

# EME v 3.1 and ArcGIS 10

Working with FGDC metadata in ArcGIS 10



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# Outline

- What's new in the metadata community
- What's new in ArcGIS 10
- Potential Pitfalls
- Using EME v3.1
- Discussion



# What's new in the metadata community



- NAP of ISO 19115/19139 still a work in progress
- FGDC advises agencies to use CSDGM for now\*
- Geospatial One-Stop (GOS) may be retired; merge with Data.gov?

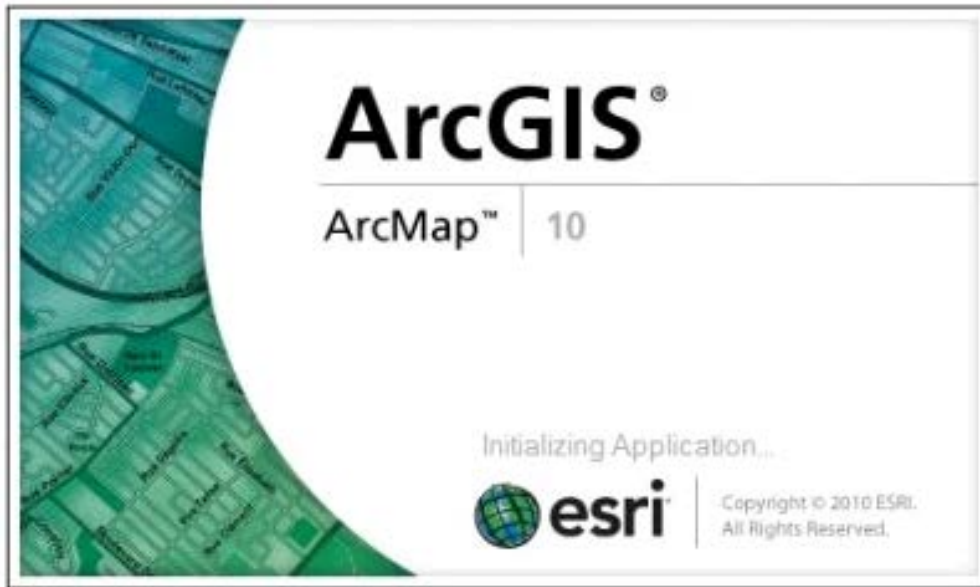
*\*unless you have a pressing need to use ISO*



International  
Organization for  
Standardization



# What's new in ArcGIS 10



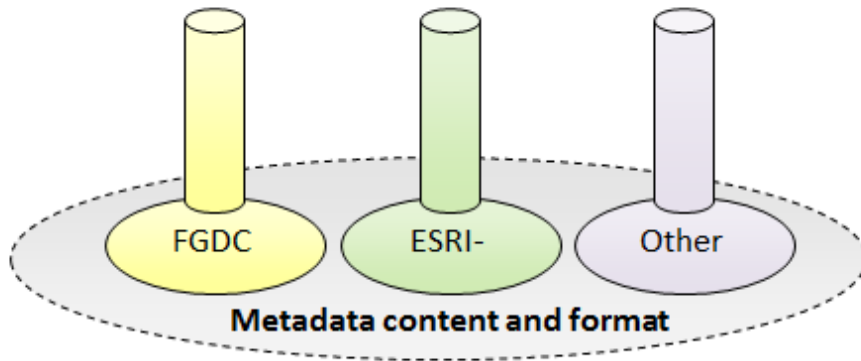
- Biggest metadata overhaul in 10 years
- Changes to many typical metadata business processes
- Main goal: support multiple standards

# What's new in ArcGIS 10

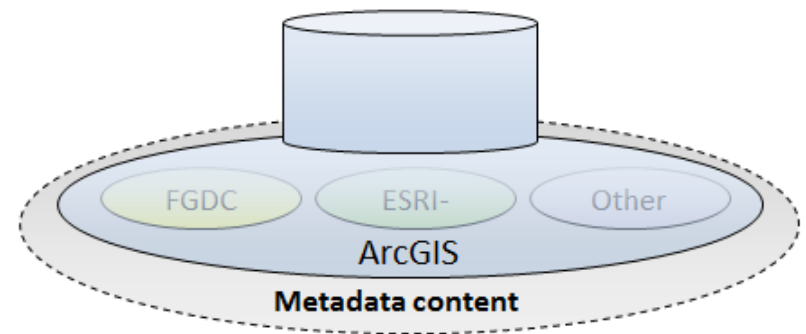
- New approach to metadata storage
  - Called 'Unified' approach (as opposed to old "stovepipe" approach)
  - Idea was to make it **easier** to support multiple standards (change metadata style from one standard to another)



*Stovepipes are out.*



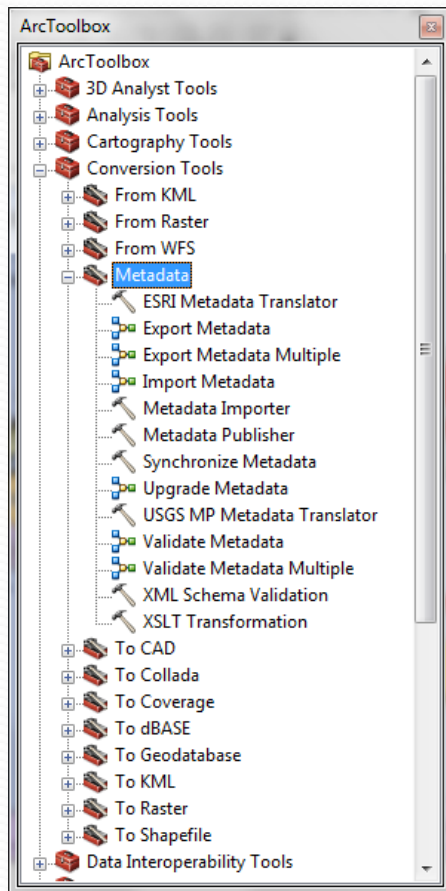
*The ArcGIS 9.3.1 stovepipe model for managing metadata*



