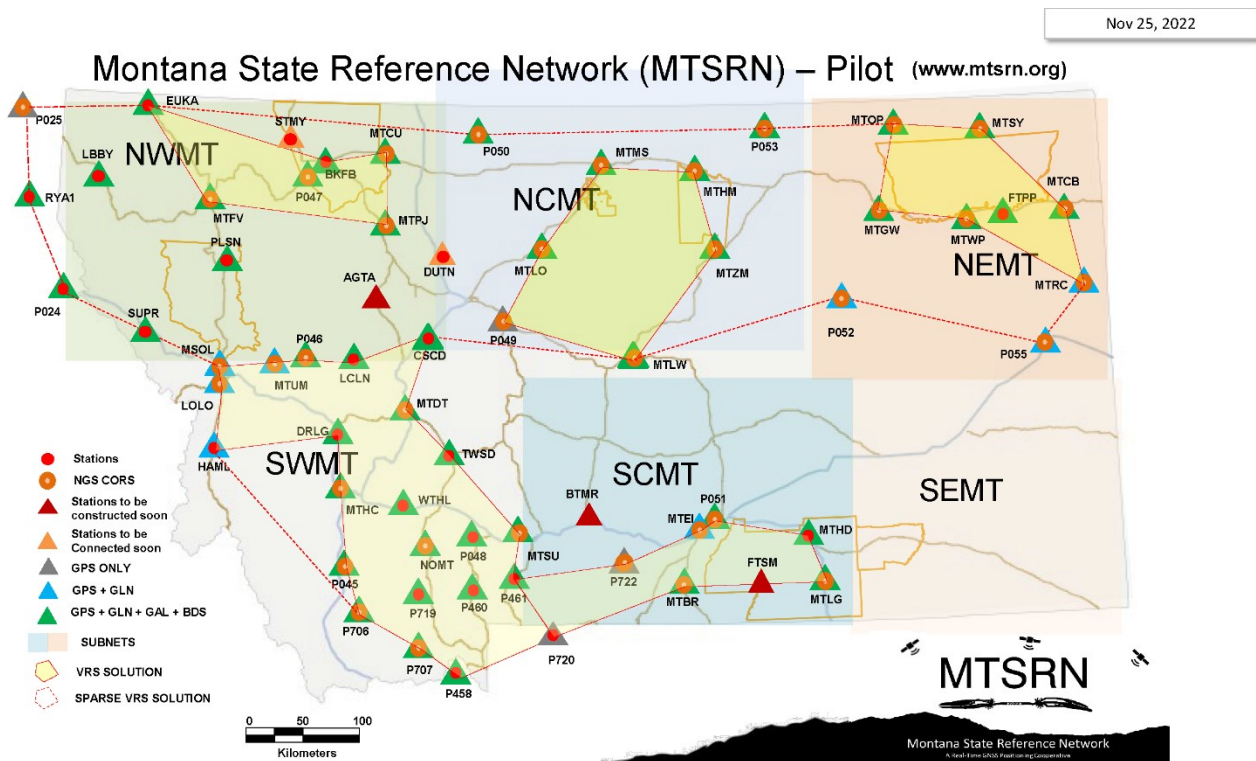


2023 INTERIM BUDGET COMMITTEE

December 2022 Updates

Montana Real Time Network

As of November 28, 2022, there are 58 MTSRN stations. MDT is currently working to expand the network by adding several stations per year. The goal for initial build-out (3-5 years) is about 130 stations statewide.



Montana State Reference Network (MTSRN) map as of November 25, 2022

House Bill 50

GIS Data Readiness

Cloud-based GIS data assessment system is now fully implemented and available for all public-safety answering points (PSAPs) to use. Since the last update, Montana State Library conducted two trainings:

- September 13 - training for six early-adopter PSAPs
- October 20 - training for all PSAPs (attended by 49 out of 53 PSAPs).

