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Protecting the beauty and biodiversity of Sonoma Valley

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Agreement Number: NSDI CAP G12AC20129

Project title: Metadata Training and Support for Conservation Practitioners

Final Report

Organization: Sonoma Ecology Center, Mailing address: PO Box 1486, Eldridge, CA 95431; Street Address: 20 East Spain Street, Sonoma CA 95476; www.sonomaecologycenter.org

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alex@sonomaecologycenter.org.

Collaborating Organizations: California Conservation Commons, North Bay Climate Adaption Initiative, California Landscape Conservation Cooperative, California Resources Agency CERES Program.

Executive Summary:

Sonoma Ecology Center has provided FGDC metadata training and support to North Bay Climate Adaption Initiative (NBCAI), California Landscape Conservation Cooperative (CA-LCC), and North Bay GIS User Group partners and facilitated sharing of their data and metadata through the California Conservation Commons.

An online survey on metadata training needs and interests was begun in October 2012. The targeted audiences were GIS professionals in northern California and the climate change community in the San Francisco Bay area. However, numerous responses were received from across the contiguous US. SEC analyzed responses received for inputs on refining our metadata training offerings.

With the recent increased focus on the incorporation of climate research into conservation practice, and the rapidly changing and highly technical nature of climate change data products, it is critical that spatial data is shared effectively and is thoroughly documented. The NBCAI and CA-LCC partners are committed to sharing their climate and conservation data through the California Conservation Commons websites: the San Francisco Bay Area Conservation Commons (SF Commons, <http://sfcommons.org>) and the CA-LCC California Climate Commons (<http://climate.calcommons.org>). Our trainings focused on FGDC metadata creation and data sharing through the California Climate Commons to serve these communities.



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Project Narrative:

To best meet the goals of metadata training and outreach assistance for conservation scientists in Northern California, we decided to tackle the issues using a multi-thread approach. We first needed to take the pulse of our constituents in the conservation community to focus the efforts of our trainings. A survey and online forum were distributed to determine what training needs of our community were. Second, we looked at what datasets were already being shared and how best to provide metadata efficiently and completely for large datasets with multiple variables. Third, we refined our training materials and provided a use-case scenario that exemplified how to best use the FGDC CSDGM for creating spatial metadata.

Due to staffing changes and illness, the project team experienced a few hurdles in the beginning. Ultimately though, the original team was able to come together again in a slightly extended timeframe to complete the trainings and metadata outreach. Given the expanded timeframe and new developments in the software tools and documentation, we were able to form much of the instruction around Esri's ArcCatalog 10.2 platform. We were delighted to learn that some of the third-party tools and functionality used to create metadata for our earlier use-case scenario were finally integrated into the Esri suite, thus allowing for streamlined metadata creation.

Project Step 1. Publishing plans to deliver metadata training and asking for input on metadata needs and interests thru an online survey and an online forum.

In October 2012 we announced publishing plans at a monthly meeting of the local GIS Users' forum, hosted by the County of Sonoma GIS Department. Paper copies of the online survey were made available at that meeting, and we received a number of responses from attendees then. Plans for the upcoming online forum were also announced at that time to the San Francisco Bay Area climate change community.

By Dec 11, 2012, a total of 85 individuals had responded. A summary of these responses is included as **Attachment A**. The detailed responses are also included as **Attachment B**. This level of response is heartening. [Metadata survey results and online forum responses were compiled and analyzed to determine the format and focus topics of our metadata trainings.](#) Through the results we came to several major conclusions:

1. A series of short webinars are popular choice for training method.
2. There was limited interest in a single all day training session.
3. The majority of respondents use the FGDC CSDGM content standard.
4. Most respondents would like more training in ESRI ArcCatalog10.x and the FGDC metadata editor add-in for ArcCatalog 10.x.



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5. Respondents have had difficulty transitioning to the ArcCatalog 10.0 and 10.1 incarnations of the metadata editor.

Project Step 2. Metadata creation and data sharing support and resources.

Key contributors of climate data were identified and metadata development support was provided for the CA-LCC and USGS Climate Scientists.

Metadata records were written for the California Basin Characterization Model, created by Alan and Lorraine Flint (USGS). This is a collection of over 19,000 datasets, 14 climate variables, covering 5 climate scenarios (1 historical and 4 future) and 180 years (90 years historical and 90 years future). 14 metadata records were written, one for each climate variable, representing over 1,300 datasets. A review group of 'end user' scientists reviewed work products. The final product contains project specific content on processes used to calculate/model each variable as well as overview of the BCM process and summary of all variables.

Project Step 3. Providing training workshops on metadata creation, data management and data sharing practices using the FGDC standards and the Conservation Commons.

Three training sessions were provided in webinar and live presentation format. Using the results of our survey, we developed a metadata training series that focused on FGDC CSDGM and Esri 10.x toolsets. The trainings also covered background and history of the CSDGM, available resources and references, additional training materials, as well as the importance of metadata to users and data managers both within and outside of organizations.

Training and Outreach Assistance:

A. Webinar and Workshop Training Series

Guided by the results of our survey and online forum, training materials were developed, assembled and refined to reflect the needs of the conservation community. Likewise, our training plans were modified to accommodate as many audience members as possible. To that end we developed two ninety-minute online webinar sessions and one live three-hour workshop training session. The first webinar session entitled Metadata and the Data Life Cycle was presented by Deanne DiPietro on January 23, 2014. The second webinar session, Writing and Managing Metadata in ESRI Arc Environment was presented by Deanne DiPietro, Alex Young, and Bryan Sesser on February 27, 2014. The workshop session was presented at the North Bay GIS User Group meeting on February 26, 2014 by Deanne DiPietro, Alex Young, and Bryan Sesser. The workshop session covered material presented at both of the webinars.



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In querying metadata users and creators, we found that many expressed frustration with the lack of documentation and the need for outside resources with the changes to ArcCatalog metadata editor in recent years. Fortunately, Esri ArcCatalog 10.2 was released prior to the scheduling of the trainings as the newest release comes with the most complete metadata help documentation since the release of version 10.x. Our trainings presented practical-use demonstrations and a wealth of resources for expanded learning opportunities.

The workshop training and webinar series combined were attended by over 40 people from a wide range of government and non-government organizations including: CA-LCC, Campo EPA, City of Petaluma GIS, City of Santa Rosa, ECON, Esri, Marin County Public Works, NBCAI, NOAA Fisheries, Ocean Spaces, Point Blue Conservation Science, Santa Rosa Junior College, Sonoma County Ag. Commission, Sonoma County GIS, Sonoma County Health, Sonoma County Planning, Sonoma County Water Agency, Sonoma Ecology Center, Sonoma Land Trust, Sonoma State University, US Fish and Wildlife Service, and US Geological Survey.

The training sessions were given in a lecture format with PowerPoint slides before a live audience and again with the slides broadcast by webinar. The webinar and workshop were promoted through the CA-LCC newsletter, Sonoma Ecology Center and FGDC websites, as well as email list-serves including The North Bay GIS User Group, Bay Area Ecosystems Climate Change Consortium (BAECCC) and CA-LCC.

An evaluation survey was provided to attendees of the training sessions and summary results can be found in Attachment C of this report. The survey was distributed through the listserve for the North Bay GIS User Group and a reminder email was sent to encourage responses. Despite our efforts, we had very few responses to the survey. Immediate feedback regarding the live training session was overwhelmingly positive and our impressions of the series overall were that they were well received. We have concluded that in the future a survey form should be distributed in person following the training session rather than online.

B. Outreach Assistance:

Metadata creation assistance focused on the California Basis Characterization Model (Flint, 2010). This is a keystone collection for the CA-LCC. A collection of this size and complexity posed challenges in organization and information represented in final metadata.

BCM metadata Abstract

The California Basin Characterization Model (BCM) dataset provides historical and projected climate and hydrologic surfaces for the region that encompasses the state of California and all the streams that flow into it at a 270 meter resolution. The historical data is based on 4 kilometer



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PRISM data, and the projected climate surfaces are based on the A2 and B1 scenarios of the PCM and GFDL GCMs. The BCM approach uses a regional water balance model based on high resolution downscaled precipitation and temperature as well as elevation, geology, and soils to produce surfaces for a wide range of variables. These variables include maximum temperature, minimum temperature, precipitation, potential evapotranspiration, runoff, recharge, climatic water deficit, actual evapotranspiration, sublimation, soil water storage, snowfall, snowpack, snowmelt, and excess water. Data is distributed as 30-year monthly summaries and 30-year water year summaries, with month-by-month data for each year available by special request.

