

RESOLUTION NO.

**A RESOLUTION AUTHORIZING THE SUBMISSION OF A
GRANT APPLICATION TO THE BURLINGTON NORTHERN
SANTA FE RAILWAY FOUNDATION FOR DRONE HARDWARE
IN THE AMOUNT OF \$7,500, ON BEHALF OF THE
GOVERNING BODY OF LARAMIE COUNTY, WYOMING**

FOR THE PURPOSE OF: REQUESTED FUNDS WILL BE USED TO PURCHASE
AEROPOINT BAGS, STENCILS, AND POINTS AND ONE YEAR ACCESS TO
PROPELLER CORRECTIONS SOFTWARE.

WITNESSETH

WHEREAS, the Governing Body of Laramie County desires to participate in the
BURLINGTON NORTHERN SANTA FE RAILWAY FOUNDATION GRANT by
sponsoring this grant to assist in financing this project; and

WHEREAS, the Governing Body of Laramie County has been provided with
preliminary cost estimates and information on the project; and

**NOW, THEREFORE, BE IT RESOLVED BY THE GOVERNING BODY
OF LARAMIE COUNTY** that a grant application in the amount of \$7,500 be submitted
to the Burlington Northern Santa Fe Railway Foundation for consideration of assistance
in funding the Cheyenne and Laramie County GIS Cooperative.

BE IT FURTHER RESOLVED, that Sandra Newland, or her successor in the
position of Laramie County Grants Manager, is appointed as agent of the Laramie County
Board of Commissioners to execute and submit applications and certifications for these
funds and to receive funds and implement the programs funded under this grant.

PASSED, APPROVED AND ADOPTED THIS 17th DAY OF MARCH, 2020.

By: _____
Gunnar Malm, Chairman

Date

ATTEST:

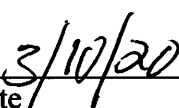
Debra Lee, Laramie County Clerk

Date

Received and Approved as to Form only By:



Mark Voss, County Attorney



Date



You can review the information you've provided so far and make necessary modifications here. If you're satisfied with the contents of the application, click [Save & Finish](#). If you're not ready to submit your application yet, click [Save & Finish Later](#).

Organization Information

[Printer Friendly Version](#) | [E-mail Draft](#)

❖ Required before final submission

In the fields below enter information as it pertains to your organization

❖ Organization Name

Laramie County

❖ Legal Name

As stated on the 501(c)3 tax determination letter

Laramie County

Also Known As

Other name(s) by which your organization is known (separated by commas)

Cheyenne

❖ Tax Status

509(a)1

❖ Street Address

310 W. 19th Street, Suite 140

❖ City

Cheyenne

❖ State

WY

❖ Zip Code

82001

❖ Phone (xxx) xxx-xxxx

Organization's main number

3076334201

❖ Mission of Your Organization (not of the program or project for which you are making this request. You will have an opportunity to explain your program/project in the next section.) (up to 3 sentences)

The GIS Program Members are actively involved in creating, hosting, and maintaining public and internal interactive map services using various technologies. The Cheyenne and Laramie County Cooperative Geographic Information System (GIS) Program was established in 1993 to benefit member agencies, government agencies, private industry and the general public. The Executive Committee will

1. Promote communication, cooperation, and support for the Cheyenne/Laramie County Cooperative Geographic Information System (GIS) Program;
2. Ensure that all city and county interests are represented and will communicate

Chief Executive

Who is the chief executive of your organization?

Prefix

Mr.

❖ First Name

Gunnar

❖ Last Name

Malm

❖ Title

Chairman

❖ Office Phone (xxx) xxx-xxxx

307-633-4260

❖ E-mail

commissioners@laramiecounty.com

Applicant Contact

If the contact for your proposal is the same as the Chief Executive, click the button below

☐ Same as Organization Primary Contact

Who should we contact regarding this application?

❖ Prefix

(i.e. Mr., Mrs., Ms., Dr.)

Miss ▼

❖ First Name

Sandra

❖ Last Name

Newland

❖ Title

Grants Manager

❖ Office Phone (xxx) xxx-xxxx

307-633-4201

Extension

Alternate Phone (xxx) xxx-xxxx

❖ E-mail

snewland@laramiecounty.com

Grant Request Information

❖ Type of Request

Project Support ▼

❖ Project Title: What is the title of your project/program? You will have an opportunity to describe it later in this application.

