Montana Land Information Plan

Effective January 15, 2012 to June 30, 2012 for planning purposes and from July 1, 2012 to June 30, 2013 for task completion and budget purposes.

Produced by the Montana State Library in coordination with the Land Information Plan Subcommittee of the Montana Land Information Advisory Council

Approved December 6th, 2011 by the Montana Land Information Advisory Council

Pursuant to Section 4 (c) of the Montana Land Information Act (Senate Bill 98) and Administrative Rule IV of the Montana Land Information Act

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Introduction and Overview

The Montana Land Information Act (MLIA) requires that an annual land information plan be prepared that describes Montana's priority **needs** in regard to collection, maintenance, and dissemination of land information (MCA 90-1-404(c)). Those priority needs are used in part to allocate funds from the state land information account. In order to define the priority needs the Montana State Library (MSL) has solicited advice from the Montana Land Information Advisory Council (MLIAC), the Montana Spatial Data Infrastructure (MSDI) Theme Stewards, and other stakeholders.   Priorities must be consistent with the intent of the MLIA which recognizes the importance of digital land information for all sectors of Montana society. It also recognizes the need to ensure that digital land information is:

- Collected consistently – in accordance with standards;

- Maintained accurately - in accordance with standards;

- Made available in common ways for all potential uses and users, both private and public

The purpose of the annual Land Plan is to announce, describe, and fund priorities for the coming year.

Through publication of this plan MSL, in cooperation with the MLIAC and other stakeholders announces to the GIS community the proposed priorities for expenditure of MLIA funds for the next fiscal year. Priorities are generally driven by the factors described in the section Accomplishments and Current Challenges. The priorities contained in the section Land Plan Priorities Proposed for Funding (A – Specified) describe tasks that are deemed critical to the day to day operation of Montana GIS. The priorities contained in the section Land Plan Priorities Proposed for Funding (B –Grant Categories) are broader categories that strengthen the overall Montana GIS infrastructure. Local, Regional and Tribal jurisdictions are encouraged to apply for funding for projects in these categories through a grant process. MLIA also requires that the annual plan contain a proposed budget that will address the priority needs and accomplish the objectives of the plan. The total estimated budget is compiled from the budget line items in the section Action Plan and Budget and listed as a total at the end of that section. Finally MLIA also requires that a budget be submitted to carry out the duties associated and assigned under 90-1-404 (previously called the GIS coordination budget). While not specifically required as part of the annual land plan MSL respectfully submits this as Appendix A of this plan.

By defining annual priorities the plan also provides a roadmap that is intended to guide the efforts of MSL, MLIAC, MSDI Theme Stewards, the Montana Association of Geographic Information Professionals (MAGIP) and others interested in furthering the interests of GIS in Montana.

Funding and Granting Process

In lieu of an application for funds, in order to accomplish the priority goals in section A, MSL will submit a work plan by March 1, 2012 which will include a MSDI work plan (A2.1, page 6) for Council review and

