MONTANA STATE LIBRARY
MGIA GRANT PROGRAM

CITY OF MISSOULA
STORMWATER UTILITY
STORMWATER INFORMATION FOR TOMORROW (SWIFT)

MONTANA GEOSPATIAL INFORMATION ACT GRANT APPLICATION

STATE FISCAL YEAR 2025: JULY 1, 2024 – JUNE 30, 2025

STORMWATER
City of Missoula

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SECTION 1 – ORGANIZATION, PARTNER, & PROPOSAL INFORMATION

Primary Applicant Contact Information *(Please fill this section out in its entirety)*	
Name of Agency/Entity:	City of Missoula
Department:	Public Works & Mobility
Division/Section:	Stormwater
Street:	1345 W Broadway
City:	Missoula
County:	Missoula County
State:	Montana
Zip Code:	59802
Project Manager Contact Information:	
Name:	Lyndsey Holloway
Title:	Program Coordinator
Email Address:	HollowayL@ci.missoula.mt.us
Phone Number:	406-493-8031
Fax Number:	
Secondary Project Manager Contact Information:	
Name:	Tracy Campbell
Title:	Superintendent
Email Address:	CampbellTL@ci.missoula.mt.us
Phone Number:	406-830-5455
Fax Number:	
MGIA Grant Funding Request & Match:	
Total Requested MGIA Funds:	$52,652.95
Total Matched Funds:	$15,400.00

Proposal Information	
Identified Grant Priority:	***Development of base geographic data layers - Development of base geographic data layers that are standardized, regularly maintained, and made publicly available to support information needs and support activities including but not limited to land use planning, infrastructure, water resources, and asset management.***
Annual or Multi-Year Proposal:	*Multi Year*
Proposal Prepared By:	Lyndsey Holloway
Short Title of Proposal:	*Stormwater Information for Tomorrow (SWIFT)*

Executive Summary: (*required – 300 maximum word count*):

The City of Missoula (City) Stormwater Utility (Utility) oversees the management and maintenance of stormwater infrastructure, facilitating the flow of water out of the right-of-way towards infiltration or established surface waters. Presently, only 30% of the stormwater asset inventory has been georeferenced. The Utility aims to boost this percentage by 20% annually for the next three years through the implementation of the Stormwater Information for Tomorrow (SWIFT) project. This initiative is designed to enhance local drainage capacity understanding, integrate stormwater considerations into capital improvement projects, and broaden public access to accurate drainage data.

The City presently provides public-facing maps, including a stormwater map delineating ownership and locations of all stormwater assets within city limits. Additionally, the City's GIS Services division manages internal maps utilizing the same stormwater layer for interdepartmental purposes. These internal maps play a crucial role in project formulation, maintenance tracking, and partnership development. However, data inaccuracies in the stormwater layer persist due to various factors. Stormwater GIS services were initiated in 2020, referencing assets from historical paper records and converted CAD files. Despite yearly efforts to enhance data integrity, progress is constrained by limited staff capacity. An infusion of MGIA funds would significantly expedite the Utility's goal of achieving complete data accuracy.

Funding Partners: *(required for each partner, copy box as needed)*	
Name of Contact:	N/A
Name of Agency:	N/A
Street:	N/A
City:	N/A
County:	N/A
State:	N/A
Zip Code:	N/A
Contact Email Address:	N/A
Contact Phone Number:	N/A

SECTION 2 – RELEVANCE

The City of Missoula (City) Stormwater Utility (Utility) manages a system that is separate from the public sewer system and consists of physical facilities designed to treat, collect, and transport stormwater, including curbs, inlets, culverts, dry wells, etc. The proposed Stormwater Infrastructure for Tomorrow (SWIFT) aligns seamlessly with the objectives of the Montana Land Information Act, which aims to establish a standardized, sustainable approach for the digital collection, maintenance, and dissemination of information regarding both natural and artificial land characteristics in Montana. This alignment has been evident since the inception of the stormwater asset layer, designed for internal and public sharing. The Utility now seeks funding to enhance accuracy by mapping all dry wells, inlets, and gravity mains within the City.

