

Montana Land Information Plan

Effective January 15, 2013 to June 30, 2014 for planning purposes and from July 1, 2013 to June 30, 2014 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

FINAL DRAFT – 11/16/2012

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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) 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

To accomplish the priority goals in section A, MSL will submit a work plan by March 1, 2013 for Council review. This plan will include the tasks assigned to MSL from the annual MSDI work plan ([A2.1, page 8](#)), along with other MSL priority tasks that promote spatial data discovery and coordination. Some MSDI

tasks may be undertaken by a party other than MSL however MSL will assume ultimate accountability. MSL will receive MLIA funding for the specified category A priorities contained within this plan.

Land Plan priorities in category B will be accomplished through MLIA grants. A standard MLIA grant application that solicits appropriate projects will be the funding mechanism for category B.

Accomplishments and Current Challenges

In preparation of this year's Land Plan MSL Geographic Information staff, in conjunction with MLIAC's Land Plan Subcommittee, reviewed the status of the MSDI themes and current MLIA grants. The status of core policy and technical issues identified in last year's plan, specifically funding, marketing, training, and data integration/standardization were also examined. While potential changes to the MLIA funding model could impact the future the overall health of MSDI, from a content perspective, MSDI is solid and GIS technology appears to be growing in all sectors. Current directions in mobile computing will spur an increasing demand for spatial data. Last year's revisions to the annual Land Plan's format and content appear to be working and this year's plan follows a similar format with the priorities undergoing only minor change.

MSL has administered both the MLIA fund and the duties of the department as described in [MCA 90-1-404 \(a\) through \(m\)](#) in an efficient and fiscally responsible manner. Working with the Department of Administration MSL developed a legislative package that, if passed, will transfer MLIA authority to MSL as per the recommendation of the Budget Office's GIS Taskforce. While FY12 expenditures in this category exceeded the \$240,000 contained in the original fiscal note primarily through the assumption of subsidized IT costs, MSL has been able to substantially reduce those costs and expect FY13 costs to be within budget. Additionally the Governor's proposed FY14/15 budget contains funding for fixed IT costs incurred by MSL through procurement of primarily MSDI related IT Services from the State Information Technology Services Division (SITSD). State funding for enterprise GIS IT infrastructure fixed costs has allowed MSL to estimate reduced internal costs reflected in the MSL budget (Appendix A). That translates into a portion of the approximately 19% reduction in the reliance on MLIA funds for overall MSDI purposes in FY14 as part of an overall 13% reduction in projected MLIA funding requested in this plan. Presently the MSL FY14/15 budget contains funding for a Water Information Manager that similarly, if passed; would reduce the need for MLIA support for the Hydrography framework.

MSDI Framework layers continue to be developed, integrated, maintained, disseminated and preserved in an efficient and standardized manner. Project priorities from the [FY13 MSDI work plan](#) are proceeding on schedule. The work plan contained a fundamental maintenance goal to establish a base level of completeness and availability for all MSDI themes. Data distribution, including metadata, will be consolidated at one primary access point. An initial roll-out date for a re-engineered MSDI web presence is scheduled for January 2013. Work on adjustment of cadastral and administrative boundary data to CadNSDI 1.2 to enhance spatial accuracy is presently on hold however still anticipated to be completed during the fiscal year. MSL staff is working closely and cooperatively with the BLM and its contractors to correct inconsistencies discovered by MSL staff during an initial examination of the data.

The Wetlands theme, while leveraging additional federal financial support for mapping of federally-owned and managed lands, continues to receive annual MLIA funding for general stewardship and mapping of state and private lands. The need for Wetlands funding in FY 14 has been substantially reduced by the MT Heritage program's proactive solicitation and procurement of additional funding from other partners, particularly the BLM. MSL has entered into discussions with MDT to examine to examine and potentially improve the business and technical processes associated with the MSDI Transportation Framework.

Statewide GIS coordination has been proactive in all sectors and has strived to meet the needs of the GIS community. Marketing materials and testimony have been developed in support of the proposed MLIA changes. Posters and brochures have been developed to market MSDI. A brochure that documented the success stories associated with the MLIA grant program was produced. From a technology transfer perspective MSDI theme leads regularly visited and assisted MSDI data partners. For example, cadastral staff assisted Butte Silver Bow with the transition from Microsoft Access CAMA databases to the Department of Revenue's new SQL databases. The assistance involved the installation of the SQL Server software, database setup and scripting of database views in SQL. MSL cadastral staff regularly coordinates with federal agencies to keep public land ownership current. MSL staff actively support MAGIP and participate on the education, technology sub-committees. Nationally, MSL staff was invited to participate on national panels addressing clearinghouses and broadband data at the September National States Geographic Information Coordinators Annual Convention. It should be noted that one area requiring additional support in FY14 will be in the area of metadata development because of software changes that have resulted in a noticeable decline in the production of metadata records.

