APPLICATION FOR GRANT FUNDING

STEP 1 – Applicant and Partner Information

Primary Applicant (Required):	
Name of principle individual:	Dennis Holten
Name of agency\entity:	Town of Columbus
Street:	PO Box 549 Physical Address: 301 Clough Avenue
City:	Columbus
County:	Stillwater
State:	Montana
Zip Code:	59019
Contact email address:	colpwd@qwestoffice.net
Contact fax address:	(406) 322-5452
Contact phone:	(406) 322-4424
Organizational Unit (if applicable)	
Department:	Public Works Department
Division:	

Other Project Partners – complete for each partner (copy box as needed):	
Name of contact:	Carol Arkell
Name of Agency:	Stillwater County GIS Department
Street:	400 E 3rd Ave N. PO Box 1287
City:	Columbus
County:	Stillwater
State:	Montana
Zip Code:	59019
Contact email:	carkell@stillwater.mt.gov
Contact phone:	406-322-8060

Date Submitted (Required):	**Date Received by State:**

Descriptive Title of Applicant's Project (Required):
Town of Columbus Public Infrastructure GIS Technology 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 about 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 Town of Columbus project parallels the aforementioned purpose as it provides the opportunity to develop a GIS database system for the sanitary sewer system, storm water drainage system, public water system, and municipal signage.

The addition of technological equipment and methodologies to the Town of Columbus Public Works Department is imperative. The dedicated staff, with extensive field experience, maintains most knowledge of the Town infrastructure intellectually and on paper files in the office. The project provides the opportunity to elevate the management and operations in the Town of Columbus Public Works Department into a current, location and GIS based system; coinciding with **MLIA priority B2.2 "Localized GIS solutions that demonstrate the value of GIS in improving the quality of life for Montana Citizens and build grass roots support for location based services."**

The initiation of the data collection project through the Public Works Department and integrating that to the County's GIS systems has a dual purpose. The Project will enhance a partnership with Stillwater County as they collaborate to enhance the GIS based system, share data, technical assistance, and training opportunities to maintain this critical data. Providing the opportunity for enhanced project costing, maintenance systems, and the ability to project future infrastructure needs directly impacts the Town.

The project coincides with the priority of the **MLIA grant category B2: Local, Regional, and Tribal GIS Support.** The project is an investment in the infrastructure in the Town of Columbus as a GIS based data collection and utilization system is implemented. The MLIA grant will allow the Town to digitally represent all aspects of the infrastructure including but not limited to roads, signage, water, wastewater, and fire hydrants. Each of these components alone enhances the overall safety of the residents of Columbus.

Access to this information is critical as the community grows and expands. This data becomes essential for land use, municipal and economic development planning. It will be a benefit to enhanced financial documentation of projects. Future infrastructure work becomes more reliable as it is documented through a structured system.

The partnership effort between Stillwater County and the Town of Columbus is significant and essential to the success of the program. The County GIS department will play a critical role in the training and technical assistance portion of this program. The County has dedicated and trained GIS staff to perpetually support the program and integrate the Town and County data as necessary to the MSDI framework.

STEP 3 – Scope of Work Narrative

Goals and Objectives:

The Town of Columbus project primarily develops a modernized GIS database system for all municipal services within the Town of Columbus City Limits utilizing PubWorks software system. This initial geodatabase will include the collection of data points for water, sanitary sewer, storm drainage, and signage.

Goals and Objectives:

1. **Build a Town asset database for water and sewer infrastructure.** This will include all manholes with the specific measurements of size, depth, incoming and outgoing mainline sizes, effluent flow direction, etc. The PubWorks program Map View component and Asset Management components will integrate the data points into a map system to be used in multiple administration facets including but not limited to budgeting repairs and maintenance, insurance purposes, and upgrades. The County GIS Coordinator will extract these points for incorporation into the Emergency 911 Database.
   a. Collect 1/3 of all sewer infrastructure data points and enter into the system by December 31, 2012 prioritizing the data collection by Maintenance Zones (1-11).
   b. Complete sewer data collection and entry by Spring/Summer 2013.
2. **Develop an asset database for the Town of Columbus Public Water Distribution System.** This will include data points such as valves, hydrants, and curb stops that can be integrated into a mapping system and utilized for future upgrades, maintenance, and repair.
   a. Initiate the project Fall 2013.
   b. Complete data collection by Spring 2014.
3. **Develop an asset database for street signs throughout the Town of Columbus**. The sign system will include type of sign, age/condition of sign, type of pole, sign size.
   a. Data collection will be completed in Summer 2015.
4. **Develop database for storm drainage assets including inlets, manholes, and culverts.**
   a. Collect data points in Fall 2014 and complete data entry by Summer 2015. This project will coincide with the sign data collection and entry.

