

Montana State Digital Library
February 2011 to March 2011

Prepared for the April 6, 2011 Commission meeting
by Jennie Stapp, Digital Library Division Administrator.

This report represents accomplishments of
Library Information Services (LIS),
Natural Resource Information System (NRIS)
& the Montana Natural Heritage Program (MTNHP).

Goal One, Content: MSL acquires and manages relevant quality content that meets the needs of Montana library partners and patrons.

LIS processed and sent another 14 boxes (807 state publications) to the Internet Archive to be digitized. These shipments were enough for LIS to pass the milestone of a million digitized pages. LIS will celebrate this achievement by hosting an MSL potluck party and issuing a press release that documents our efforts to ensure transparency and permanent public access to information issued by Montana government. Based on image counts and past averages, LIS estimates 25 more boxes need to be processed to complete the FY 2011 contract with the Internet Archive. MSL will renew this contract for FY 2012 once a final budget is available following the Legislative session.

NRIS staff has begun work on a spatial data inventory. While the primary goal of creating this inventory is to accurately and completely document the NRIS spatial data collection, there are several other things that we hope to accomplish with this project. Previous inventories have been performed as point-in-time snapshots of the collection. While this is useful, that information quickly becomes out of date. This inventory is being undertaken as part of the foundation for developing an MSL spatial data collection development policy which will include guidelines and procedures for adding new data to the collection and a process that will keep the inventory current. The project is currently in the planning phase with a focus on developing the project plan, determining where the inventory will reside, and prioritizing data collections to be inventoried. Work on the spatial data inventory falls under the GeoMAPP spatial data archiving grant discussed in the Access section of this report. In addition to feeding into the spatial data collection policy, the spatial data inventory will also serve as the foundation for NRIS web applications such as the GIS Portal and the Montana Digital Atlas, and will also be the foundation for the Montana Spatial Data Archive.

In January, February, and early March MTNHP's wetland photo interpreters mapped an additional 64,454 acres of wetland and riparian areas in Montana, bringing the total to

1,322,815 acres (989,759 acres of wetlands and 333,056 acres of riparian habitat). Wetland mapping using 2005 National Agriculture Imagery Program (NAIP) imagery has now been completed for 38% of the state and funding is in place to complete 60% of the state. The current status of the mapping and partner contributions toward these efforts can be tracked on the MTNHP website at:

http://mtnhp.org/nwi/NWI_Status_map.asp.

MTNHP Botanist, Scott Mincemoyer has associated Montana's 353 vascular plant Species of Concern with the ecological systems in which they are known to occur and has identified whether these ecological systems represent high, medium, or low habitat quality for each species. Associated plant Species of Concern are now listed in the ecological systems portion of the Montana Field Guide

http://fieldguide.mt.gov/displayES_LCLU.aspx and ecological systems associated with particular plant species are now listed under individual species accounts in the plant portion of the Montana Field Guide

<http://fieldguide.mt.gov/displayClasses.aspx?Kingdom=Plantae>.

MTNHP Ecologists, Karen Newlon, Cat McIntyre, Linda Vance, and Meghan Burns completed two reports on monitoring and evaluation of Montana's wetlands: (1) *A Reference Wetland Network for Assessment and Monitoring of Montana's Herbaceous Wetlands*; (2) *Milk, Marias, and St. Mary Monitoring: developing a long-term rotating basin wetland assessment and monitoring strategy for Montana*. Web links to these reports can be found online at: <http://mtnhp.org/Reports.asp?key=4>.

MTNHP Information Specialist Scott Blum, and Zoologists Coburn Currier, Paul Hendricks, and Susan Lenard have reviewed the spatial and temporal accuracy and appropriateness of over 200,000 animal observation records for final acceptance in the MTNHP's central point observation database over the past several months. This work has been undertaken in preparation for the processing of Species Occurrence data that is used by a variety of MTNHP partners in environmental reviews. These point observations and resulting species occurrences are viewable online on the Natural Heritage Tracker <http://mtnhp.org/Tracker/NHTMap.aspx> website.

Goal Two, Access: MSL provides libraries, agencies, and its partners and patrons with convenient, high quality, and cost-effective access to library content and services.