The paper “Development and Application of Downscaled Hydroclimatic Predictor Variables for Use in Climate Vulnerability and Assessment Studies” (available at <http://climate.calcommons.org/bib/development-and-application-downscaled-hydroclimatic-predictor-variables-use-climate>) describes the Basin Characterization Model (BCM), a map-based, mechanistic model used to process the hydrological variables. Three historic and three future time periods of 30 years (1911–1940, 1941–1970, 1971–2000, 2010–2039, 2040–2069, and 2070–2099) were developed that summarize 180 years of monthly historic and future climate values.

Status of Metadata Service:

Metadata, in both compliant and non-compliant FGDC form, is now being served, along with numerous other services, on the following websites. The California Climate Commons site (<http://climate.calcommons.org>) is preparing to host FGDC compliant metadata as it is created and becomes available.

- The two sites supporting the California Climate Commons (<http://climate.calcommons.org>) and (<http://sfcommons.org>).
- The North Bay Climate Adaption Initiative (<http://northbayclimate.org>).
- The California Landscape Conservation Cooperative (<http://californialcc.org/>).
- California BCM (A. Flint, L. Flint, 2010) (<http://climate.calcommons.org/dataset/10>)

Completing metadata for the California BCM, to the satisfaction of reviewers and accommodating the complexity of a collection of this size, was quite laborious. The result is 14 variable focused metadata records each of which is distributed with the over 1,300 individual datasets for that variable.



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Next Steps:

Metadata resources and information are available on the California Climate Commons website's metadata page <http://climate.calcommons.org/article/metadata-training-2014> and are listed with links below. In addition, the metadata discussion forum will continue to be monitored and questions addressed as they arise. <http://climate.calcommons.org/forums/metadata-discussion>

The Sonoma Ecology Center, the CA-LCC and the California Climate Commons team will continue to provide metadata instruction, resources, and guidance to climate change scientists as data becomes available and is shared throughout the community. The resources listed below are available on the Climate Commons website.

FGDC Metadata Training Webinars and Additional Resources

Subjects:

- [metadata](#)
- [data sharing](#)

Table of Contents

[Metadata Discussion Forum](#)

[Recommended Resources for Getting Started with Metadata](#)

[Training Series Description](#)

Metadata Discussion Forum

Ask your questions on the [Climate Commons online forum on metadata](#) and we will help you get answers from the experts.

Recommended Resources for Getting Started with Metadata

Help for Getting Started

- [The FGDC CSDGM Specification](#)
- The FGDC's "[Why bother with Metadata?](#)", especially see Lynda Wayne's "[Institutionalize Metadata Before It Institutionalizes You](#)" for help establishing best practices in your organization.

Tools

- [USGS Online Metadata Editor](#)



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- [EPA Metadata Editor](#)
- [FGDC Geospatial Metadata Tools](#)
- [Metadata tools overview matrix](#)

Helpful Guidance and Examples

- ["Writing Good Metadata"](#) from Marine Metadata Interoperability. Also has other useful materials that are nicely presented.
- Example metadata records: [CSDGM](#) and [ISO format \(XML\)](#)
- [FGDC webinar: All about the ISO standard and help with adopting it](#)
- [How to Register Data on the Geoplatfrom/Data.gov Catalog](#)
- [Metadata Best Practices \(from the FGDC\)](#)
- [NSGIC Metadata Primer](#)
- [NSDI Training Resources](#)

Training Series Description

With the increased focus on the incorporation of climate research into conservation and planning practice, and the rapidly changing and highly technical nature of climate change data products, it is critical that spatial data is shared effectively and is thoroughly documented. This two-part training will focus on FGDC metadata creation and data sharing to serve the research, conservation, and planning communities in their effort to support "climate-smart" conservation and planning.

These two 1.5 hour webinars offered by [Sonoma Ecology Center](#) in partnership with the [CA LCC](#) are intended to provide just the right amount of information to get an organization confidently on-track with this important element of data management. You spoke and we listened! We used the results of a [survey](#) to develop the curriculum.

Webinar #1: "Metadata and the Data Life Cycle"

Wednesday January 23, 2014, 1:00--2:30 PST

This session will introduce spatial metadata, its uses and benefits in and outside of an organization, and its role in supporting the application of science in climate-smart planning. We will touch on the national and international standards, the options for sharing your geospatial data and its metadata, and how to decide what is right for your organization with respect to these choices. We'll take the case of the CA LCC as an example of best practices for researchers and agencies.

Instructor: [Deanne DiPietro](#)

Webinar #2: "Writing and Managing Metadata in ESRI Arc Environment"

February 27, 1:00-2:30 PST



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This session will introduce the FGDC's Content Standard for Geospatial Metadata, look briefly at the array of useful tools for creating metadata, then demonstrate the creation of a metadata record using ESRI's 10.2 Arc Catalog. We will use data from a USGS climate model called the Basin Characterization Model to show how metadata for climate change data can be made using templating and drawing upon source materials. We will show the importance of well-filled-out metadata, talk about why it is needed to support research and planning, and touch upon ways to share your own metadata.

Instructors: Alex Young and Bryan Sesser

Recording of both the webinars: [Stream recording](#) | [Download recording](#)

Feedback on Cooperative Agreements Program:

What are the CAP Program strengths and weaknesses?

The CAP Program and the FGDC as a whole excel at providing a wealth of information and resources for metadata creation, cataloging, and distribution. The CAP Grant Program gives organizations a chance to take those resources and distill them down to what is pertinent to specific user groups. One of the challenges facing users is that there is so much data available with so many variables; from multiple standards to a vast number of tools, it can be overwhelming to just begin the process of understanding digital metadata creation.

Where did it make a difference?

We found the website to be extremely helpful in providing reference and training materials. Also, FGDC staff were quite helpful in pointing us to specific references and providing feedback.

Was the assistance you received sufficient or effective?

We found FGDC staff to be flexible and helpful at all stages of the project.

What would you recommend that the FGDC do differently?

The FGDC has done a great job of making resources accessible to users. I would recommend that they continue to get the word out in small, easy-to-digest pieces as to not overwhelm new users. The move to a new metadata editor in ArcMap 10.0 had the perceived effect of making an onerous task more difficult as many users had become accustomed to the previous metadata editor and not a lot of time was afforded for learning the new format. The documentation and functionality of the editor in 10.2 is quite improved and FGDC can take advantage of this by continuing to provide training assistance through the CAP Grant Program.

Are there factors that are missing or are there additional needs that should be considered?

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We found that many users are more comfortable with the CSDGM metadata standard than the ISO standard. There are many comparison charts etc. listing the advantages of ISO over CSDGM however it seems that CSDGM will still be supported for the foreseeable future. It seems that ISO is still evolving and it isn't clear when the shift will prove practical and advantageous for organizations that work domestically and do not necessarily share data internationally. Concise materials outlining the timeframe for merging of the standards may be helpful for organizations trying to decide when to make the shift from CSDGM to ISO.

Are there program management concerns that need to be addressed, such as the time frame?

Due to scheduling and staffing issues, we required a contract extension and scope modification through the course of the project. FGDC was able to accommodate both requests and helped us to provide successful training sessions as well as provide invaluable support to the USGS BCM Climate Change Project in terms of metadata creation and dissemination.

If you were to do the project again, what would you do differently?

Having been awarded previous CAP Training Grants we were confident in our ability to train others in the tools we had used for many years. Likewise, we had planned to rely on materials and knowledge from our earlier trainings. We found out quite quickly that the changes in ArcMap metadata editor and limited documentation posed a new set of challenges. In querying our community we found that we were not alone, as many others found the new format challenging. We had to find our way through the new tools and become comfortable in them before being able to train others. That said, we were able to use a number of resources available through the FGDC website and staff members to build a solid foundation from which to train others. We found that many users are still intimidated by and reluctant to begin using the new format tools. This grant provided us a great opportunity to show how to develop metadata practice in everyday data creation.

In the future we feel that it would be helpful to cast the net wider to a broader audience for survey input and promote our trainings through more outlets to increase our exposure.



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Index of Attachments

Attachment A. Metadata Survey Response Summary

Attachment B. Metadata Survey Response Detail.

