

STEP 1 – Applicant and Partner Information

Primary Applicant (Required):

Name of principle individual: James Suta
Name of agency/entity: City of Cut Bank
Street: 330 4TH Avenue SW
City: Cut Bank
County: Glacier
State: Montana
Zip Code: 59427
Contact email address: cbsupt@cityofcutbank.org
Contact fax address:
Contact phone: 406-873-2719

Organizational Unit (if applicable)

Department: Public Works
Division:

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

Name of contact: Dave Aune
Name of Agency: Great West Engineering
Street: 2501 Belt View Drive
City: Helena
County: Lewis & Clark
State: Montana
Zip Code: 59604
Contact email address: daune@greatwesteng.com
Contact phone: 406-449-8627

Date Submitted (Required): 2/4/2013 **Date Received by State:**

Descriptive Title of Applicant's Project (Required):

Cut Bank Water Asset Management Project

STEP 2 – Relevance and Public Benefit

The purpose of the Montana Land Information Act is to develop a standardized, sustainable method to collect, maintain, and disseminate information in digital formats concerning the natural and artificial land characteristics of Montana. Land information changes continuously and is needed by businesses, citizens, governmental entities, and others in digital formats to be most effective and productive (MCA 90-1-402). The City of Cut Bank project parallels the aforementioned purpose as it provides the opportunity to develop a GIS database Asset Management System for the public water system.

The addition of technological equipment and methodologies to the City of Cut Bank Public Works Department is vital. The Director and employees of the Cut Bank's Public Work Department have extensive experience and great knowledge of the City's infrastructure systems. Currently, that knowledge is stored in paper files and in the collective memories of the Director and each of his employees. This project provides the opportunity to elevate the management and operations of the Department by converting this impressive, but somewhat fragmented body of knowledge into a consolidated current location GIS based Asset Management System. This Asset Management System will enable the City of Cut Bank to produce the outcome described in **MLIA Priority B2.2, which is the ability to produce "localized GIS solutions that demonstrate the value of GIS in improving the quality of life for Montana Citizens and built grass roots support for location based services."**

The data collected through the City of Cut Bank Public Works Department data collection project will be integrated into the City of Cut Bank's Asset Management System. This Project will enhance communication and collaboration between departments through a GIS based system. Departments will share data, technical assistance, and training opportunities to maintain this critical data. This project will provide the opportunity to keep rates and taxes as low as possible by maximizing the effectiveness of the Public Works Department. The GIS database Asset Management System will provide enhanced project costing, maintenance systems, and the ability to project future infrastructure needs that directly impacts the City of Cut Bank. This new system will greatly improve the efficiency of the Department and ensure accurate and retrievable records long after the current director and his staff are gone. Accurate retrievable information is essential for emergency response. This new system will also result in better capital improvement decisions and a more thorough understanding of the condition of the water system. The Public Works Department will have superior information to protect the health and safety of the community effectively. This information will also result in better utilization of scarce public funds.

This project coincides with the priority of the **MLIA grant category B2: Local, Regional, and Tribal GIS Support**. This project is an investment in the infrastructure of the City of Cut Bank. The Montana Land Information Act Grant will permit the City to digitally represent all aspects of its infrastructure including, roads, signage, wastewater, water, and fire hydrants. The Asset Management Project will assure the critical City's infrastructure is in proper working condition. This is vital to the City of Cut Bank in the event of an emergency or catastrophe. Access to this information will be critical as the community grows and expands. The water system data is essential for land use planning, municipal, and economic development planning. Tracking job costs and maintenance costs is valuable information to realize the value of capital improvements. Future Infrastructure information will be accurate, detailed, and easily accessible once the data is collected and entered into the Asset Management System. It is the City's intent to continue to build on this database by expanding into other infrastructure types and provide increasing detail within the water infrastructure database.

STEP 3 – Scope of Work Narrative

Goals and Objectives:

The City of Cut Bank project primarily develops a modernized GIS based Asset Management System for all municipal services within the city limits utilizing PubWorks software. This initial geodatabase will include the collection of feature data points for water infrastructure. The use of readily available data, whether it is electronic or paper records, will create the baseline for all GIS datasets.

- 1. Develop asset database for the water infrastructure.** This will include data points such as valves, hydrants, and curb stops, that will be integrated into a mapping system. The GIS Asset Management System will be utilized for future upgrades, maintenance, and repair. The PubWorks program, utilizing the Map View and Asset Management components, will integrate the feature data points into a map system. PubWorks software will be applied in multiple administration facets including, but not limited to, budgeting, repairs and maintenance, insurance purposes, and water system upgrades.

Task 1. Water system design concept. The project will be initiated with a meeting, between the GIS consultant and the City of Cut Bank, to begin to develop a geodatabase framework for City of Cut Bank's existing water system. In this meeting, the GIS consultant and the City of Cut Bank will identify key features, feature attributes, key data themes and specify scales ranges.

