

**MONTANA LAND
INFORMATION GRANT
APPLICATION**

STATE FISCAL YEAR 2019

APPLICATION FOR MLIA GRANT FUNDING

SECTION 1 – APPLICANT, PARTNER, AND PROPOSAL INFORMATION

Primary Applicant Contact Information <i>(Please fill this section out in it entirety)</i>	
Name of Agency/Entity:	Park County, Montana – Local Government
Department:	GIS/IT
Division/Section:	GIS
Street:	414 E Callender St
City:	Livingston
County:	Park
State:	Montana
Zip Code:	59047
<i>Project Manager Contact Information:</i>	
Name:	Erica Hoffman
Title:	GIS/IT Manager
Email Address:	ehoffman@parkcounty.org
Phone Number:	(406)222-4197
Fax Number:	N/A
<i>Secondary Contact Information:</i>	
Name:	Steven Jay
Title:	GIS Analyst
Email Address:	sjay@parkcounty.org
Phone Number:	(406)222-4100 ext. 4275
MLIA Grant Funding Request & Match:	
Total Requested MLIA Funds:	\$20,000
Total Matched Funds:	\$8,451

Proposal Information	
Date Submitted:	February 14, 2018
Identified Grant Priority:	<u>Improve Land Records</u> - Improvements to digital representation of Public Land Survey System (PLSS) for the purpose of improving accuracy of the MSDI Cadastral and Administrative Boundaries.
Annual or Multi-Year Proposal:	Multi-Year Proposal: This application is for year 6 of our 10-year plan. Previous grant proposals were funded for years 2013-2018. In addition to 2019 we hope to get additional funding for FY 2020-2022
Proposal Prepared By:	Steven Jay – GIS Analyst
Short Title of Proposal:	Enhancement of the Public Land Survey System (PLSS) in Park County, Montana
<p>Executive Summary (<i>required – 250 maximum word count</i>):</p> <p>Enhancing the Public Land Survey System (PLSS), through control surveys and in support of geodetic controls, allows for adjustment of cadastral and administrative boundaries to more accurately represent on-the-ground conditions in Park County, Montana. These adjustments impact several key stakeholders and improve spatial data used by both the public and local governments. We are currently working on collecting control points for FY2018, which will build upon control points collected over the previous 5 years (FY 2013 – FY 2018). We propose to collect additional control points to further refine and improve the PLSS throughout Park County by revisiting populated locations that still contain errors. This proposal will focus on populated areas because that will benefit the most people. Priority will be given to the northern portion of Park County and the City of Livingston because PLSS adjustments from previous awards have already been incorporated into the MSDI framework. However, if there is sufficient funding we will move south and begin working in Paradise Valley.</p>	
List All Past Awarded MLIA Grants:	
<p>FY 2013 FY 2014 FY 2015 FY 2016 FY 2017 FY 2018</p>	

Fiscal Year 2019 Montana Land Information Act Grant Application Package

Funding Partners: <i>(required for each partner, copy box as needed)</i>	
Name of Contact:	Michael Kardoos – City Manager
Name of Agency:	City of Livingston, Montana
Street:	414 E Callender Street
City:	Livingston
County:	Park
State:	Montana
Zip Code:	59047
Contact Email Address:	citymanager@livingstonmontana.org
Contact Phone Number:	(406) 823-6000

SECTION 2 – RELEVANCE

This proposal addresses MLIA priority category three:

- I. Improve Land Records
 - a. Improvements to digital representation of Public Land Survey System (PLSS) for the purpose of improving accuracy of the MSDI Cadastral and Administrative Boundaries.

This proposal addresses all three themes listed under category three:

1. Collecting new survey control data.

Under this proposal we will work with a contracted, licensed surveyor to collect additional section corners as well as other known control points to further correct and refine cadastral and administrative boundaries. New survey control data will be collected based on identified regions to fix alignment problems found in populated areas in Park County. Additionally, further priority will be given to the areas that still have large errors that were not corrected by previous years' adjustments.
2. Digitization and dissemination of documents related to PLSS and nonPLSS corners.

Control points collected by our surveyor will be provided to the Montana State Library for incorporation into the existing PLSS framework. Additionally, the survey control points will be submitted to the Park County Clerk and Recorder for documentation and preservation. Further dissemination will be provided by updating existing administrative layers and boundaries on public maps and documents.
3. Development and enhancement of administrative boundaries, including but not limited to data layers recognized by the MSDI Administrative Boundaries Theme.

With improved PLSS control points we plan on updating all administrative boundaries to fit the improved PLSS framework, this includes MSDI Administrative Boundaries as well as other local administrative boundaries relevant to Park County.

