

STEP 1 – Applicant and Partner Information

Primary Applicant (Required):

Name of principle individual: Pat Riordan
Name of agency/entity: Butte-Silver Bow County
Street: 155 W. Granite
City: Butte
County: Silver Bow
State: Montana
Zip Code: 59701
Contact email address: priordan@bsb.mt.gov
Contact fax address:
Contact phone: 406-497-6262

Organizational Unit (if applicable)

Department: Planning
Division: Geographic Information Systems

Other Project Partners – complete for each partner (copy box as needed):

Name of contact:
Name of Agency:
Street:
City:
County:
State:
Zip Code
Contact email address
Contact phone:

Date Submitted (Required): 2/15/13 **Date Received by State:**

Descriptive Title of Applicant's Project (Required):

Butte-Silver Bow GIS Office Interactive Online Mapping Application.

STEP 2 – Relevance and Public Benefit

The Butte-Silver Bow (BSB) Geographic Information Systems (GIS) Office is dedicated to providing the most complete, accessible, and accurate Geographic Information System databases to support various City-County, State, Federal and private sector applications and mapping projects. In recent years, BSB has leveraged grant funds to improve the accuracy of its spatial data, modernize methods for data collection and strengthen capacity for data maintenance. As BSB continues to improve its data collection methods, BSB GIS is challenged to broaden access to this data and encourage the use of this expansive data repository in a wide range of scenarios.

BSB GIS Office and Planning Departments apply for this Montana Land Information Act grant to invest in-kind time and talent toward the development of an interactive online mapping application. This project meets Grant Category B2 to demonstrate GIS value to policy makers and build public support for location bases services that improve quality of life.

Spatial data and illustrations prepared by GIS Office staff have become an integral component in the decision-making methodology at Butte-Silver Bow County and the capacity to deliver the most current and reliable thematic data has generated an increase in use by various BSB Departments. Positive experiences using spatial data has encouraged departments to identify additional GIS applications to enable them to better serve the public. For example, during summer 2012, Butte-Silver Bow's Fire Chief contacted BSB GIS to request point locations to facilitate evacuation of homes threatened by wildfire. To meet this request, BSB populated Google Earth with GPS point features. While this approach suits the purpose of illustrating data, analysis is completed by GIS Staff and then provided through a third party site. A BSB online mapping application would better serve this end by transferring analytical ability to the user through an interactive GIS application populated with the range of BSB spatial data.

We believe an interactive online mapping application compatible with mobile devices will be of tremendous use to BSB employees as well as Federal and State agencies, local businesses, engineering firms, contractors and excavators, real estate developers, and educators and students among others.

BSB submits this application for MLIA funds to implement the following objectives:

1. Develop and launch a Butte-Silver Bow County GIS Interactive Online Mapping Application compatible with mobile devices.
2. Fund educational outreach program to demonstrate to public and private users how spatial data made available through this site can improve decision-making that promotes quality of life.

STEP 3 – Scope of Work Narrative

A. Goal and Objectives

Goal

Butte-Silver Bow GIS Office's goal is to create an interactive online mapping application to broaden access to location based services. A sweeping education campaign will follow the launch of the application to inform prospective users how GIS analysis can inform decision-making processes that promote quality of life. This will be achieved through training sessions demonstrating how BSB's mapping application works in a wide range of scenarios.

The Butte-Silver Bow interactive mapping application will make BSB's spatial data available to users outside the local government and offer BSB employees greater access to a tool that assists in decision-making processes.

The Butte-Silver Bow GIS Office will accomplish this goal by hiring a GIS Contractor to develop and launch an Interactive Online Mapping Application compatible with mobile devices as well as fund an education campaign that will introduce users to GIS and demonstrate the application's value in a range of scenarios.

Objectives

1. Develop and launch an interactive online mapping application compatible with mobile devices to improve access and increase use of Butte-Silver Bow GIS themes by public and private users by August 1, 2014.
2. Initiate and fund an education campaign that will target a diverse range of participants.

