

**MONTANA LAND
INFORMATION ACT
GRANT APPLICATION
STATE FISCAL
YEAR 2024
JULY 1, 2023 – JUNE 30, 2024**

**CUSTER COUNTY
REALTIME NETWORK**



TABLE OF CONTENTS

APPLICATION FOR FY2024 MLIA GRANT FUNDING.....	3
Section 1 – Organization, Partner, and Proposal Information	3
Section 2 – Relevance.....	6
Section 3 – Public Benefit.....	6
Section 4 – Project Management and Organizational Capability.....	7
Section 5 – Scope of Work	8
Section 6 – Budget Justification and Budget Table	11
Section 7 – Project Sustainability.....	12
Section 8 - Renewable Grant Accountability.....	13

APPLICATION FOR FY2024 MLIA GRANT FUNDING

SECTION 1 – ORGANIZATION, PARTNER, AND PROPOSAL INFORMATION

Primary Applicant Contact Information	
Name of Agency/Entity:	Custer County, Montana
Department:	Geographic Information System
Division/Section:	GIS
Street:	1010 Main Street, Suite 2
City:	Miles City
County:	Custer
State:	Montana
Zip Code:	59301
<i>Project Manager Contact Information:</i>	
Name:	Maureen Celander
Title:	GIS Manager
Email Address:	mcelander@co.custer.mt.us
Phone Number:	406-874-4024
Fax Number:	406-874-3452
<i>Secondary Project Manager Contact Information:</i>	
Name:	Jason Strouf
Title:	Custer County Commission Chair
Email Address:	j.strouf@co.custer.mt.us
Phone Number:	406-874-3352

MLIA Grant Funding Request & Match:	
Total Requested MLIA Funds:	\$36,000
Total Matched Funds:	\$7,680

Proposal Information	
Date Submitted:	February 14, 2023
Identified Grant Priority:	Buildout of Montana Realtime Network
Annual or Multi-Year Proposal:	Annual
Proposal Prepared By:	Maureen Celander
Short Title of Proposal:	Establishment of Custer County RTN station
Executive Summary	
<p>Custer County will promote the buildout of the Montana State Reference Network by establishment of a Custer County RTN station.</p>	

Funding Partners:	
Name of Contact:	MLIA GRANT FUNDS
Name of Agency:	Montana Land Information Act Grant
Street:	PO Box 201800
City:	Helena
County:	Lewis & Clark
State:	Montana
Zip Code:	59620
Contact Email Address:	efashoway@mt.gov
Contact Phone Number:	406-444-3115

SECTION 2 – RELEVANCE

Left blank due to being a buildout project.

SECTION 3 – PUBLIC BENEFIT

Left blank due to being a buildout project.

SECTION 4 – PROJECT MANAGEMENT AND ORGANIZATIONAL CAPABILITY

This project will be a cooperative effort of several Custer County offices. As the GIS Manager I will be the primary contact for this project. Also, the office of the County Commissioners, represented by Jason Strouf, Chairman, will have oversight and help maintain accountability. The Custer County Fire Marshal, Cory Cheguis, will also be helping with special equipment if needed for the location and construction site of the RTN equipment.

With over 30 years of experience as a Montana business owner I have managed several projects that resulted in positive outcomes for our clients and the business. With 10 years of experience as the managing member of a property development company in Arizona, we completed several construction projects timely and under budget. Also, with over 22 years of experience as a commercial appraiser with the Montana Department of Revenue I have helped with several successful statewide valuation projects. I am very conscientious and want to do my best to help this project be a reality for Custer County.

SECTION 5 – SCOPE OF WORK

Scope of Work:

Goal 1. Follow CORS Guidelines to establish a Custer County Buildout Realtime Network

Objective 1.1. Discover suitable site location for RTN equipment.

Task 1.1.1. Research local site area most suitable for the location of the antenna and equipment to be constructed. Ensure NGS is contacted, ngs.proposed.cors@noaa.gov, to obtain site specific advice on the proposed location, choice of equipment, and installation method. Get preliminary site approval.

-Completion Date: 07/01/2023

Task 1.1.2. Develop agreements for site location with other local government entities if necessary.

-Completion Date: 07/31/2023

Goal 2. Finalize equipment and personnel needed to start construction.

Objective 2.1. Develop a construction plan for time, equipment, and personnel necessary to install the RTN antenna and equipment.