[We discourage requesting General Operating Support. However, if that is what you wish to request, enter "General Operating Support." (10 words or less)]

Purchase and implementation of Propeller PPK
drone hardware.

Anticipated Project Start Date

[Or the date of the event, if applicable.]

7/1/2020

Anticipated Project End Date

9/30/2020

❖ Total Project Cost

Specify whole dollar amount. Do not include text, letters, or symbols. If request is for General Operating Support, enter your organization's annual operating budget.

8300

❖ Total Amount Requested from BNSF Foundation

Specify whole dollar amount. Do not include text, letters, or symbols

7500.00

Population Served (Choose up to 2)

❖ Population Served

All ▼

- Select One - ▼

Size of Constituency (Choose 1)

❖ Group Size

75,001 - 100,000 ▼

Choose the category that best describes your project:

❖ Program Area

Other ▼

Ethnicity (If applicable, you may choose up to 3)

Ethnicity (If applicable, you may choose up to 3)

Caucasian ▼

Hispanic ▼

Multi ▼

List other funding sources that have pledged or committed funding towards your programs/this project to date.

- ❖ Include the name of the source(s) and the amount(s) committed for each; separate by semi-colons. If none, type N/A.

The Laramie County GIS Cooperative is funded primarily between the City of Cheyenne and Laramie County general purpose funds. There are limited funds available for special projects such as this. ✓

- ❖ Add together all the funds that have been committed for this project/program from other sources and enter the total amount.
(If none, enter "0")

800.00

List other funding sources to which you have applied for your programs/this project to date.

- ❖ Include the name of the source(s) and the amount(s) pending for each; separate by semi-colons. If none, type N/A.

N/A ✓

- ❖ Add together all the funds you have requested for this project/program from other sources and enter the total amount.
(If none, enter "0")

0

Project Details

Community's Need (150 word limit)

- ❖ Describe the need you intend to address and how your programs/this project will address that need. ✓

The models we offer at this time are good for reference but are not reliable for engineering design or precise measurement. These "ground truth-ed" models are something that many of our members have been asking for. It is in light of this that we are asking for your help to add an automated ground control station system to our UAS Program. Our current UAS, while still extremely useful, falls short when trying to create very precise models. The Aeropoints Ground Control System can provide a very precise ground surface by tracking where the hardware is located using GPS. These GPS values are corrected for accuracy using the Aeropoints cloud-based software and provided back to the user in a GIS or text file.

Word count 121 of 150

Relevance to BNSF Railway (150 word limit)

- ❖ Describe how your programs/this project connects to BNSF or the transportation industry. In other words, why are you approaching BNSF specifically for su ✓

The State of Wyoming has always had a strong connection to the railroad system. BNSF runs through the State, North to South and has long served Laramie County. Our mission is to serve the public and private sector by providing accurate mapping for emergency dispatch, first responders, elections asset management and utility management. We anticipate that our services of the Drone hardware we are requesting can be of great use to BNSF if needed. We can partner with you to provide accurate aerial mapping through precise ground surface with tracking where the hardware is located using GPS. This could be useful on the BNSF rail lines located in Laramie County, Wyoming.

Word count 111 of 150

Our Funds (75 words or less)**❖ Specifically, how will BNSF funds be spent?**

The requested funds will be used to purchase the Aeropoints Ground Control System, which is essentially hardware for our drone equipment. When the drone photos are captured and processed the hardware allows for high accuracy points provided and allows for the generation of a ground truth-ed surface for maps and models to be built upon. We will be purchasing the hardware kit which includes: Aeropoint bags, Aeropoint stencils, 10 Aeropoints, and a propeller corrections network. ✓

Word count 75 of 75

Future Support (75 Words or less)**❖ How do you intend to finance your programs/this project in the future?**

If funded the Cheyenne Laramie County GIS Cooperative will continue to pay for the annual network subscription for this hardware along with providing proper maintenance of the drone equipment for prolonged use and implementation. ✓

Word count 34 of 75

Support and Collaboration**Community Support (150 word limit)**

❖ What kind of local community support does this project have, i.e. volunteerism?

The Cheyenne Laramie County GIS Cooperative is a semi-governmental organization that serves the public through geospatial data, hardware and professional knowledge. This cooperation provides both our members and the public with quality, authoritative, GIS data that is constantly updated and consumed by a variety of applications. All organizations both public and private benefit from updated GIS data and mapping services. We work with all sectors in Laramie County to provide quality services.

