

(DRAFT) MEMORANDUM OF AGREEMENT (10-26-2023)

between

MISSOULA COUNTY

THE CITY OF MISSOULA

MISSOULA CONSERVATION DISTRICT

and THE CLARK FORK COALITION

VISION AND STRATEGY FOR RESTORING GRANT CREEK

This Memorandum of Agreement (hereinafter referred to as “Agreement”) is entered into this ___ day of November, 2023, by and between Missoula County, located at 200 West Broadway, Missoula, MT 59802; the City of Missoula, located at 435 Ryman Street, Missoula, MT 59802; the Missoula Conservation District, located at 1075 South Ave. W., Suite 3, Missoula, MT, 59801; and the Clark Fork Coalition, located at 140 South 4th Street West, Suite 1, Missoula, MT 59801, collectively referred to as the “Parties.”

The purpose of the Agreement is to formalize the Parties intent to collaborate on efforts to restore and conserve lower Grant Creek as a clean, healthy, natural stream using the “Vision and Strategy for Restoring Grant Creek” (shown in Exhibit A) as guidance.

WHEREAS, Missoula’s population continues to grow, and the area around lower Grant Creek is a focal area for industrial, commercial and residential growth; and

WHEREAS, ongoing growth will increase impermeable surfaces and potential non-point source pollution and flood risks due to increased stormwater runoff; and

WHEREAS, lower Grant Creek has suffered significant degradation due to historic land uses, including water quality problems, dewatering, channelization, loss of connection to its floodplain, and loss of natural vegetation; and

WHEREAS, improvement of roads, utilities and other infrastructure, and conversion of many agricultural operations near Grant Creek to other land uses, offers an opportunity to simultaneously address certain lower Grant Creek flood, water quality, channelization and fish and wildlife habitat degradation problems; and

WHEREAS, Missoula’s population continues to seek better recreation and access opportunities near our City’s streams and rivers; and

WHEREAS, certain Missoula landowners including the Missoula Airport and others, wish to maintain open space near Grant Creek for aircraft safety, for agricultural purposes, or for public trails, or otherwise; and

WHEREAS, the Grant Creek Working Group formed in 2022, and has brought together a variety of stakeholders, including landowners, business interests, homeowner groups, non-profits and local government agencies interested in efforts to restore and conserve Grant Creek; and

WHEREAS, Grant Creek Working Group developed recommendations for the City of Missoula's Horseshoe Bend channel improvement project on lower Grant Creek, and a broader "Vision and Strategy for Restoring Grant Creek," which applies to the lower six miles of Creek; and

WHEREAS, the Parties desire to work collaboratively to determine the scope, scale, funding mechanisms and respective roles necessary to carry out the "Vision and Strategy for Restoring Grant Creek (See EXHIBIT A)."

WHEREAS the Parties recognize that Grant Creek above Interstate 90 is a high-quality riparian corridor and a healthy cold-water, trout stream, and connecting that section of the watershed to lower Grant Creek with channel and floodplain re-naturalization improvements could have major benefits on fish and wildlife, on flood control, on water quality and on our community as a whole.

NOW, THEREFORE the Parties mutually agree to work collaboratively beginning in January 2024 to plan and execute specific projects to fulfill the Vision for restoring and conserving the lower six miles of Grant Creek, from Interstate 90 to the Clark Fork River. The Parties will meet quarterly with the Grant Creek Working Group to share information, receive feedback, and coordinate execution of the goals of this MOA, and will convene a workshop every five (5) years to evaluate progress. The Parties will develop an initial 5-year Work Plan by December 31, 2024 to include specific projects and funding estimates based on the "Vision and Strategy for Restoring Grant Creek," which includes the following considerations:

1. **Scope, Scale and Priorities:** Determine the best opportunities to improve the quality of the lower Grant Creek watershed, for protecting this waterbody and the community from ongoing degradation and developing threats. Establish the key criteria used to choose initial projects. Specify how the "Vision and Strategy for Restoring Grant Creek" will inform the Work Plan and subsequent planning.
2. **Funding Strategy:** Estimate how much the distinct elements of the planning will cost. Determine what financial resources each partner can bring to the effort, and from what sources. Determine if other partners are necessary to begin the next stages each project. Specify what types of match the funding entities require, to facilitate coordination.

3. **Roles and Responsibilities:** Determine which entity or entities can be fiscal sponsors, and take the lead on specific priorities or projects. Establish which partners have human resources available to staff this planning work, or to hire consultants. Determine what types of outreach and education are required in the affected communities, and how that can be executed. Establish the continuing role of the Grant Creek Working Group in community participation.

4. **Timing:** Establish a timeline for developing the next set of lower Grant Creek projects.

5. **Other Items:** Explore what other key collaboration, conservation or recreation efforts should be considered for incorporation into the Work Plan for lower Grant Creek.

LEGAL EFFECT OF AGREEMENT

The Agreement is intended to establish the mutual agreement, commitment and understanding among the Parties for the execution of the Vision and Strategy.

PRINCIPAL CONTACTS, EFFECTIVE DATE AND SIGNATURES:

This MOA shall be effective upon signature of the Parties' authorized officials. It shall be in force from such date forward, with the option to modify during five-year evaluation workshops. All Parties indicate Agreement with this MOA by their signatures.

MISSOULA COUNTY:

Commissioner Josh Slotnick, Chair:

_____ Date: _____

Commissioner Juanita Vero:

_____ Date: _____

Commissioner Dave Strohmaier:

_____ Date: _____

CITY OF MISSOULA (City Clerk and Mayor):

Marty Rehbein, City Clerk:

_____ Date: _____

****, Mayor of Missoula:

_____ Date: _____

MISSOULA CONSERVATION DISTRICT:

Tim Hall, Board Chairman:

_____ Date: _____

CLARK FORK COALITION :

Karen Knudsen, Executive Director:

_____ Date: _____



VISION AND STRATEGY FOR RESTORING GRANT CREEK

Grant Creek Working Group

October 23, 2023

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Executive Summary

Grant Creek is Missoula’s “forgotten wilderness stream,” an exceptionally beautiful and diverse tributary watershed to the Clark Fork. However, historic land uses have fragmented Grant Creek and accelerating development threatens to overwhelm lower reaches. The following Vision and Strategy outlines a path for conservation, restoration, and stewardship of Grant Creek.

In creating the *Sx^wtpqyen Master Plan*, the City and County of Missoula recognized the complex challenges facing Grant Creek and the need for conservation. The City and County requested a community-led working group provide guidance for restoring and protecting Grant Creek. In response, homeowners, businesses, rural landowners, nonprofits, and key local and state government agencies formed the collaborative Grant Creek Working Group. These diverse stakeholders, concerned that the rapid growth of Missoula could permanently damage the integrity of the Grant Creek watershed, collaborated to articulate a vision of a healthy stream flowing from its headwaters through the western edge of the city all the way to the confluence with the Clark Fork.

To encourage a holistic, integrated, and durable restoration and conservation approach for Grant Creek, the Grant Creek Working Group developed a vision of Grant Creek as a focal point of our community, a green natural corridor connecting our neighborhoods and wild habitat areas. The working group identified that we collectively value a clean, healthy stream that protects nature, ensures safe flood control, and provides respite and recreation where appropriate for our community and future generations. The group outlined the following strategies to actualize this vision and uphold the values of the community.