*ArcGIS 10 metadata includes content for all standards*



# What's new in ArcGIS 10

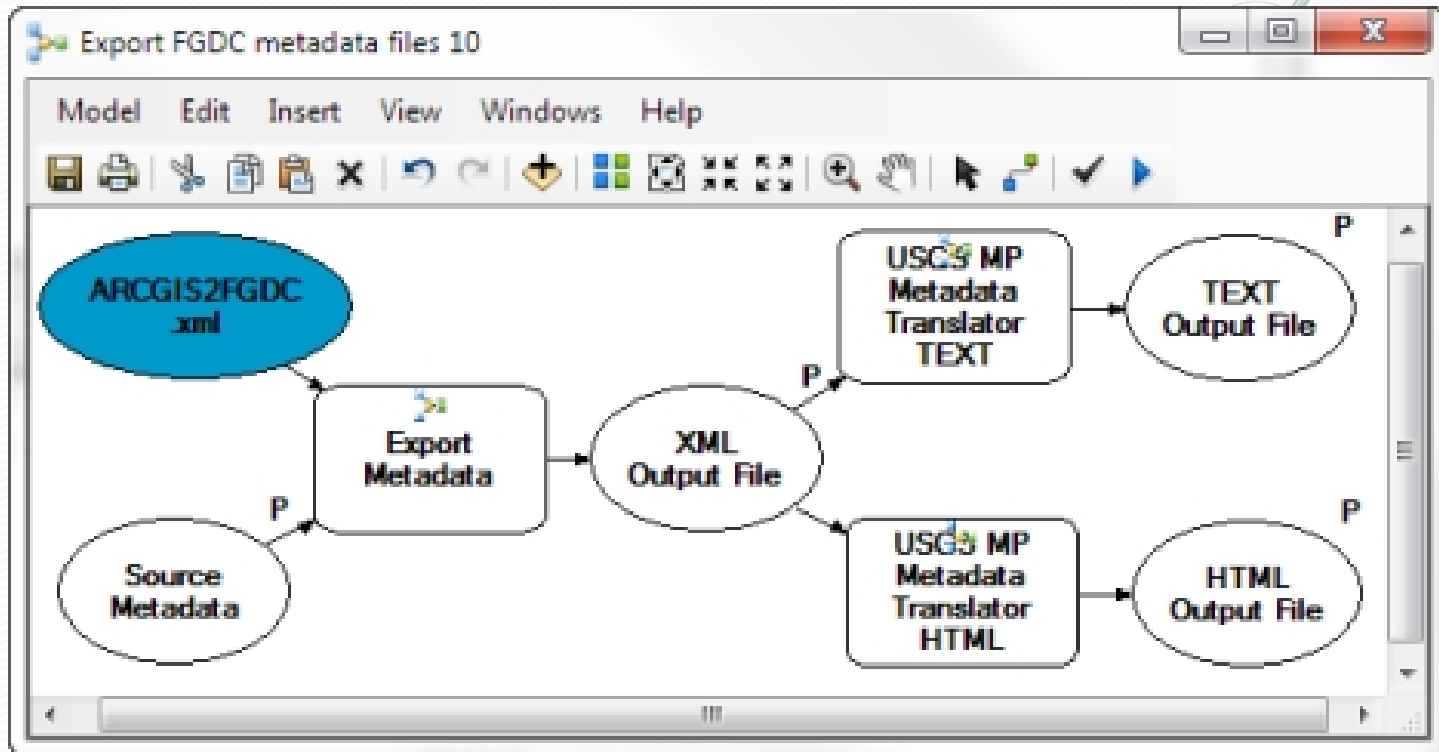


- Different metadata presentation
  - Based on metadata styles
  - Default metadata style is **Description** style
- Metadata tools now available in Toolbox (Geoprocessing tools in Conversion toolbox).
  - New tools in Conversion toolbox support importing, exporting, synchronizing
  - New validation tools
- Integration with ArcGIS software/data processing
  - Different Synchronization
  - Metadata is saved along with layers
  - Changes in map properties are saved to metadata

# What's new in ArcGIS 10

- New FGDC Export Process
  - When exporting FGDC metadata to file formats other than XML, ArcGIS 10 now uses a translator
    - **Old way:** Export to XML, then repeat the export process using other file formats
    - **New way:** Export to XML, then use the USGS MP Metadata Translator tool to create other file formats **from the XML file**
  - Can build a model to export all necessary files in one step

# What's new in ArcGIS 10



Export model for ArcGIS 10



# Potential Pitfalls

- Different default look and feel
- No longer a metadata toolbar in ArcCatalog
- Metadata tools moved to ArcToolbox and are a bit buggy
- Interim files are left on desktop during processing
- **'Metadata Import'** in the main section more of a translator