In accordance with the Land Plan Priorities, specifically "Local, Regional, and Tribal GIS Support," the city actively manages geospatial data that contributes to a robust Montana GIS system, thereby advancing the governance of Missoula. SWIFT addresses the Tier 2 grant priority of "Development of base geographic data layers," with a specific emphasis on "support activities, including but not limited to land planning, infrastructure, water resources, and asset management." SWIFT will comprehensively support all outlined activities within the designated area of interest.

The use of GIS mapping is imperative for effective land use in municipal and economic development planning. Stormwater data layers play a pivotal role in engineering design, operational management, and the formulation of maintenance plans. By collecting stormwater facility data, the project aims to establish a consistent, manageable, and accessible format that is indispensable for meeting the evolving needs of the Missoula community. SWIFT is poised to contribute significantly to the enhancement of the city's geospatial infrastructure, aligning with the overarching goals of the Montana Land Information Act and supporting critical activities essential for sustainable development.

SECTION 3 – PUBLIC BENEFIT

The Utility's public-facing map, accessible here, serves as a vital tool for the community, enabling residents to track and report drainage concerns, understand local infrastructure, and inform private development projects. Within city limits, there are more than 8,000 dry wells and 1,500 storm inlets directing stormwater to the Missoula Valley aquifer or surrounding water bodies. The Utility relies on public engagement to promptly alert staff to localized flooding incidents, given the extensive infrastructure the city manages. Unfortunately, the current stormwater asset map lacks reliability in accurately depicting asset locations, hindering the public's ability to convey crucial information. Increased field capacity, facilitated by the proposed project, will enhance staff understanding of stormwater issues throughout the Missoula community and contribute to improved asset records.

Publicly reported drainage concerns play a pivotal role in tracking the impact of climate change on stormwater system delineation in targeted areas. Utility staff have observed a rise in high-intensity, short-duration storms that overwhelm stormwater systems, potentially leading to property damage, unsafe conditions, or exacerbating emergencies. Managing the stormwater asset database is in the public interest as it actively contributes to the prevention of flooding, ensuring the safety, and well-being of both private and public properties. In essence, the proposed project not only addresses immediate concerns but also serves the broader public interest by fostering community resilience in the face of evolving climate patterns and ensuring a more reliable and responsive stormwater management system.

SECTION 4 – PROJECT MANAGEMENT AND ORGANZIATIONAL CAPABILITY

The success of SWIFT (relies heavily on effective project management and the utilization of organizational capabilities. This collaborative initiative between the Utility, City GIS Services, and a contracted GIS professional is led by Lyndsey Holloway, the primary project manager. Lyndsey, currently serving as the Program Coordinator for the Utility, will assume the responsibility of orchestrating all project aspects, including workflow organization, intern management, communication facilitation with contractors, and updating data layers. In tandem, Tracy Campbell, the Utility Superintendent, and secondary project manager, will oversee the entire division. Lyndsey will routinely report to Tracy on project progression and implementation. This dynamic managerial structure ensures a seamless flow of communication, efficient coordination of tasks, and effective oversight of SWIFT.

City GIS services will support GPS reconciliation efforts through technical assistance and database management. City GIS Services built the GIS map layers for a multitude of purposes across City departments. It is customary for their division to quality control data before it is shared within the authoritative database. This collaborative approach ensures that SWIFT benefits from a wealth of experience, technical expertise, and effective project management, laying the foundation for a successful stormwater management initiative in Missoula. Moreover, this collaborative effort extends beyond internal stakeholders. The project actively engages with external entities, including the Big Sky Watershed Corps, the Montana Conservation Corps, and a qualified GIS contractor. This engagement establishes clear communication channels for collaborative problem-solving, insights sharing, and addressing challenges collectively. It also allows for comprehensive capacity building as training programs are instituted, ensuring that all project participants are equipped with the necessary skills for successful implementation.