Word count 72 of 150

Board Support

❖ How many board members does your organization have?

(If none, enter "0" and skip to next page)

5

Do you require financial contributions as a condition of board membership?

No ▼

If yes, what is the minimum amount?

(With \$ sign, and amount with 2 decimal places for cents)

0

If no, how many board members make yearly contributions to your organization?

0

How many board members actively participate in your programs?

5

If a BNSF employee is a member of your board, enter his/her information in the fields below

Prefix

<None> ▼

First Name

Last Name

Title

Office Phone

E-mail

BNSF Railway Employee Involvement (50 word limit)

Prefix

<None> ▼

First Name

Last Name

Title

Office Phone

E-mail

❖ If BNSF employees are involved with your programs/this project, please describe the nature of their involvement.
(50 words or less) If you don't know whether BNSF employees are involved, type N/A.

We do not have a BNSF employee involved with our project.

Word count 11 of 50

Anything Else? (200 words or less)

What else would you like us to know about your organization/this project?

Having increased accuracy and precision in our aerial mapping and 3-D modelling will strengthen our ability to provide high quality data to our members and all the applications our members maintain. Additionally we will be able to represent a true model of a given area if a sudden change were to occur to the surface, say after a flood or other natural disaster. On behalf of the CLCGISC I want to thank you for your consideration of this grant request and would happily answer any questions you might have.

Word count 88 of 200

Other Information

If the campaign for this request is under either the direct or indirect supervision or influence of a non-staff contracted fundraising professional, please provide

Prefix

<None>

First Name

Last Name

Title

Office Phone (xxx) xxx-xxxx

Alternate Phone (xxx) xxx-xxxx

E-mail

Describe the amount and conditions for payment to the fundraising professional named above for all services rendered.

Word count 0 of 35

Attachments**Uploaded Files**

Title

IRS 990

Financials

Brochures, pictures, or other information NOT already covered in your application.

Project Budget

Financials

Total size of uploaded files

Available

File Name

[Tax Exempt Form.pdf](#)[2019 Laramie County Annual Financial Report.p](#)[BNSF Letter.docx](#)[BNSF Hardware Budget.xlsx](#)[GIS FY2020 Budget.pdf](#)[Save & Finish Later](#)[Submit](#)



BNSF Railway Foundation
2500 Lou Menk Dr.
Fort Worth, TX
76131-2830

To Whom It May Concern,

As the Coordinator of the Cheyenne and Laramie County GIS Cooperative (CLCGISC), I am writing this letter of support to accompany a grant application being submitted to you by Laramie County, Wyoming. The CLCGISC is an organization that encourages the sharing of geospatial data, hardware, and professional knowledge among our members. This cooperation provides both our members and the public with quality, authoritative, GIS data that is constantly updated and consumed by a variety of applications. These applications serve a variety of purposes that include: Emergency Dispatch, First Response, Elections, Tax Assessment, Asset Management, Utility Management, as well as providing information to the public. Additionally, much of our data is available to consultants and service providers in the private sector.

As part of our mission to provide quality data to our members, the CLCGISC purchased a small Unmanned Aerial System (sUAS) in 2018. This aerial platform has allowed us to provide up to date aerial mapping for all our members. These needs these maps have met run the gamut from Law Enforcement investigations, to the reallocation of cemetery plots. Additionally, the sUAS has been used to create traditional photography and videography for many purposes.

As the use of this new technology has increased among our members a product, we have struggled to deliver is highly accurate surface information calculated using a process called photogrammetry. Photogrammetry allows for the construction of a 3-D model of an area by stitching together a series of overlapping photographs. While we are able to produce such models using our current sUAS platform, they model we create are not currently referenced to known points on the ground. As a result, the models we offer at this time are good for reference but are not reliable for engineering design or precise measurement. These "ground truth-ed" models are something that many of our members have been asking for.

It is in light of this that we are asking for your help to add an automated ground control station system to our UAS Program. Our current UAS, while still extremely useful, falls short when trying to create very precise models. The Aeropoints Ground Control System can provide a very precise ground surface by tracking where the hardware is located using GPS. These GPS values are corrected for accuracy using the Aeropoints cloud-based software and provided back to the user in a GIS or text file.