Attachment C. Survey Results for Live Metadata Workshop Session,
North Bay GIS User Group. February 26, 2014.

Attachment A.

Metadata Survey Response Summary

1. Name

Response
Count

85

answered question

85

skipped question

0

2. Organization or Industry

Response
Count

85

answered question

85

skipped question

0

3. Email (so that we may contact you about upcoming metadata trainings)

Response
Count

85

answered question

85

skipped question

0

4. Does your organization create or intend to create formal standards-based metadata for documents and datasets you produce?

		Response Percent	Response Count
Yes		85.1%	57
No		14.9%	10
	Other (please specify)		24
answered question			67
skipped question			18

5. If Yes, which standard do you use?

		Response Percent	Response Count
The Federal Geographic Data Committee's (FGDC) Content Standard for Digital Geospatial metadata (CSDGM).		95.7%	44
ISO 19139, Geographic Information – Metadata – Implementation Specification.		13.0%	6
The North American Profile of ISO 19115:2003 (NAP).		6.5%	3
answered question			46
skipped question			39

6. How is metadata created and edited in your organization?

		Response Percent	Response Count
Each user creates their own metadata		80.9%	55
A designated user maintains all metadata		19.1%	13
	Other (please specify)		15
answered question			68
skipped question			17

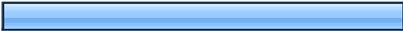
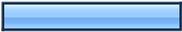
7. Does your organization use metadata templates?

		Response Percent	Response Count
Yes		56.5%	39
No		43.5%	30
	Other (please specify)		16
answered question			69
skipped question			16

8. What tools were used to create your current metadata?

		Response Percent	Response Count
ArcCatalog metadata editor 10.x		69.4%	43
FGDC metadata editor add-in for ArcCatalog 10.x		29.0%	18
ArcCatalog metadata editor 9.x		38.7%	24
ArcCatalog metadata editor 8.x or earlier		8.1%	5
Other commercial or open-source metadata editor		14.5%	9
	(please specify)		19
		answered question	62
		skipped question	23

9. Which tools are you interested in using in using now or in the future

		Response Percent	Response Count
ArcCatalog metadata editor 10.x		80.3%	57
FGDC metadata editor add-in for ArcCatalog 10.x		60.6%	43
ArcCatalog metadata editor 9.x		18.3%	13
Other commercial metadata editor		9.9%	7
Other open-source metadata editor		26.8%	19
	(please specify)		17
		answered question	71
		skipped question	14

10. If you are using or interested in Open Source metadata editors, which one(s) in particular? (or are you mostly interested in learning enough to decide?)

	Response Count
	31
answered question	31
skipped question	54

11. What are the major issues you face in creating and maintaining metadata?

		Response Percent	Response Count
Not sure how to go about it/don't know the tools		68.0%	51
Never get around to it until the funding runs out		20.0%	15
Not motivating until later when someone wants the data		50.7%	38
Not prioritized by my organization's management		42.7%	32
	Other (please specify)		22
	answered question		75
	skipped question		10

12. Rate your interest (1-5) in an in-person one-day metadata workshop to be held on a weekday in early 2013. (1 being little or no interest, 5 being very interested).

	1	2	3	4	5	Rating Average	Rating Count
	16.7% (14)	14.3% (12)	23.8% (20)	13.1% (11)	32.1% (27)	3.30	84
	answered question						84
	skipped question						1

13. Rate your interest (1-5) in a series of one hour online webinars on specific Metadata issues and tools (1 being little or no interest, 5 being very interested).

	1	2	3	4	5	Rating Average	Rating Count
	1.2% (1)	4.8% (4)	10.7% (9)	21.4% (18)	61.9% (52)	4.38	84
	answered question						84
	skipped question						1

14. Is there anything specific that you have difficulty with or would like to see addressed in a metadata training workshop?

	Response Count
	36
	answered question
	36
	skipped question
	49

Page 1, Q1. Name

1	Megan Sayles	Dec 26, 2012 4:00 PM
2	Alex Daniels	Dec 21, 2012 6:53 AM
3	Lauren Kahal	Dec 17, 2012 8:19 AM
4	Pat Lineback	Dec 13, 2012 1:38 PM
5	Katherine Stevenson	Dec 13, 2012 10:34 AM
6	Jacquelyn Hancock	Dec 13, 2012 6:50 AM
7	Steve Holzman	Dec 12, 2012 7:11 PM
8	Anne Reis	Dec 11, 2012 11:22 AM
9	Karen Hussey	Dec 11, 2012 9:58 AM
10	Dennis Saville	Dec 5, 2012 7:43 AM
11	Marshall Strong	Dec 5, 2012 7:29 AM
12	Nathaniel J. Stricker	Dec 5, 2012 5:07 AM
13	Glenn Palmgren	Dec 4, 2012 9:32 PM
14	Ken Ostermiller	Dec 4, 2012 3:24 PM
15	Terri Martincic	Dec 4, 2012 2:03 PM
16	Gareth Rowell	Dec 4, 2012 1:05 PM
17	Rob Sparks	Dec 4, 2012 12:59 PM
18	Greg Gallagher	Dec 4, 2012 12:54 PM
19	Ken Duren	Dec 4, 2012 12:52 PM
20	Chris White	Dec 4, 2012 12:43 PM
21	Ethan Duke	Dec 4, 2012 12:30 PM
22	Kristin Hall	Dec 4, 2012 12:23 PM
23	Karen Cleveland	Dec 4, 2012 12:18 PM
24	Jennifer Baldy	Dec 4, 2012 11:47 AM
25	Josee Rousseau	Dec 4, 2012 11:46 AM
26	Mark Shieldcastle	Dec 4, 2012 11:45 AM
27	Katie Koch	Dec 4, 2012 11:28 AM

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28	Josh Scullen	Nov 21, 2012 2:35 PM
29	Leo	Nov 14, 2012 10:16 AM
30	Lydia Bailey	Nov 9, 2012 7:43 AM
31	Aneth Wight	Nov 8, 2012 3:14 PM
32	Anna Deck	Nov 7, 2012 9:41 PM
33	Matt Ferner	Nov 7, 2012 4:19 PM
34	Allison Fuller	Nov 7, 2012 10:22 AM
35	Michelle Jensen	Nov 6, 2012 12:00 PM
36	Jackie Hancock	Nov 6, 2012 8:44 AM
37	Helen Thomas	Nov 2, 2012 4:06 PM
38	Corey Shake	Nov 2, 2012 10:21 AM
39	Javier del Castillo	Nov 2, 2012 10:17 AM
40	Ivette Loreda	Nov 2, 2012 9:32 AM
41	David Hoy	Nov 2, 2012 9:28 AM
42	chris caris	Nov 2, 2012 7:16 AM
43	Christine Southwick	Nov 1, 2012 2:07 PM
44	Kendra Maty	Nov 1, 2012 1:57 PM
45	Nick	Nov 1, 2012 1:17 PM
46	Liz Cruz	Nov 1, 2012 1:13 PM
47	Jennifer McBroom	Nov 1, 2012 11:39 AM
48	Aimee Rockhill	Nov 1, 2012 10:23 AM
49	Nora Rojek	Nov 1, 2012 9:43 AM
50	Andrea Wuenschel	Nov 1, 2012 9:27 AM
51	emily wittman	Nov 1, 2012 8:58 AM
52	Christine M. Stalling	Nov 1, 2012 8:14 AM
53	Erin Boyle	Nov 1, 2012 8:13 AM
54	Kristine Evans	Nov 1, 2012 7:43 AM

