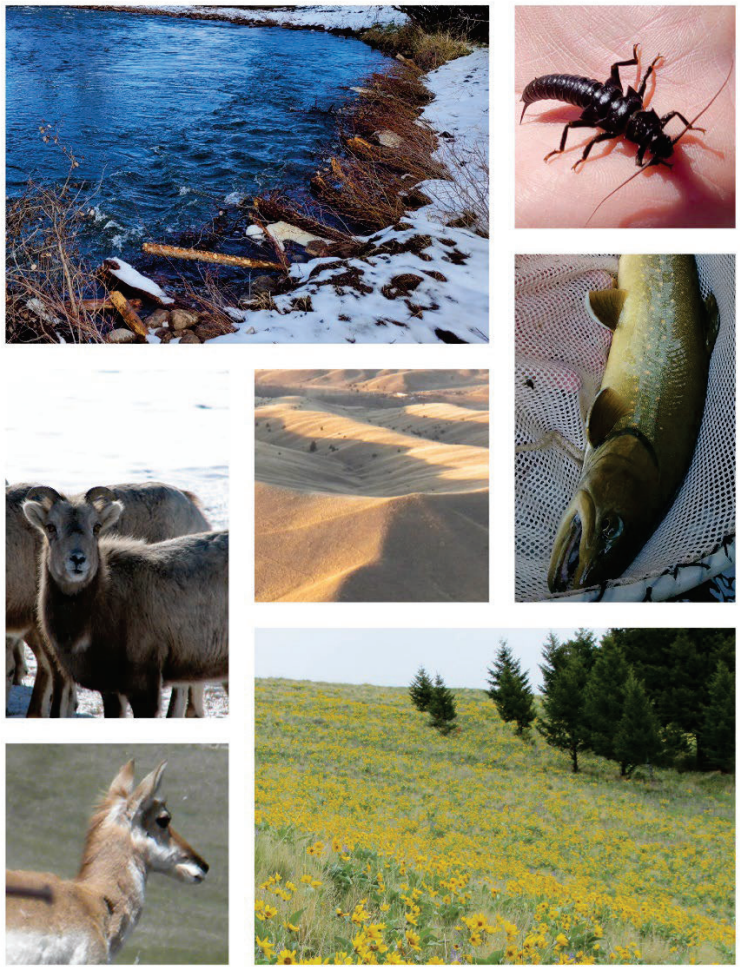
Upper Clark Fork River Basin Aquatic and Terrestrial Resources Restoration Plans

Annual Update 2025



NATURAL RESOURCE DAMAGE PROGRAM
STATE OF MONTANA

State of Montana

Natural Resource Damage Program

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Natural Resource Damage Program
State of Montana

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Table 1. Summary of Aquatic Flow Projects

Project	Project Status[1]	Project Type	Priority Area	Max. Instream Flow (cfs)[2]	Project Performance Monitoring[3]	Match Funding[4]
Helen Johnson - Dry Cottonwood Creek Rach Water rights	●	In-stream flow change	Priority 1	9.28	**X**	n/a
Helen Johnson - Deer Lodge River Ranch Water Rights	●	In-stream flow change	Priority 1	6	**X**	n/a
Helen Johnson - Lampert	●	Irrigation Improvement	Priority 1	WS	**X**	$75,000
Dry Cottonwood Creek Water Rights	●	In-stream flow change	Priority 1	4.28	**X**	n/a
Racetrack Pond Water Rights	●	In-stream flow change	Priority 1	8.22	n/a	n/a
West Side Ditch and Whalen Ditch	○	Irrigation Improvement	Priority 1	ND	n/a	yes
Harvey Creek	●	Irrigation Improvement/In-stream flow change	Priority 2	14	**X**	yes
Clark Fork River Ranch/Valiton Ditch	●	Split Season Lease/In-stream flow change	Priority 1	40	**X**	n/a
Clark Fork above Deer Lodge	○	ND	Priority 1	ND	n/a	yes
Silver Lake Water System	⊖	Water Lease	Priority 1	ND	n/a	$300,000
Racetrack Lake	●	Water right purchase/In-stream flow change	Priority 1	8.33	n/a	yes
Rock Creek Cattle	●	Water Lease	Priority 2	27.22	**X**	$154,138
Hearst Lake	○	ND	Priority 1	ND	n/a	n/a
German Gulch/Silver Bow Creek	○	Change of diversion	Priority 2	7.5	n/a	n/a
Warm Springs/Mill Creek Springs	○	ND	Priority 2	ND	n/a	n/a
Broken Circle Spring Creek Project Development	○	Change of diversion/Stream restoration	Priority 1	ND	n/a	n/a
Split Season Lease Study	●	Split Season lease	ND	ND	ND	n/a
Upper Clark Fork River Streamflow Group	⊖	Working Group	All	n/a	n/a	$300,000

Notes:

- Project update in 2025
- Project completed in 2025

[1] Status of the project at the end of 2025
- ○ - Conceptual
- ⊖ - In Progress
- ● - Complete

[2] Maximum instream flow possible from the project
- n/a - not applicable
- WS - water saving but no in-stream flow change
- ND - not determined

[3] Monitoring conducted to determine if project is still functioning and achieving restoration goals
- **X** - completed in 2025
- n/a - not applicable

[4] The 2024 Restoration Plan requires that match funding be sought for all projects
- n/a - match funding not sought, either because project is already complete or explanation provided in Project Status Report
- yes - match funding sought but not secured
- **$** -match funding secured