B. Tasks or Activities

The interactive online mapping application is the primary deliverable of this project. BSB GIS Office has spent substantial time conferring with BSB Management Information Systems Director, Planning Department Specialists and experts in the field of GIS and online mapping to determine optimal functionality of the proposed application, its basic operational features, and the necessary equipment to meet BSB needs, as defined in this scope of work.

Much time has been dedicated to the decision to purchase equipment for optimum functionality. Dell PowerEdge T320 Server with ArcGIS for Server Standard Workgroup is tested and proven to provide optimum performance with maximum storage capabilities. BSB's MIS Director indicates the purchase of a package is preferable to purchasing individual components and is this system is compatible with BSB's existing network platform.

This mapping application is only as valuable as the robust outreach and public education campaign associated with its launch. Outreach will be conducted in traditional formats such as print, radio and online media, but will also target a diverse array of community members bringing education and training opportunities to schools and senior centers to increase exposure to this new application. Scenarios will demonstrate how GIS analysis and illustration is useful in a range of situations. For example, GIS can assist local residents by referencing property ownership in a specific neighborhood or to identify their voting precinct as well as engineering firms interested in examining flood plain, topography or subsidence zones.

Implementation will occur in the four phases. Phases one through three concentrate on application development, revision and launch, while phase four focuses on education. The process is hierarchical in nature and subsequent steps build upon achievements of the previous phase.

Phase I - Develop.

- i. Agree to contractual terms with Montana State Library by August 1, 2013.
- ii. Initiate competitive process to retain GIS Consultant by August 15, 2013.
- iii. Hire GIS consultant by September 30, 2013.
- iv. Determine ideal system features and functionality such as general features, map content, editing, navigation, display controls, tools, measuring capabilities, data linking, printing, reporting, geoprocessing, and security by September 30, 2013.
- v. Initiate bid process for Dell PowerEdge T320 Server with ArcGIS for Server Standard Workgroup by September 30, 2013.
- vi. Purchase Dell PowerEdge T320 Server with ArcGIS for Server Standard Workgroup by October 15, 2013.
- vii. Initiate application development by October 30, 2013.
 - i. GIS Office staff will select and populate base layers.
- viii. Launch system internally by November 30, 2013.
- ix. Solicit feedback from internal users and revise system based upon internal feedback January 15, 2013.

Phase Two – Review.

- i. Release application for use by Council of Commissioners and departmental specialists by January 30, 2014.
 - i. Provide an array of scenarios to test application utility. For example, Commissioners could create a map of their commissioner district illustrating the district's parks, trails and schools or water, storm and sanitary sewer infrastructure.
- ii. Solicit feedback from users by March 15, 2014.
- iii. Work with consultants to implement revisions based upon internal testing by April 15, 2014.
 - i. System revisions will be performed by GIS Consultant.
 - ii. Data revisions will be performed by GIS Office.
- iv. Present the final application to Council of Commissioners for approval by May 1, 2014.

Phase Three –Launch.

- i. Publish interactive online mapping application to Butte-Silver Bow web page by June 1, 2014.
- ii. Provide opportunity for users to provide feedback to GIS Office through June 30, 2014.
 - i. Long term maintenance of underlying databases will be managed by GIS Office Staff.