Page 1, Q1. Name

55	Kaylene Keller	Oct 31, 2012 2:25 PM
56	Nick Van Lanen	Oct 31, 2012 1:54 PM
57	Kevin Petrik	Oct 31, 2012 1:45 PM
58	Kristin Sesser	Oct 31, 2012 1:01 PM
59	Khara Strum	Oct 31, 2012 12:52 PM
60	Lisa Duarte	Oct 31, 2012 12:41 PM
61	Mark Dettling	Oct 31, 2012 12:31 PM
62	Joel C	Oct 31, 2012 12:18 PM
63	Ingrid Hogle	Oct 31, 2012 11:59 AM
64	Karen Lee	Oct 31, 2012 10:55 AM
65	Libby Mojica	Oct 31, 2012 9:32 AM
66	Wolfgang Grunberg	Oct 31, 2012 9:29 AM
67	Michael Norelli	Oct 31, 2012 9:20 AM
68	Marie Pitts	Oct 31, 2012 9:17 AM
69	Paul Hardwick	Oct 31, 2012 8:36 AM
70	John Neill	Oct 31, 2012 8:24 AM
71	Eric Bergey	Oct 31, 2012 8:09 AM
72	Marie Buell	Oct 31, 2012 7:45 AM
73	Linda Margullis	Oct 31, 2012 7:45 AM
74	Kylan Frye	Oct 31, 2012 7:30 AM
75	Thomas Laxson	Oct 31, 2012 7:04 AM
76	Courtney Ellerbusch	Oct 31, 2012 6:46 AM
77	Laura Quattrini	Oct 31, 2012 6:24 AM
78	Amal Ajmi	Oct 30, 2012 4:19 PM
79	Deanne DiPietro and Dennis Jongsomjit	Oct 30, 2012 3:08 PM
80	Courtney Ellerbusch	Oct 4, 2012 3:50 PM
81	Darcy Reinier	Oct 4, 2012 3:40 PM

Page 1, Q1. Name

82	Michael Hansen	Oct 4, 2012 3:37 PM
83	George Rimer	Oct 4, 2012 3:34 PM
84	Liz Lotz	Oct 4, 2012 3:28 PM
85	Alex Young	Oct 4, 2012 3:11 PM

Page 1, Q2. Organization or Industry

1	US Marine Corp	Dec 26, 2012 4:00 PM
2	Playa Lakes Joint Venture	Dec 21, 2012 6:53 AM
3	Fort Hunter Liggett - DPW Environmental	Dec 17, 2012 8:19 AM
4	US Fish and Wildlife Service	Dec 13, 2012 1:38 PM
5	Public Works Department	Dec 13, 2012 10:34 AM
6	Contract wildlife biologist Army Reserves	Dec 13, 2012 6:50 AM
7	USFWS	Dec 12, 2012 7:11 PM
8	Urban Ecology Center, not-for-profit environmental education and community center	Dec 11, 2012 11:22 AM
9	Klamath Bird Observatory	Dec 11, 2012 9:58 AM
10	Bureau of Land Management, Wyoming State Office	Dec 5, 2012 7:43 AM
11	State of Michigan, Department of Natural Resources, Wildlife Division	Dec 5, 2012 7:29 AM
12	Ohio DNR, Div. of Wildlife	Dec 5, 2012 5:07 AM
13	Michigan DNR	Dec 4, 2012 9:32 PM
14	volunteer with eBird	Dec 4, 2012 3:24 PM
15	Cleveland Museum of Natural History volunteer. CMNH owns and regularly surveys over 5,000 acres	Dec 4, 2012 2:03 PM
16	Heartland I&M Network, National Park Service	Dec 4, 2012 1:05 PM
17	Rocky Mountain Bird Observatory	Dec 4, 2012 12:59 PM
18	Environmental Consulting	Dec 4, 2012 12:54 PM
19	Ohio Division of Wildlife	Dec 4, 2012 12:52 PM
20	Rocky Mountain Bird Observatory	Dec 4, 2012 12:43 PM
21	Missouri River Bird Observatory	Dec 4, 2012 12:30 PM
22	Audubon Society	Dec 4, 2012 12:23 PM
23	Michigan Department of Natural Resources	Dec 4, 2012 12:18 PM
24	Kalamazoo Nature Center	Dec 4, 2012 11:47 AM
25	Humboldt Bay and Klamath Bird Observatories	Dec 4, 2012 11:46 AM
26	Black Swamp Bird Observatory	Dec 4, 2012 11:45 AM

Page 1, Q2. Organization or Industry

27	Midwest Coordinated Bird Monitoring Partnership and USFWS	Dec 4, 2012 11:28 AM
28	San Francisco Bay Bird Observatory	Nov 21, 2012 2:35 PM
29	Salas	Nov 14, 2012 10:16 AM
30	Montana Fish, Wildlife & Parks	Nov 9, 2012 7:43 AM
31	National Park Service (federal gov't)	Nov 8, 2012 3:14 PM
32	San Francisco Bay National Estuarine Research Reserve	Nov 7, 2012 9:41 PM
33	SF Bay National Estuarine Research Reserve	Nov 7, 2012 4:19 PM
34	US Fish and Wildlife Service - Common Murre Restoration Project	Nov 7, 2012 10:22 AM
35	Pepperwood Preserve	Nov 6, 2012 12:00 PM
36	US Army Reserve contract wildlife biologist	Nov 6, 2012 8:44 AM
37	National Park Service	Nov 2, 2012 4:06 PM
38	U.S. Fish and Wildlife Service, Humboldt State University	Nov 2, 2012 10:21 AM
39	San Francisco Bay Conservation & Development Commission	Nov 2, 2012 10:17 AM
40	U.S. Fish and Wildlife Service	Nov 2, 2012 9:32 AM
41	USFWS	Nov 2, 2012 9:28 AM
42	usfws- fed govt.	Nov 2, 2012 7:16 AM
43	Puget Sound Bird Observatory	Nov 1, 2012 2:07 PM
44	USFWS - NWRS	Nov 1, 2012 1:57 PM
45	CEMAR	Nov 1, 2012 1:17 PM
46	U.S. Fish & Wildlife Service	Nov 1, 2012 1:13 PM
47	Invasive Spartina Project	Nov 1, 2012 11:39 AM
48	USFWS	Nov 1, 2012 10:23 AM
49	U.S. Fish and Wildlife Service	Nov 1, 2012 9:43 AM
50	Puget Sound Bird Observatory	Nov 1, 2012 9:27 AM
51	kino bay center for cultural & ecological studies	Nov 1, 2012 8:58 AM
52	US Forest Service	Nov 1, 2012 8:14 AM
53	U.S. Fish & Wildlife Service	Nov 1, 2012 8:13 AM

Page 1, Q2. Organization or Industry

54	USFWS	Nov 1, 2012 7:43 AM
55	USFWS	Oct 31, 2012 2:25 PM
56	Rocky Mountain Bird Observatory	Oct 31, 2012 1:54 PM
57	Ducks Unlimited	Oct 31, 2012 1:45 PM
58	PRBO Conservation Science	Oct 31, 2012 1:01 PM
59	PRBO Conservation Science	Oct 31, 2012 12:52 PM
60	USGS Gap Analysis Program - University of Idaho	Oct 31, 2012 12:41 PM
61	PRBO Conservation Science	Oct 31, 2012 12:31 PM
62	Pepperwood Preserve	Oct 31, 2012 12:18 PM
63	SF Estuary Invasive Spartina Project	Oct 31, 2012 11:59 AM
64	US Forest Service, Rocky Mnt Regional Office	Oct 31, 2012 10:55 AM
65	Center for Conservation Biology	Oct 31, 2012 9:32 AM
66	Arizona Game and Fish Department	Oct 31, 2012 9:29 AM
67	Golden Gate National Parks Conservancy	Oct 31, 2012 9:20 AM
68	Center for Conservation Biology (College of William and Mary and Virginia Commonwealth University)	Oct 31, 2012 9:17 AM
69	Sequoia Kings Canyon National Parks	Oct 31, 2012 8:36 AM
70	Utah Division of Wildlife Resources	Oct 31, 2012 8:24 AM
71	US Fish and Wildlife	Oct 31, 2012 8:09 AM
72	The Watershed Research and Training Center	Oct 31, 2012 7:45 AM
73	US Fish and Wildlife Service	Oct 31, 2012 7:45 AM
74	HawkWatch International	Oct 31, 2012 7:30 AM
75	University of Idaho	Oct 31, 2012 7:04 AM
76	Sonoma County Water Agency	Oct 31, 2012 6:46 AM
77	Rocky Mountain Bird Observatory	Oct 31, 2012 6:24 AM
78	ERM	Oct 30, 2012 4:19 PM
79	PRBO Conservation Science	Oct 30, 2012 3:08 PM
80	Sonoma County Cater Agency	Oct 4, 2012 3:50 PM

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81	Sonoma County PRMD	Oct 4, 2012 3:40 PM
82	County of Sonoma	Oct 4, 2012 3:37 PM
83	Sonoma State University	Oct 4, 2012 3:34 PM
84	Marin County Flood Control and Water Conservation District	Oct 4, 2012 3:28 PM
85	Sonoma Ecology Center	Oct 4, 2012 3:11 PM