Restore and Conserve Ecosystem Function

STRATEGIES: Agencies and partners will:

- 1.1. Participate in collaborative planning, project development and fund-raising to restore Grant Creek with a diverse array of stakeholders, such as those represented in the Grant Creek Working Group.
- 1.2. Use natural streambank and channel design to create a stable, functional channel and floodplain in restored sections of Grant Creek.
- 1.3. Create a broad natural riparian and floodplain corridor to protect water quality, dissipate flood energy, and filter stormwater.
- 1.4. Enhance fish and wildlife habitat and connectivity from the mouth of the Creek to the headwaters in the Wilderness.

Promote Community Needs

STRATEGIES: Agencies and partners will:

- 2.1. Create recreational assets, particularly trails, that complement existing opportunities and infrastructure to connect communities along Grant Creek.
- 2.2. Integrate City-County-Conservation District policy on floodplain management, stormwater management, water quality, riparian areas, and open-space maintenance in the Grant Creek watershed.
- 2.3. Ensure long-term maintenance of bridges, flood-control infrastructure, floodplains, and channels.
- 2.4. Conduct a comprehensive study of flood risks in the lower Grant Creek watershed to support appropriate development (examples: International Bridge, Grant Creek Crossing, Mullan Trail)
- 2.5. Provide active education and outreach on stream health needs, regulations, public safety, and maintenance agreements with developers, business owners, community members, and media.
- 2.6. Provide clear guidelines and management agreements for creek-front business owners to encourage conservation and restoration of Grant Creek while relieving conflicts.

This document is an essential element of the *Memorandum of Agreement for Restoring Grant Creek*. Together, these documents call for Missoula's leaders to:

1. Assure development is compatible with ecological and hydrologic requirements of a healthy Grant Creek as it flows through this rapidly urbanizing landscape
2. Invest in collaborative restoration of degraded stream segments
3. Commit to future management of Grant Creek
4. Provide a successful example of urban watershed protection in this community.

Successful execution pre-supposes commitment and effective collaboration among local government agencies, landowners, businesses, and nonprofit organizations. We deliver this Vision and Strategy to the City of Missoula, Missoula County, Missoula Conservation District as a first step in securing local government commitment.

Introduction

Grant Creek is an important but often overlooked tributary to the Clark Fork of the Columbia River near Missoula, Montana. Flowing down from clean, cold headwaters in the Rattlesnake Wilderness, Grant Creek maintains the characteristics of a healthy native trout stream through the Lolo National Forest and for several miles on private land before encountering a gauntlet of human impacts. Multiple irrigation diversions, an interstate highway culvert, commercial development, bridges to accommodate roads, parking lots, a major railroad, several miles of ditch through agricultural and suburban landscapes, and flood control features interfere with the stream.

Clark Fork Coalition and the University of Montana's 2021 *Grant Creek Riparian Assessment* found that the lower six miles of the Grant Creek drainage—all segments downstream of Interstate 90—are significantly degraded by historic land uses, currently deteriorating, and at risk for further degradation from ongoing development.

Purpose and Scope

The purpose of this *Vision & Strategy for Restoring Grant Creek* is to guide locally driven stream restoration, conservation, and stewardship efforts on Grant Creek. It is a key element for the *Memorandum of Agreement* formalizing the intent of the City and County of Missoula to engage in long-term coordination with the Grant Creek Working Group and other stakeholders in the protection and restoration of the lower Grant Creek watershed.

The geographic scope of this document is the lower six miles Grant Creek watershed downstream of Interstate 90. The document focuses on restoring and conserving this reach because of historic degradation and future development plans. However, the approach is grounded in a holistic watershed view that also seeks to strengthen the creek's connection to pristine headwaters.

Watershed Background

The Grant Creek watershed spans 30 square miles. The wilderness headwaters sustain robust habitat for native flora and fauna. The stream flows 18 miles from high mountain lakes through dense mountain forests, hillside grasslands, suburban residential areas, urban commercial-industrial areas, and irrigated agricultural lands to its confluence with the Clark Fork, a few miles west of downtown Missoula. Grant Creek is an ecologically significant stronghold for native cutthroat and bull trout. But the last 150 years of settler-colonization have degraded and altered the ecosystems and communities in its lower reaches, particularly downstream of Interstate 90.

Social and Ecological History

Although Grant Creek is now mostly confined to a single channel, in their survey, HDR Engineering reported, "historically, Grant Creek flowed down from its steep headwaters in the Grant Creek watershed and spread out into numerous channels over an alluvial fan in the western Missoula Valley" (HDR 2005, 13). Indigenous peoples stewarded this dynamic landscape since time immemorial. The Séliš, among other tribes, traveled and camped along Grant Creek, fishing, hunting, and harvesting. Their practices embedded cultural management and stewardship of the water and landscape resources.

The Lewis & Clark expedition, which paused on the banks of Grant Creek in 1806, catalyzed a wave of European settlement and American expansion, which dispossessed Indigenous tribes of their resources, stripped their rights of sovereignty, and marginalized their culture (CSKT 2005). Subsequent years of over appropriation of irrigation water, channelization of the stream, and industrial and suburban development, profoundly changed the character of the stream, resulting in numerous impairments to water quality, stream corridor connectivity, and natural function.

Overview of Current Issues

The Montana Department of Environmental Quality identified Grant Creek as an impaired stream and Montana Fish, Wildlife & Parks (FWP), and Missoula City/County named it a "Waterbody of Concern" (FWP 2005). Elevated nutrients levels (notably nitrates and nitrites), sedimentation and siltation, and chronic dewatering due to irrigation withdrawals contribute to poor water quality. Low flows and lack of shade cause high water temperatures. Other concerns include degraded aquatic and riparian habitat, loss of connectivity for migratory fish and loss of stream function, channelization and rip-rapped banks, and loss of natural riparian vegetation, and its associated shade, habitat, and bank stability functions.

The *Sx^wtpqyen Master Plan* and the Mullan BUILD grant dramatically increased attention to development potential in the lower Grant Creek watershed. Unfortunately, water quality and the ecological status of the creek itself were not initially a major focus of BUILD planning. Community groups pointed out that the fate of the creek within the Master Plan was unclear, and that serious risks could be precipitated by the planned development.

Grant Creek Working Group

In March 2022, the Grant Creek Working Group (GCWG) formed in response to concerns about the potential impact of development on the creek during early stages of the Master Planning process and the need for broad, coordinated conversations about the health and future of Grant Creek. Participants include conservation-minded leadership at the city and county levels, landowners, business groups, and nonprofits who are knowledgeable about the needs and opportunities surrounding the creek. The charter of the GCWG states:

The Grant Creek Working Group is being formed to capitalize on and amplify the current momentum for a revitalized Grant Creek, and to ensure that its restoration and protection is a central goal, not an afterthought, in the build-out of the lower Grant Creek Watershed.

The Clark Fork Coalition, a local nonprofit with a long history of protecting rivers and streams, facilitates the working group. Formal membership includes multiple City and County government staff; Montana Fish, Wildlife, & Parks staff; several key landowners along the creek; and other community stakeholders. The full membership list can be found in the appendices. Monthly meetings are open to the public.

A Vision and Strategy for Restoration

To create a holistic, integrated approach to conservation and management of the Grant Creek watershed, the following vision, values, and strategies help guide development near the creek and restoration below Interstate 90. Strategies are divided into four distinct geographic sectors to accommodate diverse land uses, issues, and opportunities.

Vision

We envision Grant Creek as a focal point of our community, a green natural corridor connecting our neighborhoods and wild habitat areas, and reflecting our collective values as a clean, healthy stream that protects nature, ensures safe flood control, and provides respite and recreation where appropriate for our community and future generations.

Fundamental Values

The vision for Grant Creek is driven by core values held by all the stakeholders in the Grant Creek Working Group. We value both the needs of the community and the restoration and conservation of the creek ecosystem. All the following strategies and goals flow out of these two fundamental values.

