



2026 On-the-Ground Project Application Form

General Information

Project Name

Applicant Name

Is your organization registered with the Montana Secretary of State?

Explanation: Each applicant must be registered with the Montana Secretary of State to do business in the state of Montana. Registration with the Secretary of State may be completed via the following website: <https://sosmt.gov/business/>

Is your organization registered with the federal System for Award Management (SAM)?

Explanation: Each applicant is required to register with SAM. To register or check your organization's status, go to <https://sam.gov/content/home>. If you get an "Unsupported Browser" error, copy, and paste the link into a Google Chrome browser window.

Primary Contact Title

Address City State Zip Code

Phone Number Email

Signature

Explanation: This is the person who DEQ would routinely contact to discuss project progress, billing, etc.

Signatory Title

Address City State Zip Code

Phone Number Email

Signature

Explanation: This is the person who can legally sign contracts and other binding documents on behalf of the applicant (e.g., a board chair)

Note: The primary contact, signatory and landowner must sign the application. Signatures must be either signed electronically, or wet-signed, scanned and sent electronically.

Landowner Name

Landowner Signature

Landowner Name

Landowner Signature

Landowner Name

Landowner Signature

Explanation: Landowner signatures are required. **Signing the application does not obligate the landowner to implement a project.** Instead, it is an indication that the landowner has read the application and agrees, in principle, with the project concept and goals.



2026 On-the-Ground Project Application Form

General Information

Project Name

Applicant Name

Is your organization registered with the Montana Secretary of State?

Explanation: Each applicant must be registered with the Montana Secretary of State to do business in the state of Montana. Registration with the Secretary of State may be completed via the following website: <https://sosmt.gov/business/>

Is your organization registered with the federal System for Award Management (SAM)?

Explanation: Each applicant is required to register with SAM. To register or check your organization's status, go to <https://sam.gov/content/home>. If you get an "Unsupported Browser" error, copy, and paste the link into a Google Chrome browser window.

Primary Contact Title

Address City State Zip Code

Phone Number Email

Signature Digitally signed by Tess Scanlon
Date: 2026.02.20 13:42:59 -07'00'

Explanation: This is the person who DEQ would routinely contact to discuss project progress, billing, etc.

Signatory Title

Address City State Zip Code

Phone Number Email

Signature

Explanation: This is the person who can legally sign contracts and other binding documents on behalf of the applicant (e.g., a board chair)

Note: The primary contact, signatory and landowner must sign the application. Signatures must be either signed electronically, or wet-signed, scanned and sent electronically.

Landowner Name

Landowner Signature Digitally signed by Jeff Conn
Date: 2026.02.20 15:07:14 -07'00'

Landowner Name

Landowner Signature

Landowner Name

Landowner Signature

Explanation: Landowner signatures are required. **Signing the application does not obligate the landowner to implement a project.** Instead, it is an indication that the landowner has read the application and agrees, in principle, with the project concept and goals.

Your organization's Unique Entity Identifier number (UEI #)

U1KEGKVBBE68

Explanation: Each applicant is required to have a current UEI number. The UEI number replaces the old DUNS number. If your organization had a DUNS number, you should have received a notification from the federal government indicating that your DUNS number has been changed to a UEI number. If you did not receive this notification, or if you never had a DUNS number, you will need to go to the federal government's System for Award Management (SAM - <https://sam.gov/content/home>) to obtain your UEI number. DEQ recommends starting this process early as it is very time-consuming, requires providing documentation-sometimes with follow-up requests for additional information, and can take up to 2 months to complete. If you need assistance, you may contact the federal help desk at 866-606-8220 Monday-Friday 8:00 a.m. through 8:00 p.m. EST.

Does your organization have adequate liability insurance for the risks associated with your project?

Y

Explanation: Each applicant must have or obtain liability insurance coverage meeting the requirements stated in the Draft Sample Contract and/or requirements negotiated based on the appropriate level of risk associated with the project.

Describe the technical and administrative skills your organization will use to effectively and efficiently complete your proposed project(s).

Trout Unlimited (TU) has over a decade of continuous, successful nonpoint-source (NPS) project implementation in the Upper Clark Fork Basin, including multiple phases on Flint Creek. This Flint Creek Phase 3 C/D Project on the Conn Ranch represents the fourth on-the-ground project to reduce and prevent nonpoint source pollution by restoring and protecting natural processes and conditions. Project Manager, Tess Scanlon, brings eight years of experience leading project design, permitting, contractor management, reporting, and monitoring for the earlier phases of work as well as for a variety of other projects in Granite County. TU's technical project team also includes SWCA, NRDP, FWP, and USFWS: SWCA - geomorphic assessment, engineering design, environmental compliance and permitting support, construction oversight, and post-project monitoring assistance; NRDP - technical oversight to ensure design alignment with NRD Restoration Plan goals; FWP - technical design input and monitoring of fisheries impacts; USFWS - restoration partner in the private landowner agreement. TU has the administrative systems that follow state and federal procurement and reporting requirements, including competitive bidding, documentation of cost reasonableness, and selection based on qualifications, and budgeting that will be supported by TU staff grant accountant, Catherine Redfern.

Budget Form

Please fill out the On-the-Ground Project Budget Template (Excel file). Cells highlighted in yellow may be edited to fit the needs of your particular project. DEQ uses a template to construct nonpoint source grant contracts. The Budget Template contains tasks and typical deliverables that match up with the grant contract template. Please see the Example Contract and Scope of Work Template for a more detailed look at typical task requirements and deliverables.

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.

Splitting Examples (fill out multiple Project Forms)

- Stream restoration work occurring on two separate streams..
- Two projects with significantly different sets of project partners.
- Two projects that address substantially different pollution sources (e.g., one project move 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.
- Three 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 Form

A separate Project Form (including providing separate attachments) must be submitted for each project included in your application

Project Name:

Flint Creek Phase 3C/D Conn Ranch Habitat Restoration Project

Required Attachments in Addition to This Form

- Letter of support from the organization that created or sponsored the creation of the DEQ-accepted Watershed Restoration Plan or the Tribe that created the EPA-approved Tribal Nonpoint Source Management Plan (if applicable).
- Letter of support from EACH landowner associated with the proposed project area (if applicable).
- Budget Table (see Microsoft Excel Template).
- Detailed Project site map(s)** Attach a map or set of maps showing the location and size of proposed activity if a site has been predetermined. 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. *(This is in addition to adding points of the project location to the website on page 4).*

Optional Attachments

Attach additional items and information that could help reviewers better understand your project. Information could describe public health risks, opportunities to leverage other funding sources, etc. However, application reviewers may have limited time available, and excessively long, optional attachments might not get reviewed. Do not attach copies of TMDL documents, TMDL implementation evaluations, Watershed Restoration Plans, Tribal Nonpoint Source Plans, or large comprehensive studies. The following attachments may be included. Please no more than 20 pages.

- Project Design Plans/Drawings
- Preliminary Engineering Reports / Site Evaluations
- Landowner Agreements / Construction Permits / Floodplain Permits
- Site photos
- Additional Letters of Support

Other:

Other:

Other:

Project Area

Please provide as detailed a description of the project area as possible.

List the counties in which the project will be located.

Granite County

List the 12-digit Hydrologic Unit Codes (HUCs), sometimes referred to as Sixth Code HUCs, in which the project will take place. Use the following link to help assist you in determining the HUCs: <https://apps.nationalmap.gov/viewer/>

170102020105

Project Location Map

In addition to providing your own project site map, please go to the following website and follow the instructions to add your project location to the map.

<https://gis.mtdeq.us/portal/apps/storymaps/stories/42f4a668285c4ef6aa94b1623f10df57>

Connection to a Previous or Ongoing Project

Is this project tied to a previous or ongoing project? If so, please describe the connection.

The Flint Creek Phase 3 C/D Conn Ranch Habitat Restoration Project is part of a multi-year effort to restore aquatic and riparian habitat with private landowners on lower Flint Creek. The work is being advanced by Trout Unlimited (TU) in partnership with Montana Natural Resource Damage Program (NRDP), Montana Fish, Wildlife & Parks (FWP), US Fish & Wildlife Service (USFWS) Partners for Wildlife Program, MT DEQ, and others. Shared objectives are to reduce bank erosion and nonpoint-source pollution and to improve water quality and fish populations in Flint Creek and the Clark Fork River by restoring degraded stream and floodplain processes and habitat. The goals and activities of this multi-phased Flint Creek project align with the priorities identified in the following planning documents: (1) Flint Creek TMDL (DEQ, 2012)- identifies sediment and nutrient reductions as high-priority restoration needs; (2) NRDP Aquatic & Terrestrial Resources Restoration Plans (NRDP, updated in 2024)- prioritizes riparian and channel restoration of mainstem Flint Creek; (3) Riparian Habitat Assessment for Flint Creek & Boulder Creek (prepared for NRDP 2015) - assesses riparian habitat along specific reaches of Flint Creek and recommends the Phase 3 reach for restoration; (4) Upper Clark Fork Fishery Enhancement Prioritization (FWP 2018) - prioritizes lower Flint Creek for fish habitat improvement efforts; and (5) Granite County Long Range Plan (NRCS, 2020) - identifies riparian grazing management and erosion control as local conservation priorities.

Connection to Ongoing Project: This project builds upon three recently completed phases of restoration downstream: Flint Phase 1 (2021), restored 0.5 miles of Flint Creek and 5 acres of wetlands; Flint Phase 2 (2023), restored 1-mile of Flint Creek and 3 acres of riparian habitat; and Flint Phase 3A (2025)- restored 0.5-miles of Flint Creek and 3-acres of riparian habitat (note Phase 3B – is currently paused at landowner request). The Flint Phase 3C/D – Conn Ranch Habitat Restoration Project incorporates lessons learned from previous phases and will implement an improved design that better meets both the landowner's and resource restoration goals.

Project Purpose

Select the watershed restoration plan or tribal nonpoint source plan that your project will help implement (please type in if missing from list) (Not required for HAB reduction projects)

Flint Creek - Flint Creek Watershed Group

Letter of support from author, or if the author was contracted, the author sponsor, attached? (If no, explain why below.)

IMPAIRMENT LISTINGS: Projects that address water quality impairments on Montana’s 2020 List of Impaired Waters are preferred though not a requirement. Funding may be used for projects that protect waterbodies that are demonstrated to be healthy.

Waterbody name from the 2020 List of Impaired Waters

Flint Creek

Probable causes of impairment to be addressed

Sediment, Nitrogen, Phosphorus; Streambank destabilization; Grazing impacts

Waterbody name from the 2020 List of Impaired Waters

Probable causes of impairment to be addressed

HEALTHY WATERSHEDS: While project funding is prioritized to addressing known impairments, funding can be used to protect healthy waters from becoming impaired.

Name of healthy waterbody to be protected

Description of identified threat

Name of healthy waterbody to be protected

Description of identified threat

Project 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 if project site(s) have been predetermined.*)

Landowner	Contributions to Project	Letter of Support Attached?
Conn Family Trustees	Grazing Management Plan; reduction in riparian acreage; in-kind match for boulders and cash contributions to fencing	<input checked="" type="checkbox"/>
MT NRDP	Design Support and Technical Oversight	<input checked="" type="checkbox"/>
MT FWP	Technical/biological support	<input checked="" type="checkbox"/>
MT DEQ	319 funding support and technical input	<input type="checkbox"/>

Project Partner	Contributions to Project	Letter of Support Attached?
Granite Headwaters Watershed Group	Community Engagement	<input type="checkbox"/>
WestSlope Chapter TU	Volunteer and Outreach Support	<input type="checkbox"/>
Bureau of Reclamation,	Funding Support (non-matching leveraged funds are secured)	<input type="checkbox"/>
USFWS	Private Landowner Agreement Partner; NEPA and permitting support	<input type="checkbox"/>
		<input type="checkbox"/>

Project Coordination and Planning Task

This task would include completion of all applicable planning tasks from the list below, as well as coordination and oversight of the efforts of all project partners.

Identify the status of the following project planning tasks, where applicable.

	Completed?	Copy Attached?	To Be Completed Pre-Contract (Oct 2026)?	To Be Completed as Contract Deliverable?
*Draft Project Designs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Final Project Designs	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Consultation With Potential Regulators	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Necessary Permits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cultural Resources Inventory (if relevant)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

****See Call for Applications Section 5.1 for minimum design standards.**

Describe any additional project planning that will have been completed prior to execution of a contract (October 2026).

Completed Documents:
 Final (90%) Design Plans
 NEPA decision/consultation

Final Design Planset for Construction to be completed before October 2026.

Describe any additional project planning and coordination that will need to be completed after the execution of a contract (October 2026).

Procurement and Contracting with Selected Construction Contractor - Fall 2026.
 Joint Permit Application Submitted by January 2026.

Landowner Agreement Task

DEQ includes the following language in every nonpoint source contract involving on-the-ground activities:

Contractor shall submit signed landowner agreement(s) verifying 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 (typically 10 years). 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. If a signed landowner agreement does not meet the above-stated minimum requirements, Contractor shall negotiate an amended agreement with the landowner that ensures appropriate operation and maintenance of all structures, vegetation, management measures, and includes a sustainable management plan for any livestock grazing for the life of the project (typically 10 years).

Identify the status of the following landowner agreement tasks, where applicable.

	Completed?	Copy Attached?	To Be Completed Pre-Contract (Oct 2026)?	To Be Completed as Contract Deliverable?
Draft Landowner Agreement(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Final Landowner Agreement(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grazing Management Plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Project Effectiveness Monitoring Task

If you will be conducting any on-the-ground implementation work, you will be required to complete the monitoring activities described in the task language below, as applicable. Describe below how you plan to determine the effectiveness of your project. Project effectiveness success criteria should be time-bound and assess each project objective quantitatively. Success criteria should clearly define adaptive management thresholds. Examples may include: a minimum 25% decrease in sediment/nitrogen/phosphorus load within 2 years; a 70% survival rate of containerized plantings after one year.

If you are applying for nonpoint source grant funding for project design only, and not for project implementation, you may either skip this task, or describe below which parts of this task you intend to complete:

TU will estimate sediment (tons/yr), nitrogen and phosphorus (lbs/yr) load reductions, monitor vegetation survival rates (success metric is $\geq 60\%$ survival in Year 1 and 2), and maintain photo-point monitoring consistent with methodologies accepted by DEQ. TU and partners plan to monitor and apply adaptive management to address these metrics if they are not meeting the success criteria as above. Additional monitoring needs may be identified and coordinated with the DEQ Project Manager.

Example Task Language

Contractor shall, in consultation with the DEQ Project Manager, develop a reasonable method or set of methods for evaluating and reporting on the effectiveness of the project in addressing water quality issues. Contractor shall complete a monitoring plan to guide monitoring activities. Contractor shall complete the following monitoring activities:

- *Estimate the sediment load reductions (tons/year) achieved through implementation of the proposed restoration activities and management practices.*
- *Estimate the nitrogen load reductions (pounds/year) achieved through implementation of the proposed restoration activities and management practices.*
- *Estimate the phosphorus load reductions (pounds/year) achieved through implementation of the proposed restoration activities and management practices.*
- *For projects designed to address pollution from pollutants other than nitrogen, phosphorus and sediment, evaluate and report on the effectiveness of the project in addressing water quality issues.*
- *Contractor shall collect data, as directed by the DEQ Project Manager, to be used in estimating sediment, nitrogen, and phosphorus load reductions (and for harmful algal bloom reduction projects, carbon sequestration/emissions reductions) achieved through implementation of restoration activities and management practices designed to address these pollutants.*
- *Use the following measures to evaluate the sustainability of restoration activities and management practices:*
 - *[Vegetation mortality rate.]*
 - *Pre- and post-construction photo point monitoring consistent with the “Oregon Watershed Enhancement Board Guide to Photo Monitoring” methodologies, or a similar published photo point monitoring method accepted by DEQ. The U.S. Forest Service provides additional photo point monitoring guidance in the “United States Forest Service Photo Point Monitoring Handbook”.*
 - *[Riparian survey.]*
 - *[Other.]*

Please describe any additional monitoring you intend to do as part of the project.

A large, empty rectangular box with a thin black border, intended for the user to describe any additional monitoring they intend to do as part of the project.

Project Implementation Task

Provide a **detailed description of the solution you are proposing** to implement to address a nonpoint source pollution problem.

