

FALLON COUNTY

Esri Story Maps

**MONTANA LAND
INFORMATION GRANT
APPLICATION**

STATE FISCAL YEAR 2018

APPLICATION MLIA GRANT FUNDING

SECTION 1 – APPLICANT, PARTNER, AND PROPOSAL INFORMATION

Primary Applicant:	
Name of principle individual:	Chuck Lee
Name of agency/entity:	Fallon County
Street:	10 West Fallon Avenue
City:	Baker
County:	Fallon
State:	Montana
Zip Code:	59313
Contact email address:	clee@midrivers.com
Contact fax address:	N/A
Contact phone:	(406) 778-7121
Department:	Department of Emergency Services
Division:	

Funding Partners: <i>(required for each partner, copy box as needed)</i>	
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: Next Generation 9-1-1 & Emergency Preparedness and Community Economic Development and Quality of Life Story Maps	
Executive Summary <i>(required – 200 maximum word count)</i> : Fallon County will prepare and host an Esri story map as a digital handbook explaining Next Gen 9-1-1 to elected officials and the public, along with information on how to prepare for natural and human caused emergencies. It will provide a role for citizens in understanding and supporting NG 9-1-1 data development and maintenance. It will include emergency contact information, general preparedness, emergency planning and disaster supplies. In addition to required NG 9-1-1 GIS layers, the story map will include maps and descriptions of natural hazards we face in Southeastern Montana such as Winter Storms, Floods, Wildfire, Tornadoes, as well as man-made and technological hazards such as home safety, incidents, and national security emergencies. Chuck Lee will prepare the base text and content. Geodata Services will train Chuck Lee to create, edit and maintain Esri Journal story map text, image, video and web site content. Geodata Services will prepare web map applications to be included in the story maps They will be hosted on a Fallon County ArcGIS Online account.	

List All Past Awarded MLIA Grants:

Fallon County has not been awarded any previous MLIA Grants

SECTION 2 – RELEVANCE

300-WORD COUNT LIMIT FOR NARRATIVE (Currently 299 words)

This project furthers two objectives of the 2017-2018 Land Plan. The 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 as follows:

Fallon County does not have current GIS capacity within the county. For the last decade we have contracted our basic GIS layers used for Enhanced 911, road centerlines, structures and addresses and administrative boundaries to KLJ in Fargo, North Dakota. We are interested in exploring the ability to create GIS capacity in the future. We are also interested in publishing Esri story maps as a starting point to convince county commissioners, county staff, and our citizens of the value of building GIS capacity. It may be possible to build a common GIS capacity to serve these counties for additional GIS services. Esri story maps are among the most popular ways to expose GIS to the general public.

The data for Enhanced 911 is coordinated by Chuck Lee, DES coordinator. We currently provide 911 services for three adjoining counties. Chuck Lee is interested in developing the story maps and hosting them locally. We intend to develop these story maps with the assistance of funding partner consultant Geodata Services, the Esri ArcGIS Online specialty partner in Montana.

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.

Geographic Information Systems (GIS) is a critical part of the NG 9-1-1. Although story maps will not directly lead to NG 9-1-1 data standardization, explaining the transition from E911 to NG 9-1-1 and the importance of GIS in the new system in a story map will help build local support to further this land plan objective in the future.

SECTION 3 – PUBLIC BENEFIT

Fallon County will work with funding partner and consultant Geodata Services, Inc. to develop two Esri story maps. We are proposing using MSDI theme GIS layers in the story maps in the dynamic maps and apps for the story maps, exposing them to the importance of the MSDI in showing local resources of importance to our citizens. We plan to embed Geoform applications and the crowdsource story map within the tabbed and journal story map structure to allow citizens to directly contribute comments and stories. If we are successful in building GIS capacity with these examples, we can begin to leverage the web GIS tools for public input on local layers and contribute to the MSDI themes in the future.

The public will benefit directly from the emergency preparedness handbook, improving their ability to respond to natural and man-made emergencies and disasters and learn about local resources to aid them in times of emergencies such as wildfires, flooding, tornados, oil spills and similar situations. They will also benefit from learning about the transition to Next Gen 9-1-1 and the increased dependence on GIS, and support increased resources being directed to enhancing our road centerline, structures, addresses, and law, fire and emergency medical services jurisdictional administrative boundaries and future reporting to the MSDI data stewards for transportation address and structures and administrative boundaries.

