

# NSDI Cooperative Agreements Program Metadata Training & Outreach Project

**Final Report**  
**October 1, 2007**

**Agreement Number: 06HQAG0111 - Final Report**

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**Project Narrative**

MPCER conducted four workshops for tribal GIS professionals during the project. In total we trained 67 people from 30 different organizations including 14 tribes, four federal agencies, one state agency, one county government, and one private company (Salt River Project). We conducted two workshops at NAU in Flagstaff, AZ, for December 6 & 7, 2006 and January 10 & 11, 2007. Working with the Inter-Tribal Council in Phoenix, AZ, we conducted a workshop on February 7 & 8, 2007 at the BIA regional office in Phoenix. Finally, we conducted a one-day workshop in Coeur d'Alene Idaho during the Indigenous Mapping Network annual meeting on August 20<sup>th</sup> 2007. On October 16-18, 2006 MPCER provided a pamphlet in the Southwest User Group conference registration packet promoting MPCER and other FGDC metadata workshops.

We also attended the Talking Circle at the user conference and addressed how important metadata is for Tribal Organizations in the discussion. The December workshop was mainly for Navajo Tribal Agencies, while all other workshops were open to any GIS professionals. We advertised our workshops through the following organizations; NBII (National Biological Information Infrastructure), ITEP (Institute for Tribal Environmental Professionals), FGDC, individual Tribal GIS Coordinators in the Southwest, IMN (Indigenous Mapping Network), AGIC (Arizona Geographic Information Council), and individual federal resource management agency (USGS/BIA/USFS/BOR/NPS) personnel.

## Metadata training and outreach assistance

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

Navajo Nation Agencies – 15  
Nez Perce Tribe – 1  
Tingit and Haida Tribes – 1  
Swinomish Tribe – 2  
Suquamish Tribe – 2  
Puyallup Tribe – 1  
Kasaan Tribe – 2  
Pueblo of Tesuque – 1  
Coeur d’Alene Tribe – 6  
San Carlos Apache Tribe – 2  
Ak-Chin Tribe – 2  
Hopi Tribe – 8  
White Mountain Apache Tribe – 2  
Kaibab Paiute Tribe – 3  
Tohono O’odham Tribe – 1  
Graham County, Arizona – 1  
Salt River Project – 2  
National Park Service (Canyon De Chelly) – 6  
US Forest Service – 4  
Arizona Game and Fish – 4  
US Bureau of Reclamation – 1  
US Bureau of Indian Affairs - 2

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

For the first 3 workshops listed above we will provide 1.5 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). The Coeur d’Alene workshop used a 1 day curriculum with a shortened discussion of the Biological Data Profile, clearinghouse utilization and no hand-on exercises. During all workshops we briefly touch 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 is also briefly touched upon. Participants are 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 (except as noted above) provide hands on exercises using ArcCatalog, TKME, Metavist, and the NPS Metadata Editor. Other metadata tools

are provided on the workshop CDs. Kirsten Ironside and/or Paul Heinrich, FGDC registered metadata trainers, perform the workshops. M.C. Baldwin teaches some materials relating to a Tribal Place Names project developed by Frank Roberts. Finally, we present a special section on data security and the FGDC standard especially tailored to tribal entities. For this section, we use a data security policy developed for the Coeur d'Alene tribe by Frank Roberts as an example and show how a tribal data security policy can be implemented within the FGDC standard. This module is very popular with tribal representatives as data security has become a very hot topic within tribal governments. This module was presented at all workshops.

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

We conducted four workshops, each of which was tailored specifically to the interests and needs of tribal resource management professionals.

### **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. However, most participants show little interest in publishing records to our Clearinghouse. Due to data security issues most tribal entities are very sensitive about data security issues and prefer to host metadata on their own systems. We continue to encourage sharing of metadata with the federal clearinghouses and address data security issues in our tribal data security policy module.

- **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 continue to hold several training workshops per year, assuming we can find funding for materials and travel.

- **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 and travel. Although we plan to offer the bulk of future workshops in our on-campus training laboratory we would like to continue offering workshops at other locations coinciding with major tribal GIS meetings such as the Indigenous Mapping Network annual meeting and the Southwest ESRI Users Group meeting.

- **What areas need work?**

We will need to adapt our current workshop curriculum to the ISO Core Curriculum when it comes available.

## **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. As of February 2007 our office are located in the Applied Research and Development Building at Northern Arizona University. Our new offices include a GIS training laboratory as part of the Geospatial Research and Information Laboratory (GRAIL). This facility will give us a state-of-the-art training facility including dual-monitor GIS workstations.

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

The assistance we received was very effective. It allowed us to pay MC Baldwin a stipend to help teach the workshops and recruit attendees. It also provided funding for travel to two locations which allowed us to reach people who could not travel to Flagstaff. In particular, travel to the IMN meeting in Coeur d'Alene ID was extremely useful in promoting the workshops and outreach. In the future we hope to have a much more active presence at these meetings in order to provide greater outreach.

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

We would do most of our training at Northern Arizona University using our new GIS training lab. This would both reduce cost (allowing us to schedule more workshops) and improve training. Training would be improved by allowing us to teach using computers that we control so that the proper software and data can be pre-loaded and tested well before the workshop. In the past we have had problems with software compatibility, security settings on workstations and restricted internet access. Conducting the workshops in our own facility would eliminate all of those problems. We would still like to present a workshop at the IMN conference as this allows us to reach out to tribes over a wide geographic range. Outreach activities at other conferences would be useful also.