As an integral part of SWIFT, comprehensive training programs are designed to empower members of the Big Sky Watershed Corps and Montana Conservation Corps with the necessary skills and knowledge for safe and effective work in the right-of-way. These training initiatives will encompass rigorous instruction on safety protocols, ensuring that interns are well-versed in best practices when working in the field. Additionally, training sessions will delve into the practical applications of ArcGIS Pro, Field Maps, and Trimble GPS devices. Interns will undergo hands-on sessions to familiarize themselves with these essential geospatial tools, enabling them to proficiently collect, manage, and analyze stormwater data. The goal is to equip these individuals with a comprehensive skill set that not only prioritizes safety in the field but also enhances their GIS capabilities, contributing to the overall success of SWIFT and fostering their professional development within the realm of stormwater management.

Financial management is a crucial aspect, and the project budget will be meticulously handled. Regular reviews and updates will track expenses, and transparent financial reporting mechanisms will be implemented to ensure accountability and compliance with funding guidelines. Acknowledging potential risks, SWIFT will develop a comprehensive risk management plan to address challenges associated with data collection, equipment procurement, and collaboration efforts. This proactive approach will enhance the project's adaptability and resilience, contributing to its overall success. The organizational capability of the Utility will receive a substantial boost through SWIFT. Leveraging technology, optimizing data management processes, and fostering a culture of continuous

improvement are integral components of this enhancement. This strategic approach ensures the Utility's long-term sustainability in managing stormwater infrastructure.

SECTION 5 – SCOPE OF WORK

Scope Of Work Format:

Goal 1. Expand City Stormwater GIS Capacity
- Objective 1.1. Increase Equipment Inventory
  - Task 1.1.1. Buy additional Trimble R2 GNSS receiver – buying a GPS unit so that two crews can collect data at once.
    - -Completion Date: July 15, 2024
  - Task 1.1.2. Buy field collection device – buying another iPad for field collection.
    - -Completion Date: July 15, 2024
- Objective 1.2. Purchase other relevant field gear.
  - Task 1.2.1. Acquire necessary field gear for GPS activities – Buy tripod, tripod holder, Esri subscriptions, and data services.
    - -Completion Date: July 15, 2024
- Objective 1.3. Train Big Sky Watershed Corps member
  - Task 1.3.1. Train BSWC member – Train BSWC member on equipment, workflows, and ROW safety
    - -Completion Date: November 1, 2024
- Objective 1.4. Hire and Train Montana Conservation Corps Fellow
  - Task 1.4.1. Enroll for a MCC fellow – Sign up for program with MCC.
    - -Completion Date: January 15, 2024
  - Task 1.4.2. Conduct candidate interviews – In participation with MCC, compatible candidates will be matched with our office with several applicants to choose and interview.
    - -Completion Date: May 1, 2024
  - Task 1.4.3. Train MCC fellow – train MCC member on equipment, workflows, and ROW safety
    - -Completion Date: June 1, 2024
- Objective 1.5. Work with GPS Contractor
  - Task 1.5.1. Contract additional GPS services – Hire qualified GIS contractor, local to Missoula, to
    - -Completion Date: December 1, 2024

Goal 2. Update and publish edits to authoritative database.
- Objective 2.1. Coordinate with GIS Services to maintain system updates.
  - Task 2.1.1. Proghram Coordinator to work in tandem with the GIS services department to update stormwater databases as field information becomes available.
    - -Completion Date: June 30, 2025

SECTION 6 – BUDGET JUSTIFICATION & BUDGET TABLE

Task 1.1.1. Buy additional Trimble R2 GNSS receiver:

- Cost: $17,200
- Justification: Acquisition of an additional Trimble R2 GNSS receiver is essential to enable simultaneous data collection by two crews, thereby increasing operational efficiency. Estimate provided by Frontier Precision, the city's contractor for GPS related devices.