The Fallon County Atlas journal story map will engage community leaders, commissioners and community anchor institutions interested in economic development and community sustainability. We also hope it will be of significant interest to our citizens and benefit increasing resources toward additional GIS resources. Chuck will coordinate with Southeast Montana Economic Revitalization Team (S.M.A.R.T.) to obtain text, photos, videos and web resources as source material for this story map.

SECTION 4 – SCOPE OF WORK

Goal 1. Develop local capacity in Fallon County to modify and maintain Esri Story Maps

Objective. A: Set up ArcGIS Online and Geodata Services conducts 24 hours of capacity building training for the Fallon County DES coordinator on building Esri Map Series Story Maps and Journal Story Maps and host them locally.

Tasks and Activities

1. Order the ArcGIS for Organizations five named user account
2. Participate in a capacity building session with Geodata Services to set up administration and background information for the ArcGIS for Organizations account and web map application gallery to host the story maps
3. Participate in twelve two hour WebEx training sessions introducing creating and maintaining Esri Map Series Story Maps and Journal Story Maps. Since Fallon County does not have GIS capability, the focus will be on maintaining and supporting non-spatial content. Training on adding a web map prepared by a consultant or a web map application URL will be conducted, but capacity to create new web maps or web map applications will not be covered.

Goal 2. Publish a web based story map to accompany a disaster preparedness handbook for Fallon County.

Objective A: Create non-spatial content in Journal Story Map format to include 15 story map sections including photos, videos, text, and web links.

Tasks and Activities

1. Chuck Lee will Complete the Fallon County Emergency Preparedness Handbook content.
2. Chuck Lee creates a draft journal story map with the following sections
 - Emergency Contact information for 1st responders will be provided, as well as which Agency they should contact.
 - General Preparedness for emergencies
 - Emergency Planning
 - Warning systems, such as EMS, iPaws and weather radios
 - Disaster Supplies
 - Evacuation or Sheltering
 - Animals in Disasters
 - A series of story map sections will cover natural hazards such as winter storms, floods, wildfire, tornadoes
 - A final series of sections will cover man-made and technological hazards including home safety, Haz Mat incidents and national security emergencies.

Objective B: Geodata Services will create web maps and web map applications to be used in the 15 Journal Story Map sections, and in the Tabbed Series Story map that the journal story

map is embedded within that can be completed within 20 consulting hours. Geodata Services will use data that already exists in the public domain from authoritative sources in Esri GIS format, and will not be responsible for editing or creating new or localized map content.

Tasks and Activities

1. Chuck Lee determines which dynamic or static maps are desired in the story map
2. Geodata Services identifies data sources and prepares draft web maps
3. Chuck Lee reviews, comments and approves the web maps
4. Geodata Services creates the web maps and applications

Objective C: Incorporate the web maps and apps in the map series and journal story maps and complete the final version

Tasks and Activities

1. Chuck Lee makes revisions in the draft non-spatial story map content based on the review session feedback and training
2. Geodata Services embeds the web maps and apps into the story maps
3. Conduct a 2 hour collaborative review session
4. Make final adjustments and publish the final story map

Goal 3. Publish a web based story map and map atlas for Fallon County to encourage economic development.

Objective A: Create non-spatial content in Journal Story Map format to include story map sections including photos, videos, text, and web links.