- Describe the practices you intend to design and/or implement to solve the problem (what, where, when, how much or how many).
- Describe the anticipated maintenance needs (what, where, who, how long).
- Refer to the minimum design standards in the Call for Applications.
 - *Please fill out this section to the best of your ability, even if you are only seeking funding for project design.*

The project will restore 5,419 linear feet of Flint Creek using the following restoration techniques:

(1) New Streambank Construction

Installation of approximately 4,975 linear feet of vegetated brush bank treatments. This includes native materials and equipment operation and involves (a) earthwork to cut and backfill new streambank and floodplain elevations to reconnect floodplain and wetland habitats to the stream channel and (b) construction of new streambanks. New streambank construction involves installation of “vegetated wood matrixes” that replace damaged and eroding streambanks. These matrices are constructed using large wood, brush, and are backfilled with willow cuttings and native cobbles and dirt. The matrices improve riparian vegetation, streambank stability, fish habitat, and water quality via overhead cover and stream shading.

(2) Riparian Fencing

Installation of approximately 6,057 feet of riparian and rotational pasture fencing. This involves materials and labor to construct a combination of fencing (electric and barbed wire) and water gaps that will help the landowner implement an alternative grazing management plan. Fencing and associated stockwater infrastructure is necessary to establish rotational pastures that enable the landowner to keep the riparian corridor along Flint Creek protected after the project period and protected from overgrazing in the long-term.

(3) Revegetation

This involves materials and labor to broadcast seed (native and/or agricultural seed mix) across disturbed areas, installation of approximately 10,550 willow cuttings in floodplain and streambank trenches, and planting of approximately 242 native shrubs in five individual browse-protected “planting units”. Planting units are planted with native containerized plants and protected with a temporary fence to prevent wildlife and livestock browse.

(4) Construction of In-channel Habitat Features

Targeted channel geometry adjustments will be made per design to improve riffle and pool habitat features. This involves native rock and log materials with use of heavy equipment to adjust the channel geometry and restore natural width to depth ratios and quality riffle habitat. Current conditions exhibit over-widened stream channel ratios. Narrowing the stream channel improves trout habitat.

Education, Outreach and Training Task

To get good projects on the ground, trained staff and board members and educated, enthusiastic landowners are required. To promote the development of future projects, DEQ encourages project sponsors to use up to \$5,000 per project of funding to support training and conduct education and outreach. Example training topics might include: project management, public procurement, technical writing, GIS, water quality monitoring, web design, public speaking, human resource management, photo journalism, UAV (drone) piloting, financial management, and restoration techniques. Education and outreach activities might include targeted landowner outreach, conducting project site tours for local landowners, tabling at community events, holding a watershed festival, providing stipends and travel reimbursements for speakers and participants to attend a nonpoint source pollution prevention workshop, or generating articles for social media. The primary requirement for training and outreach is clearly explaining how the activity generates behavior change to address nonpoint source pollution. Funding may not be used to pay for food and beverages, or for honorariums and gifts.

Describe the education and outreach activities or training you will complete to promote behaviors or facilitate future efforts to reduce nonpoint source pollution. Additionally, identify the goals of the training/education and outreach activities.

No 319 funds are requested for education, outreach, or training activities. TU will continue implementing targeted outreach efforts that support voluntary landowner participation and advance future NPS pollution reduction projects within the watershed. These efforts include direct landowner contact, project site tours, and ongoing coordination with local partners and community organizations. TU will maintain consistent communication with landowners to provide project updates, share information on resource concerns, and identify opportunities for future restoration actions that address NPS pollution. TU will also continue hosting project site tours for interested landowners, partner organizations, and other community members. These tours provide an opportunity to demonstrate completed restoration practices and discuss how specific techniques reduce sediment, nutrient loading, and riparian disturbance. In addition, TU will participate in watershed group meetings and partner led events to ensure alignment among local conservation practitioners and support the development of a strong project pipeline. These activities improve landowner understanding of conservation solutions and agency support available for restoration work, and help build the relationships necessary for voluntary implementation of NPS reduction actions.

Identify the specific target audience and method of delivery. Additionally, describe how the proposed training and/or education and outreach will increase local capacity and interest for addressing/promoting behavior change to reduce nonpoint source pollution.

The target audience is nearby landowners and community members. The method of delivery will be presentations with the local watershed group, presentations to the County Commissioners, presentations at the local CD Board meetings, and project tours.

Goals for reaching this audience are as follows:

- Increase landowner awareness of effective NPS pollution reduction practices through project tours, direct conversations, and sharing of restoration outcomes.
- Strengthen community understanding of watershed health concerns and the benefits of riparian and stream restoration. Maintain partner engagement and coordination essential for future project development, monitoring, and long-term implementation.
- Support the development of additional, shovel-ready restoration projects by identifying landowners interested in participating

Describe how you will evaluate the effectiveness of the proposed activities.

Effectiveness of these outreach efforts will be evaluated by the following metrics that will help track progress toward increased interest in NPS pollution reduction efforts in the Granite County area:

- Number of landowners and community members participating in site tours and project related events.
- Number of community presentations delivered and associated attendance.
- Number of earned-media pieces, such as local newspaper articles, as well as project related posts shared through partner newsletters and social media platforms.

Project Administration Task

Please use the task description below as a guide when calculating your budget for project administration. DEQ typically includes these requirements in every nonpoint source grant contract, with only minor variation. Funding applied to the Project Administration Task on each project must not exceed 10% of the total amount of funding requested, or \$12,000, whichever is lower.

Example Task Language

Contractor shall oversee and be accountable for the completion of all tasks. Contractor shall maintain regular contact with the DEQ project manager. Contractor shall prepare and submit Status Reports, Final Reports and Attachment B Billing Statements according to the format and schedule described below.

Report Format

- *Contractor shall submit each Attachment B Billing Statement, Status Report and Final Report using the most current reporting guidance and templates provided by the DEQ project manager.*
- *Contractor shall ensure each Status Report and Final Report contains adequate documentation to justify accompanying reimbursement requests and match reporting, to the satisfaction of the DEQ project manager.*
- *Contractor shall ensure that the Final Report is a standalone document describing all contract activities and containing copies of all contract deliverables (even if the deliverables were previously submitted).*

Reporting Schedule

- *Status Reports: Due June 15th and December 15th of each year the Contract is in effect, and each time an Attachment B Billing Statement is submitted.*
- *Draft Final Report: Contractor shall submit a complete draft Final Report for DEQ review and comment at least 15 days prior to the contract expiration date.*
- *Final Report: Contractor shall submit a Final Report, addressing DEQ comments on the draft Final Report, on or before the Contract expiration date.*
- *Attachment B Billing Statements: Contractor shall submit an Attachment B Billing Statement with each Status Report, or Final Report submitted to DEQ while the Contract is in effect. To maintain cash flow, Contractor may submit interim Attachment B Billing Statements as frequently as monthly during the term of the Contract. However, each interim Attachment B Billing Statement must be accompanied by an Interim Report.*

Project Timeline

	4Q 2026	1Q 2027	2Q 2027	3Q 2027	4Q 2027	1Q 2028	2Q 2028	3Q 2028	4Q 2028	1Q 2029	2Q 2029	3Q 2029
Project Coordination and Planning Task	✓	✓	✓									
Landowner Agreement Task												
Project Effectiveness Monitoring Task					✓	✓	✓	✓	✓	✓	✓	✓
Project Implementation Task			✓	✓								
Education, Outreach and Training Task	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Project Administration Task	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Co-Benefit Considerations

DEQ is committed to carrying out nonpoint source pollution reduction projects within engaged communities where the impact stretches beyond improving water quality. DEQ will award additional points in the scoring form where co-benefits extend beyond the project. Below are a few examples of how projects might exemplify co-benefits.

- Project will reduce economic hardship such as from livestock mortalities, cost and energy needs to treat municipal drinking and wastewater treatment, or loss of income from recreation
- Project will benefit underserved markets
- Project will improve or create equitable access to a clean and healthy environment
- Project planning included consultation with Tribal Nations
- Project will improve flood and drought resilience of the landscape
- Project impacts will benefit a downstream community and other natural systems (e.g., drinking water sources, human health, wildlife habitat, etc)

Please use this section to highlight co-benefits your project may have.

TU will oversee completion of all tasks, coordinate with DEQ regularly, and submit all Status, Interim, and Final Reports, including Attachment B billing statements. Administration costs will remain within DEQ's allowable cap of \$12,000 (lower than the 10% de minimus).

Project will improve access to a clean and healthy environment

- Project will improve flood and drought resilience of the landscape
- Project improves wildlife habitat and water quality for downstream drinking water sources.

BUDGET

2026 Nonpoint Source Pollution Reduction Application - On-the-Ground Project Budget Template

Project Title	Flint Creek Phase 3 C/O Conn Property Habitat Restoration Project							
Instructions	Tasks and Potential Deliverables	Funding Request*	Non-Federal Match**	Other Funding***	Match Source	Match Secured? (Y/N)	Total Project Cost	Additional Information****
This task includes completion of all planning tasks and coordination and oversight of the efforts of all project partners. Provide a detailed budget and add a row if needed.	Project Planning							
	Preliminary site investigation data and site maps						\$ -	
	Required Permits						\$ -	
	Draft Project Designs						\$ -	
	Final Project Designs	\$ 1,000.00	\$ 1,500.00	\$ 4,000.00	NRDP	Y	\$ 6,500.00	\$7,500 is budgeted for TU staff, Tess Scanlon, Project Manager, to coordinate with the landowner and design team on Final Design Planset for construction. Includes walkthrough with design in-hand (approx 112-hrs @ \$58/hr). Non-match, leveraged funds from BOR are secured.
	Total	\$ 1,000.00	\$ 1,500.00	\$ 4,000.00			\$ 6,500.00	
This task includes costs for developing and managing landowner agreements and developing grazing management plans as applicable. Provide a detailed budget and add a row if needed.	Landowner Agreements							
	Draft Landowner Agreement						\$ -	
	Final Landowner Agreement						\$ -	
	Grazing Management Plan	\$ -	\$ -	\$ -			\$ -	Signed Landowner Agreement with Grazing Management Plan has been signed by USFWS, TU, and the Private Landowner.
	Total	\$ -	\$ -	\$ -			\$ -	
This task includes costs for developing and implementing a monitoring plan to evaluate effectiveness to reduce nonpoint source pollution. See example contract template or application instructions for required monitoring activities. Provide a detailed budget and add a row if needed.	Effectiveness Monitoring							
	Draft Monitoring Plan		\$ 1,000.00		NRDP	Y	\$ 1,000.00	\$1,000 is budgeted for TU staff, Tess Scanlon, Project Manager, to develop draft Monitoring Plan (approx 16-hrs @ \$58/hr).
	Final Monitoring Plan		\$ 500.00		NRDP	Y	\$ 500.00	\$500 is budgeted for TU staff, Tess Scanlon, Project Manager, to finalize the Monitoring Plan in coordination with DEQ staff (approx 8-hrs @ \$58/hr).
	Written Summary of all Monitoring Activities	\$ 2,000.00		\$ 1,000.00			\$ 3,000.00	\$3,000 is budgeted for TU staff, Tess Scanlon, Project Manager, to collect and compile monitoring data and complete the draft and final monitoring report in coordination with DEQ staff (approx 50-hrs @ \$58/hr). Non-match, leveraged funds from BOR are secured.
	Total	\$ 2,000.00	\$ 1,500.00	\$ 1,000.00			\$ 4,500.00	
This task includes all costs for implementation of the plans developed in the Project Planning task. If you are requesting funding for design only, leave this task blank. Provide a detailed budget and add a row if needed.	Project Implementation							
	Materials						\$ -	
	Labor						\$ -	
	Construction Contractors (includes materials, labor and equipment)	\$ 150,000.00	\$ 15,000.00	\$ 580,000.00	FWP	N	\$ 745,000.00	Construction Contractors budget is based on the attached 2025 Engineer's Construction Cost Estimate and includes costs to: (1) build new streambanks and stream channel features, including earthwork to excavate, backfill, and haul excess fill to onsite repository and construct vegetated bank matrices, (2) install riparian plantings, and (3) install livestock fencing and water gaps. Leveraged, non-match funds from BOR are secured. TU will submit a funding proposal to the FWP Future Fisheries Grant Program May 2026; Funding decisions are expected by Summer 2026.
	Construction oversight	\$ 5,000.00	\$ 1,000.00	\$ 29,000.00		Y	\$ 35,000.00	\$35,000 is budgeted for construction oversight. SWCA and TU staff will split C/O responsibilities. A total of \$6,500 is budgeted for TU staff, Tess Scanlon, to complete C/O duties (approx 112-hrs @ \$58/hr). The remaining \$28,500 is budgeted for SWCA staff C/O and is based on salary rates and oversight from the previously completed Flint Creek Phase 2 Project in 2025. Non-match leveraged funds from BOR and NRDP are secured for construction oversight.
	As-built surveys						\$ -	
	Photo documentation						\$ -	
	Landowner recommendation letter						\$ -	
							\$ -	
	Total	\$ 155,000.00	\$ 16,000.00	\$ 609,000.00			\$ 780,000.00	
This task includes costs to develop and improve organizational capacity and to incorporate education and outreach into each on-the ground projects. Provide a detailed budget and add a row if needed.	Education and Outreach							
	Volunteer Coordination	\$ -		\$ 700.00			\$ 700.00	\$700 is budgeted for TU staff time for, Tess Scanlon to coordinate volunteer events (approx 12-hrs @ \$58/hr). Non-match, leveraged funds from Westslope Chapter TU secured.
	Event/Tour Planning	\$ 100.00		\$ 900.00			\$ 1,000.00	\$700 is budgeted for TU staff time for, Tess Scanlon to coordinate project tours and prepare for meetings/presentations about the project (approx 17-hrs @ \$58/hr). Non-match, leveraged funds from Westslope Chapter TU secured.
	Outreach/Publication materials	\$ 100.00		\$ 750.00			\$ 850.00	\$850 is budgeted for TU staff time for, Tess Scanlon to coordinate project tours and prepare for meetings/presentations about the project (approx 15-hrs @ \$58/hr) to coordinate with earned media on interviews and or develop newsletters and posts on social media platforms about the project. Non-match, leveraged funds from Westslope Chapter TU secured.
	Total	\$ 200.00	\$ -	\$ 2,350.00			\$ 2,550.00	
Funding applied to Project Administration task must not exceed 10% of the total amount of funding requested per project, or \$12,000, whichever is lower. Project admin includes normal business expenses and reporting requirements.	Administration							
	Mid/Annual/Interim Reports and Billing Statements	\$ 5,000.00					\$ 5,000.00	
	Draft/Final Report and Billing Statement	\$ 6,000.00					\$ 6,000.00	
	Communication with DEC	\$ 1,000.00					\$ 1,000.00	\$12,000 is budgeted for Administration Costs for TU staff time for Tess Scanlon and Catherine Redfern, TU Grant accountant, to complete interim, annual, and final reporting, invoicing, and budget tracking during the project period.
							\$ -	
	Total	\$ 12,000.00	\$ -	\$ -			\$ 12,000.00	
Grand Totals		\$ 170,200.00	\$ 19,000.00	\$ 616,350.00			\$ 805,550.00	

*Funding Request - Must not exceed \$300,000 and must be at least \$125,000 for harmful algal bloom reduction projects

**Non-Federal Match - Can include in-kind materials

***Other Funding - Include federal match here, or, for example, other funding that is supporting the project but cannot be reported as match on this grant because it is matching another funding source.

****Additional Information - Use to specify non-federal match and other funding sources, or use to justify cost if needed (e.g., hourly rates, rental costs, etc.)

