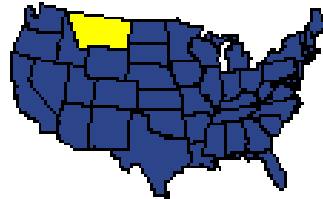


Montana Land Information Plan Fiscal Year 2009



Produced by the Montana Department of
Administration, Information Technology Services
Division in coordination with the Land Information
Plan Subcommittee of 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.

January 15, 2008

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1. PURPOSE

The objective of this plan is to establish achievable goals and objectives that will further the purposes of the Montana Land Information Act (MLIA). The stated purpose of the MLIA(MCA-90-401) is:

To collect, maintain, and disseminate information (in digital format) about the natural and artificial land characteristics of Montana.

To ensure that digital land information is:

- 1) Collected consistently – in accordance with standards
- 2) Maintained accurately - in accordance with standards, and
- 3) Made available in common ways for all potential uses and users, both private and public.

2. ORGANIZATIONAL APPROACH AND IMPLEMENTATION

To fulfill the purpose of the MLIA, the Montana Department of Administration (the Department) has the following fiscal, administrative and coordination duties:

- 1) Serving as administrator of the MLIA account
- 2) Working with federal, state, local, private, and tribal entities to develop and maintain land information
- 3) Preparing an annual Montana Land Information Plan (MLIP) that includes a proposed budget organized by annual goals and objectives, and that describes land information and prioritizes land information:
 - Collection needs
 - Maintenance needs
 - Dissemination needs
- 4) Establishing (by administrative rule) the application and granting processes required to distribute MLIA funds
- 5) Reviewing grant applications for implementation of the MLIP and giving preference to intergovernmental partnerships that meet requirements of the MLIP
- 6) Monitoring the use of MLIA grant funds to ensure compliance with the MLIA
- 7) Coordinating the development of technological standards for land information data creation
- 8) Serving as the primary point of contact (POC) for national, regional, state, and other GIS coordination groups to:
 - Channel issues
 - Channel projects
- 9) Providing administrative support to the MLIAC and paying MLIAC expenses
- 10) Preparing an annual budget corresponding to duties performed
- 11) Reporting to the governor and legislature on the progress made to collect, maintain, standardize and disseminate land information

To fulfill these responsibilities the department or any recipient of MLIA funds may contract with a public or private entity. Where appropriate, the products of the grants shall be in compliance with general State information technology (IT) and geospatial data standards and/or policies as defined by the Montana Information Technology Act (MITA) and the Federal Geographic Data Committee (FGDC).

The MLIA also created the Montana Land Information Act Council (MLIAC) and assigned it the responsibility to advise the Department regarding:

- 1) GIS issues and land information
- 2) Priority land information and data layer development
- 3) The content of the MLIP
- 4) The MLIA grant development and grant management process
- 5) The management and distribution of MLIA funds
- 6) Identifying, evaluating and prioritizing requests to develop, maintain GIS and land information services

The Council also has the duty to:

- 7) Promote coordination to:
 - Minimize duplication of effort,
 - Facilitate documentation
 - Facilitate data distribution and exchange
- 8) Advocate for the development of consistent policies, standards and guidelines for land information

At mid-year and at the end of the fiscal year for the granting period, the Department will report to the MLIAC the status of the plan's priority tasks and measures of success. The objectives of this plan will be implemented in accordance with the duties and responsibilities outlined in the MLIA and administrative rules.

This plan was developed to give direction for stakeholder groups within Montana wishing to collaborate and apply for MLIA grants targeting the goals and objectives of the Montana Land Information Plan, and supporting the consistent collection, accurate maintenance, and common availability of MSDI framework layers.

The Department and the Council do not have the authority to mandate the actions of other stakeholders and recognize that accomplishing the purpose of the MLIA, and the goals and objectives of the 2009 MLIP will require the unified cooperation of current and future users of digital land information, both public and private. To that end the Department intends to create the Montana Base Map Service Center (BMSC) and appointed the State of Montana Geographic Information Officer (GIO) as it's head for, among other responsibilities, the purpose of being the State's focal point for internal and external coordination of geospatial activities.

This plan will be in effect from January 15, 2008 to January 14, 2009.