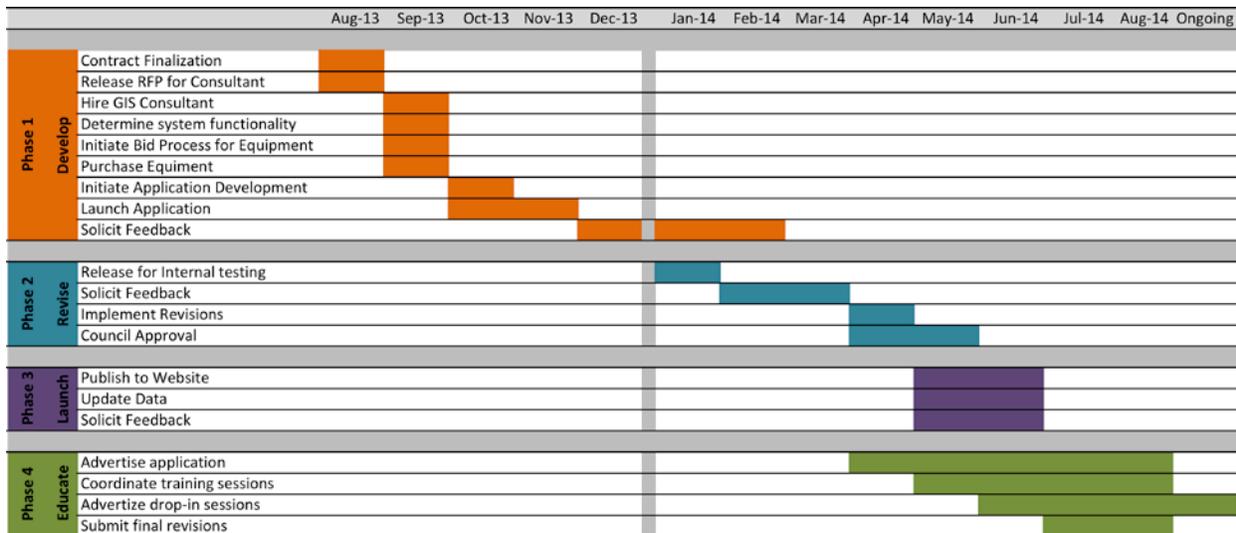
- ii. Long term maintenance of servers will be managed by Management Information Systems Department.

Phase Four – Educate.

- i. Advertise launch of interactive web mapping application by May 15, 2016.
- ii. Coordinate training sessions for seniors, students, business owners, professional organizations, and governmental departments by June 30, 2014.
- iii. Advertise and host drop-in sessions at specific locations such as the public library, courthouse, and chamber of commerce or schedule site specific training sessions at Belmont Senior Citizens Center, Assisted Living Centers, public and private schools, universities, and professional association gatherings in Spring and Fall 2014.
 - i. Gather public comment through work with the site (Ongoing).
- iv. Communicate final revisions to GIS Consultant and make final revisions to site by fall 2014.

C. Schedule of Work

Figure 1. Work Plan



STEP 4 – Project Management and Organizational Capability Narrative

The Butte-Silver Bow Geographic Information Services Office is a division of the Butte-Silver Bow Planning Department. The GIS Office mission is to provide the most complete, accessible, and accurate spatial database to benefit City-County, State, Federal and private sector applications and mapping projects. Butte-Silver Bow GIS Office will lead the project with the support of a GIS Consultant. BSB GIS Office will seek support from the Butte-Silver Bow Planning Department and Management and Information Services Department as necessary. Butte-Silver Bow submits this application along with their full measure of experience to undertake the endeavor.

Butte-Silver Bow GIS Office is experienced in grant administration and program management. At present, Butte-Silver Bow Planning Department is recipient and administrator of Neighborhood Stabilization Program dollars through the United State Department of Housing and Urban Development, State of Montana Community Transportation Enhancement Program (CTEP) dollars, and State of Montana Natural Resource Damage Grant funds. Butte-Silver Bow GIS Office is the recipient of two Montana Land Information Act (MLIA) awards which have in recent years dramatically improved the quality of nearly every aspect of BSB digital data sets. Butte-Silver Bow GIS Office skills have leveraged MLIA dollars to focus on enhancing the integrity and functionality of existing datasets for all facets of community development, including public health, emergency response services, economic development, land use planning, and sensitive resource protection.

The project team is comprised of numerous members with various backgrounds. Lead personnel are described below.

Jon C. Sesso – BSB Planning Director

Mr. Sesso has 20+ years experience in project and grants management, including several NRDP grants. He will oversee all aspects of the project and direction. He has served as Contract Administrator for several state grant programs, including a number of NRDP grants; his experience and expertise with the NRD program and all contract provisions associated with a grant award will help ensure the project is managed effectively. In addition, his use of spatial data to illustrate the impact of a proposed policy will enable him to assist with all aspects of project implementation, as needed.

Pat Riordan – BSB GIS Specialist III

Mr. Riordan has 20+ years of GIS experience in municipal and natural resource projects. He will co-coordinate and manage the project on a daily basis for the Planning Department/GIS Office. He will be responsible for data management, including feature layer management and maintenance.