Final Construction Cost Estimate

Flint Creek Phase 3D

2/3/2025

	Construction Cost Items	Quantity	Units	Unit Cost	Cost
1	Mobilization	1	Lump Sum	\$ 27,000	\$ 27,000
2	Work Area Access	1	Lump Sum	\$ 10,000	\$ 10,000
3	Temporary Bypass Channel	1	Lump Sum	\$ 15,000	\$ 15,000
4	Earthwork - Cut and Fill on Site	3,054	Cubic Yards	\$ 10	\$ 30,540
5	Earthwork - Haul to Repository and Grade	4,216	Cubic Yards	\$ 10	\$ 42,160
6	Salvage Alluvium from Existing Channel	1,832	Cubic Yards	\$ 8	\$ 14,656
7	Riffle Construction	1,409	Linear Feet	\$ 30	\$ 42,270
8	Sod Salvage and Transplant	-	Square Feet	\$ 2	\$ -
9	Install Vegetated Wood Matrix Type 1 Structures	1,647	Linear Feet	\$ 20	\$ 32,940
10	Install Vegetated Wood Matrix Type 2 Structures	1,217	Linear Feet	\$ 30	\$ 36,510
11	Install Willow Trenches	1,120	Linear Feet	\$ 10	\$ 11,200
12	Install Floodplain Roughness	1.92	Acres	\$ 3,000	\$ 5,760
13	Livestock Fencing	4,319	Linear Feet	\$ 7	\$ 30,233
14	Planting Exclosures	3	Each	\$ 1,500	\$ 4,500
15	Vegetation Salvage and Transplant	0.71	Acres	\$ 2,500	\$ 1,775
16	Seeding	5.01	Acres	\$ 1,500	\$ 7,515
17	Planting	197	Lump Sum	\$ 20	\$ 3,940
			CONSTRUCTION SUBTOTAL		\$ 315,999
	Owner Supplied Wood	1	Lump Sum	40,000	\$ 40,000
	Owner Supplied Willow Cuttings	19,920	Each	2	\$ 39,840
	Owner Supplied Containerized Plants	197	Each	15	\$ 2,955
			OWNER SUPPLIED ITEMS SUBTOTAL		\$ 82,795
			15% Contingency		\$ 460
			GRAND TOTAL		\$ 399,254

Final Construction Cost Estimate

Flint Creek Phase 3C

2/3/2025

	Construction Cost Items	Quantity	Units	Unit Cost	Cost
1	Mobilization	1	Lump Sum	\$ 21,000	\$ 21,000
2	Work Area Access	1	Lump Sum	\$ 10,000	\$ 10,000
3	Temporary Bypass Channel	1	Lump Sum	\$ 15,000	\$ 15,000
4	Earthwork - Cut and Fill on Site	2,871	Cubic Yards	\$ 10	\$ 28,710
5	Earthwork - Haul to Repository and Grade	4,131	Cubic Yards	\$ 10	\$ 41,310
6	Salvage Alluvium from Existing Channel	1,035	Cubic Yards	\$ 8	\$ 8,280
7	Riffle Construction	796	Linear Feet	\$ 30	\$ 23,880
8	Sod Salvage and Transplant	-	Square Feet	\$ 2	\$ -
9	Install Vegetated Wood Matrix Type 1 Structures	1,027	Linear Feet	\$ 20	\$ 20,540
10	Install Vegetated Wood Matrix Type 2 Structures	598	Linear Feet	\$ 30	\$ 17,940
11	Install Willow Trenches	990	Linear Feet	\$ 10	\$ 9,900
12	Install Floodplain Roughness	1.65	Acres	\$ 3,000	\$ 4,950
13	Livestock Fencing	4,658	Linear Feet	\$ 7	\$ 32,606
14	Planting Exclosures	1	Each	\$ 1,500	\$ 1,500
15	Vegetation Salvage and Transplant	0.14	Acres	\$ 2,500	\$ 350
16	Seeding	3.89	Acres	\$ 1,500	\$ 5,835
17	Planting	45	Each	\$ 20	\$ 900
			CONSTRUCTION SUBTOTAL		\$ 242,701
	Owner Supplied Wood	1	Lump Sum	30,000	\$ 30,000
	Owner Supplied Willow Cuttings	13,075	Each	2	\$ 26,150
	Owner Supplied Containerized Plants	45	Each	15	\$ 675
			OWNER SUPPLIED ITEMS SUBTOTAL		\$ 56,825
			15% Contingency		\$ 44,929
			GRAND TOTAL		\$ 344,455

**LETTERS
OF
SUPPORT**



April 1st, 2024

MT Department of Environmental Quality Nonpoint Source Program
1520 6th Ave.
Helena, MT 59601

Dear DEQ Nonpoint Source Program Review Committee,

Granite Headwaters Watershed Group (GHWG), an associate committee of the Granite Conservation District (Granite CD), strongly supports Trout Unlimited's proposal to implement the **Flint Creek Phase 3 Habitat Restoration Project**. Our mission is to promote the sustainable use of natural resources in the watershed while protecting the rural character of the area where we live. We think the proposed project aligns with our mission and addresses natural resource improvements that are needed in our watershed.

Our group is comprised of community members and other stakeholders. We have developed relationships and partnered with entities on important projects in the watershed since 2006. Our group authored the state-approved Flint Creek Watershed Restoration Plan in 2014.

The Flint Creek Watershed Restoration Plan identifies Flint Creek streambank erosion as an impairment to water quality. One of the goals in the plan is to "reduce streambank erosion and nutrient loads by restoring and enhancing the riparian zone". Last year, GHWG sent out a residential survey and hosted two public meetings to gather up to date information about natural resource issues and opportunities in our watershed. Again, streambank erosion in lower Flint Creek was identified as a priority concern.

For these reasons, we support TU's Flint Creek Phase 3 Habitat Restoration Project. It is a collaboration between TU and working ranch lands that will restore riparian habitat and eroding stream banks in Flint Creek. This approach will benefit natural resources and the environment and furthermore help achieve one of the goals in the Flint Creek Watershed Restoration Plan. This is the right project in the right place, and we feel that TU has demonstrated they have the "right stuff" to execute it successfully.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael L. Miller".

Mike Miller

President, Granite Headwaters Watershed Group

March 22, 2024

Montana Department of Environmental Quality
319 Nonpoint Source Project Program
Helena, MT 59620-0701

Dear Review Committee for the Montana DEQ Nonpoint Source Program Project Grants,

I am writing to support **Trout Unlimited's Flint Creek Phase 3 Habitat Restoration Project** proposal. As the property landowner for this reach of Flint Creek, our ranch thinks that this is a good project for us and our community.

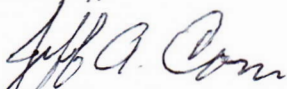
The protection of the habitat and water quality in the Flint Creek valley is vitally important for our communities and future generations. We are supportive of the proposed work to address the eroding streambanks and loss of riparian vegetation in Flint Creek as I have seen a straightening of the creek in the 67 years that I have lived on this ranch with many of the supper fishing holes of my childhood gone. Our stretch of Flint Creek is still some of the best fishing on the Creek and we would like to improve it. We think the proposed design approach will address these issues while also supporting the continuation of our ranching operations in a way that result in overall improved water quality and fish populations in the stream.

We appreciate Trout Unlimited and project partners' cooperative approach to gather input from landowners and other community members. We have been working with Trout Unlimited and the Montana Natural Resource Damage Program on planning for this restoration project and think it will contribute to the overall success of the project. By working together we can improve the health of the Flint Creek ecosystem which is directly tied to the well-being of our agricultural productivity and future generations of ranching in the valley.

I am hopeful that our collaborative planning efforts with Trout Unlimited for the *Flint Creek Phase 3 Habitat Restoration Project* become a reality with funding support from the DEQ 319 Nonpoint Source Project Program.

Thank you for your consideration of this proposal. We look forward to working with you on this project.

Sincerely,



Jeff A. Conn, Trustee
Conn Ranches



RE: Trout Unlimited's DEQ 319 Grant Funding Request for Flint Creek

Dear Hannah Riedl:

Attached is the grant application for the Flint Creek Phase 3C/D Habitat Restoration Project. The application describes the budgeting, planning, design, permitting, and construction work required to reclaim approximately 5 acres and 4,975-feet of Flint Creek along Reach 3. Trout Unlimited is committed to providing cost-share and has leveraged necessary additional funding to complete the work proposed in this grant application. This Flint Creek project is a partnership between the private landowners, Trout Unlimited, FWP, Bureau of Reclamation, and USFWS.

Please don't hesitate to contact me with questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Teresa Scanlon".

Teresa Scanlon,
Rock-Flint Project Manager, Trout Unlimited

STATE OF MONTANA, NATURAL RESOURCE DAMAGE PROGRAM



May 10, 2024

Re: Letter of Support for Trout Unlimited (TU) Proposal titled: **“Flint Creek Phase 3 Habitat Restoration Project”** Future Fisheries Improvement Project with Department of Fish Wildlife & Parks

Dear Future Fisheries Grant Program Review Committee:

This letter is written to affirm our partnership in and support to the **“Flint Creek Phase 3 Habitat Restoration Project”** application submitted to Montana FWP Future Fisheries Grant Program by Trout Unlimited. The Montana Natural Resource Damage Program (NRDP) is a project partner and contributing funds to the design of this project.

Aquatic and riparian resources of the Upper Clark Fork River Basin (UCFRB) have been injured by hazardous substances, released from mining and mineral-processing operations in the Butte and Anaconda areas. In 1983, the State of Montana (State) filed a lawsuit against the Atlantic Richfield Co. for injuries to the State’s natural resources in the Upper Clark Fork River Basin. The State settled this lawsuit which established the UCFRB Restoration Fund. The UCFRB Restoration Fund is State of Montana money administered by the NRDP and must be used to restore, rehabilitate, replace, or acquire the equivalent of the injured natural resources.

The UCFRB Aquatic and Terrestrial Resources Restoration Plans (Restoration Plans) list Flint Creek as a priority tributary for habitat restoration. Projects such as the Flint Creek Phase 3 Restoration Project will help meet the goals of the Restoration Plans by improving habitat for species such as Bull Trout, Westslope Cutthroat Trout, and Brown Trout and help increase trout recruitment to the mainstem Clark Fork River.

NRDP is excited to support TU’s application by participating in the design of this project. Together, NRDP and TU are pursuing this and other habitat restoration and fish passage projects with private landowners in partnership with Montana Fish, Wildlife, and Parks and other partners in Flint Creek. This collaborative approach is restoring fragmented native fish habitats, improving water quality in a popular recreational fishery, and recruiting fish to a highly impaired reach of the Clark Fork River.

NRDP believes that our support and commitment to the proposed project will significantly increase the success of the project, including improved water quality and enhanced ecosystem resiliency for long-term benefits to fish and wildlife in the UCFRB.

STATE OF MONTANA, NATURAL RESOURCE DAMAGE PROGRAM



Thank you for considering TU's application. NRDP agrees to the submittal and content of the application. Please do not hesitate to contact me if you have questions or need additional information. We look forward to working with TU to ensure the success of this project and to continue to facilitate water quality and habitat improvement opportunities in the UCFRB.

Sincerely,

A handwritten signature in blue ink that reads "Douglas A. Mark".

Acting NRDP Manager
Natural Resource Damage Program



Montana Fish, Wildlife and Parks - Region 2
3201 Spurgin Road
Missoula, MT 59804
(406) 542-5500
03-18-2024

Nonpoint Source Program
Montana Dept of
Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901

Subject: Letter of Support - Flint Creek Phase 3 DEQ 319 Grant Program - 319 Nonpoint Source Program

To the DEQ Non-point Source Grant Program Review Panel:

On behalf of Montana Fish Wildlife and Parks, please consider this letter as written confirmation of our full support of the proposed Flint Creek Phase 3 Habitat Restoration Project, as well the Montana Department of Environmental Quality 319 Nonpoint Source Program Grant Application. Flint Creek provides significant ecological value. It offers essential spawning habitat for wild brown trout and rainbow trout and a migratory corridor and over-wintering habitat for native westslope cutthroat trout and bull trout. Evidence from recent Montana FWP studies shows that Flint Creek and its tributaries are a key source of juvenile westslope cutthroat trout recruitment and is an important spawning migration corridor for fish from the Clark Fork River. The Clark Fork River has a diminished fishery from impacts of past mining and smelting activities as well as other limiting factors. Flint Creek is also a valued recreational fishery with high trout densities that provide high-quality angling opportunities.

A history of land use practices in the Flint Creek valley including channel modifications, riparian vegetation removal/reduction and sedimentation have adversely affected water quality as well as aquatic and riparian habitat. The proposed restoration project on the Johnson and Conn properties address these limiting factors and will enhance the ecosystem resiliency of Flint Creek. The proposed project to implement an alternative grazing management plan, stabilize and revegetate banks and the

floodplain should mitigate the adverse impacts of these land use disturbances. This includes reduction of sediment and nutrient loads that reduce the water quality in Flint Creek.

This project will create conditions that help sustain the native and wild fish populations of Flint Creek. The project will also provide improved recreational opportunities for anglers and wildlife enthusiasts, which in turn will support the local communities and economic sectors of tourism and outdoor recreation.

We encourage you to reach out to Brad Liermann, *Rock Creek/Flint Creek Fisheries Biologist*, Bradley.Liermann@mt.gov, 406-825-5525, as the primary contact person with any questions or concerns about on this project. Thank you very much for consideration of this funding application of this important project and we look forward to its swift completion.

Sincerely,



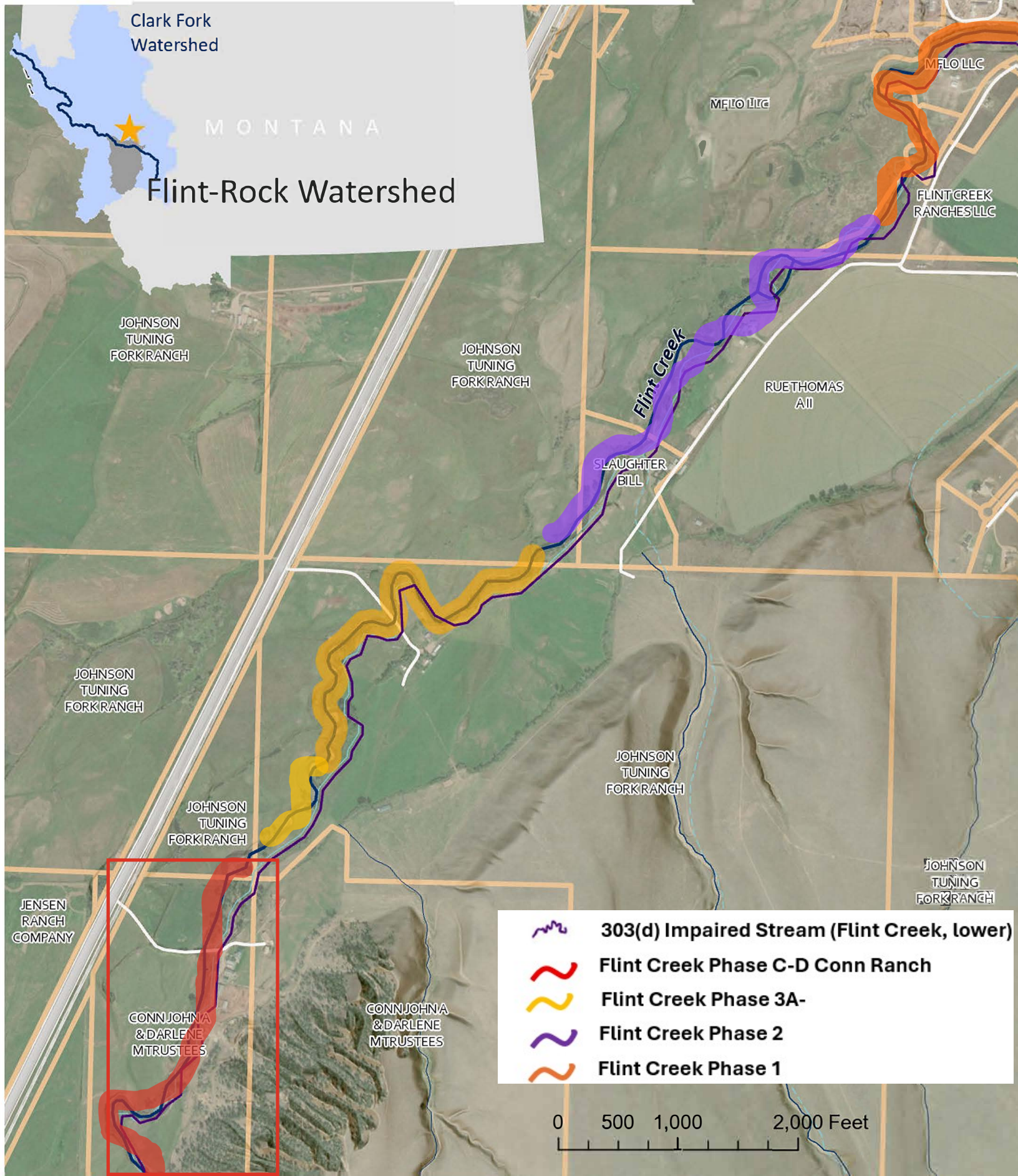
Kendra McKlosky
Acting Region 2 Supervisor