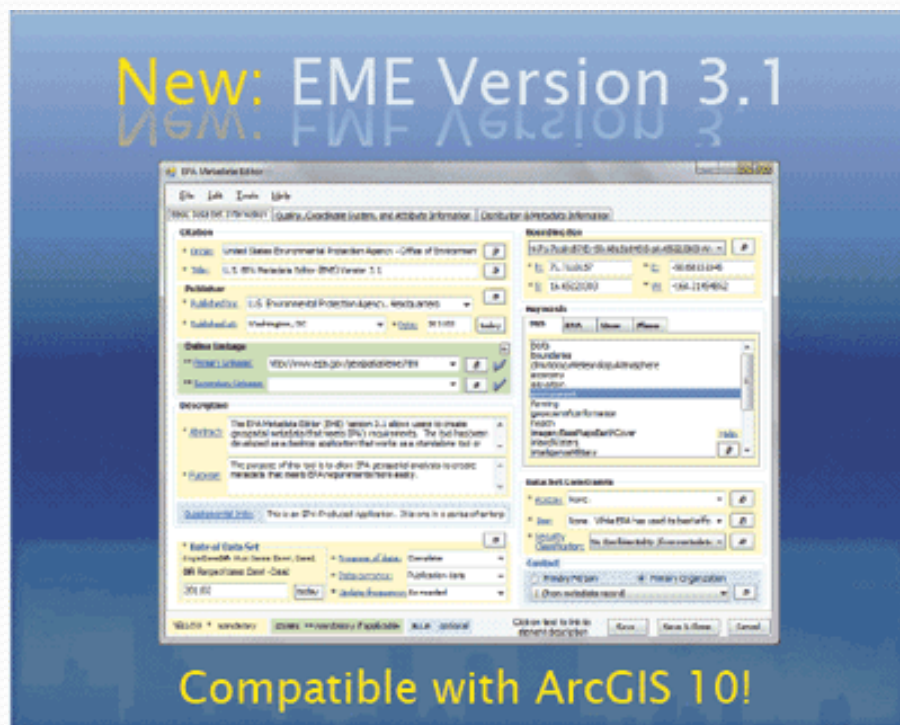


# Potential Problems

- Users have identified some issues...
  - Import/Export problems
  - No more FGDC editor and FGDC stylesheet
  - Issues with updating metadata created in 9.x
  - Validate tool is unreliable
  - Not always possible to duplicate the results shown in ArcGIS Help (especially when creating/editing FGDC compliant metadata)



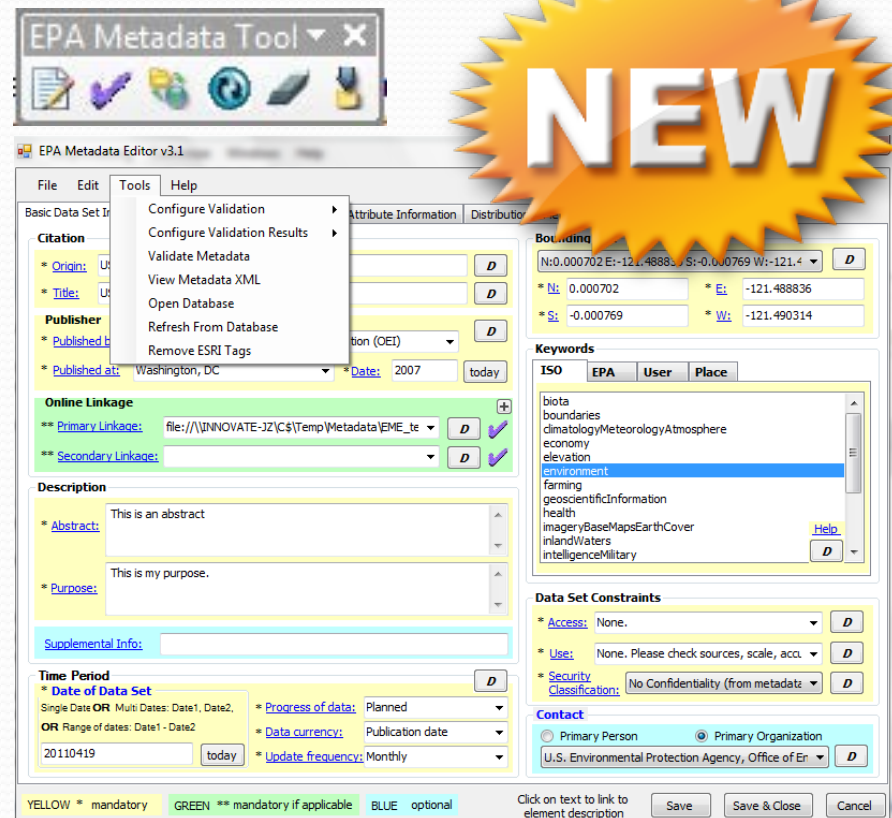
# Enter EME v3.1



- Same simple geospatial metadata editor (3 tabs)
- Maintains ArcGIS 9.X metadata business processes in ArcGIS 10
- Download from <https://geogateway.epa.gov/EME/>

