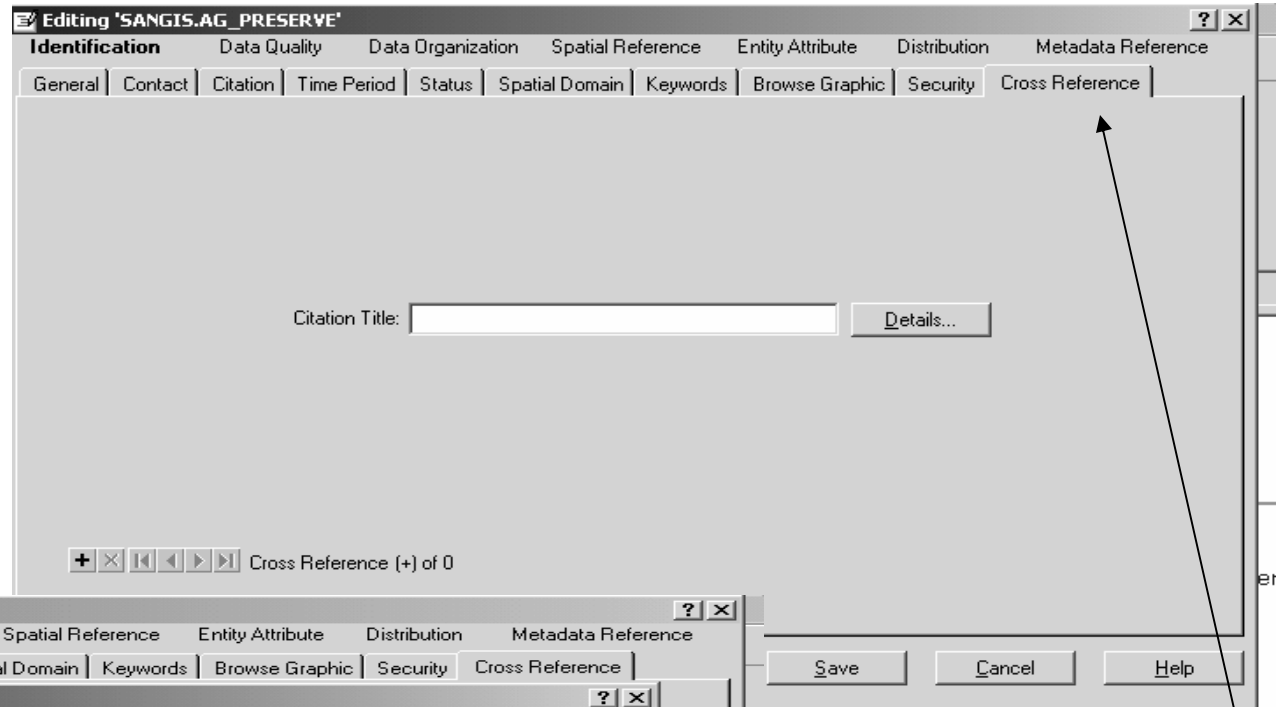
Confidential
Restricted
Secret
Sensitive
Top secret
Unclassified

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***



Information for the
Cross Reference tab
is not required

The only tab under Data Quality that requires information is in the Source Information tab

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 | Attribute Accuracy | Positional Accuracy | **Source Information** | Process Step

Logical Consistency Report:

Completeness Report:

Cloud Cover:

Save Cancel Help

17) Click on Data Quality and then the Source Information tab and General tab to enter required information.

The screenshot shows a software dialog box titled "Editing 'red_cross_closetocountyfacs'". The "Data Quality" tab is selected, and within it, the "Source Information" sub-tab is active. The "General" sub-tab is also selected. Four fields are marked as "REQUIRED" with arrows pointing to them:

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

At the bottom of the dialog, there are buttons for "Save", "Cancel", and "Help". A status bar at the bottom left shows "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).*

The information entered under Data Organization 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

Direct Spatial Reference Method: Vector Indirect Spatial Reference: [Empty]

SDTS Terms VPF Terms

ESRI Terms Description

Feature Type:	Simple
Topology:	FALSE
Feature Count:	161
Spatial Index:	TRUE
Linear Referencing:	FALSE
Feature Description:	[Empty]