Quentin Kujala
Chief of Conservation Policy

**MAPS/
DESIGNS**

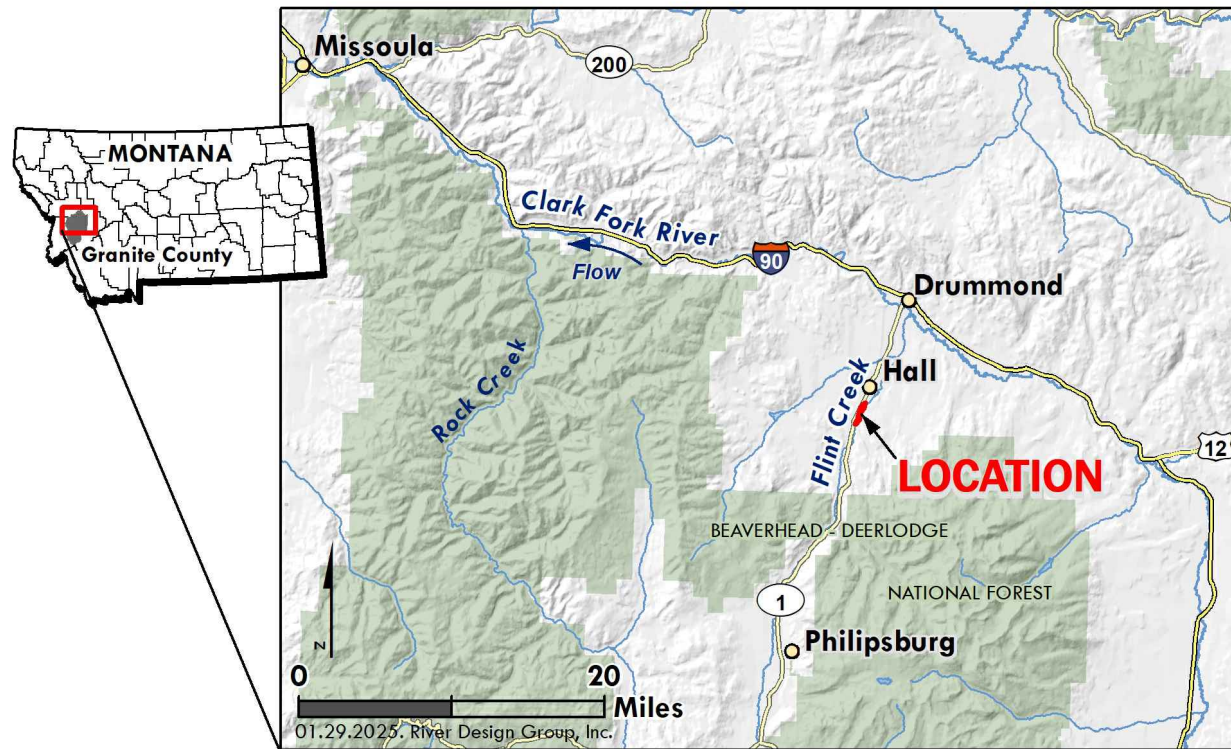
Flint Creek Phases 1-3 Habitat Restoration Project Map



FLINT CREEK PHASE 3 RESTORATION PROJECT

FINAL DESIGN PLAN SET

FLINT CREEK PHASE 3 VICINITY MAP



LEGAL DESCRIPTION:
S02, S03, S10, AND S35, T 09 N, R 13 W, GRANITE COUNTY, MONTANA

PROJECT PARTNERS



TROUT UNLIMITED
 312 N HIGGINS AVE
 MISSOULA, MT 59802



MONTANA NATURAL RESOURCE DAMAGE PROGRAM
 215 N SANDERS ST
 HELENA, MT 59601



MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
 P.O. BOX 200901
 P.P. HELENA, MT 59620-0901

PROJECT DESCRIPTION

THE STATE OF MONTANA NATURAL RESOURCE DAMAGE PROGRAM HAS IDENTIFIED THE FLINT CREEK WATERSHED AS A PRIORITY AREA FOR RESTORATION. THE UPDATED UPPER CLARK FORK RIVER BASIN AQUATIC AND TERRESTRIAL RESOURCES PLAN (NRDP 2019) OUTLINES KEY OBJECTIVES FOR LOWER FLINT CREEK RELATED TO INSTREAM FLOW, FISH PASSAGE AND RIPARIAN HABITAT. IN ADDITION, FLINT CREEK IS LISTED AS IMPAIRED FOR METALS AND SEDIMENT UNDER SECTION 303(D) OF THE CLEAN WATER ACT.

IN 2018, CONCEPTUAL DESIGNS WERE DEVELOPED FOR THREE MILES OF FLINT CREEK ON THE CORBETT, RUE, SLAUGHTER AND JOHNSON PROPERTIES IN THE LOWER FLINT CREEK VALLEY UPSTREAM OF HALL, MT. IN 2024, CONCEPTUAL DESIGNS WERE DEVELOPED FOR AN ADDITIONAL MILE OF FLINT CREEK ON THE CONN PROPERTY LOCATED UPSTREAM. IN SPRING 2021, THE PHASE 1 RESTORATION PROJECT WAS IMPLEMENTED ON THE CORBETT PROPERTY. IN FALL 2023, THE PHASE 2 RESTORATION PROJECT WAS IMPLEMENTED ON THE RUE AND SLAUGHTER PROPERTIES.

THE PURPOSE OF THE PHASE 3 PROJECT IS TO IMPROVE STREAM AND FLOODPLAIN FUNCTION FOR A TWO-MILE REACH OF FLINT CREEK BY IMPLEMENTING RESTORATION STRATEGIES FOR STREAMBANK RESTORATION, MEANDER REACTIVATION, SIDE CHANNEL CONSTRUCTION AND REVEGETATION. GRAZING MANAGEMENT STRATEGIES ARE BEING PURSUED SEPARATELY BETWEEN TROUT UNLIMITED AND THE LANDOWNERS.

NOT FOR CONSTRUCTION

DRAWING INDEX

1.0	COVER PAGE	5.6	PHASE 3A SIDE CHANNEL CROSS SECTIONS	7.1	PHASE 3C MATERIALS AND QUANTITIES	8.5	PHASE 3D GRADING PLAN STA 14+00-27+00	9.0	VEGETATED WOOD MATRIX DETAIL
1.1	GENERAL NOTES	5.7	PHASE 3A WORK ISOLATION DETAILS 1	7.2	PHASE 3C STRUCTURE LAYOUT STA 27+00-41+00	8.6	PHASE 3D SIDE CHANNEL 1 AND 2 PLAN AND PROFILE	9.1	WILLOW TRENCH DETAIL
2.0	EXISTING CONDITIONS	5.8	PHASE 3A WORK ISOLATION DETAILS 2	7.3	PHASE 3C GRADING PLAN STA 27+00-41+00	8.7	PHASE 3D SIDE CHANNEL 3 PLAN AND PROFILE	9.2	FLOODPLAIN ROUGHNESS DETAIL
3.0	PHASING PLAN	6.0	PHASE 3B RESTORATION PLAN	7.4	PHASE 3C SIDE CHANNEL 1 PLAN AND PROFILE	8.8	PHASE 3D CROSS SECTIONS 1	9.3	ENGINEERED RIFFLE DETAIL
4.0	ACCESS, STAGING, AND SURVEY CONTROL	6.1	PHASE 3B MATERIALS AND QUANTITIES	7.5	PHASE 3C SIDE CHANNEL 2 PLAN AND PROFILE	8.9	PHASE 3D CROSS SECTIONS 2	9.4	TYPICAL CHANNEL CROSS SECTIONS
4.1	WETLANDS AND VEGETATION PRESERVATION	6.2	PHASE 3B STRUCTURE LAYOUT STA 0+00 - 15+00	7.6	PHASE 3C CROSS SECTIONS 1	8.10	PHASE 3D CROSS SECTIONS 3	10.0	PHASE 3A REVEGETATION PLAN
4.2	WORK AREA ISOLATION PLAN	6.3	PHASE 3B GRADING PLAN STA 0+00-15+00	7.7	PHASE 3C CROSS SECTIONS 2	8.11	PHASE 3D WORK ISOLATION DETAILS 1	10.1	PHASE 3A REVEGETATION MATERIAL SCHEDULE
4.3	REPOSITORY PLAN	6.4	PHASE 3B STRUCTURE LAYOUT STA 15+00-37+00	7.8	PHASE 3C WORK ISOLATION DETAILS 1	8.12	PHASE 3D WORK ISOLATION DETAILS 2	10.2	PHASE 3B REVEGETATION PLAN
5.0	PHASE 3A RESTORATION PLAN	6.5	PHASE 3B GRADING PLAN STA 15+00-37+00	7.9	PHASE 3C WORK ISOLATION DETAILS 2	8.13	PHASE 3D WORK ISOLATION DETAILS 3	10.3	PHASE 3B REVEGETATION MATERIAL SCHEDULE
5.1	PHASE 3A MATERIALS AND QUANTITIES	6.6	PHASE 3B CROSS SECTIONS 1	8.0	PHASE 3D RESTORATION PLAN	8.14	PHASE 3D WORK ISOLATION DETAILS 4	10.4	PHASE 3C REVEGETATION PLAN
5.2	PHASE 3A STRUCTURE LAYOUT	6.7	PHASE 3B CROSS SECTIONS 2	8.1	PHASE 3D MATERIALS AND QUANTITIES	8.15	PHASE 3D WORK ISOLATION DETAILS 5	10.5	PHASE 3C REVEGETATION MATERIAL SCHEDULE
5.3	PHASE 3A GRADING PLAN	6.8	PHASE 3B WORK ISOLATION DETAILS 1	8.2	PHASE 3D STRUCTURE LAYOUT STA 0+0-14+00	8.16	PHASE 3D WORK ISOLATION DETAILS 6	10.6	PHASE 3D REVEGETATION PLAN
5.4	PHASE 3A SIDE CHANNELS PLAN AND PROFILE	6.9	PHASE 3B WORK ISOLATION DETAILS 2	8.3	PHASE 3D GRADING PLAN STA 0+00-14+00			10.7	PHASE 3D REVEGETATION MATERIAL SCHEDULE
5.5	PHASE 3A MAIN CHANNEL CROSS SECTIONS	7.0	PHASE 3C RESTORATION PLAN	8.4	PHASE 3D STRUCTURE LAYOUT STA 14+00-27+00				

NO.	DATE	BY	DESCRIPTION	CHK
1	3/21/25	LJ	Final Design	MD

PROJECT NUMBER
RDG-23-229

DRAWING NUMBER
1.0

Drawing 1 of 68

M:\Projects\2023\RDG-23-229 Flint Creek Phase 3\CAD\Flint Creek Phase III_Planset_Cover and Details.dwg Mar 21, 2025

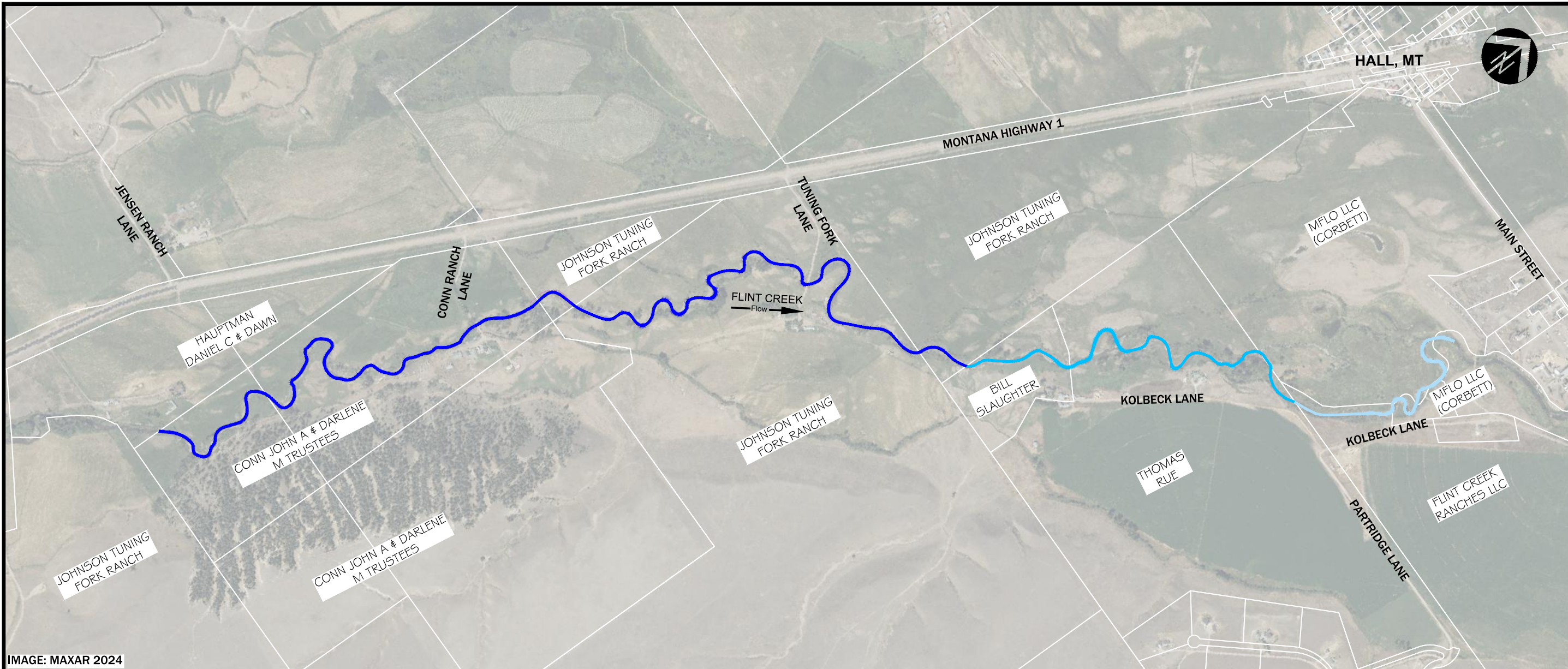


IMAGE: MAXAR 2024

1 EXISTING CONDITIONS PLAN VIEW

1" = 1000'

FEATURE LEGEND	
SYMBOL	
	PHASE 1 REACH: 2,650 LF (2021)
	PHASE 2 REACH: 4,250 LF (2023)
	PHASE 3 REACH: 11,600 LF (2025-2027)
	CADASTRAL PROPERTY LINE

FLINT CREEK EXISTING CONDITIONS

THE JOHNSON AND CONN PROPERTIES ARE LOCATED APPROXIMATELY TWO MILES SOUTHEAST OF HALL, MT. BOTH PROPERTIES ARE LOCATED UPSTREAM OF THE PHASE 2 PROJECT COMPLETED IN 2023. CATTLE RANCHING HAS BEEN THE PREDOMINANT LAND USE ON BOTH PROPERTIES, AND RIPARIAN CONDITIONS REFLECT THE IMPACTS OF GRAZING. OTHER ADJACENT LAND USES ARE RESIDENTIAL AND AGRICULTURAL.

FLINT CREEK IS A GRAVEL-BED, MEANDERING, RIFFLE-POOL STREAM TYPE WITH A CONNECTED FLOODPLAIN (C4 STREAM TYPE). HYDROLOGY IS HEAVILY INFLUENCED BY IRRIGATION WITHDRAWALS AND IRRIGATION DITCH RETURN FLOWS. VEGETATION IS DOMINATED BY PASTURE GRASSES INTERMIXED WITH REMNANT PATCHES OF WILLOWS AND COTTONWOODS. BANK EROSION RATES VARY WITH THE MOST SEVERE EROSION OCCURRING ALONG TERRACES AND ON STREAMBANKS LACKING WOODY VEGETATION. STREAMBED SUBSTRATE IS COARSE WITH MODERATE ARMORING AND EMBEDDEDNESS. AQUATIC HABITAT IS AFFECTED BY INFREQUENT POOLS, FINE SEDIMENT LOADING AND LACK OF COMPLEXITY.

