

## **Montana State Digital Library**

### **October through November 2009**

Prepared for the December 2, 2009 Commission meeting

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This report represents accomplishments of:

Library Information Services (LIS),  
Montana Natural Heritage Program (MTNHP),  
Natural Resource Information System (NRIS).

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

The 2009 National Aerial Imagery Program (NAIP) flew the state of Montana during the summer of 2009. The initial aerial imagery products of those flights, Compressed County Mosaics (CCM), were recently delivered to NRIS for distribution. Gerry Daumiller will be putting up a web site to allow people to download tiles of the imagery for areas of interest to them. NRIS is also working on creating a web service to allow users an alternative means of accessing this imagery. The 2009 NAIP imagery is an update to the imagery NRIS acquired when the state was flown in 2005. This imagery is used to create base maps for a wide variety of mapping applications including the state Cadastral application, the Montana Department of Fish, Wildlife, and Parks (MFWP) Hunt Planner application as well as our own Montana GIS Portal and Tracker applications.

During the 2009 field season, MTNHP staff conducted a variety of field surveys for plants, animals, and aquatic and terrestrial plant communities with a focus on Species of Concern and those with limited information. These surveys were conducted in partnership with the MFWP the U.S. Fish and Wildlife Service (USFWS), the Bureau of Land Management (BLM), the U.S. Forest Service (USFS), the Environmental Protection Agency (EPA), and the National Park Service (NPS). Animal observations that are available for natural resource planning as a result of MTNHP surveys and acquisition of information from other partners now total 840,000

observations across Montana; an increase of over 600,000 observations in the last 5 years. Surveys for Water Howellia, an aquatic plant that is federally listed as a threatened species, have lead to the identification of over 200 populations; an increase of around 70 known populations in the last 3 years. The MTNHP wetland mapping program has increased the number of mapped wetlands across Montana by 160,513 in the last year; an increase of 302,606 acres of mapped wetlands. MTNHP Zoologist Paul Hendricks recently completed a report on Terrestrial Mollusk surveys in Glacier National Park. This study identified 2 snail and 5 slug species that had not been previously detected in the Park.

**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.

LIS has almost finished testing the feasibility of shifting access to its digital state publications from the Montana Memory Project to the Internet Archive. As previously reported digital state publications produced through our digitization contract are already available through the Internet Archive. LIS staff has been testing the feasibility of adding "born digital" content produced by state agencies to this repository as well. Thus far the testing has been successful, but staff has been wrestling with access issues peculiar to digital publishing. Many state agencies regularly publish multi-part digital monographs with separate files for each chapter, appendix and sometimes even the cover page. Without LIS intervention, library users could, for example, find appendices online detached from chapters 1-6, that were in turn detached from the title page of a state publication that they were researching. To resolve this problem, LIS staff packages the individual digital files as a "portfolio". This solution makes it possible for our library users to view digital state publications as whole documents and not fragmented text. Changing digital repositories will also require that LIS change the url links that are found in catalog records for these publications which link to the digital files. Our next big digital decision is to settle upon a system for creating and maintaining persistent identifiers (urls) to add to our catalog records to keep the links to our digital resources from breaking and to prevent other libraries from having to update these links in their copies of the catalog records we create. Research has led LIS staff to investigate what solutions the Library of

Congress, the Government Printing Office, Defense Advance Research Projects Agency, and private corporate entities have chosen. Whatever persistent identifier system LIS chooses, LIS will be in the company of other high-profile memory institutions committed to providing permanent access to digital assets.

Meanwhile, LIS has configured its instance of WorldCat Local that allows users to begin their research at a global level and return local holdings first. As one of the three Montana libraries to pilot WorldCat Local, LIS will soon publicize the robustness of this new catalog interface that provides faceted search results, citation and social networking tools and that will extend to the contents of some of our licensed databases. Once launched LIS plans to pilot WorldCat Local for a period of several months to test its functionality against the current e-Library interface of the Montana Shared Catalog. And to further enhance the user experience, LIS is also an enthusiastic adopter of EZproxy that will allow state agency workers to easily authenticate off the state network to the Montana Shared Catalog as well as a host of licensed databases. Kudos to the Statewide Projects Librarian and others for making this possible!

NRIS released the updated Montana GIS Portal on October 1, 2009. The new portal features a redesigned interface, improved search results, and access to a wider variety of map service types. The Portal contains an online map viewer to view basic maps and air photos of any location in Montana. With the updates to the Portal, NRIS is now focusing its attention promotion and outreach to increase statewide contributions to and use of the Portal. (See goal 3).

