

TO: Dick Clark, CIO

CC: Darlene Staffeldt, State Librarian
Montana State Library Commission
Montana Land Information Advisory Council
NRIS Advisory Committee
Amy Carlson, OBPP
Nancy Hall, OBPP

FROM: Jim Hill, Administrator, Digital Library Division, MSL

SUBJECT: CIO Report on GIS Operating Environment

DATE: September 14, 2006

We appreciated the opportunity to review the report from your GIS advisory committee and to hear the discussion regarding the report at the MLIAC meeting on September 7th. I'm sorry that you missed the meeting; I highly recommend that you listen to the tape of the meeting in order to receive the full benefit of the discussion.

We at MSL were very satisfied to see that the report recognizes and supports MSL's continued role regarding geospatial data. We were also gratified to hear the MLIAC members' support of the conclusions and recommendations relating to MSL and NRIS. Although MLIAC did not take formal action on the report, I believe all concerned are hoping for and expecting to see an immediate and positive outcome from this effort.

Although the report itself has no formal bearing on the work of MSL, we are anxious to be responsive to the issues leading up to the assessment. Regarding MSL and NRIS, the recommendations of the report are generally consistent with MSL statutes, our Library Commission approved strategic plan, and the still-valid MOU between ITSD and MSL signed in 2003 which describes the respective roles of MSL and ITSD regarding geospatial data. Implementing the report recommendations requires no change in MSL statute or other MSL guidance. We are therefore happy to provide you the following summary of MSL/NRIS activities as they relate to the recommendations in the report.

Recommendation 6: The NRIS should be the GIS Clearinghouse for the State of Montana. In this capacity the NRIS performs a GIS Data Library function by being the primary gateway (Montana GIS Data Portal) for spatial information access by state and local agencies, and the public.

This recommendation supports current operations at MSL/NRIS. MSL/NRIS:

- collects, manages, and provides multiple avenues of discovery for metadata relating to all geospatial datasets of interest to the Montana GIS community and all users of Montana-related geospatial data;
- ensures metadata are readily available for all significant datasets in its collection;

- assists producers of geospatial data in the development of metadata;
- provides input into the development/evolution of metadata standards;
- trains producers of geospatial data in the development of metadata to improve the quality of metadata in the clearinghouse;
- trains library patrons in the use of metadata to help locate data and ensure it is used appropriately; and,
- will soon replace our long-standing FGDC metadata node with a comprehensive metadata Portal based on the ESRI model (in process).

We must note, however, that we have been unable to staff a full-time metadata coordinator position since ITSD withdrew our funding for that position several years ago. We are therefore seeking additional funding through the upcoming legislative session to support our metadata activities.

Recommendation 5, “Data enhancements and applications for MSDI usability and access may be done by any agency . . .”

The definition of Clearinghouse and Portal used in the report are very applicable to the MSL role. However, they do not, by themselves, describe broader avenues of access to geospatial data and derivative or value-added products provided by MSL that are well used by our patrons and partners. Recommendation 5 is therefore particularly appropriate for MSL. In actuality, the metadata storage and discovery services described under “clearinghouse” and “portal” serve only a fraction of our users - primarily GIS professionals. Most of our patrons, GIS professionals and laymen alike, discover and obtain the data and information they seek via numerous other data discovery, visualization, and access systems at the library, which we will continue to support and enhance as necessary to best serve our patrons.

Recommendation 7: Any public or private entity may provide GIS data through the Montana GIS Data Portal. However, the primary responsibility for providing MSDI data access through the portal is that of the Data Steward.

MSL/NRIS has always and will continue to strongly encourage all data producers to provide metadata to the clearinghouse, and will encourage producers to “take ownership” of the metadata they produce to keep it current and maintain links to datasets. In that regard, we will:

- continue to assist producers of geospatial data in the development of metadata;
- continue training both producers of geospatial data and library patrons in the development and use of metadata; and,
- use a team approach to development and maintenance of the Portal to ensure all entities depending on the Portal to provide an avenue of access for their data have input to its design and operation.

Recommendation 8: The NRIS GIS Data Portal function is not limited to GIS natural resource information, but should include all GIS data resources relevant to Montana.

This recommendation is consistent with our past analysis of MSL/NRIS functions and duties under general library statutes and represents no change in operation for MSL/NRIS. We will continue to provide multiple avenues of discovery and access for all geospatial datasets.

Recommendation 9: The GIS data archival responsibility should remain with the NRIS, except where that function is performed by the data source entity.