Table 2. Summary of Aquatic Resource Restoration Actions

Priority Watershed (Restoration Plan Section)	Project	Restoration Actions					Project Status[1]	Project Performance Monitoring[2]	Fish Monitoring[3]			O&M[4]	Match Funding[5]
		Flow	Fish Passage	Fish Entrainment	Riparian Enhancement	Instream Habitat			Basin	Watershed	Project		
Mainstem Clark Fork River (3.2.2.1)	Clark Fork River Mainstem Diversions	✓	✓	✓			⊖	n/a	**X**	**X**			**$1.53M**
	Sager Lane Diversion Project	✓	✓	✓			●	**X**				**X**	**$150,000**
	Valiton Diversion Project	✓	✓	✓			⊖	n/a					**Yes**
	Kohrs-Manning Diversion Project	✓	✓	✓			⊖	n/a					**Yes**
	Whalen Diversion Project	✓	✓	✓			⊖	n/a					**Yes**
	Westside Diversion Project	✓	✓	✓			⊖	n/a					**Yes**
	Flint Creek to Rock Creek Fish Population Evaluation and Follow-up Actions					✓	⊖	n/a				n/a	n/a
	Silver Bow Creek Riparian Protection Enhancement				✓		⊖	n/a			n/a	n/a	n/a
Blacktail Creek (3.2.2.3)	Butte Golf Course Irrigation Pond		✓	✓			⊖	n/a	**X**	*	n/a	n/a	$32,000
	Butte-Silver Bow Sanitary Sewer Line		✓				⊖	n/a			n/a	n/a	
	Redfern Diversion		✓	✓			●	**X**				**X**	n/a
	Roosevelt Drive Culverts		✓				⊖	n/a				n/a	n/a
Browns Gulch (3.2.2.4)	Balentine Ranch		✓	✓			●	**X**	**X**	*		**X**	**$160,000**
	Brothers Ranch		✓	✓	✓	✓	●	**X**				**X**	n/a
	Liva Ranch		✓		✓		●						n/a
	Myers Ranch				✓	✓	●						n/a
	Heavens Valley Ranch				✓	✓	●						n/a
	Woods Ranch				✓		●						n/a
Cottonwood/Baggs Creek (3.2.2.5)	McQueary Ranch		✓	✓			●	**X**	**X**	**X**	**X**	**X**	n/a
	Upper Cottonwood Diversions	✓	✓	✓			○	n/a			**X**	n/a	n/a
	Upper Cottonwood Diversions - Aspen Grove Irrigation Improvement and Fish Screen	✓	✓	✓			●	**X**			**X**	**X**	n/a
	Lower Applegate Diversion		✓	✓			●	**X**			**X**	**X**	n/a
	Allendale Diversion		✓	✓			●	**X**			**X**	**X**	n/a
	Flint Creek Private Diversions		✓	✓			●	**X**			**X**		n/a
	Spencer Ranch				✓		●						n/a

Table 2. Summary of Aquatic Resource Restoration Actions

Priority Watershed (Restoration Plan Section)	Project	Restoration Actions					Project Status[1]	Project Performance Monitoring[2]	Fish Monitoring[3]			O&M[4]	Match Funding[5]
		Flow	Fish Passage	Fish Entrainment	Riparian Enhancement	Instream Habitat			Basin	Watershed	Project		
Flint Creek and Boulder Creek (3.2.2.7)	Corbett Downs (Phase 1)				✓	✓	●		**X**	**X**			n/a
	Rue Slaughter (Phase 2)				✓	✓	●	**X**				**X**	n/a
	Phase 3				✓	✓	●						**$245,000**
	Olson Property		✓		✓	✓	●				*		n/a
	Lundgren Project				✓	✓	●				*		n/a
	Buxbaum Diversion	✓	✓	✓			~~O~~						**$108,000**
German Gulch/Silver Bow Creek (3.2.2.8)	Tailings Removal and Fish Barrier		✓			✓	●	**X**	**X**	**X**			n/a
Harvey Creek (3.2.2.9)	Irrigation Improvements	✓	✓	✓			●	**X**			*		n/a
	Culvert replacement		✓				●	**X**			*		n/a
	Bank Stabilization				✓	✓	●	**X**			*		n/a
	Riparian Fencing				✓		●	**X**			*		n/a
Little Blackfoot River (3.2.2.10)	D.W. Beck Property				✓	✓	n/a	n/a				n/a	n/a
	Janke Property				✓		●	**X**		*		**X**	n/a
	Snowshoe Creek		✓	✓			●	**X**				**X**	n/a
	Lower Spotted Dog Creek	✓	✓	✓	✓	✓	~~O~~	n/a			*	n/a	Yes
Mill/Willow Creeks (3.2.2.12)	Mill Creek Irrigation Improvement (DIV #4)		✓	✓	✓	✓	●	**X**		*	*	**X**	n/a
	Mill Creek Irrigation Improvement (DIV #2&3)		✓	✓	✓	✓	O	n/a		*	*	n/a	n/a
Racetrack Creek (3.2.2.13)	Project Prioritization						O	n/a		*		n/a	n/a
	Lower Racetrack Creek	✓			✓	✓	~~O~~	n/a				n/a	seeking
Warm Springs Creek (3.2.2.14)	Silver Lake Infrastructure		✓				●	**X**		**X**		n/a	**$542,000**
	Anaconda Diversion		✓	✓			●	**X**				**X**	n/a
	Gardiner Diversion		✓	✓			~~O~~	n/a				n/a	n/a
	Upper Warm Springs Creek		✓				●	**X**				n/a	n/a

Table 2. Summary of Aquatic Resource Restoration Actions

Priority Watershed (Restoration Plan Section)	Project	Restoration Actions					Project Status[1]	Project Performance Monitoring[2]	Fish Monitoring[3]			O&M[4]	Match Funding[5]
		Flow	Fish Passage	Fish Entrainment	Riparian Enhancement	Instream Habitat			Basin	Watershed	Project		
Basin Creek (3.2.2.15)	Reservoir Infrastructure		✓				n/a	n/a		*	*	n/a	n/a
	Re-Routing Near Burt Mooney Airport					✓	n/a	n/a				n/a	n/a
Gold Creek (3.2.2.16)	Fish Screen and Irrigation Improvement		✓	✓			○	n/a		*	*	n/a	n/a
O'Neill Creek (3.2.2.17)	Culvert replacement		✓				●	**X**		*			n/a
	Fish Screen and Irrigation Improvement		✓	✓			○	n/a			*	n/a	n/a
Rock Creek (3.2.2.18)	Bohrnsen-Marletto Fish Screen		✓	✓			●	**X**		**X**		**X**	n/a
	Upper Rock Creek Ditch Consolidation	✓	✓	✓			⊖	n/a				n/a	**$275,000**
	Upper Rock Creek Diversions	✓	✓	✓			⊖	n/a				n/a	**$875,000**

