

Montana State Digital Library

Prepared for the February 13, 2013 MSL Commission meeting
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This report represents accomplishments of
Library Information Services (LIS),
MSL Geographic Information (comprised of the Natural Resource Information System
(NRIS) and the former Base Map Service Center (BMSC) and 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 staff has shipped to date 26 boxes of an estimated 35 boxes needed to complete the FY2013 digitization contract with the Internet Archive. November and December shipments resulted in 27,868 new digitized images from 262 state publications.
- Montana Geographic Information staff continued integration and maintenance of the Cadastral, Transportation, Structures/Addresses, Administrative Boundaries, Hydrography, Geographic Names, Imagery and Geodetic Control Frameworks.
- We received additions to our collection of geodetic control positions from Gallatin and Park counties and Bob Holliday entered the data into the Montana Geodetic Control Database
- Keith Blount has been working with the BLM and the BLM's contractor Premier Data to remove errors from CadNSDI 1.2. This is the digital version of the Public Land Survey System that many GIS practitioners use as a foundation for other data
- MTNHP Zoology and Information Services staff has added an additional 73,114 observations to the animal point observation databases. Animal point observation databases now have 1,338,574 point observation records (954,384 bird records and 384,190 records of other animal species). Similarly, information has been added for an additional 2,207 structured animal surveys; the central database now contains a total of 148,513 structured animal survey locations. Note that while a large number of observations have been added, 132,848 (~10%) of the observation records still need to be reviewed for final acceptance into the database. These observation records and structured surveys are viewable on the Natural Heritage Tracker <http://mtnhp.org/Tracker/NHTMap.aspx> and Natural Heritage MapViewer <http://mtnhp.org/mapviewer/> web applications and generalized observations are viewable on the Montana Field Guide <http://fieldguide.mt.gov/>

- The MTNHP Botany Program recently appended 50,000 plant observation records to the botany database. This addition is the first large observation dataset to be added to the botany database in the history of the Program. The data will be used to provide detailed distribution information for plant species occurring in Montana similar to the information currently available for animal species. Additionally, a dataset of 750 plant observations for 27 limited distribution species from Carbon County and the Pryor Mountain Desert was added to the botany database.
- The MTNHP Botany Program also added information to the Plant Field Guide for approximately 2,000 plant species over the last few months, resulting in almost all vascular plants in the field guide now containing a species' description and habitat information.
- During the fall, the MTNHP Ecology Program added 4,377 photos to the geo-referenced photos database. These photos are used in the Montana Field Guide and assist users of the MTNHP to see habitat locations they may not be able to visit.
- Linda Vance (Senior Ecologist), Melissa Hart (MTNHP Spatial Analysis Lab), and Tara Luna (MTNHP) recently published *Restoration Guidelines for Wetlands of the Western Prairie Pothole Region*. This report was a product of a project funded by the U.S. Environmental Protection Agency
- Between September and December, the MTNHP Spatial Analysis Lab acquired and consolidated spatial datasets from several federal agencies, academic researchers, and non-profit groups to bring as much forest data as possible into a single database that could be used for mapping and map accuracy assessment. Over 360,000 data points were acquired.
- The MTNHP Botany Program Reviewed the status ranks of several dozen plant species over the last couple months and added detailed information to the field guide to make the review process and methodology more transparent. One species was removed from "Species of Concern" status and two species were added.

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.

- Since his arrival June 2012, the LIS cataloger/metadata specialist has catalogued over 650 state publications and eliminated the backlog of items needing description.
- Under the project leadership of Erin Fashoway, MSL Geographic Information rolled out our new web presence at <http://geoinfo.montanastatelibrary.org/>. It provides a

unified, standardized response to discovery and delivery of geographic data including the Montana Spatial Data Infrastructure. New search tools access GIS portal metadata records by both free form and key word search. Most of the original Base Map Service Center pages have been migrated however many NRIS related pages have yet to be able to take advantage of the new template. MSL Geographic Information staff will continue to revise web content over the next few months with a goal of having most content moved by July 1, 2013.

- MTNHP and NRIS made available the Wetland and Riparian Web Map Service for public use. The service is now available at: http://gisservice.mt.gov/ArcGIS/rest/services/MSDI_Framework/WetlandsRiparian/MapServer The new map service allows users to view the most recently published and provisional wetland and riparian data for the state as well as the historical National Wetlands Inventory (NWI) data.
- Over the past couple of years, the MTNHP Zoology Program has led the effort to create predictive distribution models and relative habitat suitability models for hundreds of vertebrate species. Recently, MTNHP initiated efforts to fully evaluate these models in formal write-ups for individual species. Model evaluation write-ups have now been completed for 26 species that are going to be used as focal species for habitat management and conservation efforts by the Prairie Pothole Joint Venture and the Montana Bird Conservation Partnership. Model write-ups are available for download at: <http://mtnhp.org/models/>

Goal Three – Training: MSL provides appropriate trainings and training resources so that the best use can be made of the resources offered.

