

# Montana State Library

## Geographic Information



FY 2014 Work Plan  
July 26, 2013

The mission of Montana State Library Geographic Information is to develop, support, deliver and promote geographic data and the spatial technologies to all levels of government and the public. MSL Geographic Information is a part of the Montana State Digital Library (MSdL). From a statutory perspective MSL Geographic Information inherits broad mandates from statute related to the Montana Land Information Act (MLIA), the Natural Resource Information System (NRIS), the Water Information System (WIS) and that related to the Montana Natural Heritage Program (MTNHP). From a data perspective, depending on the nature of the collection, we accomplish our mission through data acquisition maintenance, integration, cataloging and preservation as well as providing access through the development of a wide variety of data discovery tools. From a promotion perspective, through leadership and collaboration with peers, partners and patrons, we advocate for the integration of geographic information when considering solutions to Montana's foremost issues.

Similar to the FY 13 Work Plan, this work plan is built around the core goals contained in the [2012 through 2022 MSL Long Range Plan](#). In terms of geographic information and spatial technology we aspire to:

1. Acquire and manage relevant quality geographic information that meets the needs of users
2. Provide our partners and patrons with convenient, high quality and cost effective access to geographic information
3. Provide consultation, leadership and training for the development and use of geographic information and spatial technologies
4. Promote partnerships and encourage collaboration both within and beyond the spatial technology community.
5. Insure sustainable success through efficient and effective management of both geographic data and staff resources.

A sixth goal, that MSL Geographic Information provide appropriate training and training resources, is interspersed within the projects and tasks of the other five goals.

By completing the tasks set forth within this work plan we intend to efficiently and effectively fulfill the mission of the Montana State Library.

## Geographic Information Content

Acquisition and management of geographic information content related to natural resources has been the mission of the Natural Resource Information System (NRIS) for over twenty-five years. The 2011 transition of the Department of Administration's (DOA) Base Map Service Center into the Library brought large collections of data related to land ownership, structures, and addresses, administrative boundaries, roads, bridges, and survey control points under Library stewardship. Over the course of the year consolidation of data content will be integral to system architecture, data management and web-based content delivery.

Data classified as portions of the [Montana Spatial Data Infrastructure](#) make up a large portion of MSL's data collections. It is logical that MSDI data management projects dominate a large portion of the content portion of this work plan. Tasks from the MSDI Work Plan approved by the Montana Land Information Advisory Council in November 2012 and the Library Commission in December 2012, are incorporated into this work plan. The MSDI work plan makes three broad categorizations of MSDI tasks:

1. MSDI education, outreach and coordination
2. MSDI maintenance
3. MSDI enhancement, research and development

MSDI education, outreach and coordination generally contribute to the MSDI data content and are therefore included in this section. MSDI theme maintenance consists of the day to day tasks a theme lead needs to accomplish to keep the theme at present levels of accuracy, completeness and currency. Maintenance efforts are therefore subject to a theme's maturity as the authoritative source of statewide data and vary significantly. We categorize the coordination and maintenance as base MSDI stewardship. We estimate that the Administrative Boundaries, Cadastral, Geodetic Control, Geographic Names, Hydrography, Imagery, Structures/Addressing and Transportation themes will require approximately 12,500 hours with approximately 70 percent of that time spent on base maintenance and 30 percent on MSDI enhancement.

With legislative approval of the Water Information System Manager one area of concentration will be improving and updating flow-line and water body features and names in the Montana Hydrography database. We will continue to partner with the U.S. Census Bureau in their boundary pilot project to represent non-visible, Public Land Survey System (PLSS) segments with state data. This corresponds with our long term partnership with the Bureau of Land Management to improve the Geographic Coordinate Database which digitally represents the PLSS. Additionally we expect to obtain, process and distribute the National Agricultural Imagery Program's 2013 imagery being flown this summer.