Notes:

- Project update in 2025
- Project completed in 2025

[1] Status of the project at the end of 2025

○ - Conceptual

⊖ - Design/Construction/In Progress

● - Complete

n/a - not applicable/project no longer being pursued

[2] Monitoring conducted to determine if project is still functioning and achieving restoration goals

X - completed in 2025

n/a - project not yet complete, no monitoring conducted

[3] FWP Fisheries Monitoring

Basin - fish monitoring of the mainstem Clark Fork River and Silver Bow Creek

Watershed - fish monitoring conducted at sites spread throughout the watershed

Project - fish monitoring conducted to evaluate the specific project

X - FWP conducted monitoring in 2025

* - fisheries monitoring was not conducted in 2025, but is part of the monitoring program

[4] Operations and maintenance actions completed by NRDP or project partners

X - completed in 2025

n/a - project not yet complete, no O&M conducted

[5] The 2024 Restoration Plan requires that match funding be sought for all projects

n/a - match funding not sought, either because project is already complete or explanation provided in Project Status Report

yes - match funding sought but not secured

$ - amount of match funding secured

Table 3. Summary of Terrestrial Resource Restoration Actions

Priority Landscape (Restoration Plan Section)	Project	Restoration Actions					Project Status[3]	Project Performance Monitoring[4]	O&M[5]	Match Funding[8]	Project Details		
		Land Conservation[1]	Riparian/Wetland Enhancement	Grassland[2] Enhancement	Forest Enhancement	Data Gathering					Hunter Days 2024	Acres under CE or Fee	Approximate Cost
Land Projects[6]													
Lower Flint Creek (4.2.4.2)	Buxbaum Conservation Easement	✓					●	X	X	n/a	50	1,193	$200,000
Garnet (4.2.4.3)	Graveley Conservation Easement	✓					●	X	X	n/a	1,428	8,276	$3,500,000
Deer Lodge North (4.2.4.5)	Clark Fork River Ranch	✓					●	X	X	n/a	404	2,650	$2,400,000
Deer Lodge South (4.2.4.6)	Dry Cottonwood Creek Ranch Conservation Easement	✓					●	X	X	n/a	2,249	3,396	$2,500,000
Anaconda (4.2.4.7)	RY addition (Garrity WMA)	✓					●	X	X	n/a		640	$1,280,000
	YT Timber addition (Garrity WMA)	✓					●	X	X	n/a		154	$270,000
	Stumptown addition (Garrity WMA)	✓					●	X	X	n/a		600	$1,550,000
Habitat Enhancement Projects[7]													
Philipsburg West (4.2.4.1)	DNRC North Fork Spring Creek		✓				●	X	X	n/a	n/a		
	Upper Willow Creek LLC - Restoration		✓				●	X	X	n/a	n/a		
	Habitat Enhancement Project Development		✓				○	n/a	n/a	n/a	n/a		
Garnet (4.2.4.3)	DNRC Brock Creek		✓	✓			●	X	X	n/a	n/a		
	Hollenback Ranch		✓	✓			⊖	X	X	$20,000	n/a		
	Dutton Ranch		✓	✓			⊖	X	X	$245,000	n/a		
Deer Lodge South (4.2.4.6)	Dry Cottonwood Creek Ranch		✓	✓			●	X	X	n/a	n/a		
	Clark Fork River Ranch		✓	✓		✓	⊖	X	X	n/a	n/a	2,650	$2,400,000
	Anderson Ranch		✓				○	n/a	n/a	n/a			
	Lampert Ranch		✓	✓			●	X	X	n/a	n/a		
Upper Clark Fork WMAs (4.2.5)	FWP WMA support		✓	✓	✓	✓	⊖	X	X	n/a	n/a		$2,000,000
Upper Clark Fork Riparian (4.2.6)	CREP Blacktail Creek Riparian Habitat Enhancement		✓				○	n/a	n/a	n/a	n/a		$1,000,000

Notes:

- Project update in 2025
- Project completed in 2025

[1] Conservation easement or public acquisition

[2] Grassland or shrub grassland

[3] Status of the project at the end of 2025

○ - Conceptual

⊖ - Design/Construction/In Progress

● - Complete

[4] Monitoring conducted to determine if project is still functioning and achieving restoration goals

X - completed in 2025

n/a - project not yet complete, no monitoring conducted

[5] Operations and maintenance actions completed by NRDP or project partners

X - completed in 2025

n/a - project not yet complete, no O&M conducted

TBP - to be performed; project completed in 2025

[6] Land projects refer to acquisition of land for conservation; habitat enhancement and data gathering goals are not applicable

[7] Habitat enhancement projects refer to projects aimed at enhancing wildlife habitat; conservation easement or public acquisition goals are not applicable

