2014 FWS GeoSpatial Training Workshop – CSP7304
EPA Metadata Editor (EME)

June 19, 2014

Offered by:

U.S. FISH AND WILDLIFE SERVICE

National Conservation Training Center

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Information Needed for Metadata

a. Contact information for the organization that created the dataset – Address, Phone Number, Title and E-mail.
b. Contact information for the organization that is creating the Metadata.
c. Contact information for the organization that will distribute the dataset.
d. Find an appropriate liability statement for the dataset.
e. List any source materials and citations used in creating the dataset .
f. List the process steps taken in creating the dataset.
g. List any source materials used in attributing the dataset.
h. Calculate the size of the dataset when compressed.
i. If possible, determine the URL where a zip file of the data set will be accessible for download.

EPA Metadata Editor (EME) Agenda

Introduction to the EME v3.2

Installation Requirements

EME Features

- Interface
- Database
- Synchronization and Validation

Suggested Workflow

- Synchronize
- Customize the EME Database
- Fill in remaining elements
- Upgrade Metadata
- Validate

https://fishnet.fws.doi.net/projects/gisnew/gisinfo/SitePages/Metadata.aspx
https://edg.epa.gov/EME/

EPA Metadata Editor (EME) Interface

tcEME / EditorForm / X: 1 - Y: 38

File Edit Tools Help

Basic Data Set Information | Quality, Coordinate System, and Attribute Information | Distribution & Metadata Information

Citation

* Origin: U.S. Fish and Wildlife Service
* Title: USFSW National Wildlife Refuge System - Vegetation Mapping-Glacial Ricge

Publisher

* Published by: Region 3 U.S. Fish and Wildlife Service, National Wildlife Refuge
* Published at: Bloomington, MN
* Date: 2014 today

Online Linkage

** Primary Linkage: http://www.fws.gov
** Secondary Linkage:

Description

* Abstract: Map Veg at Glacial Ridge NWR
* Purpose: Habitat Mgmt

Supplemental Info:

Time Period

* Date of Data Set

Single Date OR Multi Dates: Date1, Date2,
OR Range of dates: Date1 - Date2

today

* Progress of data: Complete
* Data currency: Ground condition
* Update frequency: As needed

Bounding Box

N:47.762512 E:-96.177221 S:47.640454 W:-96.40(

* N: 47.762512
* E: -96.177221
* S: 47.640454
* W: -96.400609

Keywords

ISO | EPA | USFWS GIS Thesaurus | Place

Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts
Mexico
Michigan
Minnesota

Help

Data Set Constraints

* Access: None.
* Use: Although these data and information have
* Security Classification: No Confidentiality (from metadata r

Contact

Primary Person | Primary Organization

U.S. Fish and Wildlife Service, Division of Conservation

YELLOW * mandatory | GREEN ** mandatory if applicable | BLUE optional

Click on text to link to element description

Save | Save & Close | Cancel

EPA Metadata Editor (EME) v3.2 Installation & Requirements

- Uninstall EME v3.1
- Install ArcGIS 10.2
  - Required for use with ArcCatalog Extension
- Install MS .NET Framework 3.5 SP1 (if not already installed) from http://www.microsoft.com/net
- Download and install EME

  https://edg.epa.gov/EME/Download.htm

Configure the EME Database

The EPA Metadata Editor, EME, uses an Access Database to store commonly used values for many metadata elements, such as publisher and contact information.

A U.S. Fish and Wildlife version of this database and configuration file should be installed at **C:\metadata_fws** (metadata_fws.mdb and config.xml)

If the folder **C:\metadata_fws** is not installed, download metadata_fws.mdb and config.xml from:
https://fishnet.fws.doi.net/projects/gisnew/gisinfo/SitePages/Metadata.aspx
(Open the pulldown menu to the right of the file names, select **Send To** > **Download a Copy)**

Copy metadata_fws.mdb and config.xml into a new folder named **C:\metadata_fws**

Configure the EME Database

- Move the ‘hidden’ files from
  C:\Metadata_Fws to each user’s profile

To view hidden files:

- Windows Explorer>organize>folder & search options
- View tab>Show hidden files, folders, drives
- Copy/paste the config.xml file from C:\metadata_fws
  - To the user profile

C:\Users\mbalogh\AppData\Roaming\Innovate! Inc\EPA Metadata Editor v3.2

- if the \Innovate! Inc! folder is not in the user’s profile:
  - Start EPA Metadata Editor from Start>all programs (Initiating EME will create the \Innovate! Inc! folder

Install EME Toolbar for ArcCatalog

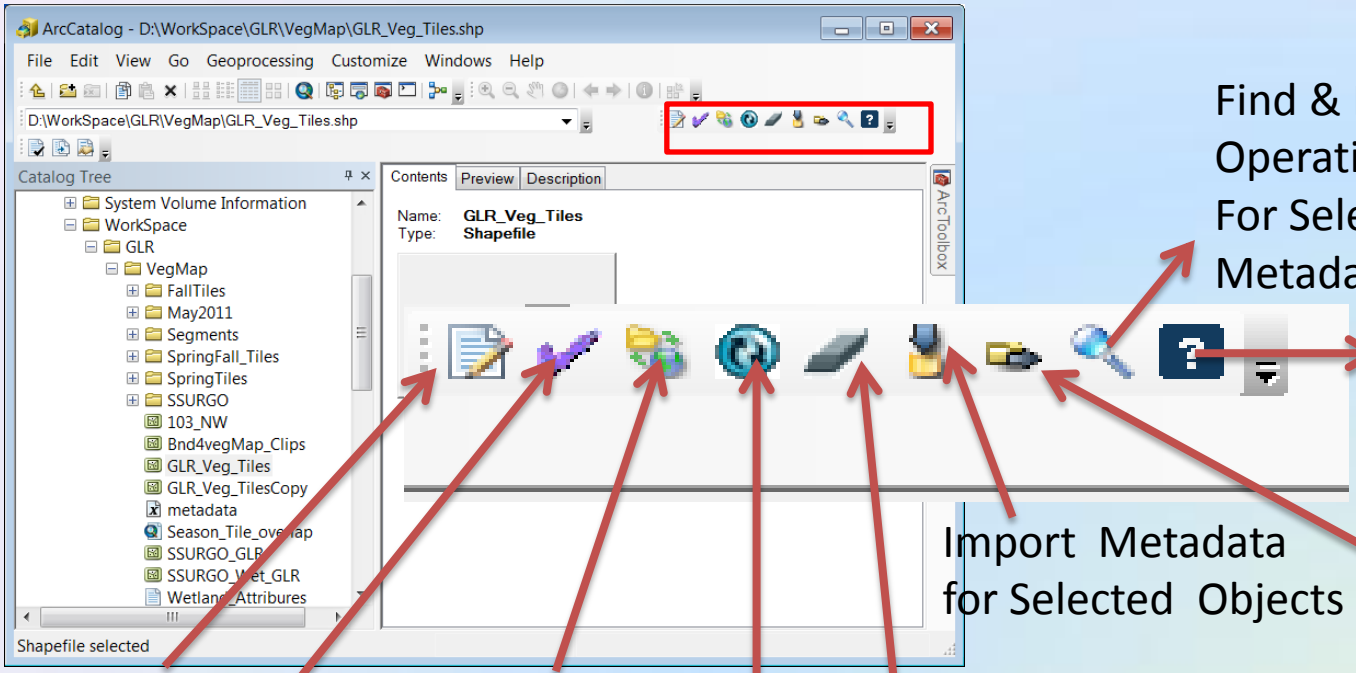
Customize: ArcCatalog Toolbars

- Customize>Toolbars tab>
- >Select “EPA Metadata Tools” from Toolbars list.
- See the EME Toolbar in the toolbar Menu

Customize: ArcCatalog Options

- Customize>ArcCatalog Options>Metadata Tab
- >Select FGDC CSDSM Metadata

EPA Metadata Editor Toolbar



Find & Replace Operation For Selected Object's Metadata

Help

Import Metadata for Selected Objects

Export Metadata for Selected Objects

Edit FGDC Metadata

Manage Metadata Synchronizer

Clear Metadata for Selected Objects

Validate Selected Metadata Records

Synchronize Metadata for Selected Objects

EPA Metadata Editor (EME) Interface

tcEME / EditorForm / X: 1 - Y: 38

File Edit Tools Help

Basic Data Set Information | Quality, Coordinate System, and Attribute Information | Distribution & Metadata Information

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today

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N:47.762512 E:-96.177221 S:47.640454 W:-96.40(

* N: 47.762512
* E: -96.177221
* S: 47.640454
* W: -96.400609

Keywords

ISO | EPA | USFWS GIS Thesaurus | Place

Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts
Mexico
Michigan
Minnesota

