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**NSDI Cooperative Agreements Program  
Standards Development and Implementation Assistance and Outreach Project**

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**Agreement Number: 08HQAG0033**

**Project title: Outreach and Training on the National Vegetation Classification Standard**

**Final report**

**Organization:** University of Montana, Montana Natural Heritage Program, 1515 E. 6<sup>th</sup> Avenue, Helena, MT 59602

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**Executive Summary**

We developed a complete guide to the NVC (Version 2), as well as a condensed guide. The guides include a glossary of terminology for both first time users and experienced personnel who need a refresher. We also created three PowerPoint presentations for on-line and in classroom use. The PowerPoint presentations include 1) a general overview of how vegetation is classified, suitable for both ecologists and mappers; 2) a detailed description of methods to implement the NVC standard protocol during vegetation sampling; and 3) an introduction to the steps involved in creating vegetation maps from remotely sensed and field data, intended for ecologists who do not have a background in computer-based mapping. We held two training sessions for agency field personnel. Powerpoints and handouts have been made available via ftp and on our website.

**Project Narrative**

The goal of this project was to develop training materials and to provide training and outreach to agency organizations within the state of Montana to promote the adoption and use of the National Vegetation Classification Standard (Version 2). We believed that promoting the use of the NVC would help land management agencies develop a consistent framework for identifying and classifying vegetation communities, and that this in turn would enhance data sharing and map

product consistency. Knowledge of the NVC would enable agencies to crosswalk and interpret their existing vegetation classification systems to the National Standard. As part of the NatureServe network, we use the NVC standard in much of our data collection, and we use the National Park Service (NPS) PLOTS database (itself NVC-based) to share vegetation plot data. Therefore, we also promoted the use of the PLOTS Database so each agency can share their plot data.

Several training materials were developed for this project. We developed a complete guide to the NVC (Version 2), as well as a condensed guide. The guides include a glossary of terminology for both first time users and experienced personnel who need a refresher. We also created handouts and examples of plot data forms for use in trainings, and we made three PowerPoint presentations for on-line and in classroom use. The PowerPoint presentations include 1) a general overview of how vegetation is classified, suitable for both ecologists and mappers; 2) a detailed description of methods to implement the NVC standard protocol during vegetation sampling; and 3) an introduction to the steps involved in creating vegetation maps from remotely sensed and field data, intended for ecologists who do not have a background in computer-based mapping. Training materials were made available for peer review by staff from the USGS (Lance Clampitt, Bozeman), BLM (Nora Taylor, Montana/Dakotas State Office), Forest Service (Mary Manning, Region 1 and Steve Shelly, Region 1) and the National Park Service (Chris Lea). All comments and suggestions were incorporated into the final versions before the training sessions.

For training outreach, we contacted via email and telephone all Bureau of Land Management Field Offices in Montana, the U.S. Forest Service, Montana Fish Wildlife and Parks, the Montana Department of Natural Resources, The National Resource Conservation Service, Montana American Indian Tribal Natural Resources offices, and representatives from the U.S. Geological Survey. During each of the two trainings, we had three attendees from the U.S. Forest Service and one attendee from the Montana Department of Natural Resources during one training. Field crews and project managers from the Montana Natural Heritage Program also attended the first training. Crews were hired for projects with the U.S. Environmental Protection Agency, the Bureau of Land Management and the Northern Cheyenne Tribe. Project managers routinely work with those agencies, and with the Bureau of Land Management, and offer frequent training sessions on field data collection. By “training the trainers,” we hoped to leverage the project’s training materials to reach a broader audience after the project ends.

Two training sessions were conducted during early summer months. The first training session was held on June 7<sup>th</sup> in Dillon, Montana. The second training included a half day training in classroom and a half day field session on June 10<sup>th</sup> at the Confederated Salish-Kootenai College in Pablo, Montana. During both training field sessions, we conducted vegetation sampling plots in nearby wetland and upland communities using the National Vegetation Classification (NVC) Standard. We used the Ecological Society of America vegetation data sampling forms in order to familiarize attendees with the NVC plot data protocol, used to describe plant associations, alliances and ecological systems.

During the classroom session on June 10<sup>th</sup>, we used PowerPoint presentations to familiarize attendees with the NVC protocol, vegetation sampling protocols and a general discussion on how natural vegetation is classified from plot data. We described and discussed the limitations and advantages of the NVC standard, particularly the development of the middle level of the NVC hierarchy and how the NVC system can be effectively cross-walked to the U.S. Forest Service V-Map classification system. We provided handouts to attendees, including a condensed version of the National Vegetation Classification Standard. We examined PLOTS database and VegBank Database on-line for reference and demonstration.

The main challenge for implementation of this project was low participation by target agencies. Three reasons were cited for non-attendance: 1) Timing. Although we held the training sessions on the cusp of field season to ensure the greatest possible attendance, agency field crews were engaged in agency-specific trainings, were not yet hired, or were already on the ground. Permanent staff were tied up in other agency activities or were busy with field crews; 2) Relevance. Field crews were being trained in the specific data collection methods already in use by the agencies, and supported by agency databases and field instruments. Permanent staff were either familiar with the NVC or did not collect data at the level of intensity that the NVC seemed relevant; 3) Format. Agency staff were glad to hear that Powerpoint materials and handouts would be widely available, and promised to consult those in the off-months to learn more about the NVC.

To ensure broader dissemination of the materials, we made them available via a File Transfer Protocol site (“ftp site”) so that they could be downloaded by, and shared among, members of the Ecological Society of America’s Vegetation Panel and the Federal Geographic Data Committee’s Vegetation Subcommittee. We have also made all materials available on the MTNHP website at <http://mtnhp.org/ecology/nvcs/>. Their availability will be broadcast via social media and highlighted on our website.

### **Feedback on Cooperative Agreements Program**

- What are the CAP Program strengths and weaknesses?

*Expectations, guidelines very clear, staff ready to provide support, good followup*

- Where does it make a difference?

*Ensuring multiple levels of involvement with NSDI (states, tribes, other federal agencies, universities etc)*

- Was the assistance you received sufficient or effective?

*Yes*

- What would you recommend that the FGDC do differently?

*Nothing*

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

*No*

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

*No*

- If you were to do this again, what would you do differently?

*Instead of doing standalone trainings I would try to piggyback on meetings and conferences that target agencies were already committed to attending.*