CITY OF CHOTEAU PUBLIC WORKS AND ADDRESSING GIS

MONTANA LAND INFORMATION GRANT APPLICATION

STATE FISCAL YEAR 2018

SECTION 1 – APPLICANT, PARTNER, AND PROPOSAL INFORMATION

Primary Applicant:							
Name of principle individual:	Mike Maples						
Name of agency/entity:	City of Choteau						
Street:	P.O. Box 619						
City:	Choteau						
County:	Teton						
State:	Montana						
Zip Code:	59422						
Contact email address:	publicworks@3rivers.net						
Contact fax address:							
Contact phone:	(406)590-2262						
Department:	Public Works						
Division:	N/A						

	Funding Partners:							
(requi	ired for each partner, copy box as needed)							
Name of contact:	Ken Wall							
Name of Agency:	Geodata Services, Inc.							
Street:	P.O. Box 8081							
City:	Missoula							
County:	Missoula							
State:	Montana							
Zip Code:	59807							
Contact email address:	kwall@geodataservicesinc.com							
Contact phone:	(406) 203-4684							

Proposal Information

Date Submitted:

February 15, 2017

Date Received by State:

Short Title of Proposal:

Building local government GIS capacity and data development for public works and addressing in the City of Choteau, Montana

Executive Summary (required – 200 maximum word count):

The City of Choteau has not had GIS capacity prior to hiring a new Public Works

director and purchasing ArcGIS in the fall, 2016. Teton County and contractors and state agencies have provided some GIS support for our roads, structures, addresses, administrative boundaries, and other layers. This project will jump start our capacity to build and maintain a GIS system for our public works infrastructure.

We were approached by Teton County GIS and DES, urging us to purchase GIS and assist them in comparing our water system records to the structures and addresses within the incorporated Choteau city boundary for future NG 9-1-1 implementation. This project will help us build capacity to collaborate with Teton County.

We want to implement the Esri local government information model (LGIM) to build public works GIS data, and maintain our GIS data applying best practices. We are proposing working with our contractor Geodata Services for training, support and consulting services during the initial build of our water systems. We intend to leverage their advanced ArcGIS licensing to insure topological accuracy and network connectivity. We are starting with a more affordable basic ArcGIS license and anticipate upgrading to standard licensing in the future.

List All Past Awarded MLIA Grants:

The City of Choteau has not applied nor been awarded an MLIA grant in the past.

SECTION 2 - RELEVANCE

300-WORD COUNT LIMIT FOR NARRATIVE (Currently 300 words)

*In this section, applicants must describe how (do not just say it does) the proposal meets the purpose of the Montana Land Information Act; references the defined grant category priority of the Land Information Plan; and clearly demonstrates how the grant project will further the land plan objectives for the defined category. (15% of the total score)

This project furthers two objectives of the 2017-2018 Land Plan. The first and primary objective is defined in Land Plan objective 3 Local and Tribal GIS and Grant application package FY 2018 Land Information Plan Grant Priority A in the following ways.

Choteau recently hired a Public Works director with previous GIS experience and purchased ArcGIS software. We want to create GIS capacity to map and maintain our water system and public works infrastructure with the training and consulting assistance funding partner, Geodata Services. Integrated with that system are correcting, completing and maintaining a road centerline feature class, with address ranges, and associated structures and sidewalks. This will allow us to develop maps for public information, permitting processes and reporting to regulatory agencies, such as the DEQ. We want to develop metadata on the initial data layers we develop. We want to be able to share our data with other City staff and departments and Teton County using ArcGIS Online. We also want to contribute our data layers to the Montana geoportal and MSDI data themes on a regular basis.

A part of this project also meets land plan objectives 1.A. and Grant application package FY 2018 Land Information Plan Grant Priority B.b. Next Generation 9-1-1 Data Standardization.

We want to build our capacity to assist Teton County GIS and DES staff to verify, correct and assist in updates and maintenance for the structures and addresses within the incorporated City of Choteau. We want to develop governance agreements, procedures and workflows to assist the county, so that these layers are accurate for NG 9-1-1 to serve the citizens of Choteau. Synchronizing our customer records and addresses with the structures maintained by the County GIS will enhance the accuracy of these layers to the Montana data stewards for MSDI transportation, address and structure layers.

SECTION 3 - PUBLIC BENEFIT

The City of Choteau will work with Geodata Services using ArcGIS desktop and ArcGIS Pro and ArcGIS Online (AGO) to enable preparation and maintenance of public works GIS data. Part of that process is converting our water system customer records from a tabular database to GIS and collaborating with Teton County in using those customer addresses to improve the address and structures MSDI themes. We plan to work with funding partner Geodata Services to adopt and implement the Esri Local Government Information Model (LGIM) and developing web maps and apps will provide us an affordable GIS solution. A GIS system with public potable water, storm and waste water systems, sidewalks, garbage collection, fire hydrants, main line water valves, sewer line flushing and cleaning and urban trees will enhance our ability to serve and benefit the citizens of Choteau, and allow our citizens better understanding and opportunity for feedback on the infrastructure they pay for in taxes.

Our ability with a local GIS capacity to assist the County in validating and maintaining our road layer, residential and business structures, addressing, and administrative boundaries for fire and incorporated city will allow us greater ability to contribute to MSDI themes for transportation, address, structures and jurisdictional boundaries which enables us to work and collaborate with the larger GIS community and partners in Montana, serving other citizens in the state.

Currently, we do not compete well for grants such as the MDT Surface Transportation Block Grant for sidewalk repair without a sidewalk planning document. GIS will help us create a plan to be more competitive for grant money and infrastructure improvements.

We will share our results with rural local governments through MAGIP conferences and workshops and the meetings of MACO to benefit other rural local government GIS staff in Montana.

SECTION 4 - SCOPE OF WORK

We recently hired a Public Works director with previous GIS experience and purchased a single license for ArcGIS Basic version 10 which includes a single named user ArcGIS Online for Organizations account.