input that will document how MSL intends to accomplish these goals. Some tasks within the work plan may be undertaken by a party other than MSL however MSL will assume ultimate accountability. For Grant Categories in category B the application process will consist of a standard MLIA grant application materials, addressing the priority grant categories identified in the plan.
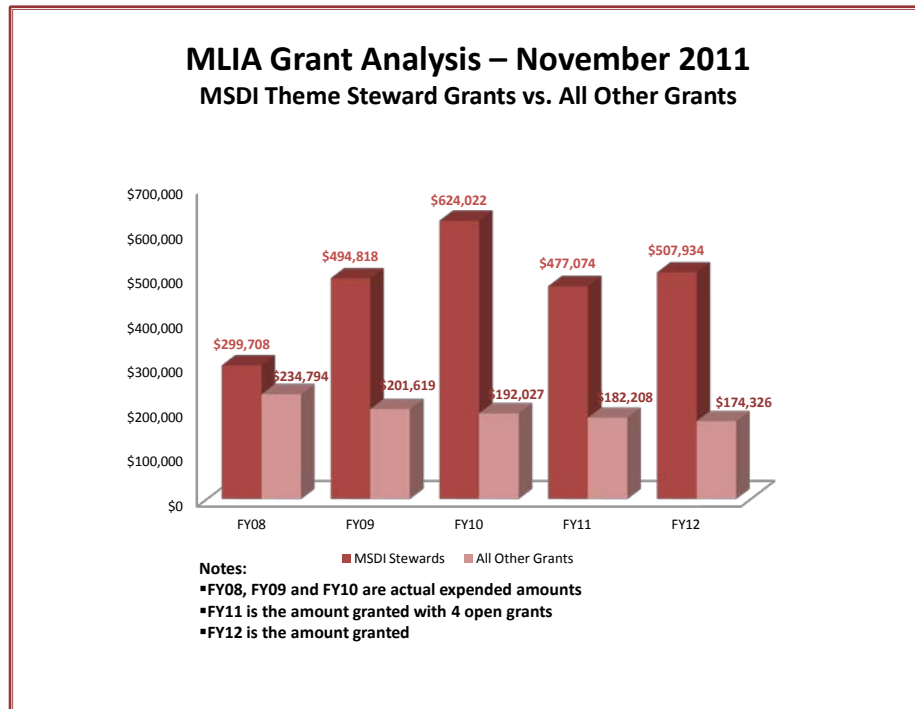
Accomplishments and Current Challenges

 The organizational structure surrounding general GIS coordination and MSDI oversight have undergone significant change over the past year based on the recommendations of the Governor's Office of Budget and Program Planning's (OBPP) GIS Taskforce. Those recommendations as enacted moved the duties associated with MLIA and oversight of the MSDI to MSL. Assuming that this organizational change results in improved services and efficiencies as envisioned, this should be regarded as a major accomplishment.   While the organizational structure has changed the policy and technical issues surrounding GIS have not changed to any great degree and in many cases issues identified in the last two years remain unresolved.   In 2010 the Montana Land Information Council reviewed the 2009 MSDI Theme Steward's report and identified four major areas where policy issues reside and need attention. They were funding, marketing, training and data integration and standardization. Not surprisingly, these issues correlate closely with the goals and objectives of past land plans, and continue to define the priority needs in this year's plan.

While sometimes debated internally, Montana's GIS coordination efforts have generally been recognized and lauded both regionally and nationally. In the past year Montana joined with Idaho through a Federal Geographic Data Committee (FGDC) grant to broaden the scope of the Montana Control Point Database and web application to include Idaho geodetic control and develop a joint business plan. Montana, through and effort by the State Information Technology Services Division (SITSD) is leading a multi-state GIS Cloud Computing feasibility study and procurement process. The Natural Resource Information System (NRIS) became a full partner of the Geospatial Multistate Archives and Preservation Program (GeoMAPP), a Library of Congress funded effort to develop archival best practices for GIS data. Now joined administratively, the Montana Base Map Service Center (BMSC) and NRIS serve as the primary points of contact for national, regional, state, and other GIS coordination groups (MCA 90-1-404 (i)) . This coordination role which includes administering the MLIA through planning, grant administration and MLIAC support, general MSDI oversight, outreach, education and marketing must continue in State fiscal years 2012 and 20 13.

The GIS community must find better ways to communicate efforts and accomplishments that have embedded GIS technology in the core business processes of government and provide Montana citizens with location based services that are fast becoming common place in internet applications they access. Recently MSL provided a draft MSDI work plan to the council that contained some initial ideas for marketing and outreach.   Those efforts must come to fruition this year to inform policy makers if any progress on acquiring additional base funding is to be expected.