Page 1, Q3. Email (so that we may contact you about upcoming metadata trainings)

1	megan.sayles@usmc.mil	Dec 26, 2012 4:00 PM
2	alex.daniels@pljv.org	Dec 21, 2012 6:53 AM
3	lauren.l.kahal.ctr@mail.mil	Dec 17, 2012 8:19 AM
4	pat_lineback@fws.gov	Dec 13, 2012 1:38 PM
5	katherine.stevenson@navy.mil	Dec 13, 2012 10:34 AM
6	jacquelyn.j.hancock.ctr@mail.mil	Dec 13, 2012 6:50 AM
7	steve_holzman@fws.gov	Dec 12, 2012 7:11 PM
8	areis@urbanecologycenter.org	Dec 11, 2012 11:22 AM
9	kfh@klamathbird.org	Dec 11, 2012 9:58 AM
10	dsaville@blm.gov	Dec 5, 2012 7:43 AM
11	strongm@michigan.gov	Dec 5, 2012 7:29 AM
12	Nathan.Stricker@dnr.state.oh.us	Dec 5, 2012 5:07 AM
13	palmgeng@michigan.gov	Dec 4, 2012 9:32 PM
14	ostermik@gmail.com	Dec 4, 2012 3:24 PM
15	Naturenut@wowway.com	Dec 4, 2012 2:03 PM
16	gareth_rowell@nps.gov	Dec 4, 2012 1:05 PM
17	rob.sparks@rmbo.org	Dec 4, 2012 12:59 PM
18	greg.gallaugh@lsa-assoc.com	Dec 4, 2012 12:54 PM
19	kenneth.duren@dnr.state.oh.us	Dec 4, 2012 12:52 PM
20	chris.white@rmbo.org	Dec 4, 2012 12:43 PM
21	ethan.duke@mrbo.org	Dec 4, 2012 12:30 PM
22	khall@audubon.org	Dec 4, 2012 12:23 PM
23	clevelandk1@michigan.gov	Dec 4, 2012 12:18 PM
24	jbaldy@naturecenter.org	Dec 4, 2012 11:47 AM
25	jsr@klamathbird.org	Dec 4, 2012 11:46 AM
26	markshieldcastle@bsbo.org	Dec 4, 2012 11:45 AM
27	katie_koch@fws.gov	Dec 4, 2012 11:28 AM

Page 1, Q3. Email (so that we may contact you about upcoming metadata trainings)

28	jscullen@sfbbo.org	Nov 21, 2012 2:35 PM
29	lsalas@prbo.org	Nov 14, 2012 10:16 AM
30	lbailey@mt.gov	Nov 9, 2012 7:43 AM
31	aneth_wight@nps.gov	Nov 8, 2012 3:14 PM
32	akdeck@gmail.com	Nov 7, 2012 9:41 PM
33	mferner@sfsu.edu	Nov 7, 2012 4:19 PM
34	arf17@humboldt.edu	Nov 7, 2012 10:22 AM
35	mjensen@pepperwoodpreserve.org	Nov 6, 2012 12:00 PM
36	jacquelyn.j.hancock.ctr@mail.mil	Nov 6, 2012 8:44 AM
37	helen_thomas@nps.gov	Nov 2, 2012 4:06 PM
38	corey.s.shake@gmail.com	Nov 2, 2012 10:21 AM
39	javierd@bccdc.ca.gov	Nov 2, 2012 10:17 AM
40	ivette_loredo@fws.gov	Nov 2, 2012 9:32 AM
41	david_hoy@fws.gov	Nov 2, 2012 9:28 AM
42	christopher_caris@fws.gov	Nov 2, 2012 7:16 AM
43	clsouthwick@q.com	Nov 1, 2012 2:07 PM
44	kendra_maty@fws.gov	Nov 1, 2012 1:57 PM
45	reseburg@ceamar.org	Nov 1, 2012 1:17 PM
46	liz_cruz@fws.gov	Nov 1, 2012 1:13 PM
47	jtmcbroom@spartina.org	Nov 1, 2012 11:39 AM
48	aimee_rockhill@fws.gov	Nov 1, 2012 10:23 AM
49	nora_rojek@fws.gov	Nov 1, 2012 9:43 AM
50	chyroptera@yahoo.com	Nov 1, 2012 9:27 AM
51	ecwittman@gmail.com	Nov 1, 2012 8:58 AM
52	cstalling@fs.fed.us	Nov 1, 2012 8:14 AM
53	erin_boyle@fws.gov	Nov 1, 2012 8:13 AM
54	kristine_evans@fws.gov	Nov 1, 2012 7:43 AM

Page 1, Q3. Email (so that we may contact you about upcoming metadata trainings)

55	Kaylene_Keller@fws.gov	Oct 31, 2012 2:25 PM
56	nick.vanlanen@rmbo.org	Oct 31, 2012 1:54 PM
57	kpetrik@ducks.org	Oct 31, 2012 1:45 PM
58	ksesser@prbo.org	Oct 31, 2012 1:01 PM
59	kstrum@prbo.org	Oct 31, 2012 12:52 PM
60	lduarte@uidaho.edu	Oct 31, 2012 12:41 PM
61	mdettling@prbo.org	Oct 31, 2012 12:31 PM
62	jcervantes@pepperwoodpreserve.org	Oct 31, 2012 12:18 PM
63	ibhogle@spartina.org	Oct 31, 2012 11:59 AM
64	karenlee@fs.fed.us	Oct 31, 2012 10:55 AM
65	ekmojica@wm.edu	Oct 31, 2012 9:32 AM
66	wgrunberg@azgfd.gov	Oct 31, 2012 9:29 AM
67	mnorelli@parksconservancy.org	Oct 31, 2012 9:20 AM
68	mlpitts@wm.edu	Oct 31, 2012 9:17 AM
69	paul_hardwick@nps.gov	Oct 31, 2012 8:36 AM
70	johnneill@utah.gov	Oct 31, 2012 8:24 AM
71	eric_bergey@fws.gov	Oct 31, 2012 8:09 AM
72	marie@thewatershedcenter.com	Oct 31, 2012 7:45 AM
73	linda_margullis@fws.gov	Oct 31, 2012 7:45 AM
74	kfrye@hawkwatch.org	Oct 31, 2012 7:30 AM
75	tlaxson@uidaho.edu	Oct 31, 2012 7:04 AM
76	celler@scwa.ca.gov	Oct 31, 2012 6:46 AM
77	laura.quattrini@rmbo.org	Oct 31, 2012 6:24 AM
78	amal.ajmi@erm.com	Oct 30, 2012 4:19 PM
79	ddipietro@prbo.org djongsomjit@gmail.com	Oct 30, 2012 3:08 PM
80	celler@scwa.ca.gov	Oct 4, 2012 3:50 PM
81	dreinier@aol.com	Oct 4, 2012 3:40 PM

Page 1, Q3. Email (so that we may contact you about upcoming metadata trainings)

82	mhansen@sonoma-county.org	Oct 4, 2012 3:37 PM
83	george.rimer@gmail.com	Oct 4, 2012 3:34 PM
84	lloz@marincounty.org	Oct 4, 2012 3:28 PM
85	alex@sonomaecologycenter.org	Oct 4, 2012 3:11 PM

Page 1, Q4. Does your organization create or intend to create formal standards-based metadata for documents and datasets you produce?