MTNHP has now updated the online Montana Field Guide, a collaborative project with MFWP, to include a number of summaries of the observations that have been acquired for animals and plants (see the maps and charts for the Gray-crowned Rosy-Finch as an example: [http://fieldguide.mt.gov/detail\\_ABPHY02030.aspx](http://fieldguide.mt.gov/detail_ABPHY02030.aspx) ). This information will assist users determine where they should go to see various animals and plants and where we need additional observations to be reported. MTNHP has also released a new online version of the Montana Plant and Animal Species of Concern Reports. This new application provides: (1) all

of the narrative information found in the old printed reports; (2) up-to-date status information for Species of Concern; (3) lists of species additions and deletions since the inception of MTNHP; (4) enhanced search and filtering functions for generating custom reports; (5) the ability to save and print reports to an Adobe PDF file; and (6) additional information for each species, including documented county occurrences, habitats for animals, and additional status information. In addition to report the increased availability of information for users, this report requires less maintenance by MTNHP staff and allows the Species of Concern Reports to be updated in a timelier manner. Use of the MTNHP TRACKER web application has continued to grow by leaps and bounds. Partners and the general public have now used the application for 17,415 hours since its inception in June of 2007; an average of over 21 hours of use per day.

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

NRIS hosted several sessions at the Montana Association of Geographic Information Professional (MAGIP) Fall Technical Session in Kalispell on October 21-22, 2009. Diane Papineau presented a session for users of the Montana GIS Portal titled "Find Data You Need: The New Montana GIS Portal." Duane Lund and Keven Roth (retired USGS) presented a session for users of the National Hydrography Dataset (NHD) entitled "NHD Concepts and Applications". Jennie Stapp, Diane Papineau, and Evan Hammer presented "Publish Data You Have: Why Not Write Metadata?" which was directed at potential contributors to the portal. Evan Hammer also led two workgroup meetings: The MAGIP Imagery Workgroup (with Stu Kirkpatrick of the Base Map Service Center (BMSC)), and The MAGIP Hydrography Workgroup. In addition to presenting at the MAGIP Technical Session, Papineau gave a Portal presentation at a Department of Emergency Services conference in Lewistown as well as a presentation on data sharing at an Intro to GIS class at Carroll College.

NRIS and MTNHP will once again mark GIS Day (November 18) by hosting learning activities for 50 5<sup>th</sup> graders from Smith Elementary here in Helena. Activities include a walk from the school using GPS units to track the location of plants and animals spotted along the way, an

interactive presentation on the NHP Tracker application presented by Karen Walker and Megan Burns, a presentation by Gerry Daumiller on how maps are made and an exercise led by Duane Lund and Diane Papineau that will help students explore how spatial information is used to understand the implications of the building of the nearby dams along a Montana river.

On October 6, MTNHP Zoology staff was awarded the Wings Across the America's award by the USFS for outstanding achievements in bat conservation in their collaborative work with the Northern Region of the USFS to conduct bat inventories and improve bat habitats. MTNHP Botanist, Scott Mincemoyer, recently provided his annual assessment of Threatened plants in Montana to the U.S. Fish and Wildlife Service who relies on MTNHP's expertise to regularly assess the status of these species under Section 6 of the Endangered Species Act.

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

NRIS participated in the first informational partners session for the Geospatial Multistate Archive and Preservation Partnership (GeoMAPP). This project, funded through the Library of Congress National Digital Information Infrastructure & Preservation Program, is currently working to develop best practices for the preservation and long term stewardship of geospatial data. Involvement with this project will prove helpful as NRIS develops a strategy for geospatial data archiving in Montana. Current GeoMAPP partner states include North Carolina, Kentucky and Utah.

MTNHP Botanist, Scott Mincemoyer, recently received funding from the Doris Duke Foundation to assist MFWP incorporate information on conservation of plant species into Montana's Comprehensive Fish and Wildlife Conservation Strategy; MFWP has also expressed interest in receiving assistance from the MTNHP Zoology Program to incorporate invertebrate species.

**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.

On October 28, MTNHP, State Library staff, and numerous representatives from partner agencies held a party to honor Sue Crispin, MTNHP's Director for the past 11 years, for her 29 years of service with the Natural Heritage Network. Numerous partners expressed appreciation for her sustained efforts in leading MTNHP to meet its mission of being the source of information on Montana's species and habitats, emphasizing those of conservation concern.

LIS recently completed screening 37 applicants for the Digital Services Technician position and will post haste begin interviews. LIS projects this position will be filled by December with training to begin as soon as possible in order to resume our state publications digitization project.