

## **MSDI Framework Assistance**

**May 22, 2009**

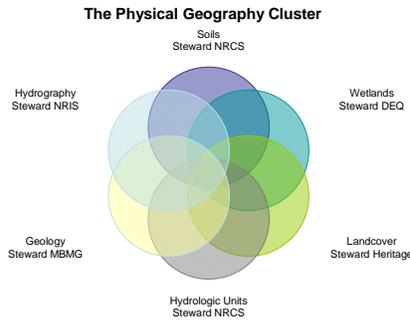
Currently, in cooperation with the State's Geographic Information Officer (GIO), a committee from the Montana Association of Geographic Information Professionals (MAGIP) is conducting a base line MSDI theme review. The State of Montana and Federal partners have made significant investments in the development and enhancement of MSDI Framework Layers. In the Directive on MSDI Theme Stewardship set forth by the GIO in 2006 a number of performance measures were identified which are useful in gauging the progress of MSDI theme development. Those performance measures are:

- A list of MSDI Themes has been approved by the Montana Land Information Advisory Council (Council) and forwarded to the department. Council members understand the relationship between an approved MSDI theme and the purpose of the Montana Land Information Act (MLIA).
- Theme stewards have been identified, recognized by council, and forwarded to the department for approval.
- A unified web presence for MSDI Theme Stewardship has been established by the department
- Council members can efficiently and effectively assess the status of MSDI Theme Stewardship prior to each council meeting including coordination, collection, maintenance, and dissemination.
- Entities outside of the council and department are informed of MSDI activities supported by the council.
- MSDI theme stewards and working groups have an appropriate communication structure to advance their respective theme. This includes internal communication, communication with other MSDI theme stewards, communication with the department, and communication with the council.
- The department has established distribution protocols and performance goals for theme metadata and content.
- Consumers of MSDI themes can locate and consume theme content and metadata for their business needs.

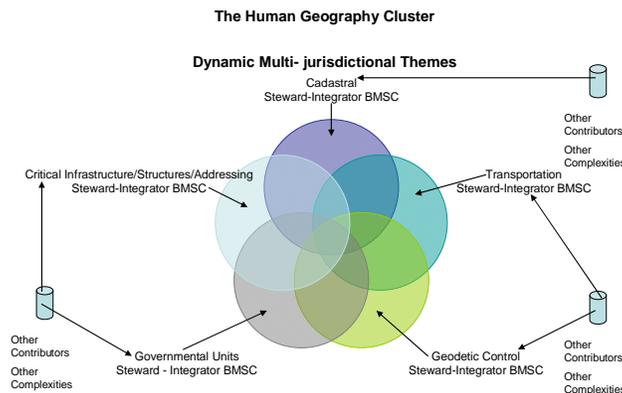
To date, the Council has been successful in promoting an organizational structure that encourages the development of MSDI Framework Layers. Stewards have been identified for all 13 MSDI Framework Layers and significant dataset development efforts have been implemented for all of these themes. As the development efforts for these themes progresses and the focus shifts towards dataset maintenance it will become increasingly critical that the direction provided by the Council not only supports data development, but that it can also provide for data access and distribution and foster an environment that encourages user-level participation in data maintenance efforts. In some cases theme stewards have the resources to provide these services. In other cases stewards are constrained from expanding their support of framework theme(s) beyond the business needs of the organization they reside in.

The Montana State Library, Natural Resource Information System (MSL/NRIS) and the Montana Base Map Service Center (BMSC) have examined those performance measures and believe that it is within the mission of their organizations to provide support for the education, outreach and data dissemination of MSDI Framework Layers. In exploring how the two organizations can most effectively support the MSDI framework themes it is clear that a structure based on the nature of the themes data focus could result in better overall accountability to the users. This conclusion is based on the following observations regarding the data focus of MSDI themes:

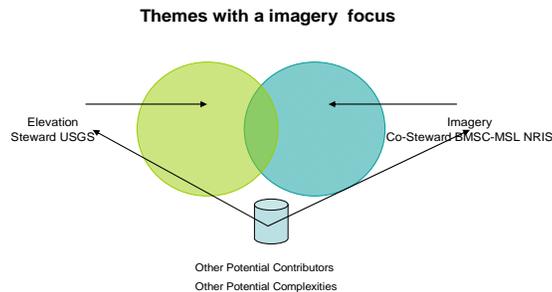
1. Certain themes are being maintained primarily by one federal or state agency, are natural resource oriented, and tend to focus on measuring or classifying natural phenomena. While a great deal of work has been done to develop these data sets by stewards from federal and state agencies, they have not yet been well integrated into a standardized MSDI web presence. A greater investment in education, outreach, and data dissemination is needed to ensure more widespread adoption and standardized use of these themes within the state. These themes fit within what we will call the Physical Geography Cluster.



2. Certain themes are inherently multi-jurisdictional, having multiple data contributors for a single feature class and potentially multiple feature classes or even disparate geodatabases. These themes focus primarily on man-made geographic phenomenon, and the main challenge is integrating disparate data into statewide themes with common standards and outputs. BMSC stewards all these themes that fit within what we will call the Human Geography Cluster:



3. Two MSDI themes, Imagery and Elevation, are presently collected on a statewide scale by federal agencies. These themes could potentially be augmented by higher resolution data, for example local hi-resolution imagery or LiDAR acquisition. MSL/NRIS and the BMSC are presently advocating joint stewardship for imagery at the state level and have engaged in discussions about a similar partnership for elevation. Neither theme can be characterized as being entirely focused on physical or human geography, but are both essential for many GIS applications. Geographic Names (GNIS), if it should be adopted as a framework theme, would also fall into this category.



The Human Geography Cluster stewarded by the BMSC requires complex integration of disparate data into multiple feature classes and geodatabases. The BMSC developed a proven model for integrating data and developing partnerships with data providers including local, state, federal, tribal agencies and private sector. MSL/NRIS is, by statute a comprehensive program for the acquisition, storage, and retrieval of existing data relating to the natural resources of Montana, intended to facilitate the management of data collected by state agencies in the normal course of their operations. Not only does it directly steward Hydrography, but has well developed partnerships with the USGS, NRCS, the U.M. Heritage Program, and the Montana Bureau of Mines and Geology. The combined resources of BMSC and MSL/NRIS offer a strong foundation for providing stewardship assistance and this arrangement would serve well to advance overall MSDI theme stewardship, assist stewarding agencies with unfunded or low priority stewardship goals, and leverage existing staffing levels and expertise. Other advantages include:

- It leverages and advances MSL/NRIS and BMSC expertise to build one-stop shopping through standardized web service delivery of all MSDI themes
- It provides a level of technical oversight for situations that require coordination across MSDI themes (both within and across Physical/Human geography clusters) as framework dependencies are identified and potentially leveraged.
- All MSDI themes can more easily move toward a common profile and stewardship accountability. Physical Geography Cluster stewards will gain valuable assistance from MSL/NRIS.
- Existing partnerships with MSL/NRIS and Physical Geography Cluster stewards can be leveraged.
- BMSC maintains its area of expertise without having to expend time attempting to do stewardship tasks for the Physical Geography Cluster.
- The natural resource assistance tasks that MSL/NRIS would support already fall under their existing statutory mandate.
- It builds upon existing Imagery Cluster partnership efforts between MSL/NRIS and BMSC as they determine common methodologies for data distribution and archiving.