[8] The 2024 Restoration Plan requires that match funding be sought for all projects

n/a - match funding not sought, either because project is already complete or explanation provided in Project Status Report

yes - match funding sought but not secured

$ - amount of match funding secured

Table 4. Summary of Recreation Projects

Project	Project Status[1]	Project Performance Monitoring[2]	O&M[3]	Match Funding[4]
Drummond Kiwanis Riverside Park	●	**X**	**X**	n/a
Deer Lodge Trestle Park / Old Yellowstone Trail	●	**X**	**X**	n/a
Washoe/Hafner Dam Parks	●	**X**	**X**	n/a
Milltown State Park	●	**X**	**X**	n/a
Bonner Dam Removal	●	n/a	n/a	n/a
Clark Fork Fishing Access Sites				
Bearmouth FAS	●	**X**	**X**	n/a
Gold Creek FAS	●	**X**	**X**	n/a
Racetrack Pond FAS	●	**X**	**X**	n/a
Vet Clinic FAS	⊖	n/a	n/a	n/a
Kohrs Bend FAS	⊖	n/a	n/a	n/a
Greenway Service District - Silver Bow Creek Greenway	⊖	n/a	n/a	yes

Notes:

- Project update in 2025
- Project completed in 2025

[1] Status of the project at the end of 2025
⊖ - Design/Construction/In Progress
● - Complete

[2] Monitoring conducted to determine if project is still functioning and achieving restoration goals
X - completed in 2025
n/a - project not yet complete, no monitoring conducted

[3] Operations and maintenance actions completed by NRDP or project partners
X - completed in 2025
n/a - project not yet complete, no O&M conducted

[4] The 2024 Restoration Plan requires 25% match funding for rec projects, with the GSD needing to seek match for Project 1
n/a - match funding not sought, either because project is already complete or explanation provided in Project Status Report
yes - match funding sought but not secured

Upper Clark Fork River Basin Restoration Fund Project Status Report

OCTOBER 2025

Status of Aquatic Restoration, Terrestrial Restoration, and Recreation Projects

This document provides an update of all the restoration projects NRDP has developed, designed, implemented, and/or monitored as proposed in the *Upper Clark Fork River Basin (UCFRB) Aquatic and Terrestrial Resources Restoration Plans* (Restoration Plans) since 2012. Landowners, water users, local governments, project partners, contractors, state and federal agencies, and others coordinated, cooperated, and assisted in the completion of these projects. The attached summary tables list NRDP's projects for aquatic flow resource restoration (Table 1), aquatic resource restoration (Table 2), terrestrial resource restoration (Table 3) and recreation (Table 4).

In the sections below, bold, italicized text indicates 2025 activities. The highlighted projects listed on Tables 1 through 4 also indicate 2025 activities. Priority streams and priority areas are shown in Figures 2-1 (Aquatics) and 2-2 (Terrestrial) of the Restoration Plans and are attached.

Aquatics Restoration Plan (Section 3.0)

In 2012, NRDP, in consultation with the Advisory Council (AC), stakeholders, and the public, prepared the *UCFRB Aquatic Resources Restoration Plan* (Aquatic Restoration Plan) for public comment, consideration, and approval by the Governor. This restoration plan provides the State's analysis of restoration alternatives for aquatic resource restoration in the UCFRB and contains proposed restoration actions and budgets for the preferred alternative. Following public comment and approval by the Governor, the plan was amended in 2016, 2019, and 2024[1]. The Aquatic Restoration Plan specifies the following components to achieve aquatic resource restoration goals:

- Aquatic Flow Resources ($20 million allocated in 2012).
- Aquatic Non-Flow Resources ($20 million allocated in 2012).
- Restoration actions are implemented in priority areas and actions are prioritized in consultation with resource managers using relevant data.
- Close coordination with landowners and project partners to implement and maintain projects. Project partners include conservation districts, Watershed Restoration Coalition (WRC), Trout Unlimited (TU), Clark Fork Coalition (CFC), Montana Fish, Wildlife, and Parks (FWP), Montana Department of Environmental Quality (DEQ), and Montana Department of Natural Resources and Conservation (DNRC).

[1] The 2024 Plan revision required all project to seek matching funds and required recreation-based projects to provide matching funds equal to 25% of the total project costs. Matching funds section have been incorporated into the project updates and included on Tables 1 – 4.

AQUATIC RESOURCE RESTORATION GOALS

1. Restore the mainstem trout fishery by improving recruitment from tributaries.
2. Replace lost trout angling in the mainstem by improving trout populations in tributaries.
3. Maintain or improve native trout populations in the UCFRB to preserve rare and diverse gene pools.

Aquatic Flow Resources (Section 3.2.1)

The mainstem of the Clark Fork River (CFR) between Galen and Deer Lodge and tributaries that feed it face chronic dewatering issues and typically experience the lowest flows during periods of peak demand in late July and early August. Aquatic flow projects aim to provide clean, cold water to the main stem Clark Fork River and its tributaries to mitigate dewatering and help meet flow targets established by FWP, see Restoration Plan Table 3-1.

The following sections discuss NRDP's aquatic flow projects and monitoring of these projects.

Aquatic Flow Projects

The Restoration Plans identified the mainstem of the CFR between Galen and Deer Lodge as the highest priority for project development. To date, work on these projects has mainly involved water rights, flow assessment, and coordination tasks needed to determine the likely flow benefits and viability of the projects. NRDP has executed master contracts with CFC and TU to assist with management and development tasks. The following descriptions provide updates specific to the projects being evaluated, all of which have proceeded with the involvement of NRDP. Also, NRDP is continuing to monitor flows in the Upper CFR to obtain flow data and to fill gaps in the U.S. Geological Survey (USGS) monitoring stations.

Summaries of activities (2012-2025) within each of the targeted watersheds are described below and summarized in Table 1.

Helen Johnson Ditch

In 2013, the Dry Cottonwood Creek Ranch eliminated the use of one of their diversions/ditches known as the Helen Johnson ditch, installed a pump system closer to the irrigated acres, and converted a portion of its irrigated acreage from flood to pivot irrigation, which conserves up to 9 cubic feet per second (cfs) of CFR flow. As required by the DNRC Water Court, the water rights were split from other water rights holders that were not involved in the change process. This process took over a year to complete.