Task 2. Finalize Geodatabase design. The GIS consultant, working with the City of Cut Bank, will finalize the water system geodatabase framework agreed upon in the initial design concept meeting. This includes, but is not limited to, all features, attributes, scale ranges, fields and metadata.

Task 3. Build Geodatabase. The water infrastructure geodatabase will be constructed using ESRI ArcGIS 10.1 software. This will include all attribute fields and column types agreed upon in the finalization of geodatabase framework meeting.

Task 4. Collect Data. Collection of data will begin with the assembly of all readily available paper and electronic data from the City of Cut Bank. The City of Cut Bank will provide this data to the GIS Consultant for the creation of a base map.

Task 5. Project Work Session. Work session will be held to assess the data provided by the City of Cut Bank. City of Cut Bank and GIS Consultant will review all features and attributes required for this project.

Task 6. Data Entry. The GIS consultant for the City of Cut Bank will enter all water system features into the Geodatabase framework. This data will include all features, and attribute fields agreed upon in the finalization of geodatabase framework meeting. The GIS consultant will ensure data integrity through domain lists to limit attribute entry errors.

Task 7. PubWorks Interface with GIS Geodatabase. A unique text field will be added to each individual feature per the specifications from Pubworks Software. This unique text field will allow the Geodatabase to interface with PubWorks Asset Management Software.

Task 8. Test the GIS Asset Management System. The GIS consultant and the City of Cut Bank will test the GIS Database Asset Management System to confirm proper operation.

Task 9. PubWorks Software Training. PubWorks software will provide on-site training the City of Cut Bank. PubWorks software training will cover the asset database software utilization.

Task 10. Finalize GIS Asset Management System Design. A project completion meeting will be held between the GIS consultant and the City of Cut Bank in order to finalize the GIS Database Asset Management System. The above stated meeting is to ensure the project was completed to the upmost satisfaction for the City of Cut Bank.

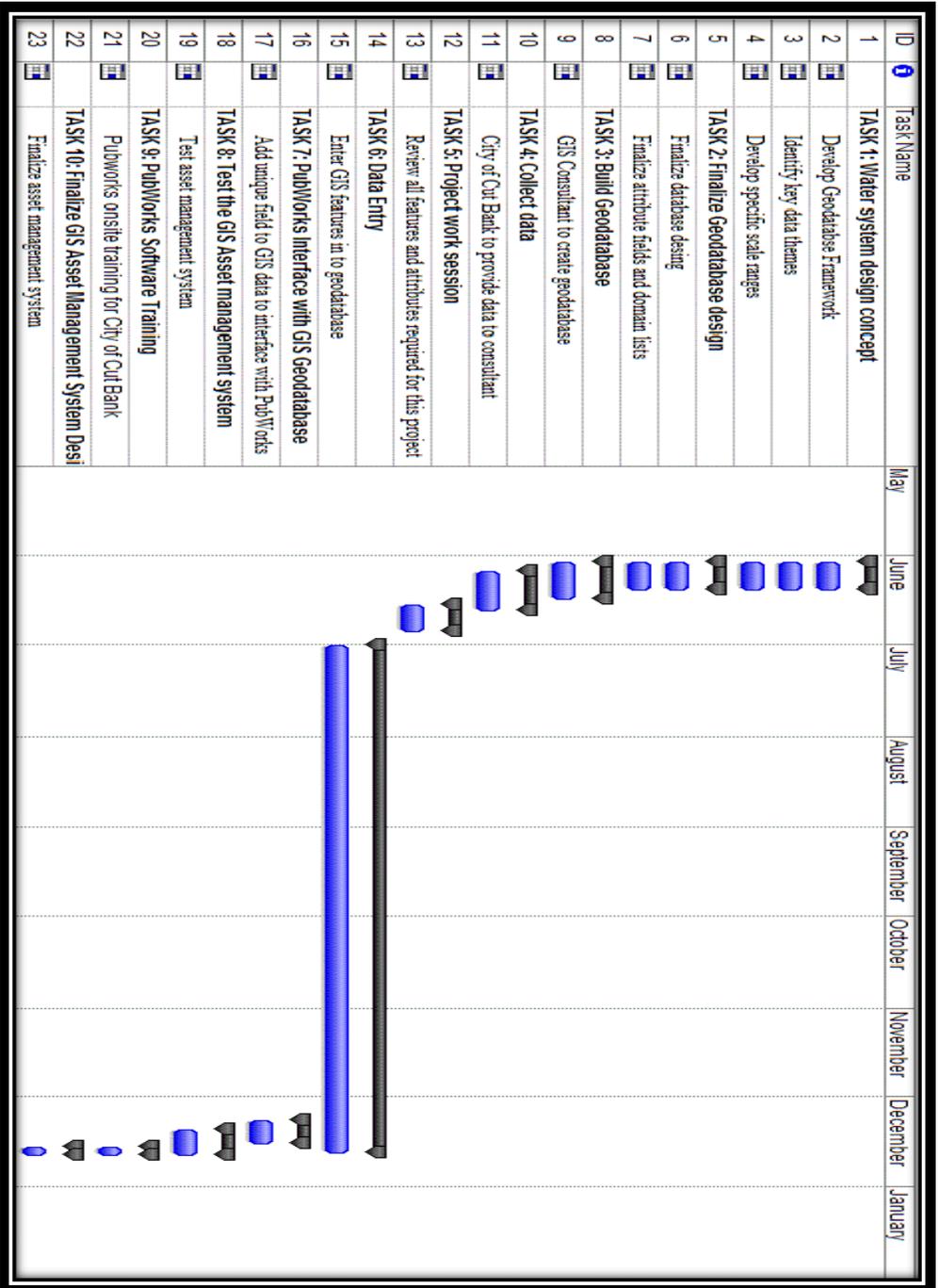
Activities:

1. Purchase Equipment:
 - a. Computer with SQL software dedicated to PubWorks program.
 - b. PubWorks Software for the dedicated computer including the following components:
 - i. Asset Management and Job Costing Core,
 - ii. Asset Data Collector,
 - iii. Map Viewer.
 - c. ESRI Arc Engine Licensed Software for utilizing the data collected.

2. Training:
 - a. PubWorks Software Training for the City of Cut Bank Public Works Department.
 - b. PubWorks Staff will provide PubWorks software training on-site. The training will cover the asset management software utilization. Training will be held immediately upon completion of data entry and PubWorks has been interfaced with the GIS data.
 - c. GPS Training for the City of Cut Bank Public Works Department.
This training will be provided by the GIS Consultant hired by the City of Cut Bank.

3. Data Collection:
 - a. City of Cut Bank Public Works staff will assemble all readily available data, whether it is electronic or paper records, and provide it to the GIS Consultant. The GIS consultant and public works staff will enter data into the GIS system and add attributes to each feature.
 - b. By January 2014, all data points will be collected and entered into the database system to utilize on all future jobs/projects.

Water System Project Schedule:



STEP 4 – Project Management and Organizational Capability Narrative

The public works staff serving the City of Cut Bank has extensive experience and is capable of managing and implementing the proposed project. Mr. Jim Suta is the Public Works Director and has over 13 years of experience. He is certified by the State of Montana as a water and wastewater operator. Mr. Suta will be assigned with the management and implementation of this project. Mr. Ken Vogel for the water system and Mr. Steve Proefrock for the sewer system will primarily be responsible to oversee the data for these systems. They will verify the components of the system as they are mapped. Mr Ken Vogel has over 10 years of experience and is a water operator. Mr Steve Proefrock has over 10 years of experience and is a certified wastewater operator.

The City currently uses a work order system for conducting operation, maintenance, and improvement projects within the Public Works Department. Records are manually filed with the occasional use of Excel spreadsheets. The proposed project will result in a system where all the records are in one place, easily upgraded, and easily retrievable. This new system will greatly improve the efficiency of the Department and ensure accurate and retrievable records. Accurate and retrievable information is essential for emergency response. This new system will also result in better capital improvement decisions and a more thorough understanding of the condition of the water system. The Public Works Department will have superior information to protect the health and safety of the community effectively. This information will result in better utilization of scarce public funds.

Water Operator Mr. Ken Vogel will primarily be responsible for oversight of the data for the water systems. Mr. Vogel will verify the components of the water system as they are mapped.

Wastewater Operator Mr. Steve Proefrock will primarily be responsible to oversee the data for the wastewater systems. Mr. Proefrock will verify the components of the wastewater system as they are mapped.

GIS Consultant will be working in a consulting role on this project through the contract with the City of Cut Bank. This project is the sole coordination and effort of the City of Cut Bank. The consultant has extensive GIS/GPS experience and will collaborate on this project as needed for data entry, technical assistance, training, and support.

STEP 5 – Budget Justification Narrative and Tables

The City of Cut Bank Project total cost is **\$93,616**. The City of Cut Bank is requesting **\$68,055** through the MLIA program. The balance of **\$25,561** is pledged in-kind services, for staff time and equipment purchase. The City of Cut Bank Public Works Department will be purchasing a GPS unit for this project from the City's existing budget.

A. Personnel: Salaries and Wages

The Public Works Department Staff are the individuals primarily responsible for all activities in this project. Mr. Jim Suta, Director, will oversee the project to completion. The wages and benefit value (**\$17,570.80**) based on 520 contributed hours and each individual employee's wage hourly rate is being considered as in-kind contribution by the City of Cut Bank.

