

**THE MONTANA SPATIAL DATA INFRASTRUCTURE (MSDI) FY12 WORKPLAN**

*A Roadmap for progress on the policy and technical issues associated with MSDI*

*Produced by the Montana State Library in conjunction with the MSDI Theme Stewards and Leads*

**August 23, 2011**

## **INTRODUCTION**

The organizational structure surrounding MSDI oversight and general GIS coordination have undergone significant change over the past year. However, many of the policy and technical issues identified in the last two years remain relevant and 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. These issues correlate closely with the goals and objectives of the FY11/12 MLIA Land Plan. As the MLIAC Land Plan Subcommittee starts working on the FY12/FY13 plan the MSDI Stewards wish to provide some input on the direction and actions contained in that plan as well as provide the Subcommittee and entire Council a list of actions that they can expect to be accomplished by the MSDI Stewards and Leads in the coming months.

From the initial announcement last September of the formation of the Governor's Budget Office's GIS Taskforce it became clear that changes in organizational structure and GIS technical architecture could and most likely would impact MSDI development. Additionally little progress has been made in implementing the funding recommendations that the previous MLIAC Funding Subcommittee passed on to MLIAC and subsequently to the Department of Administration. With the organizational recommendations of the GIS Taskforce being implemented, the MSDI Stewards and Leads respectfully submit this draft work plan as a roadmap for short and long term progress on the policy and technical issues associated with MSDI.

## **MSDI FUNDING**

**BACKGROUND** - In March, 2010 a MLIAC Funding Subcommittee finalized a report entitled "A Consolidated Funding Proposal for Montana's Spatial Data Infrastructure" which was subsequently endorsed by the entire Council. That same Subcommittee also recommended a return on investment study of the Cadastral Framework conducted by the Department of Administration that found an approximate 10 million dollar annual return on investment for that data. In 2010 the Montana Land Information Advisory Council examined a MAGIP sponsored status report on MSDI and advised the State GIO to aggressively seek and secure stable, long-term adequate funding for MSDI.

The FY11/12 Land Plan also addresses the funding issue:

**Goal 5 – Acquire permanent and secure funding for the consistent collection, accurate maintenance and common availability of MSDI framework layers.**

**Objectives:**

1. Establish a standing MLIAC Committee to address stable and reliable MSDI funding.
  - a. Prioritize MSDI framework layers for funding purposes.
  - b. Update the MLIAC's existing funding document: *A Consolidated Funding Proposal for Montana Spatial Data Infrastructure*.
  - c. Communicate the funding issues to appropriate officials in state, local government, and other stakeholders in coordination with the GIO (see Goal 4 Objective 4a).
  - d. Draft proposed legislation or budget recommendations to secure stable funding for the MSDI framework layers.
  - e. Work with the State Representatives on the Council to introduce and secure passage of legislation or budget recommendations.

## **RECOMMENDATION OR ACTION**

MSL will establish a MSDI Policy and Planning Workgroup, led by MSL staff and comprised of interested MLIAC members, MSDI Theme stewards/leads and other interested stakeholders. This Team shall review and update as necessary the funding document approved in 2010, advise the MSL Communications and Marketing Coordinator as a MSDI outreach plan is developed, and lead development of legislative package for the FY14/15 Biennium by March 1, 2012 and a final legislative package by July 1, 2012. The MSDI Theme Stewards will provide input as needed.

## **MSDI MARKETING**

### **BACKGROUND**

The MLIAC policy review of MSDI contained the following observations:

- The GIO must promote the benefits and needs of MSDI Framework Themes to policy makers, especially the Governor and his cabinet members, and to campaign for the integration of themes and stewardship programs into state agencies as a necessary part of their business processes. State Departments of Revenue, Transportation, Fish, Wildlife and Parks, Environmental Quality, even Health and Human Services must become regular contributors to framework theme data development.
- All statewide elected officials – the Attorney General, the Secretary of State, Superintendent of Schools and State Auditor – must embrace the benefits of GIS and the MSDI and consider ways to contribute through their business processes.
- Theme application discussions should be regularly disseminated to MACO, the Montana League of Cities and Towns, the Montana Conservation Districts, the Montana Association of Realtors, the Montana Association of Planners, and other public/private interest groups (e.g. surveyors, title insurance companies, Clerks and Recorders, etc).

The FY11/12 Land Plan contained the following reference to marketing:

## **GOAL 4: Improve Communication, Coordination, Education, and Outreach.**

### **Objectives:**

4. Communicate with stakeholders
  - a. By July 2011 the GIO, in conjunction with MLIAC, will develop and distribute materials to the Governor, State Budget Office, State Agency directors, MACO, the Montana League of Cities and Towns, the Montana Association of Planners, MAGIP and other stakeholders at the highest level to communicate status, needs and actions associated with MSDI and other federated GIS issues. These materials should be reviewed and updated annually.

The recommended organizational shift of MSDI oversight to MSL, not officially completed as of August, 2011, has somewhat limited the ability of MSL to take charge of those tasks assigned to the GIO. However we believe several of these items can still be started, and some completed within calendar year 2011.