+ X [Navigation] ESRI Terms Description 1 of 1

SDTS

Point and Vector Object Type	Point and Vector Object Count
G-polygon	161

+ X [Navigation] Terms Description 1 of 1

Save **Cancel** Help

The information under Spatial Reference, General tab is automatically populated. The information under the other tabs 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 Horizontal Coordinate System Vertical Coordinate System

Geographic Coordinate System Name: GCS_North_American_1983

Projected Coordinate System Name: NAD_1983_StatePlane_California_VI_FIPS_0406_Feet

Horizontal Datum Name: North American Datum of 1983

Ellipsoid Name: Geodetic Reference System 80

Semi-major Axis: 6378137.000000

Denominator of Flattening Ratio: 298.257222

Save Cancel Help

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

The screenshot shows a software interface for editing a feature class. The main window is titled "Editing 'red_cross_closetocountyfac'". It has several tabs: Identification, Data Quality, Data Organization, Spatial Reference, Entity Attribute (selected), Distribution, and Metadata Reference. Under the Entity Attribute tab, there are sub-tabs: Detailed Description (selected) and Overview Description. Within Detailed Description, there are further sub-tabs: Entity Type and Attribute (selected). The Attribute sub-tab has three sub-sections: General, Dates, and Attribute Domain Values. The General section contains the following fields:

Label:	<input type="text" value="FID"/>	Value Accuracy:	<input type="text"/>
Type:	<input type="text" value="OID"/>	Value Accuracy Explanation:	<input type="text"/>
Width:	<input type="text" value="4"/>	Value Measurement:	<input type="text"/>
Precision:	<input type="text" value="0"/>	Frequency:	<input type="text"/>
Indexed:	<input type="text"/>		
Definition:	<input type="text" value="Internal feature number."/>		
Definition Source:	<input type="text" value="ESRI"/>		

Red arrows point to the "REQUIRED" text next to the Definition and Definition Source fields. At the bottom of the Attribute sub-tab, there are navigation buttons: a plus sign, a close button (X), and four arrow buttons (back, forward, double back, double forward). The text "Attribute 1 of 38" is displayed next to these buttons. Below the Attribute sub-tab, there are similar navigation buttons for the "Detailed Description 1 of 1" section. At the very bottom of the dialog, there are three buttons: Save, Cancel, and Help.

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

- 19) 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_closetocountyfacs'

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.**

+ × ⏪ ⏩ Detail Citation (+) of 0

+ × ⏪ ⏩ Overview Description (+) of 0

Save Cancel Help

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

Editing 'red_cross_closetocountyfacs'