Mr. Jim Suta, while managing the project, will also be trained on the Asset Management System along with his staff. He will collaborate with the water and wastewater staff specialists on this project. He and his staff will focus on the water distribution system data framework. He will work with his staff throughout the entirety of the project to ensure the completion of data collection, entry, validity and accuracy of data, as well as maintain all equipment. He has dedicated 2 hours/ week over the course of the project (52 weeks) for a total contribution of **\$2,600**

Mr. Ken Vogel will be trained and begin working on the project for 4 hours/week. The water systems operator and Mr. Vogel will oversee the mapping of the data. Mr. Vogel will verify components of the system as mapped with a dedicated 4 hours/ week over the course of the project (52 weeks) for a total contribution of **\$4368**

Steve Proefrock will be trained and begin working on the project 4 hours/ week. The sewer systems operator and Mr. Proefrock will oversee the mapping of the data. Mr. Proefrock will verify components of the system as mapped with a dedicated 4 hours per week over the course of the project (52 weeks) for a total contribution of **\$4368**

B. Travel

Travel for the Cut Bank Water Asset Management Project is calculated using FEMA rates for an un-operated vehicle at \$44/day or \$5.50/ hour for the hours of data collection (assuming ½ of the total hours spent on the project $520/2=260$) to gather data. Total travel cost: **\$1430**

C. Equipment

- Computer 1: The PubWorks program is a large database program that necessitates a dedicated computer. The computer will be purchased through the City of Cut Bank purchasing process. Current quote: **\$2700** (HP Z420 Workstation(LJ449AV))
- Computer 2: This will be a laptop computer to be used by the Water Departments field crew. The computer will be purchased through the City of Cut Bank purchasing process. A current quote: **\$1689**. (HP EliteBook 8770w Mobile Workstation(C6Y80UT))
- Computer 3: This will be a laptop computer to be used by the Wastewater Departments field crew. The computer will be purchased through the City of Cut Bank purchasing process. A current quote: **\$1689**. (HP EliteBook 8770w Mobile Workstation(C6Y80UT))

Total Equipment Cost: \$6,078.00

D. Supplies

The PubWorks Software Components:

AM&CA Core:	\$6,750
Asset Data Collector:	\$1,750
Map Viewer:	\$3,500
SQL Module	\$1750

Software Total \$13,750

Pub Works Support/Maintenance: \$2475 (At 18%of \$13,750)
ESRI Arc Engine License \$1,500
This is necessary to operate the ESRI Arc Map and
Arc Map Reader and integrate the data collected into
PubWorks software.

Total Software Cost: \$17,725.00

E. Contractual

PubWorks and ESRI based systems are complex. Utilizing them efficiently from the commencement of the project requires significant training.

PubWorks Training by PubWorks Professional Training Staff:

Software Installation and Training:	\$3,900
Configuration of PC:	\$500
PubWorks Staff Travel:	\$2,100
<u>PubWorks Training</u>	<u>\$6,500</u>

June 2014 – December 2014

GIS Consultant - data entry of Water Infrastructure:

GIS Consultant Fees	\$4,800
Data collection	\$6,800
Field Survey /GPS	\$3,400
Data Entry / GIS Attributes	\$18,272
Computer w/ GIS Fee	\$3,050
<u>Water Infrastructure Total</u>	<u>\$36,322</u>

Total Contractual Cost: \$42,822.00

Application Budget Summary:

<u>Category</u>	<u>Hours</u>	<u>MLIA Share (\$)</u>	<u>City of Cut Bank Share (\$)</u>	<u>Total (\$)</u>
A. Personnel Salaries and Wages				
James Suta, Public Works Director	104		\$2,600.00	\$2,600.00
Wastewater Operator	208		\$4,368.00	\$4,368.00
Sewer Operator	208		\$4,368.00	\$4,368.00
<u>Total Salaries and Wages</u>	520		\$11,336.00	\$11,336.00
A.1 Fringe Benefits				
James Suta			\$1,430.00	\$1,430.00
Wastewater Operator			\$2,402.40	\$2,402.40
Sewer Operator			\$2,402.40	\$2,402.40
Total Fringe Benefits			\$6,234.80	\$6,234.80
<u>Total Wage and Benfits</u>			\$17,570.80	\$17,570.80
B. Travel		\$1,430.00		\$1,430.00
C. Equipment		\$6,078.00	\$7,990.00	\$14,068.00
D. Supplies		\$17,725.00		\$17,725.00
E. Contractual		\$42,822.00		\$42,822.00
F. Other				
TOTALS		\$68,055.00	\$25,560.80	\$93,615.80

STEP 6 – Statements of Support

Not applicable

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.

Jim Suta

Name (print or type)

Public Works Director

Title (print or type)

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

Date _____