### **RECOMMENDATION OR ACTION**

MSL, led by their Communication and Marketing Coordinator, and working in conjunction with the MSDI Policy and Planning Workgroup shall develop a MSDI marketing plan. The plan should contain both short and long term goals that consider target audiences, distribution mechanisms and update schedules.

As part of normal theme steward and MSDI oversight tasks the following actions shall be undertaken:

1. Attend the MACO Convention in September – MSL will acquire a booth at the MACO convention and showcase MSDI themes available for use by county GIS
2. Attend the Montana Association of Planners meeting in September, the League of Cities and Towns Conference in October, the State IT Conference in December and other suitable venues that enable us to put a “brand” on MSDI
3. Attend the MAGIP Technical Session in October – MSDI Theme Stewards will provide technical presentations that showcase the value of MSDI
4. Develop an MSDI Track for the Intermountain GIS Conference in 2012 – the State GIS Coordinator will act as Track Chair and work with Theme Stewards to develop content.
5. Develop a MSDI component for GIS day.

## MSDI TRAINING and OUTREACH

### **BACKGROUND**

The MLIAC policy review of MSDI contained the following observations:

- The professional community is a vital participant in providing training opportunities and there should be greater focus on the work of the Montana Association of GIS Professionals.
- Training may be provided through websites but must be continually updated.
- Training may be facilitated through theme stakeholders' meetings as well as integrated theme meetings.
- By improving local government data provider technical skills through education and training opportunities, data integration (for those themes that require local data input) would improve, as would local government support.

The FY11/12 Land Plan does not specifically refer to training although it does recommend that Theme Stewards establish long term partnerships with local, tribal, state and federal data providers. Those partnerships could easily be enhanced through shared knowledge and would seem to meet the intent of bullets three and four of the policy recommendations. The Plan also recommends support for MAGIP's professional development and educational initiatives.

### **RECOMMENDATION OR ACTION**

We find at least two components of training – training the consumers and outreach to MSDI data partners. MSDI themes are different and therefore may have different relationships with those two groups. Additionally training for consumers is closely related to marketing and outreach. The following actions will partially address the areas where training is recognized as part of the solution for building a robust federation of GIS professionals:

1. THEME Stewards and leads will begin to identify theme specific training plans and will share findings next meeting - that meet the needs of their data providers and consumers – identify needs of partners and consumers and post to website
2. MSDI Stewards will continue to support MAGIP sponsored events including the Fall 2011 Technical Session and Spring 2012 Intermountain GIS Conference.
3. Grant supported MSDI Stewards of multi-jurisdictional themes should visit and train data providers as per part of their deliverables. Each of those theme leads should make at least one visit to a data provider or providers per quarter. These visits should in part involve some sort of knowledge transfer between theme steward/lead and provider (this can be a two way transfer).

4. From a state perspective, as technical lead for administering the Enterprise License Agreement with Esri, MSL should make use of the Enterprise Advantage Program Credits to organize at least one Esri training class per quarter.

## **MSDI DATA INTEGRATION AND STANDARDIZATION**

### **BACKGROUND**

The MLIAC policy review of MSDI contained the following observations:

- Framework data sets must be adopted as the standard for state agencies, local governments and all other data users.
- Clarification and coordination of roles of and between theme stewards and counties is imperative.
- Development of themes must be coordinated with seamless integration and with intent for no duplication of efforts.
- Promote networking, stimulate technological growth, and advance ideas.

The FY 11/12 Land Plan closely follows the intent of the MLIA statute along the lines of data development, maintenance and dissemination and contains several objectives that, if accomplished, should lead to better MSDI data integration and standardization. Rather than repeating all the objectives here, we deal with them one by one under the next section under actions.

### **RECOMMENDATION OR ACTION**

We start here with goal four of the Land Plan as we believe improved communication, coordination, education and outreach is the key to accomplishing goals one, two and three and the pertinent objectives contained therein.

#### **GOAL 4: Improve Communication, Coordination, Education, and Outreach.**

##### **Objectives:**

1. Sponsor at least one MSDI Stewards and Theme Leads Meeting for purposes of meeting objectives of this plan. – One meeting was held on May 24<sup>th</sup>. An additional meeting was conducted August 18th to discuss continuing work that needs to be done to accomplish the goals of the Plan and deal with MSDI policy issues where appropriate.
2. Create a permanent working group for the purposes of data integration, consisting of theme stewards and theme stakeholders. – This was discussed during the August 2011 Theme Stewards/Leads meeting. Rather than a permanent working group the MSDI theme stewards and leads recommend creating an environment that promotes such

- data integration. We propose that quarterly theme steward/lead meetings with this as a permanent agenda item will better address the issue.
3. Reduce cost, eliminate duplication of effort and services, and ensure the long-term continuity of the MSDI framework layers and other essential digital land information.
    - a. Encourage and support additional coordinated efforts by the BMSC and MSDL NRIS, including administrative and policy actions to accommodate additional programmatic integration. – This has generally been accomplished through the recommendations of the GIS Task Force
  4. Support the creation of partnerships that promote data and technology sharing to resolve core business issues. – From a formal perspective the administrative merger of the BMSC into MSL we have one central authority that can act as signatory to formal interagency agreements or memorandums of agreement We believe that from an MSDI perspective this will be done less formally through the actions listed in the training and outreach section.