Tasks or Activities:

1. Purchase Equipment:
   a. Computer with sequel software dedicated to this program.

   b. PubWorks Software for the dedicated computer including the components:
      i. Asset Management and Job Costing Core,
      ii. Asset Data Collector,
      iii. Map Viewer.
   c. Laptop for collecting data points in the field
   d. Juno SB Handheld GPS Unit including TerraSync Standard Edition Software, Pathfinder Office Software, case, power supply, screen protectors, and training.
   e. Printer – high quality laser jet Printer for printing map and data points for field usage.
   f. ESRI Arc Engine Licensed Software for utilizing the data collected.
2. Training:
   a. PubWorks Software Training for Town of Columbus Public Works Department
   b. This training will be provided on site by PubWorks Staff. The training will cover the asset database software utilization. The training will be held immediately upon purchase of the software and hardware required to ensure the project is initiated correctly from the beginning. Once the project commences and a measureable amount of data collection and entry has taken place, PubWorks staff will return to the site to provide training on more intricacies of the software program.

   c. EDS Training:
      i. This training will be provided on site by Electronic Data Solutions. This training will allow the staff to receive instruction on the specific GPS units being utilized for the data collection. The staff will also enhance their abilities to sync the units with the computer and integrate the data between the units, computers, and software applications.

3. Data Collection: Town of Columbus Public Works Officials will collect and enter all data into the system. They will initially collect sewer system infrastructure data followed by Water System data, which is much more complex. The final components to integrate into the program include street signage and storm drainage systems simultaneously. The organization and methodology for collecting data will utilize the dissection of the Town by eleven maintenance zones, commencing in Zone 1.
   a. By Spring/Summer 2015 all data points will be collected and entered into the database system to utilize on all jobs/projects moving forward

for the Town of Columbus. The data will be integrated into the County GIS system for utilization in emergency 911 databases

Project Schedule:

DATE	ACTIVITY
June 2012	Anticipated Date for receiving funds
July 2012	Purchase Software and Hardware
July 2012	Initial software and GPS hardware training
August 2012	• Internal Planning Meetings – coordinating efforts • Initiate collection and entry of data points for the sewer assets including manholes (location, depth, incoming and outgoing main line sizes, designation as a 4 way or 2 way line),
December 2012	Complete collection of 1/3 sewer system data (Maintenance Zones 1-4)
January 2013 - March 2013	Complete remainder of sewer system data collection and entry (Maintenance Zones 5-11)
April 2013- August 2014	Initiate collection and entry of water system information (complex system requires more information and time) Maintenance zones 1-11. • Water Main Valves (size, type, depth) • Fire Hydrants (size, type) • Individual curb stops (size, type)
September 2014	Initiate collection and entry of street signs (Start in Zone 1 and continue to zone 11). • Street Signs • Stop signs • Yield signs • Parking signs • School zone signs Collect storm drainage assets (Start in Zone 1 and continue to zone 11). • Inlets • Culverts • manholes
May-June 2015	Complete data collection and entry of all assets identified

STEP 4 – Project Management and Organizational Capability Narrative

The Town of Columbus precedes many other small communities in the amount of experience and commitment influencing the Public Works Department. The Public Works Director of 20 years (who has 32 years Wastewater and Water Distribution Licensing) is assisted by a 22 year veteran Water and Wastewater Operator. The opportunity to enhance their efficiency and the infrastructure of a growing community is essential. The Town of Columbus has invested in a new Public Works facility in the past year. This building provides an enhanced working atmosphere while it also accommodates the opportunity to advance the technology for the Department. The department currently utilizes only paper trail for filing and documentation of projects. This project progresses the efficiency of every project and provides perpetual documentation of the work completed by the Department for the Community. This information is vital to the community in any planning or emergency efforts. The new public works facility is equipped with a dedicated office for files and asset management. This area of the facility will house the PubWorks program software and hardware components.

Dennis Holten, Public Works Director of 20 years for the Town of Columbus will be managing the entire data collection and entry process. Holten will schedule the timeframes for collection and entry taking into account other regular duties that remain imperative to the department and community. Holten will also be responsible for updating and maintaining all water and sewer assets in the program, as will all other key staff members listed below. Utilizing current staff to perform data collection and entry extends the timeframe for project completion out to 2015, however, Holten considers this imperative for project success. Data collection and entry, while basic, familiarizes the staff with the program. The ability of each staff member to utilize the software will ensure the sustainability of the project and make each job more efficient.

Steve Storer, Water/Wastewater Operator of 22 years, will primarily be responsible for all water and sewer data collection and entry. He will be involved in data collection for drainage and signs as well.

Scott Caton, **Street/Drainage Superintendent and Assistant to the Public Works Director**, has been with the Town of Columbus for 5 years. Caton will be responsible for collection of asset data for drainage facilities and street signs. Caton will also be involved in collecting water and sewer assets while assisting the Public Works Director in the overall management of the PubWorks Program.

