

Enthusiasm for Geospatial Metadata Compliancy....

Is it possible?



ESRI Federal User Conference

February 20, 2009



Innovate!



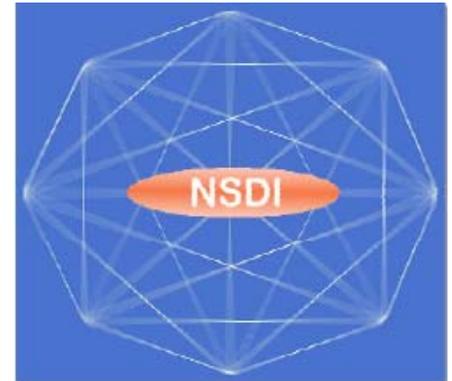
Agenda

- I'm going to tell you a very strange story.....
- About the EPA and Partners Metadata Training
 - Background
 - Approach
 - Follow-up
- Results
 - Feedback received
 - Agency-specific results
- Lessons Learned & Next Steps
- More Information
- Questions



About the EPA & Partners Training: Background

- **What was it?**
 - 2008 FGDC-sponsored CAP grant
 - 6 web-based sessions
 - 1 on-site session at EPA Headquarters
- **What did it cover?**
 - FGDC CSDGM Overview
 - FGDC Compliancy
 - Metadata Editing Tools (EPA Metadata Editor [EME])
 - Metadata Catalogs
 - Geospatial One-Stop (GOS)
 - The North American Profile (NAP) of ISO19115/19139
- **Who was involved and how?**
 - Innovate!, Inc
 - U.S. Environmental Protection Agency (EPA)
 - North Carolina Department of Environment and Natural Resources (NCDENR)



About the EPA & Partners Training: Approach

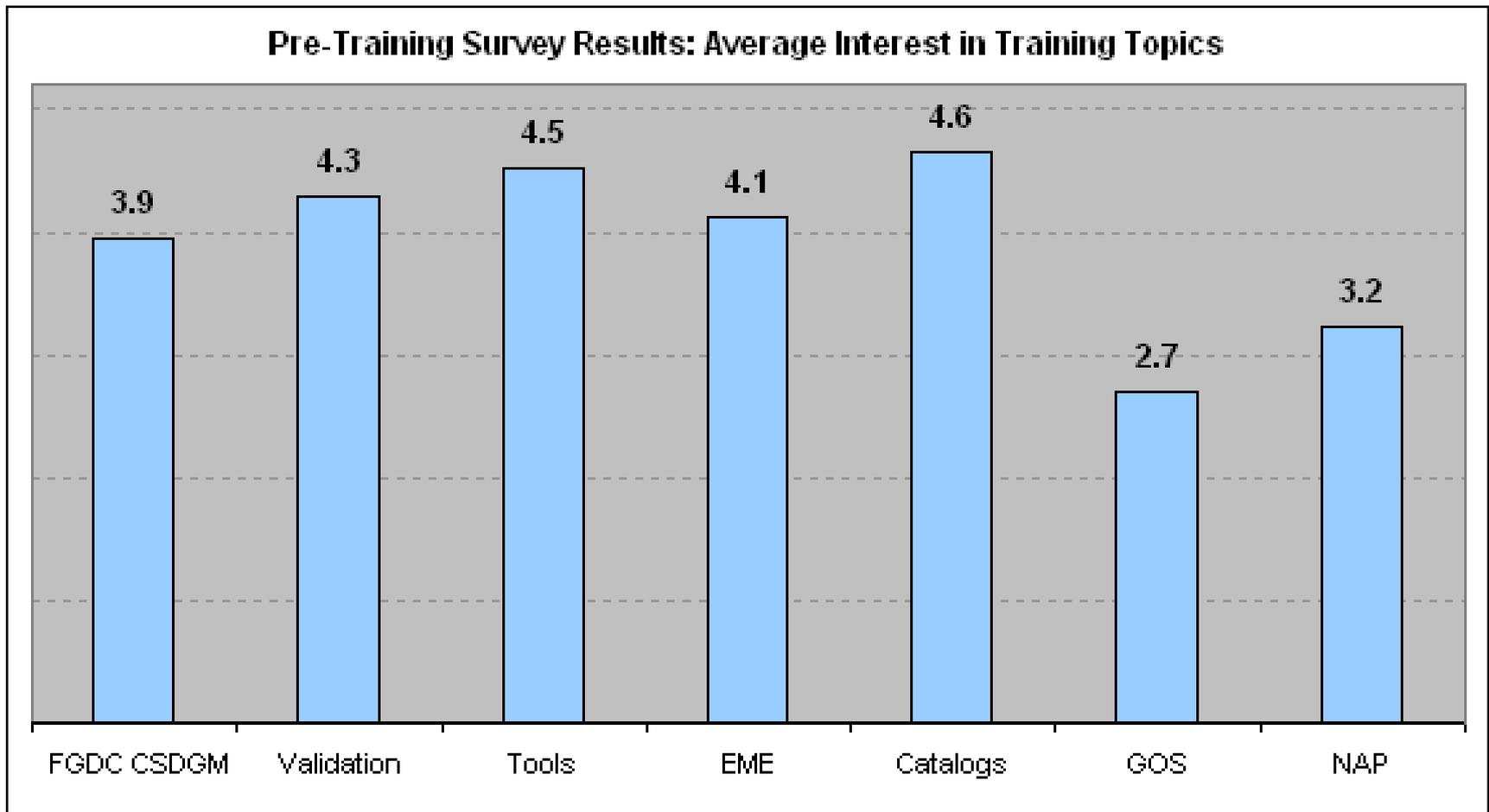
- **What did we do?**
 - Pre-Training preparation
 - Web conferencing
 - Forced 'Enrollment' to track attendees
 - Announcements/invites
 - ~300 email recipients
 - Fliers/Fact sheets
 - Logistics
 - Emphasized that they were free
 - Did not have 'sign-up' or pre-registration
 - Pre-training surveys
 - Intended to guide finalization of materials
 - Follow-up
 - ~2 weeks in advance with materials