Obtaining stable and ongoing funding for MSDI from sources other than MLIA account continues to be a challenge. Several MSDI themes rely on MLIA funding for all or parts of the creation, integration, maintenance and/or dissemination processes. Last year the Administrative Boundaries, Cadastral, Geodetic Control, Hydrography, Land Cover, Structures, Transportation received all or major portions of their budgets through MLIA grants. The Wetlands theme, while leveraging additional federal financial support, continues to receive annual MLIA funding. Without additional sources of income this biennium the state's MSDI investment must again be substantially supported through MLIA in FY13. Reliable data integration and standardization will come about over time as reliable funding sources are found that legitimize MSDI as the state's geographic infrastructure. MSDI Stewards must document their needs and priorities as well as intended actions in an annual MSDI work plan. A major effort to broaden funding sources must be undertaken by MSL, MLIAC and MSDI Stewards with ground roots support of the GIS community and private sector core users including the real estate, banking and insurance industries

MLIA Grant Analysis – November 2011
MSDI Theme Steward Grants vs. All Other Grants

Notes:
- FY08, FY09 and FY10 are actual expended amounts
- FY11 is the amount granted with 4 open grants
- FY12 is the amount granted

Support for MSDI data partners is critical to the Montana GIS enterprise.   These partners are considered the most reliable and accurate source for data content for many multi-jurisdictional MSDI themes such as Administrative Boundaries, Cadastral, Transportation and Addressed Structures. Partners may be state agencies, local and tribal governments, and in some cases federal agencies (although not eligible for MLIA funding). Support for data partners is needed both financially and through technical knowledge transfer. In FY11 Gallatin, Lake and Carbon County obtained grants that supported MSDI geodetic control and addressing efforts. Knowledge transfer is primarily accomplished through education and

outreach efforts as well as the professional development efforts of MAGIP. **MSDI Theme Stewards must support data partners through on-site visits, on-line training and other opportunities** that promote technology transfer and a plan to accomplish such outreach should be contained in the MSDI work plan. MLIA grants for MSDI data partners including local and tribal governments and contributing state agencies must continue to be available.

As a way to support a grass roots GIS approach in Montana, projects that leverage MLIA funds to collect, maintain and disseminate data and embed GIS into business processes remain solid investments. These projects may support MSDI and/or other jurisdictional priorities. By supporting these projects the federation gains the ear of important policy makers like county commissioners and tribal councils. FY11 MLIA grants to Butte-Silver Bow County to help improve their digital representation of sanitary sewer infrastructure and to the Chippewa-Cree Tribe to collect the geography of their cultural history help build the bond between State and Local GIS. In 2012 we propose to continue offering grants in this category to eligible agencies that need to enhance their GIS capacity. These grants can be local or regional in nature with single applicants or a consortium of applicants.

Finally, data discovery is only as good as the published metadata made available to the Montana GIS Portal. While all projects funded under MLIA are required to write and expose standardized metadata there remain large data holdings still unpublished. Additionally data holdings of historical value are being lost as they are replaced with more current data without standard archival methods. We recommend that MLIA funds be made available via grants to partners who wish to expose data through the Montana GIS Portal via standardized metadata or archive data of high temporal value.

Land Plan Priorities Proposed for Funding (A –Specified)

In order to fulfill the purpose of the act and support current MSDI efforts, MLIAC has identified the following specific Land Plan priorities (goals) for state FY 2013.

A1 – MLIA administration is conducted using efficient an accountable methods.

> A1.1 - Carry out the duties of the department as described in MCA 90-1-404 (a) through (m)

> A1.2 – Lead the development of a 2013 GIS enterprise legislative package which includes modification of the MLIA to accommodate administration change and provides equitable funding solutions and marketing components that solicit grass roots support.

A2 –MSDI Framework layers are developed, integrated, maintained, disseminated and preserved in an efficient and standardized manner.

> A2.1 - MSDI Theme Stewards will develop an annual MSDI work plan, to be incorporated into a MSL work plan that prioritizes actions, supports data partners and identifies funding needs.

> A2.2 - MSDI Theme Stewards and Leads will conduct new data collection, ongoing maintenance data discovery through the Montana GIS Portal, data delivery via download and web services, archival assessment and other projects as per the MSDI work plan (A2.1).

A2.3 - MSDI Theme Stewards shall support data partners through on-site visits, on-line training and other opportunities that promote technology transfer.

