Montana Land Information Plan

Last Updated: 9/14/2017

Contents

The Montana Land Information Act:

The purpose of this part is to develop a standardized, sustainable method to collect, maintain, and disseminate information in digital formats about the natural and artificial land characteristics of Montana. Land information changes continuously and is needed by businesses, citizens, governmental entities, and others in digital formats to be most effective and productive. This part will ensure that digital land information is collected consistently, maintained accurately in accordance with standards, and made available in common ways for all potential uses and users, both private and public. This part prioritizes consistent collection, accurate maintenance, and common availability of land information to provide needed, standardized, and uniform land information in digital formats. (Section 90-1-402 Montana Code Annotated (MCA)).

Executive Summary

The Fiscal Year 2019 Montana Land Information Plan has been prepared by the Montana State Library (MSL) with input from the Governor-appointed Montana Land Information Advisory Council (MLIAC). Section 90-1-404 (c) of the Montana Code Annotated calls for an annual land information plan that "describes the priority needs to collect, maintain, and disseminate land information. The land information plan must have as a component a proposed budget designed to accomplish the goals and objectives of the plan. "

Land information is collected and managed using computer-based technology, known as Geographic Information Systems or GIS and is used by federal, state, local entities to provide critical services. Geographic information is required for disaster and emergency response; the development and maintenance of transportation, sewer and water infrastructure; resource conservation and development; and overall land use planning.

The priorities set forth in this plan help to
- Guide the work of the MLIAC,
- Identify the areas of focus for the Montana Land Information Act Grant Program,
- Direct the work of the Montana Spatial Data Infrastructure (MSDI) theme stewards, and
- Provide the basis for overall coordination of GIS in Montana

Given the budgetary and human resource limitations that the State of Montana is facing in the foreseeable future, these priorities become particularly important as the MSL tries to fulfill its mission. Working with state agencies, universities, local and tribal governments, the MSDI theme stewards and the Montana Association of Geographic Information Professionals (MAGIP), the MSL will strive to support efforts to address land information in support of:
- Safety and Emergency Response
- Local Government Capacity Building
- Land Record Information
- MSDI Theme Development
- The overall maintenance, development and promotion of GIS

Introduction and Overview

- Section plainly describing the funding and purpose
- Overarching Goals of the Land Plan

The Montana Spatial Data Infrastructure and the Federated Approach

- Explain the MSDI in plain terms
- Explain the expectations when contributing data to the MSDI
- Explain the federated approach – reducing duplication of efforts
- Explain the use of best practices used to support the MSDI

Funding, Timeline and Grant Process

Funding
Section 90-1-404 MCA requires the MSL to administer the MLIA. This work is funded in part through the state land information account and other sources including the state general fund, (see budget) grants, and contracts. Funds for the state land information account are generated through collection of county recordation fees as described in §7-4-2637 ((3) iii) MCA. This account represents a significant funding source to accomplish the priorities of the Land Plan.

Since it was established in 2005, the state land information account has proven to be a source of funding subject to a variety of external factors that affect the number of recordations, including fluctuations in real estate markets and the oil and gas industry. As noted above, the MSL and other GIS partners also rely heavily on additional sources of funding to support GIS in Montana. Currently collections appear to be increasing from an all-time low in FY 2014.   However, collections have never reached the point where they can support MSDI needs and a robust grant program. For this reason, the budget for this year's Land Plan shows only a modest increase. The budget remains well below previous years' budgets and overall funding does not substantially support overall needs for MSDI and grant funding.

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Timeline
The MSL makes use of MLIA funding for MSDI and GIS Coordination priorities specified in this plan. To document specific work objectives to address the priority goals for data development and GIS Coordination, the MSL, in conjunction with the other MSDI Stewards will submit a work plan by May 1, 2018 for Council review. Some MSDI tasks may be undertaken by entities other than MSL. Nonetheless, MSL will assume ultimate accountability for meeting the plan's objectives. These objectives documented in the work plan will be met over the course of state fiscal year 2019 (July 1, 2018 through June 30, 2019).

Grants Process
Publication of the Land Plan in January informs the MLIA grant application process. MLIAC seeks grant applications from local, regional and tribal jurisdictions that address the Land Plan grant priorities through one-year MLIA grants. In accordance with Montana Administrative Rule 10.102.9105, the grant application process will be announced by January 15, 2018. Announcements will be made through the Montana Association of GIS Professionals (MAGIP), the Montana Association of Counties (MACo), the MLIAC distribution list and other communication channels. Grant applications must be received by MSL by February 15, 2018. Review and ranking of grant applications is conducted by a subcommittee of MLIAC. Final grant awards are approved by the MSL Commission in June 2018. Grants are administered by MSL and are awarded for the period beginning July 1, 2018. Grant work should be completed by June 30, 2019.