Support for MSDI data partners remains 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 assistance. GIS 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. In FY13 the MLIA Grants program funded Gallatin and Park county GCDB enhancement projects that will contribute to enhancing the spatial accuracy of cadastral and administrative Boundary data.

MLIA grant awards to local governments, like Stillwater County for collection of traffic related assets, McCone County to document rights of way information, and Lewis and Clark County for collection of certificate of survey data, all met the FY 13 Land Plan's category B2 for local, regional and tribal support. An MLIA grant was also awarded the Swan Valley School District to build GIS capacity within the school and community. This year's plan will continue to encourage a grass roots GIS approach in Montana,

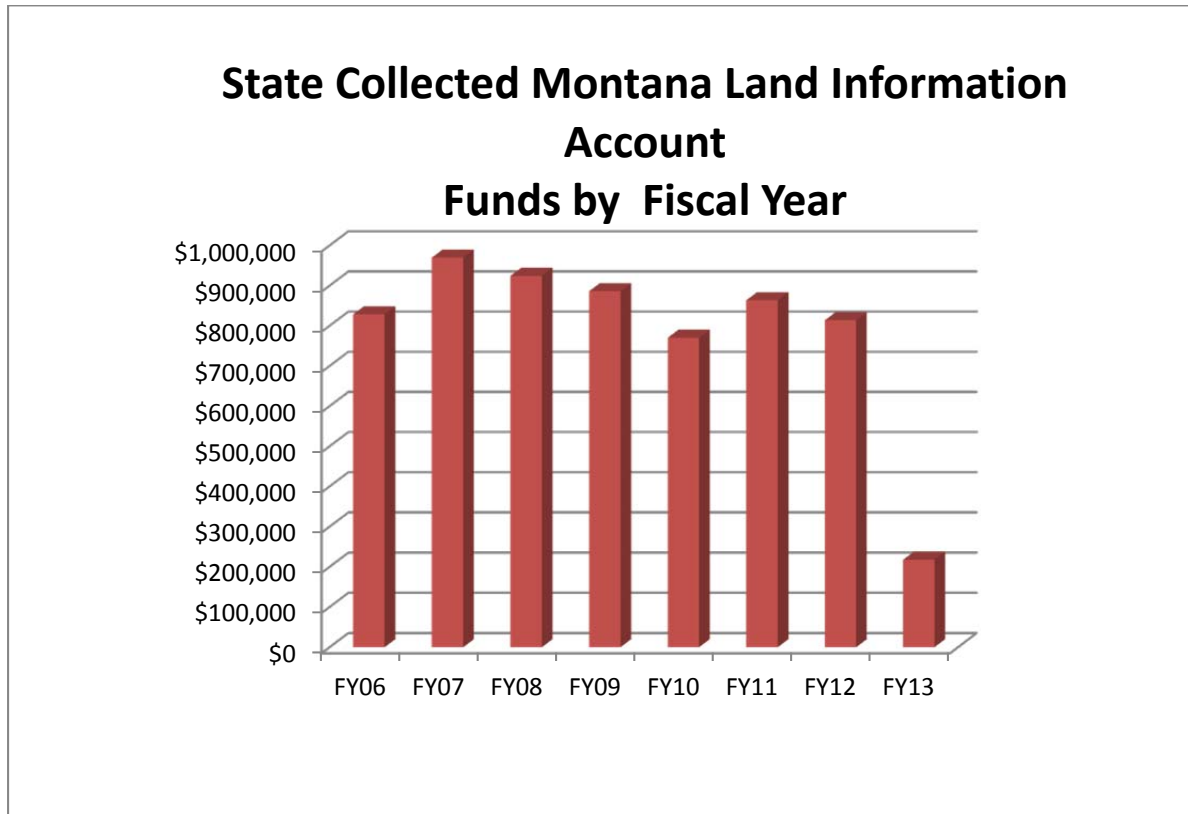
through solicitation of projects that leverage MLIA funds to collect, maintain and disseminate data and embed GIS into business processes remain solid investments. These projects may support MSDI and/or other jurisdictional priorities. By supporting these projects the federation gains the ear of important policy makers like county commissioners and tribal councils. These grant applications can be local or regional in nature with single applicants or a consortium of applicants.

