2023 319 Application Form - General and Focus Watershed

General Information

Project Name: Restoring Riparian Function in the Bull River Watershed

Sponsor Name: Lower Clark Fork Watershed Group

Registered with the Secretary of State? Y

Registered with SAM? Y

UEI #: HGRQZJEB2DH5

Does your organization have liability insurance? Y

Primary Contact: Brita Olson

Title: Coordinator

Address: PO Box 1329

City: Trout Creek State: MT Zip Code: 59874

Phone Number: 406.203.4725

Email Address: brita@lcfwg.org

Signature: Brita J O

Signatory: Regan Plumb

Title: Board Member

Address: PO Box 1329

City: Trout Creek State: MT Zip Code: 59874

Phone Number: 208-263-9471

Email Address: regan@kaniksu.org

Signature: Regan Plumb

Technical and Administrative Qualifications

The Lower Clark Fork Watershed Group (LCFWG) will be both the project sponsor and project manager for this project, overseeing and implementing all tasks. LCFWG is a 501(c)3 nonprofit, with a board of directors elected by consensus from its watershed group members. LCFWG has a long successful history of partnering with state and federal agencies, private landowners and non-profits to identify and implement projects within the watershed and has developed trusting relationships with these various stakeholders. LCFWG Coordinator, Brita Olson, works closely with LCFWG partners on watershed projects throughout the Lower Clark Fork (LCF), with particular focus on the Bull River drainage over the course of her 7-year tenure. Olson managed the Dry Creek and Bull River Sediment Reduction and Re-vegetation Project funded through the 319 Program, completed in 2018, and the the Sims Meander Stream and Floodplain Restoration Project (Vermilion River), which will be completed in 2023, under Memorandum of Understandings (MOU) with the project sponsor, Green Mountain Conservation District (GMCD). Olson is an experienced funds administrator and bookkeeper, with a good track record for providing detailed and thorough quarterly, annual and final reports, as well as accurate and clear billing statements. In addition to her natural resource education (B.S. in Ecology and Conservation Biology) and experience, she is pursuing a B.S. in Accounting, expected December 2023, which will further support management of project funds in line with generally accepted accounting principles. For this project, the LCFWG will also be supported by close partnership from the Natural Resources and Conservation Service (NRCS) and GMCD.

Budget Summary: *Fields outlined in **black** on this page will auto-populate from other sections of the application form. Fields outlined in **red** on this page will not auto-populate. You must manually input the information for fields outlined in **red**.*

	319 Funding Request	Non-Federal Match	Other Funding	Total Cost
Education and Outreach Project	$ 5,000	$ 10,750	$ 0	$ 15,750
Administration	$ 5,836	$ 2,760	$ 0	$ 8,596
Project 1 Name				
Project Planning	$ 0	$ 8,540	$ 0	$ 8,540
Landowner Agreements	$ 0	$ 1,000	$ 0	$ 1,000
Project Implementation	$ 55,000	$ 94,024	$ 56,960	$ 205,984
Project Effectiveness Monitoring	$ 3,360	$ 0	$ 0	$ 3,360
Total	$ 58,360	$ 103,564	$ 56,960	$ 218,884
Project 2 Name				
Project Planning				$ 0
Landowner Agreements				$ 0
Project Implementation Project				$ 0
Effectiveness Monitoring				$ 0
Total	$ 0	$ 0	$ 0	$ 0
Project 3 Name				
Project Planning				$ 0
Landowner Agreements				$ 0
Project Implementation Project				$ 0
Effectiveness Monitoring				$ 0
Total	$ 0	$ 0	$ 0	$ 0
Project 4 Name				
Project Planning				$ 0
Landowner Agreements				$ 0
Project Implementation Project				$ 0
Effectiveness Monitoring				$ 0
Total	$ 0	$ 0	$ 0	$ 0
Grand Total	$ 69,196	$ 117,074	$ 56,960	$ 243,230

Education and Outreach

Developing good projects often requires a considerable amount of time and effort up front to build relationships and trust with individual landowners and stakeholder groups. It also requires adequate training for project sponsor staff (e.g., technical training, project management, public procurement, technical writing, etc).To promote the development of future projects, DEQ is encouraging project sponsors to use up to $5,000 in 319 funding for education and outreach to develop and capitalize on critical relationships and to improve organizational capacity. DEQ also encourages applicants to incorporate on-the-ground projects into education and outreach efforts through on-site demonstrations and project tours. 319 funding may not be used to pay for food and beverages, or for honorariums and gifts.

Activity (method of delivery)	Arbor Day Volunteer Events
Target Audience	Bull River Landowners and Community Members
Goals	Involve members of the local community in project implementation; Provide project tours; Demonstrate the importance of streamside and floodplain vegetation to water quality, fish and wildlife habitat, and long-term watershed resiliency.
Effectiveness Evaluation	# of volunteers # of trees planted

Activity (method of delivery)	Develop second film, a sequel to Roots: Bringing Back the Bull River (https://www.youtube.com/watch?v=vI7OkiNA9GQ) and distribute through community presentations/events (possible events include film festival at The Rex Theatre, Watershed Wednesday event at a brewery, and presentation(s) at the library)
Target Audience	Streamside landowners and community members, restoration implementers
Goals	Document updated revegetation techniques; demonstrate the value of robust riparian communities to water quality and overall watershed health; provide a deliverable with broader reach and applicable to communities and project implementers across Montana; share project outcomes and promote engagement at locations within Sanders County
Effectiveness Evaluation	# of viewers # of event attendants Entrance/Exit survey

Activity (method of delivery)	Project ASCENT High School Internship
Target Audience	Local students and parents, community members
Goals	Provide capacity for LCFWG staff to expand Bull River re-vegetation projects as well as provide natural resource education to local Project ASCENT campers by offering a high school internship for local youth. Interns will directly contribute to on-the-ground accomplishments of the project, but also provide peer education to other campers.
Effectiveness Evaluation	# of internships offered # of youth reached engaged in Project ASCENT's Bull River Base Camp program Entrance/Exit survey

319 Funding Request	Non-Federal Match	Other Funding*	Total
$ 5,000	$ 10,750		$ 15,750

Match Source	Avista's Clark Fork Settlement Agreement (ongoing funding, approved annually)	Secured	☑
Match Source	Conservation District Project Grant	Secured	☐
Match Source		Secured	☐

**Use this space to record any funding that will be used to support creation of the task deliverables, but will not be reported as match. The purpose of this information is to give application reviewers a clearer understanding of the total amount of funding required to complete a task.*

Project Administration

Project administration includes book keeping, invoicing, interim/annual/final report preparation, office supplies, rent, communications, etc. 319 funding applied to this task must not exceed 10% of the total amount of 319 funding requested, or $12,000, **whichever is lower**. Like all other tasks, payment is by reimbursement for actual expenses incurred.

319 Funding Request	Non-Federal Match	Other Funding*	Total Cost
$ 5,836	$ 2,760		$ 8,596

Match Source	Avista's Clark Fork Settlement Agreement (ongoing funding, approved annually)	Secured	☑
Match Source	DNRC Watershed Management and Conservation District Project Grant Programs	Secured	☐

**Use this space to record any funding that will be used to support creation of the task deliverables, but will not be reported as match. The purpose of this information is to give application reviewers a clearer understanding of the total amount of funding required to complete a task.*

Project 1

Project Form

A separate Project Form ***(including providing separate attachments)*** must be submitted for each project included in your application. Use the following examples to help determine when to lump and when to split projects. For additional assistance, contact Mark Ockey at mockey@mt.gov or 406-444-5351.

Splitting Examples (fill out multiple Project Forms)

- Stream restoration work occurring on two separate streams, on parcels owned by two separate individuals
- Two projects with significantly different sets of project partners
- Two projects that address substantially different pollution sources (e.g., one project moves a corral off of a streambank, and another removes mine tailings, with both projects being on the same property)

Lumping Examples

- Contiguous stream restoration work spanning multiple land parcels
- 3 projects that address similar sources of pollution on a single land parcel (e.g., moving a corral off a stream, implementing a grazing management plan, and relocating a manure storage facility out of the floodplain, all on the same ranch)

Project 1 Name Roots for Rivers

Project 1 - Problem Description

Select the watershed restoration plan (WRP) that your project will help implement.

Lower Clark Fork Tributary

NA — Letter of support from author entity attached? *(If no, explain why below.)*

Project applicant is the WRP author entity.

Waterbody name from the 2020 List of Impaired Waters	Bull River
Probable causes of impairment to be addressed	sediment and 'physical substrate habitat alterations'
Waterbody name from the 2020 List of Impaired Waters	
Probable causes of impairment to be addressed	

Name of healthy waterbody to be protected	East Fork Bull River
Description of identified threat to non-impairment status	Riparian logging by previous landowner, predating the Streamside Managment Zone law on private land , left streamside and floodplain areas dominated by reed canary grass in similar condition to areas of mainstem Bull River dominated by reed canary grass; tributary to impaired mainstem
Name of healthy waterbody to be protected	
Description of identified threat to non-impairment status	

Detailed Problem Description

Provide a detailed description of the nonpoint source pollution problem you are attempting to address. Be sure to include the following:

- Identify the primary types of pollution
- Identify the primary sources of the pollution
- Identify the root causes of the pollution
- Describe any previous work done to address the problem (who, what, where, when)
- Describe the impacts of the problem (who, what, where)

The Bull River (including East Fork Bull River) is the only remaining tributary to the Lower Clark Fork River between Cabinet Gorge and Noxon Rapids Dams that still supports migratory Bull Trout, a threatened species. The river also provides important habitat for other native fish, including Westslope Cutthroat Trout and Mountain Whitefish. Among the threats to the habitat of these native species is the decline in water quality due to a variety of human activities in the watershed, including historic land conversion, riparian logging, and the introduction of non-native vegetation, primarily reed canarygrass. These activities have had a transformative impact on the river, namely contributing to bank instability, causing erosion and elevated levels of sediment, and preventing the natural succession of native riparian plant communities. As a result, the mainstem Bull River is listed as impaired by sediment and for physical substrate habitat alterations affecting aquatic life.

The primary source of sedimentation in the Bull River that needs to be addressed is from unstable banks due to the loss of native, woody riparian vegetation and the introduction and spread of reed canarygrass. Reed canarygrass was introduced in the valley as a hay grass recommended to increase the productivity of sodden ground, but it has persisted and spread along the banks of the Bull River, creating a monoculture that outcompetes native plants. The dominance of reed canarygrass has reduced the overall structural diversity of the riparian zones along the river, including wetlands. Reed canarygrass has shallow roots – extending only 12-18 inches into the soil - that provide very little bank stability and shade when compared to native trees and shrubs. As the river erodes the soil underneath, chunks of sod fall into the river. The widespread presence of this nonnative grass has led to excessive streambank erosion and elevated sediment levels. The sediment load from bank erosion was estimated to be 4,689 tons per year in 2010, when the Total Maximum Daily Load for the Bull River was approved by DEQ. The TMDL's goal is to reduce that amount by 69 percent to 1,454 tons per year.

Elevated sediment negatively impacts fish by obscuring food sources, habitat and nesting sites, silting potential spawning gravels and smothering eggs or hatchlings, and clogging fish gills, all of which reduces the ability of the fishery to thrive. Additionally, historic wood removal and limited potential for natural forest succession due to the domination of reed canary grass in stream and floodplain areas limits cover (shade) and allochthonous inputs from streamside vegetation as well as the recruitment of large woody debris in the river and floodplain, all of which would provide improved habitat for the native coldwater fishery.

This project seeks to continue a long-term program of planting native woody riparian vegetation, including western white pine, engelmann spruce, western red cedar as well as native willow,red osier dogwood, chokecherry, Wood's rose, and other native flowering shrub species. These species grow roots that help bind the soil and reduce the sloughing of the banks that is commonly occurring throughout the watershed in those areas where the riparian vegetation is dominated by reed canarygrass. The effects of this riparian revegetation effort will not be immediate as it take decades to return the riparian vegetation to native plants.

This project will leverage projects initiated and underway on private properties throughout the Bull River drainage and expand onto new properties with new private partners, building on past success. Revegetation projects in this river corridor were first implemented in 2002. Twenty years later, natural succession in the understory of those plantings is occuring. Partners continue maintaining 20, 15, 10 and 5 year old projects throughout the watershed. Maintenance includes annual visits to inspect plantings, repair browse protection, and remove matting and fencing when plants are established. Experience has shown that the maintenance component is critical to plant survival. Past efforts are summarized in the attached "Landowner Summary Table", including the installation and maintenance of over 216 large exclosures and 800 individual plantings. The LCFWG has maintained relationships with all landowners, taken primary responsibility for continued maintenance of past projects, and pursued the development of new opportunities and techniques for planting efforts in the drainage. Continued engagement has resulted in the recent implementation of over 500 additional plantings in 2021 and 2022. Survival rate of plantings from 2021 was over 99%.

Project 1 - Solution Description

Provide a detailed description of the solution you are proposing to implement to address the nonpoint source pollution problem described in the previous section. Be sure to include the following:

- Describe the range of options available for solving the problem, including a no-action alternative
- Describe the practices you intend to design and/or implement to solve the problem (what, where, when, how much or how many)
- Explain why the chosen alternative is the best alternative
- Describe any pre-project planning that has already taken place (e.g., design work, permitting consultation, Endangered Species Act consultation, wetland delineations, landowner agreements, community outreach)
- Describe the anticipated maintenance needs (what, where, who, how long)

We propose to continue working with the 12 landowners already engaged and pursue opportunities with 7 (or more pending further outreach) additional landowners who have expressed interest to plan for and plant native woody riparian vegetation along the East Fork and mainstem Bull River's stream and floodplain areas (in anticipation of migration of the river across the valley floor). We anticipate planting up to 500 new sites annually over the next three years. This method will involve pocket plantings of individual trees, and then protecting them from browsing beaver, deer and other wildlife with fencing. The materials used are gallon-sized containerized plant stock, matting to suppress the reed canarygrass, and browse protection provided by 14-gauge, welded wire secured with T-posts. Some of the materials will be salvaged from past projects, but new materials will also be purchased. The LCFWG has successfully established nearly 800 of these riparian plantings throughout the Bull River Valley in the last 5 years and maintains them to ensure new plants are protected until mature enough to withstand browse and encroaching reed canary grass. Survival rates using this technique in 2021 and 2022 have been very high (98-99%) in the first year. Mortality replacement plantings are completed as needed and partners work to establish a tree or shrubs species that will survive to maturity at all sites. When tall enough to compete with surrounding grass for light and nutrients (and if browse is no longer a concern), the weed matting and fencing can be removed. This technique has been successful in restoring native riparian vegetation along the Bull River over the years (including at Stein's two decades ago) and is making incremental improvements to this important ecosystem.

Two revegetation techniques have been used previously in the Bull River: large exclosures with multiple plantings (216 have been implemented to date) and individual plantings (over 800 implemented to date) as proposed. The practice of planting individually, or with just one companion plant, with 3' diameter browse protection cages has resulted in less ongoing maintenance issues, less snow damage and less damage from beavers and other animals. Partners are actively transitioning damaged exclosures to individual cages for longer term browse protection. Using this technique up front, the burden of material removal after 10 years is expected to be significantly less, per plant survival rates will be higher, and similar plant density rates will be achieved. Individual plantings ultimately are more cost-effective, can be more easily dispersed across the floodplain and are more aesthetically pleasing. Because funding typically covers up front costs over maintenance, individual plantings are much more feasible over the long term.

Much of the focus of this project will be to continue implementing planting efforts on properties protected by large acreage perpetual conservation easements where the LCFWG has ongoing landowner relationships, past plantings to maintain, and further opportunity to address impairments and improve resiliency of the Bull River watershed overall. In order for this effort to be successful over the long term, planted vegetation must be established at high enough densities such that tree and shrubs species can effectively outcompete reed canarygrass for light and nutrients and natural regeneration and riparian forest succession is possible. We can best achieve this by (and realize efficiencies in both implementation and maintenance) by building off of past efforts, expanding upstream, downstream and across the floodplain. Including additional landowners on adjacent parcels and other conservation properties, as there is interest, helps us build a watershed-scale effort and broaden the support for this project throughout the drainage. Conservation easement properties are of particular focus, in part because landowners interested in active stewardship are correlated with those properties protected for conservation and due to the long term security this provides our investment. The long-term nature of this effort requires an approach that maintains relationships with existing landowners, and grows partnerships with new landowners, while making good on promises to maintain and grow healthy plant communities that can both provide aesthetic and practical benefits to the river system. If no action were taken, it is likely that many areas of the Bull River would continue to be dominated by reed canarygrass into the future; where well established, this grass can prevent the natural generation of nearly all other woody vegetation. Over time, these planted trees will provide stability for the banks, cover for fish, shade that suppresses reed canarygrass and promotes natural succession, and overtime a source of large woody debris to improve the instream habitat for fish - wherever the river moves across the floodplain.

Project 1 - Goals and Effectiveness Evaluation

List the specific, measurable nonpoint source goals for your project.

Specific nonpoint source goals of this project include:
- Reducing sedimentation into the Bull River; and
- Addressing nonpollutant impairments by establishing streamside and floodplain vegetation.

Over one-third of all the Bull River's sediment load is attributed to eroding banks and revegetation is one of the most effective means of stabilizing these banks in a way that preserves and enhances the natural functions of the river. Revegetation efforts are a long-term process as trees and shrubs must make significant growth before affecting measurable improvements to bank stability and reductions in sediment contribution. The ultimate test of this project will be the establishment of robust native vegetation over the long-term, which will require significant investment in annual maintenance to protect newly established plants. On Stein's property, twenty years after revegetation efforts commenced we are seeing natural generation of native trees (see attached "Photos" document) in areas where planting efforts were dense enough to shade the understory, reduce reed canarygrass biomass, and where weed matting was removed.

Success is more likely to be documented after decades, rather than years. This project will benefit from lessons learned from LCFWG's many years of experience in carrying out riparian planting projects in the drainage, and from the positive association that existing and new landowners have with the past and ongoing efforts to steward the river's ecological health. Over 200 exclosures and 800 individual plantings to-date are a robust start. This project will maintain that effort, transitioning all 200 exclosures individual cages, and ensuring the long-term survival of tree species established to-date, and continue expanding the effort. An additional 1,500 trees, assuming 16 ft spacing at maturity, would establish 8.8 acres of tree cover and riparian forest and provide resilience to a even greater area of riparian and floodplain areas. While acknowledging there's always more to learn, the LCFWG now has a proven technique for creating an ongoing program. Successfully addressing the Bull River's impairments will require keeping the momentum alive and continuing the plantings for years to come.

Explain how you will determine whether the you have met the goals described above. Identify any data you intend to collect, calculations you'll make, or methods you intend to use.

Bank Erosion Hazard Index (BEHI)
The success of revegetation efforts at achieving sediment reduction and bank stabilization goals will be monitored over the long term through Bank Erosion Hazard Index (BEHI) assessments. A reduction in sediment loading from bank erosion is expected over the long term, after years of plant and root growth. BEHI data will be collected by LCFWG staff in coordination with DEQ to provide a baseline (this index is unlikely to change until river migrates into the roots of planted vegetation).

Photo Points
LCFWG staff will take pre-implementation photos on each of the properties involved in the project, and develop photo points for the individual plantings upon initial planting. Each photo point will be repeated approximately every 1, 3, 5 and 10 years. As a part of overall efforts, repeat photo points (where possible) at all past projects will also be taken

Plant survival
Plant survival will be assessed annually over the course of the project, to determine project success as well as to identify mortality replacement planting needs.

Mapping and cumulative impact calculations: With increased capacity through GMCD Administrator/LCFWG Watershed Technician, Big Sky Watershed Corps member, and continued partnership with NRCS, maps summarizing all previous and newly completed work in the drainage will be updated throughout and at the conclusion of this phase of project implementation. This will allow updated calculations for total area and linear feet of stream impacted to be more clearly demonstrated.

LCFWG will work will DEQ staff to establish additional metrics, as deemed appropriate for the Bull River, such that in the future, as riparian forests mature, load reduction and recovery from impairments can be documented.

Project 1 - Location

Upstream End	Latitude	48°11'34.64"N	Longitude	115°49'23.48"W
Downstream End	Latitude	48° 4'2.83"N	Longitude	115°48'20.81"W
Centerpoint	Latitude	48° 6'41.48"N	Longitude	115°48'36.06"W
Upstream End	Latitude	48° 6'58.76"N	Longitude	115°46'26.39"W
Downstream End	Latitude	48° 6'32.38"N	Longitude	115°47'1.89"W
Centerpoint	Latitude	48° 6'54.77"N	Longitude	48° 6'54.77"N
Upstream End	Latitude		Longitude	
Downstream End	Latitude		Longitude	
Centerpoint	Latitude		Longitude	

List the 12-digit Hydrologic Unit Code(s) (HUCs) in which the project area is located

Upper Bull River (Crull, Cross, Scott, Warrington, Kettle, Potts, Sommer, Avista - Wood Duck BMA, Ross, Walrath, Abrahamson, Homik/Dameron, Zigan, Stein, and Nye) - 170102131102
Lower Bull River (USFS, Rowe, Jura, Carabin) - 170102131104
East Fork Bull River (Stein, Nye, USFS) - 170102131103

☑ **Detailed Project site map(s)** Attach a map or set of maps showing the location and size of proposed activity. The map scale must be between 1:1,000 and 1:12,500. The map(s) must have an aerial photo background (e.g., USDA NAIP photography, Google Earth imagery, etc.). The map(s) must show the latitude, longitude, site name, and landowner for the activity site. The map(s) should also identify waterbodies affected by the pollution that the activity is designed to address.

Other Attachments - *(These documents are not required, but may be submitted to provide more specific details about a project or to demonstrate adequate planning and preparation; please, however, be respectful of the amount of time it will take an application reviewer to find relevant information within a document and use excerpts where appropriate; do not attach WRPs, TMDLs or other large-scale planning documents)*

- ☑ Bull River Revegetation Anticipated Expenses and Funding Plan 2023-2026
- ☑ East Fork Bull River Revegetation Plan 2022-2025; Bull River Revegetation Plan (2023-2026) is expected December 2022
- ☑ Stein Landowner Agreement (similar expected all other ownerships) tiering to updated revegetation plans (above)
- ☑ Landowner Summary Table; Bull River Maps (12 Existing Landowners); Photos
- ☑ Letters of Support: GMCD, KLT, MCC, MFWP, PA, and landowners (Stein, Warrington, Nye, Ross w/email confirming, USFS)

Project 1 - Partners

Identify each of the project partners and describe their contribution to the project. Include landowners, land managers, project designers, funders, and your own organization. Indicate whether each partner, other than your organization, has provided a letter of support. (*Note: each landowner must provide a letter of support.*)

Landowner	Contributions to Project	Letter of Support Attached?
Bob Stein	Long-term supporter of project; signed EQIP contract and agreement for pass-through NRCS funding; volunteer labor	☑
Warrington Family	Long-term supporter of project; signed EQIP contract and anticipate completing a landowner agreement for pass-through NRCS funding	☑
Dave and Karen Nye	New landowners, have caretaken property for years and support efforts; anticipate EQIP application for NRCS funding; volunteer labor	☑
Jamie (Malcolm) Ross	Long-term supporter of project; identified new areas for planting	☑

Project Partner	Contributions to Project	Letter of Support Attached?
Lower Clark Fork Watershed Group (LCFWG)	Project lead for project planning, development, implementation and monitoring; Will coordinate efforts among all project partners, landowners and volunteers; Fiscal sponsor	☐
Natural Resource Conservation Service (NRCS)	Key partner and technical advisor; provides maps for all re-vegetation properties in the Bull River and assists with resource assessment and project development; Roots for Rivers Targeted Implementation Plan is expected to provide $56,960 in EQIP funding over the life of the project: $22,784 is already confirmed.	☑
Green Mountain Conservation District (GMCD)	Long-term partner on Bull River revegetation efforts; fiscal sponsor for project funding; co-host for Big Sky Watershed Corps Member who will contribute to project implementation; project labor; and conduct education and outreach, including to new landowners, volunteers, and the greater community.	☑
Project ASCENT	Sanders County nonprofit that provides outdoor experience learning opportunities to area youth; will facilitate summer internship for high school age youth to contribute directly to project as well as assist in education and outreach	☑
Montana Conservation Corps	Long-term contributer to Bull River revegetation efforts; MCC crews provide key source of additional labor for LCFWG's maintenance and implementation efforts in the Bull, and LCFWG/GMCD was also chosen as a host-site for a Big Sky Watershed Corps who will spend 50% of time on Bull River in 2023.	☑

Project 1 - Budget

Use the space below to outline your project budget.