About the EPA & Partners Training: Approach

- **Survey feedback**

- 19 respondents
- Federal agencies, states, local governments and Canada



About the EPA & Partners Training: Approach

- **The sessions**

- 3 web courses developed; each held twice
- Close to 200* different participants
 - Over 20 states
 - 30 organizations (incl. Canada and American Samoa)
- 6 on-site attendees



**Many participants were repeat attendees & many attended in groups*



About the EPA & Partners Training: Approach

• Materials & methods

– EPA Materials

- Metadata
- Internal catalog/portal
- Public metadata service
- Web accessible folder (WAF)
- Contributions to GOS
- The EME

– NCDENR Materials

- DRAFT metadata implementation
- Metadata template

– Additional Resources

- FGDC templates & information
- 'Metadata Jeopardy'

**** DRAFT **** Potential NC DENR "Slightly Lighter" GIS Metadata Implementation
To be used for demonstration purposes only

Note: This "Slightly Lighter" metadata implementation includes all mandatory elements from FGDC Sections 1 and 7, plus a few other elements that we feel are the *most* useful pieces of information. This is *not recommended* as a preferred substitute for a full FGDC metadata record, but is a bit more useful than only the minimally compliant sections 1 and 7. This format is under *consideration* as a potentially less time-consuming alternative for business programs whose management do not allocate sufficient staff time to producing and maintaining full FGDC metadata records. It was inspired by the Virginia VGIN's Lite Metadata format.

Under the FGDC CSGDM, **Orange Items** are "mandatory", **Green** are "mandatory if applicable", and **Blue** are "optional". All elements below are mandatory for "lite metadata".

