Sweet Grass Community County Water & Sewer District Mapping

Montana Land Information Act Fiscal Year 2014

February 15, 2013

Toole County

226 1st Street South

Shelby, MT 59474

APPLICATION FOR GRANT FUNDING

STEP 1 – Applicant and Partner Information

Primary Applicant (Required):
Name of principle individual: Ben Ober, Toole County Commission Chair
Name of agency\entity: Toole County
Street: 226 1st Street South
City: Shelby
County: Toole
State: Montana
Zip Code: 59474
Contact email address: mriphenburg@toolecountymt.gov
Contact fax address: (406) 424-8301
Contact phone: (406) 424-8403
Organizational Unit (if applicable)
Department:
Division:

Date Submitted (Required): February 15, 2013 **Date Received by State:**

Descriptive Title of Applicant's Project (Required):

Sweet Grass Community County Water & Sewer District Mapping

STEP 2 – Relevance and Public Benefit

The purpose of Montana Land Information Act is to develop standardized sustainable methods to collect, maintain or disseminate information in digital formats about the natural and artificial land characteristics of Montana. The proposed project of mapping the current water and sewer systems in the Sweet Grass Community County Water & Sewer District (SGCCW&SD) does this by creating localized GIS mapping of the current systems to include water lines, sewer lines, shut-off valves, fire hydrant locations, and manhole covers.

The Sweet Grass Community County Water & Sewer District provides the water and sewer to Sweet Grass, an unincorporated community of less than 100 people located on the United States – Canadian border. Sweet Grass is also home to the largest commercial Border crossing in the State of Montana, the Port of Sweetgrass. The location of this crossing includes 6 different brokerages and three elevator operations in Sweet Grass. In addition to the listed businesses there are several additional businesses including two meat inspection locations. The original water system was constructed in 1963 with significant improvements over the last five years.

The mapping of the Sweet Grass Community County Water & Sewer District will allow accurate mapping of the recent changes to the water system. The water system is a critical part of the infrastructure of the town and having this information digitized and available will benefit community members, businesses, the SGCCW&SD, and other local organizations. The project supports B2.2 of the grant categories by utilizing GIS mapping capabilities to map the water and sewer systems. This mapping will additionally benefit persons looking to build or expand current buildings in the community as they will have the accurate mapping of the water and sewer lines prior to digging.

As the project is designed to map all shut-off valves and fire hydrant locations, there will be significant interest by the local volunteer fire department for this information. Additionally to the federal government which has invested in a facility that consists of approximately 100,000 square feet of occupied buildings that utilizes this water system.

STEP 3 – Scope of Work Narrative

Goals and Objectives:

1. **Create a database for Sweet Grass Community County Water & Sewer District water and sewer infrastructure.** This project is designed with 3 phases for ultimate completion. The first phase is to acquire the as-built diagrams for the water and sewer systems that were installed in the early 1960's. Once these plans have been acquired, they will be scanned into digital images, the images will be geo-referenced, and finally the water lines, sewer lines, shut-off valves, fire hydrant locations, and manhole cover lcoations will be digitized. The digital scanned/geo-referenced images will be made available to SGCCW&SD for reference. The last part of phase 1 includes the installation of free ArcReader software and a PMF file on one or more local computers to allow Toole County and the SGCCW&SD to view the data in a GIS as well as the training to use the software. This would enable the user to query data, zooming/panning capabilities, printing and measuring.

    a. Digitizing the water lines, sewer lines, shut-off valves, fire hydrant locations, and manhole covers on the map. To be completed by August 31, 2013.

    b. Install ArcReader software and a PMF file on a local computer(s) allowing the County and SGCCW&SD to view the data an in a GIS and program training. To be completed by September 30, 2013.

2. **Update database with GPS information obtained in the field data collection.** Phase 2 is designed to collect GPS field data in order to increase the accuracy of the initial GIS data created in Phase 1. The GIS data created in Phase 1 of the project will be uploaded into the GPS field data collection software as background maps that will be used as reference in the field to navigate to and locate GPS points using a sub-meter GPS receiver. THE SGCCW&SD board will assist in determining the location and attributes of the points (e.g. type, size, age, etc.). After all the data has been gathered the field data will be used to rectify the Phase 1 data to increase the accuracy.

    a. Lload Phase 1 data as background maps in GPS field data collection software and use it for reference in the field. Conduct field data collection by navigating to water and sewer infrastructure and record GPS points by October 31, 2013.

    b. Rectify Phase 1 data with GPS field data. To be completed by November 30, 2013.

3. **Location and GPS mapping of specific locations.** The final stage will include locating the water shut-off valuve for each structure. Toole County anticipates contracting with an experienced and insured company to come in and locate the

curb-stops, expose them, and mark them. After the stops are marked a team will GPS locate each curb stop and attribute it with the structure's physical address.

a. Hire a Subcontractor to locate, expose, and map the shut-off valve for every structure. To be determined

b. GPS locate each marked curb stop and attribute it with the structure's physical address. To be determined.

Tasks and Activities:

1. **Finalize project details and sign a Letter of Agreement with MaPS, Inc.** MaPS, Inc. will be providing all of the equipment, software, and services for this mapping project and will be overseen by the grant administrator and Toole County Commissioners. Team members from MaPS, Inc. will be on site initially to gather the as built map diagrams and review the information contained in them with the Sweet Grass Community County Water & Sewer District board members. After the initial GIS data has been created they will return to complete Phase 1 by installing the ArcReader software and data. They will once again return for the completion of Phase 2 of the project in order to complete the field work and GPS mapping. They will subcontract an outside company to locate, expose, and mark the shut-off valves before returning to Sweet Grass to mark these individual points and attribute them with the structure's physical address.