Task 2.1.1. Acquire all equipment that is donated by NOAA for this project.

-Completion Date: 07/01/2023

Task 2.1.2. Acquire all other equipment that is donated or purchased.

-Completion Date: 07/31/2023

Task 2.1.3. Establish data connection agreement with local provider.

-Completion Date: 07/31/2023

Task 2.1.4. Get final approval from NGS on site of construction project.

-Completion Date: 07/31/2023

Goal 3. Construction of the RTN network antenna & equipment.

Objective 3.1. Ensure all items in place to start construction of the RTN antenna and equipment.

Task 3.1.1. Start installation of the RTN antenna and equipment to CORS guidelines.

-Completion Date: 08/01/2023

Task 3.1.2. Complete construction of RTN antenna and equipment.

-Completion Date: 08/31/2023

Goal 4. Finalize the site Metadata and Site log to CORS guidelines.

Objective 4.1. Develop and submit all site Metadata on newly constructed RTN.

Task 4.1.1. Provide all photographs per CORS guidelines on new site.

-Completion Date: 09/22/2023

Task 4.1.2. Complete the site log of the new RTN site per CORS guidelines.

-Completion Date: 09/22/2023

Goal 5. Maintain quality control and day to day operations.

Objective 5.1. Observe and maintain the RTN site as operational.

Task 5.1.1. Provide reviews and observation for the RTN site after construction and ongoing.

-Completion Date: 09/22/2023

SUBSECTION 5 – DELIVERABLES

Custer County is a region hub for southeastern Montana. The current Montana State reference network has a large gap and lack of access to a reference station in this area. The construction of a Realtime Network, (RTN), continuously operating reference station will help fill the gap. This will increase the accuracy of measurements from distant-dependent biases and result in more accurate coordinates. This is beneficial to everyone who utilizes this data.

SECTION 6 – BUDGET JUSTIFICATION AND BUDGET TABLE

Custer County salary and fringe benefits:

Maureen Celandier will be dedicated to this project for a 6-week time span. The project will be managed by her, according to the statement of work contained in this application, from planning to completion. Fringes are calculated a percentage of the salary and rounded to the nearest dollar.

Equipment:

John Galetzka, CORS Branch Chief, National Geodetic Survey, NOAA, has offered to donate an antenna for this project. He did not have an exact amount and the \$1,000.00 is an estimate.

Contractual:

Custer County GIS is requesting the funds necessary to complete construction of the Realtime Network to be located in Custer County, Montana.

Tasks	Category Type	Funding Source	Hours	Rate	Cost
Task 1.1.1 - Site Research	Personnel (incl. fringe benefits)	Custer County GIS In-Kind	40	\$ 32.00	\$ 1,280.00
Task 2.1.1 - Plan & Acquisition	Personnel (incl. fringe benefits)	Custer County GIS In-Kind	40	\$ 32.00	\$ 1,280.00
Task 2.1.1 - NOAA Antenna Donation	Equipment	NOAA In-Kind	1	\$ 1,000.00	\$ 1,000.00
Task 2.1.3 - Task 2.1.4 - Data Contracts & Approvals	Personnel (incl. fringe benefits)	Custer County GIS In-Kind	40	\$ 32.00	\$ 1,280.00
Task 3.1.1 - Construction Oversight	Personnel (incl. fringe benefits)	Custer County GIS In-Kind	40	\$ 32.00	\$ 1,280.00
Task 3.1.2 - Construction of RTN Site & Equipment	Contractual	MLIA Grant Funds	1	\$ 36,000.00	\$ 36,000.00
Task 4.1.1 - Task 4.1.2 - Metadata Reports & Site Logs	Personnel (incl. fringe benefits)	Custer County GIS In-Kind	80	\$ 32.00	\$ 2,560.00

SECTION 7 – PROJECT SUSTAINABILITY

Custer County leadership has made a commitment to helping the County become more modernized and making improvements that promote this ideology. With the help of this buildout for the RTN Network, another portion of that commitment is put into place. As a region hub for southeastern Montana, Custer County wants to be a leader in helping develop lasting infrastructure that will carry forward for many years. With the increase in personnel to help manage and maintain this infrastructure, Custer County leadership has demonstrated their support for this goal.