Goal 1: Create a GIS schema and geodatabase for the Choteau public works infrastructure based on the Esri local government information model.

Objective A: Develop a file geodatabase structure for Choteau's public works infrastructure including layers for public potable water, storm water and waste water systems.

Tasks and Activities:

- 1. Develop a file geodatabase based on the Esri Local Government Information Model (LGIM) with the assistance of Geodata Services.
- 2. Receive training and support from Geodata Services via WebEx to develop domains and standardized topology categories to insure our data is created using best practices and workflows common to utility geodatabases.
- 3. Convert and georeference the CAD system containing our current water system network schematics and customer locations and Geodata Services will import labels into ArcGIS annotation for further processing.

Objective B: Digitize and populate the Choteau public works infrastructure geodatabase defined in Objective A and prepare metadata to document the feature classes.

Task and activities

- Convert the CAD file and tabular database records to GIS feature classes to be used as an on-screen backdrop for editing or heads up digitizing of the points, lines and polygons in the CAD files, and for initial population of the tabular data converted from CAD labels to Esri feature annotation.
- 2. Receive training and support from Geodata Services via WebEx on best practices for digitizing and editing network data, and developing domains to insure categorical tabular data associated with the spatial data is consistent and standardized. We want to build our data using best practices and workflows common to utility geodatabases.
- 3. Have Geodata Services create a NAIP based image map tile service for heads up digitizing of our initial public infrastructure system. We will use this as a backdrop for the initial digitizing on our desktop computer in ArcGIS Pro and for loading into Collector on smartphones and the iPad we have included in our proposal. We want to quickly develop the geodatabase to begin using it for operations of the public works department. We also propose implementing rules, procedures and workflows for verifying spatial locations of public works infrastructure using sub meter GPS technology to increase the precision and accuracy of the heads up digitized features in the field. GPS verification will begin during this proposal timeframe with a pilot project but the majority of field verified point and line features will be collected during future years. We have requested a Trimble R1 bluetooth SBAS receiver capable of sub meter accuracy to collect data with an iPad and Collector.
- 4. Digitize the water system infrastructure by editing the converted CAD files or digitizing

the infrastructure points, lines or polygons where the CAD files do not match the NAIP imagery and/or existing MSDI street centerlines, structures and administrative boundaries. We intend to digitize line features to connect the current MSDI structures to the potable water network. Corrected structures will be provided by Teton County in their 2017 MSDI data update to the structures theme steward based on their current work on preparing for NG 9-1-1 with their FY 2017 MLIA grant award. Subsequent objectives will address additional procedures to improve the spatial accuracy of the structures during the FY 2018 collaboration between the City of Choteau and Teton County.

- 5. Geodata Services will run topology checks and QA/QC procedures on our digitized network once it is complete using their advanced ArcGIS license and scripts and procedures and provide feedback to public works. The City of Choteau only maintains a Basic ArcGIS license.
- 6. Training and review session with Geodata Services will be held following topology checks to reinforce digitizing and editing procedures and give us feedback to improve maintenance in the future.
- 7. Digitize sidewalks, garbage collection, fire hydrants, main line water valves, sewer line flushing and cleaning and obtain the DNRC urban tree layer. Digitizing our existing sidewalks is a priority to accurately and effectively evaluate and communicate where additions, repairs, and replacement of sidewalks are necessary. This will allow us to develop a plan and submit a proposal to for sidewalk improvements.
- 8. Begin field verification on a small pilot set of infrastructure points, including fire hydrants and main line water valves using Trimble R1 bluetooth GNSS receiver and iPad in the field with ArcGIS Collector to validate locations and record maintenance activities.

Goal 2: Improve the accuracy of required NG 9-1-1 GIS structure and address data layers. **Objective A**: Improve the spatial accuracy and completeness of the structures and road centerline features and their associated addresses in Choteau by comparing them to our customer records and assisting in field verification.

Task and activities:

- 1. Convert our customer records, currently maintained in paper files into a tabular database.
- 2. Work with Geodata Services to geocode the resulting customer records list, using the Esri World Geocoder.
- 3. Compare the customer records against the corrected structures will be provided by Teton County in their 2017 MSDI data update to the structures theme steward based on their current work on preparing for NG 9-1-1 with their 2017 MLIA grant award.
- 4. Join and identify matching records and look at differences, additions, and omissions. Geodata Services will assist in this step providing summary reports to identify differences between the two address database sources and mismatches between our water system customer records and the MSDI structures, address and road centerline layers.
- 5. Work with Geodata Services to develop a database schema and appropriate domains for a Collector application to be used in updating and verifying the point address records while directly field checking on premises. We want to leverage this capability, and try

some small pilots and tests, but we are focusing initially on imagery based QA/QC, reserving systematic field checks for future inventories. We believe it is more important to get a functioning system with relative spatial and tabular data accuracy and completeness initially. Once that is operational, we will further improve the spatial accuracy in the future.

Goal 3: Publish, manage and update Choteau public works data.

Objective A: Build support for City GIS capacity to maintain public works data by publishing maps and apps with the data collected to ArcGIS Online (AGOL) and increase access by other city departments and city council and the citizens of Choteau.

Tasks and Activities:

- 1. Publish the potable water system, waste water collection system, sidewalks, road centerline, structures, garbage and snow removal routes feature layers to ArcGIS Online (AGO).
- 2. Work with Geodata Services for training, consulting, and recommended workflows in best practices for working with AGO and publishing and managing AGO with ArcGIS Pro.
- 3. Implement an automated back up system with ArcGIS Pro, Modelbuilder, Python scripting and Windows task manager.

Objective B: Establish an Esri Open Data Portal within the Esri ArcGIS Online organizational account for all public domain data derived under this project.