SECTION 3 – PUBLIC BENEFIT

After 5 years of work on this long term project we are starting to observe direct public benefits from the work already completed (figure 1). Improvements in the MSDI cadastral framework and administrative boundaries have benefitted many public and private organizations. The Park County GIS department has greatly benefitted from the work already performed and as a result Park County's GIS datasets are more accurate and are able to more clearly disseminate information to other departments and the public. Additionally, the improvements in PLSS accuracy has assisted Park County Emergency Dispatch by more clearly identifying locations and EMS and Law Enforcement boundaries. Further benefit has been observed in outlying municipalities, the Town of Clyde Park, which previously had large shifts in the cadastral framework, can now more accurately identify town limits as they begin to develop zoning regulations for the small, rural community.

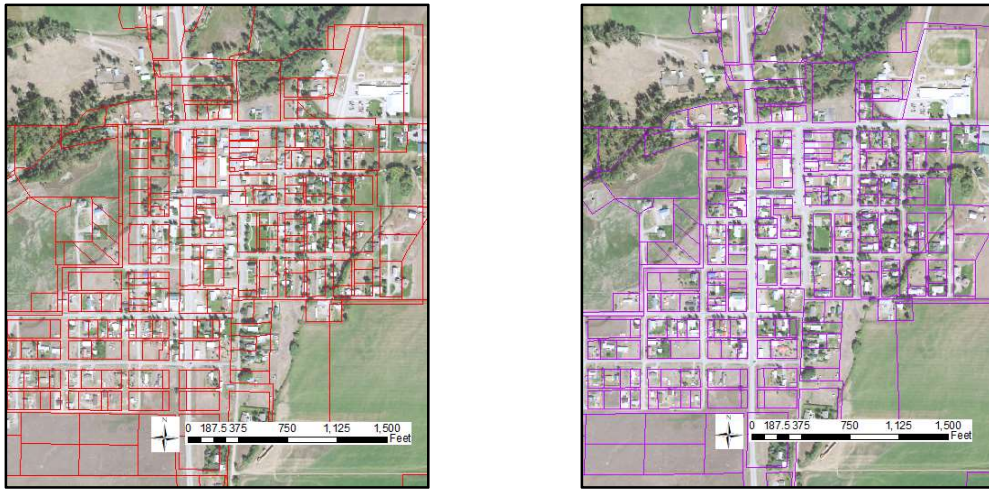


Figure 1: Town of Clyde Park pre (left, red lines) and post PLSS correction (right, purple lines).

Park County GIS has also received feedback from local organizations, such as the Park County Board of Realtors (see attached letter of support), that improvements in cadastral boundaries has made their work much easier. Additional, anecdotal reports have also been received from property owners, recreationists, and sportsmen. Improved property boundary data and administrative data has allowed sportsmen to better understand areas that they can legally access to hunt, fish, or recreate. While there have been no formal reports from recreationists, this anecdotal evidence shows that improvements to the PLSS framework affect a large portion of the population of Park County, from local government operations, to private business, to recreationists, this ongoing project has greatly benefitted many Park County residents and visitors.

PARK COUNTY BOARD OF REALTORS®

Post Office Box 1473 • Livingston, MT. 59047

Michael Wojdylak

President - Park County Board of REALTORS®
PO Box 1473
Livingston MT 59047
406-222-0304
Woj_LivingstonMT_Broker@outlook.com

February 13th, 2018

Montana Land Information Advisory Panel

Montana State Library
1515 E. 6th Ave
PO Box 201800
Helena, MT 59620-1800



Dear Sirs and Madams,

We are reaching out to you to express our support for the work being conducted by the Park County GIS department. As REALTORS® we spend much of our of time gathering information for our clients and ensuring that it is accurate and up-to-date. Having a tool like Cadastral is an effective way to acquire a wide variety of information in one location. Unfortunately, there are many properties in our county that are offset from their actual location. The Park County GIS team has been doing a wonderful job of working with the State of Montana to improve the accuracy of this information.

The work that has been done has made Cadastral a much more useful tool for our industry. However, there are still areas that need work. This project has shown real value to our community and will continue to do so. If these corrections aren't made, local REALTORS® will continue to struggle to obtain the most accurate parcel information. As Park county continues to grow and change it is important to be proactive in preparing for the growth and we feel that this project will help us to be better positioned for this growth.

We hope you will find your way to approving the application to continue the project to collect additional survey control points throughout Park County, this project is an important issue for our community.

A handwritten signature in black ink, appearing to read "Michael Wojdylak".