- LIS staff was assigned and received training to serve as custodians for the MSL laptop training lab and projectors to be loaned out to qualifying outside organizations and other Montana state agencies. LIS staff is responsible for receiving equipment reservations, maintaining inventory, and insuring that laptop software is available.
- Linda Vance (Senior Ecologist), and Claudine Tobalske (MTNHP Spatial Analysis Lab) gave a workshop entitled *Raster Analysis/Image Classification* to the Montana Association of Geographic Information Professionals Fall Technical Session, December 4, 2012 in Helena.
- In December 2012 and January 2013, Zoology staff answered over 35 requests from patrons regarding zoological information for Montana that entailed more than 50 hours of staff time. Many of these requests involved training users on the Natural Heritage Map Viewer <http://mtnhp.org/mapviewer/> and Natural Heritage Tracker <http://mtnhp.org/Tracker/NHTMap.aspx> websites.

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

- LIS staff worked with other MSL staff to capture and preserve state agency web sites of elected officials. These websites subject to significant change due to recent election results are now permanently available and searchable through [MT.GOV Connect](#), an archive of state agency websites dating back to 1996.
- Allan Cox (MTNHP Lead Program Manager) in December attended the Western Governors Association Wildlife Council meeting in Scottsdale, Arizona as an invited speaker. He presented as part of a panel on the Long Term CHAT (Crucial Habitat Analysis Tool) Maintenance and Data Integration.
- Bryce Maxell (MTNHP Senior Zoologist) gave a presentation on the Biology and Conservation of Montana's Bats to 35 members of the Last Chance Audubon Society in Helena, Montana on January 8th.
- Bryce Maxell (MTNHP Senior Zoologist) gave a presentation on the use of acoustic detectors to passively monitor Montana's bat species to biologists attempting similar efforts across the western United States on a conference call on December 5th.
- Karen Newlon (MTNHP Ecology Project Manager) completed the first phase of a contract with the Northern Cheyenne Tribe. The MTNHP has been working with the tribe to help build their wetland program through mapping, database development, and training in wetland assessment.

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

- LIS staff attended the Archive-It Partners meeting and Best Practices Exchange (BPE2012) meeting in Annapolis, Maryland, December 3-6, 2012. These meetings are national gatherings of librarians, archivists, and records managers responsible for managing state government information. Attending LIS staff reported back that based on her observations at the meetings, MSL continues to be a national leader in the management of state government information.
- LIS staff attended and participated in a recent Montana Association of Government Information Coordinators (MAGIC) meeting which is an informal group that gathers to discuss current issues associated with state government information management and propagation.

- State GIS Coordinator Stu Kirkpatrick and Gerry Daumiller met with Montana Department of Transportation staff twice to discuss methodology that might improve the ability of the Montana Transportation Framework to meet more users' needs. This group will continue to meet over the first 6 months of 2013. The group is in the process of surveying the user community, using as a basis of reference a recent Colorado needs assessment on unified road databases. State GIS Coordinator Stu Kirkpatrick and Keith Blount met with DNRC and DOR to find more efficient ways to map and maintain digital information on state owned properties. In an attempt to eliminate some duplication as well as have more accurate data the group is working on a plan that will provide options for increased efficiencies. A report is expected by February.
- Karen Newlon (MTNHP Ecology Project Manager) gave a presentation entitled *Montana's Reference Wetland Network: A Tool for Restoration* to the Montana Wetland Council meeting on November 15, 2012 in Helena.
- Linda Vance (Senior Ecologist), Claudine Tobalske (MTNHP Spatial Analysis Lab), Ute Langner (MTNHP Spatial Analysis Lab), and Jane Horton (MTNHP) gave a presentation entitled *Sage Steppe Habitat Mapping* to the Sage Grouse Manager's Meeting, December 4, 2012.
- Zoologists, Bryce Maxell, Paul Hendricks, and Susan Lenard began a collaboration with the Custer and Gallatin National Forests to conduct baseline inventories for Northern Goshawks on the Sioux and Beartooth Districts of the Custer National Forest, Flammulated Owls on the Gallatin National Forest, and amphibians, reptiles, and bats in the Pryor Mountains. Surveys will be conducted during the 2013 field season.

Goal Six – 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.

- Anticipating Chris Stockwell's retirement on January 25th, LIS created hiring documents and posted the job announcement for the Library Systems Analyst/Programmer position on several job boards. MSL is extending the application deadline since the first round of applicants did not pass the pre-screening requirements.
- LIS staff continues to develop its local digital repository for state government information. All digitized state publications and state agency web archive documents were successfully loaded into the repository. Staff is now installing and testing a local instance of the WayBack Machine and NutchWax to index and provide access

to the repository. No decision has been made whether the local repository will operate as the primary access point or as back up to the collection currently hosted off-site.

- Copies of the MT.GOV Connect Archive Plan drafted by LIS staff were presented to upper management for future discussion. This plan outlines the justification, development phases, and preservation threats associated with developing the local digital state publications repository that is standards based.
- MSL Geographic Information staff and LIS staff participated in organizing and presenting Library Legislative Night. Many legislators viewed maps and applications featuring geographic data and expressed support for the program.
- MTNHP recently entered into two new agreements:
 1. Northern Cheyenne Environmental Program, for additional mapping and wetland program planning support
 2. Cadmus Consulting, for assistance with characterizing hydrology of wetlands in the Prairie Pothole Region
- The Information Systems and Services Program of the MTNHP is currently recruiting for an Information Specialist. The Information Specialist will support the program by managing geospatial data pertaining to plants, animals, and other biological elements. Additionally, the Information Specialist will assist partner agencies and other data users by fulfilling information requests.