Tasks and Activities:

- 1. Export all the public domain feature classes in our geodatabase to common file export GIS formats, Esri shapefiles and Google KML format, and upload them to our AGO account.
 - 2. Prepare descriptions and documentation for each data layer.
- 3. With the assistance of Geodata Services, activate the open data portal in our AGO account.

Objective C: Provide the Choteau Public Works data for inclusion in the Montana geoportal. **Tasks and Activities:**

Send our public domain geodatabase feature classes and embedded metadata, along with the export format versions of the data layers in shapefile and KML format to the Montana State GIS Coordinator for inclusion in the Montana geoportal.

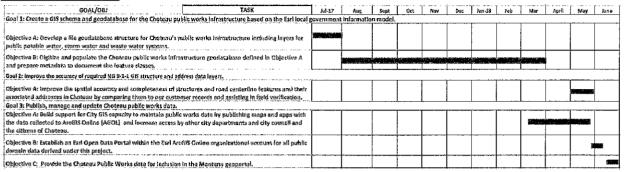
Equipment – We wish to purchase an iPad and a Trimble R1 bluetooth SBAS receiver. These items are estimated to cost as follows:

- Apple refurbished iPad 128gb with cellular capabilities \$459
- Trimble R1 bluetooth SBAS receiver \$2,500

These equipment comply with section 90-1-411 (1) of MCA - "Money in the account may be used only for the purposes of this part, including purchasing technology to assist in collecting, maintaining, or disseminating land information and funding the budget required under 90-1-410." Goals 1.B.3 and Goal 1.B.7 and Goal 2.A.5 describe how this equipment will help achieve the

applicant's goals and objectives.

Project Schedule



We will implement a contract with Geodata Services on July 3, 2017 and begin work on the project. The City of Choteau has legal authority to sole source to contractors for the amount we are proposing for a contract with Geodata Services. The initial Goal 1 tasks will commence July 3, 2017 and the file geodatabase schema will be complete by July 28, 2017. Objective B digitizing and creating the public works infrastructure GIS will begin July 28, 2017 and will be completed May 19, 2018.

Goal 2 tasks will commence November 1, 2017 and completed December 22, 2017 to coordinate with the processing of the Teton County MSAG and ALI synchronization audit (proposed in a separate MLIA proposal for FY 2018) if that project is funded. We scheduled this to allow time for initial CAD conversion and digitizing of the potable water system and linkage to structure addresses to be initially complete. Then we scheduled our verification of structures take place and be completed after the MSAG and ALI verification audit, and before the additions and deletions are completed by Teton County. If the Teton County FY 2018 project is not funded, we will still complete Goal 2 in the same timeline and our work will compare to the MSDI structures and address layer without additional contributions from a MSAG and ALI synchronization audit.

The deliverables from this objective will include the field verification queue database for future field verifications and the updated MSDI geodatabase layers and metadata for road centerlines, structures, addresses and administrative boundaries provided to the MSDI data stewards by April 1, 2018.

Goal 3 objective A will begin no later than March 23, 2018 and will be completed May 7, 2018. Goal 3 objective B will commence with the publication of all of the public domain parts of the web maps in the Open Data portal on May 25, 2018 and be completed June 8, 2018. Goal 3, objective C will begin with the completion of all GIS feature classes and metadata on June 11, 2018 and complete on June 29, 2018.

SECTION 5 - PROJECT MANAGEMENT AND ORGANIZATIONAL CAPABILITY

Choteau Public Works Department

This project will be managed and carried out by Mike Maples, public works director for the City of Choteau. We also plan to work with Geodata Services who will provide training and consulting. Mike Maples was hired in 2016 as the public works director. He has previous GIS experience utilizing ArcGIS in the field of wildlife biology. As a technician and biologist Mike Maples used ArcGIS to build maps for presenting research data, created databases to develop track survey routes used in population estimates of mountain lions, and used GIS and GPS systems to record and maintain data. Currently, Mike Maples has utilized the ArcMap software acquired by the City of Choteau to initiate databases for main line water valve inventory and maintenance, fire hydrant inventory and maintenance, garbage collection inventory and maintenance. Recently, Mike Maples utilized ArcMap to construct maps which were integral to the application process for an amendment to the city's Open Cut Mining Permit for the city's gravel pit.

The administrator of this grant proposal has working relationships with Teton County EMS, Sheriff, and Fire Departments that will be integral in making the 2018 project successful.

Geodata Services, Inc.

Geodata Services specializes in GIS services for local, state and federal governments, natural resource management, regional and community planning, and demographic and socioeconomic analysis.

For 21 years Geodata Services has provided training and services in GIS including, spatial analysis, image analysis, database development, collaborative GIS, suitability modeling, and 3D scenario visualizations. Geodata Services has been an Esri business partner for 19 years, and more than 60 years of combined experience with GIS.

The two primary staff who will provide training, consulting and support will be Ken Wall and Kyle Balke. Ken Wall has 25 years of experience in GIS experience, founder and president of Geodata Services, Inc. since 1993. Ken served on the MLIAC council for 6 years, and currently serves on the Montana State Library Commission. He served as a senior analyst for GIS projects throughout the US, Canada, and Australia. Geodata Services has been a business partner with ESRI for 18 years. Ken Wall has earned certification as an Esri Desktop Associate and served as a certified ArcGIS Desktop instructor, and is a CompTIA CTT+ Certified technical trainer. Geodata Services is the only ArcGIS Online Specialty Partner in Montana. Ken serves on the NENA NG 9-1-1 data review subcommittee, reviewing the current data standard.

Kyle Balke has 12 years of applied GIS experience in the planning, engineering, natural resources, and telecommunication fields. He has worked as a GIS analyst for firms in Wisconsin and Montana. His professional experience includes GIS data maintenance and editing, project development, CAD and GIS integration, geodatabase design, spatial and

statistical analysis, and cartography. He has extensive expertise with the full suite of Esri GIS programs and modules, including ArcMap, Business Analyst, ArcGIS Online for Organizations, ArcPro and Spatial Analyst. For the last two years Kyle taught an inter-session class at the University of Montana in web mapping using ArcGIS Pro and ArcGIS Online.