Help

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Contact

Primary Person | Primary Organization

U.S. Fish and Wildlife Service, Division of Conservation

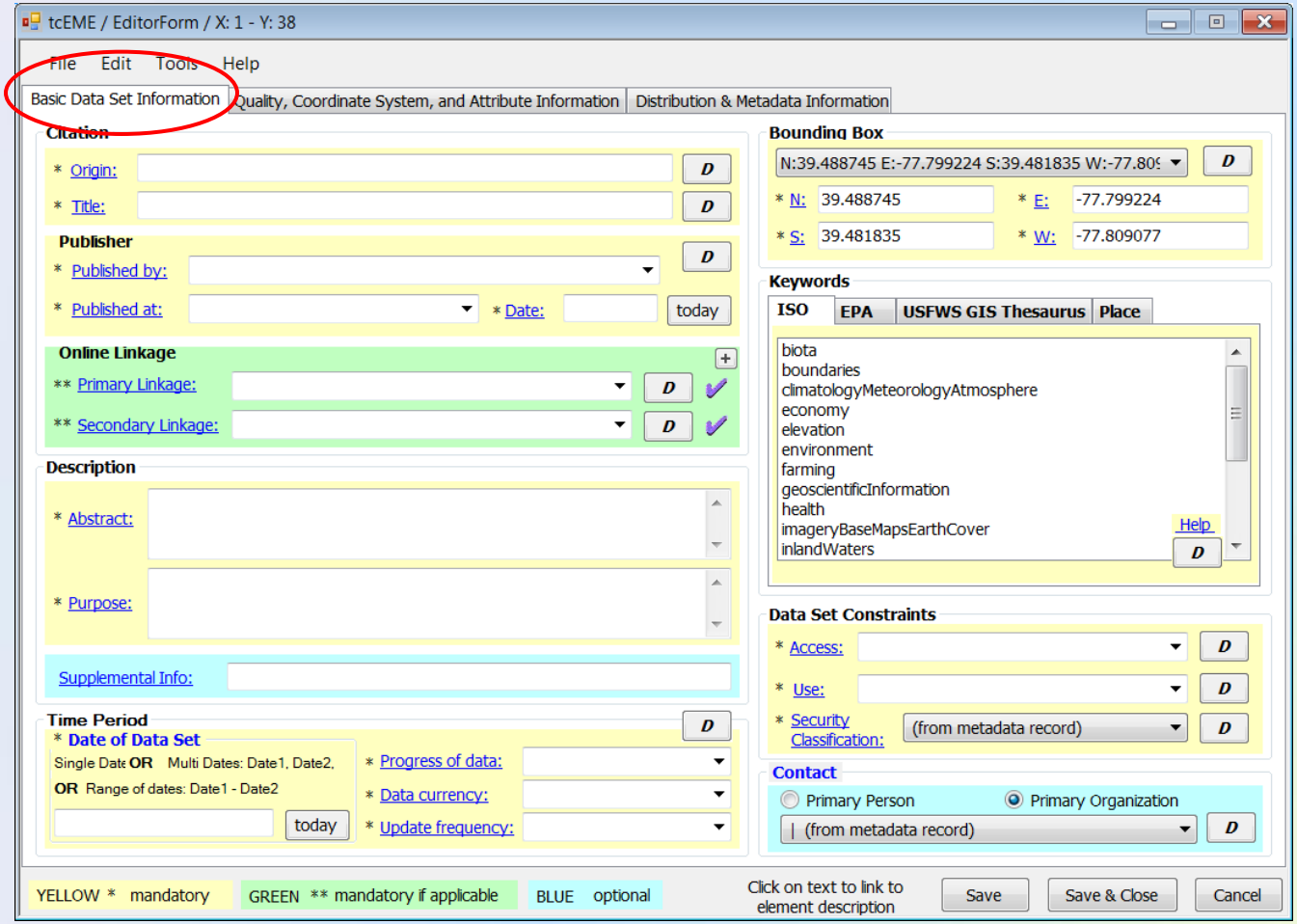
YELLOW * mandatory | GREEN ** mandatory if applicable | BLUE optional