Task 1.1.2. Buy field collection device (iPad):

- Cost: $500
- Justification: Purchase of an additional iPad for field collection purposes, supporting the expanded field operations, enhancing data collection capabilities. Price was determined by checking inventory at bestbuy.com.

Task 1.2.1. Acquire necessary field gear for GPS Equipment:

- Cost: $832.95
- Justification: Procurement of essential field gear including a tripod, device attachment, and data services to ensure a comprehensive and efficient GIS data collection process. Estimates from providers Allen Precision Equipment, Frontier Precision, and the City of Missoula HR billing department for service packages.

Task 1.5.1. Contract additional GPS services:

- Cost: $30,600
- Justification: Hiring a qualified GIS contractor, local to Missoula, for additional GPS services, supplementing in-house capacity for specialized tasks. Quote received by Eli & Associates on February 27, 2024 as follows:
    - 1 person crew = $170 /hour x 180 hours will yield approximately 1,000 assets georeferenced.

Task 2.1.1. Update authoritative database:

- Cost: $3,520
- Justification: Collaboration with GIS Services for database updates, ensuring the accuracy and relevance of the stormwater GIS data. Cost estimates based on Program coordinator's hourly wage of $22/hr and an estimate of time contributed to reconciliation.

City of Missoula	MLIA GRANT DETAILED BUDGET TABLE				
Tasks	**Category Type**	**Funding Source**	**Hours**	**Rate**	**Cost**
Task 1.1.1 - Purchase Trimble R2 GNSS receiver Device	Equipment	MGIA Grant Funds			$ 17,200.00
Task 1.1.2 - Buy field collection device (iPad)	Equipment	MGIA Grant Funds			$ 500.00
Task 1.2.1 - Tripod	Equipment	MGIA Grant Funds			$ 136.95
Task 1.2.1 -Device holder	Equipment	MGIA Grant Funds			$ 276.00
Task 1.2.1 - Data plan for device	Equipment	MGIA Grant Funds	12	$ 35.00	$ 420.00
Task 1.3.1 - Big Sky Watershed Corps member	Personnel (incl. fringe benefits)	City of Missoula In-Kind			$ 2,900.00
Task 1.4.1 - MCC Fellow	Personnel (incl. fringe benefits)	City of Missoula In-Kind			$ 12,500.00
Task 1.5.1 - GPS contractor	Contractual	MGIA Grant Funds			$ 30,600.00
Task 2.1.2 - Updating Authouritative Database	Personnel (incl. fringe benefits)	MGIA Grant Funds	160	$ 22.00	$ 3,520.00
		Totals:	172		$ 68,052.95

Section 7 – Project Sustainability

The proposed project represents an extension and enhancement of the services currently offered by the Utility. Since 2020, internal systems and workflows have been successfully established, ensuring the ongoing provision of essential services even in the absence of grant funding. While the internal processes will persist, the infusion of MGIA funds is crucial for accelerating the timeline of stormwater asset reconciliation.

The sustainability of the project is rooted in its capacity to build upon existing foundations. MGIA funds will play a pivotal role in expediting the reconciliation of all stormwater assets, providing the Utility with a comprehensive and up-to-date database. Once this initial reconciliation is achieved, the utility is poised to maintain and update the data continuously. As the City undergoes further developments and additional stormwater infrastructure is constructed, the internal workflows will adapt and expand, ensuring the ongoing accuracy and relevance of the stormwater asset data.

Crucially, the primary project manager will actively collaborate with the Montana State Library to facilitate the publication of stormwater data. This collaboration not only enhances the project's visibility but also ensures the wider dissemination of accurate and current stormwater information. The partnership with the Montana State Library underscores the commitment to long-term sustainability and the integration of the project into broader regional and state-level initiatives. In summary, SWIFT not only bolsters the existing capabilities of the Utility but also lays the foundation for continued growth, adaptation, and collaboration, thereby ensuring the sustained impact of the project beyond the grant period.