Project Planning This includes costs for surveying, engineering, permitting, procurement, construction oversight, and overall coordination of the proposed project. This does not include things like reporting, book keeping, communications, office space, or utilities, which are all covered in the Project Administration budget.

319 Funding Request	Non-Federal Match	Other Funding*	Total Cost
$ 0	$ 8,540		$ 8,540

Match Source	Avista's Clark Fork Settlement Agreement (ongoing funding, approved annually)	Secured	☑
Match Source		Secured	☐
Match Source		Secured	☐
Match Source		Secured	☐

**Use this space to record any funding that will be used to support creation of the task deliverables, but will not be reported as match. The purpose of this information is to give application reviewers a clearer understanding of the total amount of funding required to complete a task.*

Landowner Agreements This includes costs for developing and managing landowner agreements. The landowner agreement(s) must verify that Contractor and DEQ staff may access the project site, at reasonable times and with prior notification, for the purposes of project planning, implementation, and post-implementation monitoring. The agreement(s) must ensure appropriate operation and maintenance of all structures, vegetation, and management measures for the life of the project. If grazing will be allowed within the project area, the agreement(s) must include a sustainable management plan for livestock grazing, designed to protect and enhance riparian function.

319 Funding Request	Non-Federal Match	Other Funding*	Total Cost
	$ 1,000		$ 1,000

Match Source	DNRC Watershed Management Grant Program	Secured	☑
Match Source	Avista's Clark Fork Settlement Agreement (ongoing funding, approved annually)	Secured	☑
Match Source		Secured	☐
Match Source		Secured	☐

**Use this space to record any funding that will be used to support creation of the task deliverables, but will not be reported as match. The purpose of this information is to give application reviewers a clearer understanding of the total amount of funding required to complete a task.*

Project Implementation This includes costs for all materials, labor, equipment, and as-built surveys associated with implementing the plans developed under the Project Planning task. If you are requesting funding for design only, leave this task blank.

319 Funding Request	Non-Federal Match	Other Funding*	Total Cost
$ 55,000	$ 94,024	$ 56,960	$ 205,984

Match Source	Avista's Clark Fork Settlement Agreement (ongoing funding, approved annually)	Secured	☑
Match Source	DNRC Conservation District Project Grant; Volunteer Labor for Arbor Day	Secured	☐
Match Source	MFWP Future Fisheries Improvement Program	Secured	☐
Match Source	*NRCS EQIP - Roots for Rivers Targeted Implementation Plan (partially secured)	Secured	☑

**Use this space to record any funding that will be used to support creation of the task deliverables, but will not be reported as match. The purpose of this information is to give application reviewers a clearer understanding of the total amount of funding required to complete a task.*

Project Effectiveness Monitoring This includes costs for developing and implementing a reasonable method or set of methods for evaluating and reporting on the effectiveness of the project in achieving NPS pollution goals. It includes preparation and implementation of a monitoring plan, and preparation of a monitoring report. If the project goals include reducing sediment, nitrogen and/or phosphorus, this task will also include calculation of annual load reduction estimates. Photo-point monitoring is also a standard requirement for this task. If you are requesting funding for design only, you may either leave this task blank or request funding for plan development and pre-project monitoring.

319 Funding Request	Non-Federal Match	Other Funding*	Total Cost
$ 3,360			$ 3,360

Match Source		Secured	☐
Match Source		Secured	☐
Match Source		Secured	☐
Match Source		Secured	☐

**Use this space to record any funding that will be used to support creation of the task deliverables, but will not be reported as match. The purpose of this information is to give application reviewers a clearer understanding of the total amount of funding required to complete a task.*

Project 1 - Project Timeline

Task Description	3Q 2023	4Q 2023	1Q 2024	2Q 2024	3Q 2024	4Q 2024	1Q 2025	2Q 2025	3Q 2025	4Q 2025	1Q 2026	2Q 2026
Project Planning	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Landowner Agreements	✓	✓										
Project Implementation		✓		✓		✓		✓		✓		✓
Project Effectiveness Monitoring				✓				✓				✓
Education and Outreach	✓			✓	✓			✓	✓	✓	✓	✓
Administration												

Project 1 - Bigger Picture Benefits

Environmental Justice

Explain how your project incorporates disadvantaged community populations and priorities, Tribal and community leader engagement, or socioeconomic barriers in the context of equal protection and access to a healthy environment.

While this project focuses on addressing erosion occurring on private lands flanking the Bull River, the river itself is a public resource that flows through private and public lands and has existing public access. This project will enhance the environment of the Bull River watershed, primarily by improving water quality in the Bull River and East Bull River and gradually improving the habitat for native fish. Over time it will improve and enhance the access that the public already has to the river as a place for recreation and renewal. Perhaps the most direct benefit to members of disadvantaged groups will be the youth involved. This project will not only involve staff and volunteer labor, but also internship opportunities for underprivileged youth through Project ASCENT, and employment opportunities for youth involved in the Montana Conservation Corps.

Climate Change/Resilience

How will your project improve climate change resilience for communities, native plants, wildlife, or ecosystems?

This project will not just plant trees but grow trees, that will persist on the landscape for decades - or centuries. Native riparian communities that persist, protected in part by the conservation easements in place on all properties currently included in this project, will provide habitat for other native plants and wildlife, help attenuate the force of high water by added roughness on the streambanks and floodplains, and mitigate the impact of warming temperatures. Historic mean August stream temperatures from the USFS NorWeST stream temperature model show that the mainstem Bull River has ranged from 10 to 15 degrees Celsius prior to 2011. The model indicates that by the 2080s, stream temperatures could rise to 17.5 degrees Celsius in the lower mainstem river, while the upper river and tributaries may still remain below 15 degrees Celsius. While the modeling provides a grim glimpse into the future, by increasing shade, and eventually large woody debris, it is hoped that this revegetation work may protect and potentially enhance the stream as a coldwater refugia for native fish species into the future.

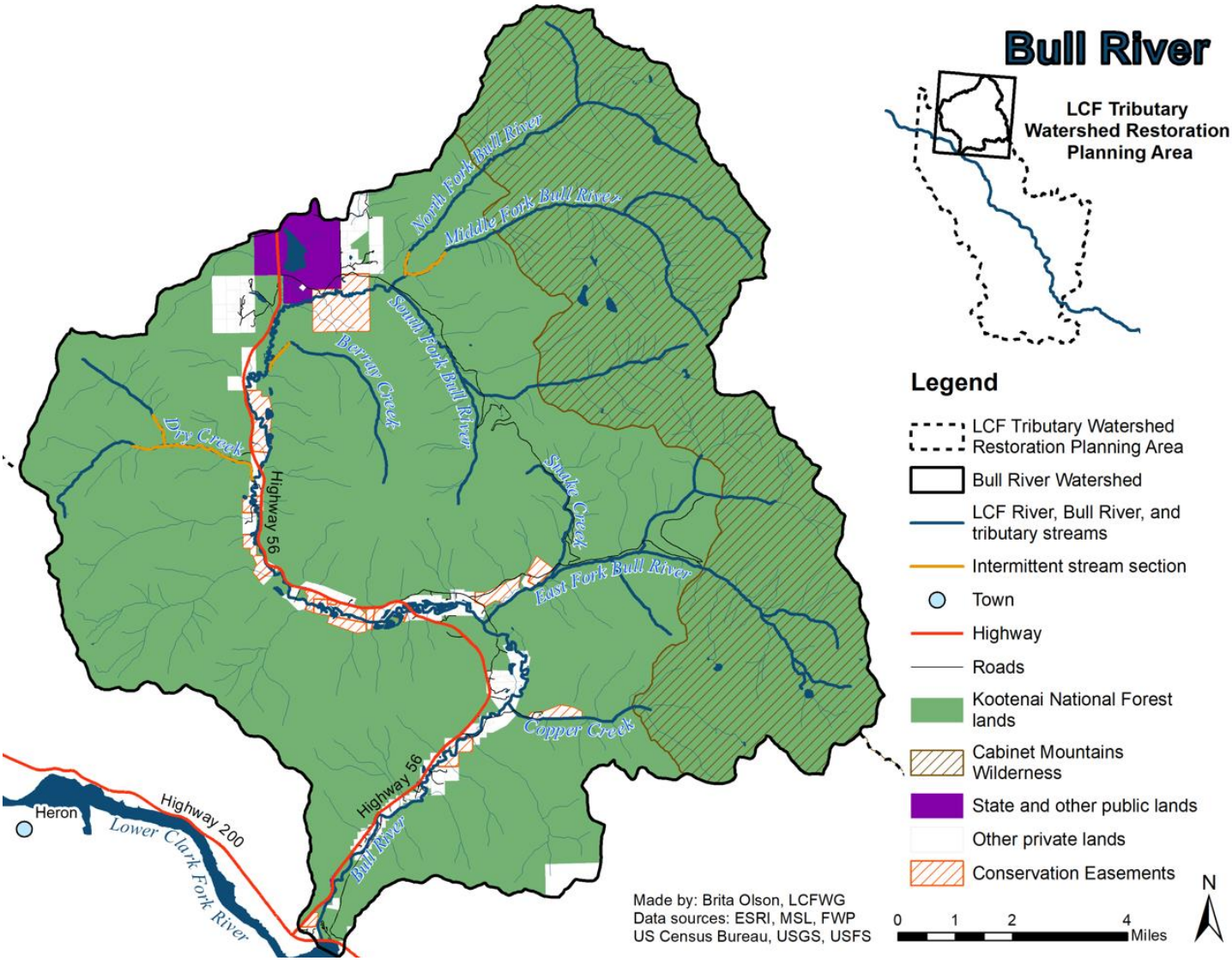
Impacts to Downstream Human, Plant and Animal Communities

What sort of an impact will your project have on downstream human, plant or animal communities?

Riparian planting is one of those conservation actions that can truly "raise all boats" while addressing identified water quality impairments and habitat threats to listed species. The vast majority of Montana's wildlife relies on riparian habitats for some part of their lifecycle. Establishing diverse native vegetation (replacing Reed Canary Grass) and more complex streamside habitat provides more food sources and shelter for native birds, pollinating species, migrating waterfowl, and large game species.

There are 11 water rights currently for surface water from the Bull River designated for domestic use. However, there are no municipal or community water systems that draw from either the Bull River or the Lower Clark Fork River below the confluence. For those property owners who use water from the Bull River for domestic purposes, reducing sedimentation within the river will reduce their maintenance costs associated with water lines and also help protect the quality of the water by reducing its turbidity and other contaminants.

Map


Bull River
LCF Tributary Watershed Restoration Planning Area
North Fork Bull River
Middle Fork Bull River
South Fork Bull River
Berray Creek
Dry Creek
Highway 56
Snake Creek
East Fork Bull River
Copper Creek
Highway 56
Bull River
Heron
Highway 200
Lower Clark Fork River
Legend
LCF Tributary Watershed Restoration Planning Area
Bull River Watershed
LCF River, Bull River, and tributary streams
Intermittent stream section
Town
Highway
Roads
Kootenai National Forest lands
Cabinet Mountains Wilderness
State and other public lands
Other private lands
Conservation Easements
Made by: Brita Olson, LCFWG
Data sources: ESRI, MSL, FWP
US Census Bureau, USGS, USFS
0 1 2 4 Miles
N

Ownership	Waterbody	Conservation Easement	Summary of past efforts	Maintenance needs	Further Revegetation Potential	Revegetation Plan / Landowner Agreement Status
Stein	East Fork Bull River	Yes	Planting along a channel restoration project occurred in 2001 and 21 additional exclosures were installed in 2002. Bob has planted additional trees in the floodplain over the last two decades. Approx. 100 trees were planted in 2021, and another 57 trees were planted in 2022.	Maintenance has occurred intermittently over the last two decades. A portion of large exclosures were removed approx. 1 decade after installation. In 2021 and 2022, the LCFWG worked with Montana Conservation Corps for three weeks to remove remaining fencing exclosures. Hundreds of individual cages remain and will be checked annually for maintenance needs.	NRCS estimates approximately 4 acres of open areas to plant could support at least 500 additional trees in the floodplain area. Bob Stein has an NRCS EQIP contract to support 300 plantings by FY2026.	East Fork Bull River Revegetation Plan (2022-2025), completed in 2022; landowner agreement for revegetation efforts from 2022-2025 is finalized for approx. 100 trees annually for four years.
Stein	Bull River	Yes	3 exclosures were installed in 2015 and planted in 2017.	Fencing is nearing the end of its life and will be removed by 2025. Any conifer or tree species remaining will be fenced individually.	Gaps between exclosures or surrounding exclosures could support perhaps a dozen more plantings to promote further shading of reed canarygrass, but area between river and streamside wetland is relatively narrow.	Landowner agreement finalized in 2015; Bull River Revegetation Plan (2023-2026) is under development, expected December 2022; updated landowner agreement, expected March 2023.
Edwards/Nye	East Fork Bull River and Bull River	Yes	16 exclosures were installed in 2015 and planted in 2017. Approx. 125 additional trees were planted in 2021, and another approx. 112 were planted in 2022.	Fencing on exclosures is nearing the end of its life and will be removed by 2025. Any conifer or tree species remaining will be fenced individually. Individually caged trees will be checked at least annually, if not more frequently by landowners who frequently clear grass around plantings.	Approximately 8 acres of property is mixed shrub/reed canary grass riparian area. Past plantings are located within this same area, but in order to fill in floodplain and shade out reed canarygrass throughout this area, there is opportunity for at least 200-300 more plantings.	Ownership of property changed in summer of 2022; East Fork Bull River Revegetation Plan (2022-2025), completed in 2022, and Bull River Revegetation Plan (2023-2026), expected December 2022, apply to the property; past landowner agreement expired with change of ownership so new landowner agreement will be developed, expected March 2023 or sooner.
Warrington family	Bull River	Yes	22 exclosures were installed in 2015 and planted in 2017. 154 additional trees were planted in 2022.	Fencing on exclosures is nearing the end of its life and will be removed by 2025. Any conifer or tree species remaining will be fenced individually. Individually caged trees will be checked at least annually.	Approximately 27 acres of the property is riparian and floodplain area. Some well established trees exist throughout, but an area at least triple of what has been planted to-date is dominated by reed canarygrass which would be easily 500 plantings. Warrington family has an NRCS EQIP contract to support 300 plantings by FY2026.	Bull River Revegetation Plan (2023-2026), expected December 2022; landowner agreement expected March 2023 or sooner
Ross	Bull River	Yes	11 exclosures were installed in 2005 and planted in 2006; 100-200 additional plantings were also completed at this time in smaller cages.	In 2016, the LCFWG worked with MCC crews for five days removed the fencing around the 11 exclosures. 43 Western Red Cedars were caged. Since, the LCFWG and NRCS staff have conducted a few days of maintenance enlarging and removing individual cages. LCFWG and Project ASCENT interns worked with NRCS to cut weed matting around the base of trees planted on both sides of the river. Over a decade of sediment deposition has made these mats extremely difficult to remove, so partners are at minimum cutting large holes so that planted trees are not eventually girdled.	To further facilite natural regeneration, it will require additional trees to shade and compete with the reed canarygrass. While a good start has been made on this property, additional planting would help promote a resilient riparian forest. Landowner would like to start with area directly upstream of the highway bridge, where LCFWG estimates there is room for 50-100 trees.	Bull River Revegetation Plan (2023-2026), expected December 2022; landowner agreement expected March 2023 or sooner for additional work
Avista - Wood Duck Block Management Area	Bull River	Yes	13 exclosures were installed in 2010 and planted in 2012. 200 individually caged trees were planted in 2017.	Significant maintenance (over two weeks of MCC crew time) was completed on the Wood Duck property to remove failed exclosures and address significant beaver browse. Over 650 supplemental plantings were completed. By 2021, exclosures had largely regrown / recovered and large exclosure fencing was removed. Tree species were individually caged where established. Weed matting is still present around approximately 1/3 of exclosures and will need to be removed.	Large patches of reed canarygrass and other grass species persist adjacent to previous planting area. Avista is supporting LCFWG in 2022/2023 to evaluate potential value and benefit of further plantings in this area to accelerate the recovery of a riparian forest. There is opportunity for 100-200 more trees depending on planting densities.	Landowner agreement completed in 2017; Bull River Revegetation Plan (2023-2026), expected December 2022; updated landowner agreement expected March 2023 or sooner for additional work

Ownership	Waterbody	Conservation Easement	Summary of past efforts	Maintenance needs	Further Revegetation Potential	Revegetation Plan / Landowner Agreement Status
Zigan	Bull River		1 exclosure was installed in 2015 and planted in 2017.	Fencing on exclosures is nearing the end of its life and will be removed by 2025.	Pending landowner interest, there is potential for a few more trees and shrubs (<10).	Landowner agreement completed in 2015; Bull River Revegetation Plan (2023-2026), expected December 2022; updated landowner agreement will be developed for any additional work
Rowe	Bull River		26 exclosures were installed in 2015 and planted in 2017.	Fencing on exclosures is nearing the end of its life and will be removed by 2025. LCFWG has already begun working to removed fence and cage individual trees, but it will likely take at least one more week of MCC crew time to complete that effort.	There is opportunity surrounding existing exclosures to fill in floodplain vegetation and expand to areas along the bank not included in previous project. LCFWG will be drafting updated site specific revegetation plan with proposed maintenance schedules and potential planting opportunities. Pending landowner review, site could benefit from additional plantings.	Landowner agreement completed in 2015; Bull River Revegetation Plan (2023-2026), expected December 2022; updated landowner agreement will be developed for any additional work
Jura	Bull River		18 exclosures were installed in 2015 and planted in 2017.	Fencing on exclosures is nearing the end of its life and will be removed by 2025. Relative to many other properties, fencing is is good condition and will likely be one of last removed of sites fenced in 2015.	Coupled with preexisting vegetation, there is limited opportunity for further riparian plantings and site is fairly well saturated.	Landowner agreement completed in 2015; Bull River Revegetation Plan (2023-2026), expected December 2022
Carabin	Bull River		3 exclosures were installed in 2015 and planted in 2017. An additional 12 trees were planted in 2017.	Fencing on exclosures is nearing the end of its life and will be removed by 2025. Relative to many other properties, fencing is is good condition and will likely be one of last removed of sites fenced in 2015, in part due to landowner presence.	There is opportunity surrounding existing exclosures to fill in floodplain vegetation. LCFWG will be drafting updated site specific plans with proposed maintenance schedules and potential planting opportunities. Pending landowner review, site could benefit from additional plantings.	Landowner agreement completed in 2015; Bull River Revegetation Plan (2023-2026), expected December 2022; updated landowner agreement will be developed for any additional work
Sommer	Bull River		70 individually caged trees were planted in 2017.	A few mortality replacement plantings have been completed, but largely the landowner has monitored and mowed around plantings to reduce reed canarygrass competition.	Landowner has expressed interested in additional plantings. A site-specific revegetation plan will be developed in winter of 2022, and pending landowner approval pursued in 2022-2025.	Landowner agreement completed in 2017; Bull River Revegetation Plan (2023-2026), expected December 2022; updated landowner agreement will be developed for any additional work
Kootenai National Forest - Cabinet Ranger District	Bull River	N/A	59 exclosures were installed in 2016 and planted in 2018. Another 23 exclosures were installed in 2018 and planted in 2020.	The Kootenai National Forest has conducted monitoring and maintenance since installation, with occasional help from LCFWG and MCC crews when available. Currently, the forest is working to transition exclosures to individual cages.	There is potential value in further planting throughout the floodplains surrounding this vegetation; however, this may require additional consultation. In the short term, it will be best to support the forest in maintaining existing revegetation effort.	Bull River Revegetation Plan (2023-2026), expected December 2022; Participating agreement was finalized in 2016 for the LCFWG and Green Mountain Conservation District to support this effort.
Crull	Bull River		Following an initial failure of plastic fencing installed as a part of a demonstration project, LCFWG used salvaged fencing from other projects to cage 118 trees surviving in addition to 4 trees that were caged individually in the original project.	Project needs to be monitored for plant survival and maintenance needs.	There is signficant opportunity to expand revegetation efforts on this property, pending landowner interest. However, landowners have had this property up for sale off and on over the last five years, so no effort is being made at this time.	Bull River Revegetation Plan (2023-2026), expected December 2022
Kootenai National Forest - Cabinet Ranger District	East Fork Bull River and Bull River	N/A			A Decision Memo was signed by the Cabinet District Ranger authorizing up to 200 tree and shrub plantings along the East Fork Bull River.	East Fork Bull River Revegetation Plan (2022-2025); Participating agreement for the LCFWG to complete this work is anticipated in fall of 2022.