In 2016, DNRC determined the application to be correct and complete, but they raised some issues in their technical report that NRDP did not believe was correct. The primary issue was that DNRC determined a volume for the instream flow that was much less than what the application proposed. NRDP and CFC supplied additional information and waived the statutory review timelines in 2016 to further substantiate some of the water use measurement data for DNRC to consider in the technical report.

In 2021, DNRC issued a final decision and issued the final change authorization, changing the water rights uses from "irrigation" to "instream flow." DNRC approved 9.28 cfs for instream flow from July 15 to September 6 of each year, which was the flow rate requested by NRDP and CFC.

In 2022, the CFC (on behalf of NRDP) submitted a change application to DNRC to convert the water rights for Helen Johnson ditch associated with the former Deer Lodge River Ranch to instream flow. DRNC issued their correct and complete determination in September of 2022. In 2023, DNRC issued their preliminary determination on January 24 and their change authorization on April 10. Six (6) cfs (424.30 acre-feet [AF]) will be protected instream between July 15 and September 30 to "enhance stream flows for the benefit of the fishery resource in the Clark Fork River."

In 2023, NRDP in conjunction with funding CFC secured from the Resource Legacy Fund (RLF), completed a project with the last remaining water user on the Helen Johnson ditch that eliminated the use of the ditch while still providing stock water and limited irrigation. To maximize use of resources, this work was coordinated with DEQ's remediation of the area.

In 2024, NRDP worked with the water user to trouble shoot the Helen Johnson ditch project and created an Operations and Maintenance Manual for the pipeline.

Match Funding

CFC provided $75,000 from the Resource Legacy Fund (RLF) for construction of the Helen Johnson Pipeline Project. CFC has provided in-kind and Columbia Basin Water Transaction Program (CBWTP) funding for project development and flow monitoring.

Dry Cottonwood Creek Water Rights

DNRC's original determination related to the Dry Cottonwood Creek water right application would only protect 0.6 cfs of the 4.3 cfs freed up by converting some of Dry Cottonwood Creek Ranch's irrigation system from flood to pivot. This outcome was problematic because it did not consider site-specific measurement data provided by the applicant (CFC) to quantify the volume of water used for irrigation, which can in turn be protected as instream flow. In 2021, CFC (on behalf of NRDP) resubmitted the change application. In 2022, DNRC issued their correct and complete determination in September. In 2023, DNRC issued their preliminary determination on January 24 and their change authorization on May 9, to appropriate up to 4.28 cfs (198.3 acre-feet) for instream flow from May 6 to July 8.

Racetrack Pond Water Rights

In 2022, CFC (on behalf of NRDP) submitted a change application to DNRC to convert water rights associated with the Racetrack Pond Property to instream flow. In 2023, DNRC issues their preliminary determination on May 18 and the change authorization on August 25, 2023, to appropriate up to 8.22 cfs (264.4 AF) for instream flow from July 15 to September 6.

Westside Ditch and Whalen Ditch

In 2018, after many years of working cooperatively with the Westside and Whalen ditch water users and ultimately providing a draft change of use application that would facilitate future ditch piping work, the water users of the Westside ditch voted not to move forward with the proposed project. The decision appears to be based largely on concerns about the quantity of water savings, future maintenance and longevity of the pipe, and concerns about going through the change of use process and reducing their irrigation rights. The project is currently on hold pending further conversations with the water right holders. ***In 2025, NRDP continued informal discussions with Westside ditch water users to develop flow projects. See Section 3.2.2.1 Clark Fork River Mainstem Diversions* for an update on Westside and Whalen Ditches.**

Harvey Creek

NRDP began working with TU and Harvey Creek Ranch in 2013 to install irrigation infrastructure improvements on the eastern side of Harvey Creek Ranch and consolidate three ditches into one. The single ditch was fitted with a fish screen in 2014. After a change of diversion was approved for three more diversions to furnish water to the western side of Harvey Creek Ranch, additional irrigation infrastructure was installed to consolidate all points of diversions on the ranch to the diversion with a fish screen. This project has eliminated six diversions that precluded upstream fish migration and resulted in fish entrainment. In September 2020**,** DNRC issued the final change orders to change the irrigation water use to instream flow. See Section 3.2.2.9 *Harvey Creek* for additional restoration actions and monitoring.

Clark Fork River Ranch/Valiton Ditch

In 2022, NRDP, CFC, and TU worked with water rights holders on Valiton Ditch to initiate a split season lease agreement. Under this agreement, a private water right holder "leases" the pivots on Clark Fork River Ranch (CFRR) in return for allowing their water rights and CFRR water right to be used for instream flow after July 15, or when flows in the Clark Fork River drop below optimal flow levels. This agreement was for two years, and if successful, would lead to a more permanent agreement and associated instream flow changes. In addition, conceptual designs have been initiated for improving the irrigation infrastructure associated with the Valiton Ditch. In 2023, NRDP, CFC, and TU worked with the last remaining water right holder on Valiton Ditch to initiate a 20 -year split season lease. This lease was motioned for approval from the Advisory Council on October 4, 2023, recommended for funding by the TRC on December 14, 2023, and signed by the Governor on January 29, 2024 and NRDP executed the split season lease agreement.

Monitoring

NRDP and its project partners conducted monitoring associated with this project. The monitoring focused on evaluating the production and sustainability of a split season lease on crop production as well as flow benefits associated with this project. Additional flow monitoring information is available in the *Annual Upper Clark Fork River Basin Surface Water Monitoring Reports.* Effectiveness monitoring continued for this project in 2024, and a report summarizing the results will be prepared (see *Split Season Lease Study*). ***In 2025, NRDP continued monitoring water use and flows throughout the irrigation season.***

Clark Fork Above Deer Lodge

In 2025, NRDP continued to meet with willing water users in the UCFRB to discuss potential flow-saving projects. NRDP, along with CFC and TU, is continuing efforts to identify and evaluate potential flow projects that would augment instream flow in the dewatered sections of the Clark Fork River between Warm Springs and Deer Lodge. Project development activities continue for additional instream flow opportunities.