When the photos captured by the sUAS are later processed, the hardware is visible in the photos and can be tied to the high accuracy points provided by the software. This allows for the generation of a ground truth-ed surface for maps and models to be built upon.

Having increased accuracy and precision in our aerial mapping and 3-D modelling will strengthen our ability to provide high quality data to our members and all the applications our members maintain. Additionally we will be able to represent a true model of a given area if a sudden change were to occur to the surface, say after a flood or other natural disaster.

On behalf of the CLCGISC I want to thank you for your consideration of this grant request and would happily answer any questions you might have.

Thank you,

Jordan Evans

Coordinator
CLCGISC
310 W. 19th St. Ste. 410
Cheyenne, WY
82009

Sandra Newland

From: Jordan Evans
Sent: Wednesday, February 26, 2020 2:26 PM
To: Sandra Newland
Subject: FW: Propeller PPK 📧

Sandra,

Below is the quote I received in January from Propeller (The company that makes the Aeropoints solution we are hoping to have covered by the grant). I had inquired about two products at the time, so I have highlighted the relevant portion for you!

I will send a letter on later this afternoon,

Thanks!

Jordan

From: Jessica Bowe <jessica.bowe@propelleraero.com.au>
Sent: Friday, January 10, 2020 11:09 AM
To: jevans@clcgisc.com
Subject: Propeller PPK 📧

Hi Jordan,

Thanks for inquiring about the Propeller PPK drone solution. To learn more about this PPK workflow, check our ebook: [The New Survey-Grade Work Tool](#). And, if you want more technical detail, [this whitepaper](#) outlines the process we went through with Trimble to validate the solution's 1/10ft accuracy. Our [drone package](#) costs \$8,300 and includes:

- 1x Phantom 4 RTK drone
- 1x AeroPoint, which includes a manual, stencil, and activation code
- 1x Controller with integrated screen and flight planning application
- 1x Accessories pack (2 batteries, 1 charging hub)
- 1x DJI Shield one-year protection plan
- Shipping
- 1-year access to PPK Corrections Service (\$2,000 per year after year one)
- [PPK FAQ Page](#)

A set of AeroPoints costs \$7,450 and includes:

- 2x AeroPoints Bags
- 2x AeroPoints Stencils
- 10x AeroPoints
- Propeller Corrections Network (\$600 annual subscription, first year included in up-front cost)
- Shipping

The best way to purchase AeroPoints is either [through our dealer network](#), or [directly through our website](#). What work are you looking to improve with this kind of drone workflow at Laramie County ?

Thank you,



Jessica Bowe

Sales Development Representative

M 720-352-3696 **E** jessica.bowe@propelleraero.com

W propelleraero.com



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■

LARAMIE COUNTY BUDGET WORKSHEET

7/1/2019

1185 Central GIS

		2018 Actual	2019 Revised	2019 Actual	2020 Request	% Inc
Regular Employees	401030	181,793	190,515	181,836	199,145	4.53
Overtime	401060	0	0	0	0	0.00
Termination-Accrued Leave	401090	1,321	0	0	0	0.00
Health Insurance	402010	13,113	14,036	18,868	23,832	69.79
Dental Insurance	402015	352	352	528	366	3.98
Life Insurance	402020	243	243	234	273	12.35
Retirement	402030	25,387	26,903	25,675	28,122	4.53
Social Security	402040	11,206	11,656	11,060	12,103	3.83
Medicare	402050	2,621	2,727	2,587	2,832	3.85
Workers Compensation	402060	640	600	619	680	13.33
Mapping Services	543030	4,380	11,180	7,250	13,900	24.33
Software Maintenance. Contract	565052	64,323	67,700	71,627	72,700	7.39
R&M General	594315	3,470	3,604	3,470	2,495	-30.77
Printer Supplies Toner & Ink	636119	788	1,200	609	1,200	0.00
Office Supplies	636131	607	1,900	483	1,900	0.00
Meal-Miles-Travel-Lodging	675815	3,672	9,990	3,602	9,990	0.00
Continuing Education	697015	6,863	7,270	5,934	7,950	9.35
GIS Executive Committee	767059	7,074	10,000	2,041	10,000	0.00
Minor Equipment (Lt \$5000)	796511	0	0	0	0	0.00
Equipment-General (GT \$5000)	808414	0	0	0	0	0.00
Totals		327,851	359,876	336,423	387,488	7.67