Michael Wojdylak
REALTOR® Broker
President of the Park County Board of REALTORS®



SECTION 4 – PROJECT MANAGEMENT AND ORGANIZATIONAL CAPABILITY

The mission statement of the Park County and City of Livingston GIS Department reads as follows:

“The goal of the GIS department is to provide City and County officials, departments, local businesses, other agencies, and the public, accurate and reliable geographic information through responsive and innovative GIS services. Create and maintain current, consistent and complete geospatial data supporting efficient operations and informed decision making.”

Erica Hoffman, GIS/IT Manager– Mrs. Hoffman will oversee all activities conducted on this project and will provide the direct management of other staff from Park County and City of Livingston. Mrs. Hoffman has 9 years of GIS experience and a BS from Montana State University in Geography. Mrs. Hoffman is Park County and City of Livingston’s IT Manager as well and will be in charge of all deliverables to the Theme Steward and the Montana State Library. Mrs. Hoffman has previously managed all previous MLIA Grant Awards and successfully fulfilled data requirements, reporting requirements, communicating with the Montana State Library, and managing contracted services.

Steven Jay, GIS Analyst – Steven will assist Mrs. Hoffman in coordinating and implementing activities performed on this project. Mr. Jay has over 10 years’ experience working with GIS and has a B.S. and M.S. from Montana State University in Land Resource Management and Environmental Science. His experience and expertise with all aspects of GIS will ensure that the project is completed efficiently and thoroughly. Mr. Jay assisted in the previous MLIA grant award and successfully provided GIS services and clerical services to successfully implement the MLIA grant.

Registered Land Surveyors - CTA Architects Engineers was selected from a released Call for Land Surveying Services RFQ in June, 2012. The RFQ released in 2012, was provided to a list of local registered land surveyors. Park County GIS/IT utilized guidelines and operating procedures developed by Park County during a pre-qualification process. The pre-qualification process was used to maintain consistency with Park County collection standards and to eliminate redundant standards and requirements when applicable. The pre-qualification process identified two firms that meet Park County standards, and CTA Architects Engineers was selected. To date we have been satisfied with CTA’s work and do not expect to release a new RFQ.

SECTION 5 – SCOPE OF WORK

Park County will continue to use the existing long-term strategy to continue to collect PLSS control points until we achieve our goal of having PLSS data within five to ten-foot accuracy in populated areas. This process will leverage existing partnerships between Park County, the City of Livingston, the Consultant, and the Montana State Library. This year we are preparing for phase two of the ten-year plan. Phase two will begin to review previous corrections and begin refining existing errors that were not corrected during phase one.

Phase two work will focus on regions around Livingston and the northern half of Park County where previous geodetic control work has already been completed and integrated into the PLSS system. Initial review of previous control work has been performed and we have identified regions that have existing errors despite previous attempts to fix PLSS alignment issues.

Goals and Objectives

Goal 1: Review and prioritize regions of Park County that need additional control work performed

The objective of this goal is to review existing corrections and identify areas that still have major alignment problems. Focus will be on the Livingston area and populated regions in the northern portion of Park County. Prior to this proposal a cursory review of previous corrections was performed in order to gauge the amount error still existing in areas of Park County that have already had adjustments performed. This review identified at least two regions that need correction. The area around the community of Wilsall has been ranked the highest priority because of large (100+ foot errors) still exist in this community (figure 1). These errors are further compounded by the relatively dense population in Wilsall. The second priority will be making corrections in and around the City of Livingston. While most major alignment problems in Livingston have been corrected there are still isolated regions that need further refinement in order to achieve our goal of five to ten-foot accuracy (figure 2). If funding remains after refinement of Northern Park County and the City of Livingston, we will begin refining areas in Paradise Valley. Currently, we anticipate getting a head start on Northern Park County during the FY2018 work, and if successful we will be ahead of schedule on our 10-year plan.



Figure 2: Example of existing cadastral shift in the community of Wilsall, despite previous PLSS adjustments.



Figure 3: Example of existing cadastral shift in the City of Livingston, despite previous PLSS adjustments.

Goal 2: Develop a work plan with our Consultant and implement the plan

During phase one, we worked with our Consultant to select PLSS corners that would be the most efficient to make corrections. Now that we are working towards phase two, we are planning on working with our Consultant to identify PLSS and non-PLSS reference data that will further improve alignment. This work will entail identifying additional PLSS reference corners that have not already been surveyed,

identifying non-PLSS reference points that can further improve PLSS accuracy, and finally working with the Montana State Library to address any data gaps they have identified.