Project Schedule:
The project is contingent upon the award of Montana Land Information Act funding. The schedule for this project could be implemented as follows:

Scheduled Date	Activity
June 2013	Projected date for receiving grant award notification
July 2013	Sign a Letter of Agreement with MaPS, Inc.
August 2013	Create digitized map with municipal structures using geo-referencing
September 2013	Install and train on ArcReader Software
October 2013	Collect GPS Data to update digitized map
November 2013	Rectify Phase 1 data with GPS data collected
April 2014	Hire subcontractor to expose and mark water shut-off valves for structures
May 2014	GPS locate each water shut-off valve and attribute it with addressess
July 2014	Estimated Completion of Project

STEP 4 – Project Management and Organizational Capability Narrative

It is proposed that this project be contracted to MaPS, Inc. and managed by Toole County. The grant administrator will be Mallory Riphenburg, the Economic Development Director. Mallory has her MBA as well as her undergraduate degrees in Accounting and Business Administration. She is new to the position and will be mentored by the former Economic Development Director and Toole County Commissioner Deb Brandon. Deb successfully wrote and managed grants for Toole County for the previous five years. Other project management experience includes the Toole County Transit Facility that was purchased and remodeled into a facility to house the Toole County Transit with ARRA funding and Department of Commerce funding to replace windows in the Historic Shelby High Community Center.

Upon funding of this project we will contract with MaPS, Inc. to complete the project. Mapping and Planning Specialists, Inc. (MaPS, Inc.) was organized as a sole proprietorship in 2000 to assist several Counties in Montana to complete their unfinished mapping and E-911 implementations. MaPS, Inc. was incorporated in 2002 and has become a premiere provider of professional E-911 and GPS/GIS consulting and implementation services in the region. MaPS, Inc.'s personnel have over 30 years of combined experience in GPS field data collection, GIS development and E-911 implementation and have worked on over forty projects in many states across the nation. MaPS Inc. has been working with Toole County since 2001, successfully completing an E-911 system that had been previously started and subsequently maintaining it.

Key Personnel for MaPS, Inc include Matthew Pearce the President and Founder of the company. Matt is a graduate of the University of Minnesota with a B.S. in Geography with GIS/Cartography emphasis. He has been working in the field for 20 years and is a certified Emergency Numbering Professional (ENP) and a member of the National Emergency Numbering Association. MaPS, Inc. is currently providing E-911 and GPS/GIS mapping and addressing services for a significant number of MT counties, including Toole, Pondera, Chouteau, Valley, Powell, Granite, Anaconda-Deer Lodge, Mineral and Sanders. To service their MT clients, MaPS, Inc. has a local field office in Helena, MT.

STEP 5 – Budget Justification Narrative and Tables

The proposed budget, which was provided by our potential contractor, brought the project total to $8,131.00 for the completion of phases 1 and 2 of the project. Phase 1 would require an initial on-site visit – to gather the as build map diagrams and review the information contained therein with SGCCW&SD officials. A second on-site visit will be necessary for the installation of the ArcReader software. Costs for phase 1 are estimated at $4,400. $1,352 is for expenses such as travel time, mileage to/from Helena, per diem, and lodging. There will be a one-time fee of $500 for the creation of the ArcPublisher PMF File. The final $2,548 is attributed to the labor of the GIS Analyst and Project Manager.

The proposed cost of the second phase of the project is $3,731. This includes 2 days of on-site field data collection and subsequent GIS processing, $768 in expenses and $3,516 in GIS Analyst & Project Manager Labor.

The County and the Sweet Grass Community County Water & Sewer District will implement Phase 3, hiring a qualified and insured contractor to locate, expose, and mark each curb stop so the curb stops can be mapped with GPS and added to the digital GIS data created in Phases 1 &2. Costs for this Phase are yet to be determined.

The County is anticipating In-Kind costs estimated at $554.64. It is currently estimated that the grant administrator will spend 20 hours administering the grant. The rate for her time is calculated at her hourly rate of $17.38 for a total of $347.60. Fringe Benefits for the 20 hours were calculated at 30% for benefits at $104.28. Travel will be for an estimated 3 trips to Sweet Grass throughout the project; the total miles driven will be 216 miles at the state mileage rate of $0.565 for mileage of $122.04. The supplies of $30 are the paper, ink, phone, and fax that will be utilized throughout the project. Finally, $50 will be used to send a newsletter out to the members of the Sweet Grass Water and Sewer District advising them of the project and any updates we have with it.

Applicant budget summary

-

Category	MLIA Share	Applicant Share In-Kind	Other Share	Total
a. Personnel	$0.00	$347.60		$347.60
a.1 Fringe Benefits	$0.00	$104.28		$104.28
b. Travel	$0.00	$122.04		$122.04
c. Equipment	$0.00	$0.00		$0.00
d. Supplies	$0.00	$30.00		$30.00
e. Contractual	$8,131.00	$0.00		$8,131.00
f. Other	$0.00	$50.00		$50.00
Totals	$8,131.00	$653.92		$8,784.92

STEP 6 – Statements of Support

Please see attached.

STEP 7 – Renewable Grant Accountability Narrative

Not Applicable

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

_____

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

Date_____