

# Montana State Library

## Geographic Information



FY 2013 Work Plan  
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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.

This work plan is built around the core goals contained in the [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 April 2012, is 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 8,500 hours of base stewardship leaving approximately 1500 staff hours to devote to MSDI enhancement. One of the most complex and time consuming enhancement projects we intend to undertake is a reengineering of the MSDI web presence which we discuss under the data access goal. Other important MSDI enhancement projects include readjustment of cadastral and boundary data to an adjusted Geographic Coordinate Database (GCDB) we will receive from the Bureau of Land Management. Starting in August the Department of Revenue will be delivering their ORION property appraisal data to MSL in a SQL Server format and this will require the development of database views that GIS users join to the Cadastral geometry. We will work with the Natural Resource Conservation Service to attempt to realize some standard interpretations of soils data. Other projects include NHD and Geographic Names enhancements.

Using the MSL Collection Development Policy as a guide we will work with our partners to refine a collection management strategy for all data that includes a data appraisal process, a data inventory plan, and an inventory of geographic data holdings and a data preservation plan. Many other non-MSDI collection development opportunities exist. 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***

Clearly data content and data access go hand in hand. Data that is difficult to find or consume is data that goes unused. Access to data may take many forms from data downloads to maps, web services and applications. The NRIS program established one of the first state geographic information clearinghouses almost 20 years ago with a comprehensive list of downloadable data. Subsequently those data were made accessible through the Montana GIS Portal and made available through applications like the GIS data bundler and Montana digital atlas. Based on technologic advances in search engine optimization and web 2.0, other states are presently evaluating clearinghouse functionality and MSL is in the process of doing the same. Previously we mentioned the reengineering of access to MSDI data however this is only a small part of a larger project to revise the entire MSL Geographic Information web presence. If the web presence is to be considered a modernized storefront, then it is logical to attempt to modernize the way the data shelves within the store are stocked as well. This is all part of a collection management strategy that will involve almost all the geographic information staff in some way. We see the process proceeding in the following manner:

1. Based on our collection development strategy, implement data management and design practices that leverages the existing collection database presently behind the GIS portal.
2. Use the collection database to drive the content contained in the MSL Geographic Information web presence including the MSDI and the broader GIS Clearinghouse.

We envision components of the revised web presence to include a content management system, Web 2.0 tools, social media tools including blogs, clearinghouse/portal data list(s), a map library or gallery, interactive applications and ArcGIS Online. This is a high priority project and in April 2012, in recognition of the looming effort, we established a project team to scope the project. That team will evolve early in the fiscal year into an implementation team that will prioritize datasets and web components for an initial round of updates scheduled for completion by January 1, 2013. We recognize that all phases may not be complete for the initial roll-out and completion of additional work to improve data access is likely to proceed throughout the fiscal year.

Finally, data access has a human factor that can't be discounted. Despite our best efforts to disseminate metadata, inevitably MSL Geographic Information staff members continually receive questions about the data and how to use it. In May, 2012 we established a Customer Service/Request Tracking team to develop policies and common operating procedures to insure consistent and reliable information is disseminated to our patrons and partners regarding geographic information in general and the content of our data holdings in particular. We intend to roll out those policies and procedures in FY13.

## ***Geographic Information Consultation and Leadership***

Since its establishment, the NRIS program has been looked to for consultation and leadership in the GIS community. Often the consultation centered on the technology of GIS software and the complexities of topological relationships and attribution of geographic data. However over the years we also provided leadership to the Montana GIS Users Group (now MAGIP) and technical working groups as well. The State Librarian is a standing member of the Montana Land Information Advisory Council (MLIAC). The Interagency Agreement signed in September between DOA and MSL brought a host of other duties directly related to consultation and leadership in the geographic information field. In FY13 MSL Geographic Information staff will:

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. Help develop the bi-annual MSL Legislative Snapshot which traditionally integrates maps and data using GIS.
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 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. To enable this we expect to implement a new staff on-call rotation in FY 13. Implementation may ask that each Geographic Information staff member act as the point of contact for customer requests for four weeks a year and we have allowed 80 hours per staff member annually to handle these requests. We will continue to support Library staff as they expand their use of GIS to expose information related to [Library types and programs](#), [public library statistics](#), and [statewide library resources activity tracking](#).