Section 6 - Budget Justification and Budget Table

Soul 1: Cre			GEODATA	GEODATA		CHOTEAU	
	TASK	HOURS	BUDGET	SUBTOTAL		BUDGET	Choteau Subtotal
bjective A	ate a GIS schema and geodatabase for the Choteau public works I						
	: Develop a file geodatabase structure for Choteau's public wor	ks infrastruc	cture including	layers for pu	blic potable water	storm water and	waste water systems.
	Develop a file geodatabase based on the Pari Local		}	1			
	Covernment Information Model (LGIM) with the assistance						
	of Geodata.	4	\$ 300	<u> </u>	16	\$ 415	
	Receive training and support from Goodata via Webilx		, ì				
	develop domains and standardized topology categories to			į			
	insure our data is created using best practices and workflows		1	ļ			
	common to utility geodatabuses.	6	\$ 450		6	\$ 136	1
	Convert and geoteroference the CAD system containing our			·	T		
	current water system network schematics and customer				1		
	lucations	4	\$ 300		4	\$ 104	
	The second secon		}	\$1,650			\$675
			[i		
lective 8:	Digitize and populate the Choteau public works infrastructure geodetab	ase defined in	Objective A and a	renare metad	ata to document the	feature classes.	· · · · · · · · · · · · · · · · · · ·
And his new	Convert the CAD file and paper records to GIS feature classes		\$ 150		40		
	Receive training and support from Geodata via Weblix on best	ļ	y. z	† ···			†
	practices for digitizing and editing actwork data	8	\$ 600	i	24	\$ 623	
	Have Geodata Services create a NAil' based image map tile	· · · · · · · · · · · · · · · · · · ·	Y			X	
	sorvice	€	\$ 450	ļ	l i	Š 26	
	Digitize the water system infrastructure		\$ 150		24		
			بر: د	+	24	J 023	-
	Geodata will run topology checks and QA/QC procedures on our		\$ 300	į		e	
	digitized network	ļ	\$ 300	·	x	\$ 26	!
	Training and review session with Goodata Services will be held				İ		1
	following topology checks to reinforce digitizing and editing] .		į	.	مد	
	procedures	4	\$ 300		ļ 4	\$ 104	
	Digitize sidewalks, garbage collection, fire hydrants, main line water			1	[
	valves, sawer line flushing and cleaning and obtain the DNRC urban	_		1			
	tree layes.	15	\$ 450		32	\$ 831	
	Begin field verification on a small pilot set of infrastructure						1
	points, using Trimble R t bluetooth ONSS receiver	0	\$			\$ 156	<u> </u>
				\$2,400	ļ <u> </u>		\$3,427
	·	L	la e e e e e e	1		- ,	<u> </u>
al 2: Imp	rove the accuracy of required NG 9-1-1 GIS structure and address	data layers,		1			
bjective A	it improve the spatial accuracy and completeness of the struct	ures and rea	d centarlina foa	tures by con	nparing them to o	ir customer recor	ds.
	Convert our customer records into a tabular database.	4	\$ 300		12	\$ 312	
	Work with Geodala Services to geocode the resulting customer records	0	3 -	· i	2	\$ 52	
	Compare the sustamer records against the the corrected structures.		· · · · · · · · · · · · · · · · · · ·		-	. 2	
	provided by Teten County	. 8	\$ 600	.	16	5 415	
	Join and identify matching records and look at differences, additions,)	†		7	
	and omissions.	4	\$ 300		24	5 623	
	Work with Geodata Services to develop a database schema to be used			†		•	:
	in updating and verifying the point address records	2	\$ 150		, si	\$ 156	
)	3					
			•	\$1,390		2,0	\$1.558
			ļ	\$1,390			\$1,558
oal 3: Publ	isk, marrage and undate Choteau public works data.	ļ <u></u>		\$1,390		y 130	\$1,558
	lish, manage and update Choteau public works data.	sellows to no	medicadih finat				\$1,558
bjective A	: Make changes to our Esri LGIM schema, and scripts and wor	kilowa to por	mply with final				\$1,558
bjective A	i: Make changes to our Esrî LGIM schema, and scripts and wor to populate final NENA required data attribution.	kilowa to co	mply with final				\$1,558
bjective A	s: Make changas to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish thewater system, road centerline, structures, and sidewalks	· · · · · · · · · · · · · · · · · · ·		NENA standa	ards and data mod	iof, and run	\$1,558
bjective A	a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerlina, structures, and sidewalks feature layers to ArcGIS Online (AGO).	kilowa to por		NENA standa		iof, and run	\$1,558
ojective A	a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NEMA required data attribution. Publish the water system, road centerline, structures, and sidewalks feature layers to ArcGS Online (AGO). Work with Geodata for training, consulting, and recommended	· · · · · · · · · · · · · · · · · · ·		NENA standa	ards and data mod	iof, and run	\$1,558
ojective A	a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks feature layers to ArcGIS Online (AGO). Work with Geodata for training, consulting, and recommended workflows in best gractices for working with AGO and publishing and	4	\$ 300	NENA standa	ards and data mod	ef, and run \$ 467	\$1,558
bjective A	a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks feature layers to ArcGIS Online (AGO). Work with Geodate for training, consulting, and recommended workflows is best practices for working with AGO and publishing and managing AGO with ArcGIS Pro.	· · · · · · · · · · · · · · · · · · ·	\$ 300	NENA standa	ards and data mod	ef, and run \$ 467	\$1,558
ojective A	a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks feature layers to ArcGIS Online (AGO). Work with Geodata for training, consulting, and recommended workflows in best practices for working with AGO and publishing and managing AGO with ArcGIS Pro. Implement an automated back up system with ArcGIS Pro.	4	\$ 300	NENA standa	ards and data mod	6f, and run \$ 467 \$ 623	\$1,558
ojective A	a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks feature layers to ArcGIS Online (AGO). Work with Geodate for training, consulting, and recommended workflows is best practices for working with AGO and publishing and managing AGO with ArcGIS Pro.	4	\$ 300	VENA standa	ards and data mod	ef, and run \$ 467	
bjective A ocesses (a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NEMA required data attribution. Publish the water system, road centerline, structures, and sidewalks feature layers to ArcGIS Online (AGO). Work with Geodata for training, consulting, and recommended workflows in best practices for working with AGO and publishing and managing AGO with ArcGIS Pro. Implement an automated back up system with ArcGIS Pro. Modelbuilder, Python scripting and Windows task manager	4 8 8	\$ 300 \$ 600 \$ 600	NENA standa	ards and data mod	6, and run 5 467 5 623 \$ 208	\$1,558 \$1,238