Item Name	FGDC Meta Section	Example Content
Elements for the required FGDC Section 1 – Identification Information are listed below		
Originator or "origin"	8.1 (from section 1.1 – Citation)	NC DENR, Division of Land Resources, Land Quality Section, NC Dam Safety Program
Publication Date or "pubdate"	8.2 (from section 1.1 – Citation)	July 2008
Title or "title"	8.4 (from section 1.1 – Citation)	Permitted NC Dam Locations
Geospatial Data Presentation Format or "geofom"	8.6 (from section 1.1 – Citation)	vector digital data (ESRI 2D point shapefile)
Online Linkage or "onlink"	8.10 (from section 1.1 – Citation)	Dam Safety Program Website: http://www.dlr.enr.state.nc.us/pages/damsafetyprogram.html (note, you may offer more than one Online Linkage element, for instance, to separately document a data download url and possibly an Internet Map Service url)
Abstract or "abstract"	1.2.1 (from 1.2 Description)	This dataset represents permitted dam locations for the State of NC, as recorded in the NC DENR Division of Land Resources' dam permitting and inspection database. This database also provides NC dam information to FEMA's National Inventory of Dams (NID).
Purpose or "purpose"	1.2.2 (from 1.2 Description)	The purpose of this data set is to provide a geographic representation of the location of permitted dams in the State of North Carolina. This spatial dataset is intended for general planning and mapping purposes rather than highly accurate engineering purposes.
Supplemental Information or "supplin"	1.2.3 (from 1.2 Description)	Dam Locations are derived from a variety of sources: paper 7.5 minute USGS Topo Maaps, commercial TopoUSA digital maaps, Aerial Imagery from various government sources, Google Earth, or from either recreational or mapping grade GPS units. The lat/lon coordinates generated from any of the above methods are entered into the Dam Safety Program's Oracle permitting database. Periodically, an export of lat/lon coordinates and selected database attributes are exported from Oracle into a flat file and imported into a GIS system to generate an ESRI shapefile. Data is reprojected to NC State Plane Coordinate System from Lat/Lon. Note that some of the older dam coordinates may have been interpreted from paper maps or generated by older versions of TopoUSA software that used 1927 datum and that it is not possible to determine those conclusively and to apply the correct datum transformation at the feature level. Many, but not all, of the coordinate locations for dams in this dataset have been verified with either mapping grade GPS or by aerial photo interpretation using ortho-rectified imagery with 1 meter pixel resolution (or better). Consistent horizontal positional accuracy for this

About the EPA & Partners Training: Follow-up

• Post-training activities

- Free follow-up consultation
 - ~10 different inquiries
- Contest winner prizes
 - *Thank you Sharon!*
- Post-training surveys
 - 12 surveys received
- Training modules & videos
 - Accessible from EPA's website
- Paper for ArcUser
 - Consolidated training information
- EME version 3 release
 - All attendees included in release



EPA and Partners Metadata Training Program: 2008 CAP Project

Using the EPA Metadata Editor (EME) 3.0

Module 1: Installing and Configuring the EME

The slide features a blue header with the text 'EPA and Partners Metadata Training Program: 2008 CAP Project'. Below this is a white box with a blue border containing the title 'Using the EPA Metadata Editor (EME) 3.0' and the subtitle 'Module 1: Installing and Configuring the EME'. At the bottom of the slide, there are three logos: NCDENR (National Center for Data and Information Management), fgdc (Federal Geographic Data Committee), and Innovate! (Innovation in Environmental Data). The year '2008' is visible in the bottom right corner. A video player interface is overlaid on the slide, showing a play button and a progress bar.

Training Results

- **What *real* results did we achieve?**

- We didn't completely bore everyone:
 - “It is great that this training is available to everyone free of cost and online. Thanks! I found these tools and materials much more informative than anything else I've tried in the past 2 months.”
- Some people actually wanted to go through it again:
 - “I concur with the request to record the webcast/audio for others to be able to see it or just to be able to watch it again myself since there was so much valuable information presented in this situation.”
- Some people indicated that they were looking forward to doing metadata
 - “The training was helpful. I look forward to implementing it on our next federal project. I also look forward to implementing similar standards in the future at the state level.”
- Some people wanted to come back for more:
 - “As I indicated in my feedback for the Introductory course, I hope you will offer a similar course associated with NAP in 2009.”
- Others were just thankful
 - “I just wanted to say thank you for hosting the metadata training, it has been extremely valuable for the users who have taken it....I wanted to let you know that your efforts are certainly realized throughout the geospatial community and are capturing the interest of the legal/justice community, too.”

