

Montana State Library Additional Digital Library Services

FUNDING OPTIONS FOR ADDITIONAL SERVICES
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INTRODUCTION

As part of the examination of digital library services required in HB 633, the Montana State Library (MSL) has provided the Legislative Finance Committee (LFC) Education Subcommittee with a summary of additional services and related funding including:

- \$450,000 for next generation 911 services
- \$250,000 for a real-time network in conjunction with the Department of Transportation
- \$200,000 for cadastral and government boundary updates
- \$500,000 to enhance government data available on MSL websites through digitization of state and local government publications
- \$350,000 for the Natural Heritage Program
- \$444,000 for storage of federal light detection and ranging surveys (Lidar) for the water information system
- \$1,000,000 for further development of information products

For the next generation 911 services and the real-time network, MSL has identified potential funding sources.¹

PROPOSED FUNDING SOURCES

NEXT GENERATION 911 SERVICES

Next Generation 911 systems are built on Geographic Information System (GIS) data sets comprised of transportation and address data. The Montana State Library is the steward for these statewide datasets which are a part of the Montana Spatial Data Infrastructure.

In 2017, House Bill 61 appropriated \$80,000, one-time-only, to the Montana State Library to award a contract to conduct a statewide Next Generation 911 GIS Data Assessment. Public safety standards require the data be 98.0% accurate. The assessment found on average local government address and transportation data is 47% accurate. Following budget cuts during the 2017 session, MSL ceased updating transportation data due to staff layoffs and does not provide Next Generation 911 data services through its digital library services.

MSL proposes to contract for a Next Generation 911 address and transportation data validation tool to allow the counties to continue to improve these datasets to meet public safety standards. MSL estimates the cost of the contract to be \$360,000 a year. MSL is also proposing to add 1.50 FTE and personal services of \$90,000 a year to allow dedicated staff to provide contract oversight, to

¹ Additional proposed services not considered part of digital library services are excluded from this report.

support local governments where necessary, and to perform regular updates to the statewide address and transportation data to create a seamless Next Generation 911 system statewide.

State special revenues generated to support 911 services in Montana are from fees imposed on a per month, per access line basis for each telephone subscriber in the state using either landline or wireless services. Statute requires that telecommunication companies charge a \$1.00 fee on each access line:

- \$0.75 to be deposited into an account used for administration of the program and distributions to local and tribal governments that provide 911 call centers for the public in order to direct police, firefighters, and ambulance services in the event of an emergency
- \$0.25 to be deposited in a separate account for grants to private telecommunication providers and local or tribal governments that provide 911 call centers to the public

As shown in the following figure, in FY 2019² a total of \$24,950,000 was deposited into the two accounts.

Montana State Library 911 Funding		
	911 Distribution	911 Grants
Beginning Fund Balance	\$0	\$798,351
Revenue	10,411,178	14,542,139
Expenditures	10,140,771	40,934
Ending Fund Balance	\$270,408	\$15,299,556

Statute provides for the administration of the program prior to the distribution of funding to local and tribal governments. MSL’s proposal to contract for a software application to improve local government data at a cost of \$360,000 a year and staff to administer the program at \$90,000 annually may be considered part of the overall administration of the Next Generation 911 Program.

REAL TIME NETWORK

Currently, Montana does not have a real time network used to improve global positioning data. Both Utah and Nevada have established a global navigation satellite system (GNSS) network of

² FY 2019 was the first year these accounts were established. Prior to this, the funding was deposited in other state special revenue accounts for 911 services. In FY 2019, the Department of Administration eliminated prior state special revenue accounts for 911 services and transferred \$6.1 million from the wireless account and \$5.0 million from the next generation 911 account into the 911 grants account.

permanently located global positioning system (GPS) receivers, which are installed across the state to generate real time high accuracy GPS positioning. Currently, Utah operates the real time network for both states. Individuals wishing to utilize the real time network purchase an annual subscription of \$600 a year. Uses of the data include:

- Surveying
- Mapping
- Agriculture applications
- Heavy machinery control and guidance systems

The Department of Transportation has proposed working with MSL to administer a real time network similar to the one developed by Utah. Funding to establish the network would be provided by the Department of Transportation. MSL would store and manage the resulting precision GPS data sets and administer the subscription services that support costs of the service. MSL estimates the costs to administer the real time network to be \$250,000 annually.

OTHER PROPOSED ENHANCED SERVICES

CADASTRAL AND GOVERNMENT BOUNDARY UPDATES

The cadastral parcel database stores information about public and private land ownership in Montana. The mapping database shows the taxable parcels and tax-exempt parcels for most of Montana. The parcel information includes owner names, property and owner addresses, assessed value, agricultural use and tax district information. MSL makes monthly parcel updates based on information submitted primarily by counties and the Department of Revenue, though updates can also come about through other sources (mostly Federal and Local partnerships). MSL has targeted an annual adjustment cycle to improve parcels and boundaries through the integration of improved control data from legal land descriptions and new surveys. Currently MSL does not have dedicated staff for this function, it is done as time allows. For the last 2-3 cycles, this adjustment has been taking 18 months to 2 years.

