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Project Title: Montana MSDI/NSDI Transportation Stewardship

Report Type: Interim Report

Organization:

State of Montana, Department of Administration/Information Technology Services
Division/Base Map Service Center
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Collaborating Organizations: U.S. Forest Service, U.S. Bureau of Land Management, Confederated Salish and Kootenai Tribes, MT Dept. of Transportation, MT Dept. of Natural Resources, Counties of Montana

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Data themes: Transportation features (roads centerlines, trails, railroads)

Project Narrative:

a) The Montana Transportation Framework project contains roads centerlines, trails and railroads features, and address ranges and road attributes tables encompassing the State of Montana. A federated approach is used to integrate new data where each data provider (federal, tribe, state, county and city) manages its datasets to suit its business needs, and the new data gets forwarded to the Base Map Service Center (BMSC) where it undergoes quality control/quality assurance processes before getting integrated into the Framework and made publically available at the BMSC website (<http://giscoordination.mt.gov/default.asp>).

The goals of this project are to improve data quality, expand sustainable operational capabilities and foster long-term partnerships between the state and data providers, as well as the state and federal partners. Tasks of this project remain unchanged as summarized below:

1. Further collaborate with data providers and negotiate data-sharing agreements (MOUs) to provide the BMSC with updated road centerline data on scheduled intervals.
2. Increase efficiency and data quality by automating integration and interoperability methodologies by developing spatial ETL (FME) tools.
3. Develop web service to allow data transfer from BMSC to stakeholders

4. Transfer Airports features class from Critical Structures Framework to Transportation Framework.
5. Make all data, metadata and web services visible and publically available through the MT GIS Portal (<http://gisportal.msl.mt.gov/GPT9/catalog/main/home.page>).

Progress on the tasks has been made and the BMSC has conducted outreach/personal visits to six counties, and email and telephone communication to five others. Two counties have signed data-sharing MOUs and the rest are still under consideration. The BLM is presently finalizing its data to share with BMSC for inclusion into the Framework. Safe Software's FME was employed to develop templates to move address ranges from the road segments dataset to the Address Ranges and Road Attributes tables. These templates can be modified to accommodate disparate formats/data structures. The Framework model is published and available for public download from the BMSC website and also is discoverable through the Montana GIS Portal.

b) To meet the needs of The National Map (TNM) as well as a National data store accessed through the Geospatial One-Stop portal, the U.S. Geological Survey (USGS) will access the Montana Transportation Framework data on an as needed basis. The USGS and the state should seek out opportunities to integrate the Montana Transportation Framework Data with the Census Bureau transportation data and other regional and national transportation datasets to meet the needs of a National transportation data strategy. The data and metadata listed above will be provided without restriction to USGS. The metadata is currently registered and available at Geospatial One-Stop. The BMSC is presently testing internally a web map service that will be available at Geospatial One-Stop following public release. The Framework dataset will provide cartographic, address location, modeling and routing capabilities to TNM as well as to other national data stores.

c) Dataset updates are made on a quarterly basis, and then gets published and made available online via a dedicated Transportation Framework Coordinator. The USGS will determine the schedule of data harvest for inclusion into TNM.

d) BMSC's main challenge is acquiring updated data from counties with their disposition against sharing data. A common element in discussions has been that sharing data with the state has no benefit to them. The BMSC provided education about the benefits (cost, human) and that having a common, centralized dataset provides advantages for numerous applications (emergency response, land-use planning, reduce/eliminate duplication of effort). Another issue is that some counties have provided data but would not consider entering into a data-sharing agreement. An additional challenge is that several counties do not have GIS in-house and have contracted out for the creation and maintenance of datasets. It seems that when counties pay an outside contractor, the tendency is toward a tighter grip on the data. Perhaps by making additional site visits to counties and further discussing advantages, they will better understand that data sharing is beneficial to all who utilize it. The BMSC would like to see other cost/benefit strategies to encourage data sharing.

e) There is currently no need for a formal data sharing agreement between the USGS and the state. The USGS appreciates the outstanding efforts of the state of Montana to build, maintain and provide stewardship of a "best practices" transportation database which serves the needs of the state and will eventually facilitate a national transportation strategy. These combined efforts formulate a partnership to build state data that can be used at all levels of government in which we have yet to realize all of the benefits.