Grant Name/Type	MLIA Share	Leverage Amt.	Leverage %
B1 MSDI Partner Grants			
MLIA_2013_GCDB_GallatinCo	\$10,000	\$15,346	153%
MLIA_2013_GCDB_ParkCo	\$20,000	\$10,000	50%
B1 MSDI Local, Regional, Tribal Support			
MLIA_2013_COS_Lewis&ClarkCo	\$60,000	\$25,000	42%
MLIA_2013_GISinRuralCommunities_SwanValleySchool	\$37,207	\$33,893	91%
MLIA_2013_PublicInfrastructure_Columbus	\$31,369	\$149,720	477%
MLIA_2013_PublicLandsInfrastructure_LakeCo	\$20,700	\$30,082	145%
MLIA_2013_RightsofWays_McConeCo	\$10,103	\$3,132	31%
MLIA_2013_TrafficControl_StillwaterCo	\$26,813	\$34,919	130%
MLIA_2013_WebMap_MissoulaCo	\$20,000	\$8,287	41%
Total B1 and B2 Grants	\$236,192	\$310,379	131%
B3 - Metadata			
MLIA_2013_Metadata_LincolnCo	\$16,150	\$11,205	69%
Total B3 Grants	\$16,150	\$11,205	69%
Totals for All Grant Applications	\$252,342	\$321,584	127%

Finally, in FY13, MLIA funding supported Lincoln County’s effort document their spatial data holdings. That project, already successfully completed, resulted in 25 metadata records submitted to the Montana GIS Portal, with documented data available for download at http://www.lincolncountymt.us/planning/county_maps.html. Consistent with last year’s plan, this plan also supports metadata and data archival efforts. 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 continue to 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.

While all of the FY13 Land Plan priorities have been, or are in the process of being addressed, challenges remain. Several MSDI themes continue to depend on MLIA funding for all or parts of the creation, integration, maintenance and/or dissemination processes. Without additional sources of income, this biennium the state’s MSDI investment must again be substantially supported through MLIA. In FY14

MSDI Stewards will continue to document their needs and priorities as well as intended actions in an annual MSDI work plan. While needs may remain static or, in some cases, may benefit from increased investment, the MLIA account has been impacted by the slow economic recovery. FY 12 collections actually declined from FY11 collections although the first 3 months of FY13 show approximately a 16% growth from FY12.



While the overall fund balance remains healthy, the annual Land Plan budgets must adapt to revenue collections. Therefore while funding priorities remain the same as FY13 we are recommending an approximate 19% reduction in the MSDI funding and a 10% MLIA Grant funding. The budgeted amount for grants, while reduced from FY13 is still approximately \$20,000 more than the total FY13 successful grant total. Funding for GIS coordination and MLIA administration should remain static at \$240,000, however MSL will carefully monitor this budget and if the legislature approves FY14 fixed costs for IT make every effort to hold this under budget.

At the time of writing a substantial question mark remains as to the extent of MLIA funding that will be available beyond FY14. The Montana Association of Counties (MACO), at its September Convention, passed a resolution stating *“Now, Therefore be it Resolved, section 90-1-410(2) should be amended to reflect that fifty percent (50%) of funds collected in the fund as described in 7-4-2637 (20(III)) shall be reserved for local and tribal government sponsored grants as described in 90-1-404”*. MACO has

indicated to the State Librarian that they are open to possible alternative solutions through negotiations with MSL and MLIAC, as the resolution is drafted into statute. MSL is currently examining the potential impacts of this resolution and certainly expects that the MLIAC will actively engage in any discussion. If a change in funding structure occurs that reduces FY15 (and beyond) funds for state enterprise GIS activities, MSL, with advice of MLIAC, will need to expend considerable energy exploring alternatives that potentially either provide additional revenues or identify ways to reduce services with minimal impact to the GIS community.

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 and MSDI administration is conducted using efficient and accountable methods.

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

A1.2 Research and document scenarios and options for a reduction of MLIA funding for MSDI and GIS Coordination in FY15 and beyond. This would include identification of alternative funding sources.

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, continue to expand a Montana spatial data archive that includes annual MSDI entries.

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

A3.1 - Increase support for creation of portal ready metadata which may include revisions to the portal standard that simplify the process

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.

A3.6 – When requested provide annual consultation and advice to MLIA grant applicants as they strive to best meet the MLIA grant criteria.

