



Montana Real Time Network

Interim Budget Committee – Section E Report
 March 1, 2024

Also available online as a digital report: <https://arcq.is/0uy5j00>

March 2024 Progress Update

Pilot Accounts

Montana State Reference Network (MTRSN) pilot users span multiple commercial sectors and access the network from 242 accounts with 520 logins. As MTRSN prepares to launch its payment portal and accept subscribers, Montana State Library will work to convert pilot users into paid subscribers with a target of 50 subscribers by the end of 2024. The following data represents the current, pilot state and illustrates opportunities for subscriber adoption.

Industry	Count	Percent
Engineering and Surveying	40	17%
Agricultural (including Precision Ag)	26	11%
Land Surveying	25	10%
Aerial/Drone	23	10%
Water, Environment and Geotechnical	21	9%
Construction	19	8%
Transportation (MDT)	20	8%
Utilities	14	6%
Equipment resellers	13	5%
City/County	12	5%
Academia	9	4%

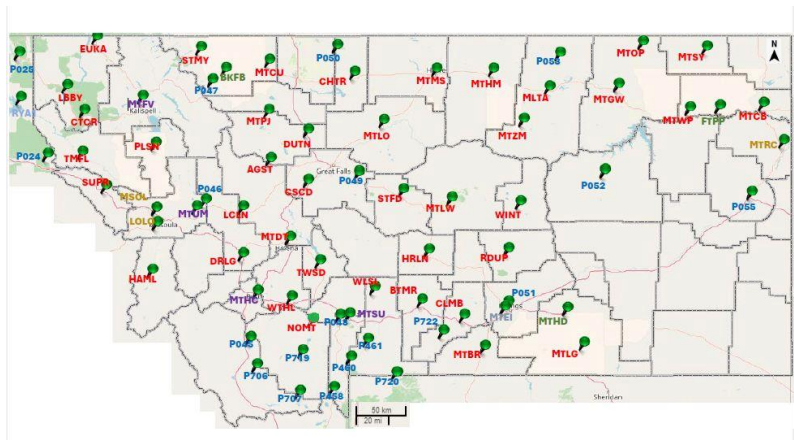
Industry	Count	Percent
Excavation	8	3%
Miscellaneous	8	3%
Ranch	4	2%
Total	242	100%

The top four sectors using pilot accounts include engineering, agriculture, land surveying, and aerial/drone. Within these and the other industries, the largest user group is professional land surveyors (43%). Other high potential sectors for subscriber recruitment include water and environment, utilities, equipment resale, local government, and excavation. City/County government could be an especially promising source for users as current pilot subscribers in local government use the RTN for a variety of purposes such as public works, GIS, and public safety.

Reference Stations

Current State

Operated under the legal authority of the Montana State Library, the Montana State Reference Network (MTSRN) is the state-owned real time positioning network. The Montana Department of Transportation (MDT) is a major partner for establishing base stations. Other station contributors include Montana



Tribal Nations, city and county governments, and the University of Montana. The network also includes stations from UNAVCO, a nonprofit organization that supports geoscience research and education based in Boulder, CO.

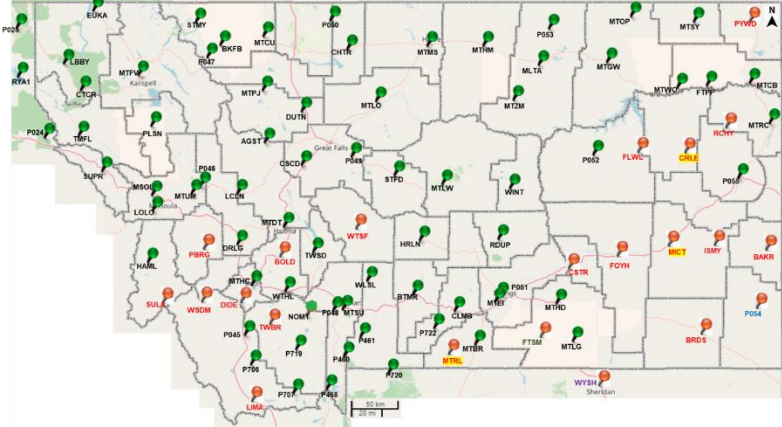
- **Tribal Nations: 18; currently maintains 3** (distributed 13 to MDT and 2 to UNAVCO)
- **MDT: 40** (including the 13 from Tribal Nations)
- **UNAVCO: 20** (including 2 from Tribal Nations)
- **Academia: 4**
- **City & County: 3**
- **Private: 1**
- **Other: 1**

Total in current state: 72 stations.

Planned State

Twenty-two planned stations will join the network over the next two years, with 8 to 15 in calendar year 2024. UNAVCO will also add another station to the network.

- **Tribal Nations: 1**
- **MDT: 17**
- **UNAVCO: 1**
- **MSL MGIA: 3**
- **BLM: 1**



Total after planned installation: 95 stations.