A2.4 – Working through MSL, develop a MSDI data archive

A3 – Statewide GIS coordination, outreach and education is targeted to reach prioritized sectors of the GIS community.

A3.1 – Develop targeted marketing materials to support the legislative package in A 1.2.

A3.2 - Develop targeted marketing materials to support MSDI.

A3.3 - Preserve and improve relationships with MSDI data providers through support and local visits that foster knowledge transfer.

A3.4 - Attend appropriate meetings and conferences including the Montana Association of Counties, Montana Association of Planners, Montana State IT Conference, MAGIP Intermountain Conference and Technical Session, the National States Geographic Information Council and other meetings of subject matter experts.

A3.5 – Provide technical consulting to users of GIS software and MSDI services.

Land Plan Priorities Proposed for Funding (B – Grant Categories)

In order to fulfill the purpose of the act MSL has identified and prioritized the following grant categories for FY13.

B1 - MSDI Data Partner Support

Data partners should receive funding support and outreach that enables and enhances partnership opportunities:

B1.1 - MSDI data partners contributing to statewide framework data may apply for grants according to the published MLIA grant application process

B1.2 - Those data partners must work in advance with the MSDI Theme Stewards to provide data in common formats that promote data integration.

B2 - Local, Regional and Tribal GIS Support

Investments that leverage local, regional, state and tribal matching funds and in-kind time and talent that builds toward a strong Montana GIS federated enterprise:

B2.1 - Regional GIS consortiums that leverage a multi-jurisdictional approach to problem solving and GIS analysis can demonstrate the value of GIS to policy makers.

B2.2 - Localized GIS solutions that demonstrate the value of GIS in improving the quality of life for Montana citizens and build grass roots support for location based services.

B3 – Metadata and Data Archival Projects
Investments that foster data discovery through common, standardized metadata and archival methods:

B3.1 - Statutorily qualified Organizations that wish to expose spatial data holding to the public by producing standardized metadata and publishing it through the Montana GIS Portal

B3.2 Organizations working in partnership with the Montana State Library to archive spatial data with standard methodologies that promote discovery of the archives

Action Plan and Budget

Both specified tasks and grant categories may be funded by a combination of MLIA and other sources. The primary source of funding for the specified tasks during the time frame of this land plan continues to be the account created by the MLIA. Administrative rule governing that account states:

(1) "Available grant funds" means the balance of the Montana land information account on March 31 of each fiscal year, plus an estimate of not-yet-deposited state funds held by counties as of that date, less the department's budget associated with duties and responsibilities defined in 90-1-404, MCA, for the fiscal year and any funds committed to grants.

MSL, in consultation with the Council, will determine the available grant funds according to administrative rule. Rolled over excess funds from past years occasionally result in a fund balance that will exceed the estimated land plan budget. MSL may submit a revised work plan for Council review that contains additional specified tasks or grant opportunities consistent with the purpose of the MLIA.

A-Specified: $750,000

A1 - MLIA administration is conducted using efficient an accountable methods

     a.   Tasks described in A1 (page 6) including the duties as described in MCA 90-1-404 (a) through (m)

     b.   Responsible Party is: MSL

     c.   Budget Line: $240,000

     d.   Anticipated Funding Source: MLIA

A2 - MSDI Framework layers are developed, integrated, maintained, disseminated and preserved in an efficient and standardized manner.

     a.   Conduct work as described in A2 (pages 6 and 7)

     b.   Responsible party is: MSL

     c.   Budget Line: $450,000

               c.1 - Framework data creation - $100,000, (MSDI stewards/leads)

               c.2 – Framework data integration and maintenance – $300,000, (MSDI stewards/leads)

               c.3 – Framework dissemination and archival – $50,000 (MSDI stewards/leads)

     d.   Anticipated funding source: MLIA

A3 - Statewide GIS coordination, outreach and education is targeted to reach prioritized sectors of the GIS community.