SECTION 8 - RENEWABLE GRANT ACCOUNTABILITY

FY2023 MLIA Grant:

Custer County GIS received a MLIA grant to help collect critical infrastructure within Custer County using ArcGIS online and the Collector App. This project is still in process and all tasks are current. We are currently working with Montana State Library on these tasks. Custer County transportation point data includes bridges, culverts, cattle guards, and fire stations, fire houses and/or fire apparatus, and the corresponding metadata records. The project is expected to be completed on time.

FY2020 – FY2019 MLIA Grant:

Custer County received a MLIA grant for NG 911 in both 2020 and 2019.

It is my understanding these grants are completed. The grants were under a different administration and staff at that time, and I have no additional data on this.



Custer County



**From the office of
BOARD OF COUNTY COMMISSIONERS**

Chair, Jason Strouf 406.874.3352 • Jeff Faycosh 406.874.3350 • Kevin Krausz 406.874.3351
1010 Main Street, Suite 22 MILES CITY, MONTANA 59301

February 15, 2023

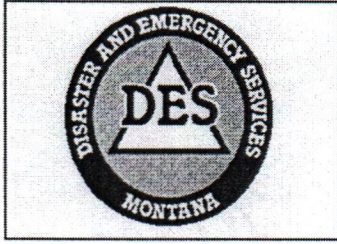
Montana State Library
PO Box 201800
Helena, MT 59620

Senior Advisory Committee Members:

The Custer County Commission would like to express our support of the Custer County GIS grant application for the Custer County RTN Station Project. This project would help give us more accurate coordinates data for maps we would use in a disaster response and other data. Please consider this letter of support for this project.

Sincerely,

Jeff Faycosh
Custer County Commission



CUSTER COUNTY
DISASTER AND EMERGENCY SERVICES
1010 MAIN ST., SUITE 2
MILES CITY, MT 59301
406-874-3490

February 15, 2023

Montana State Library
PO Box 201800
Helena, MT 59620

Senior Advisory Committee Members:

The Custer County Disaster and Emergency Services would like to express our support of the Custer County GIS grant application for the Custer County RTN Station Project. This project would help give us more accurate coordinates data for maps we would use in a disaster response and other data. Please consider this letter of support for this project.

Sincerely,

Cory Cheguis,
Disaster and Emergency Services

Cory Cheguis

02/15/2023



February 15, 2023

Montana State Library
PO Box 201800
Helena, MT 59620

Senior Advisory Committee Members:

The Custer County Fire would like to express our support of the Custer County GIS grant application for the Custer County RTN Station Project. This project would help give us more accurate coordinates data for maps we would use in a disaster response and other data. Please consider this letter of support for this project.

Sincerely,

Cory Cheguis,
Custer County Fire Warden

Cory Cheguis 02/15/2023



FY2024 MLIA Grant Application

Support the buildout of the MTSRN Realtime Network

Requirements for Establishing RTN Station Template

The Montana Land Information Act (MLIA) Grant Program has developed a tier-2 priority to support the buildout of Montana RTN. Grant funding may be available to build or support the development of Continually Operating Reference Stations (CORS) deemed significant to the network. Please see the attached map of RTN network.

If you see a location on the current status map of Montana State Reference Network (MTSRN) that appears to lack coverage and you have a potential reference station site in mind, please contact us. If you have a stable place to mount an antenna (bedrock or non-alluvial stable ground on which to construct a pillar or drill brace mount or a solid structure preferably a single-story building to mount an antenna, contact us. The location could be your business location, a local school, or other facility as long as there is legal access (or the ability to secure legal access), reliable power (120V 5A is sufficient) and a way to get the data to the internet.

The requirements for establishing RTN station are similar to the requirements for NGS Continuously Operating Reference Stations (CORS). Applicants for Grant Program are advised to consult the attached [CORS Guidelines \(pdf\) - August 2020](#) for technical aspects of establishing a station. You can also visit NGS webpage, https://geodesy.noaa.gov/CORS/Establish_Operate_CORS.shtml.

We will consider stations/sites at least 30 miles from existing RTN stations. The grant program requires the grantee enter into a contractual agreement. Additionally, prior to a station being added to the network, the station owner will be required to sign a Memorandum of Understanding (MOU) with MSL.

We have modified the site info table prepared by NGS. Please consult the specified sections in the [CORS Guidelines \(pdf\) - August 2020](#) before you fill it out and submit it with the Grant application. Please fill out the relevant information.

All questions regarding this template and MTSRN should be directed to Kazi Arifuzzaman, Montana Realtime Network Coordinator: karifuzzaman@mt.gov.