Future State

For optimal coverage, stations should be installed in a pattern of equilateral triangles, approximately 40 to 50 km apart. To achieve the goal of statewide coverage, a minimum of 131 stations would be needed, depending on the availability of suitable sites, topographic variation, and other factors related to station performance. This would be an additional 36 stations.

Total in future state: 131 stations.

MTSRN Objectives

Objective 1: Establish RTN administrative office and bring pilot network under Montana direction.

Status: Complete

- RTN coordinator hired: December 2021.
- MTSRN Extended Pilot launch date: March 2022.
- Status reporting: [MTSRN status map published online](#), ongoing status reports to key stakeholders. **Most recently, staff presented to the State Library Commission (February 16, 2024) and hosted a booth at Montana Association of Counties Midwinter Conference (February 26-28, 2024). Montana State Library anticipates publishing a new MTSRN webpage by the end of March.**

Objective 2: Develop and implement a subscription-based funding model.

Status: In Progress

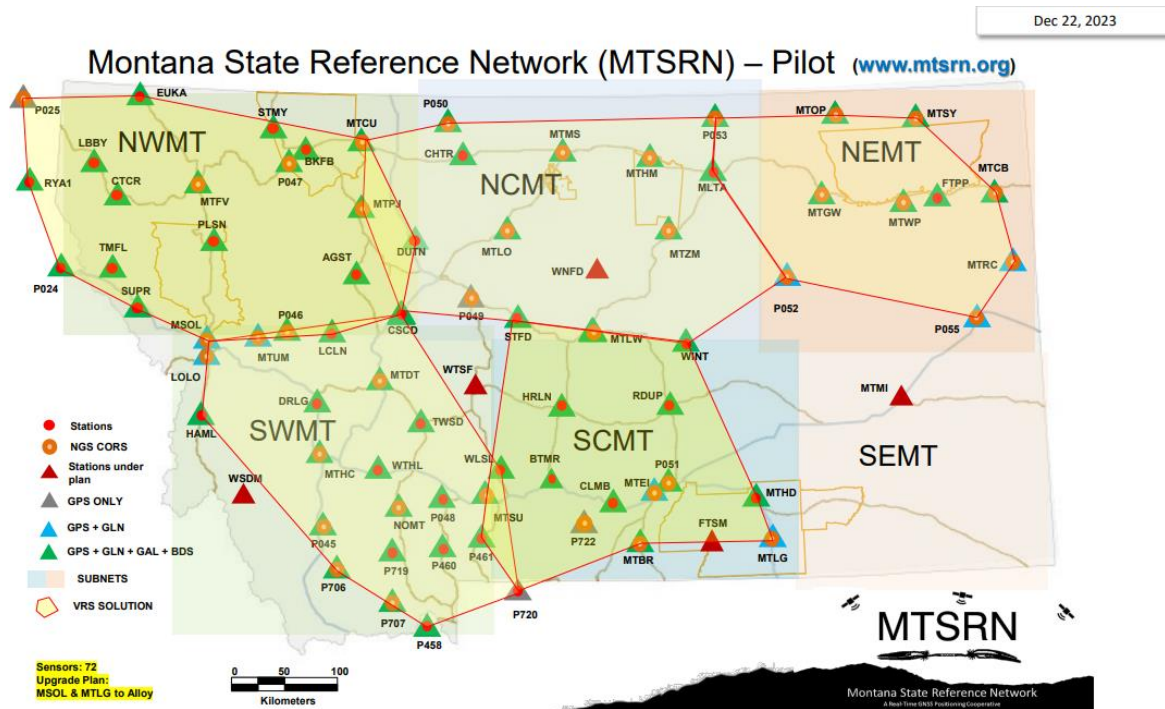
- RTN business plan: planning underway in collaboration with MDT.

- Customers subscribe to the RTN: [subscription notices and a program update were sent February 2024 via GovDelivery](#). The payment portal will open in April so users can purchase subscriptions. Educational Use Agreements and Contributing Organization Agreements will also be available at this time.
- Revenue is generated from the subscription service. Except in certain circumstances described in administrative rules, effective July 1, 2024, MTSRN users will pay a \$1,500 annual subscription fee, per login, to use the network. Fees maintain the operation of the MTSRN, including the cost for the network and support staff. Users that subscribe before June 1 will receive a one-time discounted rate of \$1,200 to use the network through July 1, 2025.

Objective 3: Operate the existing network and identify priority coverage areas.

Status: In Progress (Ongoing)

- The number of reference base stations increases to meet Montana’s business needs: 72 base stations as of December 2023, at least **eight** additional stations expected to come online in the coming year. **To achieve the goal of statewide coverage, we currently estimate that MTSRN will require a minimum of 131 stations at completion, though this number may be significantly impacted by station placement and other factors related to station performance.**
- Establish RTN working group: in development.



Montana State Reference Network (MTSRN) as of December 22, 2023. To view a live Sensor Map, visit [Montana State Reference Network – Sensor Map \(mtsrn.org\)](#)