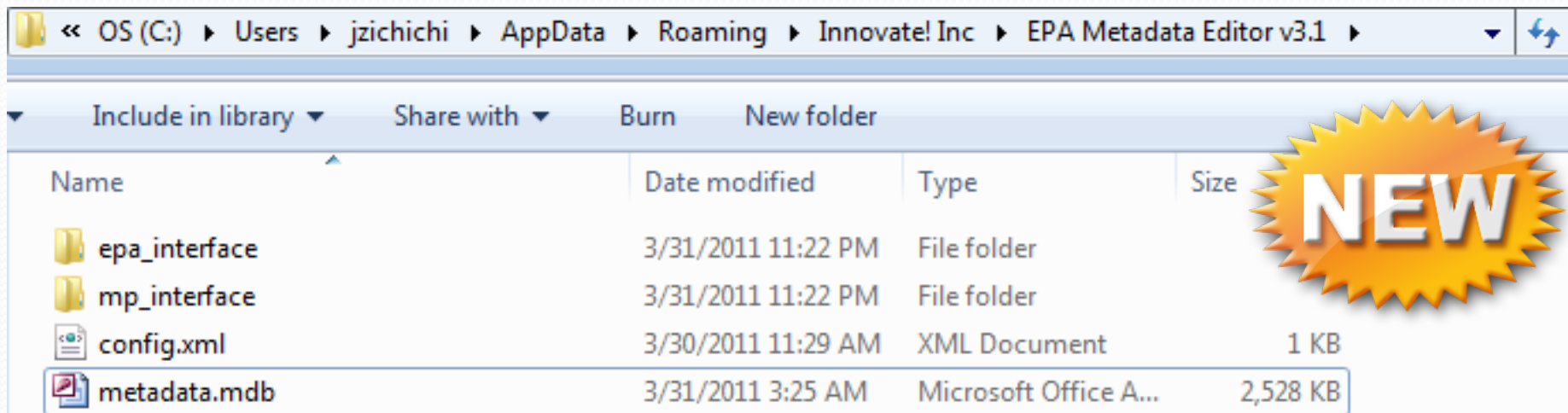
# New in EME v 3.1

- On the face of it – not much! *But....*
- Compatible with ArcGIS 10
- Runs as a standalone application
  - ArcGIS 10 extension calls standalone tool
- Synchronizes FGDC metadata in ArcGIS 10
  - Same configurable EPA Synchronizer
  - Allows user to retain published doc ID if removing ESRI tags
- **Clear all & import** buttons in toolbar
  - One or more records
- Many functions moved to menu bar



# New in EME v 3.1 (cont'd.)

- EME database moved to new location
  - Makes an operational copy of EME database in user directory (e.g., C:\Users\jzichichi\AppData\Roaming\Innovate! Inc)
  - *Still allows user to point to alternative db location in config.xml*
- Allows users to include more than two online linkages in metadata
- Fixes bugs from previous version of EME

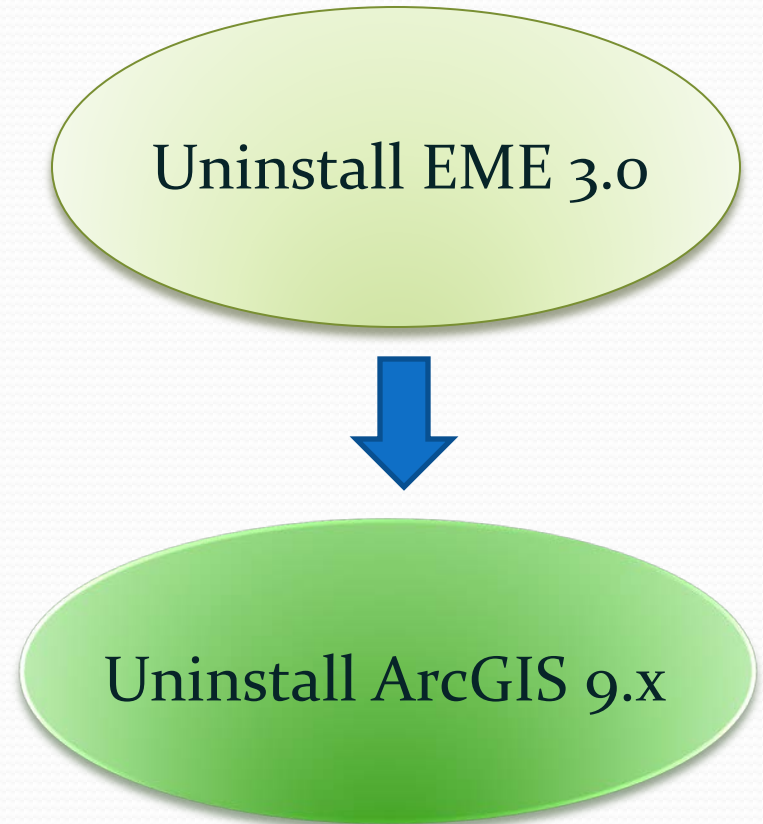


Name	Date modified	Type	Size
epa_interface	3/31/2011 11:22 PM	File folder	
mp_interface	3/31/2011 11:22 PM	File folder	
config.xml	3/30/2011 11:29 AM	XML Document	1 KB
metadata.mdb	3/31/2011 3:25 AM	Microsoft Office A...	2,528 KB