Ownership	Waterbody	Conservation Easement	Summary of past efforts	Maintenance needs	Further Revegetation Potential	Revegetation Plan / Landowner Agreement Status
Cross	Bull River	Yes			Property is protected by NRCS conservation easement which controls vegetation management; plan to meet with landowner and NRCS in fall of 2022 or spring of 2023 to discuss planting opportunities.	Bull River Revegetation Plan (2023-2026), expected December 2022; landowner agreement would be developed for any proposed work
Kettle	Bull River	Yes			Met landowner as a result of 2020-2022 outreach efforts and proximity to Warrington property; interested in a site visit and discussing opportunities/recommendations for planting trees along the river.	Bull River Revegetation Plan (2023-2026), expected December 2022; landowner agreement would be developed for any proposed work pending site visit and any site specific plan that is developed
Walrath	Bull River				Met landowner onsite as a result of 2020-2022 outreach efforts in the Bull River and past community presentations; landowner expressed interest in planting efforts and LCFWG anticipates drafting a site specific revegetation plan in winter of 2022/2023.	Bull River Revegetation Plan (2023-2026), expected December 2022; landowner agreement expected by March 2023
Homik/Dameron	Bull River				Landowner interested as a result of 2020-2022 outreach efforts; need to schedule site visit	Bull River Revegetation Plan (2023-2026), expected December 2022; landowner agreement would be developed for any proposed work pending site visit and any site specific plan that is developed
Potts	Bull River				Landowner has expressed some interest, pending site visit and scope of work	Bull River Revegetation Plan (2023-2026), expected December 2022; landowner agreement would be developed for any proposed work pending site visit and any site specific plan that is developed
Scott	Bull River				Landowner has expressed repeated interest; need to schedule site visit	Bull River Revegetation Plan (2023-2026), expected December 2022; landowner agreement would be developed for any proposed work pending site visit and any site specific plan that is developed
Abrahamson	Bull River				Met landowner onsite as a result of 2020-2021 outreach efforts in the Bull River; drafted landowner agreement for review and landowner approval is pending.	Bull River Revegetation Plan (2023-2026), expected December 2022; landowner agreement expected pending landowner review and approval of site specific plan

Customer(s): Jim Carabin
District: Green Mtn Conservation Dist.
Approximate Acres: 8
Legal Description: SE Sec26 T27N R33W

2019 Photo

Date: 2/25/2022
Field Office: PLAINS
Agency: USDA - NRCS
Assisted By: Troy Hidy

1:3,000 250 Feet/Inch

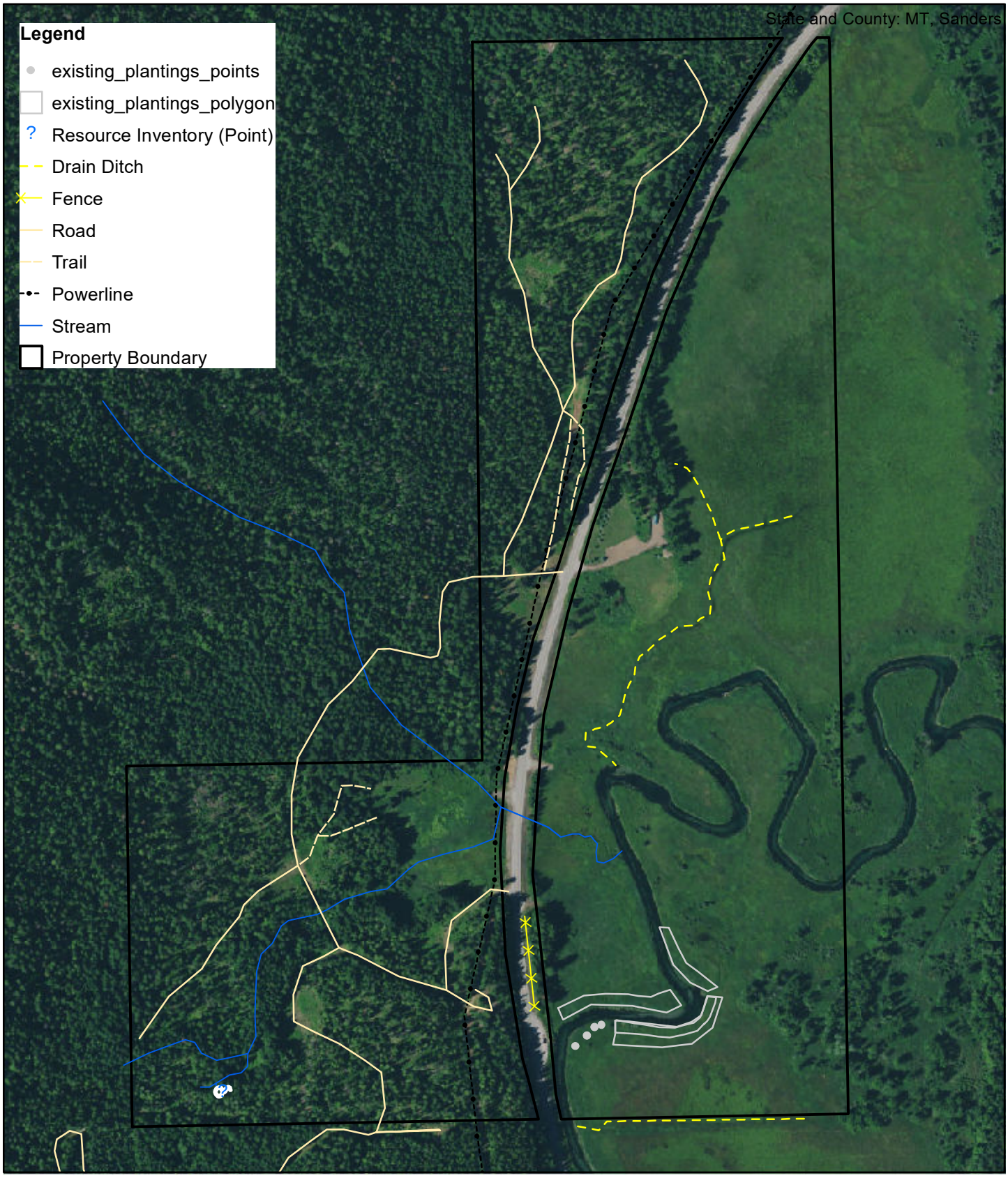
180 0 180 360 540 720
Feet

N

Customer(s): Crull Familiy
District: Green Mountain CD
Approximate Acres: 148
Legal Description: Sec. 20, T28N R33W

2019 Aerial Photo

Date: 2/28/2022
Field Office: Plains Field Office
Agency: USDA - NRCS
Assisted By: TROY HIDY
State and County: MT, Sanders



1:5,940
495 Feet/Inch

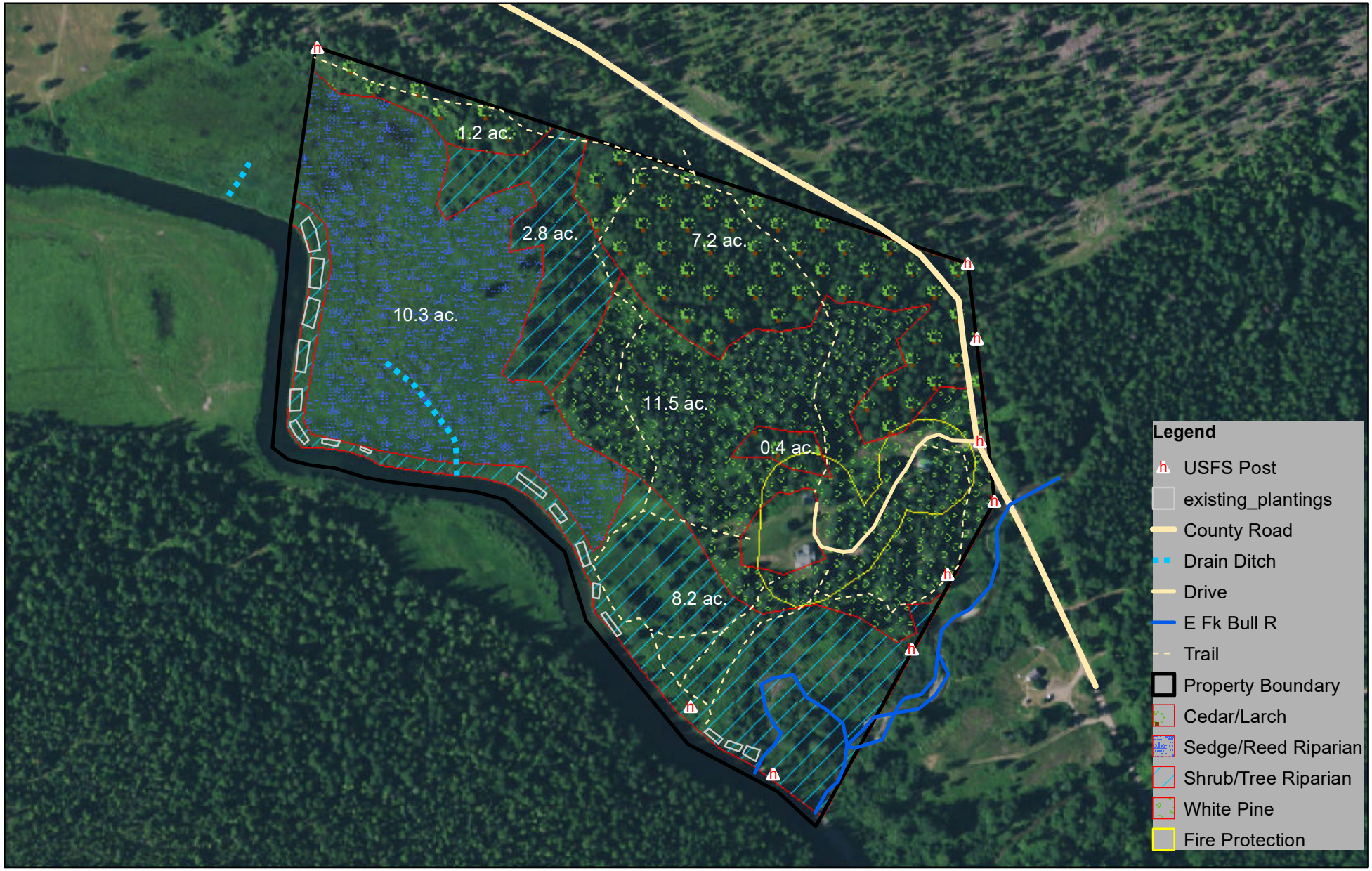
280 0 280 560 840 1,120
Feet

N

Customer(s):Don Edwards
District: Green Mountain CD
Approximate Acres: 43
Legal Description: Sec.12, T27N R33W

2019 Aerial Photo

Date: 2/25/2022
Field Office: Plains Field Office
Agency: USDA - NRCS
Assisted By: TROY HIDY
State and County: MT, Sanders



USDA

240 0 240 480 720 960
Feet

1:3,960
330 Feet/Inch

N

Customer(s): Jura
District: Green Mtn Conservation Dist.
Approximate Acres: 20
Legal Description: Sec. 25, T27N R33W

2019 Photo

Date: 2/28/2022
Field Office: PLAINS
Agency: USDA - NRCS
Assisted By:

1:3,960 330 Feet/Inch

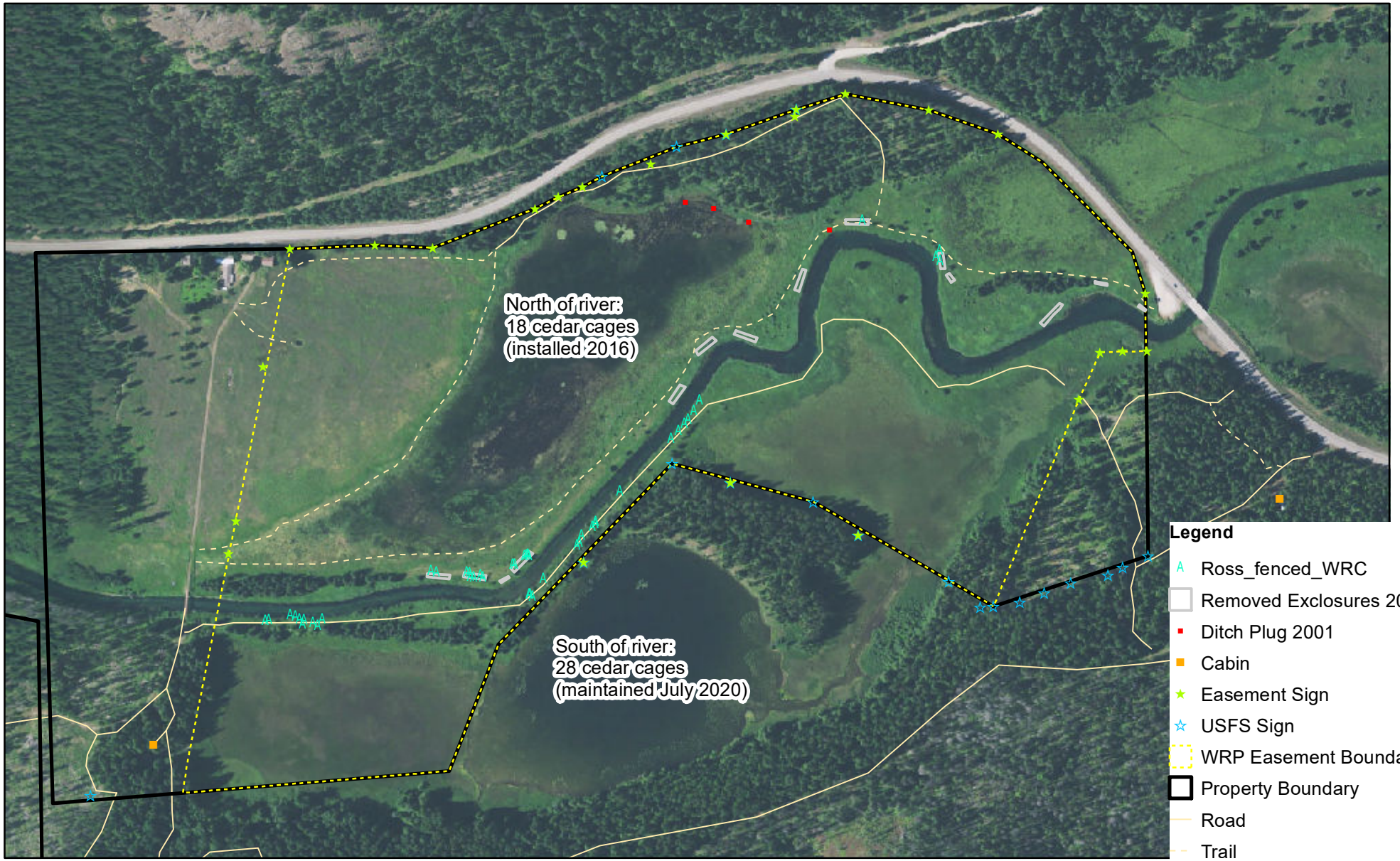
240 0 240 480 720 960
Feet

N

Customer(s): MALCOLM JAMIE ROSS
District: Green Mountain Conservation District
Approximate Acres: 115 ac. in NRCS easement
78 + 146 = 224 ac owned
Legal Description: Section 11 T27N R33W

Inventory Map
2019 Aerial Photo

Date: 9/9/2021
Field Office: Plains
Agency: USDA - NRCS
Assisted By: Troy Hidy
State and County: MT, Sanders



USDA

370 0 370 740 1,110 1,480
Feet

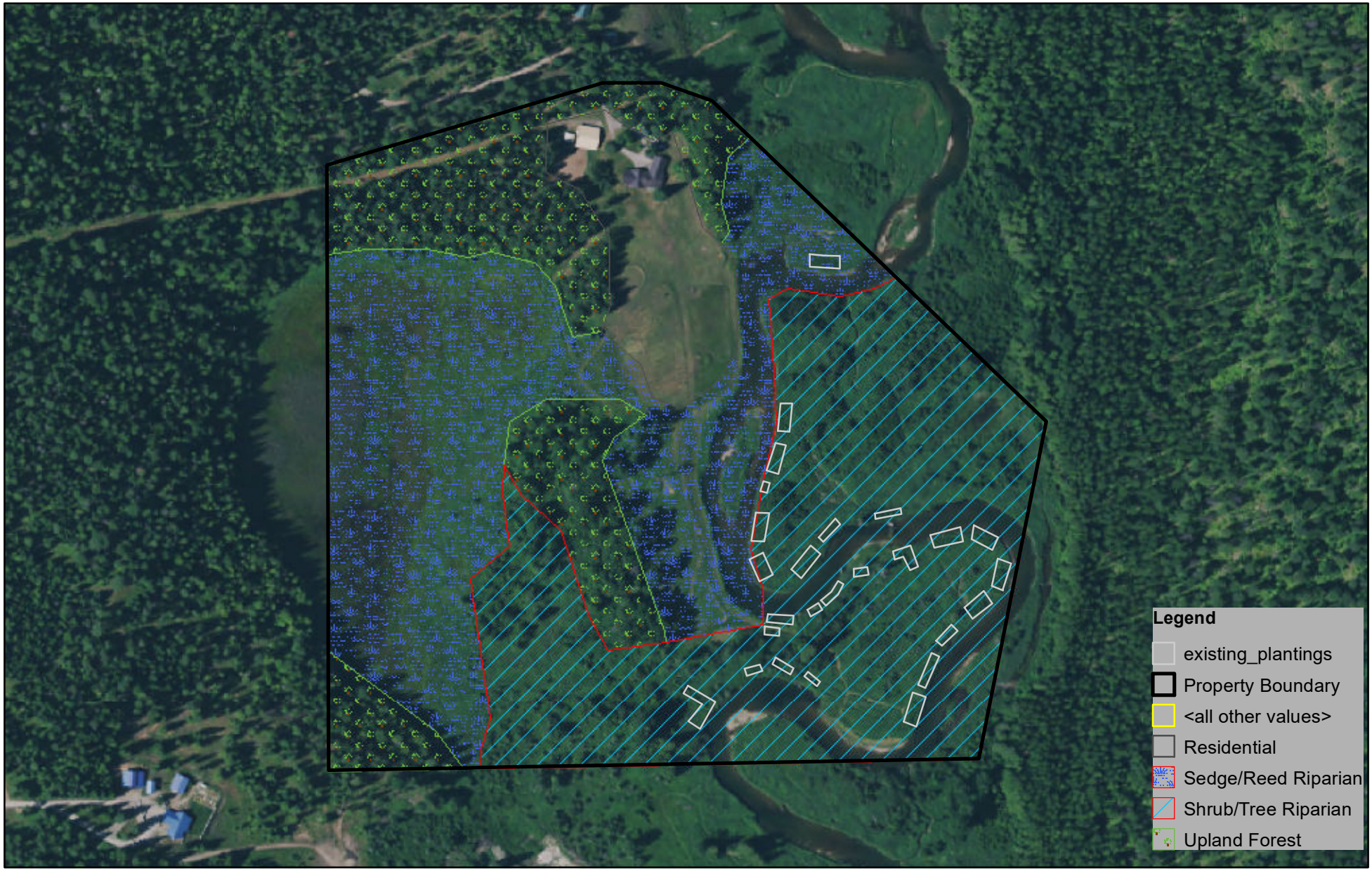
1:5,940
495 Feet/Inch

N

Customer(s):Dave & Margaret Rowe
District: Green Mountain CD
Approximate Acres: 57
Legal Description: Sec.18, T27N R32W

2017 Aerial Photo

Date: 2/25/2022
Field Office: Plains Field Office
Agency: USDA - NRCS
Assisted By: TROY HIDY
State and County: MT, Sanders



USDA

240 0 240 480 720 960
Feet

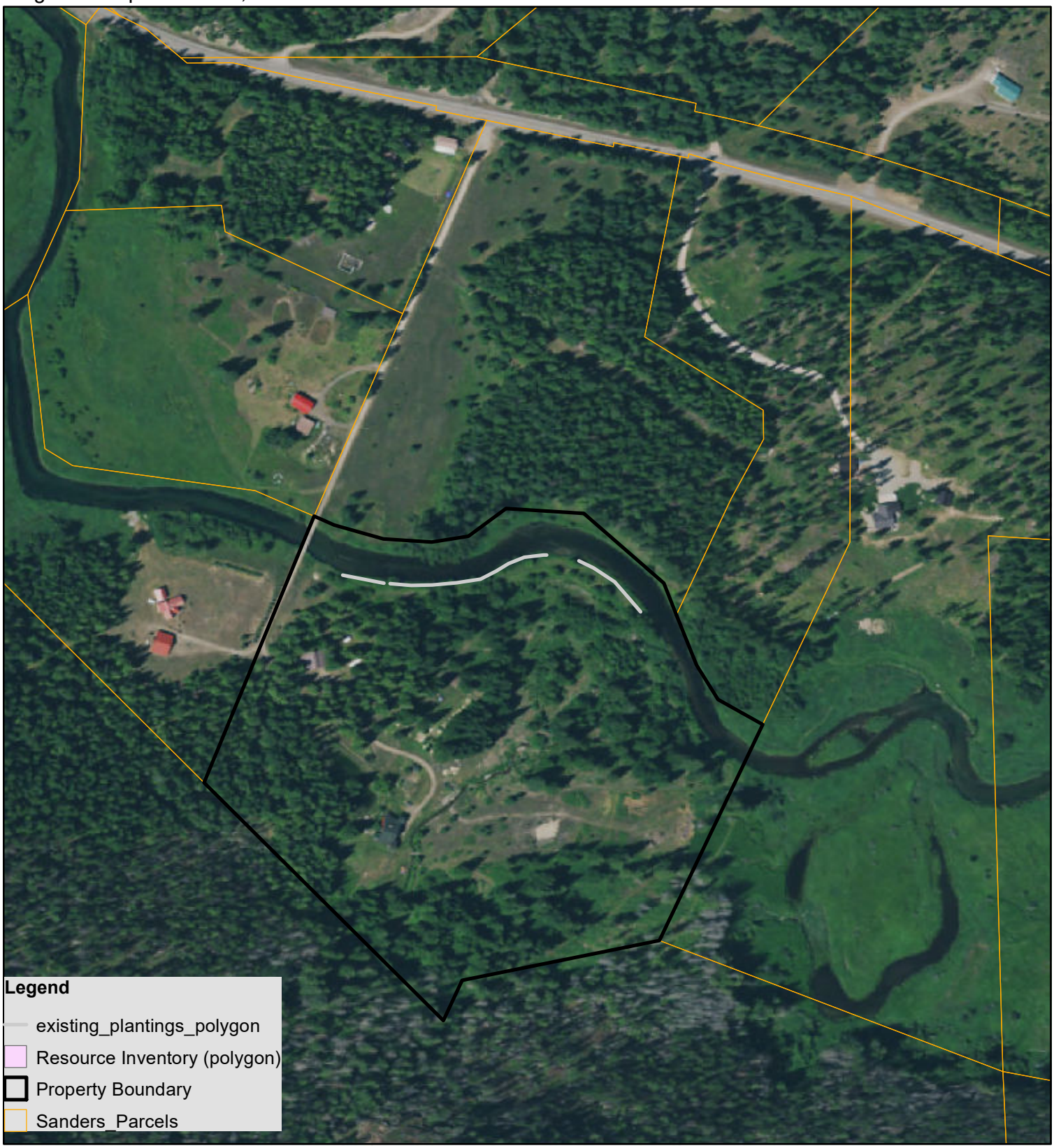
1:3,960
330 Feet/Inch

N

Customer(s): Frank Sommer
District: Green Mtn Conservation Dist.
Approximate Acres: 26
Legal Description: Sec 9, T27N R33W

2019 Photo

Date: 2/28/2022
Field Office: PLAINS
Agency: USDA - NRCS
Assisted By:



1:3,960 330 Feet/Inch

240 0 240 480 720 960
Feet

N

Customer(s): Robert Stein
District: Green Mountain Conservation District
Approximate Acres: 162 + 105 = 267
Legal Description: Parts of: Sec. 5-8 T27N R32W
Sec. 12 T27N R33W

2019 Photo

Date: 2/25/2022
Field Office: PLAINS FIELD OFFICE
Agency: USDA, NRCS
Assisted By: Troy Hidy
State and County: MT, SANDERS

1:3,000 250 Feet/Inch

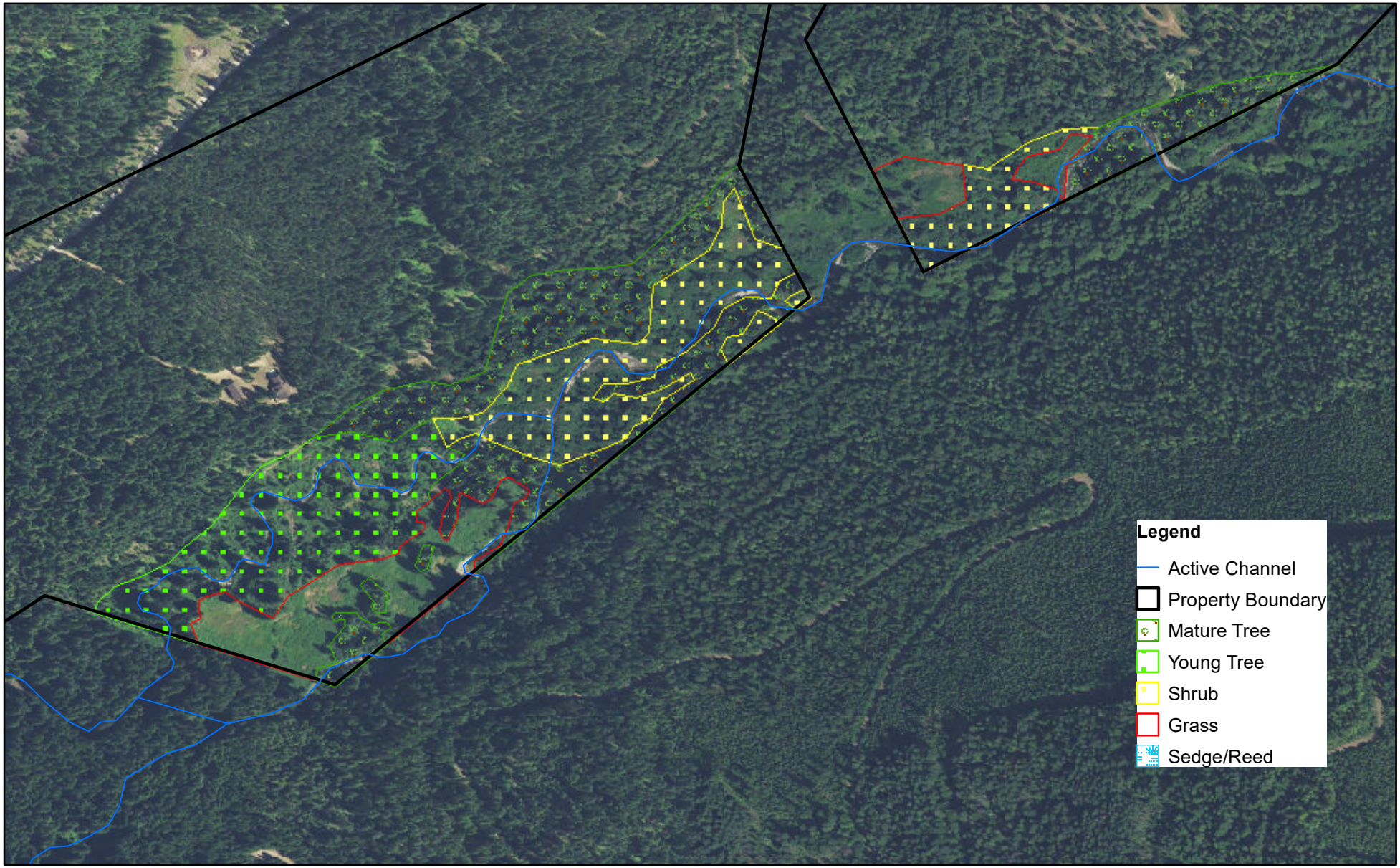
180 0 180 360 540 720
Feet

N

Customer(s): Robert Stein
District: Green Mountain Conservation District
Approximate Acres: 162 + 105 = 267
Legal Description: Parts of: Sec. 5-8 T27N R32W
Sec. 12 T27N R33W