FLINT CREEK GEOMORPHIC CHARACTERISTICS	
DRAINAGE AREA	352 SQ. MILES
MEAN ANNUAL PRECIPITATION	23 INCHES
FOREST COVER	60% FORESTED
BASEFLOW DISCHARGE	< 10 CFS
BANKFULL DISCHARGE	350 - 400 CFS
25-YEAR DISCHARGE (4% EXCEEDANCE)	1,200 - 1,400 CFS
STREAM GRADIENT	0.006 FT/FT
STREAMBED D50	2-INCH GRAVEL
STREAMBED D84	4-INCH COBBLE
EXISTING STREAM TYPE	C4
POTENTIAL STREAM TYPE	C4

EXISTING CONDITIONS
 FLINT CREEK PHASE 3 RESTORATION PROJECT
 HALL, MONTANA

NO.	DATE	BY	DESCRIPTION	CHK	
				CHK	MD
1	3/21/25	LJ	Final Design		

PROJECT NUMBER
RDG-23-229

DRAWING NUMBER
2.0

Drawing 3 of 68

M:\Projects\2023\RDG-23-229 Flint Creek Phase 3\CAD\Flint Creek Phase III_Planset_Cover and Details.dwg Mar 21, 2025

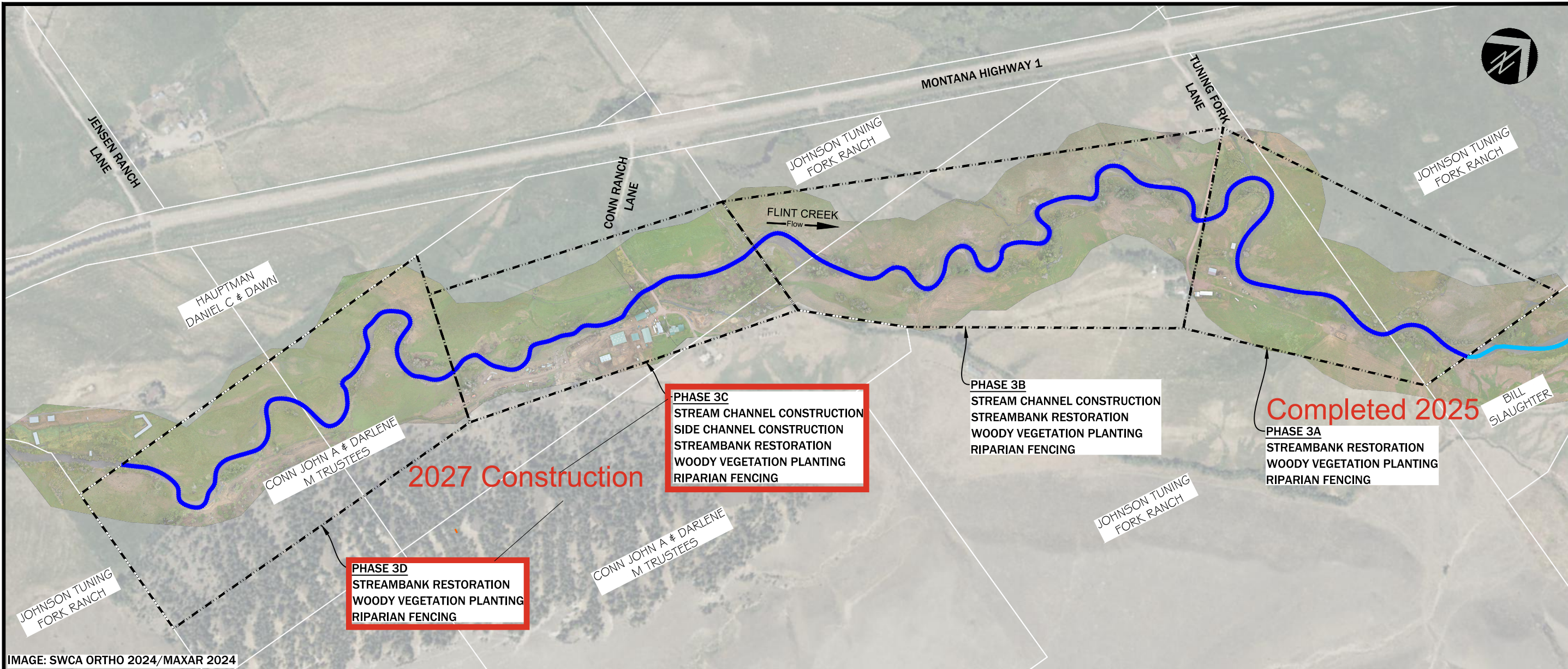


IMAGE: SWCA ORTHO 2024/MAXAR 2024

1 PHASING PLAN PLAN VIEW

1" = 600'

FEATURE LEGEND	
SYMBOL	
	PHASE 2 REACH
	PHASE 3 REACH
	CADASTRAL PROPERTY LINE

RESTORATION STRATEGIES AND ACTIONS

THE PROPOSED RESTORATION PLAN INCLUDES MEANDER REACTIVATION, STREAMBANK RESTORATION, SIDE CHANNEL CONSTRUCTION AND REVEGETATION. THE PLAN ADDRESSES LIMITING FACTORS RELATED TO STREAMBANK STABILITY, FINE SEDIMENT LOADING AND AQUATIC HABITAT. STREAMBANK STRUCTURES ARE PROPOSED FOR ACTIVE CHANNEL MARGINS WITH SPARSE VEGETATION AND OBSERVED BANK EROSION. STREAMBANKS WILL BE RE-GRADED TO GENTLE SLOPES, ENHANCED WITH FLOODPLAIN ROUGHNESS AND REVEGETATED WITH CONTAINERIZED PLANTS. SURPLUS FILL MATERIAL WOULD BE EXPORTED TO AN UPLAND REPOSITORY.

THE REVEGETATION PLAN INCLUDES STRATEGIES FOR PLANTING, SEEDING AND BROWSE PROTECTION. THE PLAN ADDRESSES ESTABLISHMENT OF NATIVE PLANT COMMUNITIES IN WETLAND, FLOODPLAIN, STREAMBANK AND UPLAND AREAS. PLANTING UNITS WERE PLACED THROUGHOUT THE PROJECT AREA WITH THE GOALS OF INCREASING CONNECTIVITY FOR HABITAT BETWEEN EXISTING RIPARIAN VEGETATION COMMUNITIES AND INCREASING THE OVERALL QUANTITY AND DIVERSITY OF WOODY VEGETATION. PRESERVATION AREAS WERE ALSO IDENTIFIED TO HIGHLIGHT WHERE EXISTING VEGETATION COMMUNITIES ARE THRIVING, AND THE PLANTING UNITS WERE PLACED TO HELP INCREASE CONNECTIVITY BETWEEN THE PRESERVATION AREAS.

PHASE	PHASE LENGTH	STREAMBANK RESTORATION LENGTH	NEW FENCING	EXPECTED CONSTRUCTION DATE
PHASE 3A	2,550 LF	1,372 LF	3,098 LF	2025
PHASE 3B	3,625 LF	3,857 LF	4,906 LF	2026
PHASE 3C	1,950 LF	2,019 LF	2,078 LF	2027
PHASE 3D	3,400 LF	3,025 LF	3,979 LF	2027

Completed 2025

2027 Construction

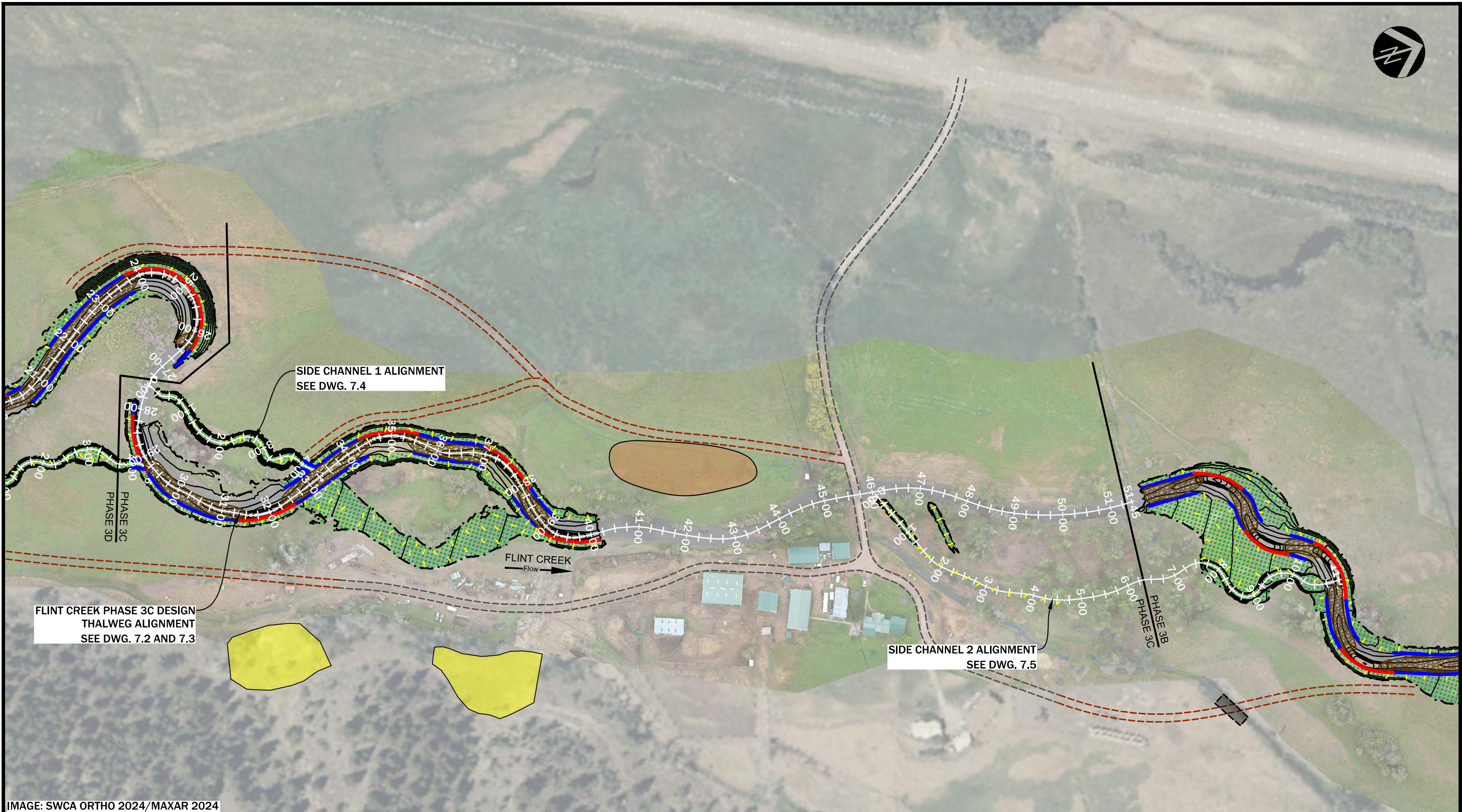
NO.	DATE	BY	DESCRIPTION	CHK
1	3/21/25	LJ	Final Design	

PROJECT NUMBER RDG-23-229

 DRAWING NUMBER **3.0**

 Drawing 4 of 68

M:\Projects\2023\RDG-23-229 Flint Creek Phase 3\CAD\Flint Creek Phase III_Planset.dwg Mar 21, 2025



FLINT CREEK PHASE 3C DESIGN THALWEG ALIGNMENT SEE DWG. 7.2 AND 7.3

SIDE CHANNEL 1 ALIGNMENT SEE DWG. 7.4

SIDE CHANNEL 2 ALIGNMENT SEE DWG. 7.5

FLINT CREEK
Flow →

IMAGE: SWCA ORTHO 2024/MAXAR 2024

1 PHASE 3C RESTORATION PLAN
PLAN VIEW

1" = 200'

DRAWING LEGEND	
SYMBOL	
	VEGETATED WOOD MATRIX TYPE 1
	VEGETATED WOOD MATRIX TYPE 2
	FLOODPLAIN ROUGHNESS
	WILLOW TRENCH
	ENGINEERED RIFFLE

PHASE 3C RESTORATION PLAN
 FLINT CREEK PHASE 3 RESTORATION PROJECT
 HALL, MONTANA

NO.	DATE	BY	DESCRIPTION	CHK
1	3/21/25	LJ	Final Design	MD

PROJECT NUMBER
 RDG-23-229
 DRAWING NUMBER
7.0
 Drawing 29 of 68

TOTAL WOOD QUANTITIES				
ITEM	QUANTITY	DIAMETER	LENGTH	ROOTWAD
CATEGORY 2 WOOD	1,236 EA	6" - 12"	8' - 10'	YES
CATEGORY 3 WOOD	3,931 EA	3" - 6"	8' - 10'	YES (50%)
CATEGORY 4 WOOD	5,684 EA	1" - 3"	8' - 10'	NO
WILLOW CUTTINGS	13,075 EA	0.5"	6' - 8'	NO

NOTE:
WOOD LENGTHS SHOWN WILL PRODUCE THE PROPER AMOUNT MATERIAL FOR STRUCTURES WHEN SPLIT INTO APPROPRIATE SIZES DURING CONSTRUCTION. IT IS CONTRACTOR'S RESPONSIBILITY TO CUT WOOD INTO APPROPRIATE SIZE LENGTHS TO FIT STRUCTURE DIMENSIONS.

NOTE:
ALL WOOD AND WILLOW CUTTINGS ARE OWNER SUPPLIED.

TOTAL ROCK QUANTITIES			
ITEM	QUANTITY (CY)	GRADATION	
RIFFLE ROCK FILL	1,997 CY	SIZE (IN)	PERCENT PASSING
		8	100
		6	80-90
		4	60-70
		3	40-50
		2	20-30
FINES	20-30		

NOTE:
50% OF RIFFLE ROCK MATERIAL WILL BE SALVAGED ON SITE AND ALL BOULDERS WILL BE SALVAGED ON SITE.

TOTAL EARTHWORK QUANTITIES	
ITEM	QUANTITY (CY)
CUT	7,002
BACKFILL	2,871
NET CUT	4,131

NOTE:
VOLUMES ARE NEATLINE, CONTRACTOR TO APPLY EXPANSION FACTORS TO DETERMINE A MORE ACCURATE BACKFILL VOLUME.