**GOAL 1: Develop land information data that are consistently collected using all applicable standards.**

**Objectives:**

1. Establish, publish, and utilize standards, best practices, and data dictionaries for MSDI framework layers. – This was discussed in May and received additional attention in August. MSDI theme pages have been consolidated at MSL. We believe additional changes to the web pages that are in the planning stages will make this information easier to access.
2. Develop GIS data for inclusion in MSDI framework layers. – This is the day to day work of the theme leads and is being accomplished  
Develop GIS data that will support the following priority needs: public health & safety, response services, economic development, land use, planning, sensitive resources, or physical infrastructure. – . Individual agencies develop spatial data based on their mandated lines of business. We know that MSDI data has been integrated with event specific data for key projects like wildlife corridors, keystone pipeline and the Yellowstone oil spill. Documenting these use cases should be closely tied to any marketing plan being developed

**GOAL 2: Maintain existing land information data.**

**Objectives:**

1. Maintain the integrity of MSDI framework layers and other GIS data supporting Goal 1 Objective 3, through creation, implementation, and publication of an update process, including update schedules. – This was discussed at the May meeting and again in August. Update schedules are different for each theme and can be accomplished through different technical means. A standardized place or tab on a framework's web page could carry this information. The goal is to have an update schedule for each theme by the end of calendar year 2011.
2. Identify existing data layers that were not collected using accepted MSDI standards and develop conformity plans; with an emphasis on MSDI framework layers. – Most relevant

MSDI standards were published in the 2009 MSDI survey conducted by MAGIP. MSDI leads are in contact with those data providers that may be using different formats that increase the difficulty of data integration. MSDI stewards and leads regard this as an education and training issue and will make it part of their training plans.

3. Maintain current metadata records for MSDI framework data. – The data inventory being conducted by MSL as part of the GeoMapp archival project should confirm this however we believe there are current metadata records for all themes.
4. Theme Stewards shall establish long term partnerships with local, tribal, state, and federal data providers for comprehensive data updates. – This is partially addressed in the training section. Formal long term partnerships may be established via written agreement.
5. A minimum of one MSDI steward (to be determined by the Framework Work Group) shall partner with MSL NRIS to develop a pilot to test archiving standards and infrastructures with the intent of creating an archive plan to support all MSDI framework layers. – Both Administrative Boundaries and Cadastral will be involved in testing archival methodology through the GeoMapp pilot at MSL.

### **GOAL 3: Disseminate land information data efficiently and cost effectively**

#### **Objectives:**

1. Create a working group to examine the dissemination needs of MSDI framework data. The working group should consist of MSDI Stewards, MLIA Council Members, MAGIP, and other stakeholders. – We believe this could be started at the MAGIP Fall Technical Session with a follow-up at the Intermountain Conference
  - a. Create a needs assessment for MSDI framework data dissemination. – MSL, in conjunction with the theme stewards and leads will create a survey that will assess user needs regarding data dissemination. A virtual “suggestion box” located on the MSDI theme pages may be able to capture needs as well.
  - b. Develop and promote policy on State mandated use of MSDI framework data. – This was discussed at the May Steward’s meeting. For a variety of reasons including the difficulty to enforce a policy of mandated use, as well as cartographic generalization and scale issues, this is a lesser priority for MSDI Stewards. The Stewards would rather concentrate on data quality, working toward becoming the primary data source of choice.
2. Ensure accessibility and security of land information data. – MSL oversight of MSDI will insure that data access and archival are secure for the long term. The survey discussed in 1a will address accessibility issues.
3. Register MSDI metadata and data created from MLIA grant funds, with the Montana GIS Portal. – The Stewards will conduct an inventory in August to insure all MSDI themes are registered on the portal. The State GIS Coordinator will go back through the MLIA grants and contact those who created data and didn’t register it with the portal.
4. Establish a common consistent MSDI web presence where information can be easily accessed by the public. – As a start all the web pages have been moved to an MSL server. We will review the pages in August for commonality and attempt provide a consistent web presence by the end of 2011.



## CONCLUSION

Through the cooperative effort of MLIAC and the MSDI Theme Stewards suggested in this work plan all of the policy and technical issues surrounding MSDI can at least be addressed by the June 30, 2012. This is not to say they can be completed as the funding and marketing efforts suggested here need to continue on through the next legislative session, and in reality never really go away. Similarly technical and policy issues surrounding training, data standardization and data integration need constant attention. This work plan is intended as an action plan for those doing the work and assurance for those using the data that professional management and accountability are in place for MSDI

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