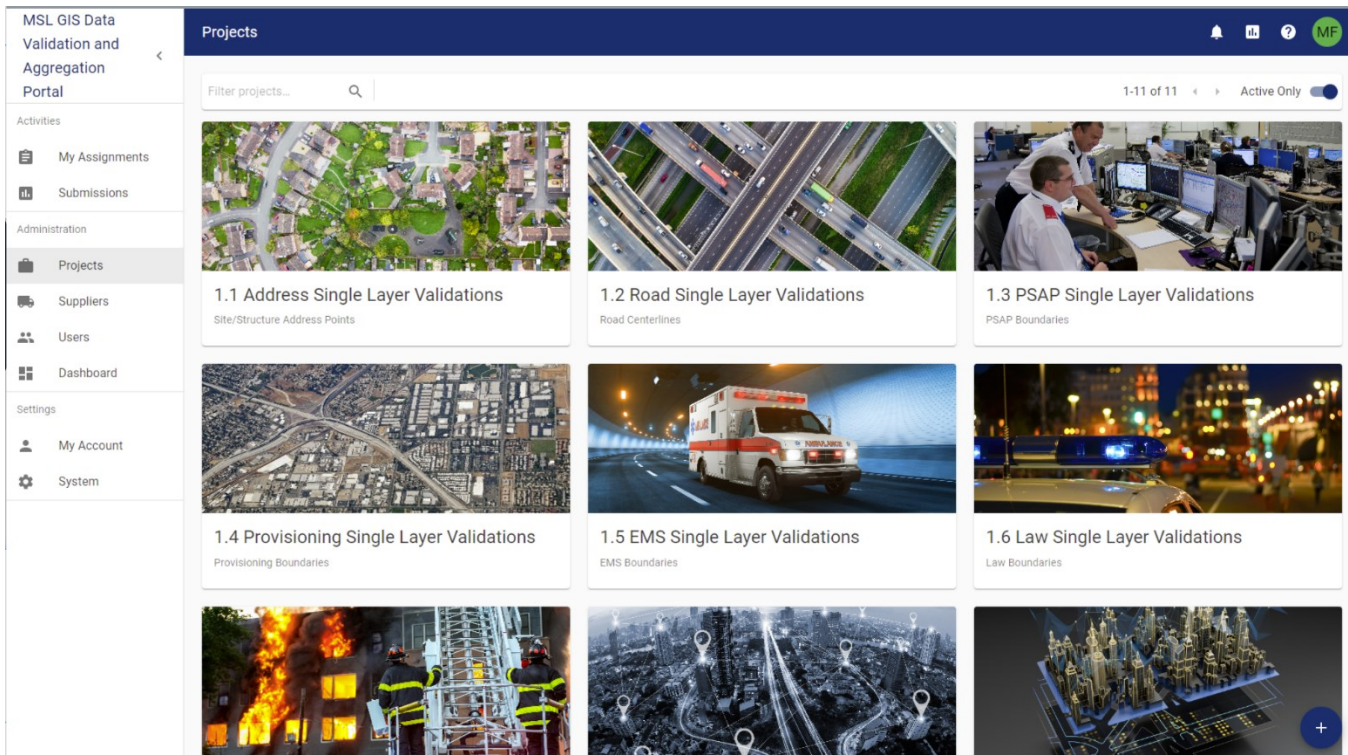
Twenty-six PSAPs have registered to use the system, as of November 28. One PSAP completed all the single layer validations for at least one required dataset.

Outreach, Coordination, Support

MSL staff presented on support for Next Generation 9-1-1 (NG9-1-1) GIS at two events:

- September 15, 2022 - Montana Association of Geographic Information Professionals, Local Government Special Interest Group meeting
- November 29-30, 2022 - Next Generation 9-1-1 Roadmap Workshop, Butte

Over last quarter, the 9-1-1 GIS Analyst spent over 250 hours directly supporting PSAPs and local government 9-1-1 GIS data providers . MSL conducted on-site visits in McCone County, Powder River County, Fergus County, and Valley County.