Restore and Conserve Ecosystem Functions

We are committed to a holistic watershed management approach that protects ecosystem functions and improves degraded stretches.

STRATEGIES: Agencies and partners will:

- 1.1. Participate in collaborative planning, project development and fund-raising to restore Grant Creek with a diverse array of stakeholders, such as those represented in the Grant Creek Working Group.
- 1.2. Create a broad natural riparian and floodplain corridor to protect water quality, dissipate flood energy, and filter stormwater.
- 1.3. Use natural streambank and channel design to create a stable, functional channel and floodplain in restored sections of Grant Creek
- 1.4. Enhance fish and wildlife habitat and connectivity from the mouth of the Creek to the headwaters in the Wilderness.

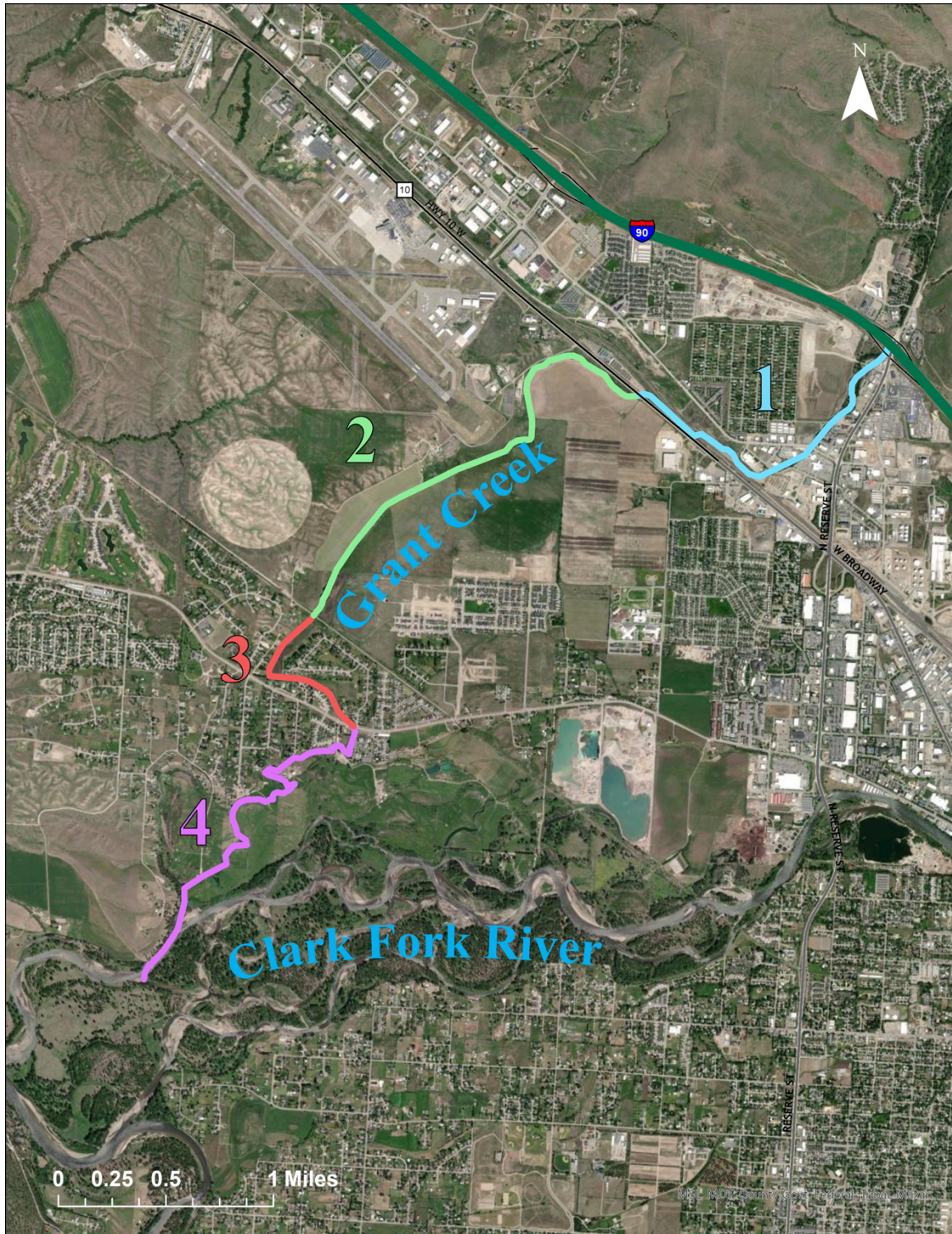
Promote Community Needs

We believe in proactive, inclusive management of Grant Creek that is responsive to the collective community.

STRATEGIES: Agencies and partners will:

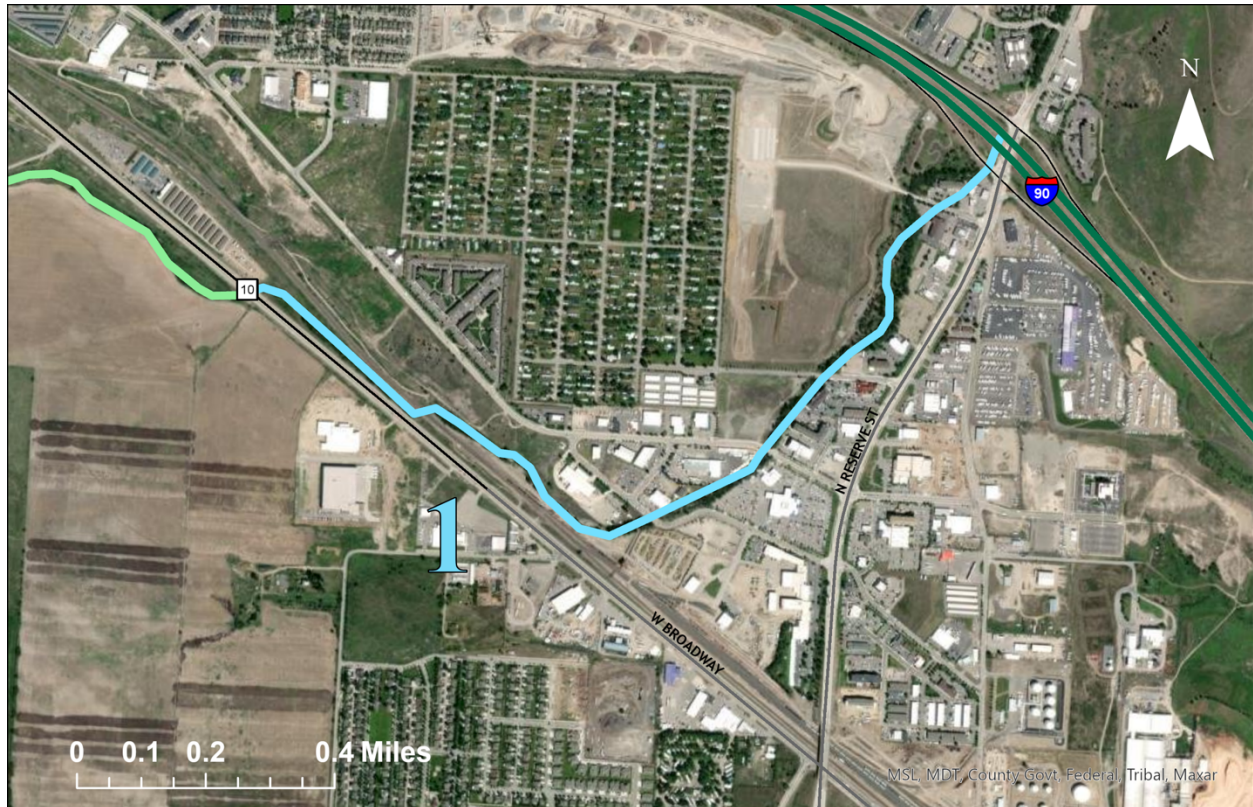
- 2.1. Create recreational assets, particularly trails, that complement existing opportunities and infrastructure to connect communities along Grant Creek.
- 2.2. Integrate City-County-Conservation District policy on floodplain management, stormwater management, water quality, riparian areas, and open-space maintenance to support appropriate development the Grant Creek watershed.
- 2.3. Ensure the safety and long-term maintenance of bridges, flood-control infrastructure, floodplains, and channels.
- 2.4. Provide active education and outreach on stream health needs, regulations, public safety, and maintenance agreements with developers, business owners, community members, and media.
- 2.5. Provide clear guidelines and management agreements for creek-front business owners to encourage conservation and restoration of Grant Creek while relieving conflicts.
- 2.6 Landowner and stakeholder participation in planning, project development, and funding.