1	Unknown	Dec 13, 2012 10:34 AM
2	Unsure at this time	Dec 5, 2012 5:07 AM
3	I don't know	Dec 4, 2012 3:24 PM
4	maybe, for key properties. What is metadata?	Dec 4, 2012 2:03 PM
5	Depends on project and client requirements.	Dec 4, 2012 12:54 PM
6	We are interested in created metadata and would like to learn more.	Dec 4, 2012 12:43 PM
7	intend to create	Dec 4, 2012 12:23 PM
8	State government standards require metadata to be created for publicly distributed GIS data layers/shapefiles	Dec 4, 2012 12:18 PM
9	Maybe our own standard, probably compliant with FGDC	Nov 14, 2012 10:16 AM
10	Uncertain, need more training	Nov 6, 2012 12:00 PM
11	Not yet, but would like to	Nov 1, 2012 2:07 PM
12	low level of compliance	Nov 1, 2012 1:13 PM
13	Sometimes	Nov 1, 2012 11:39 AM
14	We would like to.	Nov 1, 2012 10:23 AM
15	Not sure	Nov 1, 2012 9:27 AM
16	Don't know.	Oct 31, 2012 1:01 PM
17	I do not know	Oct 31, 2012 12:52 PM
18	Initially for GIS products; later for other data	Oct 31, 2012 9:29 AM
19	Only for layers that are published externally, but we also need a simpler internal standard	Oct 31, 2012 9:20 AM
20	Not familiar with the standards but others in organization may know.	Oct 31, 2012 8:24 AM
21	My position does not. The Science Department may - I will forward this email to them.	Oct 31, 2012 6:24 AM
22	always for resource data, sporadically for project data	Oct 4, 2012 3:50 PM
23	Mostly yes for publishing research grade data	Oct 4, 2012 3:34 PM
24	not currently formalized, but may want to in the future	Oct 4, 2012 3:28 PM

Page 1, Q6. How is metadata created and edited in your organization?

1	We do both depending on the situation	Dec 11, 2012 9:58 AM
2	Combination of user created and Data Steward created	Dec 5, 2012 7:43 AM
3	typically designated & trained person (me) works with user when appropriate, otherwise I generate the geospatial related metadata for our office products	Dec 5, 2012 7:29 AM
4	I don't know	Dec 4, 2012 3:24 PM
5	GIS staff in the Wildlife Division have a leadership role in generating metadata for GIS data layers (little/no formal metadata is generated on many/most other data sets), individual staff who provide data are expected to also provide sufficient information to GIS staff for them to generate metadata	Dec 4, 2012 12:18 PM
6	We have not created these standards yet	Nov 7, 2012 10:22 AM
7	We're in the process of determining who should maintain our metadata.	Nov 6, 2012 12:00 PM
8	Our data manager and GIS specialist work with other staff to maintain our metadata.	Nov 2, 2012 4:06 PM
9	if at all	Nov 1, 2012 1:13 PM
10	Much of the refuge-level spatial data contains no metadata	Nov 1, 2012 7:43 AM
11	Would like to move toward a single person doing it but that is a long way off.	Oct 31, 2012 2:25 PM
12	We currently do not have metadata files	Oct 31, 2012 1:54 PM
13	I don't know	Oct 31, 2012 8:24 AM
14	Most of our data does not have metadata, and we are not consistent	Oct 31, 2012 7:45 AM
15	Informal currently	Oct 4, 2012 3:28 PM

Page 1, Q7. Does your organization use metadata templates?

1	we're starting to create templates but need more umfph to get going on it	Dec 13, 2012 1:38 PM
2	Sort of... Sometimes...	Dec 4, 2012 9:32 PM
3	I don't know	Dec 4, 2012 3:24 PM
4	I don't know what a metadata template is	Dec 4, 2012 12:18 PM
5	ESRI	Dec 4, 2012 11:47 AM
6	I think so	Nov 2, 2012 7:16 AM
7	Sometimes	Nov 1, 2012 11:39 AM
8	Not sure	Nov 1, 2012 7:43 AM
9	We plan to	Oct 31, 2012 1:54 PM
10	Don't know	Oct 31, 2012 1:01 PM
11	I do not know	Oct 31, 2012 12:52 PM
12	We want to use metadata templates for ArcCatalog and Geoportal Server	Oct 31, 2012 9:29 AM
13	I don't know	Oct 31, 2012 8:24 AM
14	I do but I don't know about the others	Oct 31, 2012 7:45 AM
15	Standard ESRI with some custom agency info, dsclaimer	Oct 4, 2012 3:50 PM
16	basic, organization and contact info	Oct 4, 2012 3:28 PM

Page 1, Q8. What tools were used to create your current metadata?

1	EPA	Dec 13, 2012 1:38 PM
2	Combination of tools - mostly Arc based	Dec 5, 2012 7:43 AM
3	blank Word document with all the required blocks, seems easiest for many new to generating metadata	Dec 5, 2012 7:29 AM
4	I don't know	Dec 4, 2012 3:24 PM
5	eBird and excel files	Dec 4, 2012 2:03 PM
6	None	Dec 4, 2012 12:43 PM
7	Microsoft Word	Dec 4, 2012 12:18 PM
8	Simply answer meta data questions in word document	Dec 4, 2012 11:46 AM
9	Thus far, text documents	Nov 14, 2012 10:16 AM
10	NPS Metadata Tools Editor	Nov 8, 2012 3:14 PM
11	NPS-developed metadata tool	Nov 2, 2012 4:06 PM
12	not sure	Nov 2, 2012 10:21 AM
13	not sure	Nov 2, 2012 9:32 AM
14	I usually do not	Nov 2, 2012 7:16 AM
15	Microsoft Excel	Nov 1, 2012 9:27 AM
16	Metavist	Nov 1, 2012 8:14 AM
17	ESRI Geoportal Server	Oct 31, 2012 9:29 AM
18	XTools metadata viewer/editor, EPA Metadata Editor	Oct 31, 2012 9:20 AM
19	EPA Metadata Editor	Oct 31, 2012 8:36 AM

Page 1, Q9. Which tools are you interested in using in using now or in the future

1	EPA	Dec 13, 2012 1:38 PM
2	still want to use the Word document template, as it's proven itself because works for almost everyone if team creating metadata	Dec 5, 2012 7:29 AM
3	Unsure what would fit our needs	Dec 5, 2012 5:07 AM
4	I don't know	Dec 4, 2012 3:24 PM
5	any available	Dec 4, 2012 1:05 PM
6	I don't know the strengths or weaknesses of the tools listed. It would be beneficial to get a description of these tools so that an informed decision could be made.	Dec 4, 2012 12:18 PM
7	Maybe something we develop in-house	Nov 14, 2012 10:16 AM
8	Any tool or combination of tools that works.	Nov 2, 2012 4:06 PM
9	not sure, whatever is the minimum necessary and easiest to use	Nov 2, 2012 10:21 AM
10	BANDIT	Nov 1, 2012 2:07 PM
11	Not sure	Nov 1, 2012 9:27 AM
12	x-tools	Nov 1, 2012 7:43 AM
13	ESRI Geoportal Server	Oct 31, 2012 9:29 AM
14	EPA Metadata Editor	Oct 31, 2012 8:36 AM
15	EPA Metadata Editor	Oct 31, 2012 8:09 AM
16	Anything that is fast and easy to do	Oct 31, 2012 7:45 AM
17	10.1	Oct 4, 2012 3:50 PM

Page 1, Q10. If you are using or interested in Open Source metadata editors, which one(s) in particular? (or are you mostly interested in learning enough to decide?)

1	yes ... it has to efficiently work into our metadata development workflow in a way that it supports not only individuals but the office or program development of metadata	Dec 13, 2012 1:38 PM
2	EPA	Dec 12, 2012 7:11 PM
3	Limited to federal approved sources	Dec 5, 2012 7:43 AM
4	have seen these come and go in decades. I was involved with the first development and testing of FGDC metadata standard many years ago, and therefore experienced with all this.	Dec 5, 2012 7:29 AM
5	Had never considered anything outside ArcGIS tools before, but I'm definitely open to new suggestions/ideas.	Dec 4, 2012 9:32 PM
6	any available	Dec 4, 2012 1:05 PM
7	Interested in learning enough to decide	Dec 4, 2012 12:43 PM
8	I am not familiar with any open source tools. More information would be beneficial.	Dec 4, 2012 12:18 PM
9	Would like to learn more about the options.	Dec 4, 2012 11:46 AM
10	I would be interested in learning what open-source resources are available.	Nov 21, 2012 2:35 PM
11	Interested in learning more given the issues with Esri's metadata editors.	Nov 9, 2012 7:43 AM
12	Whatever one works.	Nov 8, 2012 3:14 PM
13	interested in learning enough to decide	Nov 7, 2012 4:19 PM
14	We are interested in learning enough to decide	Nov 7, 2012 10:22 AM
15	don't know	Nov 6, 2012 8:44 AM
16	Mostly want to learn enough to decide.	Nov 2, 2012 4:06 PM
17	yes	Nov 2, 2012 7:16 AM
18	mostly interested in learning enough to decide	Nov 1, 2012 2:07 PM
19	learning to decide	Nov 1, 2012 1:17 PM
20	I would be interested in learn more about Open Source, but don't have any plans to switch any time soon.	Nov 1, 2012 11:39 AM
21	Interested in learning enough to decide	Nov 1, 2012 9:43 AM
22	Not interested unless they were creating metadata for databases or non-spatial data.	Oct 31, 2012 2:25 PM
23	I am interested in learning about Open Source metadata editors but don't	Oct 31, 2012 1:54 PM