VEGETATED WOOD MATRIX TYPE 1 QUANTITIES	
ITEM	QUANTITY
VEGETATED WOOD MATRIX TYPE 1	1,027 LF
CATEGORY 3 WOOD	2,054 EA
CATEGORY 4 WOOD	2,054 EA
WILLOW CUTTINGS	5,135 EA
RIFFLE ROCK FILL	514 CY

VEGETATED WOOD MATRIX TYPE 2 QUANTITIES	
ITEM	QUANTITY
VEGETATED WOOD MATRIX TYPE 2	598 LF
CATEGORY 2 WOOD	1,196 EA
CATEGORY 3 WOOD	1,794 EA
CATEGORY 4 WOOD	2,392 EA
WILLOW CUTTINGS	2,990 EA
RIFFLE ROCK FILL	449 CY

FLOODPLAIN ROUGHNESS	
ITEM	QUANTITY
ACRES OF FLOODPLAIN ROUGHNESS	1.65 AC
CATEGORY 3 WOOD	83
CATEGORY 4 WOOD	248

ENGINEERED RIFFLE QUANTITIES	
ITEM	QUANTITY
ENGINEERED RIFFLE	796 LF
BOULDERS	637 EA
RIFFLE ROCK FILL	1,035 CY
CATEGORY 2 WOOD	40 EA

WILLOW TRENCH QUANTITIES	
ITEM	QUANTITY
WILLOW TRENCH	990 LF
CATEGORY 4 WOOD	990
WILLOW CUTTINGS	4,950 EA

PHASE 3C MATERIALS AND QUANTITIES
 FLINT CREEK PHASE 3 RESTORATION PROJECT
 HALL, MONTANA

NO.	DATE	BY	DESCRIPTION	CHK
1	3/21/25	LJ	Final Design	MD

M:\Projects\2023\RDG-23-229 Flint Creek Phase 3\CAD\Flint Creek Phase III_Planset.dwg Mar 21, 2025

M:\Projects\2023\RDG-23-229 Flint Creek Phase 3\CAD\Flint Creek Phase III_Planset.dwg Mar 21, 2025

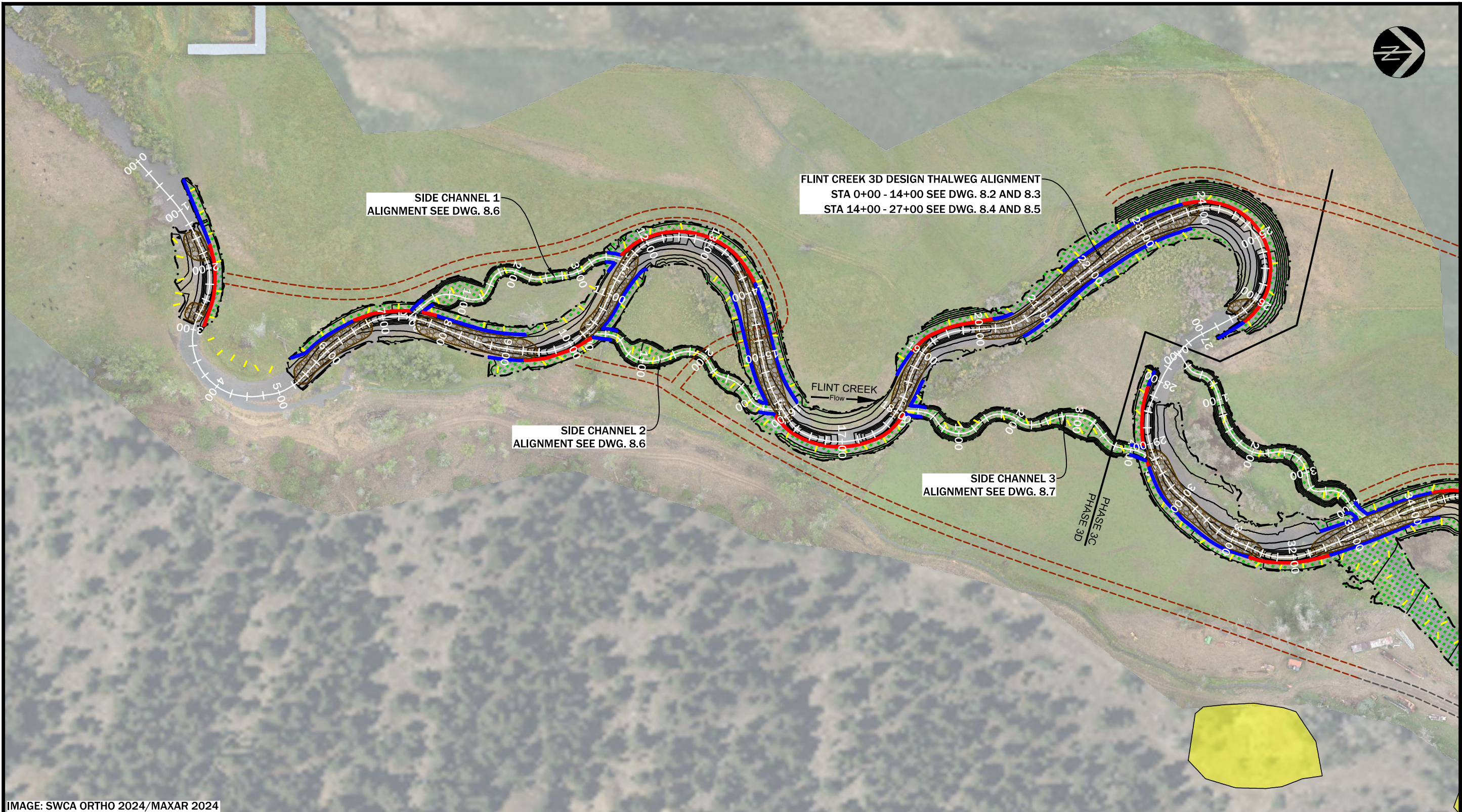


IMAGE: SWCA ORTHO 2024/MAXAR 2024

1 PHASE 3D RESTORATION PLAN
PLAN VIEW
 1" = 150'

DRAWING LEGEND	
SYMBOL	
	VEGETATED WOOD MATRIX TYPE 1
	VEGETATED WOOD MATRIX TYPE 2
	FLOODPLAIN ROUGHNESS
	WILLOW TRENCH
	ENGINEERED RIFFLE

RDG RIVER DESIGN GROUP
 236 Wisconsin Avenue
 Whitefish, MT 59937
 406.862.4927

NOW PART OF
SWCA
 ENVIRONMENTAL CONSULTANTS
 311 SW Jefferson Avenue
 Corvallis, OR 97333
 541.738.2920

PHASE 3D RESTORATION PLAN
 FLINT CREEK PHASE 3 RESTORATION PROJECT
 HALL, MONTANA

NO.	DATE	BY	DESCRIPTION	CHK
1	3/21/25	LJ	Final Design	MD

PROJECT NUMBER
 RDG-23-229

DRAWING NUMBER
8.0

Drawing 39 of 68

TOTAL WOOD QUANTITIES

ITEM	QUANTITY	DIAMETER	LENGTH	ROOTWAD
CATEGORY 2 WOOD	2,505 EA	6" - 12"	8' - 10'	YES
CATEGORY 3 WOOD	7,041 EA	3" - 6"	8' - 10'	YES (50%)
CATEGORY 4 WOOD	9,570 EA	1" - 3"	8' - 10'	NO
WILLOW CUTTINGS	19,920 EA	0.5"	6' - 8'	NO

NOTE:
WOOD LENGTHS SHOWN WILL PRODUCE THE PROPER AMOUNT MATERIAL FOR STRUCTURES WHEN SPLIT INTO APPROPRIATE SIZES DURING CONSTRUCTION. IT IS CONTRACTOR'S RESPONSIBILITY TO CUT WOOD INTO APPROPRIATE SIZE LENGTHS TO FIT STRUCTURE DIMENSIONS.

NOTE:
ALL WOOD AND WILLOW CUTTINGS ARE OWNER SUPPLIED.

TOTAL ROCK QUANTITIES

ITEM	QUANTITY (CY)	GRADATION	
RIFFLE ROCK FILL	3,568 CY	SIZE (IN)	PERCENT PASSING
		8	100
		6	80-90
		4	60-70
		3	40-50
2	20-30		
FINES		20-30	

NOTE:
50% OF RIFFLE ROCK MATERIAL WILL BE SALVAGED ON SITE AND ALL BOULDERS WILL BE SALVAGED ON SITE.

TOTAL EARTHWORK QUANTITIES

ITEM	QUANTITY (CY)
CUT	7,270
BACKFILL	3,054
NET CUT	4,216

NOTE:
VOLUMES ARE NEATLINE, CONTRACTOR TO APPLY EXPANSION FACTORS TO DETERMINE A MORE ACCURATE BACKFILL VOLUME.

VEGETATED WOOD MATRIX TYPE 1 QUANTITIES

ITEM	QUANTITY
VEGETATED WOOD MATRIX TYPE 1	1,647 LF
CATEGORY 3 WOOD	3,294 EA
CATEGORY 4 WOOD	3,294 EA
WILLOW CUTTINGS	8,235 EA
RIFFLE ROCK FILL	824 CY

VEGETATED WOOD MATRIX TYPE 2 QUANTITIES

ITEM	QUANTITY
VEGETATED WOOD MATRIX TYPE 2	1,217 LF
CATEGORY 2 WOOD	2,434 EA
CATEGORY 3 WOOD	3,651 EA
CATEGORY 4 WOOD	4,868 EA
WILLOW CUTTINGS	6,085 EA
RIFFLE ROCK FILL	913 CY

FLOODPLAIN ROUGHNESS

ITEM	QUANTITY
ACRES OF FLOODPLAIN ROUGHNESS	1.92 AC
CATEGORY 3 WOOD	96 EA
CATEGORY 4 WOOD	288 EA

ENGINEERED RIFFLE QUANTITIES

ITEM	QUANTITY
ENGINEERED RIFFLE	1,409 LF
BOULDERS	1,127 EA
RIFFLE ROCK FILL	1,832 CY
CATEGORY 2 WOOD	71 EA

WILLOW TRENCH QUANTITIES

ITEM	QUANTITY
WILLOW TRENCH	1,120 LF
CATEGORY 4 WOOD	1,120 EA
WILLOW CUTTINGS	5,600 EA

M:\Projects\2023\RDG-23-229 Flint Creek Phase 3\CAD\Flint Creek Phase III_Planset.dwg Mar 21, 2025



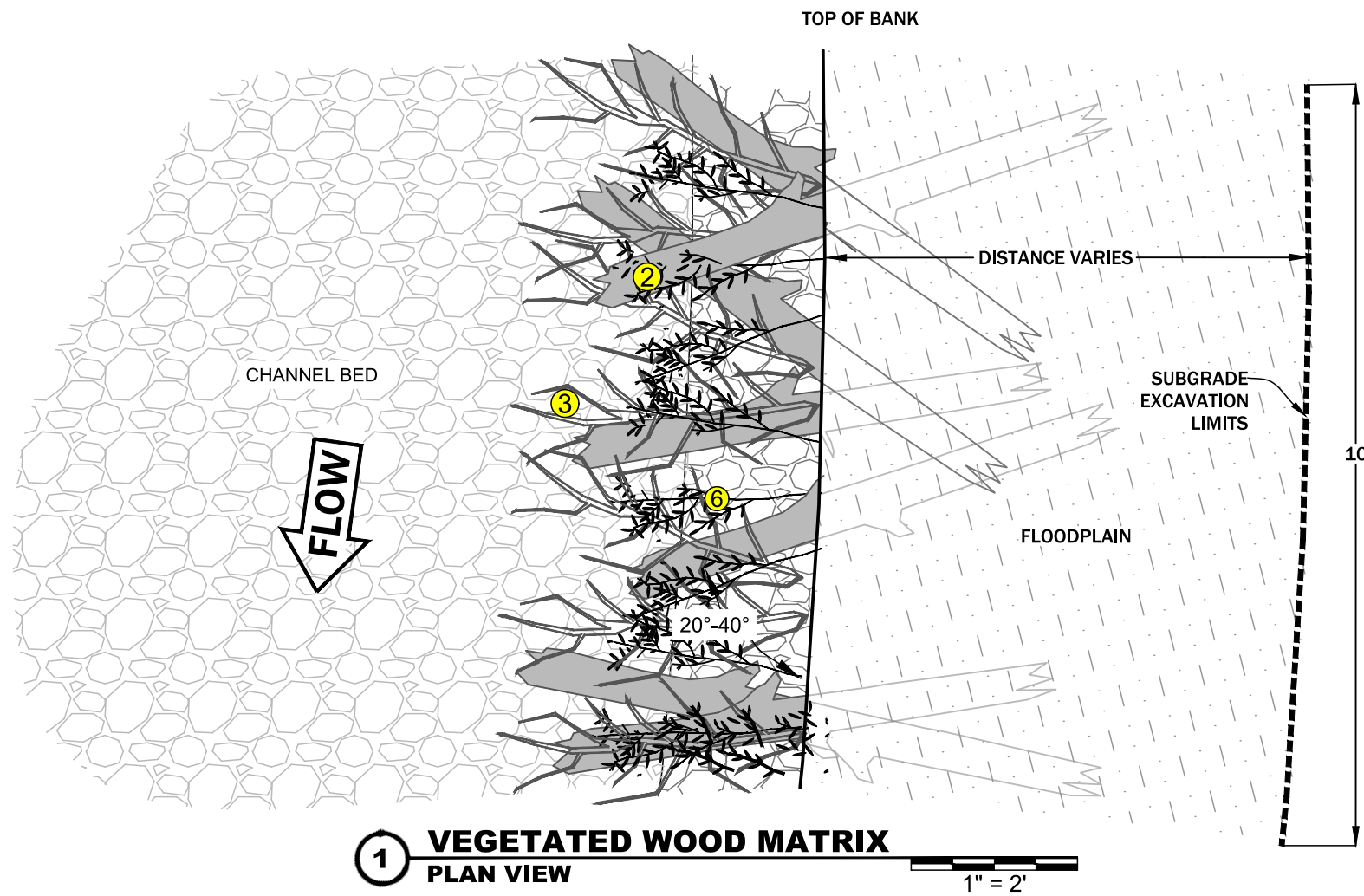
 NOW PART OF


 236 Wisconsin Avenue
 Whitefish, MT 59937
 406.662.4927

PHASE 3D MATERIALS AND QUANTITIES
 FLINT CREEK PHASE 3 RESTORATION PROJECT
 HALL, MONTANA

NO.	DATE	BY	DESCRIPTION	CHK	MD	
					MD	MD
1	3/21/25	LJ	Final Design			
PROJECT NUMBER RDG-23-229						
DRAWING NUMBER 8.1						
Drawing 40 of 68						

M:\Projects\2023\RDG-23-229 Flint Creek Phase 3\CAD\Flint Creek Phase III_Planset_Cover and Details.dwg Mar 21, 2025



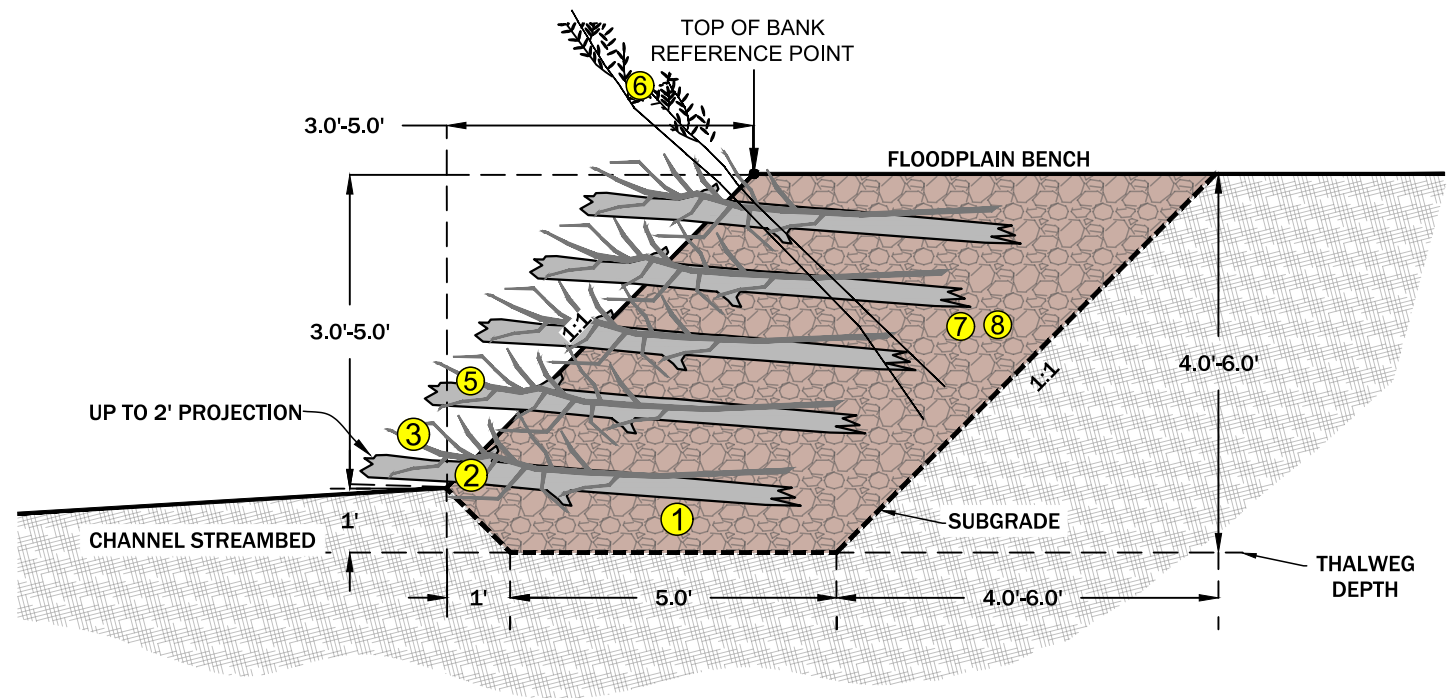
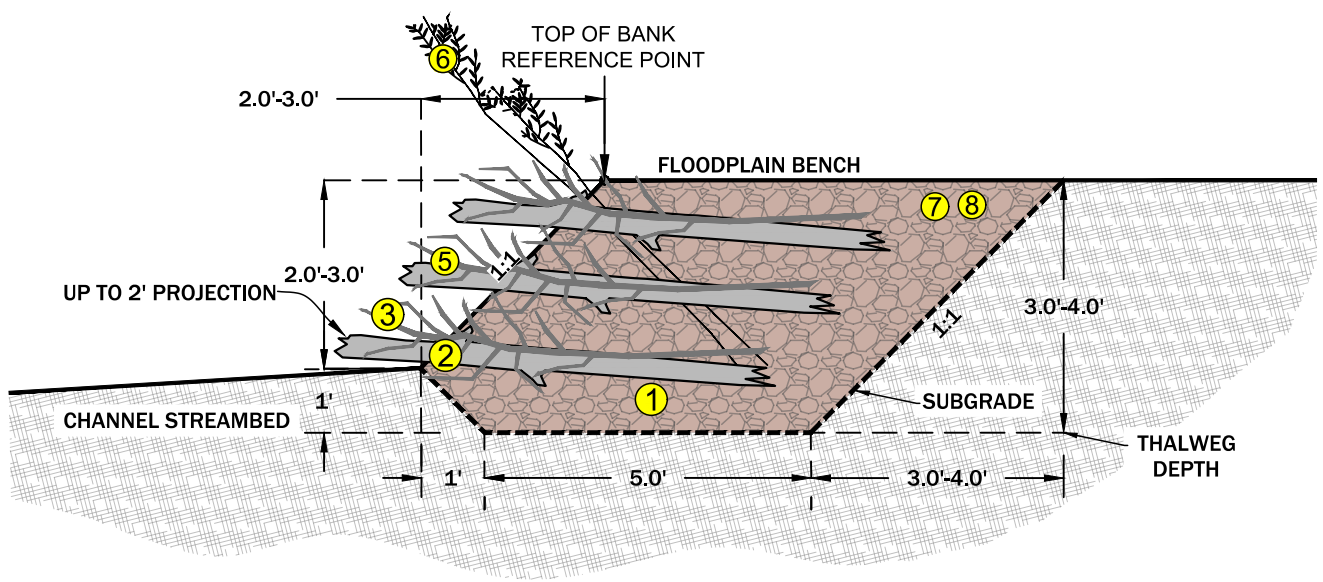
MATERIAL SCHEDULE (PER LINEAR FOOT)				
ITEM	TYPE 1 QTY.	TYPE 2 QTY.	DIA. (IN)	LENGTH (FT)
1	1	1.5		
7 8	.5	.75		
7 8	.5	.75	SEE GRAD.	
5	2	3	3-6	8-10
2	0	2	6-12	8-10
3	2	3	1-3	8-10
6	5	5	0.5	6-8