November 30, 2022 Screenshot of the MSL GIS Data Validation and Aggregation Portal for PSAPs

The library also provided remote training and assistance with GIS data maintenance workflows to Broadwater County, City of Bozeman, Carbon County, Central Montana 9-1-1 (Fergus, Judith Basin, Petroleum Counties), Custer County, City of Great Falls, Lewis and Clark County, Madison County, McCone County, Meagher County, Powder River County, and Teton County.

House Bill 49

Lidar (Light Detection and Ranging)

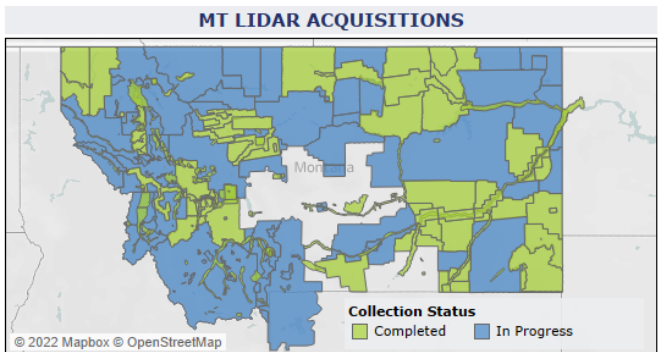
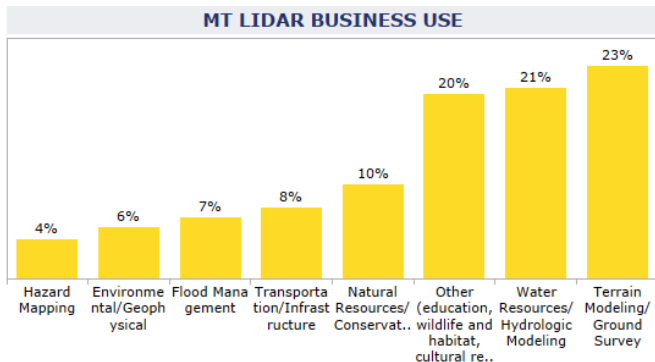
2022 lidar acquisition flights are complete. Data are currently being processed by the vendor and will then go through quality control with the USGS. Processing and QC take a significant amount of time for these large projects. The Montana State Library and partners anticipate receiving the 2022 lidar data around the first quarter of 2024.

A proposal for 2023 lidar acquisitions was submitted to the the USGS 3D Elevation Program on November 18. If the proposal is successful and awarded the full amount, the resulting project will bring Montana lidar coverage to 100%, accomplishing the goal of the 2019 Montana Lidar Plan.

The State Library completed its goal to publish a list of lidar-derived products. MSL maintains a database of available lidar-derived products per project (e.g. county). Where lidar data are available, the following products are produced:

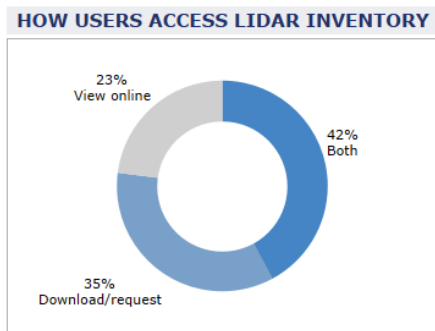
- Hillshade
- Bare-earth elevation model
- Surface elevation model
- Intensity
- Canopy height

Additionally, some areas include contours, building footprints, and relative elevation models.