Click on text to link to element description

Save | Save & Close | Cancel

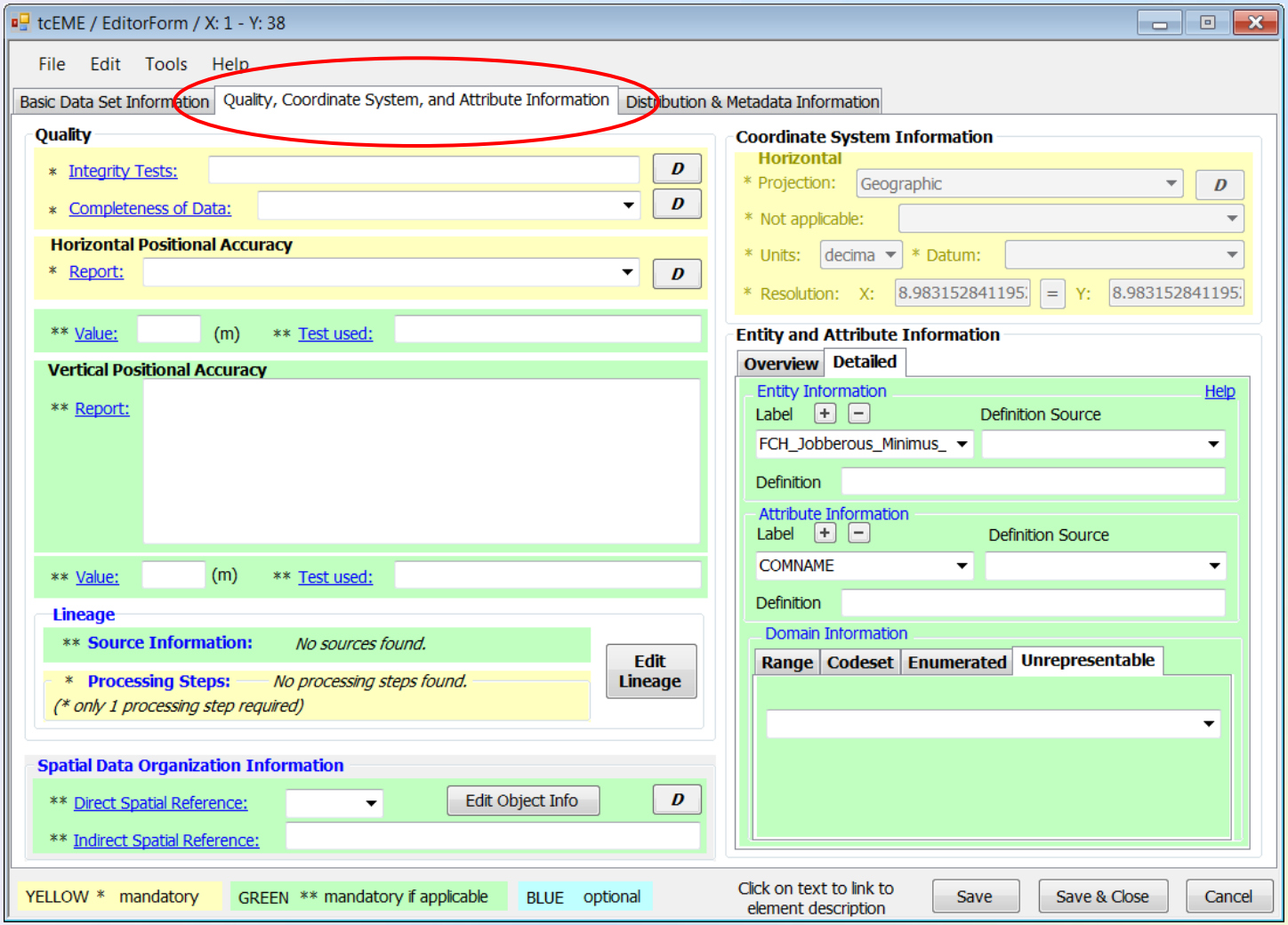
EPA Metadata Editor (EME) Interface

Basic Data Set information



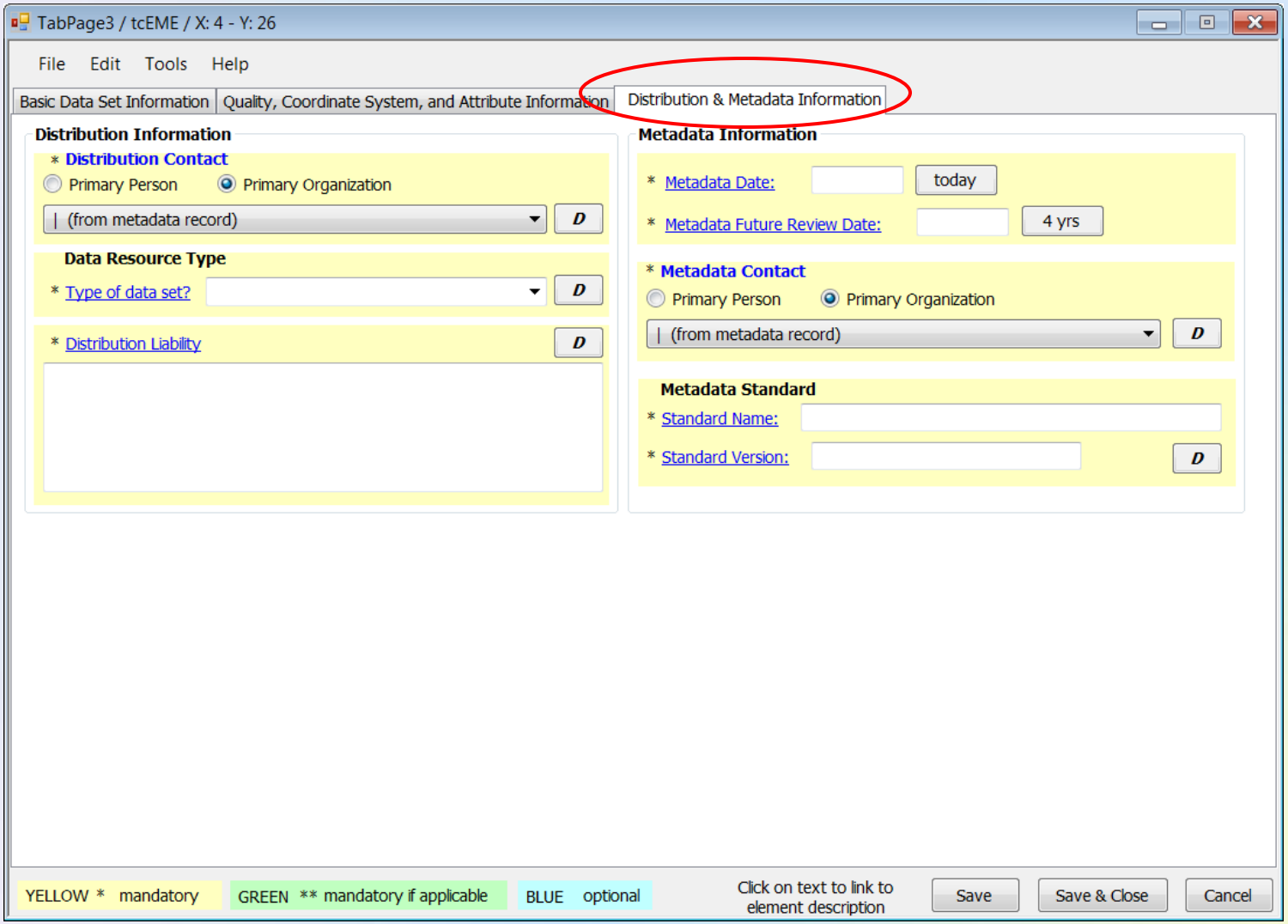
EPA Metadata Editor (EME) Interface

Quality, Coordinate System, & Attribute Information



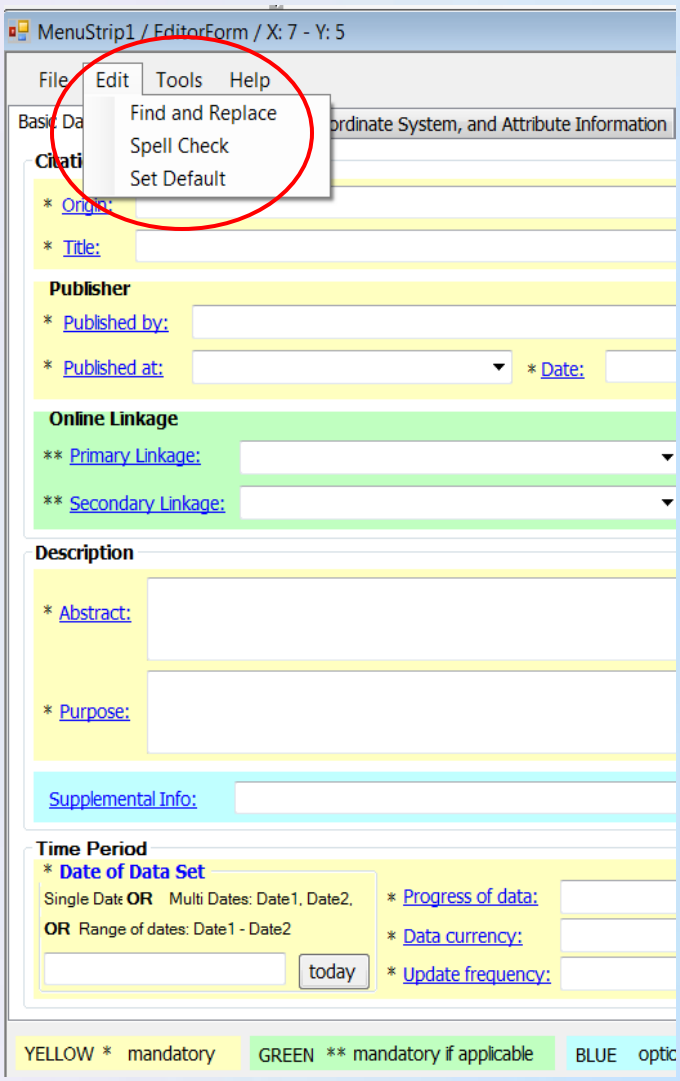
EPA Metadata Editor (EME) Interface

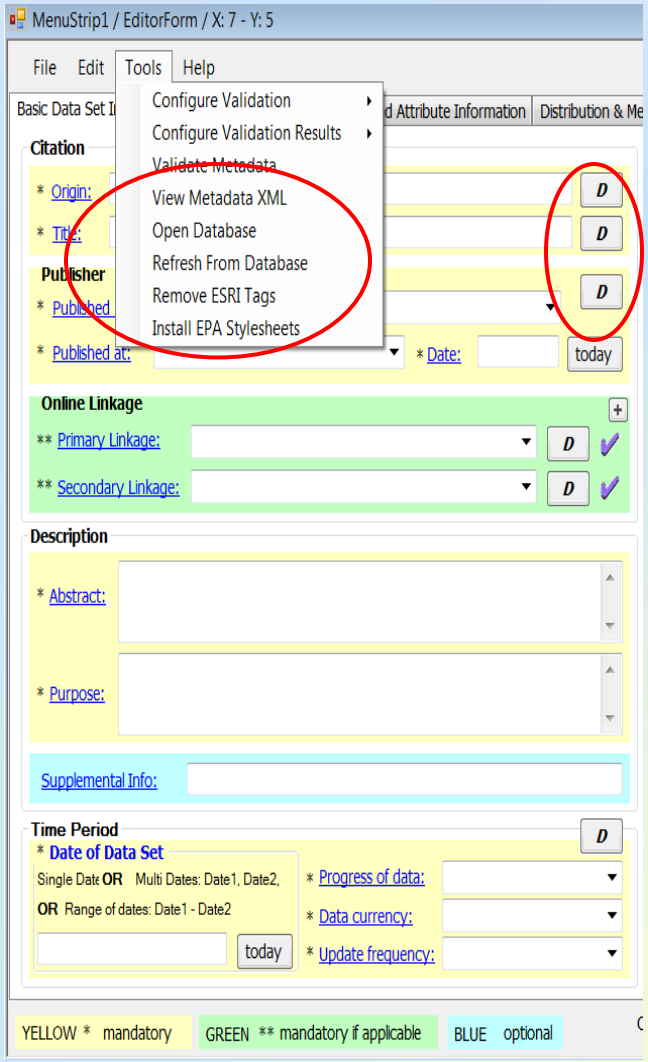
Distribution and Metadata Information



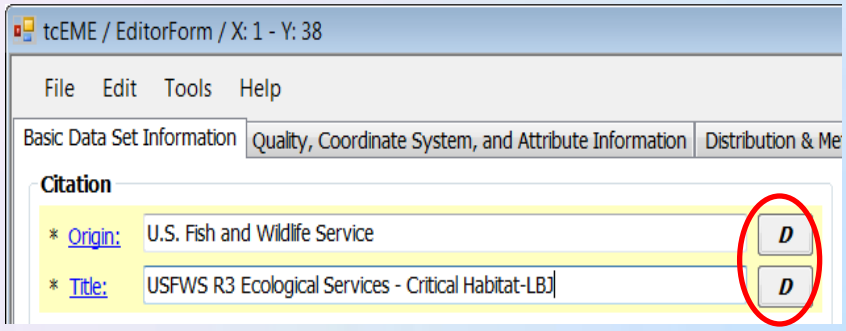
EME Interface

Menus



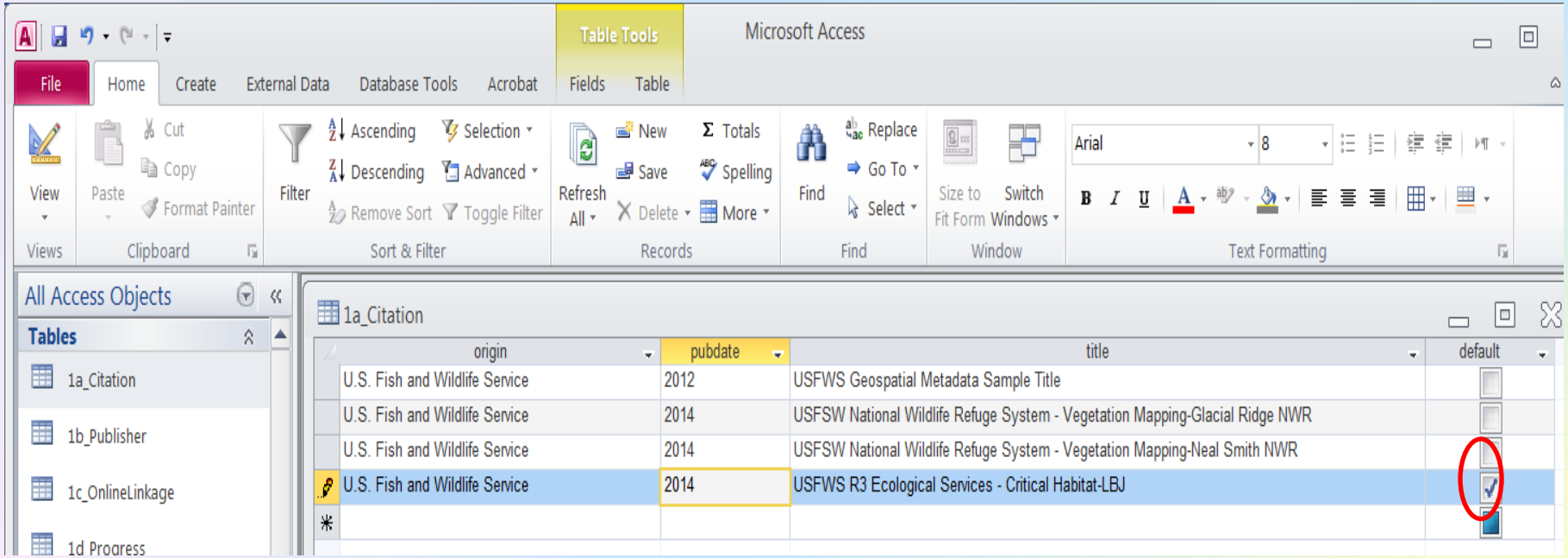


EME Features
Access Database

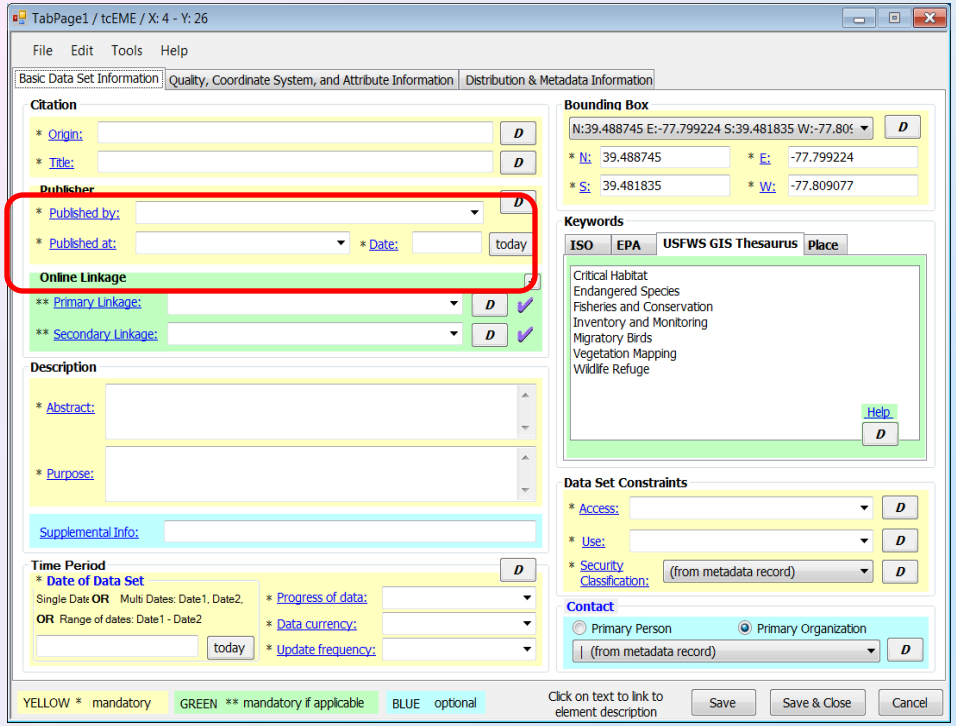