RIFFLE ROCK FILL GRADATION	
SIZE (IN)	PERCENT PASSING
8	100
6	80-90
4	60-70
3	40-50
2	20-30
FINES	0-10

NOTE: MIX SALVAGED AND IMPORTED TO ACHIEVE SPECIFIED GRADATION

CONSTRUCTION NOTES

- EXCAVATE STREAMBANK TO SUBGRADE ELEVATIONS AND PLACE 50/50 NATIVE MATERIAL AND RIFFLE ROCK FILL MIX TO DEPTHS SHOWN (SEE SPECIFIED GRADATIONS).
- PLACE LOGS (CATEGORY 2 AND 3 WOOD) IN THE STREAMBANK AT SKEWED ANGLE TO THE STREAMBANK. LOGS MAY OVERLAP. NO CUT ENDS SHALL BE EXPOSED.
- PLACE BRUSH (CATEGORY 4 WOOD) WITHIN THE MATRIX OF LOGS. BRUSH SHALL BE PLACED BELOW TOP OF BANK LINE.
- PLACE 0.5 FT LAYER OF 50/50 NATIVE MATERIAL AND RIFFLE ROCK FILL MIX ON LOG/BRUSH MATRIX AND COMPACT.
- REPEAT STEPS 2 THROUGH 4 UNTIL THE DESIRED TOP OF BANK ELEVATION IS ACHIEVED.
- PLACE CUTTINGS INTO THE LOG/BRUSH MATRIX WITH THE STEMS IN CONTACT WITH THE BASEFLOW WATER TABLE AND THE LEAVES AT OR ABOVE THE TOP OF BANK ELEVATION.
- BACKFILL STREAMBANK WITH A 50/50 MIX OF NATIVE MATERIAL AND RIFFLE ROCK FILL.
- WASH FINES AND WATER FROM ONSITE INTO THE STREAMBANK FILL TO SEAL THE VOIDS IN THE BACKFILL.



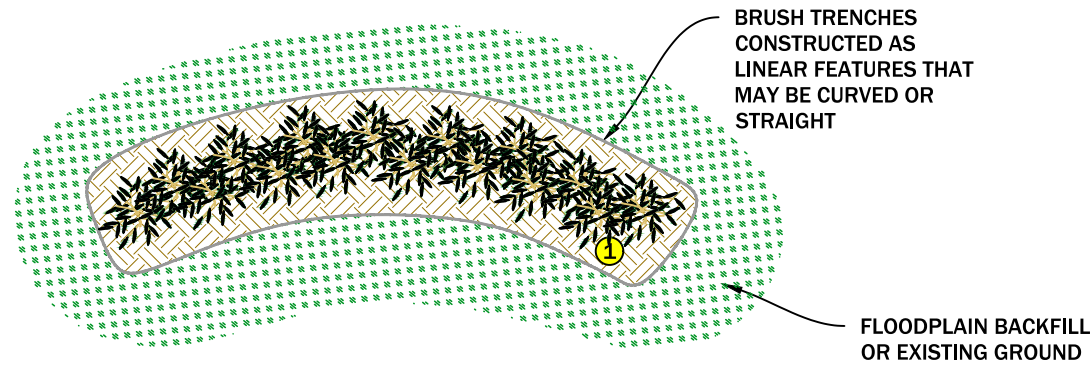
VEGETATED WOOD MATRIX DETAIL
 FLINT CREEK PHASE 3 RESTORATION PROJECT
 HALL, MONTANA

NO.	DATE	BY	DESCRIPTION	CHK
1	3/21/25	LJ	Final Design	MD

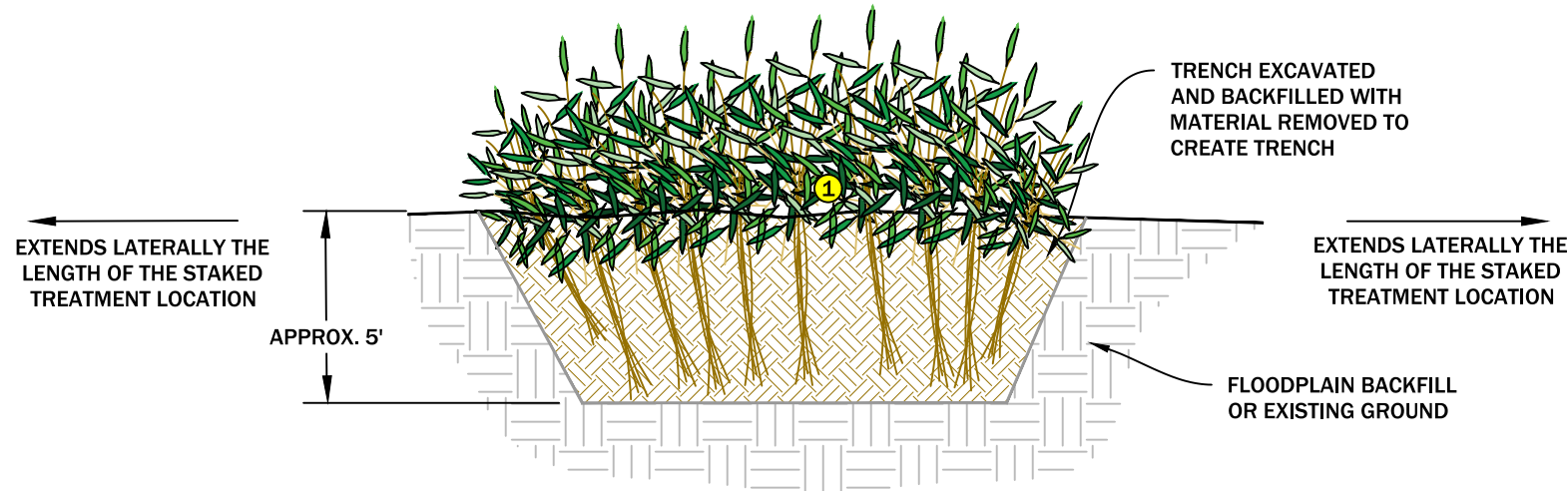
PROJECT NUMBER
RDG-23-229

DRAWING NUMBER

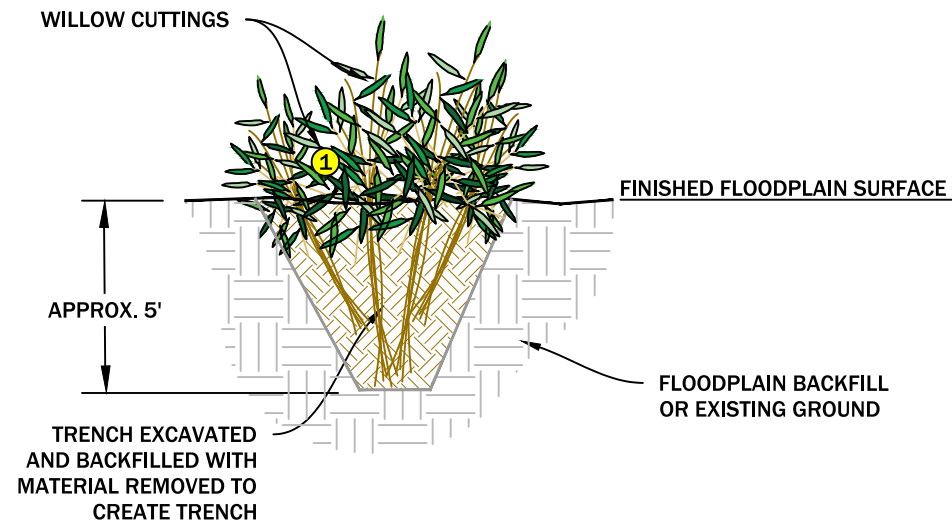
9.0



1 **WILLOW TRENCH PLAN VIEW** NTS



2 **WILLOW TRENCH PROFILE VIEW** NTS



3 **WILLOW TRENCH SECTION VIEW** NTS

GENERAL NOTES

1. CONSTRUCTION OF WILLOW TRENCHES WILL OCCUR FOLLOWING APPROVAL OF FINISHED GRADE SURFACES BY THE CONSTRUCTION MANAGER, AND CONCURRENT WITH INSTALLATION OF THE FLOODPLAIN TREATMENTS.
2. ANY CHANGES TO THE CONSTRUCTION SEQUENCE MUST BE APPROVED BY THE CONSTRUCTION MANAGER.
3. CONTRACTOR SHALL MARK THE UPSTREAM AND DOWNSTREAM EXTENTS OF THE LOCATIONS OF THE VEGETATED BRUSH TRENCHES.

NOTES ON WILLOW TRENCH INSTALLATION

1. WILLOW TRENCHES WILL BE CONSTRUCTED WITHIN THE FLOODPLAIN AT THE DIRECTION OF THE CONSTRUCTION MANAGER.
2. CONSTRUCTION OF WILLOW TRENCHES WILL OCCUR AFTER OCTOBER 1ST AND BEFORE THE END OF THE CONSTRUCTION SEASON.
3. CONTRACTOR SHALL MARK THE UPSTREAM AND DOWNSTREAM EXTENTS OF THE LOCATIONS OF THE CONSTRUCTED CHANNEL STREAMBED STRUCTURES.
4. CONTRACTOR SHALL MARK AND ENGINEER SHALL APPROVE THE GENERAL CONSTRUCTION LOCATION FOR EACH VEGETATED BRUSH TRENCH PRIOR TO CONSTRUCTION.
5. A TRENCH WILL BE CONSTRUCTED APPROXIMATELY 5' DEEP AND EXTEND THE LENGTH OF THE STAKED TREATMENT LOCATION. LIVE WILLOW CUTTINGS WILL BE PLACED IN THE TRENCH SUCH THAT THEY ARE INTERMIXED AND ORIENTED AT A NEAR VERTICAL ANGLE.
6. THE TRENCH WILL THEN BE BACKFILLED WITH THE SAME MATERIAL REMOVED TO CREATE THE TRENCH AND SHOULD MATCH THE ELEVATION OF THE SURROUNDING FLOODPLAIN GRADE.

WILLOW TRENCH MATERIAL SCHEDULE (PER LINEAR FOOT)			
	ITEM	DIA. (IN)	QUANTITY
⑤	CATEGORY 4 WOOD	1 - 3	1
⑤	WILLOW CUTTINGS	0.5	5



EXAMPLE OF A WILLOW TRENCH INSTALLATION

NO.	DATE	BY	DESCRIPTION	CHK
1	3/21/25	LJ	Final Design	MD

PROJECT NUMBER
RDG-23-229

DRAWING NUMBER

9.1

M:\Projects\2023\RDG-23-229 Flint Creek Phase 3\CAD\Flint Creek Phase III_Planset.dwg Mar 21, 2025

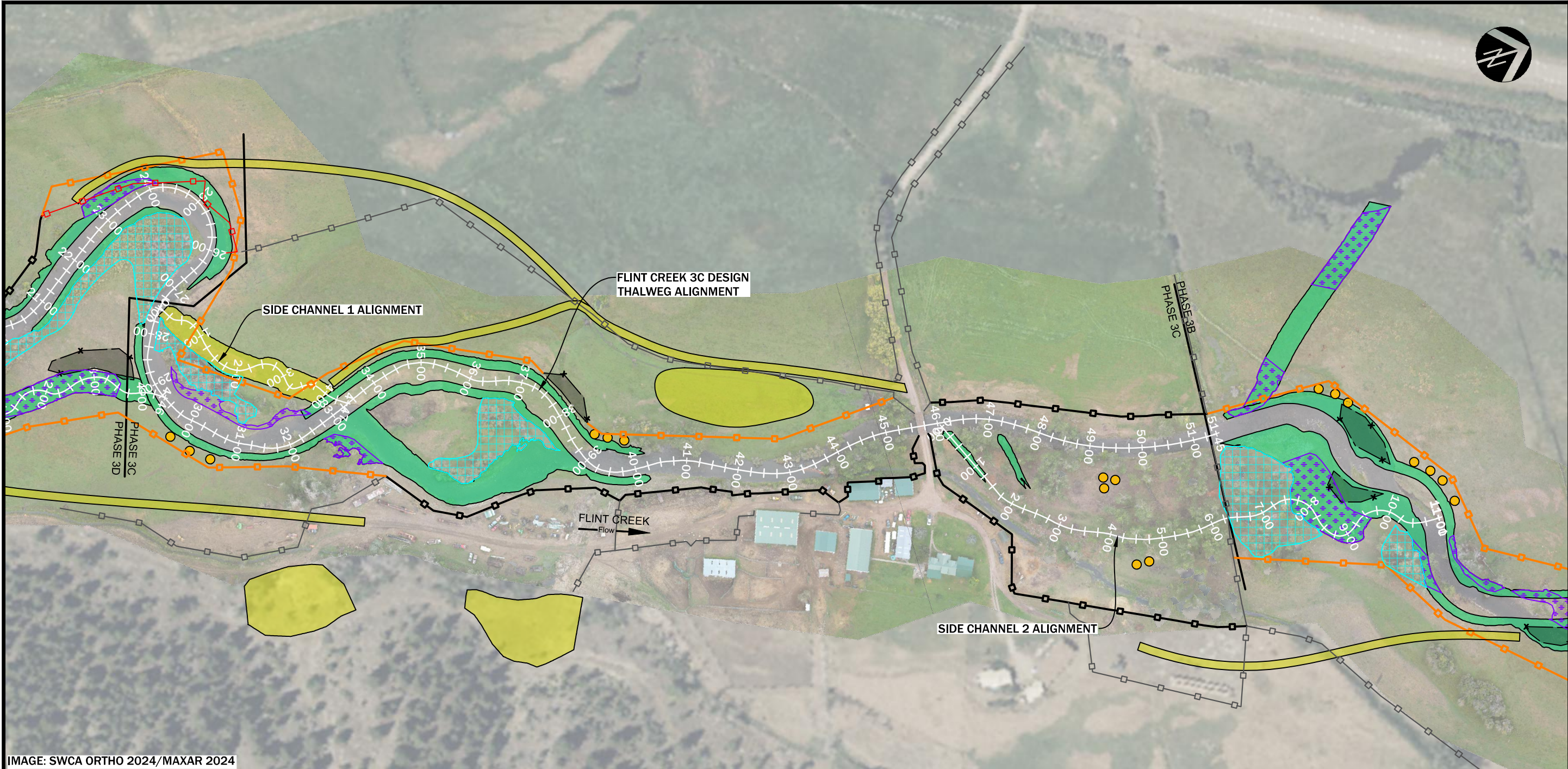


IMAGE: SWCA ORTHO 2024/MAXAR 2024

1 PHASE 3C REVEGETATION PLAN
PLAN VIEW
 1" = 200'

DRAWING LEGEND	
SYMBOL	
	VEGETATION SALVAGE AND TRANSPLANT
	PRESERVATION AREA
	VEGETATION PLANTING UNIT WITH EXCLOSURE FENCE
	FLOODPLAIN SEEDING
	UPLAND SEEDING
	5-GALLON BLACK/NARROWLEAF COTTONWOOD WITH INDIVIDUAL WIRE CAGE
	REMOVE EXISTING FENCE
	REPAIR EXISTING FENCE
	CONSTRUCT WILDLIFE FRIENDLY CATTLE FENCE
	EXISTING FENCE