3. PROGRAM GOALS - STATE FISCAL YEARS 2008/2009

The 2008 Montana Land Information Plan contained the following goals:

- Support standardized and sustainable methodologies to collect, maintain, and disseminate land information,
- Improve and encourage partnerships and collaboration,
- Encourage and support appropriate integration of geographic information systems technology and geospatial data into business processes and public policy, and
- Foster professional development in land information systems, and assess workforce needs and opportunities.

The 2009 MLIP has incorporated the intent of these goals from the 2008 Land Information Plan with currently identified priorities and needs and presents the following goals and objectives with milestones as measures of accomplishment.

GOAL 1: A statewide set of MSDI framework layers that are consistently collected, accurately maintained, and made commonly available

Objective 1.1 – Funding and administrative support for local, tribal, state and federal data collection efforts that will help develop and maintain multi-jurisdictional MSDI framework layers.

Section 5 summarizes funding recommendations and priorities identified by the Department, and by theme stewards in the MSDI theme plans. MSDI framework layer plans are available at <http://giscoordination.mt.gov/MiniPlans.asp>. This information is provided to assist theme stewards and stakeholders in identifying needs and opportunities for MLIA grant applications.

Milestone 1.1.1– Funding available from the MLIA account for MSDI framework layers will be prioritized and provided to grant applicants through the MLIA granting process

Milestone 1.1.2 – A progress report and timeline for completion of each MLIA framework layer will be developed by theme stewards, the framework subcommittee and other stakeholders and presented to the Department and Council. This report will include projected funding needs for basic theme completion, current and projected future theme maintenance and enhancement costs. The Department, with input from theme stewards, will produce a standardized template for these reports.

GOAL 2 - A physical and organizational infrastructure that will support the long-term collection, maintenance, availability and use of digital land information.

Objective 2.1 – An organizational framework and stable infrastructure that efficiently provides the human and technological resources needed to support the use and integration of digital land information into the critical business processes of local, tribal, state, federal, and other stakeholders.

Milestone 2.1.1 – A background report presented to the Council that identifies the basic human and technological resources necessary to develop and use the digital land information required for the critical business processes of local, tribal, state, federal, and other stakeholders.

Milestone 2.1.2 – A proposal presented to the Council that identifies viable alternatives for an organizational framework and infrastructure that will provide the human and technological resources necessary to provide efficient use of GIS and digital land information in the critical business processes of stakeholders throughout the State

Milestone 2.1.3 – A recommendation from the Council regarding an efficient and cost effective organizational structure for long-term support of MSDI framework layers and their integrated use by stakeholders.

Goal 3 – Permanent and secure funding for the consistent collection, accurate maintenance and common availability of MSDI framework layers

Objective 3.1 – Identify, develop, and propose secure funding mechanisms for the consistent collection, accurate maintenance, and common availability of all MSDI framework layers

Milestone 3.1.1 – A presentation to the Council of a clearly stated proposal for long-term funding for each of the MSDI framework layers. This proposal will include alternatives that compare the use of MLIA funds to support framework layers with other funding options.

Milestone 3.1.2 – A recommendation from the Council of actions necessary to provide long-term secure funding for the long-term support for each of the MSDI framework layers.

Objective 3.2 – Fulfill the administrative and fiscal responsibilities assigned to the Department in the MLIA while supporting other GIS coordination needs.

Milestone 3.2.1: The Department will prepare and present to the Council a summarized annual funding report for overall MLIA administration costs and a proposed multi-year funding model for Statewide GIS coordination costs, including but not limited to the coordination of MLIA duties.

Milestone 3.2.2 – With advice from the Council, the GIO and the Department will develop and propose to the Governor, and with the Governor's approval to the 2009 Legislature, a funding model that will fairly distribute geospatial coordination costs between administration of the MLIA and other statewide GIS coordination activities.

Milestone 3.2.3 – With advice from the Council, the GIO and the Department will review and if necessary, revise the MLIA administrative rules to address the land information plan schedule as it relates to the State fiscal calendar.

GOAL 4: Improved quality and efficiency in the business processes of stakeholders through consistent availability to critical land information and the use of GIS technology.

Objective 4.1 – The integrated use of standardized MSDI framework layers in the business and decision-making processes of local, tribal, state, federal and other stakeholders.

Milestone 4.1.1 – The completion of one or more projects demonstrating how MSDI framework layers, GIS tools and technology, and other digital land information can be used to support priority core business processes and efficiently answer critical land information questions.

Milestone 4.1.2: A presentation of the results of one or more demonstration project complete with maps, tabular reports, and other appropriate analytical results to the Council, the Department and the Governor.