MSL and NRIS are excited to announce that their application for a grant to become a full partner in the Geospatial Multistate Archives and Preservation Partnership (GeoMAPP) spatial data archive project was accepted. Grant funds will be used to purchase a geospatial data archive server. Additionally the grant will fund .5 FTE (using existing modified FTE) through December 2011. Staff time will be used to conduct an NRIS data inventory, to develop a spatial data collection development policy and to plan for the development of a spatial data archive. Staff has been actively participating in

GeoMAPP team meetings and we will be visited by GeoMAPP members sometime in April.

MTNHP and NRIS staffs are collaborating with staff of the Base Map Service Center to cache 2009 NAIP imagery in order to create a more responsive web map service which is more in line with user expectations. MTNHP and NRIS staff are also collaborating to make the 2010 land cover map and wetland mapping data layers, two of the 14 Montana Spatial Data Infrastructure (MSDI) layers, available via a web map service.

LIS recently improved usability of our web archive of state agency websites, Archive Montana, by grouping the 141 URLs currently being archived under state agency headings. The URL descriptions were also standardized to be more uniform in appearance. LIS also added a date range in the description for each URL so that users readily know the period of time a URL was archived. As part of ongoing maintenance, each URL was also verified as still being active. Archive Montana can be visited at http://msl.mt.gov/For_State_Employees/Archive_Montana/default.asp.

Several weeks of testing resulted in LIS staff completing a programming script designed to automate metadata enhancements for the entire collection of items in the MSL online digital repository of state publications at the Internet Archive. This script insures that all metadata for all items in the repository will have OCLC numbers essential for creation of persistent uniform resource locators (PURLs). All items will also gain enhanced bibliographic level information especially important to users that land directly on archive publications. In particular, this new "bib" level information helps users know when publications are part of a larger series. Each item is also receiving a Dewey Decimal call number normally associated with only physical items, but which is useful also in a digital context. The final metadata enhancement involves removal of catalog codes populating the description field. These codes are meaningful to catalog administrators but not to our users.

Goal Three, Consultation and Leadership: MSL provides consultation and leadership to enable its patrons and partners to reach their goals.

MTNHP's Bryce Maxell, Allan Cox, and Linda Vance hosted a series of five webinars on data resources provided by the Montana Natural Heritage Program between January 25th and March 3rd. These webinars included an overview of all of the data resources offered by the Heritage Program, as well as some focused on wetland data resources and the Natural Heritage MapViewer and Tracker web mapping applications. These webinars can now be viewed by clicking relevant links on the Heritage Program's website at: <http://mtnhp.org/webinars/>.

MTNHP Program Botanist, Scott Mincemoyer, gave an invited presentation on identification of Montana's asters to the Montana Native Plant Society in Missoula on February 22nd.

MTNHP Aquatic Ecologist, Dave Stagliano, presented results of his collaborative efforts with Montana Department of Fish, Wildlife, & Parks (FWP) and the United States Forest Service (USFS) to translocate Western Pearlshell Mussels from a population about to be impacted by a diversion dam to some streams they had been extirpated from at the Montana Chapter of the American Fisheries Society meeting in Great Falls on February 11th.

MTNHP Senior Ecologist, Linda Vance, and Interim Director / Senior Zoologist, Bryce Maxell gave presentations on classification of lentic riparian areas and the status and management of amphibians on Montana rangelands at the Society for Rangeland Management meetings in Billings on February 9.

MTNHP Interim Director and Senior Zoologist, Bryce Maxell, gave presentations to, and led discussions at, the amphibian and reptile working group meetings in association with the Montana Chapter of the Wildlife Society meeting in Missoula on February 22nd.

A recent Internet Archive blog article written by LIS staff about the Montana State Library adopting the Internet Archive as our institutional repository continues to pay dividends. In addition to being reposted in numerous other blogs, State Library staff from New Mexico recently requested a teleconference with LIS staff to discuss the LIS text and web archiving strategy. Details of how LIS migrated data from CONTENTdm to the Internet Archive were of particular interest to these librarians who are also considering a similar migration.