Silver Lake Water System

In 2019, NRDP, in cooperation and coordination with Butte-Silver Bow County (BSB) and TU, conducted a short-term lease of Silver Lake water for instream flow. The lease involved pumping up to 32 cfs from Silver Lake and discharging the water to Warm Springs Creek, where it was monitored for four weeks from late July to August 2019. The monitoring, which was done with assistance from TU and CFC, occurred at USGS monitoring sites and other temporary monitoring stations, such as select irrigation

diversions, in Warm Springs Creek and the CFR. The monitoring revealed that, though there was some diminishment in flow enroute to the river, about 20 cfs made it as far as Galen, and potentially about 10 cfs reached Deer Lodge. Temperature data is not as definitive, but it appears that these releases have a significant effect on reducing temperature in the mainstem CFR. NRDP considers these releases to be successful. Since these Silver Lake water rights have already been designated for instream flow use, a water lease is not required to go through the DNRC's change authorization process.

In 2021 (a summer of severe drought), NRDP, BSB, and Montana Resources reached an agreement to secure water releases from Silver Lake to improve instream flows in the CFR. Under this agreement, 32 cfs of water was released from Silver Lake from August 5 to September 20, 2021. The 2021 release had two primary goals. First, to improve flows in the CFR in extremely critical low-flow circumstances, and second, to continue to evaluate the Silver Lake Water System as a possible source of water to improve the CFR as provided for in Section 3.2 of the Restoration Plans. The 2021 release was extremely successful. NRDP received cooperation from most irrigators, and the release allowed the CFR to maintain flows near or above flow targets for most of the summer. Monitoring of the release also confirmed information collected in previous releases. Of the 32 cfs of water released from Silver Lake, a flow increase of approximately 12.5 cfs was observed in the CFR at Deer Lodge.

Between 2022 and 2024, NRDP and BSB continued discussion of the possibility of releases from Silver Lake.

In 2025, NRDP, BSB reached an agreement that was facilitated by TU for an in-stream flow release from Silver Lake. Under this agreement, 32 cfs was released from Silver Lake between July 10 and August 26. Flow at the USGS gauge at Galen (most upstream gauge of the mainstem Clark Fork River) remained above minimum flow targets from the duration of the release. A report summarizing the instream flow effects from Silver Lake is currently being prepared and will be available on NRDP's website when completed.

Match Funding

One of the goals of the 2025 release was to develop a framework for future releases. This framework would allow TU to seek funding from the Columbia Basin Water Transaction Program (CBWTP) to provide match funding for future releases.

Racetrack Lake

In 2010, CFC submitted a Proposal Abstract to NRDP to purchase a storage water right in Racetrack Lake, an on-stream reservoir located in the headwaters of Racetrack Creek in the Flint Creek Mountain range. The water right authorizes the holder to store 433.33 AF of water per year. The water right was purchased with a 50% cost-share from the Columbia Basin Water Transaction Program. Upon completion of the water right transfer, CFC committed to filing a change of use application with DNRC to change the use of the water right from irrigation to instream flow for the benefit of the fishery resource of Racetrack Creek.

In 2018, DNRC issued a decision on CFC's application to change the Racetrack Lake storage water right from "irrigation" to "instream flow." According to the decision, CFC would only be able to protect the lake water released during summer low flows for the top 17 miles of Racetrack Creek to immediately below the Cement Ditch, which is where previous water right holders diverted the lake water to use for irrigation. Downstream of this "historical point of diversion" – a stretch where Racetrack Creek

typically goes dry from irrigation withdrawals – DNRC said CFC has no legal authority to protect the water and ensure it reaches the river.

Following a hearing in front of a DNRC hearings examiner and then an appeal to the Water Court, in April 2019, the Water Court ruled in CFC's favor and ordered DNRC to grant the change application to protect the entire Historic Diverted Volume (390 AF) instream in Racetrack Creek. The change application went through the public notice process and received several objections. The objectors and CFC developed a plan for managing and monitoring instream flow releases. CFC reached a settlement agreement with 14 of the 16 objectors. In September 2021, DNRC held a hearing for CFC and the two remaining objectors. DNRC dismissed the remaining objections from these two objectors.

In 2025, the fourth consecutive instream flow release was initiated from Racetrack Lake in accordance with the Racetrack Creek Streamflow Monitoring Plan (RCSM Plan). This plan was developed in conjunction with the objectors to the change application.

Match Funding

In 2024, NRDP partnered with the other Racetrack Lake water users, WRC, CFC, and the streamflow working group to develop and submit a WaterSmart Environmental Water Resources Project Grant for the Racetrack Lake Dam Improvements Project: Increasing Water Reliability to Benefit Ecological Function in Racetrack Creek. The Project entails automating the Racetrack Lake outlet gate to allow for remote, precise, and real-time operation by installing a new pressure sensor for the reservoir level; replacing the headgate, connecting the sensor on the downstream flume to the headgate controller at the lake, installing equipment for satellite telemetry, and creating a custom webpage dashboard to enable remote monitoring and headgate control. This project also includes ancillary upgrades to the dam infrastructure to improve the long-term safety and reliability of the dam, including upgrading the emergency spillway to help accommodate the Probable Maximum Flood and restoring the dam crest, which will allow the maximum amount of water to be stored. The total project cost is estimated to be approximately $410,000. The grant request is for approximately $300,000 with the remaining being in-kind cash and contributions from NRDP, DNRC and CFC.

In 2025, the project partners were notified that they received the WaterSmart Grant and began the process of working with the Bureau of Reclamation (BOR) on the grant award. The BOR requested that a cultural resource survey be completed prior to issuing a Notice of Award. The survey is scheduled to be completed by the end of 2025, and it is anticipated that an official grant award will be made in early 2026. Depending on the timing of the award, construction activities could begin in fall of 2026 but may need to be delayed until fall of 2027 if award is not received in time to complete final designs and procure a construction contractor.