Segment-Specific Strategies
Map of Lower Grant Creek Segments



Segment 1: Interstate 90 to Broadway

Map



Overview

This segment begins as Grant Creek emerges from a large culvert under Interstate 90 and continues 1.5 miles to its intersection with Broadway. The channel has significant floodplain encroachment by commercial development and the railroad, narrowing and hardening of the banks, five bridge crossings in varying design quality and condition, and two irrigation diversions with senior water rights. Present concerns include erosive banks, sediment transport imbalances, limited floodplain extent due to encroachment, and degraded fish and wildlife habitat. Fortunately, the presence of willing landowners and existence of nearly 25 acres of still-undeveloped floodplain offer several opportunities to significantly improve stream function.

The 15+ commercial landowners represent diverse interests along the creek. While the stream conditions, relevant regulations, riparian management plans, and current water rights remain obscure to many of the landowners, there is momentum behind several small-scale riparian habitat enhancement projects being implemented by the hospitality industry. There are limited recreational opportunities on the creek, but the opportunity to build trails that connect upstream and downstream amenities does exist.

Segment 1 Vision

A stable channel with perennial flow, a native plant riparian buffer and a greenway trail connecting existing amenities upstream and downstream. The landowners and agencies participate in coordinated stewardship of the stream corridor.

Key Segment 1 Value: Ecosystem Function

The specific ecosystem functions we value in this segment are a healthy riparian corridor that provides habitat and movement pathways for many species, natural channels and banks that minimize both unwanted erosion and aggradation, and adequate hydrologic capacity to help with flood control. These natural stream functions improve and protect water quality.

Strategies to Protect and Restore Ecosystem Function

The following reach-specific strategies align with the numbered overarching strategies that support our fundamental values.

Provide incentives and support to create the largest possible riparian buffer of diverse native vegetation. (1.1, 1.2)

- Quantify and share with stakeholders the benefits of a riparian buffer on water quality, hydrologic capacity, and flood impacts.
- Develop native riparian planting projects with cost-sharing and maintenance agreements.
- Vegetated riparian buffers minimize lawn grasses and invasive species.
- City and County riparian ordinances are aligned and enacted.

Local government addresses bank stability, stream sediment balance, and hydrologic capacity in development plans along Grant Creek. (1.3)

- Protect channel integrity and bank stability.
- Prioritize and pursue opportunities to create expanded floodplain on undeveloped properties that encroach on the channel.
- Stabilize banks with native shrub and plant species instead of riprap or other hardscaping.
- Development is ecologically compatible with connecting segments of Grant Creek

Fish and wildlife habitat, quality, and connectivity are considered in approvals of development plans along Grant Creek by local government. (1.4)

- Aquatic habitat for spring fish migration connects from the Clark Fork River to upper Grant Creek.
- Riparian buffers support the habitat and connectivity needs for a variety of species and life stages.
- Non-compatible wildlife is discouraged.

Key Segment 1 Value: Promote Community Needs

In Segment 1, we prioritize community needs for safe and functional infrastructure for bridges and streamside trails, an expanded trail system that connects amenities, and economic assets based on each business's needs. Landowners and stakeholders should be able to participate in planning, project development, and funding opportunities. In order to successfully balance community needs, comprehensive understanding of flood risks, management guidelines and agreements, and regulatory processes is vital. Broad community awareness of Grant Creek conservation needs and inherent values must be intentionally cultivated.

Strategies to Promote Community Needs

The following reach-specific strategies align with the numbered overarching strategies that support our fundamental values.

Create opportunities for a recreational and commuter trail along Grant Creek to be incorporated into existing trail networks. (2.1, 2.7)

- Diverse stakeholders develop a trail plan that prioritizes landowner interests and the creation of a public recreation asset.
- Build aesthetically pleasing trails that connects to other parts of the watershed.
- Emphasize public safety and control of illegal camping along this corridor.
- Address recreation impacts with appropriate infrastructure (fences, hardened pedestrian access, etc.)

Address major infrastructure issues to assure community safety. (2.2, 2.3)

- A comprehensive, publicly funded flood study is coordinated to understand the geomorphology and sediment transport issues, including all four existing bridges.
- Management and maintenance easements are employed, when possible, for ongoing maintenance of the stream channel and riparian area.
- City and County ordinances and management is aligned.

Local government supports the Grant Creek Working Group as a venue for stakeholder inclusion in the development and management of Segment 1. (2.4, 2.5, 2.6)

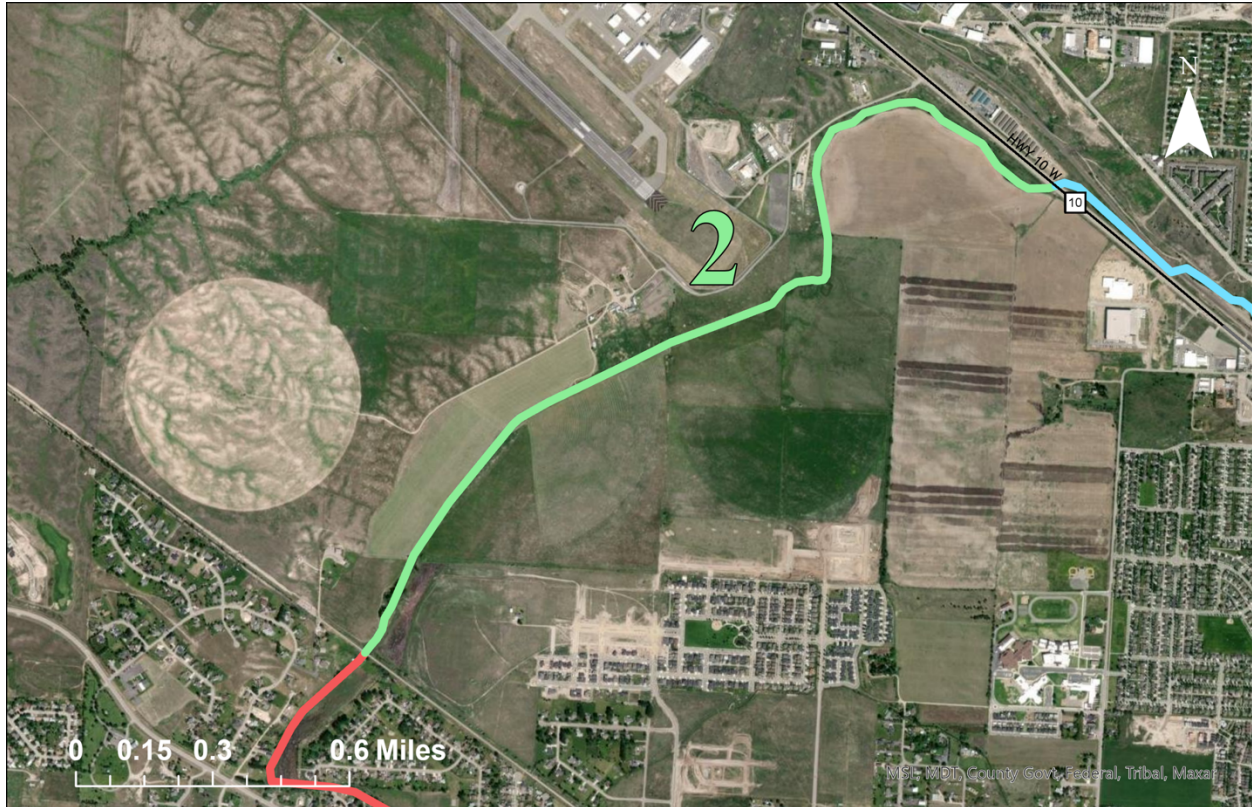
- Consistent and collaborative communication with landowners, businesses, and residents, including adjacent residential areas.
- Landowners and business managers are educated about 310 Law, zoning, and City and County floodplain regulations.
- Stakeholders collaborate on pro-active education and outreach about the stream, its history, and how to keep it healthy.