MSL will continue to work with all data producers to ensure that copies of their data remain accessible for use. Ensuring stable, long-term access to public data and information, not limited to geospatial information, is a fundamental aspect of our library function. The reality is that most often, users of data outside of the producing agency do not access production databases or datasets, but in fact access copies of datasets, which are often subsets, stripped of information, not intended for publication (e.g. personal identifiers). MSL routinely receives copies of datasets from agencies to offer for public access, and to eliminate the need to expose production data. MSL uses these copies as the basis for its internal information access tools and, where appropriate, maintains the copies for long-term access.

Recommendation 10: GIS Application development services should be phased out of the NRIS. Application services in this context means application services other than those performed to provide data access.

This recommendation requires no change within MSL, as NRIS performs application development services only when it serves to provide or improve access to information, in accordance with its agency mandate. However, in accordance with the spirit of the recommendation - that NRIS should focus its attentions on its internal information access applications - MSL/NRIS has for some time encouraged its partners to seek application development services elsewhere, and is seeking additional funding and staffing to better support its internal operations. A favorable outcome to the current NRIS EPP funding request will go a long way toward enabling us to focus on our internal operations as recommended in the report.

Recommendation 11: The DOA, ITSD Data Center should serve as the primary GIS Data Warehouse. All GIS, non-source data content will be stored at the ITSD Data Warehouse.

MSL supports the concept of centralization of its data infrastructure and information assets in the new data center to be built to serve all agency IT infrastructure needs. We understand that ITSD is currently in the position of having to add capacity even to serve its own needs until the data center can be built. On the other hand, MSL has a robust data center capable of handling its data and information storage responsibilities for the next few years without further significant investment. MSL's highly popular data discovery and access tools and services also depend on our ability to store and manipulate the data. In order to avoid having to add capacity at the old ITSD data center to store geospatial

data and in order to take advantage of the investments already made at MSL, MSL will continue to store the data and information comprising its collection within its on-site data center at this time. MSL is committed to working with ITSD to determine how best to take advantage of the new data center while serving MSL business needs in the most efficient manner possible and to ensure a smooth transition of its infrastructure and information assets to the new facility when the time comes.

Other Recommendations:

The summary above addresses those recommendations in the report that relate directly to MSL/NRIS. Other recommendations also have a significant effect on MSL/NRIS and on the entire Montana GIS community.

Recommendation 1: Create a Geospatial Information Office for the State and hire a Geospatial Information Officer (GIO) who will report directly to the Governor's Office, with responsibility and oversight for managing the geospatial information efforts across all State agencies.

Recommendation 12: The DOA, ITSD, GIS Service Bureau, including the State GIS Coordinator, should be realigned to report to the GIO.

Aside from suggesting moving the GIS Bureau to the office of the Governor and describing the coordination activities of that office, the report contains little specificity regarding the functions and duties of the bureau - particularly those relating to data layer creation and maintenance. It is clear from the discussion in the report that your GIS advisory committee sees the need for GIS coordination and fund administration to take place in a neutral setting. The discussion during the MLIAC meeting of the GIS Bureau's use of MLIA funds for purposes other than coordination highlighted the problematic nature of the current situation, wherein the agency responsible for overseeing the MLIA fund also competes for funding for purposes beyond its coordination and fund administration role. Several MLIAC members suggested that the coordination role should be separated from the data layer maintenance role, which seems to be the intent of the report - although that is not clearly stated.

We encourage you to consider the benefits to an approach compatible with the generally accepted protocol in which data stewards are selected on the basis of the relationship of the agency business needs to the particular data layer. With funding available via MLIA grants, the Department of Transportation would be encouraged to steward the transportation layer (they were once very desirous of doing so); Disaster and Emergency Services would be encouraged to steward the critical structures layer (again, they have previously expressed interest), and the Department of Revenue might take on the cadastral layer. MSL/NRIS would consider stewardship of layers for which no other steward agency exists, as it has done for the hydrography layer. In this scenario, steward agencies would be on an equal footing in competing for MLIA funds and the funding would more likely be granted on the basis of priority of need for the data layers.

I will present your report and these thoughts to the NRIS Advisory Committee and the Library Commission for consideration and will advise you of any recommendations made by these groups regarding MSL's activities as they relate to this report. I encourage you to attend future meetings of these two groups to facilitate open discussion of the issues and concerns regarding GIS and geospatial data in Montana.