Stephen Foreman – BSB GIS Programmer/Specialist III

Mr. Foreman has 10 years of experience in GIS programming and data maintenance using Microsoft Access, Visual Basic, and SQL server. He will assist with in-house data management, coordinate hardware and software operations, and assist with the upload of base layers.

Linda Sajor – Information Technology Services Manager

Ms. Sajor has 20+ years in information management and technology supervision. She will coordinate internal software and hardware compatibility and advise long-term maintenance of all hardware and software related to the launch of an online mapping application.

Alyson Harvey Williams – Information Technology Computer Analyst

Ms. Harvey-Williams has 15+ years experience in information and technology services. She is responsible for all hardware and software installations and maintenance. She will analyze and recommend user requirements.

Julia Crain – Special Projects Planner

Ms. Crain has 5 years experience in urban planning and community development. She is skilled in outreach and public meeting facilitation and regularly utilizes GIS illustrations as a planning tool to generate discussion and solicit feedback from the public. Ms. Crain will leverage this experience to coordinate education associated with the launch of the mapping application.

Other Professional Staff

MIS staff will be responsible for ordering and installation of computer hardware and software and providing technical support.

Other Administrative Staff

Clerical support will contribute, as needed.

GIS Consultant

Butte-Silver Bow will initiate a competitive process to hire a GIS Consultant to develop the interactive online mapping application. The ideal candidate will have demonstrated expertise developing online and mobile applications. This person should possess skills and talents in Geographic Information Systems, design, and project management. The ideal candidate will exhibit excellent interpersonal communication skills working with BSB staff and the public. In addition, this person will have capacity to confidently assert his or her ability to meet or exceed the minimum functionality as described within the scope of work.

STEP 5 – Budget Justification Narrative and Tables

The proposed budget summary is attached as Chart A. The total project cost is \$93,471.18. The sponsor requests, \$35,000 through the MLIA program and pledges \$58,471.18 as an in-kind match of staff time and direct and indirect expenses.

a. Personnel

The primary BSB employee working on this project will be Pat Riordan, GIS Specialist III, who will serve as project manager. Mr. Riordan is expected to dedicate a minimum of 320 hours of time to direct the process for application development. The process will begin with the establishment of a review committee which will determine the web-mapping application's functionality, prepare requests for qualifications, and review candidates for hire. In addition, Mr. Riordan will manage the long-term maintenance of the online mapping application's underlying geodatabases.

A number of Butte-Silver Bow staff will be involved in the project as well. Linda Sajor will advise long-term maintenance of all hardware and software related to the launch of an online mapping application and Alyson Harvey-Williams will analyze and recommend user requirements. Jon Sesso, Planning Director, will provide project direction, Stephen Foreman, GIS Programmer, will assist Mr. Riordan with processing and maintaining thematic data sets and populating the online mapping application with data and features on an ongoing basis. Julia Crain, Special Projects Planner, will direct outreach and education to meet the education objectives outlined in this grant application. Ms. Crain's time planning, organizing, and coordinating trainings, including outreach and marketing, is considered an in-kind match. Budget requests for education are separate and will only be used to procure technology for trainings and to ensure trainings are held in locations with access to internet.

Long-term maintenance of this application is of utmost importance and annual maintenance costs have been considered. In the future, we believe online access to data will significantly reduce the time GIS staff spend fielding individual requests thus freeing them up for the long term management, maintenance and development of the mapping application and datasets.

a.1. Fringe Benefits (Permanent Staff)

For any salary paid under the grant, an average rate of 35% will be applied to account for fringe benefits. This rate has been calculated using the actual costs incurred for such benefits, for example, health insurance, Workers' Compensation, FICA, etc.

a.2. Fringe Benefits (Temporary Staff)

For temporary staff, salaries paid under the grant, an average rate of 14.28% will be applied to account for fringe benefits. This rate has been calculated for actual costs incurred for such benefits such as Social Security, Workers' Compensation, FICA, etc.

b. Travel

Travel costs associated with this project will be covered by this item. The travel estimate of \$500.00 is for fuel only. The applicant will be responsible to supply the vehicle and incur all required maintenance.