Work with the business community to co-create a green economic asset along the creek. (2.5, 2.6)

- Businesses along Grant Creek endorse, cultivate, and receive benefits from the aesthetic, social, and ecological values of the restored stream.
- Businesses along Grant Creek invest in stream health, including revegetation, weed control, and stormwater runoff management.

Segment 2: Broadway to Hiawatha Road

Map



Overview

This two-mile segment flows from Broadway to Hiawatha Drive. The channel here was relocated and channelized in the early 20th century to facilitate agriculture, sacrificing channel form, water quality, and fish and wildlife habitat. The highly incised channel functioned primarily as an irrigation water conveyance and drainway until the recent approval of large-scale development in the area.

The City of Missoula is using ARPA funds to implement a $\frac{3}{4}$ mile restoration of Grant Creek at Horseshoe Bend immediately downstream of Broadway and within the *Sxwtpqyen Master Plan* (SMP) area. The Grant Creek Working Group provided the City seven specific recommendations for making the channel and floodplain both a natural and community asset. The recommendations emphasized ecosystem functions, social and economic benefits, and holistic watershed planning for successful restoration.

The Missoula County Airport Authority (MCAA) acquired most of the land surrounding the Grant Creek channel in Segment 2 over the past two decades. By mandate through the Federal Aviation Administration, MCAA manages this open space in the interest of public safety, including reducing habitat for raptors and waterfowl given the risk of bird collisions with aircraft.

Stream re-naturalization may be possible in the airport area due to the significant open space available, but any restoration planning must prioritize the public safety constraints.

Segment 2 Vision

A low-flow channel and broad floodplain that supports native shrubs and sedges, stores floodwaters and lowers flood elevations, balances sediment transport, and provides a fish and wildlife movement corridor. The result provides safety for aircraft operations, a buffer from surrounding development, and meet the open space goals.

Key Segment 2 Value: Ecosystem Functions

In this second segment of Grant Creek, we especially value a naturally functioning floodplain with capacity for flood control and a riparian vegetation corridor through open space. The recommended strategies for this segment would help reinforce a natural, stable stream with minimal maintenance needs and would protect water quality.

Strategies to Protect and Restore Ecosystem Function

The following reach-specific strategies align with the numbered overarching strategies that support our fundamental values.

Provide incentives to create a broad, naturally functioning floodplain and riparian corridor. (1.1, 1.2)

- Quantify and share with stakeholders the benefits of a riparian buffer and floodplain on water quality, hydrologic capacity and flood impacts.
- Native riparian vegetation stabilizes banks and floodplain with minimal lawn grass and invasive species.
- Floodplain is periodically inundated to dissipate flood energy and capture pollutants.
- City riparian ordinances are enacted.

Apply natural streambank and channel design informed by technical expertise. (1.3)

- A flood study is coordinated to minimize flood risk and sediment maintenance.
- Prioritize and pursue opportunities to restore channel integrity and bank stability.
- Reference reaches and examples guide stream channel design.
- Restoration designs harmoniously connect to other segments of Grant Creek.

Provide fish and wildlife habitat connectivity, while discouraging wildlife species incompatible with airport operations. (1.4)

- Aquatic habitat for spring fish migration connects from the Clark Fork River to upper Grant Creek.
- Floodplain and riparian area are dominated by native riparian sedge, forb, and shrub species)
- Management plans exist for actively supporting appropriate habitat within the riparian buffer and discouraging non-compatible wildlife, especially raptors and waterfowl.

Key Segment 2 Value: Promote Community Needs

In Segment 2, we are committed to the safety of the airport and travelers. We believe landowners and stakeholders should be able to participate in collaborative planning, project development, and funding opportunities and the creek should be an economic asset to the businesses in this segment. To successfully balance community needs, comprehensive understanding of flood risks, management guidelines and agreements, and regulatory processes must be intentionally cultivated. We see great value in having a long-term monitoring and management plan for this section.

Strategies to Promote Community Needs

The following reach-specific strategies align with the numbered overarching strategies that support our fundamental values.

Create and manage a public recreation asset on accessible portions of Segment 2. (2.1)

- Recreation trails connect to nearby amenities, such as near Broadway, where appropriate for landowners.

Assure community safety by following Airport guidance on wildlife and habitat management. (2.3)

- Habitats for species which pose safety hazards to aircraft are minimized and actively managed.

Local government supports broad stakeholder inclusion in the development and management of Segment 2 of Grant Creek. (2.4, 2.5, 2.6)