Riparian Stands
2019 Photo

Date: 3/3/2022
Field Office: PLAINS FIELD OFFICE
Agency: USDA, NRCS
Assisted By: Troy Hidy
State and County: MT, SANDERS



1:5,280 440 Feet/Inch

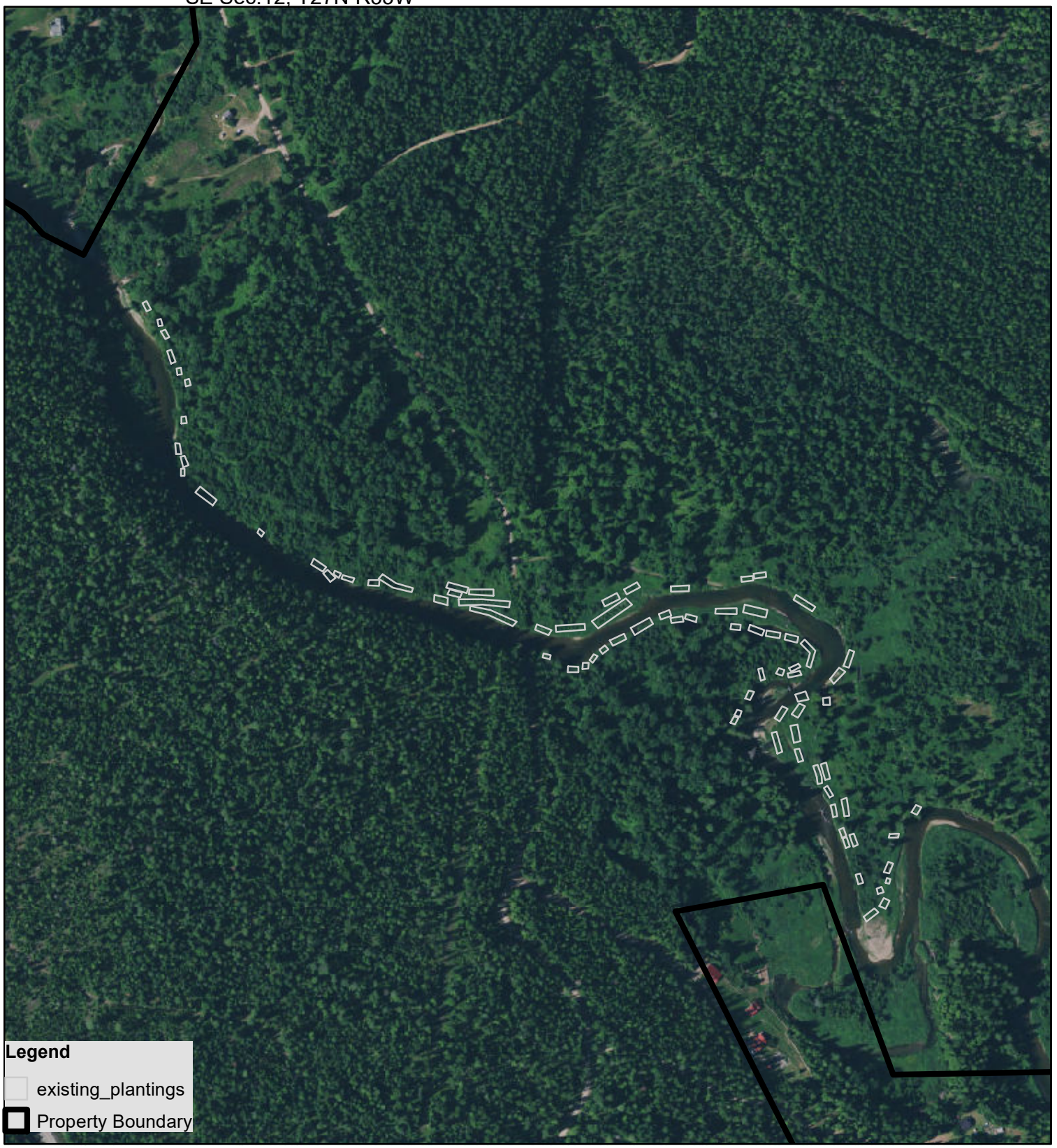
320 0 320 640 960 1,280
Feet

N

Customer(s): USFS
District: Green Mtn Conservation Dist.
Legal Description: SW Sec.7, T27N R32W
NW Sec.18, T27N R32W
SE Sec.12, T27N R33W

2019 Photo

Date: 2/28/2022
Field Office: PLAINS
Agency: USDA - NRCS
Assisted By: Troy Hidy



1:5,280 440 Feet/Inch

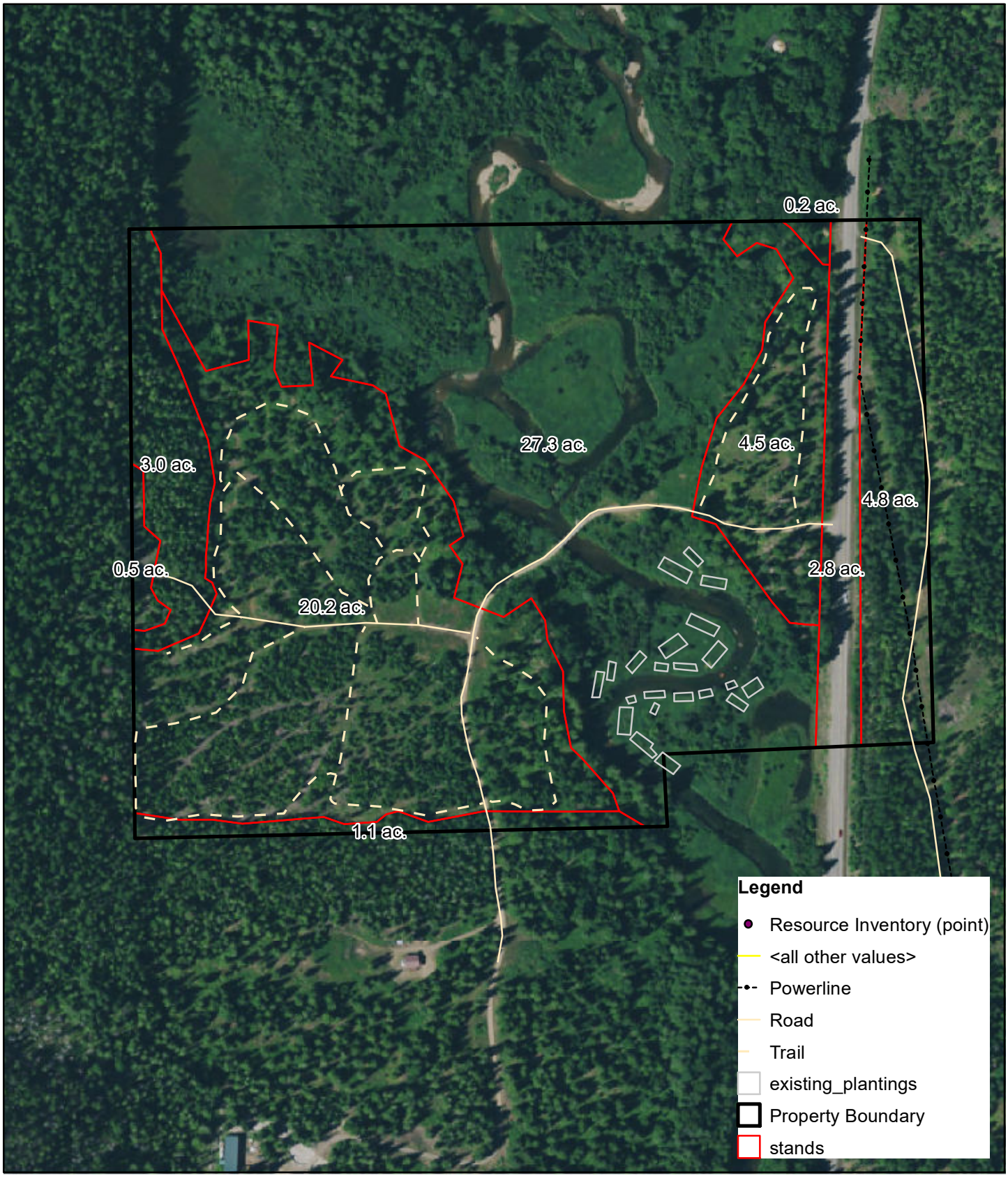
325 0 325 650 975 1,300
Feet

N

Customer(s): Warrington Living Trust
District: Green Mountain CD
Approximate Acres: 65
Legal Description: Sec.32 & 33, T28N R33W

2019 Aerial Photo

Date: 2/25/2022
Field Office: Plains Field Office
Agency: USDA - NRCS
Assisted By: TROY HIDY



1:3,960
330 Feet/Inch

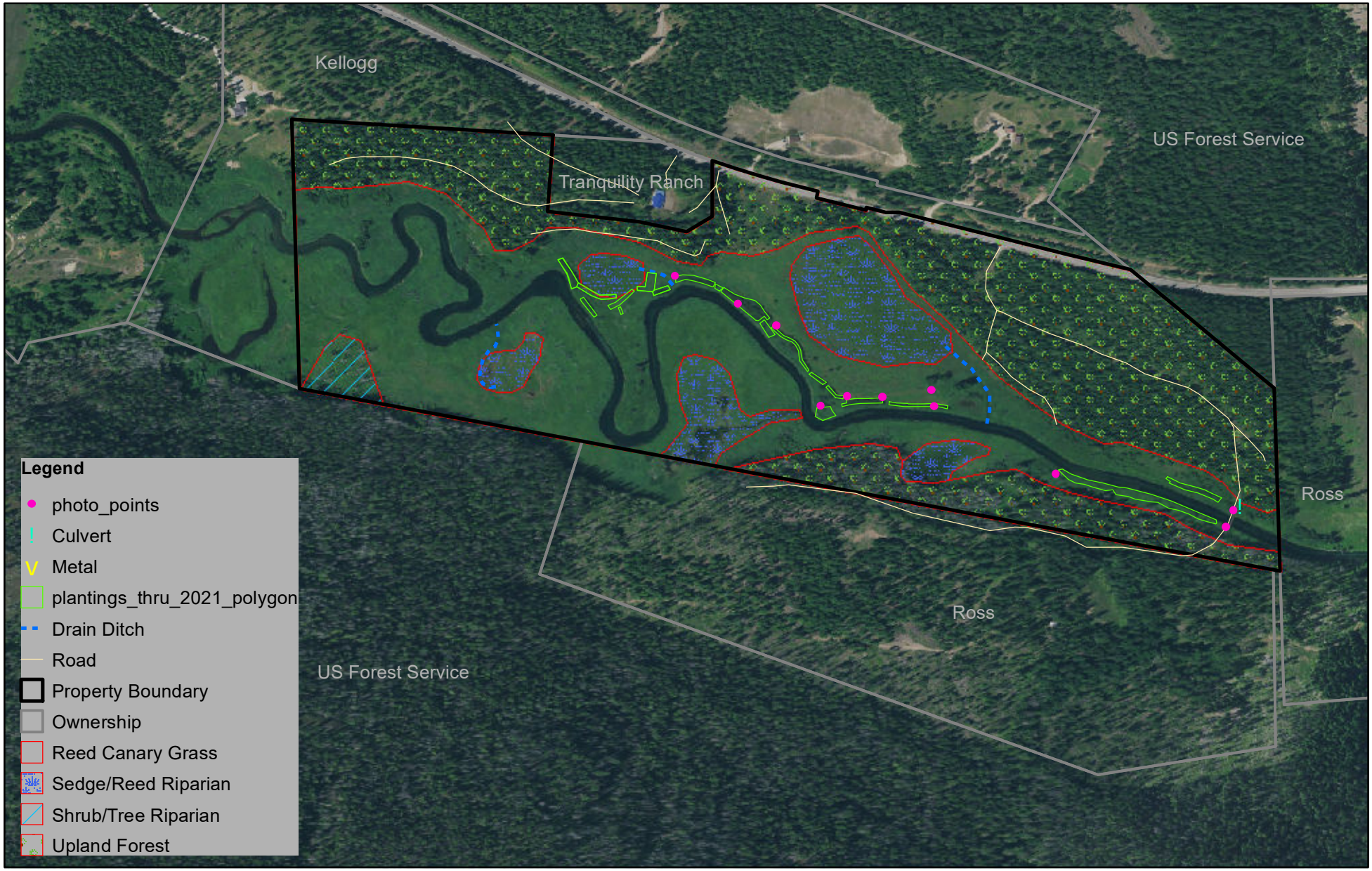
190 0 190 380 570 760
Feet

N

Customer(s):Wood Duck Property, Avista Corp.
District: Green Mountain CD
Approximate Acres: 144
Legal Description: Sec.10, T27N R33W

Planning Map
2019 Aerial Photo

Date: 2/1/2022
Field Office: Plains Field Office
Agency: USDA - NRCS
Assisted By: TROY HIDY
State and County: MT, Sanders



USDA

490 0 490 980 1,470 1,960
Feet

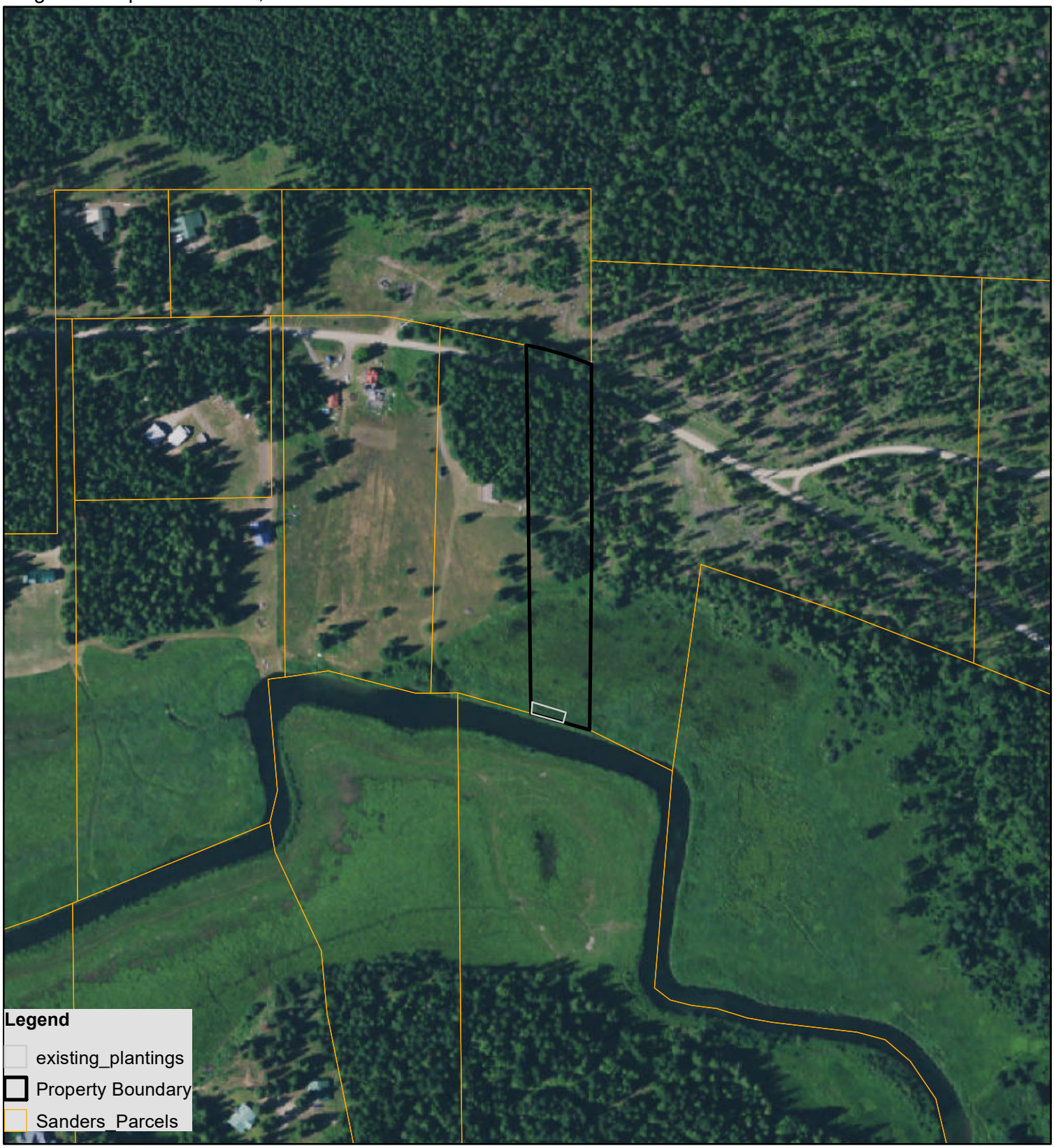
1:7,920
660 Feet/Inch

N

Customer(s): Steve Zigan
District: Green Mtn Conservation Dist.
Approximate Acres: 3
Legal Description: Sec. 12, T27N R33W

2019 Photo

Date: 2/28/2022
Field Office: PLAINS
Agency: USDA - NRCS
Assisted By:



1:3,960 330 Feet/Inch

240 0 240 480 720 960
Feet

N

Letters of Support

Green Mountain
CONSERVATION DISTRICT
PO Box 1329 · Trout Creek, MT 59874 · (406) 827-4833
greenmountaincd.org

September 30, 2022

Brita Olson, Coordinator
Lower Clark Fork Watershed Group
P.O. Box 1329
Trout Creek, MT 59874

Dear Ms. Olson,

Please accept this letter as an expression of support from the Green Mountain Conservation District (GMCD) and our ongoing willingness to assist in the Lower Clark Fork Watershed Group's (LCFWG) riparian revegetation project in the Bull River watershed.

The GMCD has been a member of the LCFWG, as well as a fiscal sponsor and project partner, since the organization was formed in 2004. Prior to that, we helped form and serve as the fiscal sponsor for landowner watershed councils in multiple tributaries to the Lower Clark Fork River. The GMCD and LCFWG have worked together to plan, fund, administer, coordinate and implement many restoration projects over the years – including in the Bull River Watershed.

We are currently working to secure funding for staff capacity, including a Big Sky Watershed Corps member, that would allow GMCD staff and the additional member to contribute directly to planting efforts, landowner and community outreach and project maintenance in 2023. We aim to continue building and sustaining capacity at the district to support these efforts through the scope of your current proposed projects and into the future.

Due to our long history and involvement with the LCFWG and work in the Bull River, it is without hesitation that we support your efforts to secure funding for future phases of the ongoing riparian revegetation efforts in this very important tributary of the Lower Clark Fork River. We have full confidence in LCFWG's ability to carry out this work, and know it complements the GMCD's mission to protect and enhance the natural resources of Western Sanders County.

Sincerely,

William D Naegel

Green Mountain Conservation District

KANIKSU
LAND TRUST

October 5, 2022

Brita Olson
Lower Clark Fork Watershed Group
P.O. Box 1329
Trout Creek, MT 59874

Dear Ms. Olson,

This letter is to express the full support of Kaniksu Land Trust for the Lower Clark Fork Watershed Group's continued work to restore native riparian vegetation along the banks of the Bull River and East Bull River.

Kaniksu Land Trust is an accredited land trust whose mission is to care for the lands and people of the Kaniksu Region, today, tomorrow and forever. To that end we have completed more than 30 land conservation projects throughout this region – which includes Sanders County, Montana and Bonner and Boundary Counties in Idaho - since forming in 2002. Our land trust holds 7 conservation easements in the Bull River Valley and maintains and monitors an 8th, nearly all of which are on properties where your organization has planted much-needed native trees and shrubs. We are impressed with the results thus far of this restoration initiative and are excited to see natural regeneration now occurring from initial planting efforts years ago.

The Bull River is a high priority for our conservation work because of the importance of this river for threatened Bull Trout and other native fish species. Because of our commitment to steward the lands under our management, and the benefits of restoring native vegetation to this river system, consider us a full partner in your efforts to restore the health of this river.

Sincerely,

Regan

Regan Plumb
Conservation Director
Kaniksu Land Trust

MONTANA CONSERVATION CORPS

301 N. Willson Ave, Bozeman, MT 59715 * PH: 406-587-4475 * www.mtcorps.org

September 14, 2022

Brita Olson, Coordinator
Lower Clark Fork Watershed Group
P.O. Box 1329
Trout Creek, MT 59874

Dear Ms. Olson,

On behalf of Montana Conservation Corps (MCC), let me express our satisfaction in being included as a partner in your riparian revegetation projects in the Bull River watershed. This letter is in support of your efforts to secure funding to support the next three years of partnership in pursuit of further restoration work.

The mission of the MCC is to inspire young people through hands-on conservation service to be leaders, stewards of the land and engaged citizens who improve their communities. We have had multiple opportunities to live this mission through our more than six years of working with the Lower Clark Fork Watershed Group, partnering to support ongoing planting efforts in the Bull River drainage. We have deployed multiple MCC Crews to assist with the planting of native trees and shrubs, and in the maintenance of previous plantings.

It is so gratifying to see the success of this work over the years, while working with the professionals at the LCFWG. This project has given many MCC members exposure to quality restoration work, an opportunity to work with positive mentors, a glimpse into the power of partnerships for land stewardship, and exposure to a potential career pathway.

We look forward to partnering with the Lower Clark Fork Watershed Group on future phases of this long-term restoration project.

Please don't hesitate to contact me with questions regarding the contents of this letter.

Sincerely,

Clifford Kipp
Regional Director
MCC – Northern Rockies
clifford@mtcorps.org

September 30, 2022

Brita Olson, Coordinator
Lower Clark Fork Watershed Group
P.O. Box 1329
Trout Creek, MT 59874

Dear Ms. Olsen,

Please accept this letter of support for Lower Clark Fork Watershed Group's (LCFWG) proposed work on the Bull River.