Training Results

- **Agency-specific results (NCDENR)**

- Training:

- ~20 attendees present at all sessions
- Learned to use the EME for their specific needs



- Products:

- Developed a DRAFT metadata implementation
 - Review and comments obtained through this effort
 - Still in progress at this time



- Future Work:

- NCDENR personnel discussing setting up an Agency metadata catalog in 2009





Training Results

- **Agency-specific results (EPA)**

- Training:

- At least 24 EPA staff/contractors trained
 - 9 different locations
 - Attendees indicated they will use the training

- Products:

- Provided materials for Agency use
 - Training modules
 - Post-training videos
- EPA on-site training at a GIS Workgroup meeting
- Promoted use of Agency resources

- Future Work:

- Will continue to use materials
 - EME 3 videos and training modules
 - Other basic metadata training materials



Training Results

- **Agency-specific results (FGDC)**
 - Promoted FGDC compliancy & metadata sharing across the US (and beyond)
 - Some take home messages:
 - People want to understand the standards
 - » Not just for academics!
 - Free may be key
 - Interest in new technologies?
 - » Catalogs and sharing tools
 - Thinking Ahead
 - Recurring web-based metadata training series?



Lessons Learned and Next Steps

- **So if I were to do this again.....**
 - Announcement
 - 6 weeks in advance was good, but bad
 - Send inquiry about 3 months ahead to obtain interest
 - Invites
 - Try some additional venues for posting
 - Target states missing from this set of sessions
 - Logistics
 - Give a bigger window around release of a key software product
 - Include a how-to in getting set up with web conference
 - Fix the collaboration suite & phone
 - Ask about planned fire drills....
 - Materials
 - Obtain samples from additional groups (if they dared!)
 - Get even more duck paraphernalia.....
- What's next?
 - **Short-term:** Follow-up with participants
 - **Long-term:** Can't apply for FGDC grant for 2 years



More Information

- People:
 - My Info:
 - Jessica Zichichi: jzichichi@innovateteam.com
 - EPA:
 - Michelle Torreano: torreano.michelle@epa.gov
 - NCDENR:
 - Julia Harrell: julia.harrell@ncmail.net
 - FGDC CAP Coordinator:
 - Gita Urban-Mathieux: burbanma@usgs.gov
 - FGDC Metadata Coordinator:
 - Sharon Shin: sshin@usgs.gov
- Places:
 - Innovate website:
 - <http://innovateteam.com>
 - EPA geospatial website:
 - <http://www.epa.gov/geospatial>
 - <http://www.epa.gov/geospatial/eme.html>

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EPA and Partners Geospatial Metadata Training

The EPA and Partners Geospatial Metadata Project will provide metadata training and instruction for EPA's geospatial community, other federal agencies, state agencies, tribes, and additional groups (e.g., organizations, academia, local government agencies, and/or private companies). Any interested party is invited to join.

Web Conference and Teleconference Information:
Web Conference URL: <http://portal.epa.gov/webconference>
Conference Key: 2774
Teleconference Phone Number: 1-712-432-7308
Participant Code: 92696#

Materials for the sessions will be made available below
(click on those shown in orange to view/download)

- Detailed Training Information
- Pre-Training Survey
- Introductory Presentations

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EPA Metadata Editor (EME)

The EPA Metadata Editor (EME) was developed to simplify and standardize geospatial metadata development across the Agency. It allows users to create and edit geospatial metadata records that meet the EPA Geospatial Metadata Technical Specification and Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata (CSDGM) requirements.

The EME version 3.0 is the current version of the EME. It was released on October 31, 2008.

Available Downloads:

- Download the [EME 3.0](#) (Zip format, 3.2MB)
- Download the [EME Installation and Configuration Instructions](#) (Text document, 5KB)
- Download an [Example Metadata Record](#) (XML document, 10KB)
- Download the [EME Source Code](#) (Zip format, 5.7MB)

EME Announcements:

- **October 31, 2008:** EME version 3.0 released
- **October 20, 2008:** Government Computer News (GCN) honors EPA for its [GeoData Gateway and EPA Metadata Editor with a 2008 Agency Award](#) [EPA 2008]
- **September 2007:** [ArcUser Magazine](#) features [EME](#) [EPA 2007]
- **July 3, 2007:** EPA Metadata Editor version 2.1 released
- **June 22, 2007:** EPA Metadata Editor wins first place for Best Embedded GIS Application at the ESRI International User Software Applications Fair.
- **May 1, 2007:** EPA Metadata Editor version 2.0 released
- **July 28, 2006:** EPA Metadata Editor version 1.0 released



Any Questions?

- Thank you for your time today