Page 1, Q10. If you are using or interested in Open Source metadata editors, which one(s) in particular? (or are you mostly interested in learning enough to decide?)

	currently know anything about them.	
24	need more information about the strengths and weaknesses of other metadata editors	Oct 31, 2012 1:45 PM
25	would like to learn about them.	Oct 31, 2012 1:01 PM
26	Learning enough to decide	Oct 31, 2012 9:20 AM
27	EPA Metadata Editor - Not sure if this is considered open source, but it is free for download.	Oct 31, 2012 8:09 AM
28	I'm mostly interested in learning enough to know what I should be using for each project.	Oct 31, 2012 7:30 AM
29	1) There was one from the FWS, a plug-in to Arc Catalog that we tried and was nice; we will try to find the name of it. 2) Something that works on the Mac (haha, really!)	Oct 30, 2012 3:08 PM
30	interested in learning enough to decide	Oct 4, 2012 3:34 PM
31	Mostly interested in learning more	Oct 4, 2012 3:11 PM

Page 1, Q11. What are the major issues you face in creating and maintaining metadata?

1	It has been low priority in FWS but increasing importance. Need to have clean workflows that work for our non GIS folks who are authoring a ton of data but we don't have good efficient workflows to optimize their work.	Dec 13, 2012 1:38 PM
2	Lack of organizational control in data mgt and creation. Many different people are involved in data collection and creation of databases	Dec 5, 2012 7:43 AM
3	Importance of metadata is not well understood by supervisors and upper management, so time to create it is not always supported.	Dec 5, 2012 7:29 AM
4	Metadata hasn't been kept and most of the information is in the heads of the employees. Creating metadata will require tracking all this information down from each individual involved.	Dec 4, 2012 12:43 PM
5	It takes a lot of time to do correctly, and this has to compete with high priority or urgent issues in a reality where staff and budgets are declining.	Dec 4, 2012 12:18 PM
6	While I have templates to enter, I'm aware there is software for checking compliance to certain standards. We tried to install one, but some of the software needed to install it, made it turn out to be unreasonable. I'd like to know more about software to catch errors and help meet particular standards.	Dec 4, 2012 11:47 AM
7	Motivating others to provide it. Need to keep it ultra-simple	Nov 14, 2012 10:16 AM
8	Cross walking required elements in 9x to 10x.	Nov 9, 2012 7:43 AM
9	No individual is tasked with maintaining the metadata.	Nov 6, 2012 12:00 PM
10	Not everyone creates metadata	Nov 6, 2012 8:44 AM
11	Too many other higher priority tasks, and issues with tools all working together nicely and meeting NPS requirements.	Nov 2, 2012 4:06 PM
12	finding a decent editor	Nov 1, 2012 1:17 PM
13	Finding time to write metadata is a challenge. Having a template would help.	Nov 1, 2012 1:13 PM
14	Arc metadata editor lost functionality in 10.0. Patches may have improved this but I am not very familiar with them.	Oct 31, 2012 12:41 PM
15	Just looked up yesterday how to convert from ArcGIS 9.3.1 to 10.x metadata formats, and haven't gotten to it yet. Want all metadata to be in XML format so that folks not using ESRI products can still easily view our metadata associated with shared shapefiles, etc.	Oct 31, 2012 11:59 AM
16	Disconnect between ArcCatalog 10.x and FGDC metadata add-in, one does not populate the other.	Oct 31, 2012 10:55 AM
17	Metadata creation and maintenance is for many data and process owners too cumbersome or difficult. Did not find a metadata management solution that would work for GIS and non-GIS literate staff.	Oct 31, 2012 9:29 AM
18	Easy tools, though the EPA one goes a long way by saving your information	Oct 31, 2012 8:36 AM

Page 1, Q11. What are the major issues you face in creating and maintaining metadata?

19	How to deal with many related layers that are nested or related to the same product, like model runs for lots of species. Apparently PRBO folks created a script for outputting a batch of XML files with slight differences in them... have never seen a tool that does this but we would be interested in such a thing if it exists.	Oct 30, 2012 3:08 PM
20	Time constraints	Oct 4, 2012 3:40 PM
21	The amount of data to write metadata for	Oct 4, 2012 3:37 PM
22	Changes in ArcGIS10 have made older FGDC harder to use, not sure how to move forward	Oct 4, 2012 3:28 PM

Page 1, Q14. Is there anything specific that you have difficulty with or would like to see addressed in a metadata training workshop?

1	I've had problems exporting and importing metadata in Arc that I would like to solve.	Dec 21, 2012 6:53 AM
2	Very interested in seeing this move ahead. I would like some help figuring out how to go beyond pushing buttons "plug and chug" with metadata and actually develop business workflows that will encourage more metadata development and compliance. Thanks for taking this on.	Dec 13, 2012 1:38 PM
3	We are developing an online data center that contains data from different owners and under different levels of public sharing. We need metadata that is queriable and available through online tools.	Dec 11, 2012 9:58 AM
4	Automated GPS data collection and downloading with metadata templates and data dictionaries.	Dec 5, 2012 7:43 AM
5	Interest in above two descriptions depends on the specific agenda; you didn't offer a refresher course session (could use that for others who I work with, but I am rather informed and aware of activities and tools for metadata authoring). I am interested in methods of authoring or crafting metadata within a team (both nearby and dispersed situations) who were involved in data development, or those who were involved in step-wise series of data generation activities. Are there better methods to accomplish these steps? (I think my method worked but interested if there's other ideas). Thank you for this survey and you can add me to any mailing list or group of beta testers (if needed or offered). Feel free to email me to discuss any of this; email strongm@michigan.gov = Marshall Strong, Mapping and Geotechnology Program Specialist, Wildlife Division, Department of Natural Resources (DNR), State of Michigan.	Dec 5, 2012 7:29 AM
6	What metadata components are actually required by FGDC and other standards?	Dec 4, 2012 9:32 PM
7	I'm looking for info, but this conversation is already over my head.	Dec 4, 2012 2:03 PM
8	Any new (last 2-3 years) developments in metadata	Dec 4, 2012 1:05 PM
9	Bird Monitoring metadata standards.	Dec 4, 2012 12:59 PM
10	creating the habit of meta data production as part of the process rather than an afterthought.	Dec 4, 2012 12:23 PM
11	While I'd love the in-person workshop, if it's in California it will not be reasonable for me to attend most likely (or much less likely anyway!)	Dec 4, 2012 11:47 AM
12	Metadata updating mechanisms, sharing with entity such as Avian Knowledge Network, etc.	Dec 4, 2012 11:46 AM
13	really interested in an interface for BMDE data.	Dec 4, 2012 11:45 AM
14	Organization-wide strategy for managing metadata.	Nov 21, 2012 2:35 PM
15	I think it is important to illustrate how metadata are used and why is this so important.	Nov 14, 2012 10:16 AM

Page 1, Q14. Is there anything specific that you have difficulty with or would like to see addressed in a metadata training workshop?