The mainstem Bull River and East Fork Bull River are important migratory and spawning (respectively) tributaries for Bull Trout, a threatened species. They also support Westslope Cutthroat Trout, Mountain Whitefish, and a popular sport fishery. Because of the long-term benefits to fish habitat, we have been involved and supportive of the LCFWG efforts to restore this river through a multi-decade riparian revegetation effort. This work is time-consuming and requires patience, but we have seen results as the monoculture of reed canarygrass is gradually replaced by native shrubs and trees. Over time this project will improve the function of the Bull River and surrounding floodplain areas necessary for the long-term resilience of the system and the fish habitat it provides.

This work requires collaboration with landowners, including small private property owners as well as the U.S. Forest Service. All projects include multiple stakeholders with diverse objectives, and the LCFWG is essential for coordination during this process. The LCFWG assists in many aspects of restoration throughout the drainage including pre-project planning (such as stakeholder collaboration, obtaining funds, permitting, and contractor selection and oversight), as well as on-the-ground work (such as planting, maintenance and monitoring). We value the group's ongoing commitment to champion this project over the long-term.

We support the LCFWG's proposed work on the Bull River over the next three years and believe it to be in line with the goals and objectives of our agency, in particular the Future Fisheries Improvement Program. We further expect to continue supporting the LCFWG's efforts in the Bull River by supporting funding through the Avista's Clark Fork Settlement Agreement for ongoing maintenance of past projects.

Sincerely,

Travis Rehm

Travis Rehm
Fisheries Biologist
Montana Fish, Wildlife & Parks, Region 1
5427 Hwy. 200
Thompson Falls, MT 59873
(406) 382-3032

October 4, 2022

Brita Olson
Lower Clark Fork Watershed Group
P.O. Box 1329
Trout Creek, MT 59874

Dear Ms. Olson,

As landowners in the Bull River Valley, We are happy to offer our support of your efforts to fund continued revegetation efforts on our property and other properties in the area.

We have lived in the Bull River for over two decades, and feel fortunate to be stewarding a parcel at the confluence of the East Fork Bull River and mainstem Bull River. The Bull River is near and dear to our hearts, and a big part of our lives. We value its scenic beauty – and also recognize the importance of protecting and conserving the river for the many fish and wildlife species we share the valley with.

We have been caretaking this piece of land for years, supporting the previous owners Don and Helen Edwards in their vision of managing the land surrounding their home for the benefit of nature. Don donated a conservation easement for the property to the Kaniksu Land Trust in 2020, and we are privileged to continue the Edwards legacy of stewardship on the property.

For the last few years, we have been working to implement recommendations made by the Natural Resources Conservation Service who completed a resource assessment on the property. This work has included pruning Western White Pine, forest health thinning, and supporting the Lower Clark Fork Watershed Group's planting efforts on the mainstem and East Fork Bull River and surrounding floodplains. In addition to supporting additional planting efforts, we help maintain the plantings every summer and mow around the planting cages to reduce competition and support the young trees as they are getting established. We are committed to continuing this work in partnership with you and the Lower Clark Fork Watershed Group for the next 3 years and into the future for as long as this property is ours to steward.

It's gratifying to see the conservation progress year after year, and to know that we are contributing to making this river system healthier, and giving fish and wildlife in this valley a better opportunity to thrive. We only wish we could live to see these trees in 100 years!

We wish you success in recruiting more landowners to participate in this program and in efforts to securing funding to expand the work. Please feel free to use this letter of support toward that aim.

Sincerely,

David R. Nye
Karen Nye

Dave and Karen Nye

Project ASCENT

September 30, 2022

Brita Olson
Lower Clark Fork Watershed Group
P.O. Box 1329
Trout Creek, MT 59874

Dear Ms. Olson,

I am writing on behalf of the entire Project ASCENT Board of Directors to express Project ASCENT's support and enthusiasm for your efforts to restore a healthy ecosystem in the Bull River watershed through continued revegetation work along the mainstem Bull River and the East Fork Bull River. Let this letter signal our full support for your efforts to secure funding for this important work.

Project ASCENT is a Sanders County non-profit organization dedicated to getting kids outdoors and connected to nature. Our primary purpose is to offer recreational opportunities and outdoor education primarily to underprivileged youth in our area and the surrounding areas.

We are particularly excited about the opportunity to place older youth in internships with the Lower Clark Fork Watershed Group so they can learn about the value of native vegetation and healthy rivers, while contributing to ongoing conservation projects. Just as important, these internships will give youth a chance to experience teamwork with people from different walks of life and build self-confidence. This will give them a meaningful summer job and perhaps inspire them to appreciate conservation work and perhaps consider it as a future career option.

We are hopeful that adequate funding can be secured to continue this critical restoration work along our treasured waterways and provide a transformative growth experience for youth from our community.

Sincerely,

Rob Christensen, CEO
Project ASCENT
P.O. Box 1954
Thompson Falls, MT 59873

October 5, 2022

Brita Olson
Lower Clark Fork Watershed Group
P.O. Box 1329
Trout Creek, MT 59874

Dear Ms. Olson,

As a landowner in the Bull River Valley, I am happy to offer my support of your efforts to fund continued revegetation efforts on my property and other properties in the area.

This land is my favorite place on earth, and the only true home I've ever known. In fact, this fall marks the 50th anniversary of my family moving to our property, and I remember sitting around the dining room table with Mr. Berray who homesteaded the place with his father, Casper Berray, in the early 1900s. I heard of all of the years of labor that the first homesteaders in the Bull River valley put into clearing the fields, diverting the river, and turning this land into one of the most productive farms in the Bull River valley. When I was in school, we harvested 2,000-3,000 bales of hay out of our fields.

While in many ways it is difficult to balance this rich legacy that I inherited with a return to nature, it's been nearly 30 years since our family has hayed or kept animals. The homestead has been placed in multiple conservation easements. Drainage ditches from our fields have been plugged and wetlands on the property now support many species of migratory waterfowl, beaver, muskrat and other wildlife. I am deeply passionate about protecting this land from subdivision and stewarding it as a place where nature can thrive.

Every tree along the river currently has grown in since the late 1990s, some naturally and some through past planting efforts. I fully support the Lower Clark Fork Watershed Group's continued efforts to establish trees along the river and floodplain, which will eventually provide quality habitat, shade the river, and contribute to the long term resilience of the habitat on our land. The Lower Clark Fork Watershed Group has worked with the Natural Resources Conservation Service for years to maintain past plantings and support these efforts on our property. My wife and I are enthusiastic for additional western white pine, Engelmann spruce and western red cedar to be established along the river, further shade out reed canarygrass and continue this long-term project.

I wish you success in recruiting more landowners to participate in this program and in efforts to secure funding to expand the work.

Sincerely,

Jamie Ross

October 5, 2022

Brita Olson
Lower Clark Fork Watershed Group
P.O. Box 1329
Trout Creek, MT 59874

Dear Ms. Olson,

As a landowner on the East Fork Bull River, I am happy to offer my support of your efforts to fund continued revegetation efforts on my property and other properties in the area.

My property includes a portion of the East Fork of the Bull River, a spawning and rearing stream for Bull Trout, which is listed as a threatened species under the ESA, and for native Westslope cutthroat trout, a Montana species of special concern. Historically the riparian area of the property was an old growth western red cedar forest, but the forest was heavily logged by the previous landowner. This led to the establishment of extensive areas of reed canary grass, which has thick root mats that preclude shrub and tree seedling generation. My long term vision and objective for the riparian area of the property is to reestablish western red cedar forest, which will provide shade for cooler water temperatures for more favorable trout habitat and deep roots for streambank stability.

Prior revegetation work has been done in the riparian area to establish riparian shrubs and western red cedar trees with good success. You can feel the temperature difference provided by the shade of the canopy cover on a hot day which is the result of over 20 years of revegetation efforts on my property. I am encouraged by natural generation in these previously planted areas that we are now observing – a sign that our relatively short-term planting efforts will be resilient over the long term. Despite these successes, there are still significant areas along the stream and in nearby floodplain covered in reed canarygrass and with limited tree cover. I am enthusiastic about the continued efforts proposed by the Lower Clark Fork Watershed Group and fully support the proposed work to expand revegetation efforts on my property and others in the drainage.

I value and appreciate the natural surroundings in which I live, and am pleased to have the opportunity to be a good steward of this land, leaving it healthier than when I arrived. I have placed my property in conservation easements, and hence the land and restoration investments will be protected in perpetuity. I wish you success in recruiting more landowners to participate in this program and in efforts to secure funding to expand the work.

Sincerely,

Robert A. Stein

United States Department of Agriculture
Forest Service
Kootenai National Forest
Cabinet Ranger Station
2693 MT Highway 200
Trout Creek, MT 59874-9503
406-827-3533

File Code: 2700
Date: September 28, 2022

Brita Olsen - Director
Lower Clark Fork Watershed Group
P.O. Box 1329
Trout Creek, MT 59874

Dear Ms. Olson,

As the primary land manager in the Bull River Watershed, the Kootenai National Forest recognizes the importance of the work being conducted by the Lower Clark Fork Watershed Group (LCFWG) and its partners to restore native riparian vegetation in the Bull River and East Bull River. Of the 142 square miles in the watershed, the vast majority (93 percent) are on USFS managed lands. The Bull River drainage is an important tributary for native fish, and we share your commitment to restoring these rivers to a more resilient and high-quality condition.

Because of our responsibility to steward the lands under our management, and the benefits of restoring native vegetation to this river system, we are working to facilitate the expansion of the riparian revegetation work onto U.S. Forest Service lands along the East Bull River. In 2021 and 2022, the Kootenai National Forest issued Categorical Excluded Decision Memos to authorize riparian plantings along the East Bull River. We also have facilitated funding of riparian revegetation work in the East Bull River through the Secure Rural Schools and Community Self-Determination Act to support efforts on public lands in 2022 and 2023. We look forward to future opportunities to assist with this important restoration work on lands that we manage.

Sincerely,

MICHAEL D. FEIGER
District Ranger

September 27, 2022

Brita Olson
Lower Clark Fork Watershed Group
P.O. Box 1329
Trout Creek, MT 59874

Dear Ms. Olson,

As a landowner in the Bull River Valley, I am happy to offer my support of your efforts to fund continued revegetation efforts on my property and other properties in the area.

We have owned our property on the mainstem Bull River for decades and have protected it with a conservation easement from the Kaniksu Land Trust. We've been happy to support planting efforts on our property since 2015 and the continued efforts of the Lower Clark Fork Watershed Group in the Bull River. Past plantings are performing well and we enthusiastically supported another 150 trees planted on our property this past year. All previous planting efforts have taken place downstream of our bridge, and while these areas will continue to be maintained and saturated with plantings, there are large areas upstream of the bridge on our property that are dominated by reed canarygrass. We fully support the Lower Clark Fork Watershed Group's efforts to expand plantings efforts throughout the floodplain on our property and elsewhere in the Bull River valley.

It's gratifying to see the progress year after year, and to know that we are contributing to making this river system healthier, and giving fish and wildlife in this valley a better opportunity to thrive. In addition, we have been working with the Natural Resources Conservation Service to implement recommendations and forest health improvements throughout our property. Last year, this included upland thinning, pruning and hundreds of blister rust resistant western white pine plantings. Through multiple partnerships, we are moving toward whole property management for the health of the forest, Bull River, and the many species that utilize and compose the habitat on our property.

We are pleased to have the opportunity to be a good steward of this land, leaving it healthier than when we first saw it. I wish you success in recruiting more landowners to participate in this program and in efforts to securing funding to expand the work on our property and beyond.

Sincerely,

Brad Warrington

USDA United States Department of Agriculture
Farm Production and Conservation
Natural Resources Conservation Service
NRCS – Montana
Plains Field Office
7487 MT HWY 200
Plains, MT 59859

10/07/2022

Brita Olson
Lower Clark Fork Watershed Group
P.O. Box 1329
Trout Creek, MT 59874

Dear Ms. Olson,

The NRCS has a long history of working with the LCFWG in collaboration with other conservation partners, such as Green Mountain Conservation District, US Forest Service, Avista Utilities, and Montana Fish, Wildlife, and Parks within the watershed to restore the native vegetation on a landscape-scale within the Bull River Watershed.

NRCS prioritizes our workload through our Local Working Group process. One of the priorities identified by the Local Working Group in Sanders County has been the restoration and revegetation of the Bull River watershed. NRCS has worked with multiple partners, including LCFWG, to develop and implement projects that address these identified priorities. As a result of this collaboration, a Targeted Implementation Plan (TIP) was developed to address revegetation in the Bull River Watershed.

As such, we look forward to continuing to work closely with the LCFWG in the coming years to continue our long history of coordination and collaboration.

Sincerely,

Dillon Martini
District Conservationist
(406) 826-3701
Dillon.Martini@usda.gov

Roots for Rivers Targeted Implementation Plan (TIP)

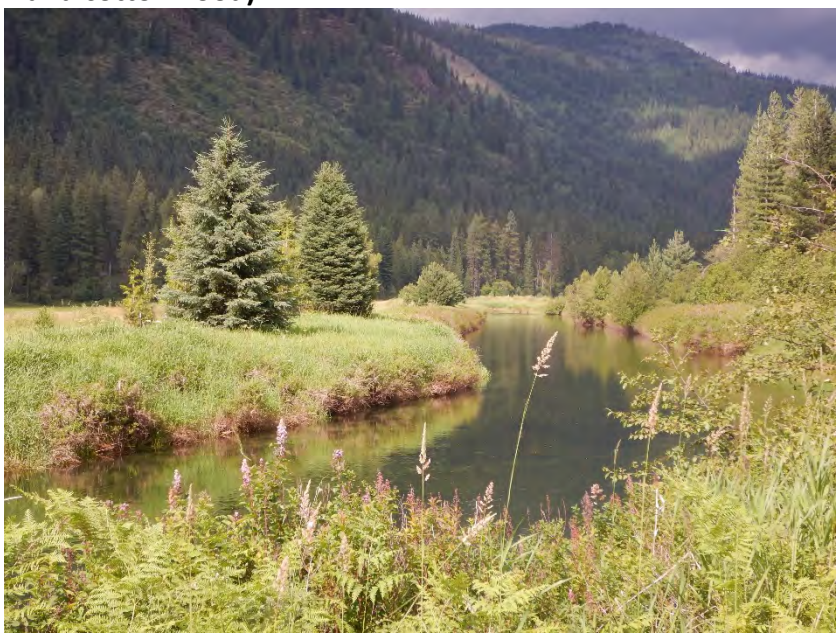
Riparian Restoration of Woody Vegetation

Natural Resources Conservation Service

Sanders County, Montana

Examples of reed canary grass, and other introduced grasses along the Bull River, and subsequent bank sloughing in riparian area cleared for hay ground.

Desired riparian condition includes robust stands of woody shrubs (such as Douglas spirea and willow) and trees (such as hawthorn and cottonwood).



Trees planted approximately 15 years ago on this NRCS wetland easement along the Bull River are now well established.

New plantings, such as these installed in fall of 2018, require browse protection and weed matting for at least 5-10 years until they are established enough to compete with surrounding vegetation and/or browse pressure. In some areas that are suitable, such as the opposite bank pictured in the photo on the left (planted in 2012), large enclosures can be installed to protect larger areas of vegetation.

Overview and Background Information

Riparian areas are critically important landscape features. Over the past 120 years human development has caused significant degradation to the riparian areas within the Bull River drainage. As was common in most areas of the west, early settlement, homesteading, and logging was concentrated in the riparian areas within the Bull River drainage. These riparian areas were highly sought after due to their productive soils, proximity to water, and their relatively flat terrain in an otherwise mountainous area. Riparian forests were cleared of timber first, followed by large-scale logging on the adjacent areas. Roads were constructed throughout the landscape to assist with these logging operations. Most of the larger riparian areas are private while the adjacent areas are mostly Forest Service lands. Large areas of the larger riparian areas were planted to reed canarygrass, which has since taken over these riparian areas creating a monoculture. This monoculture of reed canarygrass fails to provide stream and flood plain stability. One unique feature of the Bull River drainage is that grazing is relatively uncommon.

The Lower Clark Fork Watershed Group (LCFWG) in conjunction with Green Mountain Conservation District (GMCD) has been actively working to restore native riparian vegetation along the Bull River since 2002. The Natural Resource Conservation Service (NRCS) has complemented this work by restoring woody vegetation on wetland easements within the Bull River and has provided technical assistance to LCFWG and GMCD on other properties in the Bull River watershed throughout the years. Working cooperatively, NRCS, GMCD, and LCFWG have had success in establishing species such as western red cedar, western white pine, spruce, and cottonwood trees which help to provide stability to the banks, shade for the river, and large down woody debris to the stream.

This TIP will utilize the lessons learned over the past two decades to restore riparian areas within the Bull River drainage. The TIP will be completed in cooperation with the LCFWG and GMCD. The US Forest Service (USFS) has also implemented similar projects on federal property which are often adjacent to private properties that will be restored through this TIP. This TIP will work to expand the cumulative benefits that multiple partners can provide.

Problem Statement

Due to the lack of large rock and bedrock in most area streams, large diameter wood and tree roots are a key component to stream and flood plain stability. Historically, this created high quality fishery habitat for native fish species by maintaining complex stream structures with deep, cool temperature pools. These areas also provided quality habitat for terrestrial wildlife species (Sanders County Long Range Plan, page 23).

Current conditions on the Bull River consist of mostly reed canarygrass, as documented in the picture on the left. You can see some of the existing plantings that have been installed by Lower Clark Fork Watershed Group. On the right, you can see a properly functioning riparian area that currently exists on the East Fork of Bull River. Coarse woody debris has resulted in a diverse stream with riffles, pools, and structure that provides great aquatic habitat. Coarse woody debris coupled with diverse vegetation and structure also help prevent sedimentation and bank erosion issues.

This project will improve fish and wildlife habitat as well as water quality in the Bull River Watershed. Riparian corridors in this area have the potential for high biodiversity and habitat value. Not only are healthy riparian areas vital to the long-term survival of native fish, they also provide important habitat for numerous birds, ungulates such as moose, elk and deer, beaver and other furbearers, and, when composed of diverse flowering plant species, native pollinator species. Bull trout, a species listed as threatened under the Endangered Species Act, are present in the drainage but declining - maintaining and improving high quality habitat is a component of multi-part conservation efforts for the species. The project area includes bull trout critical habitat. The Sanders County Long Range Plan explicitly discusses the desire to improve wildlife habitat for both bull trout and cutthroat trout (pages 13, 14, and 24 of the Sanders County Long Range Plan).

The Bull River is listed by the Montana Department of Environmental Quality (DEQ) as impaired by sediment as well as 'physical substrate habitat alterations', affecting aquatic life and the cold-water fishery. The priority recommendation for addressing stream impairments in the Bull River drainage, identified in the Lower Clark Fork Tributary Watershed Restoration Plan, is to continue streamside revegetation efforts. The Sanders County Long Range Plan discusses the DEQ listing of the Bull River and discusses addressing these problems as well as improving riparian forest health on pages 7, 13, 14, 23, 24, and 25.

Many riparian habitat conditions suffer from the loss of native riparian vegetation due to historic uses such as logging, wildfire and land conversion to agriculture. Following human disturbances, invasive reed canarygrass has replaced native vegetation in many areas. The aggressive nature of reed canarygrass inhibits the natural regeneration of woody shrubs and trees, as well as native grasses, forbs, and reeds. Meanwhile, the invasive grass lacks the deep root structures needed to prevent excessive erosion of the river's banks which are highly susceptible to erosion during seasonal high-water events. Reed canarygrass' tendency to prevent the natural regeneration of native vegetation further degrades in-stream and riparian habitat for fish and wildlife. Reed canarygrass typically outcompetes all other vegetation creating a monoculture that is extremely difficult to control. In addition, reed canarygrass does not provide the amount of shade trees and shrubs are able to provide to the stream resulting in increased water temperatures.

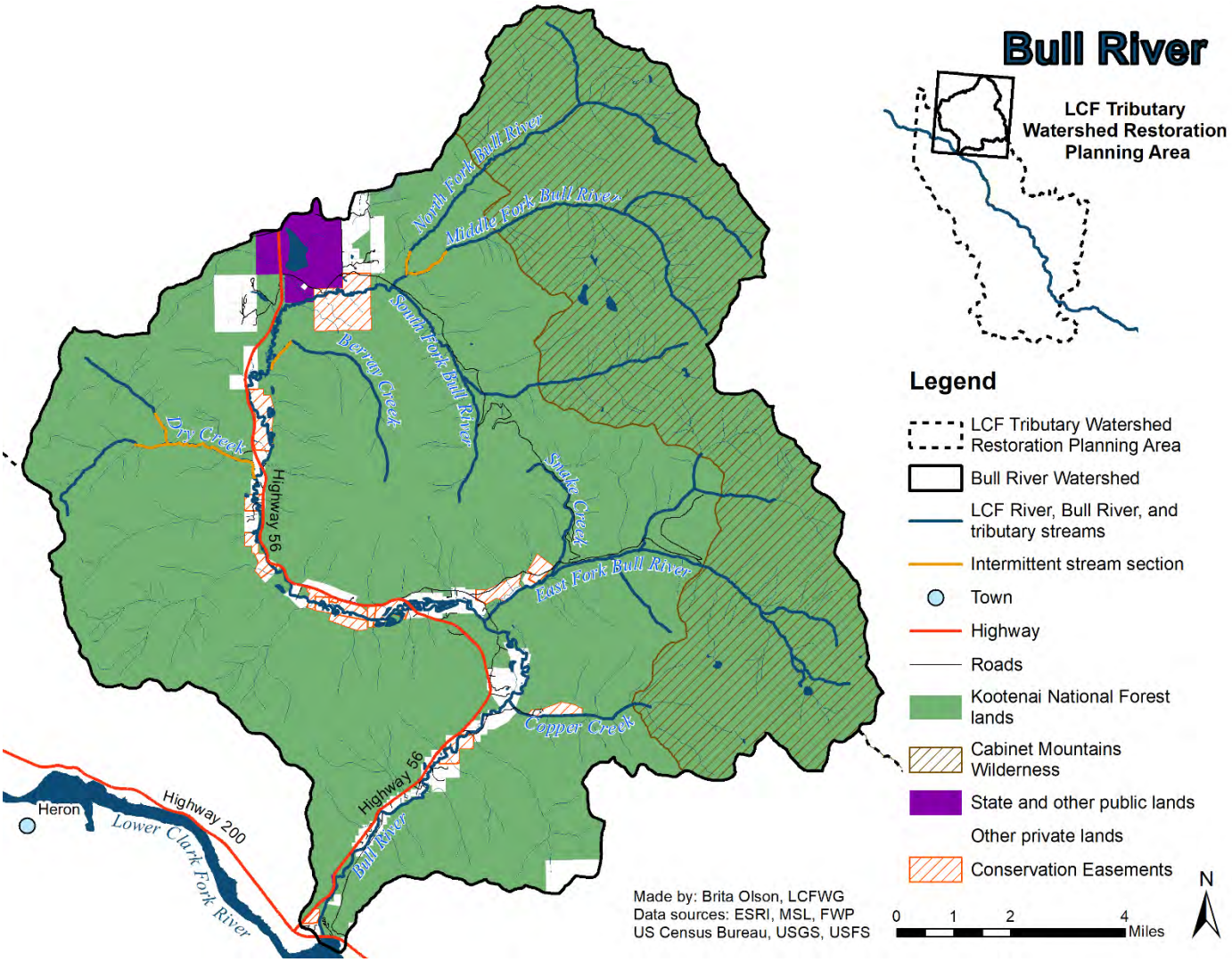


Figure 1: The Bull River drainage, located in Sanders County, MT. The boundary of this TIP is the Bull River Watershed, and the TIP applies to private property that has riparian areas within the drainage.