As part of our efforts to support the Montana GIS community NRIS stays involved with the state's professional GIS organization, the Montana Association for GIS Professionals (MAGIP). GIS Analyst Diane Papineau has served on the MAGIP board since May 2009. During that time, Diane participated in several projects but a primary focus has been chairing a subcommittee tasked with developing a GIS Mentoring program. The program will encourage members of the GIS community to share their GIS skills in peer-to-peer or mentor-to-mentee relationships, thereby strengthening the use of GIS and the GIS products created in Montana. Diane presented the MAGIP GIS Mentoring program to the MAGIP Board of Directors at the March 10 board meeting where it was received favorably. More information about the Mentoring program is available from the MAGIP website: <http://www.magip.org/MentoringSubcommittee>.

Goal Four, Collaboration: MSL promotes partnerships and encourages collaboration amongst its partners and patrons so that their information needs can be met.

The US Geological Survey (USGS) is revising the data model of the National Hydrography Dataset (NHD) to accommodate the inclusion of additional hydrographic features provided by state and local partners such as watershed boundaries. As the State Steward of the NHD, MSL is working with the USGS to ensure that the new data

structure and data definitions will comply with the needs of state hydrography users. Because the NHD is in flux this has caused delays in NRIS efforts to promote the use of the NHD with other users including the Department of Environmental Quality, the Department of Natural Resources and Conservation (DNRC) and FWP. However, NRIS has been in contact with state hydrography stakeholders to get their feedback on proposed changes and has invited them to participate on USGS calls related to the proposed changes. We hope that changes to the NHD will be complete by mid to late summer and that agency projects can more fully resume at that time.

In collaboration with Scott Story and Janet Hess-Herbert at the FWP, MTNHP Interim Director and Senior Zoologist, Bryce Maxell, gave a half day workshop on accessing fish, wildlife, and other natural resource information in Montana in Missoula on February 22nd. The workshop was held in association with the annual meeting of the Montana Chapter of the Wildlife Society and was attended by approximately 20 state and federal resource managers and private consultants.

MTNHP's Senior Ecologist, Linda Vance, and Ecologist, Cat McIntyre, led a portion of the National Wetland Condition Assessment training session for the EPA and its partners February 28th through March 5th in Pensacola, Florida. MTNHP's collaboration on this national survey is designed to provide estimates of wetland ecological integrity and rank the wetland stressors most commonly associated with poor conditions in Montana.

MTNHP Landscape Ecologist, Meghan Burns, collaborated with individuals from Federal Emergency Management Agency, DNRC, and a consulting firm to give a presentation on creating flood risk maps for Montana at the Association of Flood Plain Managers in Lewistown on March 9th.

MTNHP Zoologists Paul Hendricks and Susan Lenard held several collaborative meetings with staff from FWP, BLM, USFS, the University of Montana's Avian Science Center, and the Rocky Mountain Bird Observatory on how to conduct bird point count monitoring across Montana during the 2011 field season.

MTNHP Zoologist, Paul Hendricks, attended the Society for Northwestern Vertebrate Zoology meetings in Gig Harbor, Washington between March 22nd and 25th.

Goal Five, Sustainable Success: MSL is a well-run organization and a sought-after employer; it is efficient and effective (measured against partner and patron outcomes), and successfully engaged in its ongoing mission.

NRIS is happy to announce that we have hired a new web developer to fill the position that has been open since August 2010. Grant Austin will begin work as the NRIS web developer on April 4. Grant comes to us directly from the private sector, but his background includes work in Montana State Government at the Department of Administration IT Services Division. Grant has significant experience with web

development and web enabling of databases which are key needs for NRIS. Grant's initial projects will include completing the new Water Rights query system for DNRC and completing work for a beta release of the new Digital Atlas. We are excited to have Grant on board.

The University of Montana has begun phone interviews of candidates for the MTNHP Director's position. The results of phone interviews will be used to determine final candidates for on-site interviews.

The MTNHP has made job offers to two individuals for photo interpreter positions that will assist with the MTNHP's Wetland and Riparian Mapping Center's statewide wetland mapping efforts. If they accept the positions, both photo interpreters are expected to start in April.

MSL is currently participating in the State GIS Task Force which is charged with finding efficiencies in GIS management for the state. Please refer to the separate GIS Task Force memo for more information regarding this effort and its potential impacts on MSL.