Origin and Title entries in the EME are derived from the default field in the access database.

Access database records and defaults can be customized.



EME Features
Database Structure

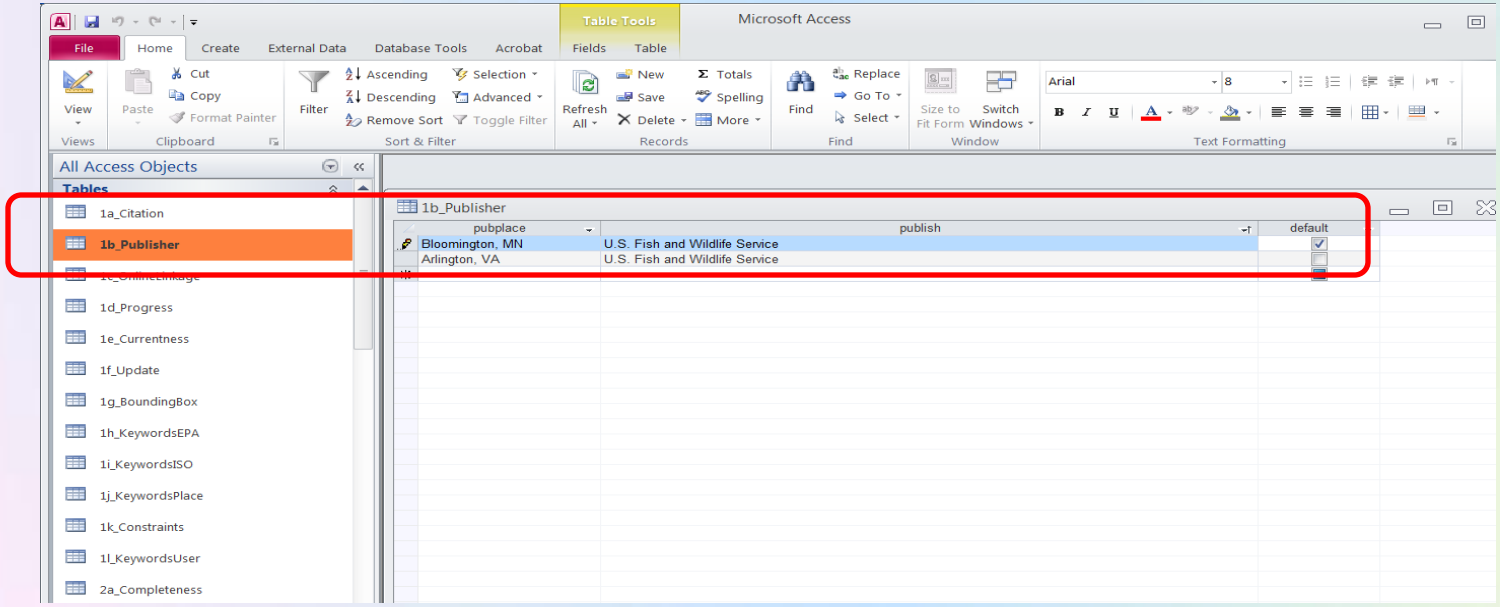


EME Access database structure aligns with EME interface.

Access Table names correspond with EME interface tabs

Ex: Fields for EME Tab 1 correspond to database tables starting with 1

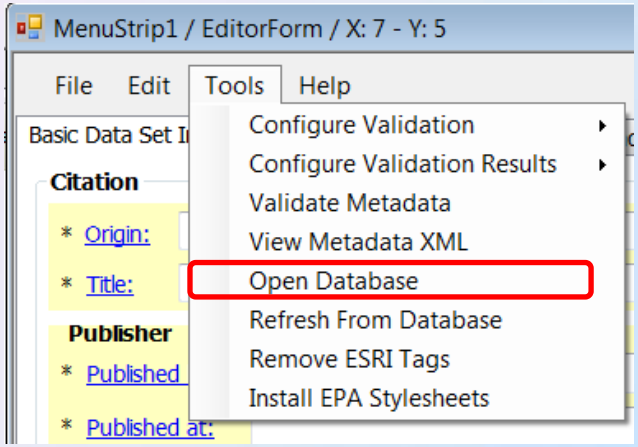
Tables are ordered alphabetically



EME Features

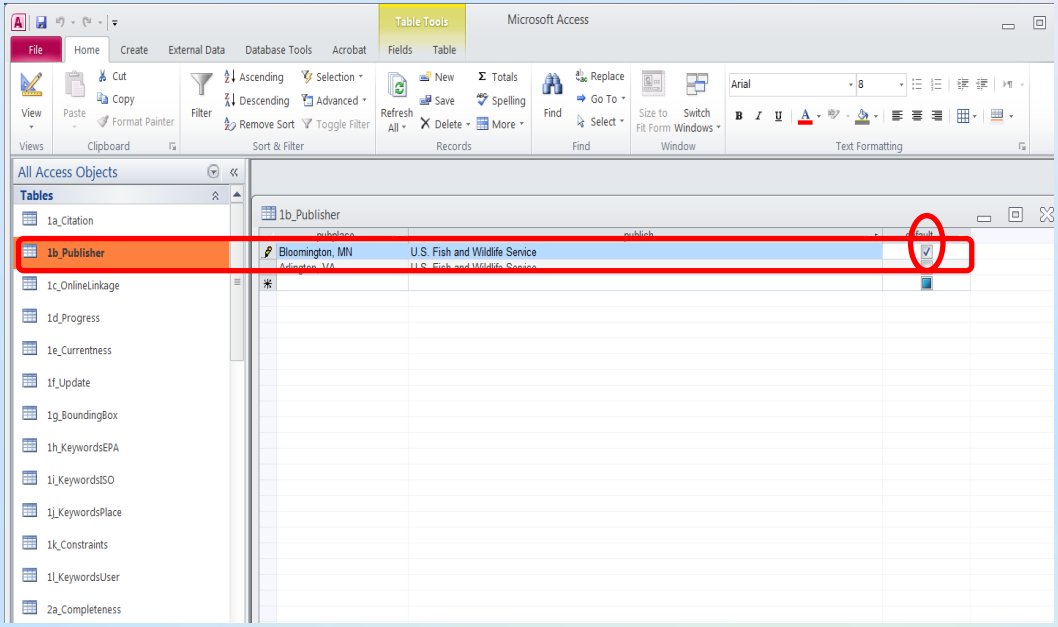
Edit the Access Database

1



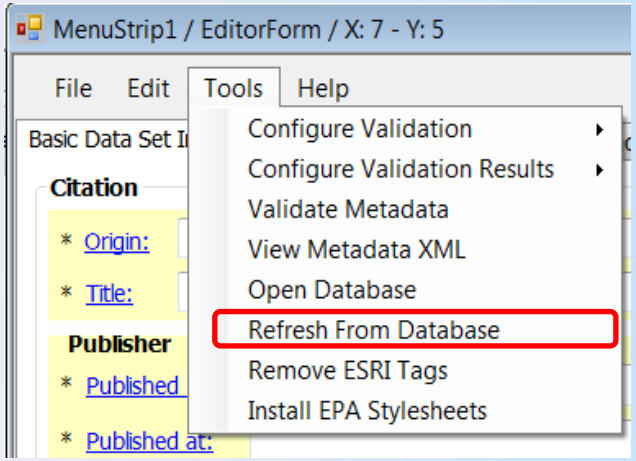
Open Database from EME interface

2 - 5



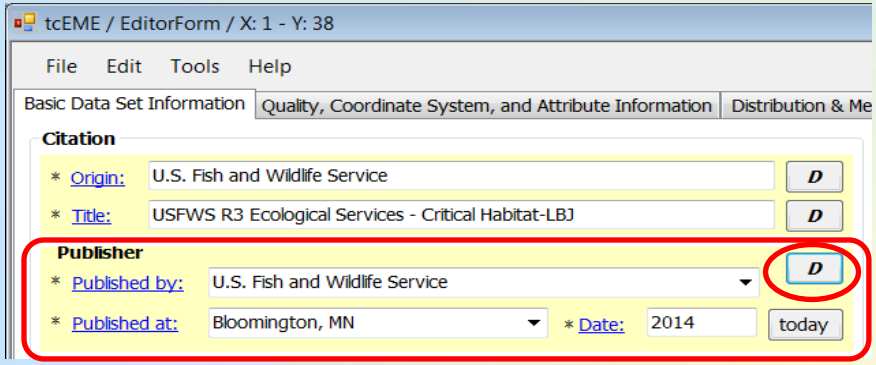
Edit fields for database record in Access