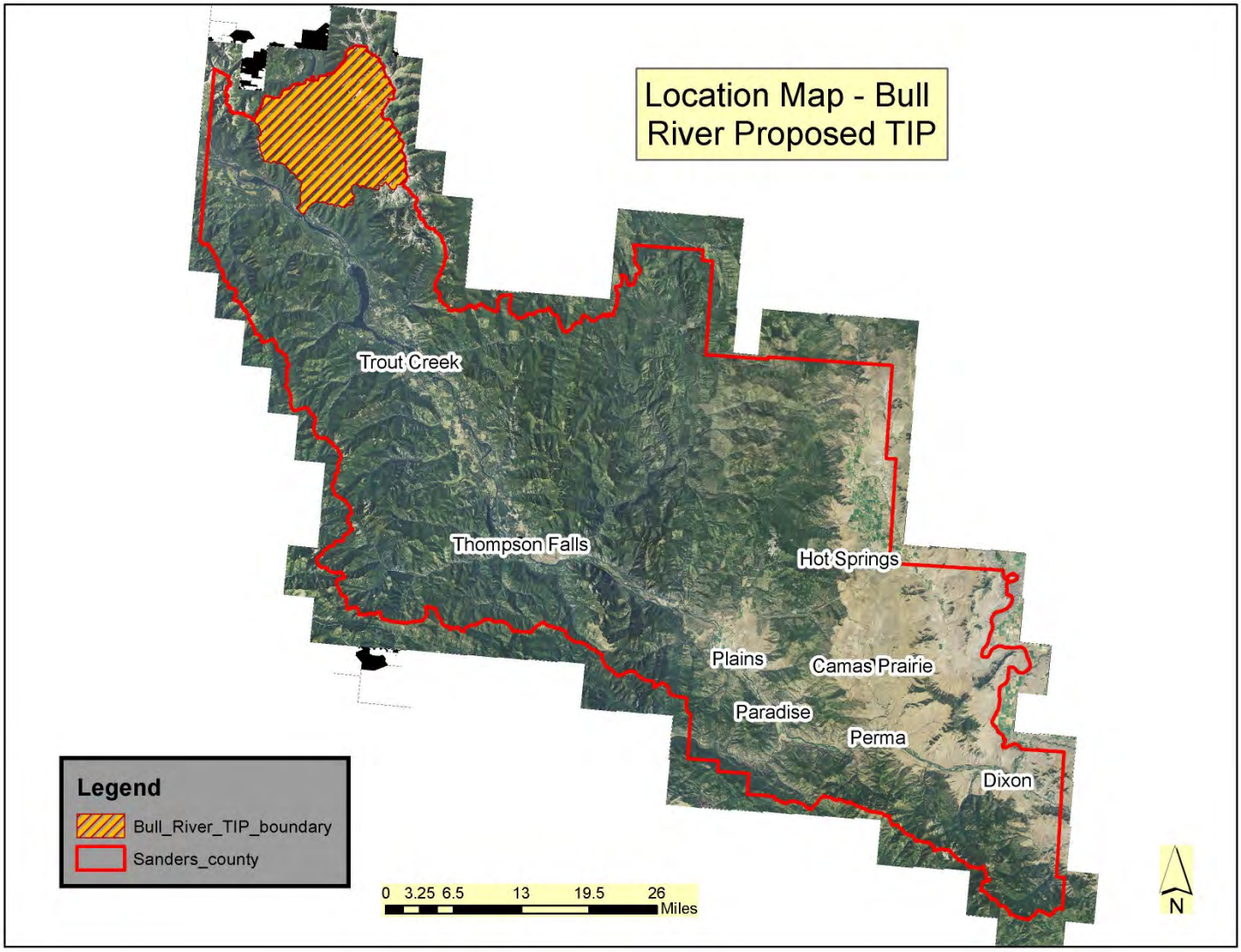


Figure 2: The Bull River drainage as located in Sanders County.

Goals and Objectives

The goals and objectives of this project will be completed jointly via the NRCS, GMCD and LCFWG. This project will be highlighted as part of a concerted outreach effort to engage the community and other landowners in the GMCD service area in supporting and getting involved in efforts to improve ecological integrity and resilience of riparian areas. The LCFWG and the GMCD are collaborating on an extensive outreach effort to educate and engage more landowners through direct mailings, improved online resources for landowners and the general public, and articles in the local media. The project will provide a positive example of the kind of work landowners can do with the help of the LCFWG, GMCD and the NRCS, and will help generate future projects with new partners.

This project will restore woody vegetation to streamside areas where it historically existed but often is currently dominated by reed canarygrass and/or other invasive species (such as spotted knapweed). We will work closely with landowners to develop the revegetation plan, purchase container plants - primarily conifers and black cottonwood. The restoration methods will involve plantings of small groups of individual trees. Plantings will be protected from browsing

beaver, deer and other wildlife with fencing and competition from reed canarygrass and other weeds reduced by mechanical removal (with hand tools) and placement of weed matting as needed. The LCFWG has established many plantings throughout the Bull River Valley in the last two decades and maintains revegetation sites to ensure the new plants are protected until they are mature enough to withstand browse and encroaching reed canarygrass without protection. Shading is a successful technique in reducing the competitiveness of reed canarygrass and has been shown to result in significant decreases in both above-ground and below-ground biomass of reed canarygrass. This technique has been successful in restoring native riparian vegetation along the Bull River over the years and is making incremental improvements to the overall health of this important ecosystem. Establishing deeply rooted native vegetation will reduce erosion, increase shade, and improve habitat for both aquatic and terrestrial species.

Treatments will include a variety of practices to establish or promote woody vegetation in the riparian area. The primary practice will be Riparian Forest Buffer (391) to establish appropriate woody vegetation in areas where it has been reduced or eliminated. Fence (382) will be used to protect woody vegetation from damage due to deer, elk, moose, and beaver. Tree Pruning (660) will be used only on western white pine in or adjacent to riparian areas to improve resilience to blister rust. Forest Stand Improvement (666) and Woody Residue Treatment (384) will be used to improve existing stands of woody vegetation within or adjacent to riparian areas. Herbaceous Weed Treatment (315) will be used to treat weed infestations. Plantings will typically consist of physically removing reed canarygrass with handtools, planting a tree (container or bare root stock), laying down 5 feet by 5 feet landscape fabric, and using t-posts and woven wire to exclude ungulates and beavers.

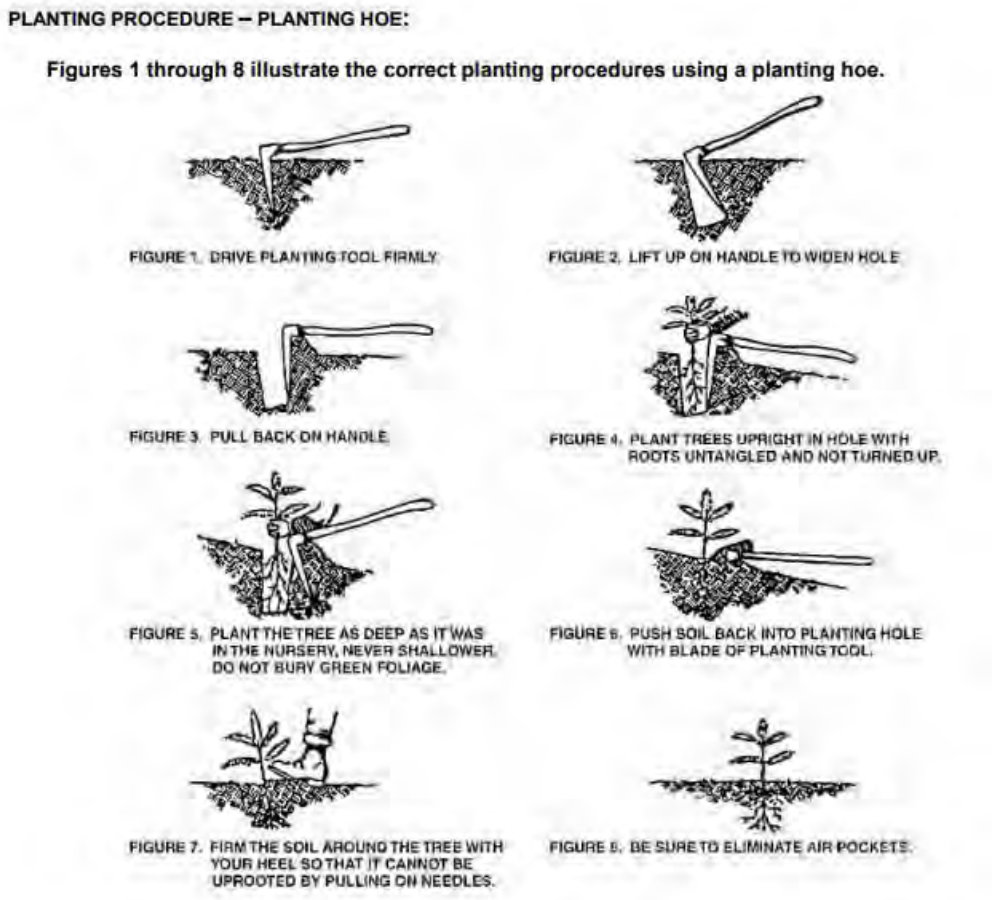


Figure 3: Typical procedure for planting trees.

In the following picture, you can see the individually planted trees as an example of work this TIP will accomplish. In the picture, these trees were planted and are being maintained by Lower Clark Fork Watershed Group.

Rough, preliminary, aerial estimates of river that potentially has reed canarygrass shows 10-15 miles of river that could be treated. This project aims to treat up to 7.5 miles of river which is the maximum that partner groups believe they can maintain at the current time. Various sources estimate the total river length at 25 miles. Therefore, roughly 40-60% of the river has the potential to have treatments, and we hope to treat 50-75% of the problem areas. This would result in the potential for 70-90% of the Bull River to meet NRCS planning criteria for identified resource concerns.

This TIP will address the following resource concerns:

- Plant: Structure and Composition – Primary Resource Concern
- Plant: Pest Pressure – Supporting Resource Concern
- Soil: Bank erosion, streams – Supporting Resource Concern
- Animal: Aquatic habitat for fish & aquatic organisms – Supporting Resource Concern

All of these resource concerns tie directly to the Sanders County Long Range Plan. Page 7 of the long range plan discusses water quality and the sedimentation problem in the Bull River. Pages 13, 14, 24, and 25 all discuss improving wildlife habitat, particularly for endangered and threatened species, such as bull trout and cutthroat trout. In addition, page 23 discusses the decline of healthy riparian forests.

As a direct result of the Roots for Rivers TIP, the Bull River Watershed will experience a decrease in the abundance of invasive reed canarygrass, an increase in the quality of riparian habitat for both aquatic and terrestrial wildlife, an

increase in carbon sequestration, and a decrease in sedimentation within the Bull River Watershed. In the long-term, the money utilized in this TIP will most likely result in an increase in bull trout and cutthroat trout thanks to the benefits of creating a healthy riparian forest instead of leaving the area as a monoculture of reed canarygrass. The project will also beneficially impact bird species, big-game, and other terrestrial wildlife. The changes this TIP has the potential to bring to the landscape will benefit recreational users and travelers in the Bull River watershed, providing a special place for future generations to experience.

Proposed Alternatives and Actions

1. Alternative 1: No action will occur. NRCS will not provide financial or technical assistance to restore woody vegetation to riparian areas in the Bull River drainage.

2. Alternative 2: The preferred alternative. Under this alternative NRCS will utilize the following practices to provide both technical and financial resources to restore woody vegetation in riparian areas: Riparian Forest Buffer (391), Fence (382), Tree Pruning (660), Forest Stand Improvement (666), Woody Residue Treatment (384), and Herbaceous Weed Treatment (315). This alternative will provide the greatest opportunity to improve the condition of riparian areas within the Bull River Drainage.

3. Alternative 3: Under this alternative, NRCS would utilize the following practices to provide both technical and financial resources to decrease the abundance of reed canarygrass and establish woody vegetation in riparian areas: Herbaceous Weed Treatment (315) combined with Prescribed Burning (338) and followed with Tree/Shrub Establishment (612). This alternative would require intensive management and would likely result in an increase in stream sedimentation. In addition, it would be very costly.

Alternatives will be analyzed in compliance with the National Environmental Policy Act (NEPA). All practices chosen for implementation will meet NEPA requirements. Special consideration will be given for practices affecting T/E species, such as Canada Lynx and Bull Trout, to meet all federal regulations and NRCS policy requirements. Any cultural resources present will be identified and avoided during the planning and implementation of practices involving any federal action.

Partnerships

This project is an outgrowth of ongoing collaborative efforts to restore woody vegetation along the Bull River, led by the LCFWG and the NRCS. This effort has the potential to be expanded through additional TIPs to include other riparian areas in the Green Mountain Conservation District, with support from many partners including Green Mountain Conservation District, Kootenai National Forest, Montana Fish, Wildlife & Parks, Avista Utilities, volunteers, and landowners. This work continues to be a priority for stakeholders throughout the watershed who recognize the long-term, multi-species and watershed level benefits of this effort.

The mission of the LCFWG is to facilitate collaboration among watershed stakeholders and to coordinate efforts to maintain, enhance and restore the ecological integrity of tributaries to the lower Clark Fork River. A key focus of the organization's work has and continues to be working with landowners to revegetate the Bull River with woody trees and shrubs. Likewise, GMCD's mission is to protect and enhance the natural resources of the district and to educate the public about natural resource concerns. This TIP is well-aligned with these partners' missions and will be well supported through this partnership.

The following partners will provide both direct and indirect assistance:

- Natural Resources Conservation Service – Plains Field Office
- Lower Clark Fork Watershed Group
- Green Mountain Conservation District

The Plains Field Office, Lower Clark Fork Watershed Group, and Green Mountain Conservation District have a long history of partnership coordinating on conservation efforts. LCFWG has served as a liaison between NRCS, Forest Service, MT Fish, Wildlife & Parks, MT DEQ, Avista Utilities, and Kaniksu Land Trust. GMCD would like to increase conservation technical assistance to community members by working with the LCFWG, which this NRCS TIP will help facilitate.

This partnership will provide 'boots-on-the-ground' assistance towards implementation of the TIP. NRCS personnel with appropriate Job Approval Authority will oversee these plans to ensure that they meet NRCS Standards and Specifications. NRCS job sheets will be completed for each practice.

GMCD will help with administrative services, grant administration, and storage. LCFWG will provide on-the-ground work, through employees and volunteers, in both the installation and maintenance of the practices. They will also help find and educate landowners on this TIP and how it can help conservation on their land.

Primary Resource Concern	Plant - Structure and composition
Additional RCs treated by the TIP	Soil - Bank erosion, streams
	Animal - Aquatic habitat for fish and aquatic organisms
	Plant – Pest Pressure
TOTAL Acres in the TIP Area (All Land Uses and Ownership)	90,942 ac
Total Acres Private Lands	5,807 ac

Implementation and Outreach Efforts

TIP Treatment Acres by Land Use	Units	FY22	FY23	FY24	FY25	FY26	Total
Acres of Forest Planned	Acres	50	50	50	50	50	250

TIP OUTCOMES

Describe TIP Outcome(s)	Units	FY22	FY23	FY24	FY25	FY26	Total Treated
Restore woody vegetation component of riparian forest	Number of plantings	250	250	250	250	250	1,250
Increase roots in the riverbanks thus decreasing sedimentation	Miles of eroding banks treated	1.5	1.5	1.5	1.5	1.5	7.5

PARTNERSHIPS

Partners	Services, assets or assistance provided
Green Mountain Conservation District	Outreach to landowners and oversight of Lower Clarkfork Watershed Group's partnership.
Lower Clarkfork Watershed Group	Outreach to landowners. Management of restoration activities including planting, maintenance and landowner communications.

Estimated Partnership Leverage	FY22	FY23	FY24	FY25	FY26	
Green Mountain Conservation District TA	$1,800	$1,800	$1,800	$1,800	$1,800	$
Lower Clarkfork Watershed Group TA	$30,480	$30,480	$30,480	$30,480	$30,480	$

BUDGET INFORMATION

Conservation Program(s)	EQIP

NRCS	FY22	FY23	FY24	FY25	FY26	
Estimated FA	$25,000	$25,000	$25,000	$25,000	$25,000	
Estimated Number of Contracts	10	10	10	10	10	

It is estimated that implementation of this TIP will require $125,000 in total from NRCS over the course of five years. Total financial obligations will be dependent upon the practices contracted and the extent of the contract practices; the chosen suite of practices will be dictated on a site-specific basis. Some contracts will require only riparian forest buffer

and fence practices while other may need forest stand improvement, woody residue treatment, and tree pruning practices to fully treat riparian woody vegetation for maximum benefit. It is expected that different riparian areas will require unique combinations of conservation practices in order to accomplish restoration objectives.

Screening and Ranking

Screening tools and ranking questions will be used to prioritize areas within the work unit based upon interest levels of potential applicants as well as the priorities of our partners.

Potential Ranking Questions:

1. Is the riparian area lacking woody vegetation and/or dominated by nonnative species, such as reed canarygrass, other pasture grasses, or noxious weeds?
2. Is the adjacent stream TMDL listed?
3. Is the adjacent stream perennial?

Screening:

- Reference Montana NRCS Bulletin MT300-21-08, attached to this document

Progress Evaluation and Monitoring

Evaluation and monitoring will take place on an annual basis. NRCS and LCFWG will analyze interest levels, implementation rates, and staff availability to plan and direct workloads. Each contracted practice will be overseen by field office staff with certifications being made upon completion, contingent on practices meeting NRCS standards and specifications. Progress will be recorded in Conservation Desktop or other appropriate databases.

After practices have been implemented and contracts complete, LCFWG and landowners will monitor and maintain plantings. LCFWG and GMCD have the capacity to seek funding through the Avista settlement agreement and state agencies, and NGOs for project monitoring and maintenance.

Progress towards achieving this goal will be measured by calculating the total linear feet of treatment. Each enrolled property will be monitored for success using photo-points with photos taken before planting and subsequent monitoring 1 year after planting, 3-years after planting and 5-years after planting.

References:

Land and Water Consulting. 2001a. Bull River Watershed Assessment: Lower Clark Fork River Drainage, Noxon, Montana. Report of Bull River Watershed Council, Heron, Montana. Land and Water Consulting, Inc., Kalispell, Montana.

Mader, E., M. Shephed, M. Vaughan, and S. Black. 2011. Attracting Native Pollinators: Protecting North America's Bees and Butterflies. Xerces Society, Storey Publishing, Massachusetts.

Olson, B. *In prep.* Lower Clark Fork Stream Restoration Summary 1995 – 2020. Lower Clark Fork Watershed Group, Trout Creek, Montana.

RDG. 2013. Bull River Watershed Restoration Prioritization Plan Update, Lower Clark Fork River near Noxon, Montana. Report to Avista Corporation, Noxon, Montana. River Design Group, Whitefish, Montana.

Vander Meer, M. 2006. The Bull River Vegetation Ecological Assessment. Watershed Consulting LLC, Whitefish, Montana.

Supplemental Attachment 1

Revegetation Plan

East Fork Bull River
Revegetation Plan (2022-2025)

Site Characteristics

Elevation: 2300-2400'
Aspect: Flat (riparian and floodplain areas along a NE-SW flowing river)
Soil: mostly fine, alluvial deposits with pockets of more coarse deposits (gravel and cobble)

Project Area / Current Conditions: Riparian and floodplain areas along the East Fork Bull River and its confluence with the mainstem Bull River, currently dominated by invasive and nonnative grass and/or forb communities (Reed canarygrass/*Phalaris arundinacea* with Canada thistle/*Cirsium arvense, etc.* or Spotted knapweed/*Centaurea stoebe*).

Much of the East Fork Bull River valley bottom was once dominated by old growth Western red cedar (*Thuja plicata*) forest, a climax forest: anecdotally, it's been compared to the Ross Creek Cedars and numerous large cedar stumps provide evidence of this historic condition. In the late 19th and throughout the 20th century as the Bull River was settled and homesteaded, valley bottoms were often cleared for agriculture and/or timber harvest (prior to the Streamside Management Zone law of 1991). The removal of vegetation resets the successional process - under natural circumstances (such as fire disturbance) the disturbed area would require over a century to recover. In the mid-20th century, reed canarygrass (*Phalaris arundinacea*) was introduced to the valley – recommended for its ability to produce a hay crop even on sodden ground. Reed canarygrass is a fierce competitor and limits the regeneration of native species. With the ongoing persistence of reed canarygrass (and a few other invasive species, noted above), the natural succession of native species will be limited. The recovery of the area may be delayed – or never fully occur.

The understory of the project area is dominated by reed canarygrass and patches of reed canarygrass monocultures occur throughout the project area. In the Bull River drainage, reed canarygrass is occasionally codominant with Bracken fern/*Pteridium aquilinum* or Canada thistle – the latter has not been confirmed along the East Fork but is a potential condition without intervention. Well drained cobble bars along the East Fork Bull River also feature Spotted knapweed. These invasive species provide limited bank stability or habitat. They also interfere with the natural regeneration of native species. While better than bare soil, reed canarygrass provides little bank stability. Its roots only extend 12-18 inches into the soil, and because the species often forms a monoculture, there are not often other species present to provide a diverse root system, bank stability, and quality fish habitat.

Other shrub and tree species present (in patches) along the East Fork Bull River include: relic Western Red Cedar/*Thuja plicata*, Black hawthorn/*Crataegus douglasii,* Sitka Alder/*Alnus sinuata* or Thin-leaf Alder/*Alnus incana*, Red osier dogwood/*Cornus Sericea*, Willow/*Salix sp.*, Black cottonwood/*Populus balsamifera ssp. Trichocarpa*, Wood's Rose/*Rosa woodsii,* Douglas spiraea/*Spiraea douglasii*, Rocky Mountain Maple/*Acer glabrum,* as well as conifer species such as Western White Pine/*Pinus Monticola,* Engleman Spruce/*Picea engelmannii,* etc. Other conifer species, including grand fir/*Abies* grandis, Western hemlock/*Tsuga heterophylla,* Douglas fir/*Pseudotsuga menziesii*, etc., are occasionally present in riparian areas, but are more common in upstream or upland areas nearby. A portion of present

species are relics from pre-human disturbance, the result of natural regeneration, but many are also the result of concerted revegetation efforts that have been implemented over the last two decades.
On the Stein Property Project area, revegetation efforts have been underway for close to two decades, in line with Stein's goals to restore closed canopy cedar forest on the bottomlands of his property. An additional 98 plantings were installed in 2021, filling in gaps in vegetation established in previous planting efforts (Figure 1). On the Edwards Property Project area, revegetation efforts have been underway since 2015, and focused on areas of the property along the mainstem Bull River (Figure 1). This property is also bordered by Kootenai National Forest lands along the East Fork Bull River in similar condition that could benefit from this revegetation effort. Partners hope to extend this revegetation effort onto forest land, pending forest approval (permitting and NEPA consultation, as applicable). Revegetation along the mainstem Bull River has been underway since 2016 on the adjacent parcel, but this effort has not included the East Fork Bull River corridor until 130 plantings were installed along the mainstem (near its confluence with the East Fork) and the East Fork in the spring and fall of 2021, respectively.

Despite these efforts, patches of reed canarygrass, other nonnatives, and poorly vegetated areas are present on both properties and adjacent Kootenai National Forest lands along the East Fork Bull River. Continued focused revegetation efforts in these areas have the potential to improve stream health, watershed resilience, and contribute to high quality habitat for fish and wildlife species into the future. Both properties are protected by conservations easements held by the Kaniksu Land Trust, with current landowners dedicated to the stewardship of their land and ecological resources. Relative to adjacent Kootenai National Forest lands, private lands along the East Fork and mainstem Bull River are less densely forested (Figure 1). This is likely to continue to persist due to the prevalence of reed canarygrass which has encroached throughout much of the project areas delineated below, following riparian clearing activities in the last century. Existing vegetation is either decadent or patchy (Figure 2). Natural regeneration through reed canarygrass has been observed only by alder (*Alnus spp.*), resprouting vegetatively from downed limbs and logs, Douglas spiraea, and other species (such as White Pine) only along the periphery where reed canarygrass is shaded out by other overstory species or in well-drained cobble sites where reed canarygrass does not thrive or form as thick a sod mat, allowing seeds to reach mineral soil and germinate (Figure 3).