NO.	DATE	BY	DESCRIPTION	CHK
1	3/21/25	LJ	Final Design	MD

PROJECT NUMBER
RDG-23-229

DRAWING NUMBER
10.4

Drawing 65 of 68

PHASE 3C REVEGETATION PLAN
 FLINT CREEK PHASE 3 RESTORATION PROJECT
 HALL, MONTANA

RDG
 RIVER DESIGN GROUP
 ENVIRONMENTAL CONSULTANTS
 236 Wisconsin Avenue
 Whitefish, MT 59937
 406.862.4927

SWCA
 NOW PART OF
 ENVIRONMENTAL CONSULTANTS
 311 SW Jefferson Avenue
 Corvallis, OR 97333
 541.738.2920



PLANTING SCHEDULE

LOCATION	SPECIES		CONTAINER SIZE	MINIMUM SPACING (FT)	NUMBER
FLOODPLAIN PLANTING UNITS	BLACK COTTONWOOD	<i>POPULUS TRICHOCARPA</i>	TALL 1 GALLON	20	2
	NARROWLEAF COTTONWOOD	<i>POPULUS ANGUSTIFOLIA</i>	TALL 1 GALLON	20	2
	WATER BIRCH	<i>BETULA OCCIDENTALIS</i>	TALL 1 GALLON	10	5
	BLACK HAWTHORN	<i>CRATAEGUS DOUGLASII</i>	TALL 1 GALLON	10	5
	THINLEAF ALDER	<i>ALNUS INCANA</i>	TALL 1 GALLON	6	10
	RED-OSIER DOGWOOD	<i>CORNUS SERICEA</i>	TALL 1 GALLON	6	10
FLOODPLAIN INDIVIDUAL CAGES	BLACK COTTONWOOD	<i>POPULUS TRICHOCARPA</i>	5 GALLON	20	8
	NARROWLEAF COTTONWOOD	<i>POPULUS ANGUSTIFOLIA</i>	5 GALLON	20	3
TOTAL					45

SEEDING SCHEDULE

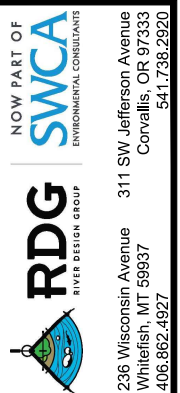
LOCATION	SEED SPECIES		PLS/ACRE	TOTAL PLS LBS
FLOODPLAIN 1.41 ACRES	SLENDER WHEATGRASS	<i>ELYMUS TYACHYCAULUS</i>	9.66	13.62
	BLUEJOINT REEDGRASS	<i>CALAMAGROSTIS CANADENSIS</i>	3.77	5.32
	FOWL MANNAGRASS	<i>GLYCERIA STRIATA</i>	9.66	13.62
	CREEPING SPIKERUSH	<i>ELEOCHARIS PALUSTRIS</i>	0.60	0.85
	SEASIDE ARROWGRASS	<i>TRIGLOCHIN MARITIMUM</i>	0.94	1.33
	SEDGE	<i>CAREX SPP.</i>	0.15	0.21
TOTAL				34.96
LOCATION	SEED SPECIES		PLS/ACRE	TOTAL PLS LBS
UPLAND 2.48 ACRES	WESTERN WHEATGRASS	<i>PASCOPYRUM SMITHII</i>	11.64	28.86
	MOUNTAIN BROME	<i>BROMUS MARGINATUS</i>	18.18	45.09
	IDAHO FESCUE	<i>FESTUCA IDAHOENSIS</i>	2.91	7.21
TOTAL				81.16

PLANTING AND SEEDING QUANTITIES

MATERIAL QUANTITIES			
ITEM	QUANTITY	UNITS	DIMENSIONS
1-GAL CONTAINERIZED PLANTS	34	EA	4" x 4" x 14"
5-GAL CONTAINERIZED PLANTS	11	EA	
SEED - FLOODPLAIN MIX	34.96	PLS LBS	
SEED - UPLAND MIX	81.16	PLS LBS	
WILDLIFE EXCLOSURE FENCING			
POLYPROPYLENE DEER FENCE	290	LF	7.5' TALL
STEEL T-POSTS	25	EA	10' TALL
CABLE TIES - SELF LOCKING	101	EA	1.75"
CABLE TIES - RELEASABLE	4	EA	12"
WILDLIFE BROWSE PROTECTION FOR 11 5-GALLON COTTONWOOD CAGES			
WELDED WIRE DEER FENCE	1.1	EA	5' X 100' ROLL
T-POSTS	22	EA	5.5'
TREE TIE	11	EA	

FENCING QUANTITIES

WILDLIFE FRIENDLY CATTLE FENCING			
ITEM	QUANTITY	UNIT	DIMENSIONS
SMOOTH WIRE	4156	LF	
BARBED WIRE	4156	LF	
WOODEN FENCE POSTS	126	EA	7' TALL
NEW FENCE	2078	LF	
FENCE REMOVAL	0	LF	
FENCE REPAIRS	2580	LF	



PHASE 3C REVEGETATION MATERIAL SCHEDULE
FLINT CREEK PHASE 3 RESTORATION PROJECT
HALL, MONTANA

NO.	DATE	BY	DESCRIPTION	CHK
1	3/21/25	LJ	Final Design	

PROJECT NUMBER
RDG-23-229

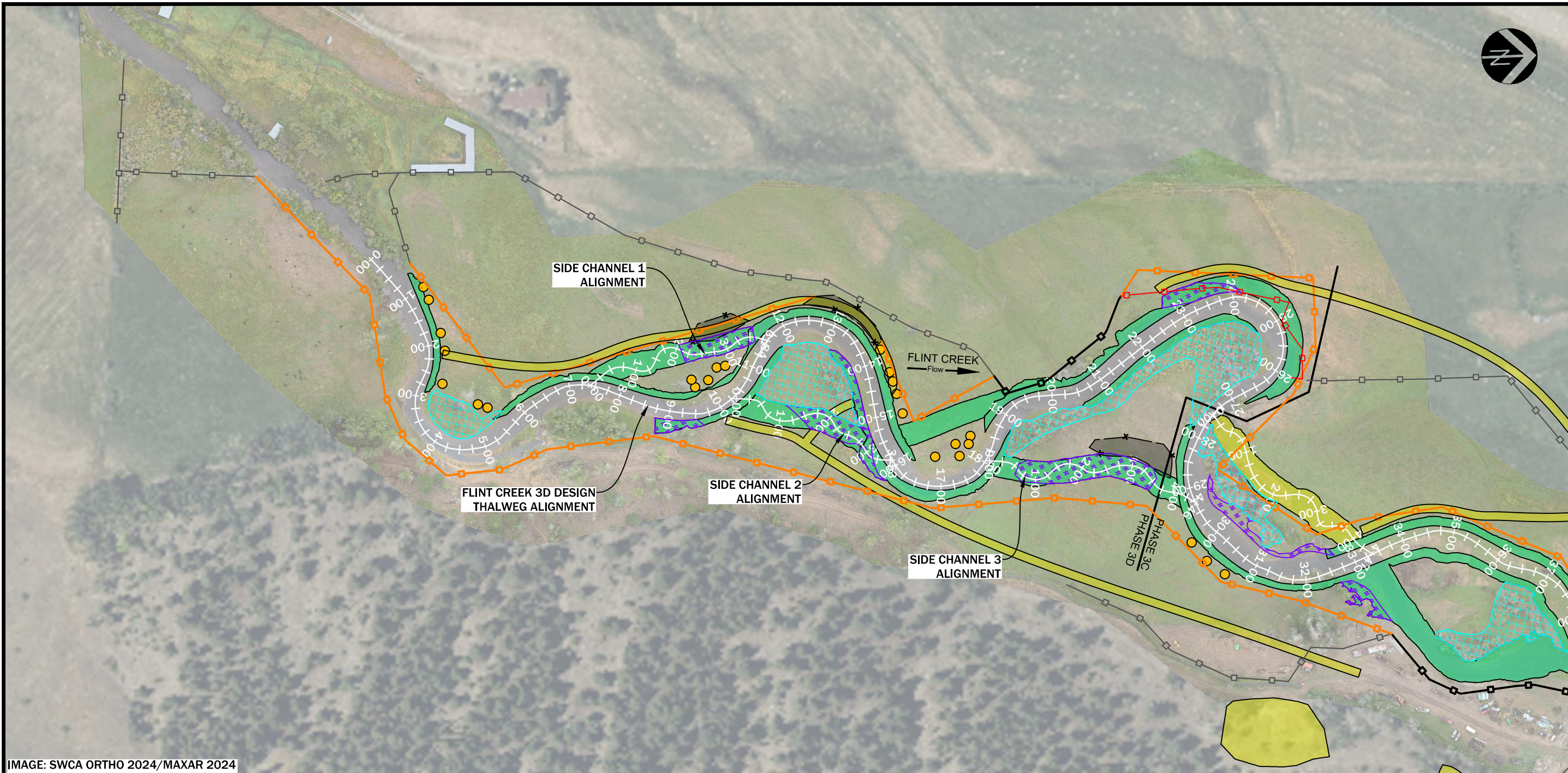
DRAWING NUMBER

10.5

Drawing 66 of 68

M:\Projects\2023\RDG-23-229 Flint Creek Phase 3\CAD\Flint Creek Phase III_Planset.dwg Mar 21, 2025

IMAGE: SWCA ORTHO 2024/MAXAR 2024



1 PHASE 3D REVEGETATION PLAN
PLAN VIEW
 1" = 200'

DRAWING LEGEND	
SYMBOL	
	VEGETATION SALVAGE AND TRANSPLANT
	PRESERVATION AREA
	VEGETATION PLANTING UNIT WITH WILDLIFE EXCLOSURE FENCE
	FLOODPLAIN SEEDING
	UPLAND SEEDING
	5-GALLON BLACK/NARROWLEAF COTTONWOOD WITH INDIVIDUAL WIRE CAGE
	REMOVE EXISTING FENCE
	REPAIR EXISTING FENCE
	CONSTRUCT WILDLIFE FRIENDLY CATTLE FENCE
	EXISTING FENCE

NO.	DATE	BY	DESCRIPTION	CHK
1	3/21/25	LJ	Final Design	MD

PROJECT NUMBER	RDG-23-229
DRAWING NUMBER	10.6
Drawing 67 of 68	

PHASE 3D REVEGETATION PLAN
 FLINT CREEK PHASE 3 RESTORATION PROJECT
 HALL, MONTANA

RDG
 RIVER DESIGN GROUP
 ENVIRONMENTAL CONSULTANTS
 236 Wisconsin Avenue
 Whitefish, MT 59937
 406.862.4927

SWCA
 NOW PART OF
 ENVIRONMENTAL CONSULTANTS
 311 SW Jefferson Avenue
 Corvallis, OR 97333
 541.738.2920



PLANTING SCHEDULE

LOCATION	SPECIES		CONTAINER SIZE	MINIMUM SPACING (FT)	NUMBER
FLOODPLAIN PLANTING UNITS	BLACK COTTONWOOD	<i>POPULUS TRICHOCARPA</i>	TALL 1 GALLON	20	9
	NARROWLEAF COTTONWOOD	<i>POPULUS ANGUSTIFOLIA</i>	TALL 1 GALLON	20	9
	WATER BIRCH	<i>BETULA OCCIDENTALIS</i>	TALL 1 GALLON	10	25
	BLACK HAWTHORN	<i>CRATAEGUS DOUGLASII</i>	TALL 1 GALLON	10	25
	THINLEAF ALDER	<i>ALNUS INCANA</i>	TALL 1 GALLON	6	53
	RED-OSIER DOGWOOD	<i>CORNUS SERICEA</i>	TALL 1 GALLON	6	53
FLOODPLAIN INDIVIDUAL CAGES	BLACK COTTONWOOD	<i>POPULUS TRICHOCARPA</i>	5 GALLON	20	15
	NARROWLEAF COTTONWOOD	<i>POPULUS ANGUSTIFOLIA</i>	5 GALLON	20	7
TOTAL					197

SEEDING SCHEDULE

LOCATION	SEED SPECIES		PLS/ACRE	TOTAL PLS LBS
FLOODPLAIN 2.40 ACRES	SLENDER WHEATGRASS	<i>ELYMUS TYACHYCAULUS</i>	9.66	23.18
	BLUEJOINT REEDGRASS	<i>CALAMAGROSTIS CANADENSIS</i>	3.77	9.06
	FOWL MANNAGRASS	<i>GLYCERIA STRIATA</i>	9.66	23.18
	CREEPING SPIKERUSH	<i>ELEOCHARIS PALUSTRIS</i>	0.60	1.45
	SEASIDE ARROWGRASS	<i>TRIGLOCHIN MARITIMUM</i>	0.94	2.26
	SEDGE	<i>CAREX SPP.</i>	0.15	0.36
TOTAL				59.50
LOCATION	SEED SPECIES		PLS/ACRE	TOTAL PLS LBS
UPLAND 2.61 ACRES	WESTERN WHEATGRASS	<i>PASCOPYRUM SMITHII</i>	11.64	30.37
	MOUNTAIN BROME	<i>BROMUS MARGINATUS</i>	18.18	47.45
	IDAHO FESCUE	<i>FESTUCA IDAHOENSIS</i>	2.91	7.59
TOTAL				85.42

PLANTING AND SEEDING QUANTITIES

MATERIAL QUANTITIES			
ITEM	QUANTITY	UNITS	DIMENSIONS
1-GAL CONTAINERIZED PLANTS	175	EA	4" x 4" x 14"
5-GAL CONTAINERIZED PLANTS	22	EA	
SEED - FLOODPLAIN MIX	59.50	PLS LBS	
SEED - UPLAND MIX	85.42	PLS LBS	
WILDLIFE EXCLOSURE FENCING			
POLYPROPYLENE DEER FENCE	1045	LF	7.5' TALL
STEEL T-POSTS	88	EA	10' TALL
CABLE TIES - SELF LOCKING	351	EA	1.75"
CABLE TIES - RELEASABLE	12	EA	12"
WILDLIFE BROWSE PROTECTION FOR 22 5-GALLON COTTONWOOD CAGES			
WELDED WIRE DEER FENCE	2.2	EA	5' X 100' ROLL
T-POSTS	44	EA	5.5'
TREE TIE	22	EA	

FENCING QUANTITIES

WILDLIFE FRIENDLY CATTLE FENCING			
ITEM	QUANTITY	UNIT	DIMENSIONS
SMOOTH WIRE	7958	LF	
BARBED WIRE	7958	LF	
WOODEN FENCE POSTS	241	EA	7' TALL
NEW FENCE	3979	LF	
FENCE REMOVAL	508	LF	
FENCE REPAIRS	340	LF	

NO.	DATE	BY	DESCRIPTION	CHK
1	3/21/25	LJ	Final Design	

PROJECT NUMBER
RDG-23-229

DRAWING NUMBER

10.7

OTHER ATTACHMENTS

REQUIRED ATTACHMENTS

1. WRP Author Support Letter
2. Landowner Support Letter
3. Budget Table Additional
Detail - Engineers Cost
Estimate
4. Project Map

OPTIONAL ATTACHMENTS

1. SUPPORT LETTERS
2. PROJECT PHOTOS
3. PROJECT DESIGN

Conn Ranch – Existing Conditions Photos