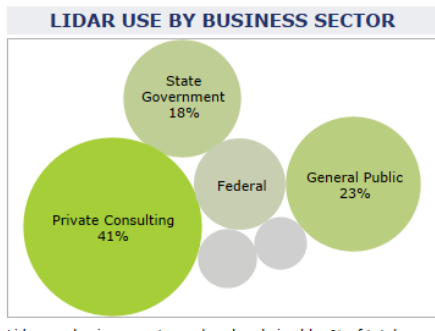


MT Lidar Inventory business use, colored and sized by percent of users. Lidar is used for many purposes, some of the most popular uses include **terrain modeling and ground survey, water resources and hydrologic modeling, and other (education, wildlife and habitat, cultural resources, and energy).**

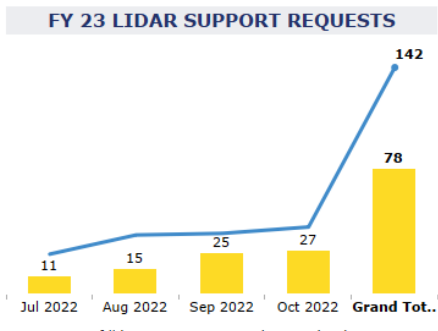
Map based on the **MT Lidar Acquisition Status** project footprints as of **September 2022**, colored by status: <https://msl.mt.gov/gis/lidarinventory>. Montana lidar acquisition is currently underway for the current fiscal year and the MSL-coordinated USGS 3DEP Broad Area Announcement project application for next year's acquisition will be submitted in November.



Pie chart of How Users Access the Lidar Inventory, colored and sized by access type. Most users access the inventory by both **downloading/requesting and viewing online.**



Lidar use business sector, colored and sized by % of total survey count. The inventory is used by all business sectors, but most popularly by **Private Consulting, General Public, and State Government.**