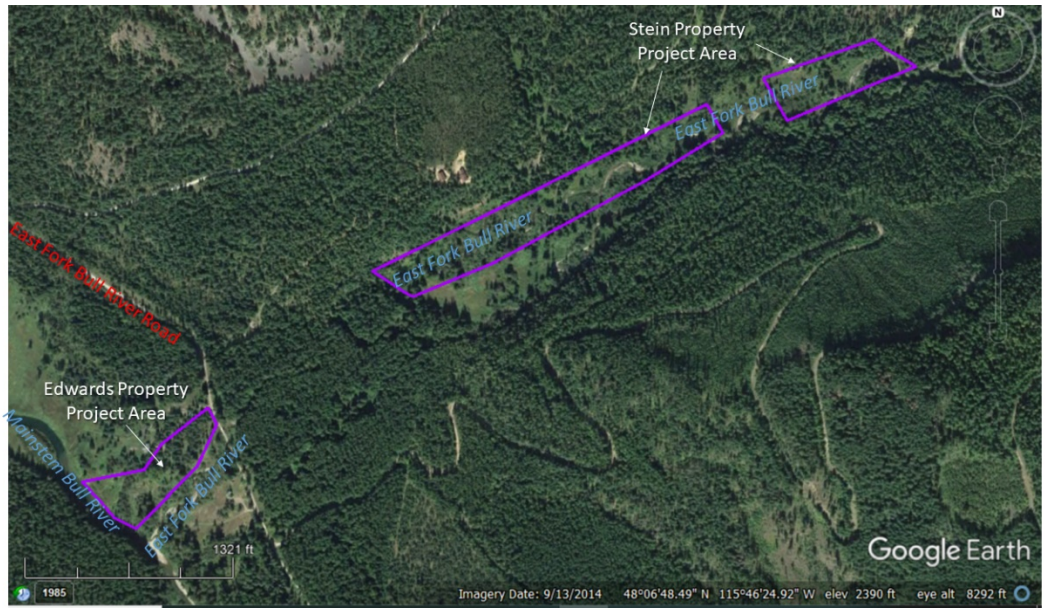


Figure 1. Google Earth map of the East Fork Bull River: purple outlines delineate rough project area on private land.


Figure 2. Alder (*Alnus spp.*) are present along the lower East Fork Bull River, but reed canarygrass remains the dominate cover.

Figure 3. Conifer revegetation is observed in some dry locations, where reed canarygrass does not thrive. Other nonnative competitors on this site include knapweed.

Site Potential / Revegetation Goals

The climax condition of bottomlands of the East Fork Bull River is dominated by large Western Red Cedar (*Thuja plicata*), with diverse understory herbaceous species where light availability permits. Some areas, such as adjacent upland areas where elevation/moisture regime permits, may be codominant with Western Hemlock (*Tsuga heterophylla*). Natural succession (e.g. following a fire) in these habitat types is characterized by diverse species composition and habitats. Important successional tree species include conifers: Western White Pine/*Pinus monticola*, Western Larch/*Larix occidentalis*, Douglas fir/*Pseudotsuga menziesii*, Grand Fir/*Abies grandis*, and Englemann Spruce/*Picea engelmannii*; as well as deciduous: Black cottonwood/*Populus balsamifera ssp. Trichocarpa*, and occasionally Quaking aspen/*Populus tremuloides* and River birch/*Betula nigra*. Important shrub species include: Sitka Alder/*Alnus Sinuata* or Thin-leaf Alder/*Alnus incana*, Black hawthorn/*Crataegus douglasii*, Rocky Mountain Maple/*Acer glabrum*, Willow/*Salix spp.*, Elderberry/*Sambucus cerulea*, Red osier dogwood/*Cornus sericea*, Western yew/*Taxus brevifolia*, Woods Rose/*Rosa gymnocarpa*, Thimble berry/*Rubus parviflorus*, Snowberry/*Symphoricarpus albus*, and Devil's Club/*Oplopana horridum* (Smith and Fischer 1997). Numerous herbaceous and fern species are also present.

When disturbance creates openings in the canopy, shade intolerant species such as Black Cottonwood, Western White Pine, Western Larch, and Douglas Fir can take hold, where moisture conditions are suitable (well-drained sites). Especially cold and frosty conditions may more likely favor Engelmann Spruce. Moist, inundated sites will favor shrub species such as Alder, Red Osier Dogwood, and Willow. Cover from a maturing forest is what will eventually moderate moisture and temperature, promoting the cedar and hemlock climax regime. In areas where beaver are present, they will favor an open

canopy, shrub species, and inundated wetland conditions; this may potentially delay forest succession for decades.

Along the Stein Property project area, remnant mature Western Red Cedar and approximately 15 year old cedar (established in revegetation efforts) are dispersed among a diverse riparian canopy of numerous shrub and tree species, also promoted and established through revegetation efforts over the last 20 years. Understory is predominantly reed canarygrass. Revegetation efforts will focus on continuing succession through shrub and conifer planting. The best long-term competition with reed canarygrass requires a robust and mature riparian canopy of native vegetation, capable of shading out reed canarygrass from the understory, and promoting native herbaceous species. The presence of reed canarygrass largely inhibits the establishment of woody species on their own; however, through targeting plantings, we can set the landscape on a desirable ecological trajectory toward resilient native vegetation and a climax cedar forest.

The Edwards Property project area along the East Fork Bull River is dominated by a mix of reed canarygrass and alder, occasionally punctuated by decadent black hawthorn and the occasional mature Western Red Cedar (Figure 2). Adjacent floodplain and upland areas feature a few mature Black Cottonwood and a 35-40 year old stand of Western White Pine. A few large, old growth cedar trees remain at the confluence of the East Fork Bull River with the mainstem – one is a bearing tree for the property corner. Old channels and elevated cobble deposits provide evidence of historical channel migration, but these are often dominated by invasive Spotted Knapweed, not Black Cottonwood or conifer species that would be expected, though some natural conifer regeneration is occurring (Figure 3).

Planting efforts on both sites will aim to outcompete reed canarygrass by planting native vegetation; and continue to mimic natural succession along the East Fork Bull River. While eradication of reed canary grass is likely unrealistic, if plantings are maintained long enough to get above the “canopy” of reed canary grass where they will not be competing for light or choked out, native vegetation will likely persist (Annen 20XX). Reed canary grass is a strong competitor for light, up to about 6 ft, but a poor competitor for nutrients (Annen 20XX). Fast growing and/or beaver resistant species will be favored, including: Black Cottonwood, Rocky Mountain Maple, Elderberry, Alder, and other native shrubs; and White Pine, Engelmann Spruce and Wester Red Cedar, in shaded and partially shaded areas. Western White Pine is a particularly well-suited successional species, if blister-rust resistant stock is available; due to its high genetic and phenotypic diversity, it is a “generalist” with a high range of environmental tolerance (Keane et al. 2018). The goal of these planting efforts is to enable and accelerate the recovery of riparian areas along the East Fork Bull River from disturbance and dominant nonnative species to a native riparian community and toward a climax forest.

There are additional opportunities for planting on adjacent Kootenai National Forest lands in similar condition to the above two properties, and partners aim to plant these sites as well – if permission is obtained from the Kootenai National Forest.

Planting

Seed/plant source:
Black Cottonwoods: Coeur d'Alene Nursery – USDA Forest Service (seed collected on the Kootenai National Forest)
Other species: DNRC Montana Conservation Seedling Nursery; U of I Pitkin Forest Nursery; Clifty View Nursery

Site prep and planting:
Prior to planting, sites will be identified / selected by LCFWG, NRCS and/or KNF staff and marked with flagging and/or a t-post (which will eventually be used for browse protection). Riparian stands and priority planting areas have been mapped by the NRCS through resource planning activities conducted with each landowner. Sites within the riparian area and floodplain, protected from extended inundation by floodwaters, dispersed 10-15 ft apart (to allow for proper distribution of tree species, and currently dominated by non-natives species with be priorities for planting at both properties. A 3-5' diameter area will be scalped with a weedwhacker equipped with a grass blade, a pickmattock or other hand tool of preference to remove reed canarygrass sod and reduce competition from grass encroachment and/or other weeds. Seedlings will be planted according to nursery directions in April/May or October/November, and a 3-5' x 3-5' piece of weed matting will be secured around the planting with 8" landscape staples to reduce pressure from weeds. Reduction of grass cover may also help prevent mortality from vole damage. The Lower Clark Fork Watershed Group planted 228 sites in 2021 across all properties. It's anticipated that a similar annual effort will be made until suitable planting sites are exhausted, as funding allows.

Fencing:
1-2 t-posts and approximately 10 feet of wire fencing (welded or woven, minimum 14 gauge, 6 ft) will be used to protect each planting from beaver and ungulate browse. Typically, one post is sufficient, especially when paired with landscape staples on the opposite side to secure the bottom of the fence's position and contact with the ground. However, in some areas an additional post may be used if the ground is uneven enough that a post is required to secure fencing in contact with the ground and prevent a large gap that a beaver could utilize.

Irrigation:
No irrigation will be necessary, as the water table is high along the Bull River and soil sediments are fine enough to allow for capillarity. Planting efforts will also be timed early enough in April/May to benefit from spring rains or in October (when dormant) to benefit from fall rains. If drier sites are planted, such as a perched alluvial deposits (which are present on the Edwards property), arrangements may be made to irrigated if practitioners determine it to be necessary for 2-3 years as plantings are established.

Variations:
Methods may vary depending on the site, as follows:

(1) Additional plantings located on cobble bars and areas not dominated by reed canarygrass will not require scalping; though hand-pulling of Spotted Knapweed may be necessary. Noxious weeds will be bagged and removed from site, or disposed of on-site as directed by the landowner.

(2) Some plantings of beaver and browse resilient trees and shrubs (Engelmann spruce, wood's rose, etc.) will be completed directly along the East Fork Bull River without browse protection (which in close proximity to the river may be likely to be undermined by erosion, runoff, or channel migration) or in floodplain areas not immediately adjacent to the river or without signs of beaver activity (lower elevation areas, channels, etc.). Expecting higher mortality, plantings without browse protection will be completed at higher densities.

Maintenance and monitoring

Annual maintenance is expected; however, past experience working in the Bull River has shown that individual plantings (versus large exclosures) require very little maintenance. Most issues arise from the death of, or limb drops, from surrounding vegetation (such as hawthorn or alder); encroaching reed canarygrass and weeds; and plant mortality (if fenced and free from browse) from vole damage, disease or moisture stress (such as too dry in a cobble patch or too wet from prolonged inundation from floodwaters). The site will be visited at least annually, ideally biannually in both the spring and fall, to assess maintenance needs, if any. Minor maintenance will be completed immediately, while a larger effort or mortality replacement plantings will be planned as resources (staff capacity, volunteers, materials/supplies, funding) are available. The LCFWG, with anticipation of ongoing support from Avista's Clark Fork Settlement Agreement, landowners, and other funding sources (TBD), commits to maintain plantings and revegetation efforts for a minimum of 10 years.

Most monitoring efforts for this project will be informal, meant to assess maintenance needs. Mortality rate will be recorded for plants with browse protection, in anticipation of mortality replacement plantings (or removal of materials, depending on what cause of mortality is determined to be). In spring of 2021 (prior to planting efforts, after sites are flagged/marked for planting), photo points will be established. Post-implementation photo points will be taken after planting is complete, and repeated at 2, 5, and 10 years post-project to record vegetation growth and assess project outcomes.

References:

Annen, Craig. 20XX. Reversing Reed canarygrass Invasions Requires a Multiple-method Systems Approach. Integrated Restorations, LLC.

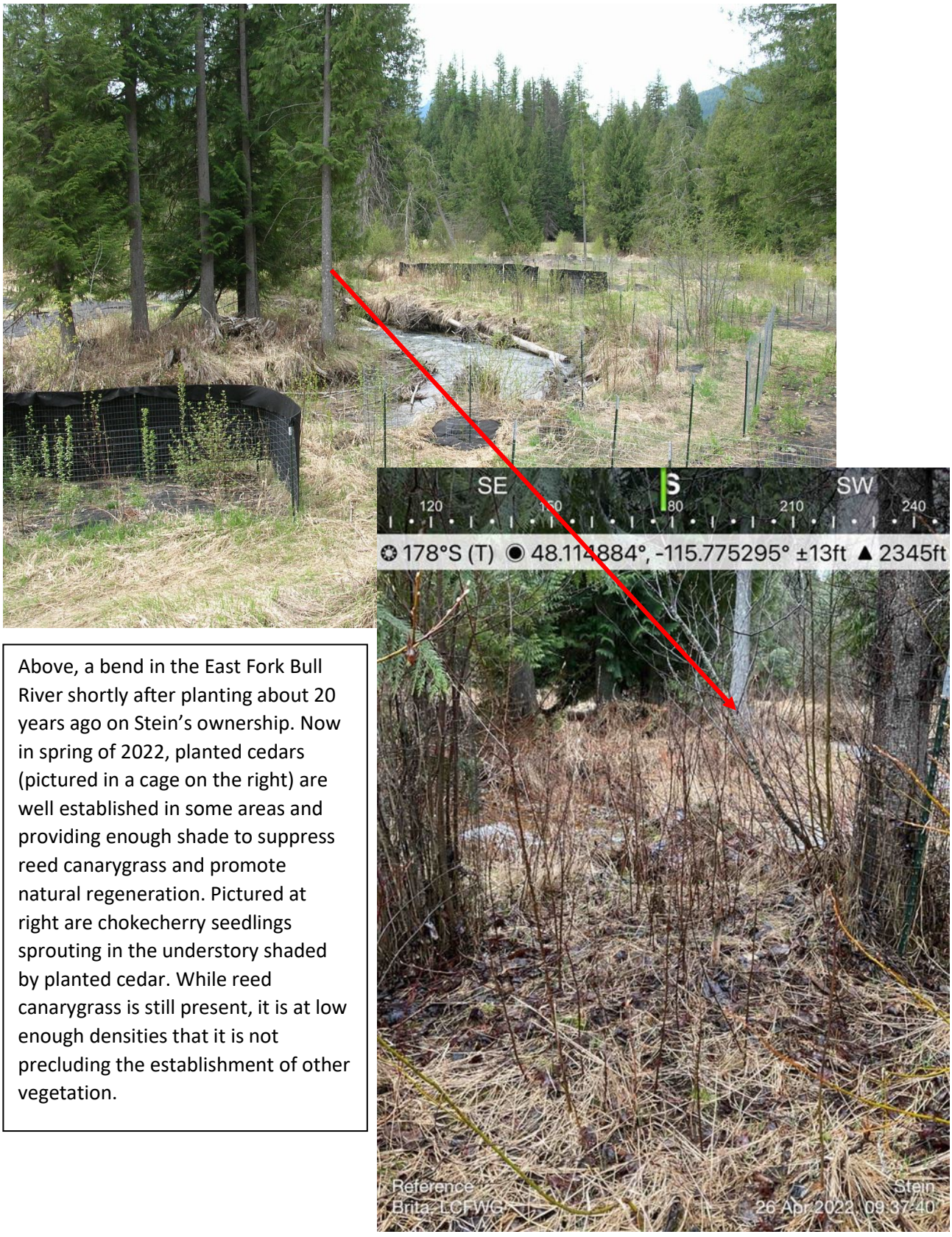
Keane, R.E., M.F. Mahalovich, B.L. Bollenbacher, M.E. Manning, R.A. Loehman, T.B. Jain, L.M. Holsinger, A.J. Larson, and M.M. Webster. 2018. Effects of Climate Change on Forest Vegetation in the Northern Rockies. USDA Forest Service.

Smith, J.K., and W.C. Fischer. 1997. Fire Ecology of the Forest Habitat Types of Northern Idaho. Rocky Mountain Research Station, UT.

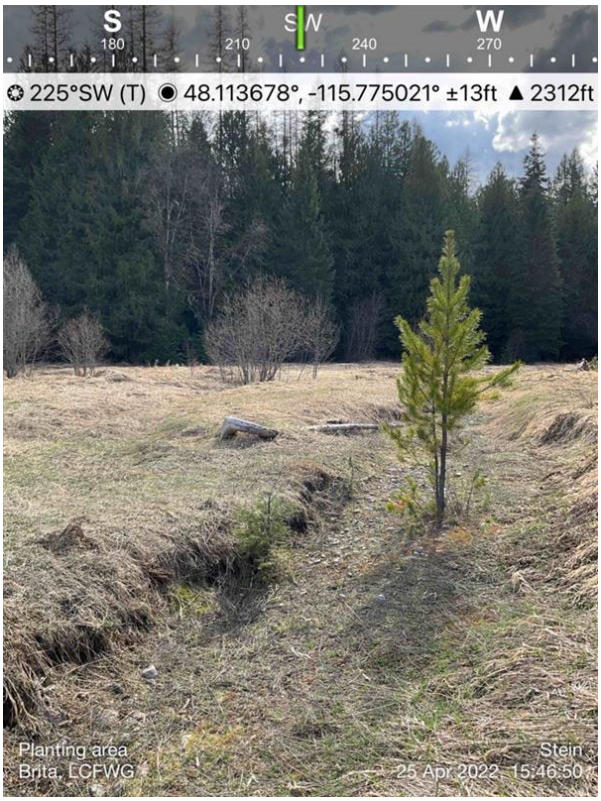
Supplemental Attachment 2

Project Site Photos

Planting efforts were first initiated in the Bull River drainage on Bob Stein's ownership along the East Fork Bull River just over 20 years ago. Now, natural generation of native woody shrubs and trees is occurring in the understory of planted vegetation throughout a site that was formerly dominated by reed canarygrass. Clockwise from top left, (1) site pictured shortly after planting, (2) Western Red Cedar seedling germinated found in 2021 in the understory of vegetation planted and pictured in (1), (3 and 4) native forbes and woody seedlings germinating underneath established vegetation at another site upstream pictured in spring of 2022.



Above, a bend in the East Fork Bull River shortly after planting about 20 years ago on Stein's ownership. Now in spring of 2022, planted cedars (pictured in a cage on the right) are well established in some areas and providing enough shade to suppress reed canarygrass and promote natural regeneration. Pictured at right are chokecherry seedlings sprouting in the understory shaded by planted cedar. While reed canarygrass is still present, it is at low enough densities that it is not precluding the establishment of other vegetation.



Additional areas on Stein's ownership along the East Fork Bull River and in its floodplains are dominated by reed canarygrass and show limited natural regeneration. Left, an old stump indicates the mature cedar forest that once grew along the East Fork. Right, a solitary Lodgepole Pine grows in an abandoned channel of the East Fork Bull River. The majority of this area is dominated by reed canarygrass and shows little promise of natural regeneration. Most of the natural generation of native shrubs and trees is occurring in areas immediate adjacent to more tightly planted vegetation where reed canarygrass is limited by light and competition for nutrients. Future plantings in openings such as above will promote greater stability and resilience to this area if/when the East Fork Bull River migrates in the future.

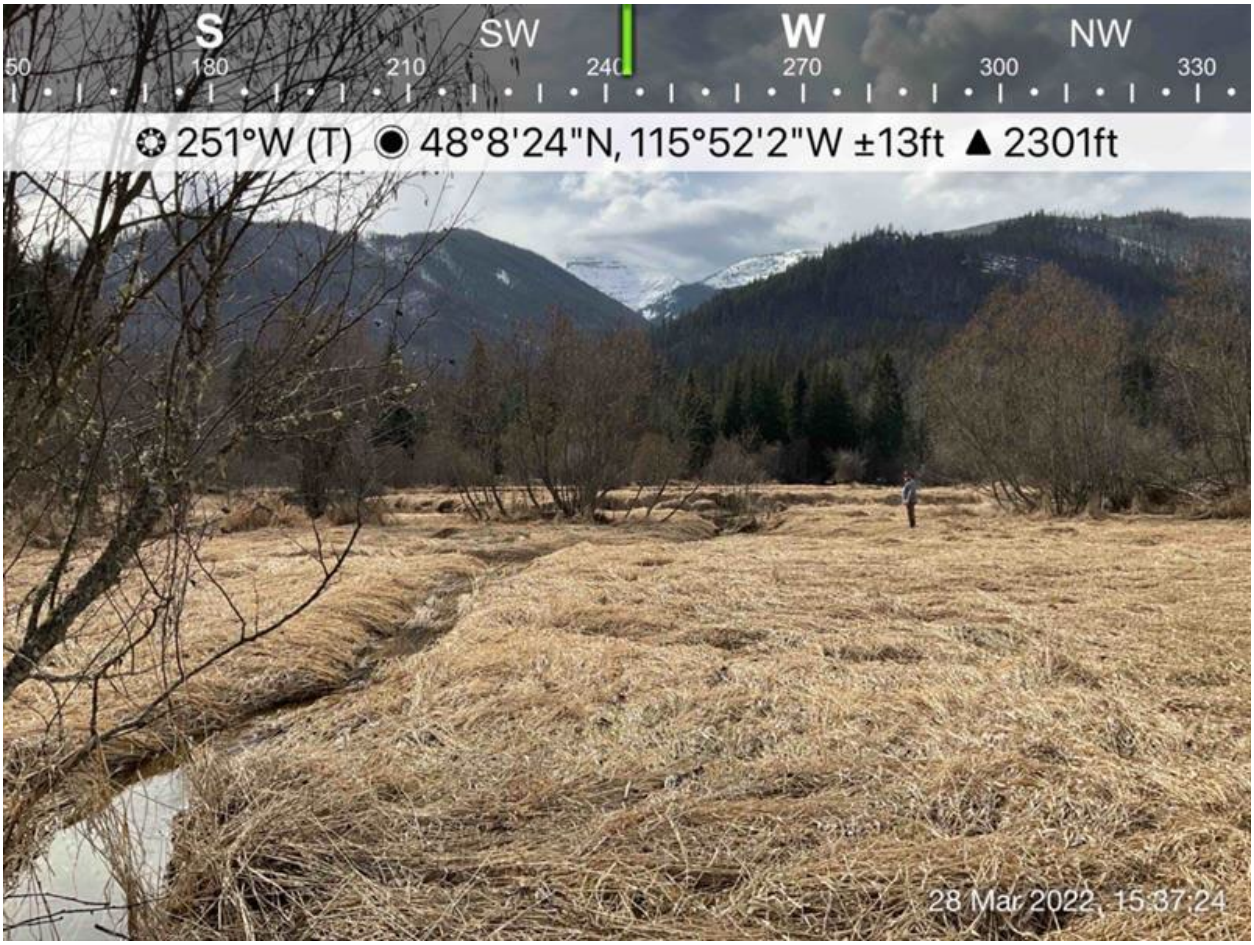
Montana Conservation Corps crew poses in front of 15x30 ft area they helped free from 20 year old fencing and weed matting on Stein's ownership. This effort cost $750 in labor alone. For this and other nonmonetary reasons, such as browse resistance, site suitability, higher plant survival rates and landowner preference, restoration partners have largely shifted to individually caged trees such as those pictured at in the foreground.