6



Refresh database after editing

7



Default value is updated in the EME interface

EME Work Flow

1) Synchronize the data layer with EME database
   - -Configure the EME Synchronizer
   - -Select the data layer & Synchronize

2) Edit/customize required default values for the EME Access database based on local program/office.
   - -Save edits for Access objects: *C:\metadata_fws\metadata_fws.mdb*
   - -EME Tools→Refresh from Database

3) Enter Default metadata elements to the EME interface

4) Manually complete EME fields that are not filled in automatically

5) Upgrade Metadata

6) Validate the metadata using the USGS MP Metadata Translator

7) Correct errors found in validation

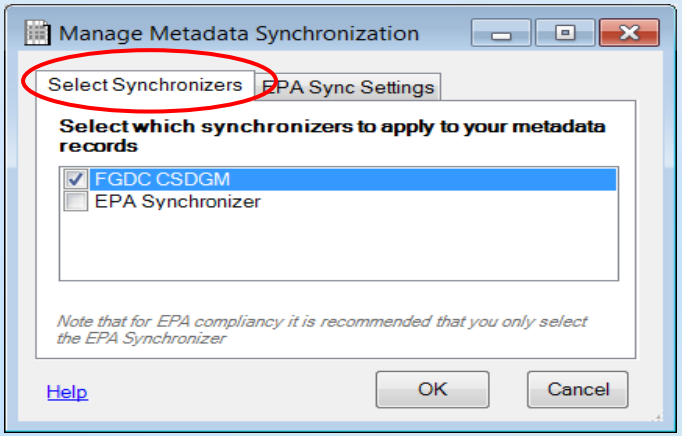
EME Synchronization with ArcGIS 10

Work Flow Step 1

1

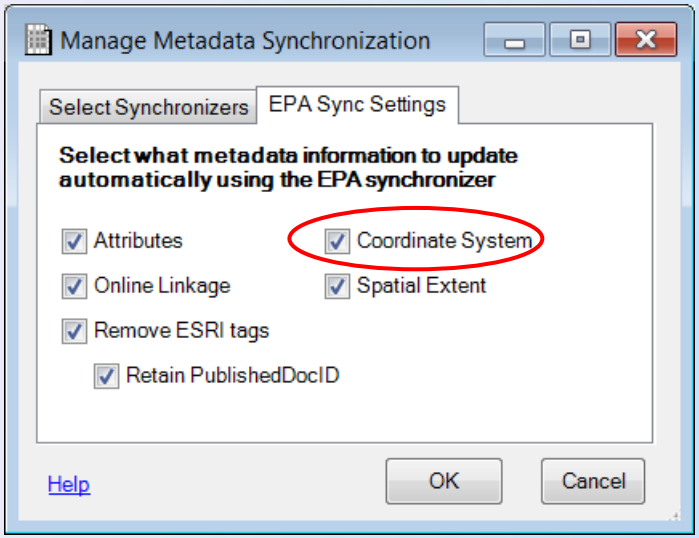
Open the Manage EPA Synchronizer icon

2



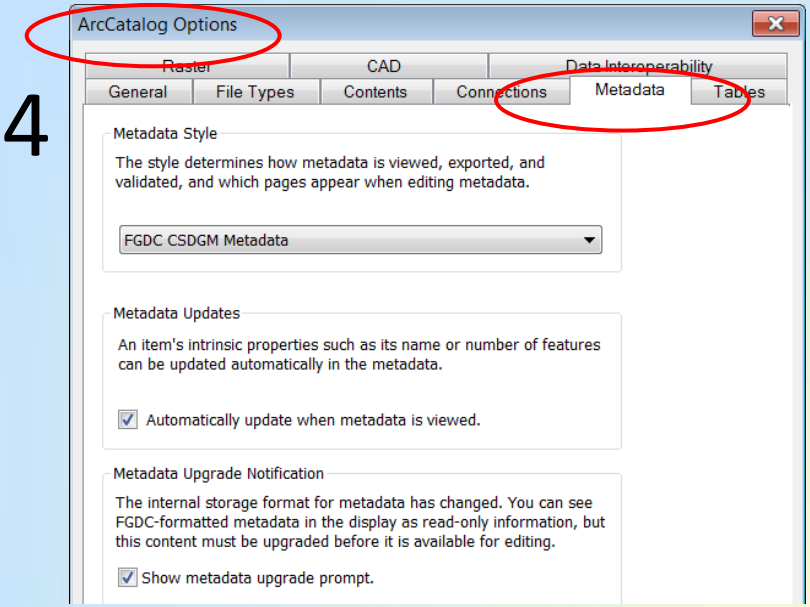
Select FGDC CSDGM

3



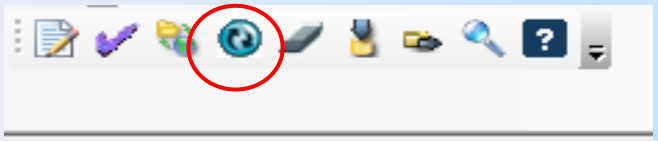
Select attributes to synchronize

4



Enable background synchronization (& Upgrade prompt)

5



Select Data Layer (ArcCatalog) - Synchronize

Customize Database

Basic Data Set Information

Work Flow Step 2 -- *1 of 2*

Add relevant information for the Vegetation Map in the Access Database for:

EME Interface	Access Database
• Citation: Origin & Title.....	1a_Citation
• Publisher: by & at.....	1b_Publisher
• Time Period.....	1d_Progress
	1e_Currentness
	1f_Update

Customize Database

Basic Data Set Information

Workflow Step 2 – 2 of 2

EME Interface	Access Database
• Key Words	1i_KeywordsISO 1j_ KeywordsPlace 1l_ KeywordsUser
• Data Set Constraints	1k_Constraints Fields: acccont, useconst, secclass *access constraints, use constraints, security classification*
• Contact • Primary Organization	Contact_Information_Cluster Fields: cntper, cntorg *Primary Person, Primary Organization*

Save Access Database

EME <u>Tools</u> Menu->Refresh from Database: updates EME interface for the first tab: Basic Data Set Information only

Enter Information to EME Elements

Basic Data Set Information

Work Flow Step 3 – Enter Defaults to EME Interface

- Select the data set in the Table of Contents
- use EME Tool Bar→ Edit Menu →Set Defaults
  - Sets defaults for all defaults on the current tab.

  Or
- Select the individual Default icons

Work Flow Step 4 Enter Blank EME Fields

- Enter information for Abstract
- Enter information for Purpose

Save Information for EME Elements
Basic Data Set Information

tcEME / EditorForm / X: 1 - Y: 38

File Edit Tools Help

Basic Data Set Information | Quality, Coordinate System, and Attribute Information | Distribution & Metadata Information

Citation

* Origin: US Fish and Wildlife Service (USFWS)
* Title: Glacial Ridge National Wildlife Refuge, 2011 Vegetation Map

Publisher

* Published by: U.S. Fish and Wildlife Service, Region 3
* Published at: Bloomington, MN
* Date: 2014 today

Online Linkage

** Primary Linkage:
** Secondary Linkage:

Description

* Abstract: US Fish & Wildlife Service, Region 3, Division of Conservation Planning created a vegetation map of the Glacial Ridge National Wildlife Refuge, Polk County, Minnesota. The vegetation categories were developed in
* Purpose: The purpose of the vegetation map is to aid in the development of a Comprehensive Conservation Plan for the Glacial Ridge National Wildlife Refuge. The vegetation mapping provides an inventory of wildlife habitat

Supplemental Info:

Time Period

* Date of Data Set

Single Date OR Multi Dates: Date1, Date2, OR Range of dates: Date1 - Date2

20140604 today

* Progress of data: Complete
* Data currency: Ground condition
* Update frequency: As needed

Bounding Box

N:45.006139 E:-71.869987 S:38.956682 W:-79.763

* N: 45.006139
* E: -71.869987
* S: 38.956682
* W: -79.763235

Keywords

ISO | EPA | USFWS GIS Thesaurus | Place

South Dakota
Tennessee
Texas
United States
Utah
Vermont
Virgin Islands
Virginia
Washington
Washington DC
West Virginia

Help

Data Set Constraints

* Access: None.
* Use: Although these data and information have
* Security Classification: No Confidentiality (from metadata r