bjective A ocesses (a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks fleature layers to ArcGIS Online (AGO). Work with Geodata for training, consulting, and recommended workflows in best practices for working with AGO and publishing and managing AGO with ArcGIS Pro. Implement an automated back up system with ArcGIS Pro, Modelbuilder, Python scripting and Windows task manager Establish an Esri Open Data Portal within the Esri ArcGIS Chiline organize	4 8 8	\$ 300 \$ 600 \$ 600	NENA standa	ards and data mod	6, and run 5 467 5 623 \$ 208	
bjective A ocesses (a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks feature layers to ArcGIS Online (AGO). Work with Geodata for training, consulting, and recommended workflows in best practices for working with AGO and publishing and managing AGO with ArcGIS Pro. Implement an automated back up system with ArcGIS Pro, Modelbuilder, Python scripting and Windows task manager Extablish an Esri Open Data Portal withile the Esri ArcGIS Online organization of the public domain feature classes in our geodelabase	8 8	\$ 300 \$ 600 \$ for all public dor	NENA standa S1,500 nain data deri	18 24 8 ved under this proje	5 467 5 623 5 208	
bjective A ocesses (it Make changes to our Esri LGIM schema, and scripts and work to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks feature layers to ArcGIS Online (AGO). Work with Geodata for training, consulting, and recommended workflows in best practices for working with AGO and publishing and managing AGO with ArcGIS Pro. Implement an automated back up system with ArcGIS Pro. Modelbuilder, Python scripting and Windows talk manager Establish as Ect Open Data Portal within the Esri ArcGIS Online organiza Export all the public domain feature classes in our geodalabase tle common file export GIS formate	4 8 8	\$ 300 \$ 600 \$ 600 t for all public dor	NENA standa S1,500 nain data deri	ards and data mod 18 2A 8 ved under this proje	ef, and run 5 467 5 623 5 208 4.	
bjective A ocesses (a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks fleature layers to ArcGIS Online (AGO). Work with Geodata for training, consulting, and recommended workflows is best practices for working with AGO and publishing and managing AGO with ArcGIS Pro. Implement an automated back up system with ArcGIS Pro, Modelbuilder, Python scripting and Windows task manager Extablish an Erd Open Data Portal within the Esri ArcGIS Chiline organiza Export all tha public domain feature classes in our geodatabase to common file export CIS formals Propure descriptions and documentation for each date layer.	4 8 8	\$ 300 \$ 600 \$ for all public dor	NENA standa S1,500 nain data deri	18 24 8 ved under this proje	ef, and run 5 467 5 623 5 208 4.	
bjective A ocesses (it Make changes to our Esri LGIM schema, and scripts and work to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks feature layers to ArcGIS Online (AGO). Work with Geodata for training, consulting, and recommended workflows in best practices for working with AGO and publishing and managing AGO with ArcGIS Pro. Implement an automated back up system with ArcGIS Pro. Modelbuilder, Python scripting and Windows talk manager Establish as Ect Open Data Portal within the Esri ArcGIS Online organiza Export all the public domain feature classes in our geodalabase tle common file export GIS formate	4 8 8 8 18 18 18 18 18 18 18 18 18 18 18	\$ 600 \$ 600 t for all public dor \$ 75 \$ 300	S1,500	ards and data mod 18 2A 8 ved under this proje	ef, and run 5 467 5 623 5 208 4.	
ojective A ocesses (a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks feature layers to ArcGIS Online (AGO). Work with Geodata for training, consulting, and recommended workflows in best practices for working with AGO and publishing and managing AGO with ArcGIS Pro. Implement an automated back up system with ArcGIS Pro, Modelbuilder, Python scripting and Windows task manager Extablish an Esri Open Data Portal withila the Esri ArcGIS Online organize its common file export GIS formula. Propore descriptions and documentation for each date layer. With the assistance of Geodate Services, activate the open data.	4 8 8 8 18 18 18 18 18 18 18 18 18 18 18	\$ 300 \$ 600 \$ 600 t for all public dor	VENA standa S1,500 nain data deif	ards and data mod 18 24 8 ved under this proje 40	5 467 5 623 5 208 4.	51,298
jective 9:	a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks feature layers to ArcsiS Online (AGO). Work with Geodate for training, consulting, and recommended workflows is best practices for working with AGO and publishing and managing AGO with ArcsiS Pro. Implement an automated back up system with ArcsiS Pro, Modelbuilder, Python scripting and Windows task manager Establish an Erd Open Data Portal within the Esri ArcsiS Online organiza Export all the public domain feature classes in our geodatabase to common file export GIS formate Propare descriptions and documentation for each date layer. With the assistance of Geodate Services, activate the open data portal in our AGO account.	4 8 8 8 8 8 14 14 14 14 14 14 14 14 14 14 14 14 14	\$ 600 \$ 600 t for all public dor \$ 75 \$ 300	S1,500	ards and data mod 18 24 8 ved under this proje 40	5 467 5 623 5 208 4.	
ojective A	is Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks fleature layers to ArcGIS Online (AGO). Work with Geodata for training, consulting, and recommended workflows in best practices for working with AGO and publishing and managing AGO with ArcGIS Pro. Implement an automated back up system with ArcGIS Pro, Modelbuilder, Python scripting and Windows task manager Establish an Erd Open Data Portal within the Esri ArcGIS Online organize Export all the public domain feature classes in our goodstabase to common file export GIS formate Propure descriptions and documentation for each date layer. With the assistance of Geodate Services, activate the open data portal in our AGO account.	4 8 8 8 8 11 1 4 4 4 4 opental.	\$ 600 \$ 600 t for all public dor \$ 75 \$ 300	VENA standa S1,500 nain data deif	ards and data mod 18 24 8 ved under this proje 40	5 467 5 623 5 208 4.	51,298
ojective A	a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks feature layers to ArcsiS Online (AGO). Work with Geodate for training, consulting, and recommended workflows is best practices for working with AGO and publishing and managing AGO with ArcsiS Pro. Implement an automated back up system with ArcsiS Pro, Modelbuilder, Python scripting and Windows task manager Establish an Erd Open Data Portal within the Esri ArcsiS Online organiza Export all the public domain feature classes in our geodatabase to common file export GIS formate Propare descriptions and documentation for each date layer. With the assistance of Geodate Services, activate the open data portal in our AGO account.	4 8 8 8 8 11 1 4 4 4 4 opental.	\$ 600 \$ 600 t for all public dor \$ 75 \$ 300	VENA standa S1,500 nain data deif	ands and data mod	5 467 5 623 5 208 4. 5 208 5 1,038	51,298