# Using the EME

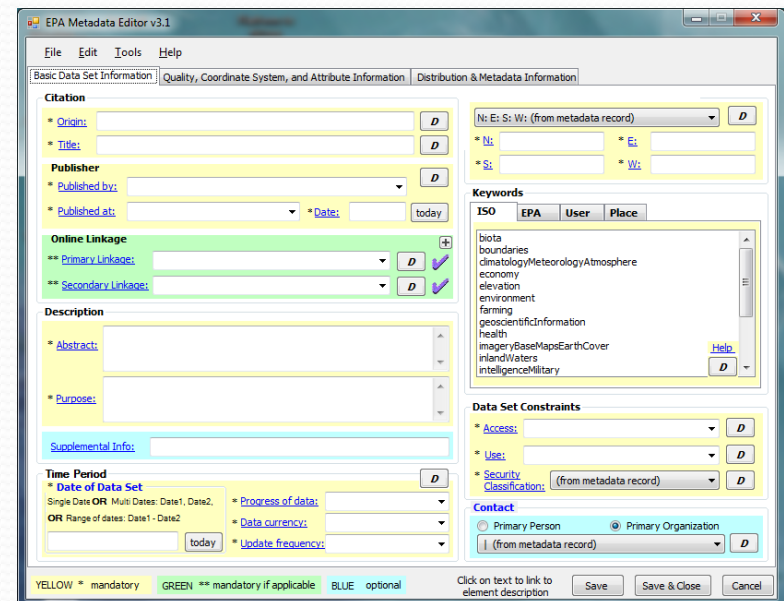
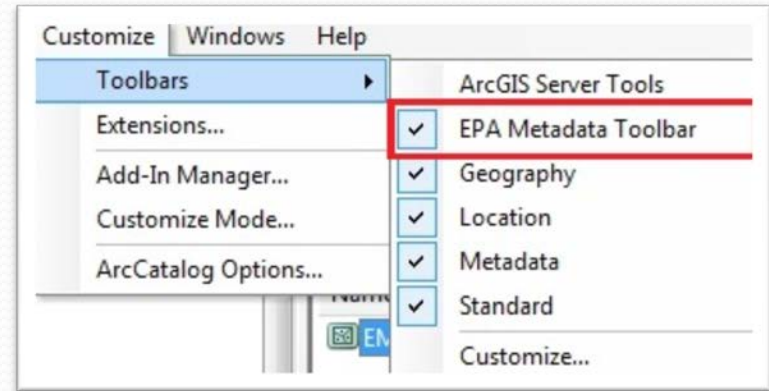
- Installing v. 3.1
  - EME 3.0 must be uninstalled **prior** to uninstalling ArcGIS 9.X.
  - EPA has developed a patch to help address this issue (Included in EME v3.1 download package)
- EME v3.1 Installation Reqts:
  - .Net Framework 3.5 required
  - ArcGIS 10 (for ArcGIS extension)
  - FGDC Style Patch (for ArcGIS extension)





# Using the EME

- Access EME as an ArcGIS Extension from ArcCatalog
- Access EME as a standalone application
  - Start → EPA Metadata Editor



# Using the EME

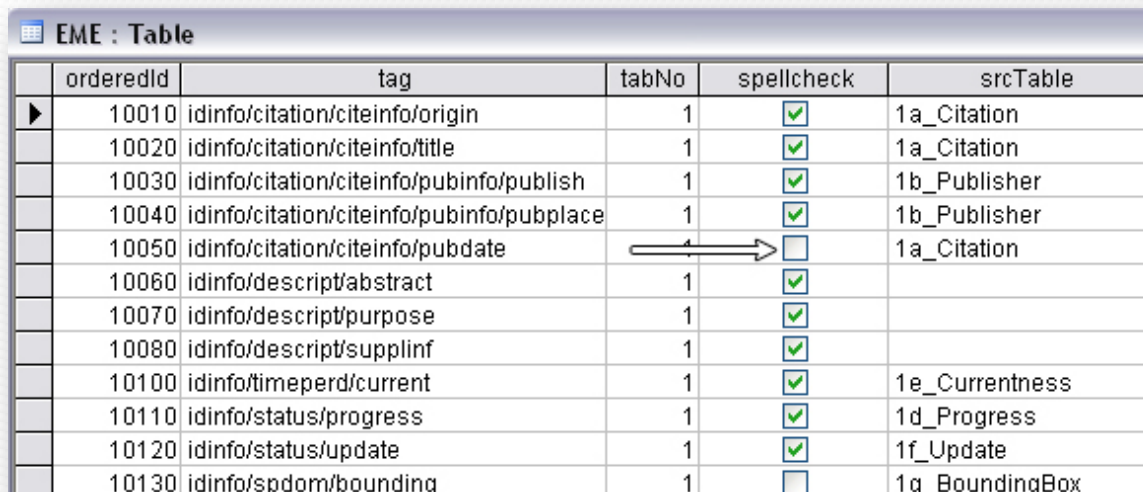
The screenshot shows the EPA Metadata Editor v3.1 interface. The 'Basic Data Set Information' tab is active. The 'Citation' section includes fields for Origin, Title, Publisher, and Published by, all highlighted in yellow. The 'Online Linkage' section includes Primary and Secondary Linkage fields, highlighted in green. The 'Description' section includes Abstract and Purpose fields, highlighted in yellow. The 'Time Period' section includes Date of Data Set, Progress of data, Data currency, and Update frequency fields, highlighted in blue. The 'Supplemental Info' field is also highlighted in blue. A legend at the bottom left indicates: YELLOW \* mandatory, GREEN \*\* mandatory if applicable, BLUE optional. A legend at the bottom right indicates: Click on text to link to element description, Save, Save & Close, Cancel.

## User interface

- Specify information that corresponds to all EPA required elements in Sections 1, 2, 4, 6, and 7 of the FGDC CSDGM.
- Specify some information for Section 5 (Attributes) of the FGDC CSDGM.
- Fields are color-coded
  - Yellow = 'mandatory',
  - Green = 'mandatory if applicable'
  - Blue = considered 'optional'.