Contact

Primary Person | Primary Organization

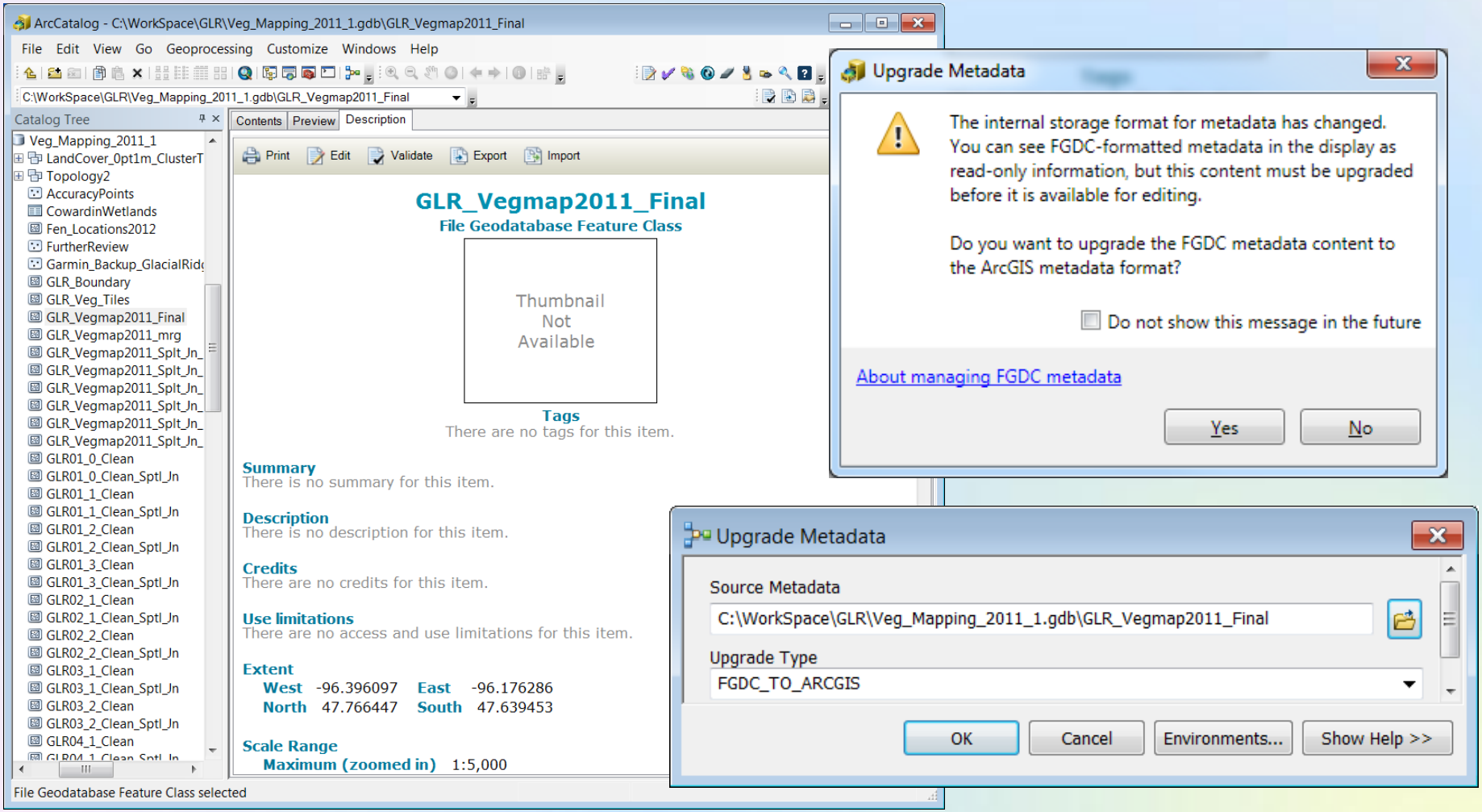
U.S. Fish and Wildlife Service, Region 3, Division of Cor

YELLOW * mandatory | GREEN ** mandatory if applicable | BLUE optional

Click on text to link to element description

Save | Save & Close | Cancel

Upgrade Metadata
Work Flow Step 5



Upgrade Metadata

ArcCatalog - D:\WorkSpace\Metadata\Veg_Mapping_2011_1.gdb\GLR_Vegmap2011_Final

File Edit View Go Geoprocessing Customize Windows Help

D:\WorkSpace\Metadata\Veg_Mapping_2011_1.gdb\GLR_Vegmap2011_Final

Catalog Tree

- hydric_1
- Outline
- OxcartTransects_060111
- Refuge_Edit_Pts
- Sum_Output
- 1_USGS_MD_Output.
- 1_USGS_MD_Output.2
- GLR_Veg_Tiles
- GLR_Veg_Tiles_usgsmptrar
- GLR_Veg_Tiles_usgsmptrar
- Metadata
- Critical_Habitat
- Metadata_Policy_2013-201
- MetaDataRequirementsBu
- NCTC
- Veg_Mapping_2011_1
  - AccuracyPoints
  - CowardinWetlands
  - Fen_Locations2012
  - Garmin_Backup_Glaciall
  - GLR_Boundary
  - GLR_Veg_Tiles
  - GLR_Vegmap2011_Final
  - GR_Wetlands_121712
  - hilshd_ldr1
  - hilshd_ldr10
  - hydric_1
  - Outline
  - OxcartTransects_060111
  - Refuge_Edit_Pts
  - Sum_Output
- 1_CritHab_MetaData_temp
- 5_FGDC_Metadata_Video_I
- 7_emev31_url
- ArcCat_FGDC-compliant
- BioDataStd_review1

Contents | Preview | Description

Print Edit Validate Export Import

Glacial Ridge National Wildlife Refuge, 2011 Vegetation Map

File Geodatabase Feature Class

Thumbnail Not Available

Tags

Environment, West Virginia, environment, United States

Summary

The purpose of the vegetation map is to aid in the development of a Comprehensive Conservation Plan for the Glacial Ridge National Wildlife Refuge. The vegetation mapping provides an inventory of wildlife habitat types and the acreage of the habitat types, used to plan habitat management. The mapping also provides a delineation of the location and extent of active and closed gravel pits, and agricultural fields with in the refuge boundary.

Description

US Fish & Wildlife Service, Region 3, Division of Conserva
created a vegetation map of the Glacial Ridge National W
County, Minnesota. The vegetation categories were devel
with refuge staff to represent vegetation related to habit
vegetation categories were cross walked to NVCS categor
produced using analysis of May 2002 Color Infrared 0.05 r
Supplemental imagery, 2010 1 meter LiDAR derived Digita
data was included in the analysis also. The minimum map
150 sample sites were used to spectral categories.

File Geodatabase Feature Class selected

ArcToolbox

- ArcToolbox
- 3D Analyst Tools
- Analysis Tools
- Cartography Tools
- Conversion Tools
  - Excel
  - From GPS
  - From KML
  - From Raster
  - From WFS
  - JSON
  - Metadata
    - Esri Metadata Translator
    - Export Metadata
    - Export Metadata Multiple
    - Import Metadata
    - Metadata Importer
    - Metadata Publisher
    - Synchronize Metadata
    - Upgrade Metadata
    - USGS MP Metadata Translator
    - Validate Metadata
    - Validate Metadata Multiple
    - XML Schema Validation
    - XSLT Transformation
  - To CAD

Upgrade Metadata

Source Metadata

D:\WorkSpace\Metadata\Veg_Mapping_2011_1.gdb\GLR_Vegmap2011_Final

Upgrade Type

FGDC_TO_ARCGIS

OK | Cancel | Environments... | Show Help >>

Quality, Coordinate System, & Attribute Information

- Select data layer & Synchronize - Work Flow Step 1
- Customize Database - Work Flow Step 2 *1 of 2*

Add information for the Vegetation Map to the Access Database for:

EME Interface	**Access Database**
Quality: Integrity Test	2a_completeness
Completeness of data	2a_completenes
Coordinate System Info:	
Horizontal	2b_CoordinateSystem
Projection	2b_UTMParams
Units	2c_Units
Datum	2d_Datum
Resolution	?

Customize Database

Quality, Coordinate System, & Attribute Information

Work Flow Step 2 *2 of 2*

EME Interface	**Access Database**
Horizontal Position Accuracy:	
• Report	2c_Horizontal_Accuracy
Entity & Attribute Information - Overview Tab	
• Overview Description	2e_Citation
• Citation	2e_Citation

Work Flow Step 3 – Enter Defaults to EME Interface

- Use EME Tool Bar→ Edit Menu →Set Defaults OR
- Select the individual Default icons

Enter Blank EME Fields

Quality, Coordinate System, & Attribute Information

Work Flow Step 4 *1 of 4*

Entity & Attribute Information - Detailed Tab

Entity Information

- Label: Name of the Feature Class
- Definition Source: Region 3 Division of Conservation Planning
- Definition: (brief description) Vegetation Map of Glacial Ridge National Wildlife Refuge, 2011

Enter Blank EME Fields

Quality, Coordinate System, & Attribute Information

Work Flow Step 4 *2 of 4*

Entity & Attribute Information - Detailed Tab

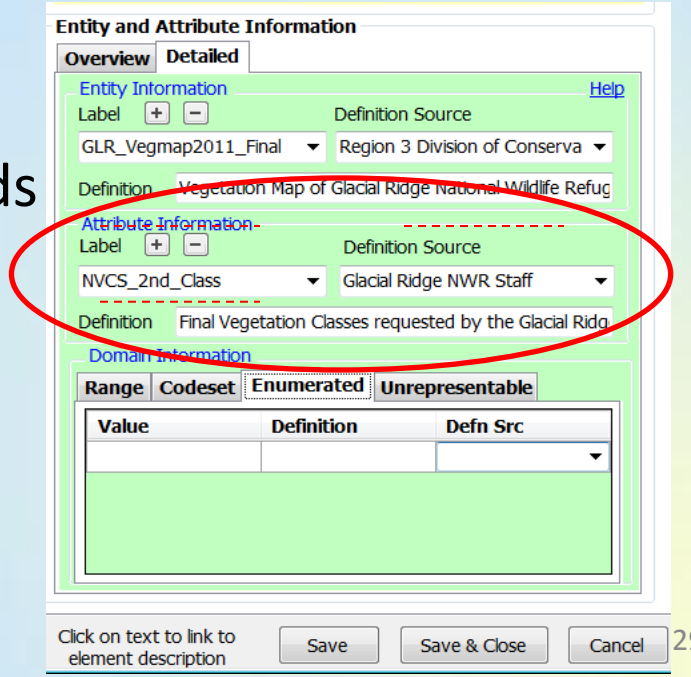
Attribute Information

- <u>Label</u>: Field names extracted from Attribute Table
- <u>Definition Source</u>:

  Defaults to Esri for Esri specific fields

  Non-Esri fields entered by analyst
- <u>Definition:</u> Analyst enters

  definitions for non- Esri fields

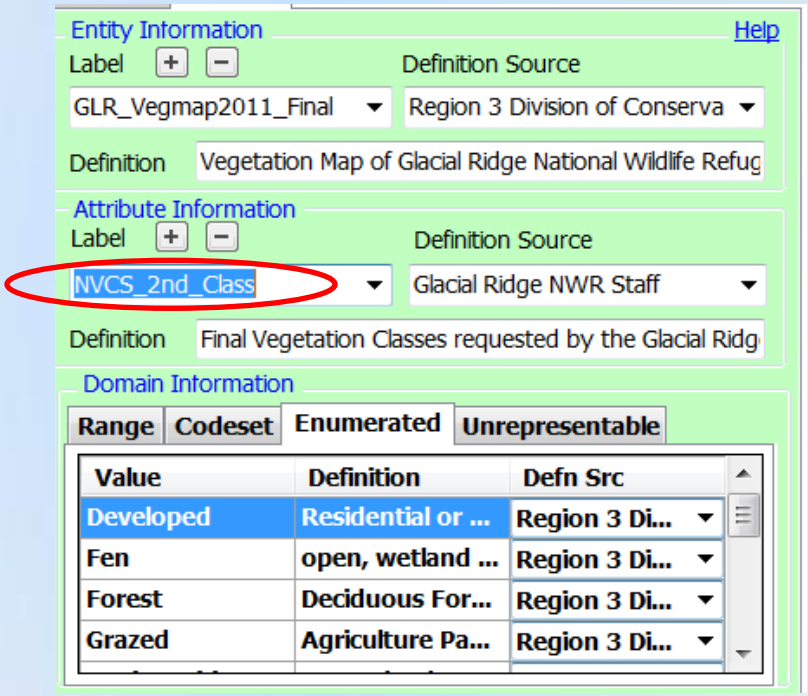


Enter Blank EME Fields
Quality, Coordinate System, & Attribute Information
Work Flow Step 4 *3 of 4*

Entity & Attribute Information - Detailed Tab

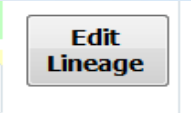
Attribute Information

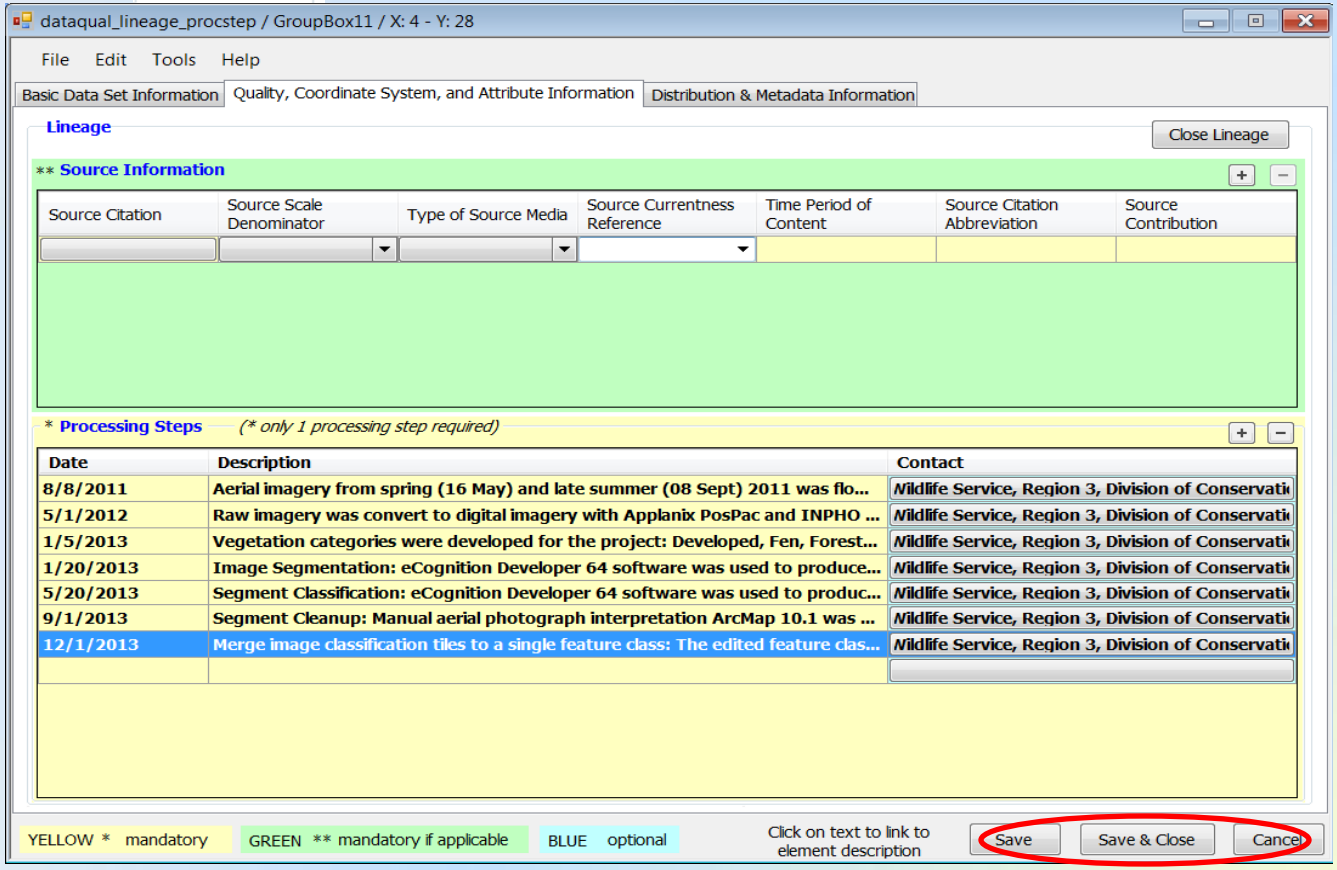
- <u>Domain Information</u>: Enumerated. Analyst enters Value, Definition, Defn Src



Enter Blank EME Fields
Quality, Coordinate System, & Attribute Information
Work Flow Step 4 *4 of 4*

- Lineage



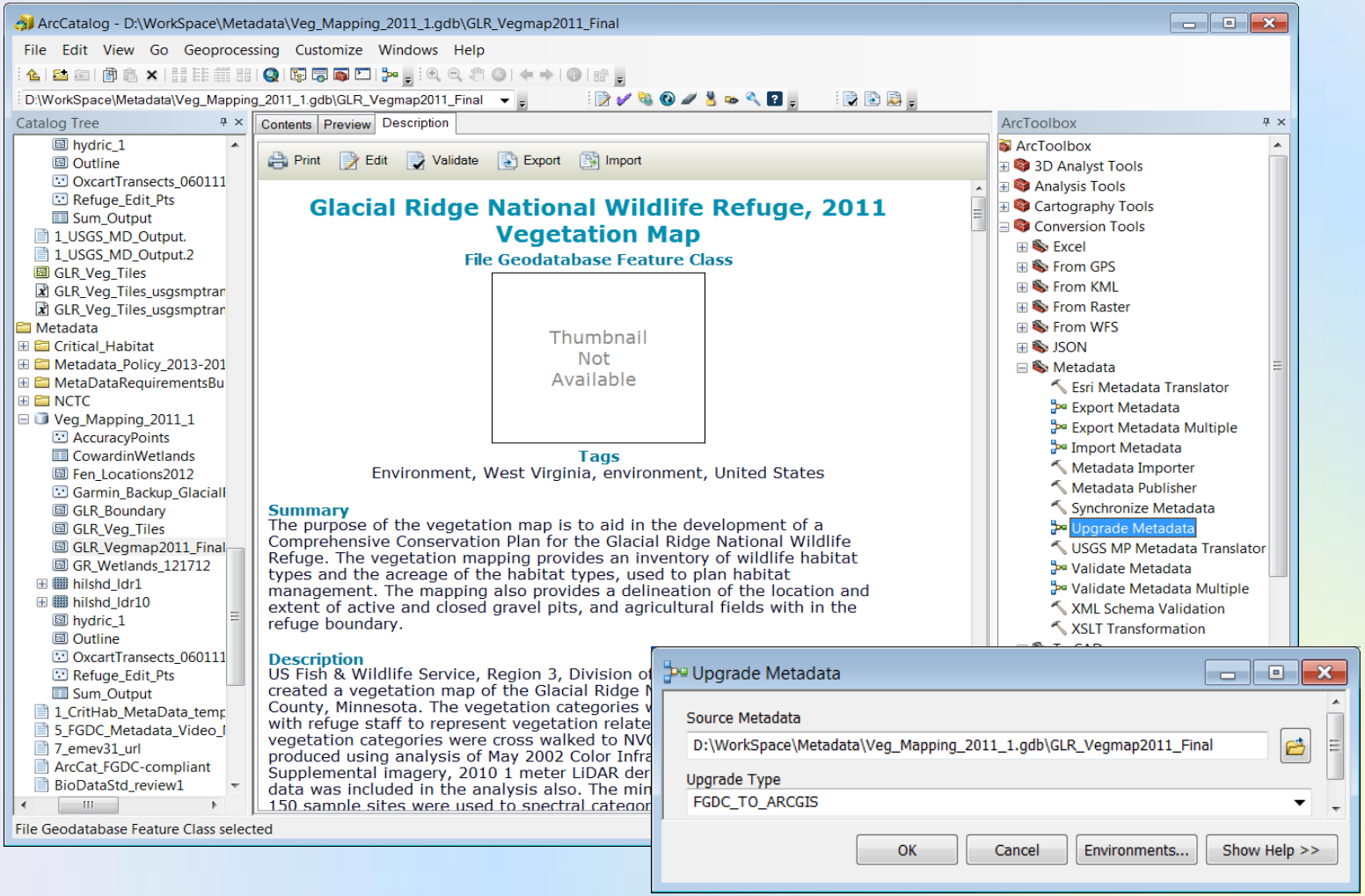


Save & Close

Upgrade Metadata

Quality, Coordinate System, & Attribute Information

Work Flow Step 5



Database & Metadata Information

- Select Data layer & Synchronize - Work Flow Step 1
- Customize Database - Work Flow Step 2 *1 of 2*