Tasks and Activities

1. Chuck Lee reviews the Park County Map Atlas and discuss the content with the economic development and community leaders and S.M.A.R.T in Fallon County
2. Chuck Lee determines which the following sections of the Park County journal story map to replicate (note if a section does not mention a map it only includes graphics, text, images, video or a url for a web site)
 - Cover page section
 - How to use the atlas with embedded tutorial video
 - Acknowledgements
 - Introduction
 - Overview - with static image of a location map
 - Base map - dynamic web map with basic labeling of features and major roads and streams)
 - Prehistoric information
 - Historic communities (1913) - With dynamic Esri base maps and custom historic sites in multiple categories with pop up descriptions.
 - Historic points of interest - Dynamic Basic web application template with points of interest and pop up descriptions)

- Population trends - no map, basic infographic with population and NAICS economic data by industry
 - Income information - no map, basic infographic with household income economic data
 - Employment by industry 1- no map, basic infographic with employment by industry economic data
 - Employment by industry 2- no map, basic infographic with employment by industry economic data as line graphs
 - Income by industry - no map, basic infographic with personal income by industry
 - Non-labor income - no map, basic infographic with personal income by industry
 - Education information - no map, basic infographic with school enrollment
 - Roads – Dynamic road map classified by road type
 - Public services – Dynamic point map with community anchor institutions like police, fire, hospitals
 - Broadband cellular services – dynamic map with broadband wireless coverage from 2015 NTIA data
 - Land ownership – dynamic map with public land administrative areas – USFS, BLM, USFWS, National Parks and state land
 - Taxable value of property – infographic bar charts with taxable value of land by year 1999-2012 and average sale price for residential properties
 - Land cover – dynamic map with National Land Cover (NLCD from USGS)
 - Soil productivity – dynamic web map with soils (SSURGO from NRCS)
 - Watersheds – dynamic map with watershed boundaries (one level of hydrologic units from USGS)
 - Housing Density – Dynamic map with housing density (map density from 1-10) – doesn't identify the source whether from census or the Montana structures layer)
 - Residential growth patterns – Dynamic map in basic web app template format (doesn't identify source but appears to be MSDI structure points derived from cadastral year built attributes for 1900, 1940, 1980, 2008 with no pop-ups)
 - Divisions of land – Dynamic map of land divisions from historic census created by NRIS and Montana State library
 - Protected lands – Dynamic map does not specify source, but presumably Montana state library collection. NO pop-ups
 - Oil and gas leases – Dynamic map derived from Park County, Montana DNRC and BLM
 - Wildfires since 1980 – Dynamic map - Sources not identified not sure how recent these extend to
 - Wildlife map – Dynamic map in Basic map app template format with 18 species general distribution – source not identified but looks like MDFWP
 - Gamefish quality – Dynamic map of stream reaches from MDFWP sources
 - Importance to Hunters/Anglers – Dynamic map with areas of interest collected by the Theodore Roosevelt Conservation Partnership
 - Economic value of Hunting/Fishing – Infographic of data from MDFWP time and money spent 2011 & 2012
 - Data Sources
3. Chuck Lee determine which sections can be completed and are desired without maps.

Objective B: Geodata Services will create as many web maps and web map applications that can be created and completed in 25 consulting hours. These will be selected from the highest priorities identified by Chuck Lee from reviewing the Park County Map Atlas web applications.

SECTION 5 – PROJECT MANAGEMENT AND ORGANIZATIONAL CAPABILITY

Chuck Lee

Chuck Lee has served as DES Coordinator for Fallon County for the past 13 years. Mr Lee will serve as administrator of this grant proposal. He has working relationships with EMS staff, county Sheriffs, and Fire Departments in Fallon, Carter, Wibaux and Prairie counties. Chuck is the facilitator for Enhanced 911 and will be responsible for implementing Next Generation 911, working through KLJ in Fargo, North Dakota.

Geodata Services, Inc.

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

Geodata has worked with ten previous successful MLIA projects, including two NG 9-1-1 MLIA projects in the 2017 fiscal year with Carbon and Teton counties. Geodata has presented testimony on behalf of the Montana State Library at interim legislative sessions demonstrating the effectiveness of the grant program and has presented at past MACO conferences on the success of the MLIA program.

The two primary staff who will provide 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 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 13 years of applied GIS experience in the local government, 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, web mapping and cartography. He has extensive expertise with the full suite of Esri GIS programs and modules, including ArcMap, Business Analyst, ArcGIS Online for

Organizations, ArcGIS Pro and Spatial Analyst. For the last two years Kyle has taught a course on Internet GIS at the University of Montana focused on ArcGIS Online and ArcGIS Pro.