Once we have identified survey reference points, our Consultant will then perform surveys. Our goal will be to collect as many survey points as the budget allows, this number will likely be smaller than the number of points collected during phase one because we anticipate these additional control points will be harder to locate in the field. Surveys of control points will be prioritized based on the results from Goal 1, and emphasis will be given to populated areas with the largest errors.

Tasks and Activities

1. **Prioritize Target Control** – Working with the Montana State Library, the City of Livingston, the Consultant, and Park County, 1st, 2nd, and 3rd choices for control points will be devised. These points will be selected and ranked according to the estimated correction to PLSS data the point will achieve. This planning effort is designed to efficiently select control points that will provide the best correction.
2. **Create Project Maps** – Working with the Consultant, project maps will be developed for each area of interest. These maps will be comprised of existing PLSS/CadNSDI points to assist the Consultant in providing cost estimates as well as for mission planning to effectively collect the most control points possible.
3. **Create a Contractor Scope of Work** – Once priority areas are identified and control points are prioritized, Park County will work with the Consultant to obtain a legal contract for surveying services. The agreement between the County and the Consultant will emphasize collecting the maximum number of control points with available funding.
4. **Obtain Permission of Property Owners** – After survey control points are finalized and agreed to by all parties, Park County will send Certified Letters to all affected land owners notifying them about the survey and to obtain permission to cross their land to access control points.
5. **Conduct Field Geodetic Control Surveys** - Perform field control point collection throughout the project. This will be performed by a Registered Land Surveyor using Geodetic Control Processing with a positional accuracy statement for each point. Field notes and Corner Records reestablished where applicable will be submitted, with any necessary corner records recorded with the Clerk and Recorder. Standards and Guidelines for Cadastral Surveying from the Theme Steward will be followed. Control points will be entered into the State Survey and Mapping Control (SUMAC) database template and submitted to the Montana Control Point Database.

Project Timeline

	Month Week	July				August				September				October				November				December				January				February				March				April				May				June			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
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	Create Project Maps									█	█	█	█	█	█	█	█																																
	Create a Contractor																	█	█	█	█	█	█	█	█																								
	Scope of Work																																																
	Obtain Permission of Property Owners																									█	█	█	█																				
	Geodetic Control Surveys																													█	█	█	█	█	█	█	█	█	█	█	█								

SECTION 6 – BUDGET JUSTIFICATION AND BUDGET TABLE

See next page

STATEMENTS OF SUPPORT (IF APPLICABLE)

Statement of Support attached at end of proposal

MLIA GRANT BUDGET SUMMARY TABLE

MLIA GRANT BUDGET SUMMARY								
	MLIA Summary	Applicant Summary			Funding Partner Summary*			Total:
Category	MLIA Share	Applicant Cash	Applicant In-kind	Applicant Subtotal	Funding Partner 1	Funding Partner 2	Partner Subtotal	<i>MLIA Share, Applicant Subtotal, Partner Subtotal</i>
a. Personnel			\$1,831.00		\$600.00			\$2,431.00
a. 1. Fringe Benefits			\$580.00		\$240.00			\$820.00
b. Travel								
c. Equipment								
d. Supplies & Materials		\$200.00						\$200.00
e. Contractual	\$20,000.00	\$5,000.00						\$25,000.00
f. Other								
Total								\$28,451.00

**Modify, add, or remove the funding partners column(s) as needed to define a clear budget*

Park County and City of Livingston has estimated 10 years for completion of Phase I and Phase II of this project. In-kind contributions consist of staff time and benefits for this project. Costs associated with the project are mainly personnel needed to plan, research and review fieldwork, as well as the analytical GIS adjustment of the dependent GIS themes. Current hourly rates for salaries and fringe benefits with an approximation of time spent on the project make up the in kind contribution budget.

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Salaries and Wages: Personnel from the Park County and City of Livingston Geographic Information Systems Department will be the only staff required for these project phases.

Fringe Benefits: The amount assigned to fringe benefits is 45% of the salaries and wages of County employees. These include health and unemployment insurance, worker's compensation, FICA and Medicare and retirement.

Travel: No travel costs are anticipated.

Equipment: No equipment costs are anticipated. Existing hardware/software will be utilized.

Supplies: Supplies include minor office incidentals and plotting supplies for field Survey plots, and Certified Mail postage costs.

Contracted Services: Professional contract services provided by Registered Land Surveyors will be paid for the Control Surveys. Contracts will be written and administered by Park County based on a submitted Scope of Work with a not to exceed amount for time and materials. Park County will contribute 25% of MLIA grant funds, if awarded, in cash for contracted services.