## ***Geographic Information Collaboration***

Partner involvement and support are critical to the mission of MSL Geographic Information. The NRIS program has a long history of working with outside groups to supplement the content they are able to make available to patrons. In addition to strong relationships with other state agencies including the Departments of Natural Resources, Environmental Quality, Transportation, and Fish, Wildlife and Parks, MSL has pursued projects with the departments of Agriculture, Revenue, Public Health, and the Montana Historical Society. Beyond state government, there are agreements in place with the USGS to supplement hydrography, geographic name and elevation data, as well as NRCS to supplement soils and surface water data holdings. There has also been significant work with watershed groups resulting in such sites as the Yellowstone River Corridor Resource Clearinghouse (through work with the Yellowstone River Conservation District Council), the Flathead Basin Mapping Project, the Sun River Watershed Group web site and the Big Hole Watershed Mapping Project.

In the data content section we noted that 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. For example our relationship with the State Broadband Program during the initial American Recovery and Reinvestment Act funding phase led to an FY12 partnership that will allow MSL to pass through over \$100,000 to rural counties and tribal governments for local addressing projects. The ability to pass through small amounts of funding enabled our ability to enter into an even broader set of partnerships with those rural and tribal governments. MSL has entered into address data sharing agreements with twelve local and tribal governments with another 11 expected in FY13. In FY13 we envision building similar type of partnership with the State E-911 Office. Being a partner in their work on next generation E-911 could result in additional improvements to statewide address data. In FY13 MSL Geographic Information will concentrate on strengthening partnerships in the following ways:

1. Participate with partner agencies in developing long-term visions for acquisition and maintenance of imagery, hydrography, elevation, address and other data.
2. Visit all the NRIS core funding agencies to discuss long-term ideas and solutions for broadening access to their data and metadata.
3. Work with the MAGIP Board, and various MAGIP committees to strengthen the Montana GIS community through professional development and mentoring.
4. Work with federal, state, local, tribal and private sector representatives to organize GIS/Geographic Information Day events in November and/or January (we presently have the capitol rotunda reserved for a day in both months)
5. 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.***

We believe that through successful completion of the tasks presented in the Content, Access, Leadership and Collaboration sections MSL Geographic Information moves in the right direction regarding external sustainability by meeting our partner and patron needs. However successful completion, to a great degree, is directly correlated to internal management practices that promote and encourage staff growth and development. In FY12 we conducted a facilitated meeting with staff that helped institute procedures that would promote the merger of the BMSC and NRIS staffs into MSL Geographic Information. In a large part working groups on systems architecture, web enhancement and customer support were spawned out of that session.

This work plan is another example of how we intend to proceed in a logical, documented and successful manner to meet the State Library's mission and goals. This work plan has as a foundation a spreadsheet that documents all the tasks outlined in this work plan in a much more detailed manner. Time commitments for each task are estimated and staff members are assigned to each task. It is meant to be a fluid tool to allow management to move resources to tasks as needed. We also intend to institute project management tools that track the progress of projects and tasks and are testing two such tools, Basecamp and Jira, to see if they meet our requirements.

Long-term sustainable success will require on-going staff development to keep up with changes in technology. Components of this development strategy include clear definition of staff roles and performance objectives as well as a more holistic approach to workgroup planning that accounts for interactive and overlapping staff responsibilities. We intend to develop an annual training plan and are initially budgeting at least 32 hours of role appropriate staff training for each staff member.

Finally, MSL needs to market ourselves to our patrons and partners as a primary point of contact for Montana geographic information. In FY12 we developed printed materials that highlighted our mission and products. In FY 13 we intend to review and edit these materials appropriately. The re-engineering of MSL the Geographic Information presence has been documented as a priority and will be done with the support and advice of the MSL Marketing Coordinator. As previously mentioned we intend to use appropriate social media tools to extend our sphere of influence. We have marketing and outreach calendar in place and add events that either by our direct presence or other means will enhance our image as the go-to place for geographic information.