SECTION 6 – BUDGET JUSTIFICATION AND BUDGET TABLE

GOAL/OBJ	TASK	GEODATA HOURS	GEODATA BUDGET	GEODATA SUBTOTAL	FALLON CO Labor HOURS	FALLON CO LABOR BUDGET	Subtotal
Goal 1: Develop local capacity in Fallon County to modify and maintain Esri Story Maps							
Objective A:	Set up ArcGIS Online and Geodata Services conducts 24 hours of capacity building training for the Fallon County DES coordinator on building Esri Map Series Story Maps and Journal Story Maps and host them locally	40	\$ 3,000		80	\$ 2,510	
				\$3,000			\$2,510
Goal 2: Publish a web based story map to accompany a disaster preparedness handbook for Fallon County.							
Objective A	Create non-spatial content in Journal Story Map format to include 15 story map sections including photos, videos, text, and web links	2	\$ 150		80	\$ 2,510	
Objective B:	Geodata Services will create web maps and web map applications to be used in the 15 Journal Story Map sections, and in the Tabbed Series Story map	20	\$ 1,500		10	\$ 528	
Objective C:	Incorporate the web maps and apps in the map series and journal story maps and complete the final version	5	\$ 375		20	\$ 811	
				\$2,025			\$3,850
Goal 3. Publish a web based story map and map atlas for Fallon County to encourage economic development.							
Objective A	Create non-spatial content in Journal Story Map	2	\$ 150		40	\$ 1,378	
Objective B:	Geodata Services will create web maps and web map applications to be used in the Journal Story Map	25	\$ 1,875		10	\$ 528	
Objective C:	Incorporate the web maps and apps in the map series and journal story maps and complete the final version	5	\$ 375		20	\$ 811	
				\$2,400			\$2,717
				LABOR SUBTOTAL			\$7,425
OTHER BUDGET ITEMS							
	ArcGIS Online 5 named User Account					\$2,500	
				TOTAL	\$ 7,425	Fallon TOTAL	\$ 11,577
				GRAND TOTAL	\$19,002		

The contractual match is \$9,077 in in-kind labor by Chuck Lee. This does not include any data set valuations, it is only labor on creating the story maps. Funding partner Geodata Services will provide training and map development for supporting the story maps totaling \$7,425.

The only other budget item is a five named user ArcGIS Online subscription for one year purchased from Esri for \$2,500 to allow Fallon County to host the story maps.

MLIA GRANT BUDGET SUMMARY

Category	<i>Applicant Summary</i>					<i>Project Partner* Summary</i>				Total
	MLIA Share	Applicant Cash	Other Cash	In-kind	Applicant Subtotal	Partner 1	Partner 2	Partner 3	Partner Subtotal	
a. Personnel				\$ 7,361	\$ 7,361	\$ 6,900			\$ 6,900	
a. 1. Fringe Benefits				\$ 1,716	\$ 1,716					
b. Travel										
c. Equipment										
d. Supplies										
e. Contractual	\$ 2,500									
f. Other	\$ 7,425				\$ 7,425					
Total	\$ 9,925			\$ 9,077	\$ 19,002					\$ 19,002

SECTION 7 – STATEMENTS OF SUPPORT



Erin Fashoway
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 Fallon, Carter, Prairie and Wibaux PSAP and Fallon County DES on this project proposal and understand that we have been listed as a funding recipient. We support the project plan in the scope of work. Geodata Services is prepared to provide consulting to further the goals, objectives and tasks in the proposal. We understand that we are listed as a funding recipient 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,


A handwritten signature in black ink that reads "Ken Wall". The signature is written in a cursive, slightly slanted style.

Ken Wall
President
Geodata Services, Inc.
P.O. Box 8081, Missoula, MT 59807

SECTION 8 – RENEWABLE GRANT ACCOUNTABILITY

Not applicable, Fallon County 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.
<u>Chuck Lee</u> Name (print or type)
<u>DES/911 Coordinator</u> Title (print or type)
 Signature and Title of Authorized Representative(s) of Public Entity Applicant
<u>2-14-17</u> Date

SECTION 9 – CHECKLIST – SIGNATURES REQUIRED

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