Milestone 4.1.3: The development of communication outreach materials to support funding requests and other efforts to promote the collection, standardization, maintenance and distribution of digital land information.

4. ANNUAL PROGRAM COST AND BUDGET

The attached budget projects the Department's estimated allocation and expenditure of 2008 and 2009 MLIA funds. It is organized to display expenditures by: 1) The Department's coordination and administrative responsibilities and; 2) MLIA grant allocations.

		FY 2009 Budgeted Sources			
	MLIA	Grants	Rates	Other	Total
Est. 2009 MLIA Acct. Bal.	900,000				
Est. 2008 MLIA Grant Underspending					
- Transportation	50,000				
- Stillwater	20,875				
- Hydrography	11,000				
TOTAL Available Funds	981,875				
Expenditures					
General Coordination - 66413 & 66415 **					
Personal Services	150,000	4,500			154,500
Operating	90,000				90,000
Sub-total	240,000	4,500	0	0	244,500
Cadastral - 66414 & 66441 (20%)					
Personal Services	82,465				82,465
Operating	23,218	800,000			823,218
Sub-total	105,683	800,000	0	0	905,683
Transportation - 66410					
Personal Services	70,000				70,000
Operating	29,483				29,483
Sub-total	99,483	0	0	0	99,483
Critical Structures - 66416					
Personal Services	67,008	6,354			73,362
Operating	9,490	18,646			28,136
Sub-total	76,498	25,000	0	0	101,498
Boundaries - 66441 (80%)					
Personal Services	0	55,000			55,000
Operating	0	387,906			387,906
Sub-total	0	442,906	0	0	442,906

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MLIA Council						
Personal Services		200				200
Operating		2,900				2,900
Sub-total		3,100	0	0	0	3,100
GIO **						
Personal Services		0		112,000		112,000
Operating		0		35,000		35,000
Sub-total		0	0	147,000	0	147,000
NAIP *		113,167			186,833	300,000
MLIA Funds Available for:		343,944				
GCDB (Gallatin)						
Land Cover/Land Use						
Statewide Addressing						
Metadata						
Regional GIS						
Other						
TOTAL		981,875	1,272,406	147,000	0	1,944,170

 2008 MLIA Holdover
 Pass Thru Funds

* Recommended NAIP Holdover

** Land Plan milestones performed by the GIO/State Coordinator as part of their MLIA coordination activities

- 2.1.1 Background Report
- 2.1.2 GIS Organizational Framework
- 3.1.1 Long-term Funding Proposal
- 3.2.1 GIS Coordination Funding
- 3.2.2 Legislative Funding Proposal
- 3.2.3 Revise MLIA Administrative Rules
- 4.1.3 MLIA Outreach Materials

5. BACKGROUND, RECOMMENDATIONS AND PRIORITIES

Potential grant applicants are strongly encouraged to become familiar with the MSDI theme plans available at: <http://giscoordination.mt.gov/MiniPlans.asp>; to discuss project proposals with the theme stewards; and to use the following information as a background reference.

Based on information provided by MSDI theme stewards, four of the thirteen MSDI framework layers – Elevation/Hypsography, Hydrologic Units, Geology and Soils are funded for core work in 2009 by federal and/or state agency budgets. The Government Units theme has partial federal funding for FY 2008 and is searching for additional non-MLIA funds. Based on current theme work plans it is not anticipated that 2009 MLIA grant applications will be submitted by the theme stewards. This does not imply that work on these layers is completed, or that additional funding and other support needed to continue the collection, maintenance and dissemination of these layers will not be required in the coming years. Therefore, grant applications, for example a grant for local Lidar collection or one similar to the 2007 DNRC Fire District Boundary Grant, may be submitted, however contact with the theme steward prior to writing the grant is recommended.

Of the nine remaining MSDI framework layers, the Geodetic Control theme impacts the geographic accuracy and integrity of all other layers. Initial public release of the Montana Control Point Database (MCPD) is expected during the 2008 fiscal year, additional data collected to enhance the MCPD for Montana must be provided by registered surveyors. In 2007 an MLIA grant to support comprehensive GCDB control enhancement was allocated to Gallatin County. Continued enhancement of GCDB control points throughout the state will continue to be important for the geospatial stability of the MSDI. The Department has federal funding (listed in the budget as the \$800,000 in pass-thru funds under Cadastral) that could be used to leverage MLIA and applicant provided funding. Therefore, the Department recommends continued support for GCDB enhancement projects.