    a.   Conduct GIS coordination, marketing, outreach and education as described in A3 (page 7)

    b.   Responsible party is: MSL

    c.   Budget Line: $60,000

        c.1 - Develop targeted marketing materials to support the legislative package in A 1.2. - $5,000

        c.2 - Develop targeted marketing materials to support MSDI - $5,000

        c.3 - Preserve and improve relationships with MSDI data providers through support and local visits that foster knowledge transfer - $30,000

        c.4 - Attend appropriate meetings and conferences - $10,000

        c.5 - Provide technical consulting to users of GIS software and MSDI services - $10,000

    d.   Anticipated funding source: MLIA, existing MSL marketing

B- Grant Categories: $300,000 (budget line items may vary based on grant applications submitted)

B1 - MSDI Data Partner Support

    a.   Support Land Plan Grants – MSDI Support Category

    b.   Responsible party is: Grant Recipients

    c.   Budget Line: $ 150,000

    d.   Anticipated funding source: MLIA

B2 - Support Local, Regional and Tribal GIS Infrastructure

    a.   Support Land Plan Grants – Local and Regional Infrastructure Category

    b.   Responsible party is: Grant Recipients

    c.   Budget Line: $120,000

      d.   Anticipated funding source: MLIA

B3   Encourage Metadata and Archival Efforts

      a.   Support Land Plan Grants – Metadata and Archival Category

      b.   Responsible party is: Grant Recipients

      c.   Budget Line: $30,000 (approximate)

      d.   Anticipated funding source: MLIA

The total budget to accomplish the tasks contained within this plan $1,050,000

Appendix A – Department MLIA and MSDI Administration Budget

(Budget is the FY 12 budget, current as of November 15, 2011. It was used as a tool to estimate the Land Plan budget for FY13)

DRAFT FY12 General Administrative Budget for MLIA and MSDI (formerly called GIS Coordination)
November 15, 2011

Budget Category	Coordination Budget	MLIA Grants	Other Grants	MLIAC Council Expenses	Total Budget
Personal Services					
2 FTE - BMSC Chief and GIS Staff Support Analyst	179,871.00				
.5 FTE - MSL Central Services	12,000.00				
4 FTE - Theme Stewards		300,472.00			
Total Personal Services	**191,871.00**	**281,902.00**	**18,570.00**		**492,343.00**
Operating					
Supplies	300.00	900.00		1,000.00	
Equipment					
Rent					
Communications	2,000.00				
ITSD fixed costs	36,135.00	14,781.00			
Repair & Maintenance					
Other					
Travel - In State	3,000.00	9,800.00	2,100.00	2,000.00	
Travel- Out of State	2,000.00				
Professional Development	3,000.00				
Professional Services		22,500.00	121,830.00		
MSDI Hosted Infrastructure	54,730.00				
Software - ESRI ELA	8,183.00	7,500.00			
Software - Other - Data Interoperability & FME		1,800.00			
Meetings				2,000.00	
Total Operations	**109,348.00**	**57,281.00**	**123,930.00**	**5,000.00**	**295,559.00**
Total					**787,902.00**
Revenue					
Coordination Funds	240,000.00				
MLIA Grants (4)	317,647.00				

Other Grants				20,670.00		
MLIA GeoControl Grant	23,625.00					
Broadband Passthru				121,830.00		
Total	**581,272.00**			**142,500.00**		**723,772.00**
Difference						**(64,130.00)**
SITSD GIS - Servers	4,400.00					
SITSD GIS - Database	14,000.00					
SITSD GIS - Applications	4,750.00					
SITSD GIS - Hosted Services	14,000.00					
SITSD GIS - Shared Software	7,580.00					
SITSD GIS - Professional Ser.	10,000.00					
Subtotal SITSD Services	**54,730.00**					
FY12 OTO Expenses						
SITSD GIS - Servers	6,600.00					
SITSD GIS - Database	1,400.00					
SITSD GIS - File Storage	25,000.00					
SITSD GIS - Professional Ser.	3,000.00					
Total	**36,000.00**					