FY 2019 Land Plan Priorities

This section of the Land Plan sets forth priorities for the 2018-2019 fiscal year. Given the uncertainty of future funding for GIS in Montana, we have to be realistic in setting goals and priorities for the next year that reflect the current funding situation. These priorities are overarching, in that they provide general guidance for land information-related activities for each of the following:

- The Montana Land Information Advisory Council (MLIAC)
- The Montana Land Information Act (MLIA) Grant Program
- Development and maintenance of Montana's Spatial Data Infrastructure (MSDI)
- Priorities for Promoting the use of GIS: Creation, Standardization, Maintenance and Disseminating of Geographic Information in Montana

Priorities for the Montana Land Information Advisory Council
<mark>(The following need to be ranked or given equal weight)</mark>
1. Review MSDI Layers to determine sustainability under current funding restraints
    a. Review what it means to be designated as an MSDI theme
        i. Support provided
        ii. Best practices
    b. Prepare a recommending document

2. Identify overall priorities for GIS in Montana
3. Match data layers to Montana Statutes (e.g. Growth Policy and Call Before You Dig statutes)
4. Coordinate with other statutory board and councils
5. Conduct analysis of stakeholders and prepare plan for outreach
6. Create measureables to determine success of grant program and MSDI layers funded by MLIA

Priorities for Grants
<mark>(The following need to be ranked or given equal weight)</mark>
1. Safety and Emergency Response -
    a. Next Generation 911
        i. Boundaries – Development of the Public Safety Answering Point boundary. Accurate Cadastral data and PLSS digital representation will support the creation of boundaries.
        ii. Addresses – Development of address data that are National Emergency Number Association (NENA) Standard Compliant and to be integrated into the MSDI Structures & Addresses theme.
        iii. Road Centerlines – Development of road centerline data that are National Emergency Number Association (NENA) Standard Compliant and to be integrated into the MSDI Transportation theme.
    b. Development of GIS to support Disaster and Emergency Operations and Planning -

Local, Regional, and MSDI layers are used to help plan and mitigate in disaster and emergency response including, but not limited to:

   i. Wildfires
   ii. Earthquakes
   iii. Drought
   iv. Floods
   v. Invasive Species

2. Local & Tribal Government GIS Capacity Building –
   a. Land Use Planning
   b. Asset Management
   c. GIS Data & Program Development – Development of base geographic data layers that federate into the MSDI and support other programs, e.g.
   d. GIS data development to support the U.S. Census Bureau's Statistical Boundary Program.
3. General Land Records –
   a. Improvements to digital representation of Public Land Survey System (PLSS) for the purpose of improving accuracy of the MSDI Cadastral and Administrative Boundaries Themes.
      i. Collecting new survey control data
      ii. Digitization and dissemination of corner recordation documents
   b. Development and enhancement of administrative boundaries, including but not limited to data layers recognized by the MSDI Administrative Boundaries Theme.

Priorities for the Montana Spatial Data Infrastructure
(The following need to be ranked or given equal weight)
General MSDI Priorities
1. Coordinate with stakeholders on the development and maintenance of Themes: local, tribal, regional, federal, university, private, and international partners.
2. Regular maintenance of MSDI Theme data layers, schedules vary depending on Themes.
3. Publish all MSDI data, incompliance with standards, to the Montana GIS Data List –
   a. https://mslservices.mt.gov/Geographic_Information/Data/DataList/default.aspx.
4. Continue to develop the Montana spatial data archive collection, including annual MSDI entries.
5. Develop an annual MSDI work plan, to be incorporated into the MSL work plan that prioritizes actions, supports data partners and identifies funding needs.