In 2005, numerous state partners cooperated with the USDA-APFO National Aerial Imagery Program (NAIP) to acquire Statewide coverage of the one-meter resolution natural color ortho-imagery regularly collected by the U.S. Department of Agriculture. In addition, State partners contributed additional funding for Statewide acquisition and processing of the one-meter color infrared (CIR) imagery derived from the NAIP. The CIR was identified as critical information to support development of the Wetlands framework layer. The 2005 NAIP is perhaps the most widely used MSDI framework layer and provides a critical background for mapping and development of several other MSDI layers, in addition to countless uses associated with other GIS projects.

The Department recommends that \$186,833.00 held in reserve by the Department from the 2007-2008 MLIA fund, and an additional \$113,167.00 from the 2009 MLIA fund be placed in an MLIA Ortho-imagery account to provide a portion of the funding necessary to support the state contribution to the USDA-APFO 2009/2010 NAIP ortho-imagery acquisition. This procurement may also be expanded to include contracting for the color infrared imagery (CIR) derived from the NAIP provided adequate funding can be secured. The MSDI Imagery plan clearly articulates that in addition to the NAIP, there is a growing need for organized and strategic acquisition of high resolution multi-spectral imagery. It is understood that alternatives to the NAIP that address the need for high resolution true-color and multi-spectral imagery need to be explored.

Given their importance in the business processes of GIS stakeholders, the Department has requested that the funding requests presented in the 2008-2009 MLIA steward grant applications for the Cadastral, Critical Structures, Hydrography, and Transportation/Addressing MSDI framework layers be prioritized for funding from the FY2009 MLIA account. Provided the grant reporting indicates successful accomplishment of the FY2008 goals, and with approval by the Council, these priorities will be recommended to the grants subcommittee.

With adoption of these recommendations and requests, a minimum level of support for twelve of the thirteen MLIA framework layers would be addressed.

To build broader stakeholder support and address weaknesses identified in the 2008 Land Cover/Land Use grant application submitted by the theme steward, the Department has allocated 2008 MLIA funds for the Montana Natural Heritage Program (MTNHP) to conduct a needs assessment. It is anticipated that a 2009 grant application will be received from the theme steward.

The Department also recommends support for efforts that integrate Statewide data into a standardized Master Address File (MAF). A standardized MAF is considered essential for promoting the integration of GIS into the business processes of health care and social services-which have been slow to utilize GIS technology. To this end, the Department encourages projects that continue to advance the Transportation/Addressing MSDI theme by building upon the MAF being developed in 2008 by Flathead County.

With the escalating development of digital information by all sectors, timely access to digital land information requires adequate support for a comprehensive digital records cataloging system. The 2007 State Legislature provided MSL with stable staff funding for GIS Portal development, cataloging existing MSL metadata records, and metadata coordination. However, additional support at the data creation level will be needed to assist in developing and cataloging new metadata records across the spectrum of data producers that have geospatial and tabular records that relate to land information in Montana. The Department

encourages activities that develop metadata records and catalogue those records through submittal to the State Metadata Portal.

As presented in Goal 2, it is well recognized that Montana needs a stable physical and organizational infrastructure to support GIS data development and related geospatial activities. The Department encourages stakeholders to assist in exploring and proposing alternatives for a viable organizational framework to support GIS throughout the State. This could include developing information that identifies the advantages, disadvantages, and potential funding and organizational support for strategically located regional GIS centers.

6. APPENDIX A

Appendix A - Acronyms used in this Document

APFO – Aerial Photography Field Office
CIR - Color Infrared Imagery
FGDC - Federal Geographic Data Committee
GCDB - Geographic Coordinate Database
GIS - Geographic Information Systems
GIO – Geographic Information Officer
GIT - Geographic Information Technology
IT - Information Technology
MITA - Montana Information Technology Act
MLIAC - The Montana Land Information Advisory Council
MLIA - The Montana Land Information Act
MLIP – Montana Land Information Plan
MSDI - Montana Spatial Data Infrastructure
NAIP - National Aerial Imagery Program
NHD - National Hydrography Dataset
NSDI - National Spatial Data Infrastructure
NSGIC - National States Geographic Information Council
NWI - National Wetlands Inventory
POC – Point of Contact
USDA – United States Department of Agriculture
USGS - United States Geological Survey
USFWS - United States Fish and Wildlife Service