Distance to nearest Existing RTN station is more than 30 miles	-----miles	Existing RTN station code (4 letters)
74 Miles to Glendive station.	74 Miles	P055

Additional comments:

Site Location and Obstructions Section B.2

B.2.a	Location	Custer County Road Dept
B.2.b	Obstructions	No obstructions
B.2.c	Radio Frequency Environment	No

Additional comments: [This will be located 30m from current Leica station. Address of Custer County Road Dept Building is 5125 Valley Dr E., Miles City, MT.](#)

Ground-based Monument Section B.3.

B.3.a	Top of pillar width narrower than antenna	NA
B.3.b	Braced monument	NA

Additional comments: [Hoping to utilize building mount to minimize expense.](#)

Roof-based Monument Section B.4.

B.4.a	Building made of mortar	Block Building
B.4.b	Mount attachment bolts	To be determined at construction
B.4.c	Mount bolted length to free standing length	To be determined at construction

Additional comments: [Goal 4, Task 4.1](#)

Attach. Antenna, Mount and Monument, Orienting Antenna, Antenna Cable Section B.5-B.7.

B.5	Leveling and orienting device	To be determined at construction
B.6	Antenna level	To be determined at construction
B.7	Antenna oriented to North	To be determined at construction
B.8	Antenna cable tension	To be determined at construction

Additional comments: [Goal 4, Task 4.1](#)

Equipment Section C.

C.1	Valid antenna type	To be determined at construction
C.2	Valid radome type	To be determined at construction
C.3	Valid receiver type	To be determined at construction

Additional comments: [Goal 4, Task 4.1](#)

Site Metadata: Digital Photographs Section E.1.		Photograph name
A	Photograph showing the monument (pillar/ braced/building) and antenna	[ssss]_monu_[yyyyymmdd]
B	Photograph showing the mark	[ssss]_mark_[yyyyymmdd]
C	Photograph that shows how the antenna is attached to the monument	[ssss]_ant_monu_[yyyyymmdd]
D	Photograph of view 000 (north)	[ssss]_ant_000_[yyyyymmdd]
E	Photograph of view 090 (east)	[ssss]_ant_090_[yyyyymmdd]
F	Photograph of view 180 (south)	[ssss]_ant_180_[yyyyymmdd]
G	Photograph of view 270 (west)	[ssss]_ant_270_[yyyyymmdd]
	If the antenna is on a roof, you must include the following:	
H	Photograph showing “clearly” how the antenna is attached to the building.	[ssss]_ant_bldg_[yyyyymmdd]
I	A photograph showing the antenna and the roof surface	[ssss]_ant_roof_[yyyyymmdd]
J	A photograph of the antenna showing model and serial number	[ssss]_ant_sn_[yyyyymmdd]
K	A photograph of the receiver showing model and serial number	[ssss]_rec_sn_[yyyyymmdd]
L	A photograph of the receiver location	[ssss]_rec_[yyyyymmdd]
M	Resolution and size of photographs	

Additional comments:

[To be determined at construction. Supply D., E., F., and G photos. Remainder will be a deliverable at construction.](#)

[Goal 4, Task 4.1](#)

Site Metadata: Site Log Section E.2

(S.1,S.3,S.4 are log file sections)

S.1	Detailed monument information	
S.1	Height of monument and dimensions of material	
S.1	Dimensions of building/monument foundations	
S.1	Description of materials used	
S.3	Receiver name and serial number match photograph	
S.3	Receiver install and removed dates are valid	
S.4	Antenna name and serial number match photograph	
S.4	Antenna install and removed dates are valid	
S.4	Antenna cable type and length	
S.11-12	Contact information	

Additional comments: To be determined at construction. Goal 4, Task 4.1

Looking North Photo D.



Formatted: Font: Bold

Looking South Photo F.



Looking East Photo E.



Looking West Photo G.





CUSTER COUNTY
1010 Main St
Miles City, Montana 59301

CLAIM SHEET

VENDOR	DEPARTMENT	CLAIM DATE
MLIA PO BOX 201800 HELENA MT 59620	RTN	2/15/2023

INV#	DATE	DESCRIPTION	ACCOUNT NUMBER	Init	AMOUNT

VENDORS TAX ID NUMBER	COUNTY CLERK	TOTAL \$0.00
X	X	
VENDORS SIGNATURE	COUNTY COMMISSIONERS	
X	X	

Please Attach All Invoices and Statements
ALL BILLS MUST BE IN THE HANDS OF THE ACCOUNTS PAYABLE CLERK by 12:00 pm Wednesday

Authorizing Statement

I hereby certify that I have read the application and the information and all statements in this application are true, complete and accurate to the best of my knowledge and that the project or activity complies with all applicable state, local and federal laws and regulations.