Using the MSL Collection Development Policy as a guide we will work with our federal, state and local partners to evaluate, inventory and archive where appropriate our current data holdings. We will work closely with the Montana Land Information Advisory Council (MLIAC) and the NRIS Advisory Committee (NAC) to identify, prioritize and acquire new collections that will enhance our partner and patron's ability access geographic data for mapping and analysis

## Geographic Information Access

Leveraging work started in FY 13 we will continue to modernize the tools our patrons use to access both data and information. This may sound redundant but there are subtle differences between what we consider data that our more technical users access and geographic information that patrons from all walks of life, and certainly not GIS experts, have come to expect to find.

For our GIS savvy patrons we have completed approximately 80 percent of the development work associated with transforming our current data bundler from outdated technology to new using FME Server. The current bundler fails predictably at least 5 times a week, causing staff assigned to monitor it to restart it, re-run requests, and contact the patron notifying them their data is ready for download. Our new application should eliminate this high maintenance load. During the process of reengineering the bundler we are also reviewing the data we are distributing via the bundler in an attempt to insure that we are delivering the most current data. One of the advantages of FME Server is that it allows us to point at data stored on other agencies servers or ftp sites, connecting the user with the source of the data without going through a third party. We expect the new data bundler to be tested and operational before November. After the bundler is completed we expect to start scoping the requirements for replacing our current digital atlas.

For our patrons that prefer geographic data in a premade map format we will be unveiling our new Map Gallery in August (It is currently operational at [http://apps.msl.mt.gov/Geographic\\_Information/Maps/Gallery/](http://apps.msl.mt.gov/Geographic_Information/Maps/Gallery/)). This was a vision put forth in last year's plan and we have spent a good deal of effort to insure that we are providing useful geographic information in a format that is easy to search and use.

In FY 13 we provided our users an alternative to the GIS Data Portal through a searchable Data List at [http://apps.msl.mt.gov/Geographic\\_Information/Data/DataList/](http://apps.msl.mt.gov/Geographic_Information/Data/DataList/). In FY 14 we will continue to scope alternatives for metadata collection and delivery that make it easier for our patrons to discover data. One of the biggest hurdles has been a finding a work around for metadata creation in ArcGIS Version 10 software would be compatible with the current Portal metadata standards. Our staff has currently come up with a work around which we are testing internally and will release to the public in September if testing is successful.

## Geographic Information Consultation and Leadership

MSL Geographic Information takes pride in our role as GIS leaders in Montana yet we understand that we must continue to evolve in order to continue to be considered relevant and accountable. In FY14 MSL Geographic Information staff will continue to provide the following ongoing services :

1. Conduct the “duties of the department” as defined in MCA 901-1-404 and administrative rule associated with the entire Montana Land Information Act (MLIA). This includes staff support to MLIAC, development of an annual Land Information Plan, and conducting the annual MLIA grant process as well as administering the MLIA grants. Even broader in scope MCA 901-1-404(b) requires MSL to “work with all federal, state, local, private, and tribal entities to develop and maintain land information”.
2. Administer the State’s Enterprise License Agreement (ELA) with Environmental Systems Research Institute.
3. Participate in state government leadership groups on water policy drought and continue our role as the State Geographic Names authority.
4. Work closely with local governments every day and support local governments through participation in annual MACO and League of City and Town conferences.
5. Participate and act as the State’s representative in national and regional leadership groups such as the National State’s Geographic Information Council and the Western Governors Geographic Information Council.

We are very excited for the possibilities in FY 14 extended to us by the Governor’s Office and the Department of Administration’s SITSD. Through a close relationship between the State Librarian and the CIO we are seeing opportunities that haven’t been available in the past. For example the current Governor has requested that the new state website <http://montana.gov/>, unveiled this July, contain a map presence. We have created a general purpose Montana map that is being displayed at [http://apps.msl.mt.gov/Geographic\\_Information/Maps/Gallery/basicviewer/index.html?id=9158c7d15bd34025a702707bf8a0951f](http://apps.msl.mt.gov/Geographic_Information/Maps/Gallery/basicviewer/index.html?id=9158c7d15bd34025a702707bf8a0951f) and have worked with SITSD to build a map gallery, similar to the MSL map gallery, where maps from all agencies can be displayed. This link <http://montana.gov/mediagallery.aspx?activeTab=2> is still being worked on and we expect it to be live in August. Additionally we have been asked by the CIO and the Governor’s Office of Economic Development to provide consultation as they re-engineer the Montana Site Selector <http://www.montanasiteselector.com/>. We have also been assured by the CIO that we will have a role at the table as Montana implements [FirstNet](#), an expansion of Public Safety broadband services within the state.