SECTION 8 - RENEWABLE GRANT ACCOUNTABILITY

City of Missoula Stormwater Utility has not received funds from MGIA grant previously.

CITY OF MISSOULA
Public Works and Mobility-Engineering
1345 W Broadway
MISSOULA, MT 59802
(406) 552-6098

INVOICE 77850

INVOICE DATE	**12/7/2022**
AMOUNT DUE	**2,259.60**

INTERSTATE TRUCKING
5561EXPRSSSWAY
MISSOULA, MT 59808

AMOUNT PAID _____

MAKE CHECKS PAYABLE TO THE CITY OF MISSOULA
PLEASE DETACH AND RETURN WITH YOUR REMITTANCE

DESCRIPTION	AMOUNT
Expressway spill response cleanup	
1 Dump Truck for 2.5 hours	$108.18
1 Loader for 2.5 hours	$111.80
Total Amount Due:	$30.57
PAYABLE UPON RECEIPT	$658.74

Please Remit to: CITY OF MISSOULA
PUBLIC WORKS/STORMWATER
1345 BROADWAY STREET
MISSOULA, MT 59802

Authorizing Statement

I hereby certify that I have read the above application for the FY2025 MGIA Grant Program and 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.

Andrea Davis	Mayor
Applicant Authorized Signer Name	Title
DocuSigned by: Andrea Davis BEFC167DC9184B2...	3/12/2024
Signature	Date

Complete Grant Application package Received by:

Erin Fashoway	Montana GIS Coordinator
Erin Fashoway, MSL	Title
DocuSigned by: 898149F544564A6...	3/12/2024
Signature	Date

DocuSign

Certificate Of Completion

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Signer Events	Signature	Timestamp
Andrea Davis davisa@ci.missoula.mt.us Mayor Security Level: Email, Account Authentication (None)	DocuSigned by: Andrea Davis BEFC167DC9184B2... Signature Adoption: Pre-selected Style Using IP Address: 209.137.251.46	Sent: 3/8/2024 2:36:30 PM Resent: 3/8/2024 2:41:03 PM Viewed: 3/12/2024 11:03:31 AM Signed: 3/12/2024 11:04:00 AM

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Erin Fashoway efashoway@mt.gov Montana GIS Coordinator State of Montana Security Level: Email, Account Authentication (None)	DocuSigned by: 898149F544564A6... Signature Adoption: Drawn on Device Using IP Address: 161.7.39.7	Sent: 3/12/2024 11:04:01 AM Viewed: 3/12/2024 11:09:48 AM Signed: 3/12/2024 11:10:10 AM

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In Person Signer Events	Signature	Timestamp

Editor Delivery Events	Status	Timestamp

Agent Delivery Events	Status	Timestamp

Intermediary Delivery Events	Status	Timestamp

Certified Delivery Events	Status	Timestamp

Carbon Copy Events	Status	Timestamp
Andrea Davis davisa@ci.missoula.mt.gov Security Level: Email, Account Authentication (None)	COPIED	Sent: 3/12/2024 11:10:11 AM

Electronic Record and Signature Disclosure:
Not Offered via DocuSign

Carbon Copy Events	Status	Timestamp
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Witness Events	Signature	Timestamp

Notary Events	Signature	Timestamp

Envelope Summary Events	Status	Timestamps
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Envelope Updated	Security Checked	3/8/2024 2:41:02 PM
Certified Delivered	Security Checked	3/12/2024 11:09:48 AM
Signing Complete	Security Checked	3/12/2024 11:10:10 AM
Completed	Security Checked	3/12/2024 11:10:11 AM

Payment Events	Status	Timestamps