Monitoring

Extensive monitoring of this flow release was conducted each year of release in accordance with the RCSM Plan. Monitoring showed that stored water from Racetrack Lake reached the confluence of the CFR and provided increased flows and decreased temperatures as well as provided a cold-water refuge for fish in lower Racetrack Creek. Additional monitoring information is available in the annual *UCFRB Surface Water Monitoring Reports.*

Other Flow Projects

Rock Creek Cattle Water Lease

In 2000, FWP and others contributed to a water conservation project on Rock Creek that involved a flood to pivot irrigation conversion including a fish screen, pipeline and two center pivots. The conversion project made available up to 27.22 cfs of water to be leased for purposes of instream flow and effectively re-watered 1.5 miles of Rock Creek that were historically dewatered. The term of the original lease was 20 years, which expired in 2021. In 2022, NRDP prepared a funding recommendation for this project and received a recommendation by the AC and Trustee Restoration Council to fund a portion of this lease. This recommendation was approved by the Governor and FWP renewed the lease for another 10 years. This project was cost-shared with FWP, who provided half of the 10-year lease amount ($154,138).

Hearst Lake

In 2022, NRDP, in coordination with CFC and Anaconda-Deer Lodge County (ADLC), evaluated the feasibility of using Hearst Lake as a source of instream flow to Warm Springs Creek/CFR. Flow monitoring conducted in 2020 and 2021 lead the George Grant Chapter of TU to develop a project on lower Fifer Gulch. NRDP funded a hydrologic assessment of Hearst Lake that included gaging on Fifer Creek and some of the other tributaries. Hearst Lake is in the Anaconda Mountain Range about five miles southwest of the city of Anaconda at an elevation of 8,300 feet. The lake is natural but was modified with impoundments to increase storage by the Anaconda Copper Company.

German Gulch

In 2023, TU worked with the one remaining irrigator on German Gulch to evaluate a potential change of diversion project. This project would provide up to 7.5 cfs of cold water to a critical area of Silver Bow Creek and fully reconnect Silver Bow Creek to German Gulch, thereby enhancing access to spawning habitat and thermal refuge. In 2024, NRDP contracted with Montana Tech to analyze thermal drone imagery collected in 2022 and 2023 to evaluate the extent and magnitude of cold-water habitat enhancement provided by additional German Gulch water to Silver Bow Creek. ***In 2025, NRDP and TU continued to develop this project with the water user.***

Warm Springs/Mill Creek Springs

In 2020, two unnamed springs were identified - one on Warm Springs Creek near Fifer Gulch and one on Mill Creek in Opportunity. These springs have limited or no water rights associated with them. In 2021, the CFC evaluated these springs to determine if the water could be protected in stream and if these springs could be improved to provide flow and cold-water habitat for fish. In 2022, based on the flow and temperature monitoring conducted in 2021, it was determined that these springs did not provide a consistent source of water. If additional information or monitoring shows that these springs provide more reliable flows, additional project development will be performed.

Broken Circle Spring Project Development

In 2025, NRDP, TU, and CFC began working with the landowner to develop a potential project to improve trout spawning habitat, provide cold water refuge, bank habitat, riparian vegetation, and fish passage while maintaining agricultural productivity and stock water on a small spring creek on the Broken Circle Ranch. This spring creek receives return flows from the Whalen Ditch, and the project team is working with the landowner to potentially relocate the point of diversion closer to the irrigated acres (see Clark Fork River Mainstem Diversions, Whalen Ditch Project below for more

information). In fall 2025, NRDP selected an engineering firm to provide restoration concepts that can be explored in 2026.

Split Season Lease Study

In 2022, NRDP, along with CFC and University of Montana (UM), continued investigating the feasibility of short-term, water leasing projects in the UCFRB. The goal of the proposed study is to estimate the quantity of surface water available through short-term leasing that could be used to augment both tributary and mainstem flows in low-water years within several key watersheds. The study will also investigate the social desirability of a potential short-term water leasing program in the UCFRB and estimate the potential cost of implementing such a program on a limited basis.

In 2022 through 2024, NRDP intensively monitoring of crop health on NRDP's pivot areas to evaluate the effects of split season leases on crop health and productivity. Results of monitoring were presented to multiple groups including the Upper Clark Fork River Streamflow Group. Monitoring activities have concluded and a report summarizing the results will be prepared.

Upper CFR Streamflow Group

In 2021, NRDP, working with project partners, other State agencies, and the Confederated Salish and Kootenai Tribes (CSKT), established a streamflow working group. This group's mission is "to pursue solutions that support the water need of the Upper Clark Fork Watershed Community." ***In 2025, this group met six times. These meetings were solution-oriented and were a highly collaborative effort between water users, ranchers, farmers, industry, municipalities, recreationalists, non-government organizations, CSKT, and state agencies. This group is currently developing a suite of projects aimed at improving flows while maintaining agricultural production in the UCFRB.***

Match Funding

In 2024, the WRC received a WaterSMART Cooperative Watershed Management Program Grant for "Upper Clark Fork River Streamflow Group Development and Planning." The grant provided approximately $300,000 of dedicated funding for this group to pursue watershed-wide planning and subsequent water conservation activities that benefit our partners, local communities, and the river***. In 2025, WRC was funded entirely by the WaterSMART Cooperative Watershed Management Program Grant.***

Flow Monitoring

NRDP, through contracts with its project partners, routinely monitors season streamflow and water temperature in the mainstem of the Upper Clark Fork River and tributaries in the UCFRB. The purpose of the monitoring is to collect additional data where existing data is lacking, monitor performance of instream flow projects, and develop other flow projects. The overarching goal of the monitoring is to better understand summer streamflow and water temperature conditions in the UCFRB. The stretch of the mainstem of the CFR between Galen and Deer Lodge and tributaries that feed it face chronic dewatering issues and typically experience the lowest flows during periods of peak demand in late July and early August. The data collected from this monitoring is integral to the understanding of surface water and groundwater dynamics in the most dewatered portion of the UCFRB.