EME Interface	**Access Database**
Distribution Information	Contact_Information
Distribution Contact	Primary Organization
Data Resource Type	
• Type of data Set	3a_ResourceType
• Distribution Liability	3b_DistributionLiability
Metadata Standard	
• Standard Name	3c_MetadataStandard
• Standard Version	3c_MetadataStandard

Database & Metadata Information

- Customize Database - Work Flow Step 2 *2 of 2*

EME Interface	**Access Database**
Metadata Information	
Metadata Contact	Contact_Information
○ Primary Organization	

Work Flow Step 3 –Enter Defaults to EME Interface

- Use EME Tool Bar→ Edit Menu →Set Defaults OR
- Select the individual Default icons

Enter Blank EME Fields

Database & Metadata Information

Work Flow Step 4

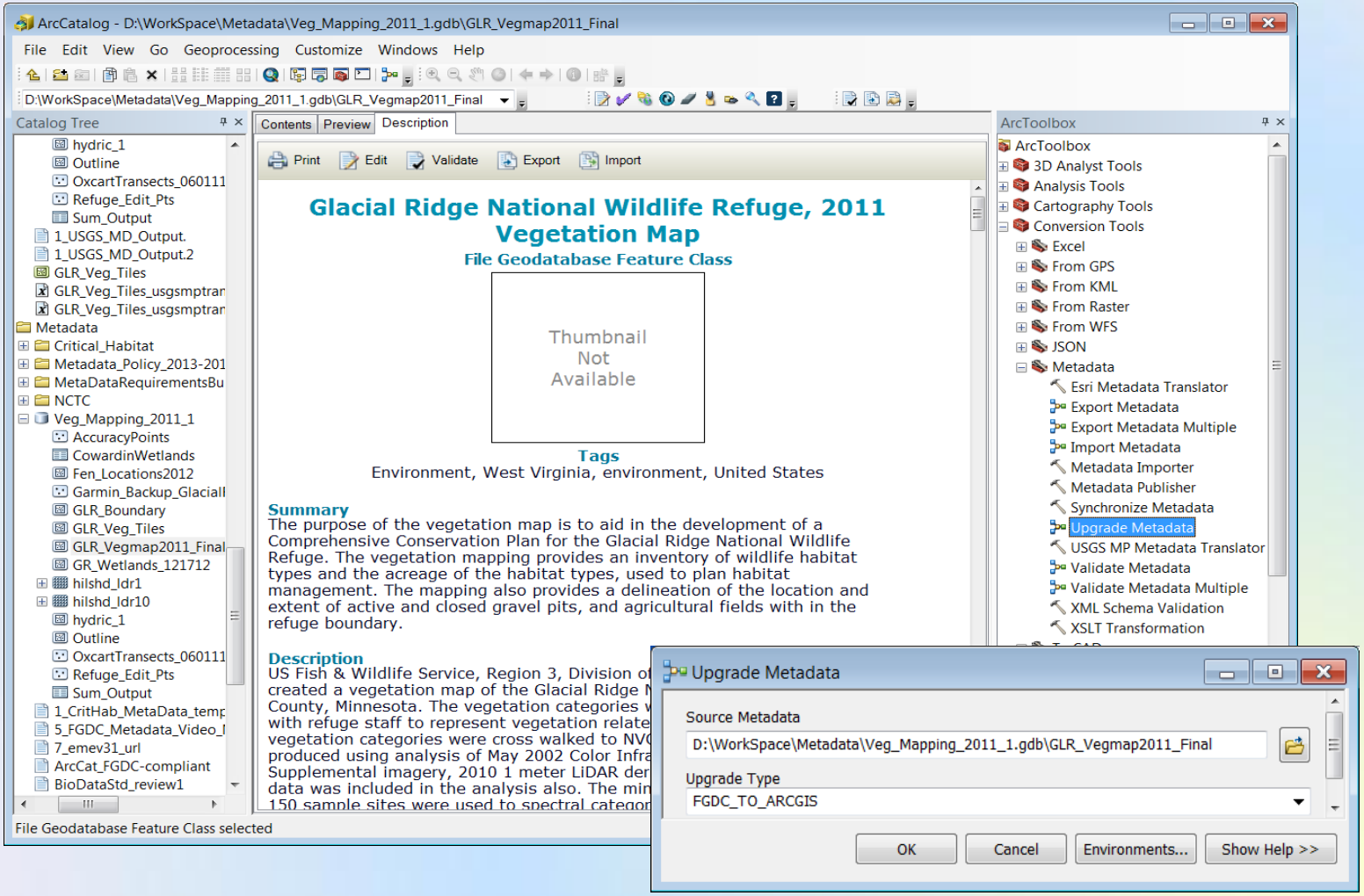
Metadata Information

Metadata Date Today
20140619

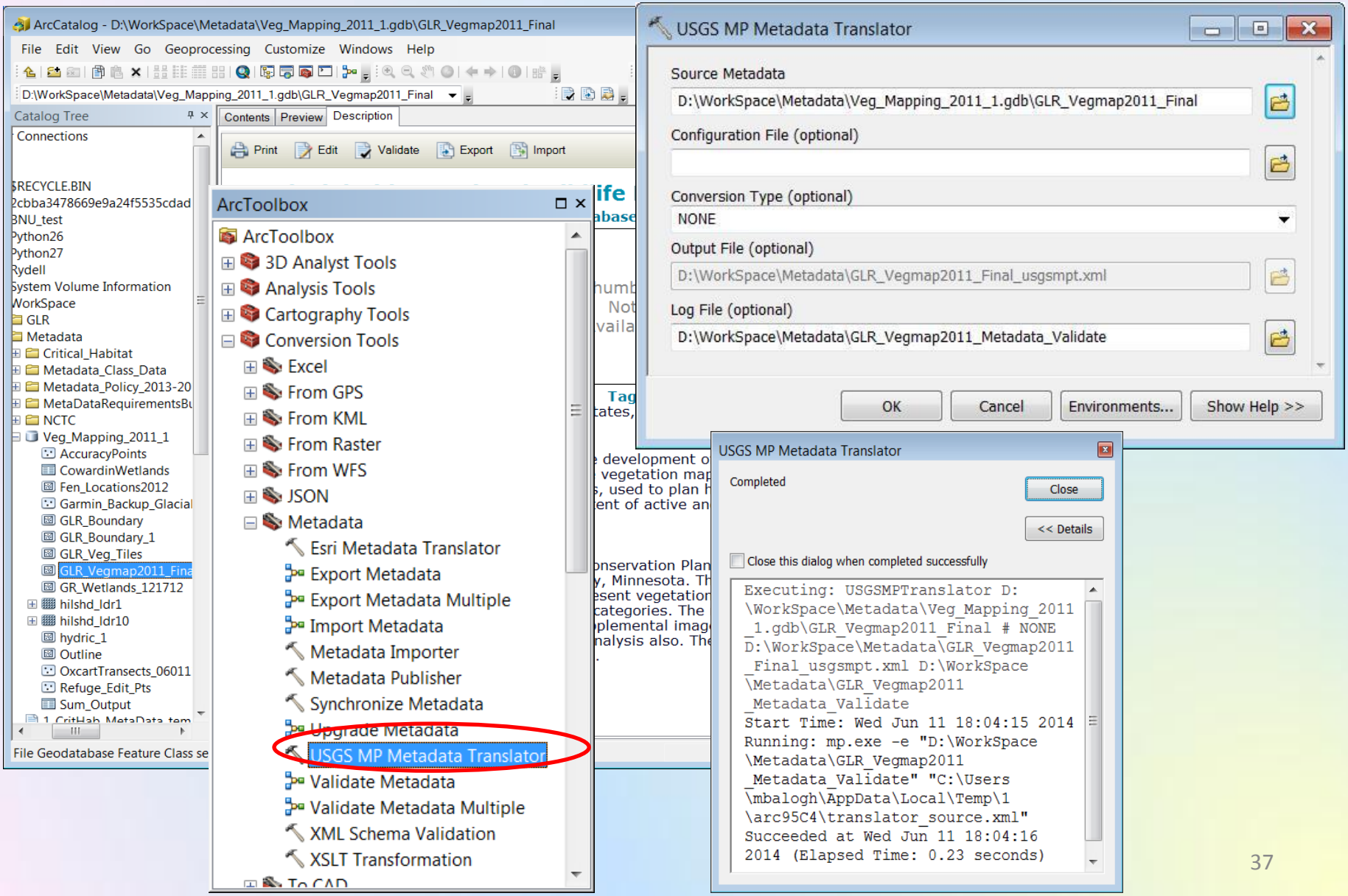
Metadata Future Review Date 20190619

Save EME edits and close

Upgrade Metadata
Distribution & Metadata Information
WorkFlow Step 5



Validate Metadata – ArcCatalog



EME Access Database is a Template

- EME is configured (C:\metadata_fws\configure.xml) to extract data from: C:\metadata_fws\metadata_fws.mdb
- When creating Metadata for a new feature class, the defaults in metadata_fws.mdb can be imported from C:\metadata_fws\metadata_fws.mdb.
- Review the existing metadata elements and create new default values in metadata_fws.mdb as needed. Or
- Use EME tools Edit Menu→Set defaults for each tab to extract defaults or use the icon