# Using the EME

- EME Database
  - EME uses a Microsoft Access database to supply default information within the user interface
  - Database is structured to align closely with the flow of the user interface
  - Modify the database from the EME user interface
  - Change the location of the database as needed



orderedId	tag	tabNo	spellcheck	srcTable
10010	idinfo/citation/citeinfo/origin	1	<input checked="" type="checkbox"/>	1a_Citation
10020	idinfo/citation/citeinfo/title	1	<input checked="" type="checkbox"/>	1a_Citation
10030	idinfo/citation/citeinfo/pubinfo/publish	1	<input checked="" type="checkbox"/>	1b_Publisher
10040	idinfo/citation/citeinfo/pubinfo/pubplace	1	<input checked="" type="checkbox"/>	1b_Publisher
10050	idinfo/citation/citeinfo/pubdate	1	<input type="checkbox"/>	1a_Citation
10060	idinfo/descript/abstract	1	<input checked="" type="checkbox"/>	
10070	idinfo/descript/purpose	1	<input checked="" type="checkbox"/>	
10080	idinfo/descript/supplinf	1	<input checked="" type="checkbox"/>	
10100	idinfo/timeperd/current	1	<input checked="" type="checkbox"/>	1e_Currentness
10110	idinfo/status/progress	1	<input checked="" type="checkbox"/>	1d_Progress
10120	idinfo/status/update	1	<input checked="" type="checkbox"/>	1f_Update
10130	idinfo/spdom/bounding	1	<input type="checkbox"/>	1g_BoundingBox

# Using the EME



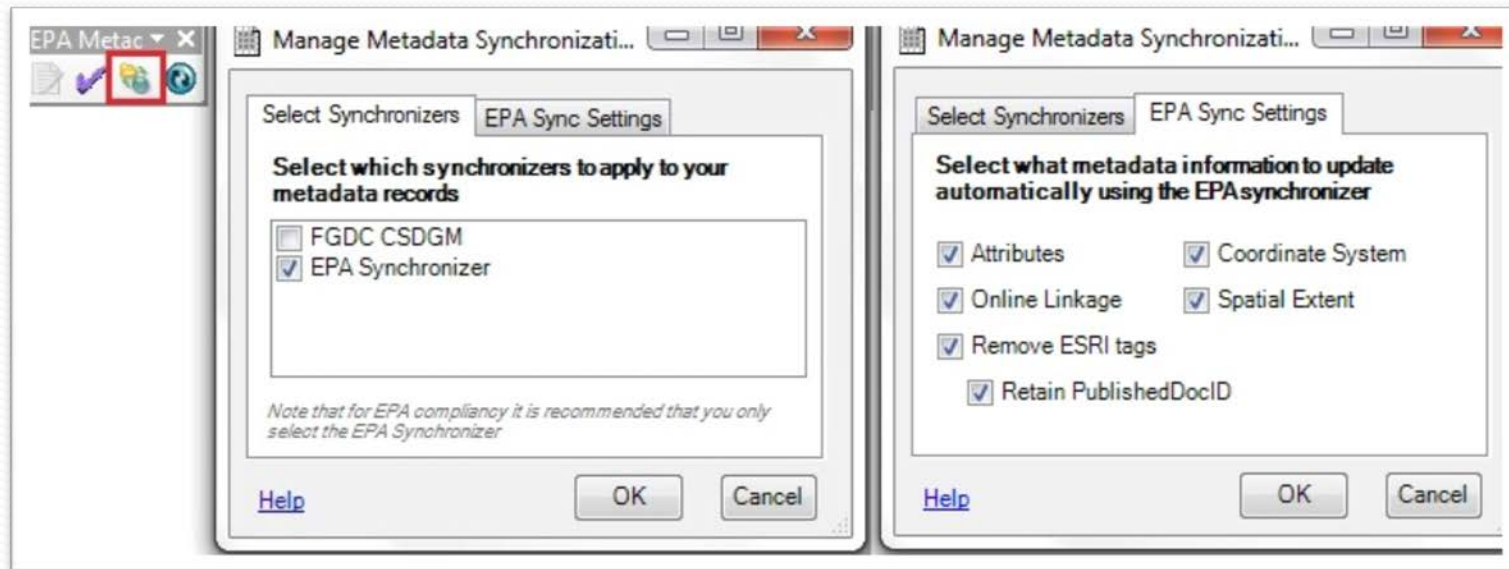
Non-compliant



- Synchronization
  - Automatically insert data properties into metadata
  - Save time and ensures consistency with data
  - Particularly useful for coordinate system and spatial extent