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

General Distributor Standard Order Process Available Time Period

Resource Description: Downloadable Data
REQUIRED

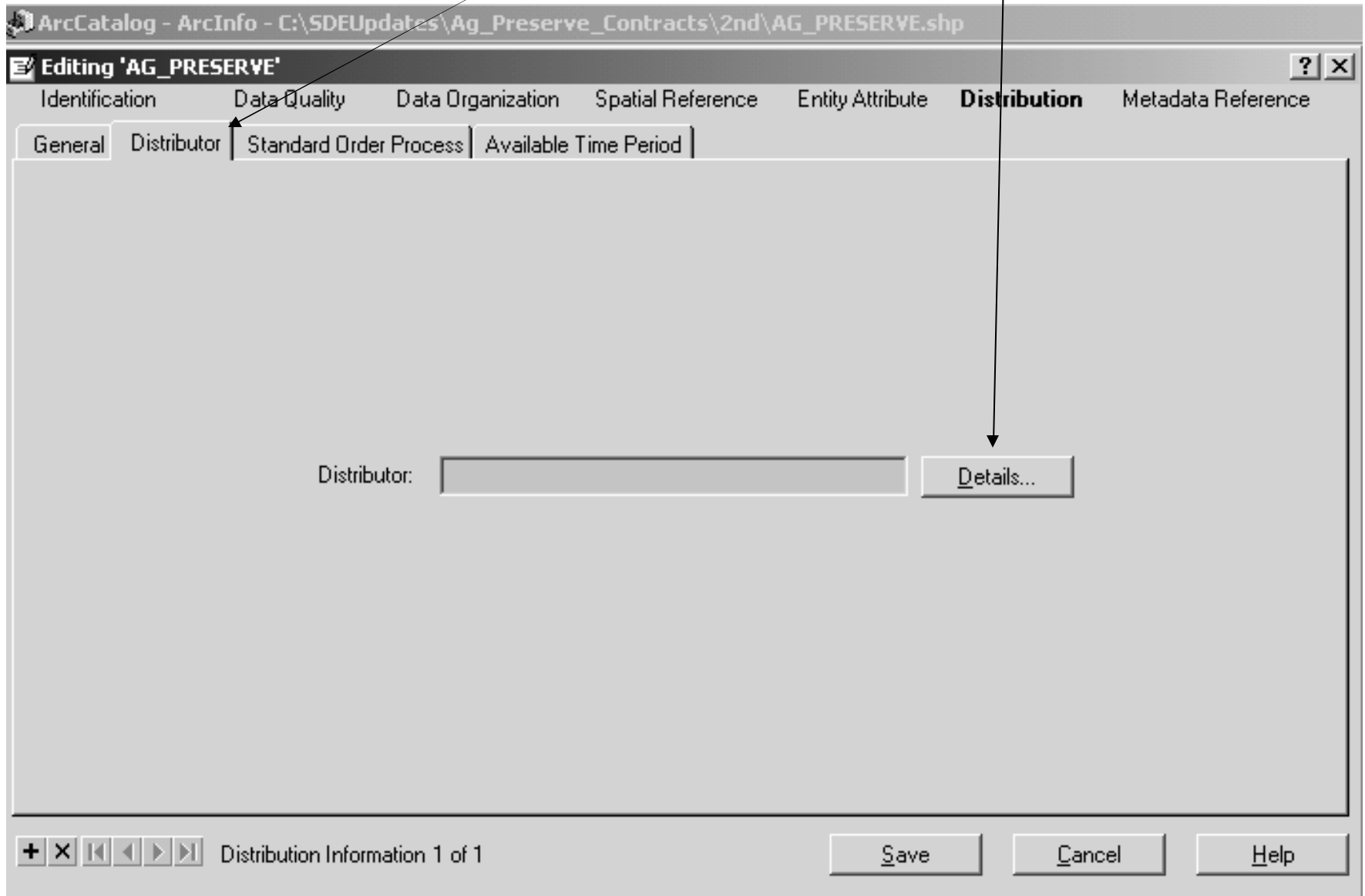
Distribution Liability:
REQUIRED

Custom Order Process:

Technical Prerequisites:
REQUIRED (if applicable)

+ × ⏪ ⏩ Distribution Information 1 of 1 Save Cancel Help

21) 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

Organization **REQUIRED (*if applicable)**

Person: _____

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

Position: _____

General Address

Contact Voice Telephone: (858) 874-7000 **REQUIRED (*if applicable)**

Hours of Service: 8:00 A.M. - 4:30 P.M.

Contact Fax Number: _____

Contact Email Address: _____

Contact TDD/TTY Telephone: _____

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.**

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

Editing 'red_cross_closetocountyfacs'

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 Access Constraints:

Metadata Use Constraints:

Metadata Security Information

Classification System:

Classification:

Handling Information:

Details... REQUIRED

Save Cancel Help

- 23) 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 file named 'AG_PRESERVE'. The 'Contact Information' tab is active, and several fields are marked as 'REQUIRED' with arrows pointing to them. The fields and their values are:

- Primary Contact:** Radio buttons for 'Person' and 'Organization'. The 'Organization' option is selected. An arrow points to this section with the label 'REQUIRED'.
- Person:** An empty text field. An arrow points to it with the label 'REQUIRED or'.
- Organization:** The text 'DPLU-GIS'. An arrow points to it with the label 'REQUIRED'.
- Position:** The text 'Senior GIS Analyst'. An arrow points to it with the label 'REQUIRED'.
- Contact Voice Telephone:** The text '858-694-2783'. An arrow points to it with the label 'REQUIRED'.

Other fields include 'Contact Fax Number', 'Contact Email Address', 'Contact TDD/TTY Telephone', 'Hours of Service', and 'Contact Instructions'. The 'OK' button is visible at the bottom right.

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

The screenshot shows the ArcCatalog Metadata Reference dialog box for the file 'AG_PRESERVE.shp'. The 'Metadata Reference' tab is active, and the 'Address' sub-tab is selected. The 'Contact Information' section is visible, with 'Organization' selected as the primary contact type. The 'Address' section contains several fields, each with a 'REQUIRED' label and an arrow pointing to the field:

- 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: (empty)

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