FY 23 count of lidar support requests by month. The Montana State Library observes an increasing portion of users that access the lidar inventory via self-service. So far in FY 23, MSL received **78** requests, **55%** of the **142** use surveys submitted.

Last updated 11/10/2022. Updated monthly.

November 30, 2022 Screenshot of FY 23 MSDI Elevation Dashboard.

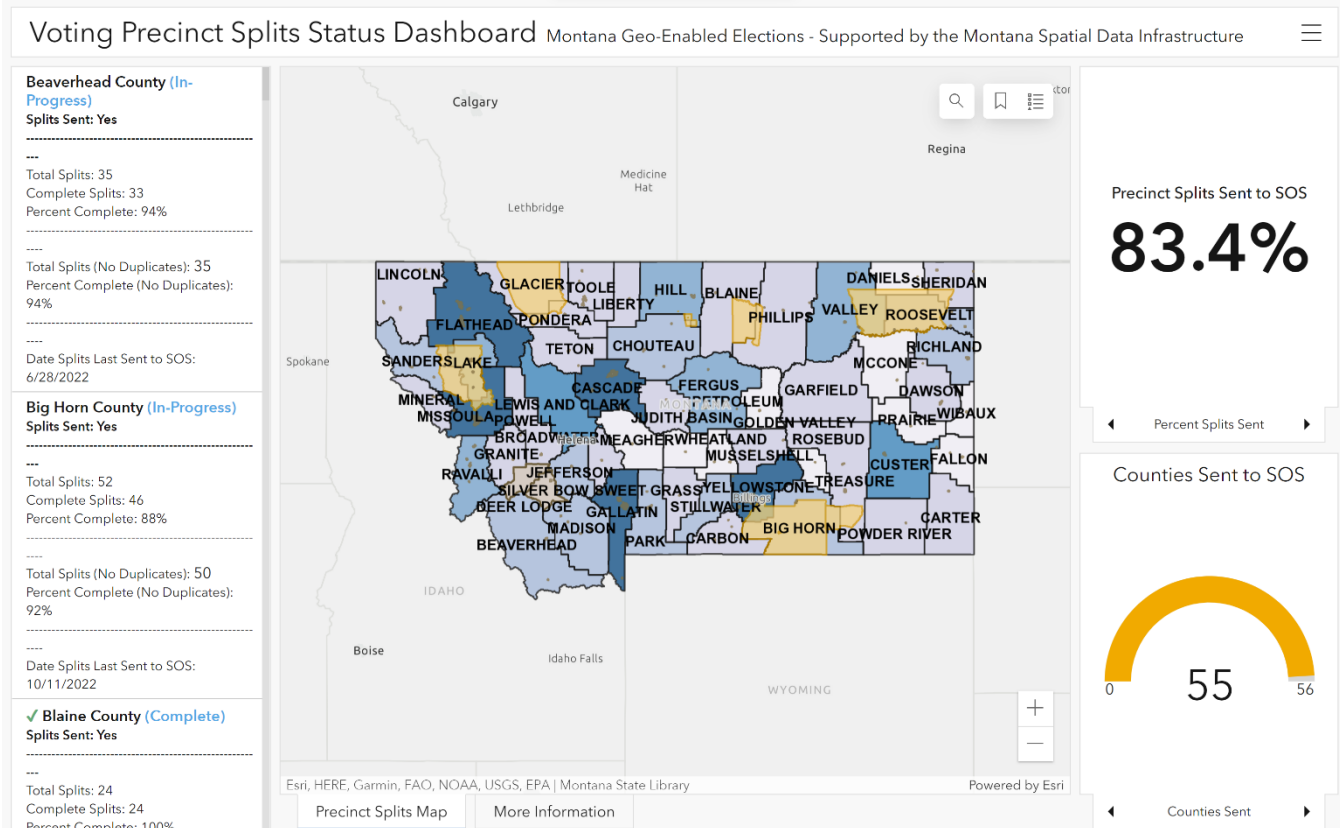
Since September 1, MSL received 123 lidar data-use surveys. Patrons generally found what they needed online without staff intervention. However, 67 data requests, an increase from previous quarters, were filled by MSL staff. All business sectors were reached, as follows: 37% private consulting, 25% general public, 15% state government, 11% federal government, 5% nonprofit, and 7% local government. Top use categories included terrain modeling/ground survey (24%), water resources/hydrologic modeling (17%), natural resources planning (10%), and transportation/infrastructure (9%).