ojective A	it Make changes to our Esri LGIM schema, and scripts and work opopulate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks feature layers to ArcGIS Online (AGO). Work with Geodate for training, consulting, and recommended workflows in best practices for working with AGO and publishing and managing AGO with ArcGIS Pro. Implement an automated back up system with ArcGIS Pro, Modelbuilder, Python scripting and Windows talk manager Extablish an Ect Open Data Portal withila the Esri ArcGIS Online organitz export all this public domain foature classes in our goodstabase to common file export GIS formals Propare descriptions and documentation for each date layer. With the assistance of Geodate Services, activate the open date portal in our AGO account.	4 8 8 8 8 11 1 4 4 4 4 opental.	\$ 600 \$ 600 \$ 725 \$ 300 \$ 300	S1,500 nain data deri	ards and data mod 18 24 8 ved under this proje 40	5 467 5 623 5 208 4. 5 208 5 1,038	51,298
ojective A	a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks fleature layers to Arcsis Online (AGO). Work with Geodate for training, consulting, and recommended workflows is best practices for working with AGO and publishing and managing AGO with Arcsis Pro. Implement an automated back up system with Arcsis Pro, Modelbuilder, Python scripting and Windows task manager Establish an Erd Open Data Portal within the Esri Arcsis Online organiza Export all tha public domain feature classes in our geodatabase to common file export GIS formals Propare descriptions and documentation for each date layer. With the assistance of Geodate Services, activate the open data portal in our AGO account. Provide the Choteau Public Works data for leclusion in the Montana ge Send public domain geodatabase feature classes and ombedded metadate to the Montana State GIS Coordinator for inclusion in	4 8 8 8 8 8 1 1 1 4 4 4 oportal.	\$ 600 \$ 600 \$ 725 \$ 300 \$ 300	S1,500 nain data deri	ards and data mod 18 2A 8 wed under this proje 4	5 467 5 623 5 208 4. 5 208 5 1,038	51,298
ojective A	a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks fleature layers to Arcsis Online (AGO). Work with Geodate for training, consulting, and recommended workflows is best practices for working with AGO and publishing and managing AGO with Arcsis Pro. Implement an automated back up system with Arcsis Pro, Modelbuilder, Python scripting and Windows task manager Establish an Erd Open Data Portal within the Esri Arcsis Online organiza Export all tha public domain feature classes in our geodatabase to common file export GIS formals Propare descriptions and documentation for each date layer. With the assistance of Geodate Services, activate the open data portal in our AGO account. Provide the Choteau Public Works data for leclusion in the Montana ge Send public domain geodatabase feature classes and ombedded metadate to the Montana State GIS Coordinator for inclusion in	4 8 8 8 8 8 1 1 1 4 4 4 oportal.	\$ 600 \$ 600 \$ 725 \$ 300 \$ 300	S1,500 nain data deri	ards and data mod 18 2A 8 wed under this proje 4	5 467 5 623 5 208 4. 5 208 5 1,038	\$1,238 \$1,350
ojective A	a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks fleature layers to Arcsis Online (AGO). Work with Geodate for training, consulting, and recommended workflows is best practices for working with AGO and publishing and managing AGO with Arcsis Pro. Implement an automated back up system with Arcsis Pro, Modelbuilder, Python scripting and Windows task manager Establish an Erd Open Data Portal within the Esri Arcsis Online organiza Export all tha public domain feature classes in our geodatabase to common file export GIS formals Propare descriptions and documentation for each date layer. With the assistance of Geodate Services, activate the open data portal in our AGO account. Provide the Choteau Public Works data for leclusion in the Montana ge Send public domain geodatabase feature classes and ombedded metadate to the Montana State GIS Coordinator for inclusion in	4 8 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9	\$ 600 \$ 600 \$ 70 \$ 300 \$ 300	S1,500 sain data delt	ands and data model is a second control of the second control of t	5 467 5 623 5 208 4. 5 208 5 1,038 5 104	\$1,298 \$1,350
ojective A	a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks fleature layers to Arcsis Online (AGO). Work with Geodate for training, consulting, and recommended workflows is best practices for working with AGO and publishing and managing AGO with Arcsis Pro. Implement an automated back up system with Arcsis Pro, Modelbuilder, Python scripting and Windows task manager Establish an Erd Open Data Portal within the Esri Arcsis Online organiza Export all tha public domain feature classes in our geodatabase to common file export GIS formals Propare descriptions and documentation for each date layer. With the assistance of Geodate Services, activate the open data portal in our AGO account. Provide the Choteau Public Works data for leclusion in the Montana ge Send public domain geodatabase feature classes and ombedded metadate to the Montana State GIS Coordinator for inclusion in	4 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9	\$ 600 \$ 600 \$ 75 \$ 300 \$ 300 \$ 300	S1,500 s1,500 s1,500 s679 5300	ands and data mod 18 2A 8 ved under this proje 8 40 49 City of Chote	5 467 5 623 5 208 4. 5 208 5 1,038 5 104	\$1,258 \$1,350 \$1,222 \$3,529
ojective A	a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks fleature layers to Arcsis Online (AGO). Work with Geodate for training, consulting, and recommended workflows is best practices for working with AGO and publishing and managing AGO with Arcsis Pro. Implement an automated back up system with Arcsis Pro, Modelbuilder, Python scripting and Windows task manager Establish an Erd Open Data Portal within the Esri Arcsis Online organiza Export all tha public domain feature classes in our geodatabase to common file export GIS formals Propare descriptions and documentation for each date layer. With the assistance of Geodate Services, activate the open data portal in our AGO account. Provide the Choteau Public Works data for leclusion in the Montana ge Send public domain geodatabase feature classes and ombedded metadate to the Montana State GIS Coordinator for inclusion in	4 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9	\$ 600 \$ 600 \$ 70 \$ 300 \$ 300	S1,500 s1,500 s1,500 s679 5300	ands and data mod 18 2A 8 ved under this proje 8 40 49 City of Chote	5 467 5 623 5 208 4. 5 208 5 1,038 5 104	\$1,298 \$1,350