I further certify that this project will comply with applicable statutory and regulatory standards.

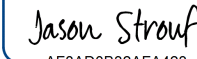
I further certify that I am (by my signature) authorized to enter into a binding agreement with the Montana State Library to obtain a grant if this application receives approval.

Jason Strouf

Commission Chair

Authorized Signer Name

Title

DocuSigned by:

AF8AD0B32AFA423...

Signature

2/27/2023

Date Signed

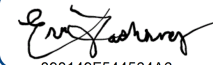
Completed Application Package Received by:

Erin Fashway

MLIA Grant Administrator

Name

Title

DocuSigned by:

898149F544564A6

Signature

2/27/2023

Date Signed

Certificate Of Completion

Envelope Id: B4A234C5F1314FF7A9A2E2D5969184E3
 Subject: Complete with DocuSign: MLIA_2024_CusterCountyApplication_Unsigned.pdf
 Source Envelope:
 Document Pages: 25 Signatures: 2
 Certificate Pages: 2 Initials: 0
 AutoNav: Enabled
 Envelope Stamping: Enabled
 Time Zone: (UTC-07:00) Mountain Time (US & Canada)

Status: Completed

 Envelope Originator:
 Sean Anderson
 PO Box 201800
 Helena, MT 59620-1800
 sanderson@mt.gov
 IP Address: 161.7.39.7


Record Tracking

Status: Original
 2/23/2023 11:15:02 AM
 Security Appliance Status: Connected
 Storage Appliance Status: Connected
 Holder: Sean Anderson
 sanderson@mt.gov
 Pool: StateLocal
 Pool: Montana State Library
 Location: DocuSign
 Location: DocuSign

Signer Events

Jason Strouf
 j.strouf@co.custer.mt.us
 Commission Chair
 Security Level: Email, Account Authentication (None)

Signature

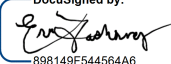
DocuSigned by:

 AF8AD0B32AFA423...
 Signature Adoption: Pre-selected Style
 Using IP Address: 64.89.211.234

Timestamp

Sent: 2/23/2023 11:18:22 AM
 Resent: 2/27/2023 8:23:24 AM
 Viewed: 2/27/2023 8:27:15 AM
 Signed: 2/27/2023 9:25:16 AM

Electronic Record and Signature Disclosure:
 Not Offered via DocuSign

Erin Fashoway
 efashoway@mt.gov
 Montana GIS Coordinator
 State of Montana
 Security Level: Email, Account Authentication (None)

DocuSigned by:

 898149F544564A6...
 Signature Adoption: Drawn on Device
 Using IP Address: 161.7.39.7

Sent: 2/27/2023 9:25:19 AM
 Viewed: 2/27/2023 10:42:40 AM
 Signed: 2/27/2023 10:43:30 AM

Electronic Record and Signature Disclosure:
 Not Offered via DocuSign

In Person Signer Events **Signature** **Timestamp**

Editor Delivery Events **Status** **Timestamp**

Agent Delivery Events **Status** **Timestamp**

Intermediary Delivery Events **Status** **Timestamp**

Certified Delivery Events **Status** **Timestamp**

Carbon Copy Events **Status** **Timestamp**

MLIA Grants
 mliagrants@mt.gov
 Security Level: Email, Account Authentication (None)

 Sent: 2/27/2023 10:43:32 AM

Electronic Record and Signature Disclosure:
 Not Offered via DocuSign

Witness Events **Signature** **Timestamp**

Notary Events	Signature	Timestamp
----------------------	------------------	------------------

Envelope Summary Events	Status	Timestamps
--------------------------------	---------------	-------------------

Envelope Sent	Hashed/Encrypted	2/23/2023 11:18:22 AM
Certified Delivered	Security Checked	2/27/2023 10:42:40 AM
Signing Complete	Security Checked	2/27/2023 10:43:30 AM
Completed	Security Checked	2/27/2023 10:43:32 AM

Payment Events	Status	Timestamps
-----------------------	---------------	-------------------