SECTION 7 – RENEWABLE GRANT ACCOUNTABILITY

1. Park County received an MLIA FY2018 Grant to continue conducting Geodetic Control Surveys in order to improve the PLSS, cadastral and administrative boundaries. Working with our Consultant, we are currently in the process of identifying control points to most effectively and efficiently collect survey control points in the townships near Gardiner, MT and Cooke City/Silvergate, MT. The supplemental funding provided by the Montana State Library, will be used to begin the work described in this proposal, beginning with the Wilsall area, and PLSS section corners are being identified to begin further refinement in the norther portion of Park County. Once these control points are finalized, we will begin property owner notifications and begin survey work as soon as weather and snow cover permit.
2. Park County is currently working on year 6 of our 10-year project plan. To date, this long term project has had many successes and few failures. Due to this success, we are hoping that we will finish this project in less than 10 years. Following the completion of the FY2018 project, we will have a much better handle on how many more years we will need to complete this project.

The biggest challenge Park County has faced with this project is finishing the survey work by the end of the grant term. The primary reason Park County has had trouble completing the grant by the end of the fiscal year is due to weather and geography. Park County has several high elevation and mountainous areas. In previous years, late snowmelt has resulted in a delayed field season for our surveyors. Because the ground needs to be mostly clear of snow to find survey monuments, our Consultant has been delayed from beginning work with adequate time to complete the survey's by June 30. Compounding this problem, is the remote nature of some locations in the County. Long travel times and remote, hard to find section corners further cause challenges in order to meet grant reporting deadlines. With phase 2 work beginning, Park County hopes to mitigate some of the delays by focusing on populated locations at lower elevations. With less snowfall in the valleys and shorter travel times, Park County hopes to prevent any reporting or grant closing delays.

SECTION 8 – AUTHORIZING STATEMENT

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.

Steve Caldwell, Clint Tinsley, Bill Burg

Name (print or type)

Park County Commission

Title (print or type)



Signature and Title of Authorized Representative(s) of Public Entity Applicant

2/8/18

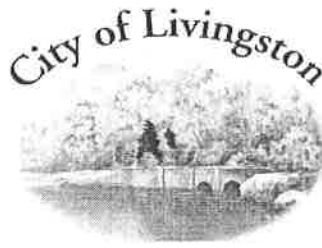
Date

SECTION 9 – CHECKLIST – SIGNATURES REQUIRED

Applicant's Project Manager, defined Section 1, must initial in ink or mark 'n/a' if a section is not applicable.

Initial or mark n/a	Completed Required Task
GH	Proposal Prepared by an outside party – I have read this document in its entirety. (if applicable)
GH	Section 1 – Applicant, Partner, and Proposal Information
	Primary Applicant Information
	Funding Partner (if applicable)
	Proposal Information
	List All Past Awarded MLIA Grants
GH	Section 2 – Relevance (300 max word limit)
GH	Section 3 – Public Benefit
GH	Section 4 – Project Management
GH	Section 5 – Scope of Work Narrative (4-page limit)
GH	Section 6 – Budget Justification Narrative and Table (3-page limit)
	Budget Justification Narrative
	Complete Budget Table
GH	Section 7 – Funding Partner Statements of Support (if applicable)
GH	Section 8 – Renewable Grant Accountability Narrative (if applicable)
	FY2018 Grantee Report (if applicable)
	Past MLIA Grant Project Narrative (if applicable)
GH	Section 9 – A Signed Authorizing Statement

Michael Kardoes
City Manager
citymanager@livingstonmontana.org
(406) 823-6000



Chairman
Dorel Hoglund
Vice Chairman
Quentin Schwarz
Commissioners
Mel Friedman
Sarah Sandberg
Warren Mabie

February 7, 2018

Erica Hoffman, Manager
IT/GIS Park County Montana
4114 E. Callender Street
Livingston, MT 59047

Dear Erica,

The City of Livingston is pleased to provide a letter in support of your grant application under the Montana Land Information Act, in order to continue the efforts around Geographic Coordinate Database enhancement. The City of Livingston and Park County governments have worked very collaboratively together on this project and have seen tremendous value add from the information gathered. We continue to have an overarching agreement in our City-County Compact which addresses the continued partnership of our governments.

Through this program to date we have been able to enhance the detailed information used by all of our Public Safety Entities, including 911 Dispatch, Fire, Emergency Medical, Police and Public Works. The information we have added includes utility specific locations and has aided tremendously in our response time to utility outages such as water and sewer main breaks.

This technology has greatly enhanced our community and our responsiveness to their current and emerging needs. Further through enhancing our own internal data analysis abilities we, as an organization, are better equipped and prepared to plan for future infrastructure needs of our community and prioritize as well as budget for them more effectively.

Sincerely,

Michael J. Kardoes
City Manager