We will continue to provide all consumers of geographic information, GIS professionals as well as the public with quality service that may include data, discovery and analysis tools, GIS mentoring and technical presentations. We implemented a new staff on-call rotation in FY 13 and will continue that using that process in FY 14 whereby each Geographic Information staff member acts as the point of contact for customer requests for four weeks each year. We will continue to support Library staff as they expand their use of GIS to expose information related to their programs.

## Geographic Information Collaboration

Partner involvement and support are critical to the mission of MSL Geographic Information. Without support from our data partners we couldn't integrate parcels, structures with addresses, new or changed roads, municipal boundaries or a variety of other data. Collaboration with partners and developing relationships can be viewed as a stimulus that may not yield immediate results but builds the foundation that may result in collection enhancement later. In FY14, beyond our on-going collaboration role addressed in the previous section we plan to:

- In partnership with the U.S Census Bureau complete work on our addressing and boundary pilot projects before the end of the FY.
- By October 31, 2013 visit all the NRIS core funding agencies to discuss long-term ideas and solutions for broadening access to their data and metadata.
- Work with the MAGIP Board, and various MAGIP committees to strengthen the Montana GIS community through professional development and mentoring and actively assist in the planning for the April 2014 Intermountain GIS Conference.
- In collaboration with the Bureau of Land Management, provide the quality control and quality assurance to correct the errors we have found in CADNSDI 2 (the newest version of the geographic coordinate database) and brought to the BLM's attention. Our goal is to have a usable CADNSDI 2 by October 2013.
- Partner with DNRC to have one agreed upon version of State Trust Land parcels by December 31, 2013.
- The Water Information System Manager will contact DNRC, FWP and DEQ by staff by September 2013 and reform the Montana Hydrography Working Group by December 31, 2013.
- Support all MSL programs as they expand their profile by presenting their programs using a geographic component (see [http://www.msl.mt.gov/For\\_Librarians/Maps/](http://www.msl.mt.gov/For_Librarians/Maps/))

## Sustainable Success

Sustainable success from a technical perspective requires that we persist in on schedule transition of our legacy systems like the data bundler, digital atlas, and GIS portal to newer technology. Significant change to all three applications will be a measure of success of the FY 14 work plan. Additionally, the completion of an asset management system that allows us to inventory and track all our assets – data, metadata, applications and maps will be completed in FY 14.

Long-term sustainable success will require on-going staff development to keep up with changes in technology. As per the FY13 Work Plan we have instituted an annual training plan with the goal that each employee takes part in at least 32 hours of annual training that is appropriate to their skill level and job duties.

Sustainable success requires adequate funding. MSL's budgetary success in the 2013 legislative session, especially in acquiring increased fixed costs for acquisition of GIS enterprise services and the restoration of the Water Information Manager position are certainly important to our ability to move forward in FY 14. The budgetary process never really slows down however and in FY 14 we will start documenting the need to not only keep the Water Information System Manager funded long term but the need for find more appropriate funding sources for other staff positions currently funded through the Montana Land Information Account.

Finally, sustainable success is at least partially based on continued relevance. Consider this comment we received on July 25, 2013 from William Larson, an Economist with the Bureau of Economic Analysis in Washington, DC. "This is fantastic stuff. Montana is one of the tops in the country when it comes to publically available electronic parcel databases. It's basically you guys, Indiana and Florida, and then everyone else, and yours is much easier to work with than either of those two. Keep up the great work!" From this perspective our success in providing geographic data content and access, coupled with our recognized ability to provide vision, leadership and work in collaboration with others will insure sustainability.