16	Ways to automate populating required metadata elements that are the same for all metadata records.	Nov 9, 2012 7:43 AM
17	How to adequately train volunteers to enter metadata using templates. We are very restricted in time.	Nov 6, 2012 12:00 PM
18	no	Nov 6, 2012 8:44 AM
19	different metadata data formats, & their manipulation. i.e. importing/exporting xml, htm, .txt .csv etc etc	Nov 2, 2012 10:17 AM
20	I find current ESRI metadata platform extremely confusing and very daunting, if this could somehow be streamlined with only the fields absolutely necessary then I would use it more. Also, find some way to auto populate redundant fields and maybe pick from a picklist those items that are used several times.	Nov 1, 2012 1:57 PM
21	Not at all happy with Arc v10 metadata- is there a better tool? I struggle with what to write in abstract and description fields.	Nov 1, 2012 1:13 PM
22	The internet in the interior is slow which makes it difficult (sometime not possible) to follow online webinars. It would be nice to have material/instructions (.pdf format?) that could easily be passed to others in the office that need to create metadata.	Nov 1, 2012 10:23 AM
23	Although I would be interested in an in-person workshop, we are not likely to have funds to travel (thus I rated that interest low). Having webinars would be good way to inform lots of us that want to learn more about this but can't travel. As for topics to address - how does one deal with the daunting task of dealing with the huge number of historical files that have no metadata?	Nov 1, 2012 9:43 AM
24	Contrast Arcmap 10.x with FGDC addin and other open source editors	Oct 31, 2012 1:45 PM
25	I took a Creating and Maintaining Metadata course on ESRI's Virtual campus 5-6 years ago. A refresher and update is probably a good thing.	Oct 31, 2012 1:01 PM
26	editing metadata in Arc10 in preparation to publish the next version of a particular database. Need to maintain most of the information from the previous version while saving changes specific to next version.	Oct 31, 2012 12:41 PM
27	Explanation of metadata in ArcGIS 10.x and why ESRI made it so that the default view shows such limited metadata. (Argh!)	Oct 31, 2012 11:59 AM
28	How can we pre-populate ISO 19115 metadata fields in ArcCatalog 10.1? How can we make metadata generation as easy (for data owners with little GIS skills) and as clean (using templates, automatic QA/QC, etc.) as possible?	Oct 31, 2012 9:29 AM
29	Strange inconsistent and unfriendly implementations in ArcGIS products	Oct 31, 2012 9:20 AM
30	Need to learn the basics first	Oct 31, 2012 8:24 AM
31	How to streamline the process to make it quick and complete. Much like how the EPA tool works.	Oct 31, 2012 8:09 AM

Page 1, Q14. Is there anything specific that you have difficulty with or would like to see addressed in a metadata training workshop?

32	spatial data organization techniques and best practices	Oct 31, 2012 7:45 AM
33	The bite-sized chunks of information offered in the webinars would be easier to digest than a whole-day thing. We would like a webinar on the basics, and would invite a bunch of people to that, and another one or two about specific tools would be for a smaller group here.	Oct 30, 2012 3:08 PM
34	setting up tools and planning for metadata at the project planning level	Oct 4, 2012 3:34 PM
35	how to import older FGDC metadata into ArcGIS10.1	Oct 4, 2012 3:28 PM
36	The metadata editor in ArcCatalog 10 is difficult to work with compared to 9.3. I'd like some instruction in the latest version	Oct 4, 2012 3:11 PM

Attachment B.

Metadata Survey Response Detail

2170100776	10/4/2012 23:36	George Rimer	Sonoma State University	george.rimer@gmail.com		Mostly yes for publishing research grade data	The Federal Geographic Data Committee's (FGDC) Content Standard for Digital Geospatial Metadata (CSGDM).		Each user creates their own metadata		No		ArcCatalog metadata editor 10.x									Interested in learning enough to decide	Not sure how to go about (don't know the tools)	Not motivating until later when someone wants the data			2	3	setting up tools and planning for metadata at the project planning level
2170094059	10/4/2012 23:25	Liz Lotz	Marin County Flood Control and Water Conservation District	lotz@marincounty.org	No	not currently formalized, but may want to in the future			Each user creates their own metadata	Informal currently	Yes	basic organization and contact info	ArcCatalog metadata editor 10.x	ArcCatalog metadata editor 9.x	ArcCatalog metadata editor 8.x or earlier								Not sure how to go about (don't know the tools)		Not prioritized by my organization's management	Changes in ArcGIS 10 have made older FGDC harder to use, not sure how to move forward	5	5	how to import older FGDC metadata into ArcGIS 10.1
2168805144	10/4/2012 23:05	Alex Young	Sonoma Ecology Center	alex@sonomaecologycenter.org	Yes		The Federal Geographic Data Committee's (FGDC) Content Standard for Digital Geospatial Metadata (CSGDM).		Each user creates their own metadata		Yes		ArcCatalog metadata editor 10.x	FGDC metadata editor add-in for ArcCatalog 10.x	ArcCatalog metadata editor 9.x	ArcCatalog metadata editor 8.x or earlier						Mostly interested in learning more	Never get around to it until the funding runs out	Not motivating until later when someone wants the data			5	5	The metadata editor in ArcCatalog 10 is difficult to work with compared to 9.3. It's like some instructions in the latest version

Attachment C.

**Survey Results for Live Metadata Workshop Session
North Bay GIS User Group
February 26, 2014**

Results for: Metadata Training Evaluation Record No: 1

The overall experience of the training is positive.

	1	2	3	4	5	Responses	Weighted Average
1 = Strongly Disagree, 5 = Strongly Agree	0 (0.00%)	0 (0.00%)	1 (20.00%)	2 (40.00%)	2 (40.00%)	5	4.20 / 5
							4.20 / 5

Since the workshop, my knowledge of the subject matter has improved.

	1	2	3	4	5	Responses	Weighted Average
1 = Strongly Disagree, 5 = Strongly Agree	0 (0.00%)	0 (0.00%)	0 (0.00%)	4 (80.00%)	1 (20.00%)	5	4.20 / 5
							4.20 / 5

The workshop has enabled me to apply the topic in my work.

	1	2	3	4	5	Responses	Weighted Average
1 = Strongly Disagree, 5 = Strongly Agree	0 (0.00%)	0 (0.00%)	2 (40.00%)	2 (40.00%)	1 (20.00%)	5	3.80 / 5
							3.80 / 5

I have been able to share the topic taught with colleagues.

	1	2	3	4	5	Responses	Weighted Average
1 = Strongly Disagree, 5 = Strongly Agree	0 (0.00%)	3 (60.00%)	1 (20.00%)	0 (0.00%)	1 (20.00%)	5	2.80 / 5
							2.80 / 5

The amount of information was appropriate for the time allowed.

	1	2	3	4	5	Responses	Weighted Average
1 = Strongly Disagree, 5 = Strongly Agree	0 (0.00%)	0 (0.00%)	0 (0.00%)	4 (80.00%)	1 (20.00%)	5	4.20 / 5
							4.20 / 5

The materials provided me useful information.

	1	2	3	4	5	Responses	Weighted Average
1 = Strongly Disagree, 5 = Strongly Agree	0 (0.00%)	1 (20.00%)	1 (20.00%)	2 (40.00%)	1 (20.00%)	5	3.60 / 5
							3.60 / 5

The pace and style of the workshop was effective.

	1	2	3	4	5	Responses	Weighted Average
1 = Strongly Disagree, 5 = Strongly Agree	0 (0.00%)	0 (0.00%)	2 (40.00%)	1 (20.00%)	2 (40.00%)	5	4.00 / 5
							4.00 / 5

The workshop content was challenging.

	1	2	3	4	5	Responses	Weighted Average
1 = Strongly Disagree, 5 = Strongly Agree	0 (0.00%)	1 (20.00%)	3 (60.00%)	0 (0.00%)	1 (20.00%)	5	3.20 / 5
							3.20 / 5

Participation was encouraged.

	1	2	3	4	5	Responses	Weighted Average
1 = Strongly Disagree, 5 = Strongly Agree	0 (0.00%)	1 (20.00%)	3 (60.00%)	0 (0.00%)	1 (20.00%)	5	3.20 / 5
							3.20 / 5

The instructors responded to questions effectively.

	1	2	3	4	5	Responses	Weighted Average
1 = Strongly Disagree, 5 = Strongly Agree	0 (0.00%)	0 (0.00%)	0 (0.00%)	1 (20.00%)	4 (80.00%)	5	4.80 / 5
							4.80 / 5

The presenter(s) was knowledgeable about the subject.

	1	2	3	4	5	Responses	Weighted Average
1 = Strongly Disagree, 5 = Strongly Agree	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	5 (100.00%)	5	5.00 / 5
							5.00 / 5

The workshop met learning objectives.

	1	2	3	4	5	Responses	Weighted Average
1 = Strongly Disagree, 5 = Strongly Agree	0 (0.00%)	0 (0.00%)	2 (40.00%)	2 (40.00%)	1 (20.00%)	5	3.80 / 5
							3.80 / 5

What were the major strengths of the workshop? What was the most useful?

Examples in ArcGIS 10.2

Good overview of metadata and why it is important

What aspects of the workshop could be improved and how?

more examples
More practical how to demos of editing metadata

Can the presentation, or resource slides, be improved and how?

No text answers to display.