NSDI Cooperative Agreements Program
Metadata Training & Outreach Project

Final Report
June 22, 2006

Agreement Number: 05HQAG0140
Final Report

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Project Narrative

Merriam-Powell Center for Environmental Research has successfully conducted four metadata workshops for tribal organizations on the Colorado Plateau and trained 58 people. The success of the project could not have been achieved with the help of several people and organizations, especially M.C. Baldwin (Navajo EPA), who was invaluable in helping to organize and coordinate workshops. He aided with training during the workshops as well. We have conducted workshops for the Hopi, Navajo Nation, Ute Mountain, Southern Ute, and many of the Taos Pueblo tribes. The Institute for Tribal Environmental Professionals has been helpful for advertising our workshop events. Sharon Shin and Bonnie Gallahan have also been very supportive and helped spread the word on workshop events. Workshop participants have be encouraged to house metadata within the MPCER clearinghouse or other clearinghouses. All workshop participants were given binders and CDs of training materials along with metadata creation tools. Certificates of attendance were awarded to participants.

Metadata training and outreach assistance

- **List organizations and number of individuals receiving metadata training and outreach assistance as appropriate**

    1. Hopi Tribe-Office of Hopi Land Administration, 4 members, and 1 member of Merriam-Powell Center Staff received 1.5 days of formal training on October 18th-19th, 2005. This small workshop was held at Northern Arizona University, Flagstaff, AZ.
    2. Southern Ute, 10 members, Ute Mountain, 1 member, and 1 Montezuma County GIS

Department member received 1.5 days of formal training. This workshop was held in Ignacio, CO on the Southern Ute Reservation on November 1st-2nd, 2005.

3. Navajo Nation workshop had 17 participants representing various departments within the Navajo Nation, including the Department of Information Technology, Judicial Branch, Division of Health-Aging Department, Division of Dine Education-OERS, Dine College, Dine Environmental Protection Agency, Navajo Nation Historic Preservation Department, and Water Management Branch. The participants received 2 days of formal training in Window Rock, AZ at the Navajo Museum on November 16th-17th, 2005.

4. Taos Pueblo workshop had 24 participants from various pueblos near the Taos, NM area. Participants represented a variety of organizations: Taos Pueblo Environmental Office, Pyramid Lake Paiute Tribe, Pueblo of Laguna - Environmental Department, Taos Pueblo Utility Service, Santa Clara Pueblo-Office of Environmental Affairs, Jicarilla Nation Environmental Protection Office, Navajo Nation Dept. of Agriculture, Village of Angel Fire, Pueblo of Sandia, Taos Pueblo Realty Office, New Mexico Environment Dept DOE Oversight Bureau, and the Wind River Alliance. Participants from Taos County and also the Cheyenne & Arapaho Tribes of Oklahoma Environmental Department attended. The participants received 1.5 days of formal training in Taos, NM at the BIA Forestry Building on February 8th-9th, 2006.

Attached is a list of all participants and their contact information below.

- **At what level of proficiency are the trainees or training**

  For the 4 workshops listed above we provided 1.5-2 day curriculums covering the Federal Geographic Data Committee's (FGDC) Content Standard for Digital Geospatial Metadata (CSDGM) version 2 (FGDC STD-001-1998) and the Biological Data Profile (FGDC STD-001.1-1999). We also briefly touched upon all of the approved standards and standards in development listed on the FGDC website formerly at http://www.fgdc.gov/standards/status/textstatus.html (prior to the new FGDC websites). The ISO Metadata Standard 19115 was also briefly touched upon. The FGDC Core Curriculum was not used but will be for any future trainings when it comes available. Participants were taught how to use the graphical representation along with essential metadata elements and how to make robust metadata by providing information for mandatory if applicable and optional elements. All the workshops provided hands on exercises using ArcCatalog, TKME, Metavist, and the NPS Metadata Editor. Other metadata tools were provided on the workshop CDs. Kirsten Ironside and/or Paul Heinrich, FGDC registered metadata trainers, performed the workshops. M.C. Baldwin helped teach some materials relating to a Tribal Place Names project developed by Frank Roberts.

- **Indicate the number and character of workshops conducted as appropriate**

  We have conducted 4 workshops (see above for details) and planned to conduct one more on March 28th-29th in Lakewood Colorado at the BIA Geographic Data Service Center (GDSC), but it was canceled by the GDSC.

Status of Metadata Service

- **Site names where metadata is served; clearinghouse node or Geospatial One-Stop harvestable web folder.**

  Our clearing house is up as of March 2005 and has been harvested by NSDI.

  http://mprlsrvr1.bio.nau.edu/metadataexplorer/

- **Approximately how many metadata entries have resulted from this project?**

  Metadata for 30 MPCER datasets are currently stored on our Clearinghouse. We hope participants in our workshop will publish records to the clearinghouse in the near future since we offer metadata hosting to all workshop participants.

- **Do you need assistance in providing for metadata service to organizations you have assisted?**

  No.

Next Steps

- **Will this project's activities continue in the future**

  Yes, we will conduct 4 more workshops in the late summer and fall of 2006, with funding from the 2006 CAP award we received. Following this we will host metadata training through the Geospatial Research and Information Laboratory (GRAIL) on the Northern Arizona University campus when it opens in the spring of 2007.

- **Describe the next phase in your project**

  We plan to expand the CP Metadata Clearinghouse into a full data node where we provide access to data through the Clearinghouse.

- **Are there issues in metadata management and service**

  Only that it is difficult to develop a workflow to bring non-ArcCatalog created metadata into an ESRI-based Clearinghouse. We are working to develop a workflow to do this.

- **Requirements (more technical assistance, software, other?)**

  Our major requirements are covering the costs of training materials and trainer's time.

- **What areas need work?**

  We will need to adapt our current workshop curriculum to the FGDC Core Curriculum.

Feedback on Cooperative Agreements Program

- **What are the program strengths and weaknesses?**
- **Where does the program make a difference?**

    We would not be able to provide training workshops without the support of the CAP program and contacts made through FGDC. We do plan on being able to support training events independent of FGDC funding when MPCER moves into the Applied Research and Development building on the NAU campus. There we will have a training laboratory as part of the Geospatial Research and Information Laboratory (GRAIL). We are hoping to move in February 2007.

- **Was the assistance you received sufficient or effective?**

    Very effective, it provided funding for hiring a tribal instructor, M.C. Baldwin, sufficient travel funds for trainers to conduct workshops on tribal lands, and for providing tablet P.C.s for hands on experience in creating metadata records.

- **What would you recommend doing differently?**

    It may be useful to describe CAP levels somewhat more specific as to tasks. If necessary, add levels to segregate proposal objectives. CAP levels which just target training or just materials development or just software development would help to focus proposal goals.

- **Are there factors that are missing or need to consider that were missed?**
- **Are there program management concerns that need to be addressed? Time frame?**
- **If you were to do this again, what would you do differently?**

List of Workshop Participants

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Southern Ute and Ute Mountain – Ignacio Metadata Workshop 11/1/05-11/2/05

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Navajo – Window Rock Metadata Workshop 11/16/05-11/17/05

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Taos, NM Metadata Workshop 2/8/02-2/9/06

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