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: \$656,000

A1 - MLIA and MSDI administration is conducted using efficient and accountable methods

- a. Tasks described in [A1 \(page 8\)](#) 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 \(pages 8 and 9\)](#)
- b. Responsible party is: MSL
- c. Budget Line: \$362,000
 - c.1 - Framework data creation -\$60,000, (MSDI stewards/leads)
 - c.2 – Framework data integration and maintenance – \$270,000, (MSDI stewards/leads)
 - c.3 – Framework dissemination and archival – \$32,000(MSDI stewards/leads)
- d. Anticipated funding source: MLIA

A3 – MSDI 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 \(page 8 and 9\)](#)
- b. Responsible party is: MSL Theme Stewards and Leads
- c. Budget Line: \$54,000
 - c.2 - Develop and maintain a public web presence and 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 - \$32,000
 - c.4 - Attend appropriate meetings and conferences - \$9,000
 - c.5 - Provide technical consulting to users of GIS software and MSDI services - \$8,000
- d. Anticipated funding source: MLIA, existing MSL marketing

B- Grant Categories: \$270,000 (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: \$135,000
- 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: \$108,000
- 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: \$27,000
- d. Anticipated funding source: MLIA

The total budget to accomplish the tasks contained within this plan: \$926,000

Appendix A – Department’s FY14 MLIA/MSDI Anticipated Budget

For organizational purposes, MSL consolidated the Base Map Service Center program that came from the Department of Administration and the Natural Resource Information System under one program – MSL Geographic Information. However from a budget perspective they remain separate which makes it challenging to describe the situation. While funds can potentially flow from MLIA to MSL staff funded primarily through NRIS core funding it is not possible in the FY 14/15 biennium to transfer funds in the opposite direction. In an attempt to clarify this to the greatest extent we have separated the MSL anticipated costs related to MLIA and MSDI into two separate tables. Table 1 represents the costs tied to the original MLIA fiscal note of \$240,000 and labeled over the years as GIS Coordination. Table 2 represents MSDI costs formerly (from FY2008 through FY2012) funded in yearly grant applications. The remaining portion of the equation, non-MLIA revenue tied to additional MSDI stewardship, data discovery and archival, as well as GIS IT enterprise infrastructure fixed costs, is described in the narrative after table 2.

Table 1

MSL Geographic Information - 766000 & 766001 - GIS Coordination Budget			
Budget Category	Description	Amount	Source
Personal Services			
	2.25 FTE - State Coordinator, GIS Support Analyst and Administrative Assistant	\$178,983	MLIA
Operating			
	ITSD fixed costs (include microsoft and esri software costs and the Montana Cadastral Web Application)	\$46,527	MLIA
	Supplies & Materials	\$500	MLIA
	Travel - In State	\$1,500	MLIA
	Travel - Out of State	\$3,000	MLIA
	Professional Development	\$3,000	MLIA
	Other Expenses	\$1,490	MLIA
MLIAC Operating Expenses			
	Meetings	\$2,000	MLIA
	Travel	\$3,000	MLIA
Total		\$240,000	MLIA

Because of the cost savings realized through the merger of the two programs, primarily by eliminating some and transferring other IT costs, MSL estimates that this budget will be back in-line with the original fiscal note after the budget overages in FY 12 during the transition period.

Table 2

MSL Geographic Information - 766005 - MSDI Budget			
Budget Category	Description	Amount	Source
Personal Services			
	4.15 FTE - MSDI Theme Stewardship	296,168	MLIA
Operating			
	Supplies & Materials	1,200	MLIA
	Travel - In State	7,000	MLIA
	Travel - Out of State	3,000	MLIA
	Professional Development	10,000	MLIA
	Other Expenses	7,500	MLIA
	Professional Services - Heritage Program for MSDI Land Cover and Wetlands	91,000	MLIA
Total		415,868	MLIA

Table 2 reflects an approximate 19% MSDI reduction in the MLIA funding estimate from the FY13 Land Plan. In the interest of transparency it should be noted that MSL also expects to be under the \$510,000 MSDI budget contained in the FY13 Land Plan. The additional FY14 reduction is due to a combination of factors including:

- More accurate personal service and operational costs, based on FY12 actual costs, that weren't available during the MSDI stewardship transition from DOA/SITSD to MSL
- A Water Information System manager position included in the MSL FY 14/15 budget that, presuming budget approval, could take over much of the MSDI Hydrography work.
- The inclusion of fixed costs for the GIS IT enterprise system hosted at DOA/SITSD that will cover the costs of MSDI public facing web services

The professional services line item reflects funding for a portion MT Heritage Program's costs for Land Cover and Wetlands. The request for Wetlands funding in FY14 has been substantially reduced due to additional funds Heritage was able to obtain from other Wetlands partners.