MSDI Theme Specific Priorities– MSL Stewarded
1. Administrative Boundaries
   a. Annual update of existing layers
   b. Participate in Annual BAS
   c. Research and development of County Commissioner district boundaries
   d. Research and development of NextGen 9-1-1 boundaries
2. Cadastral:
   a. Annual update of the digital PLSS

b. Monthly Cadastral Updates, including Conservation Easements and Public Lands.
c. Web application?
3. Geographic Names
    a. Total Theme Review
        i. Research incorporation of the Geographic Names Advisory duties underneath the auspices of the Montana Land Information Advisory Council.
    b. Work with the Dept. of Natural Resources and Conservation on the theme – we work under an MOU.
4. Hydrography
    a. Annual updates to the National Hydrography Database (NHD)
    b. Promoting the editing of the NHD by stakeholders
    c. Integrating Wetlands waterbody polygons into the NHD
5. Imagery
    a. Continue to disseminate and host statewide imagery data and services
6. Mapping Control
    a. Work with stakeholders, specifically Montana State Agencies, to obtain existing survey control.
    b. Coordinate best practice development with stakeholders, including county governments and MARLS.
7. Structures & Addresses
    a. Annual update of data layers.
    b. Coordinate with local governments to promote the standardization of NENA compliant address data.
    c. Review the Montana Next Gen 9-1-1 GIS Data Assessment.
    d. Work with SITSD to promote MSDI within their granting process.
8. Transportation
    a. Develop a statewide NENA compliant road centerline dataset.
    b. Define new update schedule.

Theme Specific - Non MSL Stewarded

9. Climate, University of Montana
    a. Gridded meteorological dataset evaluation: Currently evaluating gridded temperature and precipitation datasets for Montana for goodness of fit. This will drive what datasets we focus on for specific applications like drought or products like the Montana Climate Atlas.
    b. Montana Climate Atlas updates: Update and enhance the online Montana Climate Atlas and associated map and raster services.
    c. Climate Station Data updates: Update the online access to climate station datasets and Montana Mesonet datasets using standards adopted by NOAA.
10. Elevation, No Steward
    a. The Montana State Library will participate in national discussions, i.e. USGS 3DEP program
    b. The Montana State Library will coordinate with stakeholders in the state on elevation data related issues and topics
11. Geology, Montana Bureau of Mines and Geology
12. Hydrologic Units, U.S. Dept. of Agriculture

13. Land Cover, University of Montana – Montana Natural Heritage Program
    a. Obtain and incorporate new data:
        i. Fire polygons from the Montana Dept. of Natural Resources and Conservation
        ii. Crop information from Montana Dept. of Revenue
    b. Replace current wetlands with aggregated NWI wetlands where size allows
14. Soils, U.S. Dept. of Agriculture
15. Wetlands, Montana Dept. of Environmental Quality & University of Montana – Montana Natural Heritage Program
    a. Tribal & Remaining Areas of wetland mapping
    b. Incorporate all new value added attributes plus metadata

Priorities for Promoting the use of GIS: Creation, Standardization, Maintenance and Disseminating of Geographic Information in Montana
<mark>(The following need to be ranked or given equal weight)</mark>

1. Promote the use of GIS in Montana
    a. Advocate for the use of MSDI data in state and local business processes, programs, and workflows.
    b. Attend appropriate meetings and conferences including the Montana Association of Counties, Montana Association of Planners, Montana State IT Conference, Montana Association of Geographic Information Professionals, the National States Geographic Information Council and other meetings of subject matter experts
    c. Preserve and improve relationships with MSDI data providers through support and local visits that foster knowledge transfer
    d. Promote the use of GIS within mobile technology:
        i. Improving field data collection efforts by integrating the use of GIS
        ii. Creation of new mapping applications that are mobile friendly
        iii. Exploring the use of citizen science through mobile technology
2. Promote best practices and standards
    a. Engage stakeholder work groups to seek input on the priorities and best practices for data development
    b. Support local data providers as they adopt appropriate data standards and data collection methodologies.
    c. Advocate for the use of MSDI data as a best practice
3. Promote dissemination of GIS data
    a. Identify data that does not currently exist or is not accessible within the Montana Data List
    b. Conduct ongoing maintenance data discovery through the Montana Data List
    c. Deliver data via download and web services,
    d. Support the use of the GIS Data List, through training and outreach, for registering Montana related GIS datasets
4. Partner with the Montana Association of Geographic Information Professionals (MAGIP) and other relevant professional associations for purposes of:
    a. Education
    b. Promotion of GIS in Montana

      c.   Promotion of the Montana Spatial Data Infrastructure
      d.   Promotion of Best Practices and Standards

FY 2019 Land Plan Budget

The FY 2019 Land Plan Budget represents an ==increase of $XXX== over FY 201X. This increase is reasonable given the current slight increase in revenues in the MLIA account. A final determination for the amount of available grant funds will be made at the end of March 2018, in accordance with administrative rule. If additional funds are available, there may be an opportunity to further increase grant funding.

==**INSERT BUDGET TABLE HERE**==