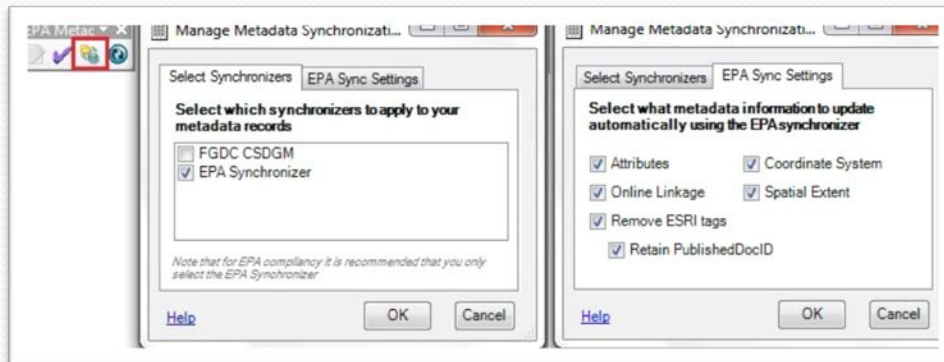
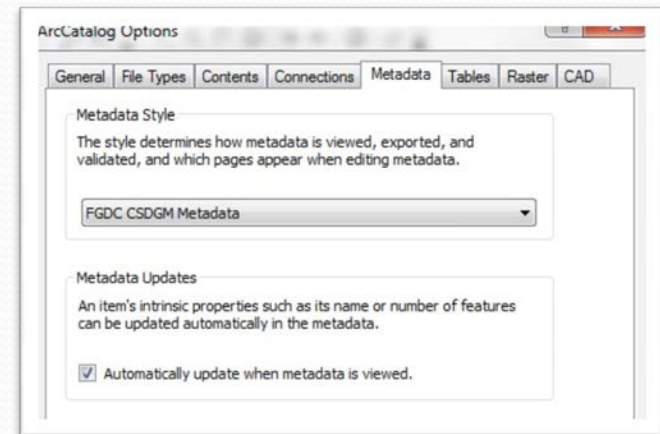
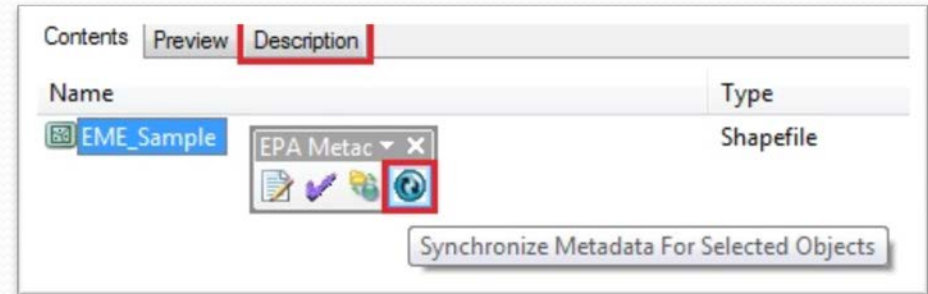
# Using the EME

- The EPA Synchronizer
  - Lets users control which data properties are synchronized
  - Retain information for important elements
  - Avoid inserting unnecessary information
  - Access from EME Toolbar



# Using the EME

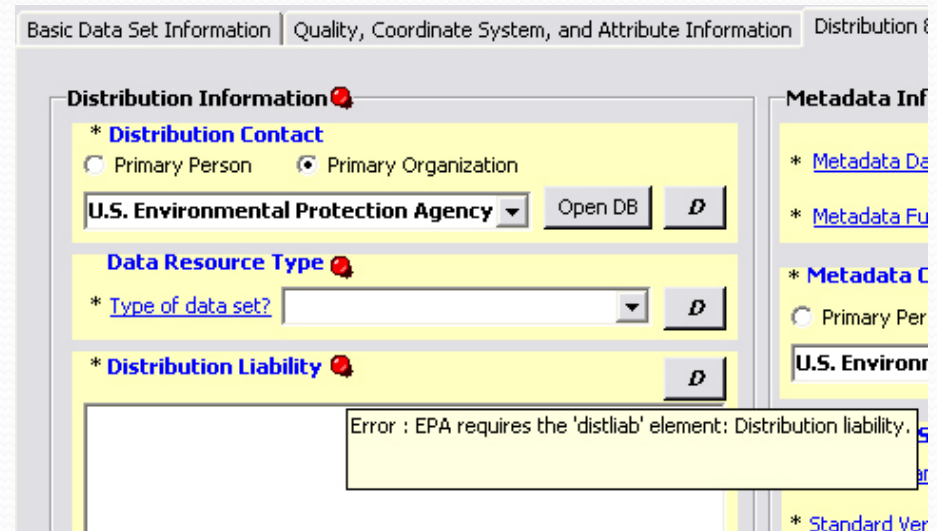
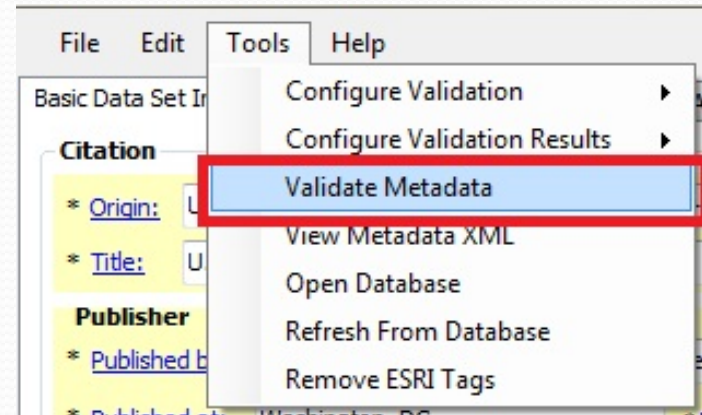
- Set EPA Synchronizer as default
- Select which attributes to synchronize
- Apply synchronization