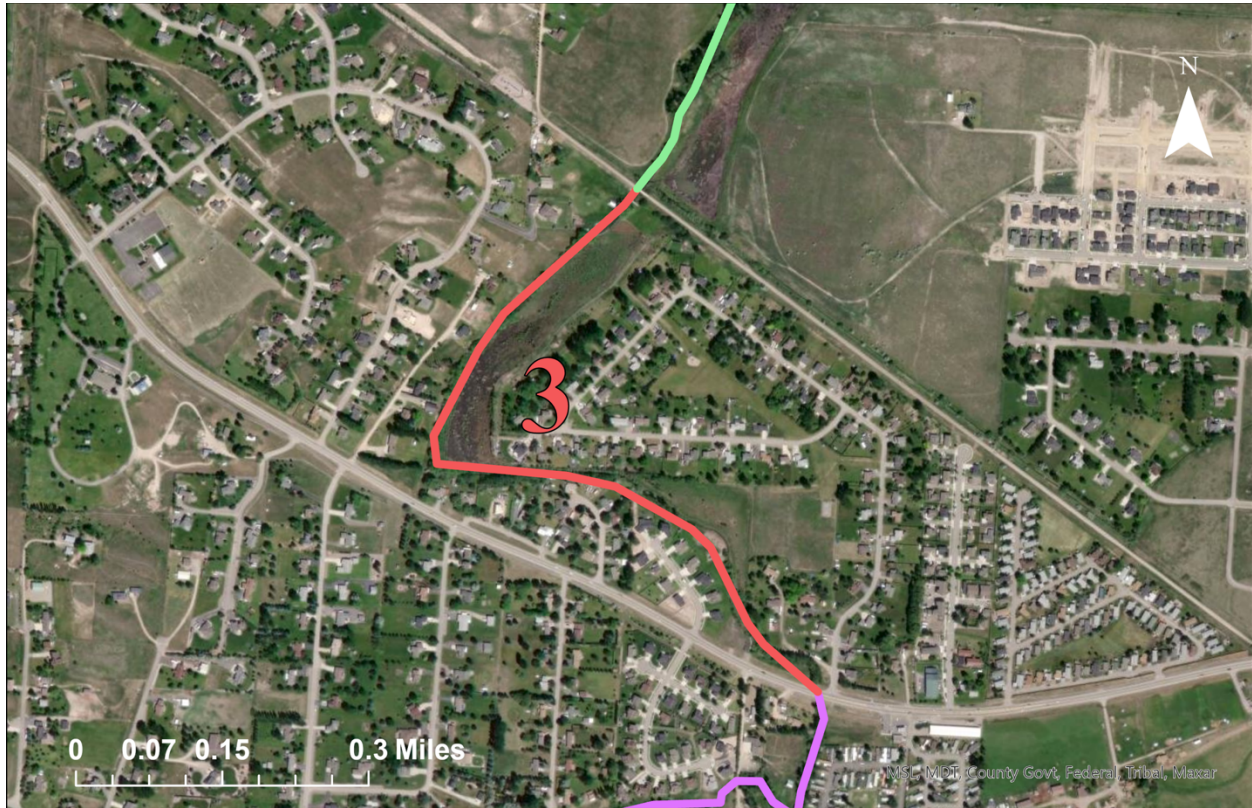
- Consistent and collaborative communication with landowners, businesses, and residents in Segment 2
- Landowners and business managers are educated about 310 Law, zoning, and City and County floodplain regulations.
- Stakeholders collaborate on pro-active education and outreach about the stream, its history, and how to keep it healthy.

Work with the business community to co-create business and economic assets along Grant Creek. (2.5, 2.6)

- Businesses along Grant Creek endorse, cultivate, and receive value from the aesthetic, social, and ecological values of the restored stream.
- Businesses along Grant Creek invest in stream health, including weeds, stormwater management and revegetation.
- The City assumes ownership or acquires maintenance agreements in the greenway on developed parcels (e.g., Horseshoe Bend) to ensure the long-term management, protection, and maintenance of the area.

Segment 3: Hiawatha Road to Mullan Road

Map



Overview

This segment has a complex history of channel alteration and social conflict. The existing channel is narrow, deep, erosive, and poses risks to human safety. There is a large retention basin at Mullan Trail which floods during spring runoff. This infrastructure provides protection from flooding, but its design is a source of dissatisfaction for some residents. Flood velocities are high, mosquitoes pose a nuisance to people and livestock, and sedimentation threatens the ongoing effectiveness of flood control efforts. Land ownership in this segment is primarily residential subdivisions. The Mullan Trail Homeowners' Association is a primary landowner in this segment, including the retention basin.

There are significant opportunities to improve stakeholder awareness of the creek and its ecological functions. Emerging conversations have discussed reconnecting the multiple strands of flow and establishing a natural and meandering low-flow stream channel through the retention basin. Partners have expressed interest in developing a comprehensive flood/stream management plan.

Segment 3 Vision

A community-generated restoration and management plan incorporating natural channel design and habitat connectivity while creating recreational amenities and addressing human health and safety concerns.

Key Segment 3 Value: Ecosystem Functions

In Segment 3, we are committed to pursuing a healthy riparian corridor and a natural, stable stream channel with minimal maintenance needs. These characteristics would help buffer high-velocity floods and protect water quality, both highly important needs in this area.

Strategies to Protect and Restore Ecosystem Function

The following reach-specific strategies align with the numbered overarching strategies that support our fundamental values.

Provide incentives to create a more naturally functioning riparian corridor. (1.1, 1.2)

- The benefits of a riparian buffer on water quality, hydrologic capacity, and flood impacts are quantified and shared with stakeholders.
- Agencies and partners collaborate to on cost-sharing and maintenance agreements.
- funding for project planning
- Floodplain of retention basin is periodically inundated, but often dry, mimicking natural conditions.
- Native riparian vegetation stabilizes new banks and floodplain while filtering stormwater runoff before it enters Grant Creek.

Use natural streambank and channel design informed by technical expertise. (1.3)

- A flood study is coordinated to understand sediment transport, flooding risk, and the benefits of a natural low-flow channel.
- Flows are conveyed through the current Mullan Trail retention basin area in a natural channel.
- Reference reaches, and examples, guide stream channel design.
- Restoration designs meaningfully connect to other Segments on Grant Creek.

Enhance fish and wildlife habitat and connectivity (1.4)

- A natural low-flow channel supports prolonged flow and optimum migratory fish movement during spring and summer.
- Riparian and floodplain vegetation support the habitat and connectivity needs for a variety of species and life stages (e.g., substantial shade and cover of the stream channel)
- Non-compatible wildlife (e.g., beaver) are discouraged.

Key Segment 3 Value: Promote Community Needs

Priorities in this segment are community safety, secure and functional infrastructure, and improved recreational assets. A comprehensive understanding of flood risks, management guidelines and agreements, and regulatory processes is necessary. Broad community awareness of Grant Creek conservation needs and the inherent values in this document must be cultivated. Landowners and stakeholders need access to resource manager expertise, and should be able to participate in collaborative planning, project development, and funding.

Strategies to Promote Community Needs

The following reach-specific strategies align with the numbered overarching strategies that support our fundamental values.

Create a public recreation asset. (2.1)

- A low-flow channel is compatible with walkable dry surfaces in the retention basin at Mullan Trail.

Assure community safety. (2.3)

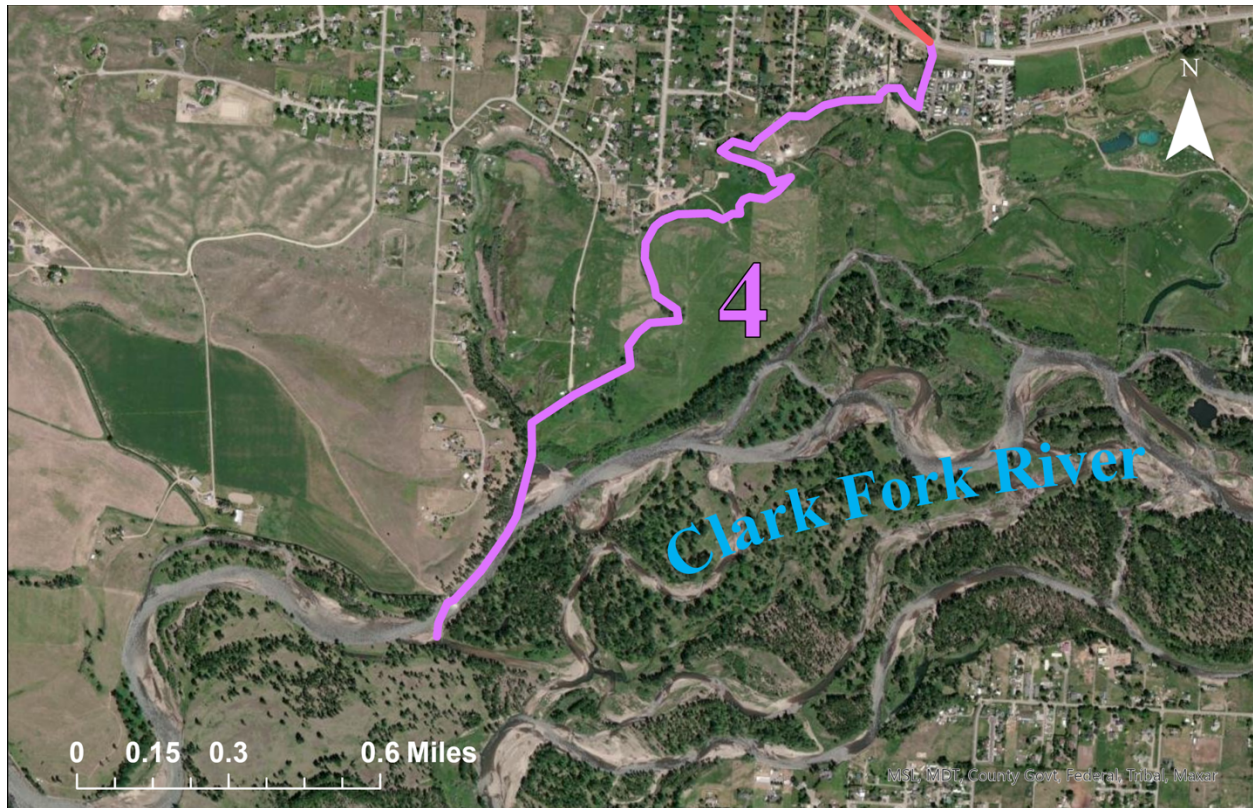
- Channels are designed to reduce seasonal flood challenges for adjacent landowners.
- Best practices and management plans support ongoing stewardship.
- Channels are designed to reduce pest nuisance (mosquitos, beavers, etc.)