Patrons continued to express interest in lidar data for areas impacted by spring 2022 flooding, particularly in Park County and Carbon County. MSL responded to approximately a dozen requests regarding the status of ongoing or upcoming lidar acquisitions.

Geo-Enabled Elections

The State Library continues to work with counties to collect precinct, precinct split, and updated address data. Staff visited Fergus County and Valley County to coordinate with local government on geo-enabled elections geospatial datasets.

As of November 30, precinct and precinct split data have been collected and sent to the Secretary of State's office for 55 out of 56 counties. Of those counties, 15 are complete with the remainder in progress.



November 30, 2022 Screenshot of [Voting Precinct Splits Dashboard](#)

Cadastral

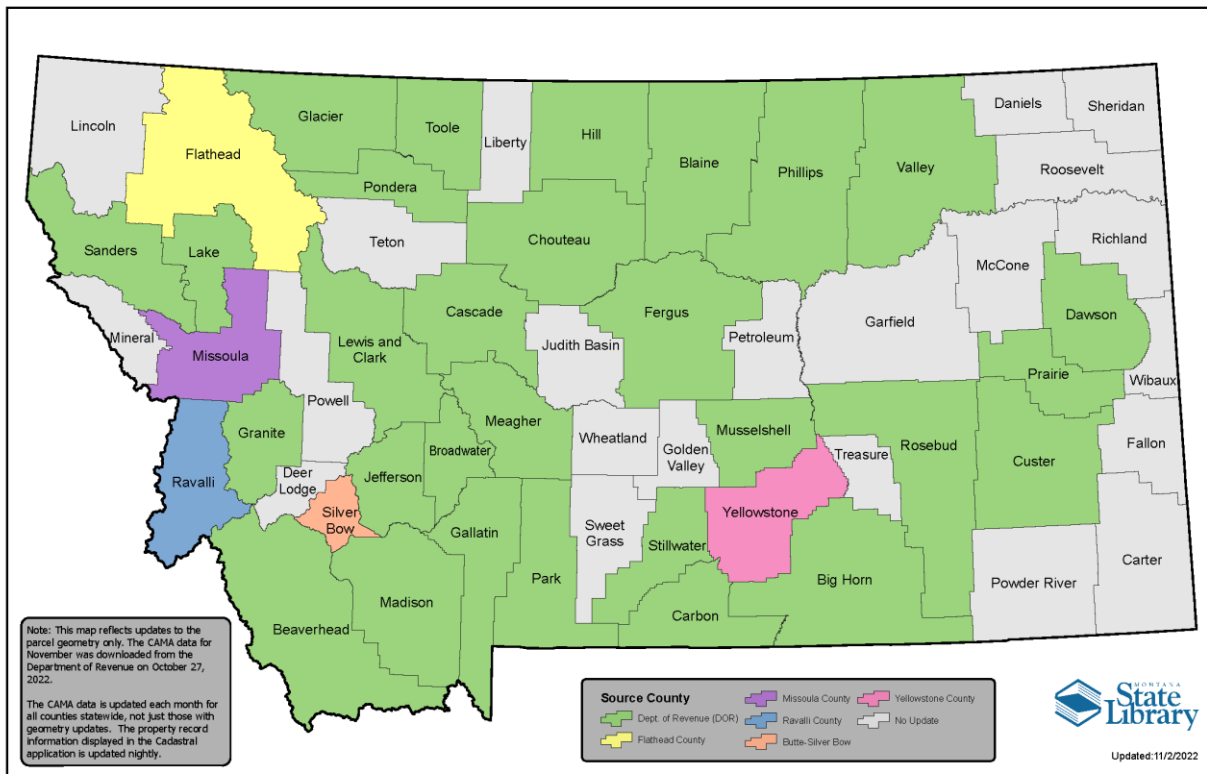
As some MLIA grants close, the State Library is beginning to receive data relevant to the MSDI Cadastral Framework survey control points. Once received and approved, the data can be integrated into existing cadastral workflows. Seven projects in FY 2022 and FY 2023 focused on the Land Information Plan priority, Improve Land Records: Public Land Survey System (PLSS).

For example, Stillwater County's project "Cadastral / PLSS Point Collection FY 2023" focuses on acquiring better survey control using Global Navigation Satellite System (GNSS) technology. The county will contribute this enhanced control to the Geodetic Control Framework to improve the accuracy of the PLSS in Stillwater County.

"McCone County PLSS Enhancement Phase 3" is another project example from FY 2023. McCone County collected 52 survey points in Phase 1 of their project in the areas of Brockway and Circle. In phase 2, they collected 62 points in the Vida area. The final phase will be 82 points in around McCone County. Collected survey control data will increase mapping control from a 69 feet variance to less than 19 feet, making spatial analysis more accurate.

MSDI Cadastral Framework Updates

November 2022



MSDI Cadastral Framework Updates November 2022

Outreach, Coordination, Support

The State Library started implementation of the GIS Coordination Strategic Plan goal to improve communication with geospatial stakeholders. One tool used by staff is GovDelivery, a web-based e-mail subscription management system. GovDelivery allows vested partners and members of the public to self-subscribe to news and information from MSL. Subscribers can follow bulletins related to General GIS Coordination News & Updates, MSDI Themes, the Real Time Network, Water Information, Applications, MLIA grants, and more. Across all GIS and Natural Resource related topics, MSL supports 875 subscribers as of November 30. The public can access past bulletins via the News page on the MSL website.

The Montana Land Information Council is working on second business plan to address its goal to "Create & Strengthen Partnerships." In last quarter, MSL staff conducted GIS outreach at:

- Montana Association of Counties (September 2022)
- Montana Association of Planners (September 2022)
- Montana League of Cities & Towns (October 2022)
- Montana Section American Water Resources Association (October 2022)