MSL proposes to maintain the monthly update cycle and perform annual adjustments by hiring additional staff dedicated to the cadastral and government boundaries updates. MSL includes 2.00 FTE, \$180,000 in personal services and \$20,000 in operating expenses each year under this proposal. As discussed in the [Montana State Library Funding Options](#) report, the legislature may wish to consider increasing the fee for filing documents such as land titles with county clerks. A portion of these funds are deposited into the Montana Land Information Act (MLIA) state special revenue account. Increased revenues to the MLIA could be used to support cadastral and government boundaries updates.

ENHANCED GOVERNMENT DATA

Statute requires state agencies notify MSL of their state publications and to make their publications available to MSL. Over the last ten years, MSL digitized print-based copies of state publications from previous years. MSL continues to digitize print publications as appropriations allow. MSL

also captures state agency websites at varying intervals through a web crawler to archive publications published to agency websites.

MSL proposes to modernize the State Publications Depository Program from a digital text-based model to an open data model. MSL also proposes to offer a grant program to help libraries collect and integrate local government data into the statewide open data structure. MSL includes 3.00 FTE, \$195,000 in personal services, \$50,000 in operating expense, and \$255,000 in grants in the proposal for enhanced government data. While MSL did not identify a funding source, the costs related to the digitization of state publications could be included in the assessment to various state agencies should the legislature determine it wished to provide additional resources for this function.

NATURAL HERITAGE PROGRAM

The Natural Heritage Program currently acquires, stores, and retrieves data related to the flora, fauna, and biological community types in Montana. The Natural Heritage Program has information on 3,800 animal species, 4,500 plant species, and 120 biological communities. It should be noted that these numbers represent only a portion of the total number of species present in Montana. MSL has contracted with the University of Montana (U of M) to operate the Natural Heritage Program. In FY 2020 MSL budgeted \$400,000 in operating expenses for the Natural Heritage Program contract with U of M. Updating species and biological communities is not part of the current contract and occurs when staff have time between other projects. In FY 2021, MSL anticipates bringing the Natural Heritage Program in-house. At that time most of the operating expenses would be transferred to personal service costs to support 6.50 FTE.

MSL proposes additional funding for Natural Heritage Program to update Montana species and habit information. As part of its work with the Environmental Quality Council last interim, MSL testified it required \$350,000 a year in new funds to make the Natural Heritage Program sustainable. This includes 3.50 FTE, \$250,000 in personal services, and \$100,000 in operating expenses. A funding source has not been identified.

STORAGE OF LIDAR SURVEYS FOR THE WATER INFORMATION SYSTEM

A part of the MSL's Natural Resource Information System includes water information on Montana's rivers and streams. The data used to model streamflow information can be enhanced with the adoption of light imaging, detection, and ranging (Lidar) technology, a form of elevation data. MSL does not currently have a significant amount of Lidar data on the waterways in Montana and does not have staff dedicated to this work.

The federal government is in the process of conducting Lidar surveys in the various states. These surveys would enhance the water information system used by MSL if the federal surveys were made part of the data it currently manages. MSL estimates it will cost \$444,000 a year to store the data once it is completed as it is estimated it would require 100 terabytes to store the Lidar data on Montana's waterways. This estimate does not include costs for data management and data access tools. A funding source has not been identified.

DEVELOPMENT OF INFORMATION PRODUCTS

MSL’s FY 2020 budget for information products is \$459,000. Current services include building and supporting web applications, coordinating GIS and resource databases, and administration of the Environmental System Research Institute (Esri) web services platform. In FY 2020, MSL budgeted 3.00 FTE, \$433,000 in personal services, and \$26,000 in operating expenses for information products.

MSL proposes to modernize the GIS and resource data, update web applications for better coordination and improved data access. MSL proposes 1.00 FTE, \$320,000 in personal services and \$680,000 in operating expenses. A funding source has not been identified.

SUMMARY

The following figure shows the total amount of additional resources requested by the Montana State Library for digital library services.

Montana State Library Additional Proposed Services					
Service	FTE	Personal Services	Operating Expenses	Grants	Total Expenditures
Next generation 911	1.50	\$90,000	\$360,000	\$0	\$450,000
Real time network	0.00	0	250,000	0	250,000
Cadastral and government boundaries	2.00	180,000	20,000	0	200,000
Government open data	3.00	195,000	50,000	255,000	500,000
Natural Heritage Program	3.50	250,000	100,000	0	350,000
Storage of Lidar surveys	0.00	0	444,000	0	444,000
Information Products	1.00	320,000	680,000	0	1,000,000
Total Additional Proposed Services	11.00	\$1,035,000	\$1,904,000	\$255,000	\$3,194,000

POTENTIAL FUNDING OPTIONS

As discussed on page 2 of this report, MSL has proposed funding for the \$700,000 in additional expenditures for the next generation 911 services and the real time network.

Updating cadastral and government boundaries could be funded through an increase to the fees assessed for filing documents with county clerks.

Government open data for state publications is part of MSL’s required archival responsibilities for state agencies. The funding for the \$245,000 in personal services and operating expenses could be assessed to state agencies based on the number of print-based publications stored by MSL that require digitization.

The Natural Heritage Program expenditures are currently supported in part from state agency assessments which could be increased if the legislature wished to increase resources for the program.

MSL has not identified specific funding for the remaining \$1.7 million in new or expanded expenditures proposed for digital library services. The legislature will need to determine if it wishes to expand digital library services:

- To provide grants for local governments to digitize publications
- For storage of Lidar surveys
- Expand information products

Further exploration of funding options could be made once the legislature determines if it wishes to provide these additional or expanded services.