Local government supports the Grant Creek Working Group as a venue for stakeholder inclusion in the development and management of Segment 3 of Grant Creek. (2.4, 2.5, 2.6)

- Government and landowners coordinate to synthesize existing management plans and develop a new one as needed.
- Landowners are educated about 310 Law, zoning, and City and County floodplain regulations.
- Stakeholders collaborate on pro-active education and outreach about the stream, its history, how to keep it healthy, and community interests and concerns.
- Public understanding of natural channel design, flood management, and aquatic and wildlife habitats is enhanced.

Segment 4: Mullan Road to Clark Fork River

Map



Overview

Segment 4 is a critical element of the Grant Creek watershed, given both its place at the confluence with the Clark Fork River, and its perennial flow. Several agricultural properties graze livestock along this Segment. Long term agricultural use has resulted in an over-widened channel and eroding banks, poor water quality, sedimentation, and diminished fish habitat. The channel just below Mullan Road has been straightened and encroached by development, and an overflow flood pipeline replaces part of the undersized channel.

A homeowner's association owns a significant part of the channel near Mullan Road, while the remainder is private agricultural land. Significant restoration opportunities exist on the wide and undeveloped floodplain which has perennial springs, and only a few landholdings. Several private agricultural owners are supportive of aquatic habitat restoration. Currently, local agencies like Missoula County and City Floodplain, the Missoula Conservation District, MT Fish, Wildlife, & Parks, and the Clark Fork Coalition are exploring opportunities with these landowners.

Segment 4 provides the opportunity to set the tone for restoration work in the watershed through effective landowner-led, collaborative projects. There is growing interest in a more ambitious and holistic stream re-naturalization that is compatible with landowner livelihoods.

Segment 4 Vision

The Creek's fish and wildlife habitat are restored, protected, and connected at the confluence with the Clark Fork River, while also supporting agricultural livelihoods and recreation.

Key Segment 4 Value: Ecosystem Functions

In the last segment of Grant Creek where it connects to the Clark Fork, our guiding values are a naturally functioning channel and floodplain that supports climate-resilient fisheries habitat providing seasonal refuge.

Strategies to Protect and Restore Ecosystem Function

The following reach-specific strategies align with the numbered overarching strategies that support our fundamental values.

Provide incentives for landowners to establish and maintain natural channels, streambanks, and riparian areas. (1.1, 1.2, 1.3)

- Agencies and partners collaborate to seek funding for project planning.
- Partners develop a natural channel restoration design using reference reaches.
- Best-practices support is available for livestock management compatible with a stable stream and healthy riparian corridor.
- Restoration designs connect compatibly across amenable private lands and to other segments of Grant Creek.

Enhance fish and wildlife habitat and connectivity (1.4)

- Improve seasonal fish passage and rearing and perennial refugia habitats .
- Enhance riparian shrub wetland habitat for wildlife and fish.
- Maintain wildlife habitat corridor with the Clark Fork River.

Key Segment 4 Value: Promote Community Needs

We also value the distinct community needs in this segment and believe it is important to sustain intact agricultural livelihoods, involve landowners and utilize their leadership, and actively educate the public. We also value recreation and prioritize the community need for access to state lands in this area.

Strategies to Promote Community Needs

The following reach-specific strategies align with the numbered overarching strategies that support our fundamental values.

Prioritize stakeholder inclusion in the design process, including homeowners' associations and agricultural landowners. (2.6)

- Coordinate with landowners to develop restoration and management plans.
- Create a comprehensive, integrated restoration plan for Segment 4.
- Design channels that protect adjacent landowners and reduce seasonal flooding challenges.

Conduct proactive education and outreach. (2.4)

- Educate the public on aquatic and wildlife habitat, including the ways beavers can positively and negatively affect the segment.
- Educate landowners about 310 Law, zoning, and City and County floodplain regulations.
- Increase interpretive signage at Fish, Wildlife & Parks Kelly Island Fishing Access Site regarding Grant Creek.

Conclusion

The Grant Creek Working Group, representing a wide variety of concerned community members who are especially impacted by decisions on the management of the Grant Creek watershed, worked collectively to create this holistic vision and practical strategies to guide restoration and future planning along the creek. Its successful execution requires effective collaboration between local government agencies, landowners, businesses, and nonprofit organizations committed to a healthy creek that sustains a thriving community.

We are hopeful that the respectful, effective relationships between stakeholders upholding the best interests of the community will continue as we work together to implement this vision. Grant Creek is a precious wilderness stream that offers enormous benefit and even greater potential. Right now, we have a moment of opportunity to protect and revive Grant Creek for fish, wildlife, and the people of the Missoula valley.

References

HDR Engineering, Inc. 2005. *Grant Creek Environmental Restoration / Flood Control*. February 2005.

Montana Fish, Wildlife & Parks (FWP). 2005. *FWP Dewatering Concern Areas*. Revised May 2005.

Confederated Salish & Kootenai Tribes of the Flathead Reservation, Montana. Salish-Pend d'Oreille Culture Committee Mont. Elders Cultural Advisory Council (Confederated Salish & Kootenai Tribes of the Flathead Reservation). 2005. *The Salish People and the Lewis and Clark Expedition*. Lincoln: University of Nebraska Press.