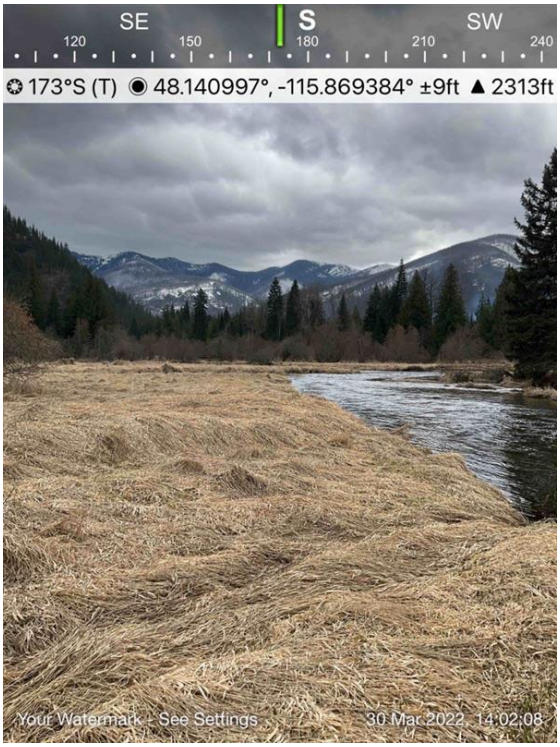
Volunteer Zac Barron plants a tree on the mainstem Bull River in spring of 2021 on the Edwards (Nye) property. These individual plantings are spaced such that at maturity, they will provide canopy cover, suppress reed canarygrass and promote natural generation of the trees and shrubs. After 1 year, plant survival was 99% for 105 individually caged plantings on the Edwards (now Nye) property).

Volunteer Perky Hagadone and LCFWG staff Sarah Busmire plant Western White Pine on the East Fork Bull River as a part of LCFWG's 2022 Arbor Day volunteer event on the Edwards (Nye) property.

On the Edwards (Nye) property, 100 trees were planted during LCFWG's 2022 Arbor Day event, expanding revegetation efforts across the floodplain of the East Fork and mainstem Bull River.

Willow stands and other vegetation established as a part of revegetation efforts implemented from 2014-2018 on the Warrington ownership were supplemented by over 150 plantings across the floodplain that will provide greater long term resilience, help close the canopy, and promote natural regeneration of a riparian forest into the future.





Additional areas, such as these pictured on the Warrington ownership, are still dominated by large monocultures of reed canarygrass. Future planting efforts will work to saturate the floodplain with native plants and provide long-term resiliency. On properties such as Stein's, Warrington's, Nye's, and the Ross's, LCFWG can work with landowners over the long-term to not just plant trees, but grow a resilient riparian forest over the long term.

Supplemental Attachment 3

Anticipated Expenses and Funding Plan

Bull River Revegetation Funding Plan 2023-2026

Funding Status	Funding Source	2023 3Q	2023 4Q	2024 1Q	2024 2Q	2024 3Q	2024 4Q	2025 1Q	2025 2Q	2025 3Q	2025 4Q	2026 1Q	2026 2Q	Total
LCFWG Confirmed Funding*	Avista CFSA App B LCF Projects Coordination	$ 284	$ 284	$ 286	$ 286	$ 286	$ 286	$ 290	$ 290	$ 290	$ 290	$ 294	$ 294	$ 3,460
	Avista CFSA App B LCF Projects Monitoring/Maintenance	$ 568		$ 858	$ 250	$ 572		$ 870	$ 250	$ 580		$ 882	$ 250	$ 5,080
	Avista CFSA App B LCF Maintenance Allocation	$ -	$ 8,475	$ -	$ 8,388	$ -	$ 8,488	$ -	$ 8,413	$ -	$ 8,513	$ -	$ 8,438	$ 50,713
	Avista CFSA App E	$	1,250	$			2,500	$			2,500	$	2,000	$ 8,250
	DNRC Watershed Managmenet Grant	$ 500	$ 500											$ 1,000
	FWP Nursery Credit													$ -
	NRCS EQIP - Stein		$ 2,848		$ 2,848		$ 2,848		$ 2,848					$ 11,392
	NRCS EQIP - Warrington		$ 2,848		$ 2,848		$ 2,848		$ 2,848					$ 11,392
GMCD In-Kind	DNRC Project Grant	*$ 6,156*	*$ 3,656*											$ 9,812
LCFWG Pending Funding	*NRCS EQIP - Nye*		*$ 2,848*		*$ 2,848*		*$ 2,848*		*$ 2,848*		*$ 2,848*		*$ 2,848*	*$ 17,088*
	NRCS EQIP - TBD				*$ 5,696*		*$ 2,848*		*$ 2,848*		*$ 2,848*		*$ 2,848*	*$ 17,088*
	Trout and Salmon Foundation													*$ -*
	MDEQ 319 Application	*$*	*10,000*	*$*			*20,000*	*$*			*20,000*	*$*	*13,360*	*$ 63,360*
	MFWP Future Fisheries	*$*	*5,000*	*$*			*10,000*	*$*			*10,000*	*$*	*5,000*	*$ 30,000*
	Volunteers				*$ 2,000*				*$ 2,000*				*$ 2,000*	*$ 6,000*
	Total Direct Funding	$ 23,758	$ 21,459	$ 33,644	$ 25,164	$ 858	$ 20,166	$ 33,660	$ 22,345	$ 870	$ 14,499	$ 21,536	$ 16,678	$ 234,634

Anticipated Indirect Funding	**$ 8,596**
Anticipated Total Project Funding	**$ 243,230**

*Includes annual funding expected from Avista's Clark Fork Settlement Agreement (CFSA), which is reviewed and approved annually each March. While technically pending, LCFWG has received annual funding for project planning and coordination from the CFSA for nearly two decades, and annual funding for restoration project maintenance for over 5 years.

Bull River Revegetation Anticipated Expenses 2023-2026

Timeline		2023 3Q	2023 4Q	2024 1Q	2024 2Q	2024 3Q	2024 4Q	2025 1Q	2025 2Q	2025 3Q	2025 4Q	2026 1Q	2026 2Q	Total
Bull River Revegetation	**Budget Item Description**													
1. Project Planning	LCFWG Labor	**$ 852**	**$ 284**	**$ 1,144**	**$ 536**	**$ 858**	**$ 286**	**$ 1,160**	**$ 540**	**$ 870**	**$ 290**	**$ 1,176**	**$ 544**	**$ 8,540**
2. Landowner Agreements	LCFWG Labor	**$ 500**	**$ 500**											**$ 1,000**
3. Project Implementation		**$ 500**	**$ 24,405**	**$ -**	**$ 42,918**	**$ 500**	**$ 24,208**	**$ -**	**$ 43,063**	**$ 500**	**$ 24,284**	**$ -**	**$ 43,208**	**$ 205,984**
3A. Planting	Gallon-size containerized plant stock: 500 plants x $14/plant		$ 2,100		$ 4,900		$ 2,100		$ 4,900		$ 2,100		$ 4,900	$ 21,000
3A. Planting	Browse protection: 14-gauge, welded wire provided in-kind, reused salvage from past projects. 5,000' needed, costs approx. $2/ft new.		$ 3,000		$ 7,000		$ 3,000		$ 7,000		$ 3,000		$ 7,000	$ 30,000
3A. Planting	Browse protection: 6.5' posts, reused salvage from past projects. 500 minimum needed, costs approx. $5/post new.		$ 750		$ 1,750		$ 750		$ 1,750		$ 750		$ 1,750	$ 7,500
3A. Planting	Weed suppression: 4' x 4' mats, costs approx. $2/mat.		$ 300		$ 700		$ 300		$ 700		$ 300		$ 700	$ 3,000
3A. Planting	Miscellaneous tools and supplies		$ 500				$ 250				$ 221			$ 971
3A. Planting	LCFWG Labor		$ 5,680		$ 8,580		$ 5,720		$ 8,700		$ 5,800		$ 8,820	$ 43,300
3A. Planting	Contract Labor (Montana Conservation / Big Sky Watershed Corps)		$ 3,000		$ 9,000		$ 3,000		$ 9,000		$ 3,000		$ 9,000	$ 36,000
3A. Planting	Volunteer Labor				$ 2,000				$ 2,000				$ 2,000	$ 6,000
3A. Planting	Travel	$ 500	$ 1,000		$ 1,000	$ 500	$ 1,000		$ 1,000	$ 500	$ 1,000		$ 1,000	$ 7,500
3B. Maintenance	LCFWG Labor		$ 1,775		$ 1,788		$ 1,788		$ 1,813		$ 1,813		$ 1,838	$ 10,813
3B. Maintenance	Contract Labor (Montana Conservation Corps crews)		$ 6,000		$ 6,000		$ 6,000		$ 6,000		$ 6,000		$ 6,000	$ 36,000
3B. Maintenance	Materials and supplies		$ 300		$ 200		$ 300		$ 200		$ 300		$ 200	$ 1,500
3B. Maintenance	Travel		$ 400		$ 400		$ 400		$ 400		$ 400		$ 400	$ 2,400
4. Project Effectiveness Monitoring		**$ -**	**$ -**	**$ -**	**$ 1,108**	**$ -**	**$ -**	**$ -**	**$ 1,120**	**$ -**	**$ -**	**$ -**	**$ 1,132**	**$ 3,360**
4. Project Effectiveness Monitoring	LCFWG Labor				$ 858				$ 870				$ 882	$ 2,610
4. Project Effectiveness Monitoring	Travel				$ 250				$ 250				$ 250	$ 750
5. Education and Outreach		**$ 2,500**	**$ -**	**$ -**	**$ 750**	**$ 2,500**	**$ -**	**$ -**	**$ 1,750**	**$ 3,500**	**$ 1,500**	**$ 2,500**	**$ 750**	**$ 15,750**
5A. Arbor Day Volunteer Events					$ 750				$ 750				$ 750	$ 2,250
5B. Bull River film and distribution									$ 1,000	$ 1,000	$ 1,500	$ 2,500		$ 6,000
5C. Project ASCENT High School Internship		$ 2,500				$ 2,500				$ 2,500				$ 7,500
Administration														**$ 8,596**
Total Bull River Revegetation (2023-2026)		**$ 4,352**	**$ 25,189**	**$ 1,144**	**$ 45,312**	**$ 3,858**	**$ 24,494**	**$ 1,160**	**$ 46,223**	**$ 4,870**	**$ 26,074**	**$ 3,676**	**$ 45,384**	**$ 243,230**

Supplemental Attachment 4

Stein Landowner Agreement

Landowner Agreement – 2022-2025

Landowner: Bob Stein

Project(s): East Fork Bull River Revegetation

Location: 184 East Fork Bull River Rd, Noxon, MT
Legal: S07, T27 N, R32 W, multiple parcels

Background and scope: Over the course of 2020, the Lower Clark Fork Watershed Group (Brita Olson) has worked with the landowner, Avista (Eric Oldenburg), and other partners, such as the Natural Resource Conservation Service (Troy Hidy) to assess revegetation opportunities on the Stein property along the East Fork Bull River. In 2021, the Lower Clark Fork Watershed Group facilitated the planting of 98 new sites on the property. Opportunities and proposed continued work are included in the attached East Fork Bull River Revegetation Plan (EFBR_RevegetationPlan_2022-2025.pdf).

The purpose of this agreement is to confirm the LCFWG's and landowner's commitment to completing the following activities:

- Additional revegetation efforts along the East Fork Bull River, as part of the LCFWG's larger East Fork Bull River Revegetation Project which will include additional properties in the vicinity. The LCFWG anticipates completing approximately 100 new plantings annually for the next four years.

Property access: Property will be accessed via existing driveway and access roads off of the East Fork Bull River Road by LCFWG staff, other partner organizations assisting in the implementation of the proposed work (Natural Resources Conservation Service, Kootenai National Forest, Avista, etc.), contractor(s), and volunteers.

Timeline: This is an ongoing project. Annual implementation and maintenance efforts will be adapted to weather, labor availability, and funding limitations. Reasonable advance notice of site visits and scope of intended work on the property will be given to the landowner. In general, annual activities will proceed as follows unless unforeseen delays are encountered.

> January-February: Plant orders and deliver dates confirmed, staff and labor scheduled, and general planning for yearly activities.
> March-April: Site visit will be made after snowmelt to confirm planting sites and extent of opportunities throughout riparian area on Stein's ownership.
> April-June: Planting associated with the revegetation effort along the mainstem and East Fork Bull River will be completed.
> April-November: Revegetation maintenance will continue as needed (on planting efforts initiated both previously and as a part of this agreement).
> October-November: Additional planting, if there are further opportunities, may be completed.
> 2022-2035: Revegetation maintenance will continue as needed (on planting efforts initiated both previously and in 2021).

Funding: Proposed work will be completed with financial and in-kind support provided by the LCFWG and the landowner. In general, the LCFWG commits to funding the implementation and ongoing

maintenance of all revegetation efforts on the property to be initiated in the implementation period covered by this agreement, as well as maintenance on past revegetation efforts as time and resources are available. The landowner commits to in-kind contributions in the form of project review, coordination, implementation, and maintenance (as time and availability allows), and in-kind contributions of plant materials (willow cuttings, conifer transplants, etc.).

It is expected that a NRCS Environmental Quality Incentives Program (EQIP) contract will be established between the NRCS and landowner for the implementation of revegetation efforts during this period. Payments approved and issued to the landowner by the NRCS under such a contract for work completed by the Lower Clark Fork Watershed Group (LCFWG), or LCFWG partners, subcontractors, and/or volunteers engaged at the LCFWG's expense, will be passed through to the LCFWG in consideration for the work completed on the landowner's behalf. In the event that the landowner contributes in some way to the implementation of such LCFWG-led revegetation work on the property, the landowner may retain EQIP funding enough to reimburse direct expenses incurred.

The landowner agrees to and commits to the following:

1. Implementation of the project as outlined above, in referenced document, and further informed by technical input provided by the LCFWG.
2. Reviewing any proposed changes to the agreed upon scope of work and providing supplementary approval (via email, phone or in-person) prior to the on-the-ground implementation of changes.
3. Allowing reasonable access to the property as is necessary to complete proposed work.
4. Protecting investment in riparian revegetation efforts for a minimum of twenty (20) years as it is the intention of this project to contribute to lasting improvement in the health of streamside habitats on the property. Revegetation areas will be protected from land management practices that may negatively affect the outcomes of this project.
5. Communicating with LCFWG regarding anticipated funding available through EQIP for the implementation of this project and any requirements associated with the practices funded, and/or allowing LCFWG to communicate with NRCS directly regarding the scope and expectations of the established EQIP contract.
6. Passing EQIP funding through to the LCFWG in consideration of work completed as outlined above.

LCFWG agrees to and commits to the following:

1. Implementation of the project as outlined above, in referenced document, and further informed by technical input provided by the LCFWG and NRCS.
2. Informing the landowner of any proposed changes to the outlined scope of work at least one week prior to their planned implementation.
3. Providing regular updates to the landowner regarding project progress.
4. Managing and coordinating all aspects of proposed work, and providing the landowner with a single point of contact for all planned revegetation work on the property (Brita Olson).
5. Contributing up to 100% of labor, travel, equipment and materials required for the East Fork Bull River Revegetation Project, with the following caveats:
    a. If additional landowner-sponsored funding is secured such as through EQIP (see above), LCFWG's commitment to fund the project will be reduced by a corresponding amount.

6. Additional contributions for continued maintenance are expected in future years, but maintenance needs and funding are not yet confirmed.
7. Maintaining riparian revegetation efforts for minimum of 10 years.

This landowner agreement consists of three (3) numbered pages and will be considered effective when executed below, through December 31, 2045. Financial commitments made as a part of this agreement will expire December 31, 2025.

Ruth Watkins
Lower Clark Fork Watershed Group

3/29/2022
Date

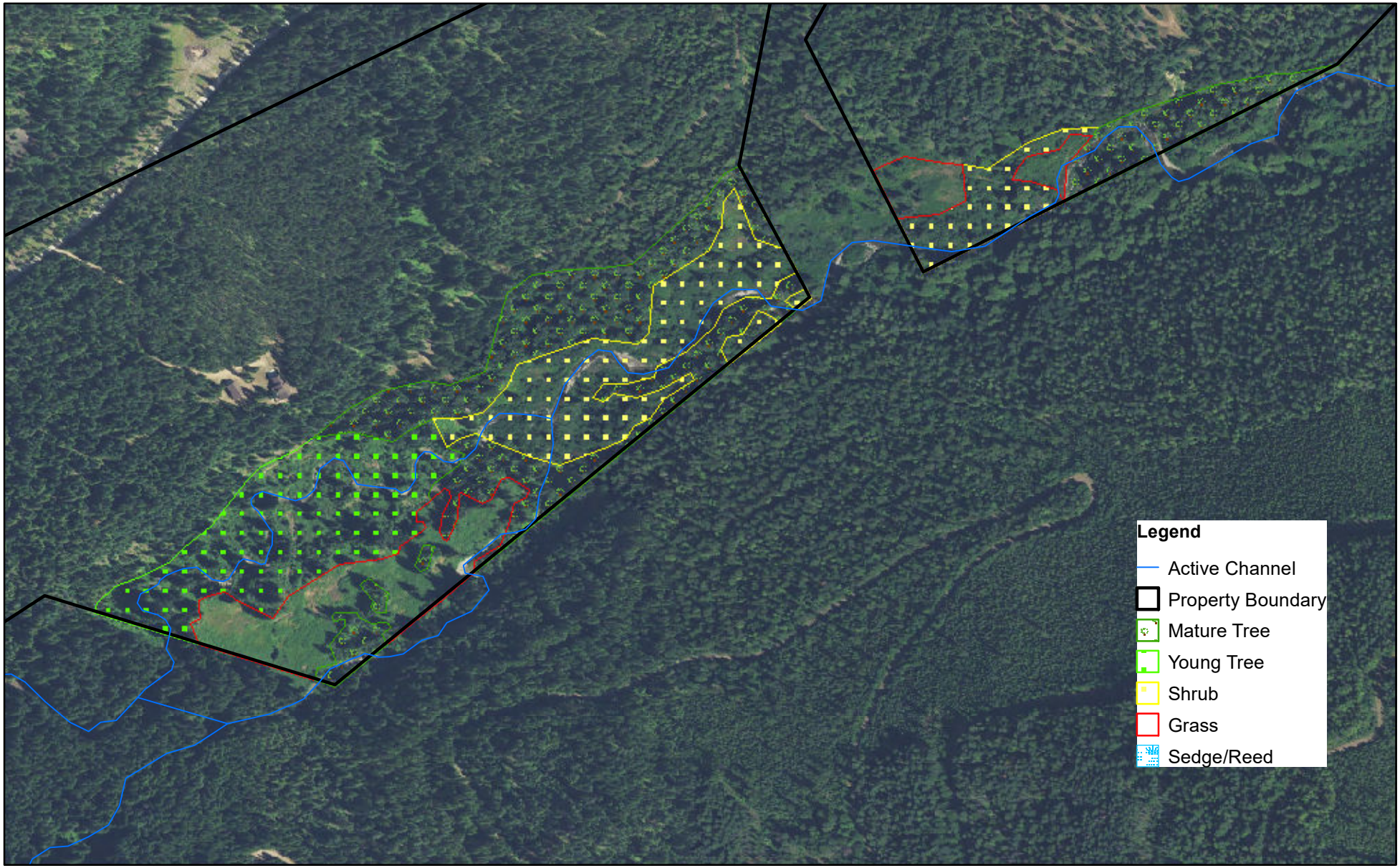
Bob Stein
Bob Stein, Landowner

3/28/2022
Date

Customer(s): Robert Stein
District: Green Mountain Conservation District
Approximate Acres: 162 + 105 = 267
Legal Description: Parts of: Sec. 5-8 T27N R32W
Sec. 12 T27N R33W

Riparian Stands
2019 Photo

Date: 3/3/2022
Field Office: PLAINS FIELD OFFICE
Agency: USDA, NRCS
Assisted By: Troy Hidy
State and County: MT, SANDERS



1:5,280 440 Feet/Inch

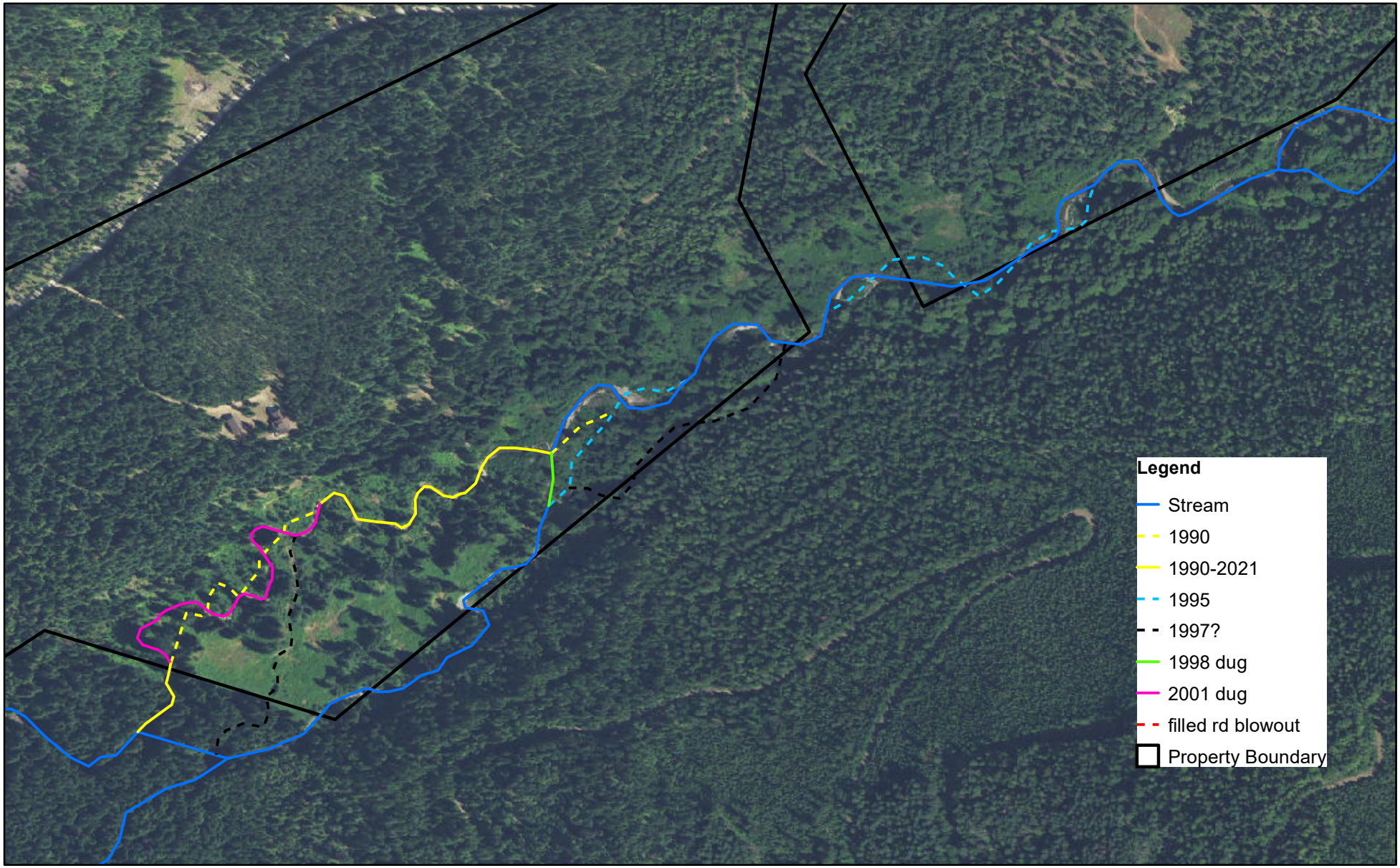
320 0 320 640 960 1,280
Feet

N

Customer(s): Robert Stein
District: Green Mountain Conservation District
Approximate Acres: 162 + 105 = 267
Legal Description: Parts of: Sec. 5-8 T27N R32W
Sec. 12 T27N R33W

East Fork Bull River Stream Channels
2019 Photo

Date: 3/3/2022
Field Office: PLAINS FIELD OFFICE
Agency: USDA, NRCS
Assisted By: Troy Hidy
State and County: MT, SANDERS



1:5,280 440 Feet/Inch

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