bjective A ocesses (cesses (a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks fleature layers to Arcsis Online (AGO). Work with Geodate for training, consulting, and recommended workflows is best practices for working with AGO and publishing and managing AGO with Arcsis Pro. Implement an automated back up system with Arcsis Pro, Modelbuilder, Python scripting and Windows task manager Establish an Erd Open Data Portal within the Esri Arcsis Online organiza Export all tha public domain feature classes in our geodatabase to common file export GIS formals Propare descriptions and documentation for each date layer. With the assistance of Geodate Services, activate the open data portal in our AGO account. Provide the Choteau Public Works data for leclusion in the Montana ge Send public domain geodatabase feature classes and ombedded metadate to the Montana State GIS Coordinator for inclusion in	4 stional account 1 4 4 4 4 4 4 Geodate Ai	\$ 600 \$ 600 trans public don \$ 75 \$ 300 \$ 300 \$ 300 \$ Labor Subtotal	\$1,500 ain data dell \$676 \$300 \$7,275 \$19,728	ands and data mod 18 2A 8 ved under this proje 8 40 49 City of Chote	5 467 5 623 5 208 4. 5 208 5 1,038 5 104	\$1,258 \$1,350 \$1,222 \$3,529
bjective A ocesses (cesses (a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks fleature layers to Arcsis Online (AGO). Work with Geodate for training, consulting, and recommended workflows is best practices for working with AGO and publishing and managing AGO with Arcsis Pro. Implement an automated back up system with Arcsis Pro, Modelbuilder, Python scripting and Windows task manager Establish an Erd Open Data Portal within the Esri Arcsis Online organiza Export all tha public domain feature classes in our geodatabase to common file export GIS formals Propare descriptions and documentation for each date layer. With the assistance of Geodate Services, activate the open data portal in our AGO account. Provide the Choteau Public Works data for leclusion in the Montana ge Send public domain geodatabase feature classes and ombedded metadate to the Montana State GIS Coordinator for inclusion in	4 stional account 1 4 4 coportal.	\$ 600 \$ 600 \$ 75 \$ 300 \$ 300 \$ 1abor Subtotal	\$1,500 nain data derit \$679 \$19,728 \$ 459	ands and data mod 18 24 8 ved under this proje 40 43	5 467 5 623 5 208 4. 5 208 5 1,038 5 104	\$1,258 \$1,350 \$1,222 \$9,529
bjective A ocesses (cesses (a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks fleature layers to Arcsis Online (AGO). Work with Geodate for training, consulting, and recommended workflows is best practices for working with AGO and publishing and managing AGO with Arcsis Pro. Implement an automated back up system with Arcsis Pro, Modelbuilder, Python scripting and Windows task manager Establish an Erd Open Data Portal within the Esri Arcsis Online organiza Export all tha public domain feature classes in our geodatabase to common file export GIS formals Propare descriptions and documentation for each date layer. With the assistance of Geodate Services, activate the open data portal in our AGO account. Provide the Choteau Public Works data for leclusion in the Montana ge Send public domain geodatabase feature classes and ombedded metadate to the Montana State GIS Coordinator for inclusion in	4 stional account 1 4 4 4 4 4 4 Geodate Ai	\$ 600 \$ 600 trans public don \$ 75 \$ 300 \$ 300 \$ 300 \$ Labor Subtotal	\$1,500 ain data dell \$676 \$300 \$7,275 \$19,728	ands and data mod 18 24 8 ved under this proje 40 43	5 467 5 623 5 208 4. 5 208 5 1,038 5 104	\$1,258 \$1,350 \$1,222 \$9,529
ojective A	a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks fleature layers to Arcsis Online (AGO). Work with Geodate for training, consulting, and recommended workflows is best practices for working with AGO and publishing and managing AGO with Arcsis Pro. Implement an automated back up system with Arcsis Pro, Modelbuilder, Python scripting and Windows task manager Establish an Erd Open Data Portal within the Esri Arcsis Online organiza Export all tha public domain feature classes in our geodatabase to common file export GIS formals Propare descriptions and documentation for each date layer. With the assistance of Geodate Services, activate the open data portal in our AGO account. Provide the Choteau Public Works data for leclusion in the Montana ge Send public domain geodatabase feature classes and ombedded metadate to the Montana State GIS Coordinator for inclusion in	4 stional account 1 4 4 4 4 4 4 Geodate Ai	\$ 300 \$ 600 \$ 600 \$ 75 \$ 300 \$ 300 \$ 300 \$ 12bot Subtotal Habor Subtotal	\$1,500 sain data deri \$629 \$300 \$7,275 \$19,728 \$459 \$2,500	ands and data model. 18 24 8 veel under this projection 4 49 City of Chote	5 467 5 623 5 208 4. 5 208 5 1,038 5 104	\$1,258 \$1,350 \$1,222 \$9,529
bjective A ocesses (cesses (a: Make changes to our Esri LGIM schema, and scripts and wor to populate final NENA required data attribution. Publish the water system, road centerline, structures, and sidewalks fleature layers to Arcsis Online (AGO). Work with Geodate for training, consulting, and recommended workflows is best practices for working with AGO and publishing and managing AGO with Arcsis Pro. Implement an automated back up system with Arcsis Pro, Modelbuilder, Python scripting and Windows task manager Establish an Erd Open Data Portal within the Esri Arcsis Online organiza Export all tha public domain feature classes in our geodatabase to common file export GIS formals Propare descriptions and documentation for each date layer. With the assistance of Geodate Services, activate the open data portal in our AGO account. Provide the Choteau Public Works data for leclusion in the Montana ge Send public domain geodatabase feature classes and ombedded metadate to the Montana State GIS Coordinator for inclusion in	4 stional account 1 4 4 4 4 4 4 Geodate Ai	\$ 600 \$ 600 \$ 75 \$ 300 \$ 300 \$ 1abor Subtotal	\$1,500 sain data derit \$676 \$300 \$7,275 \$19,728 \$ 459 \$2,500	ands and data mod 18 24 8 ved under this proje 40 49	5 467 5 623 5 208 4. 5 208 5 1,038 5 104	\$1,258 \$1,350 \$1,222 \$3,529