Appendices

Grant Creek Working Group Membership
Grant Creek Working Group Charter

Grant Creek Working Group Voting Membership

	Affiliation	Participant	Status
1	City of Missoula	Cassie Tripard (Floodplain)/Tracy Campbell (Stormwater) /Andy Schultz (Public Works)	Member
2	Missoula County	Chet Crowser/ Matt Heibel (Floodplain) / Water Quality District	Member
3	Montana FWP	Ladd Knotek	Member
4	Missoula Conservation District	Radley Watkins	Member
5	Missoula Airport Authority, landowner Segment 2	Brian Ellestad	Member
6	Reserve Street Working Group	Kevin Davis	Member
7	Highlander Beer, landowner Segment 1	Riley Egan	Member
8	Grant Creek Trails Association	Kim Birck	Member
9	Envirocon/Washington Corp, landowner Segment 1	Kris Kok	Member
10	Grant Creek Homeowner, Segment 3	John Drake	Member
11	Five Valleys Audubon	Rose Leach	Member
12	Riverwalk Estates, Segment 4	Randy Arnold	Member
13	Hotel Representative, landowner Segment 1	Courtney Szalay/ Tim Geisler	Member
14	Friends of Grant Creek	RT Cox	Member
Additional Options			
	Segment 4 stakeholder, Lower Grant Creek Agriculture	Dale Frey	Additional Option
	Segment 3 stakeholder, Homeowner	Kirby Campbell	Additional Option
	Landowners Segment 2	Perry & Chuck Thomas	Technical Advisor
	West Slope Chapter of TU	Invited	Additional Option
	Grantland HOA	Scott McNall	Additional Option
	UM Watershed Health Clinic	Vicki Watson	Additional Option

Proposed Final Membership
Additional Members and/or Technical Advisors

Grant Creek Working Group Charter

April 24, 2023

Background

Grant Creek is an ecologically significant trout stronghold on Missoula's west side that traverses wilderness, rural, residential, industrial, and agricultural lands on its 19-mile course to the Clark Fork River. Grant Creek begins high in the Rattlesnake Wilderness, but before the snowmelt of its headwaters reaches the Clark Fork, the stream runs the full gauntlet of human impacts and uses, which have significantly altered and degraded its lower reaches, particularly below Interstate 90. In its final miles, it literally disappears from view as it is ditched, confined by fill material and culverts; trampled by hooves, littered, and polluted; dewatered and all but fully depleted by the time it limps to its confluence.

Today, Missoula is experiencing explosive growth, and the lower Grant Creek Watershed is rapidly being converted from agriculture to subdivisions and commercial properties. This development pressure is particularly intense downstream of Interstate 90.

Fortunately, many factors have aligned in recent years to create a unique window of opportunity to bring about much-needed healing, recovery, and protection to Grant Creek. These factors include a community-driven vision for restoration captured in the *Sx^wtpqyen Master Plan (SMP)* and the Mullan BUILD grant (MBG); \$900K in ARPA funding for realignment and restoration of ½ mile of Grant Creek; conservation-minded leadership at the city and county levels; active engagement of local stakeholder groups who are knowledgeable about the needs and opportunities surrounding the creek; and strong partnerships with a shared restoration vision for Grant Creek and capacity to take action. The time is ripe, though the window of opportunity limited, to protect and restore the ecological integrity of Grant Creek and fortify its resilience to current and future threats.

Purpose

The Grant Creek Working Group (GCWG) is being formed to capitalize on and amplify the current momentum for a revitalized Grant Creek, and to ensure that its restoration and protection is a central goal, not an afterthought, in the build-out of the lower Grant Creek Watershed.

Key Responsibilities

The GCWG is being formed to complete the following tasks:

1. Ensure the aspirational vision for Grant Creek developed in the Master Plan (SMP), including channel restoration, riparian buffers, stormwater mitigation, and green infrastructure, becomes a reality on the ground, and expand this vision beyond the boundaries of the SMP area;
2. Support the City's ARPA-funded restoration of ½ mile of Grant Creek and promote the use of using natural channel design principles, so that the project can serve as a model for how to restore remaining sections of Grant Creek;
3. Serve as a clearing house for members to share information and coordinate on efforts to study, protect, and restore Grant Creek;
4. Host a series of workshops to share lessons and recommendations for ecologically sound urban stream restoration; and

5. Develop a consensus vision, strategy, and conceptual-level restoration plan for the six miles of Grant Creek between Interstate 90 and the Clark Fork River confluence, to be submitted to local government as the recommendations of the Working Group.

Membership and Voting

The GCWG will strive to be inclusive, and its meetings will be open to the public. Voting members will have key responsibilities and voting authority. All participants have an opportunity to shape proposals and provide feedback. But key decisions will be made by the voting membership (see “Decisions” below).

The size of the voting membership of GCWG will be between 12-16 members. The Group’s voting members will strive to represent a balance of geography and key interests, and they should have knowledge of Grant Creek. The voting membership should represent a broad array of interested parties on Grant Creek, including residents of the watershed, local businesses, and landowners along the creek, neighborhood associations, non-profit organizations, and local government representatives.

Local and state government agency representation will be limited to a total of five voting members, with two for the City of Missoula and one member for Missoula County, Missoula Conservation District, and Montana Fish, Wildlife, & Parks. Other agency staff are welcomed and encouraged to attend and contribute as resources and technical advisors.

A voting member will have specific member responsibilities. These include:

- Members will attend scheduled GCWG and will come prepared to the meetings. They will support the agenda and the functioning of the meeting.
 - Voting members will strive to attend all GCWG meetings and will appoint an appropriate replacement from their organization if they are unable to attend, and try to notify the Facilitator in advance of the meeting. Voting members who consistently cannot attend meetings may be replaced at the discretion of the voting membership.
- Members will complete assignments and attend committee positions that they have accepted.
- Members will conduct outreach to their organizations and other stakeholders, including sharing Working Group progress updates and soliciting feedback.
- Members will participate in consensus decision-making and faithfully execute their vote when necessary.
- Members will abide by the GCWG Norms and will work with each other to develop understanding and consensus in decision-making processes.

The voting membership may nominate and approve Co-Chairs in the future as needed. Co-Chairs responsibilities could include:

- Working with the GCWG Facilitator to set meeting agendas
- Resolving disputes between members
- Representing the GCWG to the media
- Representing the GCWG to other groups

The process for nominating new members will be the following:

- The GCWG will identify one voting member to make an initial contact to each of the potential nominees to determine interest, gather contact information, and explain about how the group functions.
- The potential nominee should then attend a GCWG meeting to get a sense of how the GCWG operates and to give everyone a chance to meet the potential nominee. At the introductory meeting, the nominee be given five minutes to introduce themselves, to share their background, and to answer member questions.
- The GCWG will make a decision about inviting the nominee to join the Group. Based on the outcome of that decision, the initial BDWG member who contacted the nominee will alert the new member of the Group's decision.

Meetings

The GCWG will meet monthly, or more frequently if circumstances dictate. The group began meeting in March 2022, and will strive to complete its five Key Responsibilities (above) in 18 months, working through September 2023. The group will reevaluate the need for continued meetings or other Group work at the end of this proposed timeline.

To accomplish its goals, the GCWG has formed four subcommittees that represent the four relevant segments of Grant Creek between Interstate 90 and the confluence with the Clark Fork River. These Segments are the following.

- Segment 1: I-90 to Broadway
- Segment 2: Broadway to Hiawatha Road
- Segment 3: Hiawatha Road to Mullan Road
- Segment 4: Mullan Road to Confluence

Meetings shall be open to the public who are encouraged to voice their views and opinions within the framework of the Working Group meeting structure.

Decisions

The Group will strive for full consensus on all formal recommendations and decisions. Consensus means the willingness to go along with a decision without opposing it, either in active support or in neutral assent. A fall-back position is to use a super-majority (>75%) vote, with a minority report.

Voting shall be conducted concurrently and in person whenever possible. The designated City and County membership seats must select their alternates prior to decisions. Other alternate votes will need approval prior to the meeting and as scheduled by the GCWG.

Host Organization

The Clark Fork Coalition (CFC) serves as the lead for the coordination, administration, and facilitation of the GCWG. CFC will host the meetings, provide meeting space or Zoom access, develop meeting agendas, facilitate the meetings, sponsor the urban stream restoration workshops, and take and distribute meeting minutes. All activities will be done in consultation with CGWG members. CFC will also take a lead role in conducting education and outreach activities in support of the GCWG's efforts.