c. Equipment

Much time has been dedicated to the decision to purchase the T320 server with ArcGIS. This piece of equipment is bundled with Arc GIS Server software which is tested and proven to provide optimum performance with maximum storage capabilities. In addition, the bundled software and hardware is more cost effective than purchasing each component on its own. This equipment is compatible with Butte Silver Bow's existing network, yet will stand solely to host online activity.

d. Supplies

Please see indirect Costs.

e. Contractual

Butte-Silver Bow will initiate a competitive process to hire a GIS Consultant to develop an interactive online mapping application compatible with mobile devices. As noted previously, the ideal candidate will have demonstrated expertise developing online and mobile applications, Geographic Information Systems, design and project management. In addition, this person will have the talent and experience necessary to generate an application meeting or exceeding the minimum functionality as described in this scope of work. This person will be the respondent to a publicly advertised request for qualifications.

The estimated cost of \$16,500 includes all project management, labor, and testing costs associated with application development. In addition, it is expected that this person will provide substantial operational support during the term of the contract. He or she will build into the work plan time to respond to inquiries and feedback generated by internal stakeholders or the general public.

f. Other (Indirect)

With any project there are costs of doing business not directly attributed to any direct cost line item. For example, access to personal computers, printers, copiers, GIS and GPS mapping facilities and equipment, and other publicly owned field equipment. These services, as well as supplies and materials and travel and communications, are expenses pledged as a match by Butte-Silver Bow. The 20% indirect rate has been used to quantify the value of these indirect costs. It is the practice of Butte-Silver Bow to estimate indirect costs against the total value of the personnel working on the project. Thus, the 20% rate has been applied to the \$37,075.60 in anticipated personnel services. All the indirect expenses \$9,745.20 are provided as a match for the project.

Education is considered a significant aspect of this project. The proposed budget of \$5,000 is considered adequate to direct education and training targeting a diverse array of community members throughout the region of Butte and Silver Bow County. Training sessions are expected to be more costly than traditional public meetings due to the technical nature of the program. For example, all education opportunities will be open to the public. Some may be targeted toward specific populations such as seniors, business and professional associations, or student groups. Hands-on experience is essential to provide training that is not only demonstrative but interactive. Scheduling sites with ample technology is imperative to the success of this program.

Figure 2. Budget Table

DESCRIPTION	Annual Hours	MLIA Share	BSB Share	Total
a. Personnel Salaries and Wages				
Jon C. Sesso, Planning Director	80		3,032.80	3,032.80
Pat Riordan, GIS Specialist III	320		11,596.80	11,596.80
Stephen Foreman, GIS Programmer	320		7,734.40	7,734.40
Linda Sajor, Information Technology Director	80		2,752.00	5,920.00
Alyson Harvey-Williams	120		3,094.00	3,094.00
Julia Crain, Special Projects Planner	160		6,400.00	6,400.00
Other Administrative Staff	160		2,465.60	2,465.60
Sub-Total Salaries			37,075.60	37,075.60
a.1 Fringe Benefits (permanent staff) @ 35% of Wages		0.00	10,736.46	10,736.46
a.2 Fringe Benefits (temporary staff) @ 14.28% of Wages *		0.00	913.92	913.92
TOTAL WAGES AND BENEFITS:		0.00	48,725.98	48,725.98
b. Travel		500.00	0.00	500.00
c. Equipment		14,000.00	0.00	14,000.00
Dell PowerEdge T320 Server with ArcGIS for Server Standard Workgroup				
d. Supplies (see Indirect Costs)				
e. Contractual		15,500.00	0.00	15,500.00
f. Other (see Indirect Costs)				
Indirect Costs @ 20% of salaries/benefits		0.00	9,745.20	9,745.20
Education		5,000.00	0.00	5,000.00
TOTAL PROJECT COSTS:		\$35,000.00	\$58,471.18	\$93,471.18
* Temporary staff receive a fraction of the permanent employees benefits.				

STEP 8 – Sign the Application

Authorizing Statement

I hereby certify that 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.

Name (print or type)

Title (print or type)

Date

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