Carol Arkell, Stillwater County GIS Coordinator, will be a support role in this project through an interlocal agreement between Stillwater County and the Town of Columbus if/when necessary. This project is the sole coordination and effort of the Town of Columbus. However, Arkell has extensive GIS/GPS experience and will collaborate on this project as needed for technical assistance, training, and support. Carol has over

five years of GIS experience with mapping and addressing and three years as the GIS Coordinator for the county. Utilizing ArcGIS, she creates decision support maps for fires and maps that show school areas, voting districts, fire districts, commission's precincts, and others as requested using a variety of resources and data layers to develop maps and databases of information for addresses including project boundaries and ownership for addressing. Carol has conducted GIS fundamentals training using Arc View for the Road & Bridge Department and also uses a Trimble Juno SB GPS unit to collect GPS points for 911 addressing. She generates metadata in ArcGIS, desktop, software, ESRI, GIS, Census, and remote sensing data software, and digital cartographic through ESRI courses.

STEP 5 – Budget Justification Narrative and Tables

The Town of Columbus Project total cost is **$181,089**. The Town of Columbus is requesting **$31,369** through the MLIA program. The remaining **$149,720** is pledged as a match of in kind services including staff time.

a. Personnel: Salaries and Wages
The Public Works Department Staff are the individuals primarily responsible for all activities in this project. Dennis Holten, Director, will oversee the entirety of the project. The local administration and implementation of the project will provide for perpetual consistency and integrity of the data collected and utilized as the project progresses. The wages and benefit value **($149,720)** based on 4,680 contributed hours and each specific employees wage per hour rate is being considered as in-kind contribution by the Town of Columbus. ,

Mr. Holten, while managing the project, will also be trained and performing the initial data collection and entry to learn the entirety of the system with his staff. He will collaborate with other staff specialists (wastewater, storm drain, and signage) of the project and will personally focus on the water distribution system data framework. He will work with staff ongoing to answer questions, ensure the completion of data collection and entry, the validity and accuracy of that data, as well as maintaining all equipment. He has committed to working 6 hours per week on the project. 936 total hours at $35,952.

Mr. Storer will initially be trained and working on the project 12 hours per week. As the wastewater and water systems operator, Storer will oversee the collection of field data for those systems. He will verify the components of the system as mapped with a dedicated 12 hours per week over the course of the project (156 weeks) for a total contribution of $56,196.

Mr. Caton will devote a minimum of 12 hours per week (156 weeks) to be trained in the system and perform data collection/entry and updating, specifically on the storm drainage and signage portions of the project. Total contribution: $57,545.

b. Travel

Travel for the project is calculated using FEMA rates for an unoperated vehicle at $44/day or $5.50/ hour for the hours of data collection (assuming that is ½ of the total hours spent on the project 5,616/2=2808) and divided those hours in half (2808/2=1404) as the project will require two individuals to collect data together for safety and efficiency. Total cost: **$7,722.**

c. Equipment

- Computer 1: The PubWorks program is a very large database program that necessitates a dedicated computer. The computer will be purchased through the Town of Columbus purchasing process. A current quote: **$1,778.23**.

- Computer 2: The efficient use of the program and all its components requires a laptop located in the vehicle for entry verification and download. (quote through CDW-G): **$1085.43**

- GPS Unit: Trimble Juno with software: **$2704**

- Printer to disseminate information as necessary: Xerox Printer**: $321.56**
- Software
    - The PubWorks Software Components:

AM&CA Core:	$6,650
Asset Data Collector:	$1,750
Map Viewer:	$3,500
Total:	$9520 (11,900 with a 20% Small Agency Discount)
Support/Maintenance:	$1,713.60 (18% x 9520)
ESRI Arc Engine License	$1,000

This is necessary to operate the ESRI Arc Map and Arc Map Reader and integrate the data collected into data for the County to utilize when uploading to the MSDI Framework Steward.

Total Software: **$12,233.60**

Total Equipment: $18,122.82

e. Contractual

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

PubWorks Training by PubWorks Professional Training Staff:

Software Installation and Training:	$2,925
Configuration of Laptop and PC:	$500
PubWorks Staff Travel:	$2,100

Total Training: $5,525

Applicant budget summary

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Category	Hours	MLIA Share (Dollars)	Town of Columbus Share (Dollars)	Total (Dollars)
a. Personnel Salaries and Wages				
Dennis Holten, Public Works Director	936		23,184	23,184
Steve Storer, Wastewater Operator	1,872		37,720	37,720,
Scott Caton, Asst. Public Works Director	1,872		38,039	38,039
Total Salaries and Wages	**4,680**		**98,943**	**98,943**
a.1 Fringe Benefits				
Dennis Holten			12,795	12,768
Steve Storer			18,476	18,476
Scott Caton			19,506	19,506
Total Fringe Benefits			**50,777**	**50,777**
a. TOTAL WAGES AND BENEFITS	**4680**		**149,720**	**149,720**
b. Travel		**7,722**		**7,722**
c. Equipment		**18,122**		**18,122**
d. Supplies				
e. Contractual		**5,525**		**5,525**
f. Other				
TOTALS		**31,369**	**149,720**	**181,089**

STEP 6 – Statements of Support

Stillwater County GIS Department: 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.

Gary Woltermann
Name (print or type)

Mayor, Town of Columbus
Title (print or type

_____

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

Date: 2-13-12