The budget detail for this project is provided in the table above. The majority of the funding is for training and consulting costs with our contractor and funding partner, Geodata Services, Inc. (\$7,275) We are also requesting two pieces of equipment, an iPad (\$459) and a Trimble R1 bluetooth GPS receiver (\$2,500).

The contract with Geodata Services for a total of \$7,275 will be matched with in-kind labor and fringe benefits by the Choteau Public Works Director, totaling \$12,453).

We indicated in the project partner section that all of Geodata Services lump sum contract work will be for consulting. We did not subtotal this amount in the Total field to avoid double counting this contractual arrangement as specified in the Applicant summary.

				MLIA	GR/	ANT BU	DG	ET SUMI	VΑ	RY						
Category a. Personnel	Applicant Summary								Project Partner* Summary							***************************************
	B	VILIA Share	Applicant Cash	Other Cash	In-kind		Applicant Subtotal		Geodata Services		Partner 2	Partner 3	Partner Subtotel		Tota	Total
					\$	9,579	\$	9,579	55	7,875			\$	7,875		
a. 1. Fringe Benefits		***************************************			\$	2,874	\$	2,874								
b. Travel																
c. Equipment					<u> </u>		ļ		L.							
d. Supplies	ş	2,959					\$	2,959		·				,		
e. Contractual	\$	7,276			<u> </u>		\$	7,275								
f. Other		dagendaged and a sales contact			<u></u>	377.	<u> </u>		×-	,		,,,,,	<u> </u>			
Total	\$	10,234			\$	12,453	\$	22,687							\$	22,68

geodata

Erin <u>Fashoway</u> State GIS Coordinator Montana State Library

I am writing in support of this proposal in our role as funding partner and consultant. We have worked with the City of Choteau Public Works on this project proposal and understand that we have been listed as a funding reciplent. We support the project plan in the scope of work. <u>Geodata</u> Services is prepared to provide training and consulting to further the goals, objectives and tesks in the proposal. We understand that we are listed as a funding reciplent for portions of the direct request from MLIA and are not providing any in-kind services. We are not providing data holdings or serving as a data provider for this project.

Sincerely,

Ken Wall President

Geodata Services, Inc.

P.O. Box 8081, Missoula, MT 59807

Kunth & Wall

SECTION 8 - RENEWABLE GRANT ACCOUNTABILITY

Not applicable, the City of Choteau has never applied for nor received an MLIA award.

SECTION 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.

Mile Maples

Name (print or type)

Public Works Director

Title (print or type

2/15/2017

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

Date

SECTION 9 - CHECKLIST - SIGNATURES REQUIRED

Initial or mark n/a	Completed Paguired Tack						
ММ	Section 1 – Applicant, Partner, and Proposal Information						
MM	Primary Applicant Information						
ММ	Funding Partner (if applicable)						
мм	Project Partner (if applicable)						
ММ	Proposal Information						
MM List All Past Awarded MLIA Grants							
ММ	Section 2 – Relevance (300 max word limit)						
MM	Section 3 – Public Benefit						
мм	Section 4 – Scope of Work Narrative (4-page limit)						
MM	Section 5 – Project Management and Organizational Capability Narrative						
ММ	Section 6 – Budget Justification Narrative and Table						
ММ	M Budget Justification Narrative						
мм	Complete Budget Table						
ММ	Section 7 – Statements of Support (if applicable)						
MM	Section 8 – Renewable Grant Accountability Narrative (if applicable)						