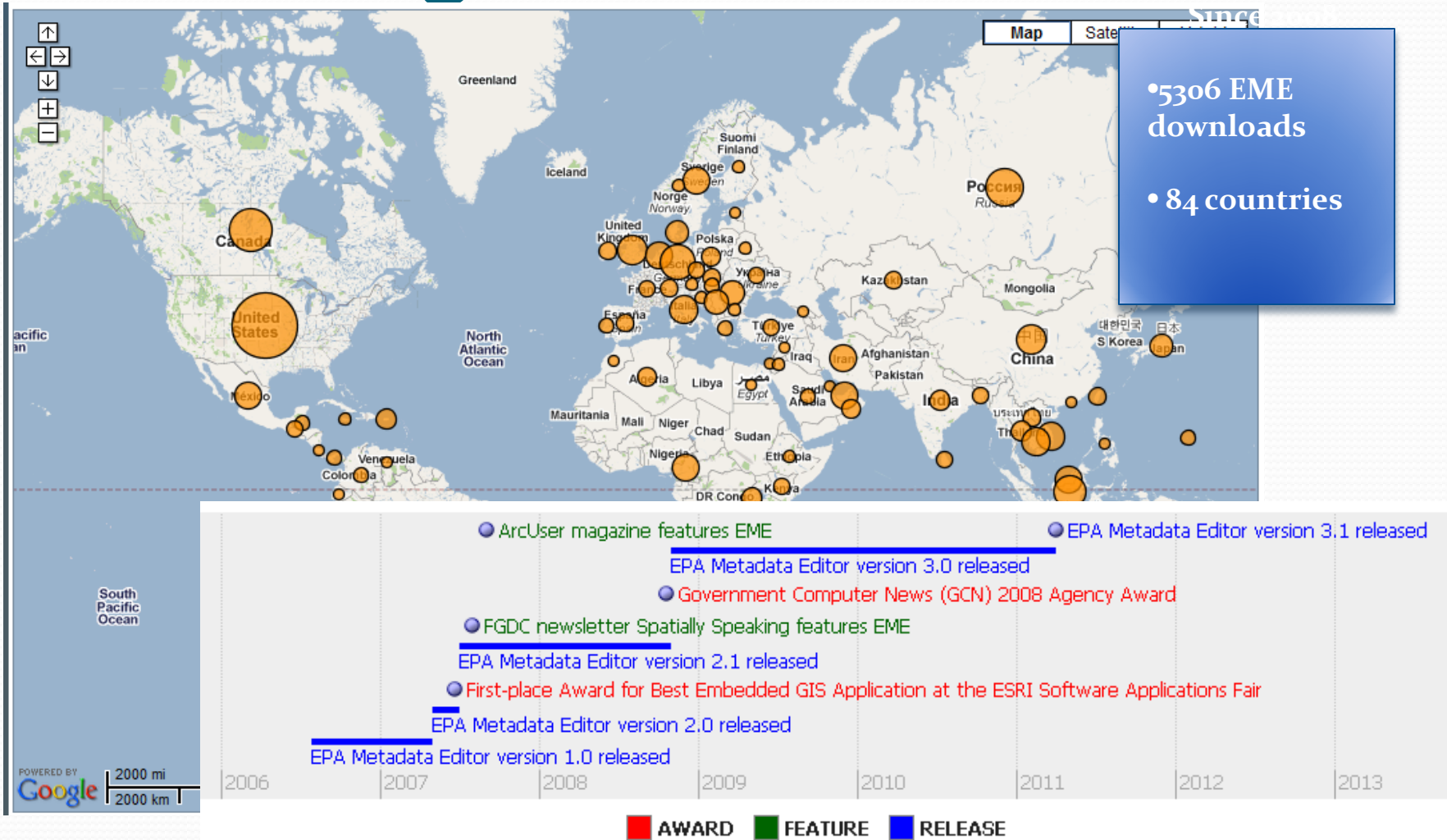


# Using the EME

- The EME Validator
  - Tests metadata records for compliancy with both FGDC and EPA requirements.
- Validate records one at a time or with batch processing
- Results of validation available in:
  - EME user interface
  - Web browser



# EME Usage





## EPA Metadata Editor v3.1 – Validation Results –

No errors or warnings!

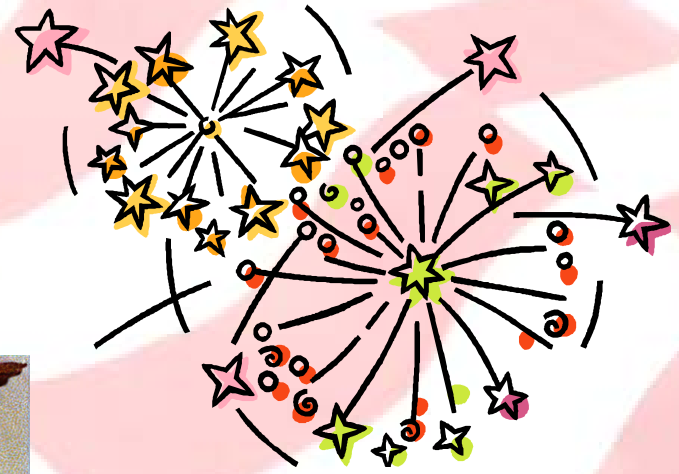
1	<?xml version="1.0" encoding="UTF-8"?>
2	<metadata>
3	<idinfo>
4	<citation>
5	<citeinfo>
6	<origin>United States Environmental Protection Agency - Office of Environmental Information (OEI)</origin>
7	<pubdate>201102</pubdate>
8	<title>U.S. EPA Metadata Editor (EME) Version 3.1</title>
9	<pubinfo>
10	<pubplace>Washington, DC</pubplace>

# Additional Resources

- EME Website
  - <https://geogateway.epa.gov/EME/Home.htm>
- ESRI FGDC Style Patch
  - <http://blogs.esri.com/Dev/blogs/arcgisdesktop/archive/2010/08/25/FGDC-Metadata-Style-Patch.aspx>
- ArcGIS 10 Desktop Metadata Help
  - <http://help.arcgis.com/en/arcgisdesktop/10.0/help/index.html#/00qp0000001p000000.htm>
- ArcGIS Metadata Blog Posts
  - <http://blogs.esri.com/Dev/blogs/arcgisdesktop/archive/2011/01/03/A-new-approach-for-Metadata-with-ArcGIS-10.aspx>
- FGDC Metadata Website
  - <http://www.fgdc.gov/metadata>



# Discussion



# Contact Us

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