In 2025, NRDP through its project partners, CFC and TU, monitored flows on the mainstem Clark Fork River between Deer Lodge and Warm Springs, on Racetrack Creek in relation to the Racetrack Lake and Silver Lake instream flow release, and at multiple irrigation diversions. The purpose of the

monitoring is to better understand the timing and magnitude of dewatering at points between the USGS gauges and to monitor performance of implemented projects. The flow and temperature gauges were NOT pulled prior to this update. Additional monitoring information will be available in the 2025 UCFRB Surface Water Monitoring Report and the Racetrack Creek Monitoring Report, anticipated to be completed in early 2026. The following are preliminary observations:

- ***Overall, 2025 was a low flow year. Flows stayed above target levels only at the Galen Gauge for the entire irrigation season, most likely due to the additional instream flow from the Silver Lake Release.***
- ***Flows at the Deer Lodge Gauge hovered around target flows during the Silver Lake release, reaching a low of ~ 57 cfs on August 16. After the release ended, flows dropped significantly with a low flow of 36 cfs on September 9.***
- ***FWP implemented Hoot Owl Fishing restrictions due to high temperature on the mainstem of the Clark Fork River from July 11 to August 29, one of the earliest restrictions on record.***

Aquatic Priority Area Specific Plans (Section 3.2.2)

Aquatic non-flow projects aim to improve fish passage, reduce fish entrainment, and improve aquatic habitat to improve trout recruitment to the Clark Fork River and Silver Bow Creek mainstems.

Work on the non-flow aquatic projects in priority watershed areas has involved continued coordination with landowners, evaluation of current riparian and instream habitat conditions, as well as fish passage/entrainment issues, prioritization of restoration actions, development of restoration project designs, and implementation of restoration projects in the 17 watersheds targeted for work. The development and implementation of projects include projects that protect/enhance riparian habitat, improve fish passage, reduce fish entrainment, and/or improve instream habitat. These projects are being accomplished through contracts and task orders between NRDP, property owners, and our project sponsors/partners (CFC, TU, and the Watershed Restoration Coalition (WRC)), and various engineering firms.

Summaries of activities (2012-2025) within each of the targeted watersheds are described below and summarized in Table 2.

Mainstem Clark Fork River (Section 3.2.2.1)

Clark Fork River Mainstem Diversions

In 2018, the State proposed restoration action to enhance fish passage on the Clark Fork River mainstem upstream of Deer Lodge. Modifications of diversion on the mainstem of the Clark Fork River will improve fish passage and recreational activities. In 2024, the State allocated $750,000 from Aquatic interest to modify mainstem diversions to improve fish passage and recreation activities. The State has been working in partnership with the CFC and TU on infrastructure improvements on the mainstream Clark Fork River to provide fish and recreational boat passages, screen ditches, and improve water delivery. Seven mainstem diversion projects have been identified as high priority projects; these include the Helen Johnson diversion, Whalen diversion, Westside diversion, Valiton diversion, Broken Circle Pumps, Sager Lane diversion, and the Kohrs-Manning diversion. The State and project partners will continue to work with water users on these diversion projects in conjunction with TU's WaterSMART Aquatic Ecosystem Restoration Project Grant which includes over $300,000 of funds

to develop project design concepts and final designs for the Whalen, Westside, Valiton, Sager Lane, and the Kohrs-Manning diversions.

Sager Lane Diversion and Infrastructure Improvement Project

The Sager Lane Diversion and Infrastructure Improvement project is located on the Clark Fork River approximately 6 miles south of Deer Lodge and immediately upstream of the Sager Lane bridge. The diversion dam was a full-spanning pin-and-plank style concrete and timber weir. Metal supports were manually raised seasonally to support check boards that form a dam across the entire river. The dam was supported by a concrete apron and abutments used to check up the water surface for pumps located northwest of the bridge. Tarps were also used to seal the dam during low stream flows which can significantly dewater the river below diversion. This diversion presented a recreational obstacle when raised and poses a complete seasonal fish passage barrier. The pumps were located about 100 yards down the ditch on the far side of Sager Lane at the intersection with Dempsey Creek.

This project was bid on in late summer and included improvements to the diversion structure to allow recreational passage and fish passage as well as improve irrigation infrastructure. The work included the following items: removal of the existing diversion structure in the Clark Fork River and remediation of the adjacent streambank bank, diversion and dewatering of the work areas in the Clark Fork River, construction of four rock weirs in the Clark Fork River with fill placement between them and channel bed re-grading for approximately 50 feet immediately downstream the weirs, placement of rock riprap on the adjacent banks of the weirs, removal of contaminated materials in the work area, placement of contaminated materials at the Opportunity Ponds B2.12 repository cell, and construction of a bypass channel with riprap-armored bed.

In 2025 the irrigation infrastructure was upgraded. The work included removal of existing infrastructure and installation of a new drum/cylinder screen(s), pump vault, three vertical turbine pumps, pipe manifold, pipeline, control systems, and earthwork necessary for the irrigation infrastructure improvement. Minor operations and maintenance actions were completed throughout the irrigation season.

Match Funding

CFC and TU have contributed over $50,000 of outside funding from the Resource Legacy Fund (RLF) for preliminary design costs, including in-kind match. The CFC and TU contributed approximately $100,000 of RLF funding to project implementation. CFC and TU were also successful in receiving an additional $50,000 match through the Future Fisheries grant program. NRDP's design and construction costs are considered non-federal match for TU's WaterSMART Aquatic Ecosystem Restoration Project Grant (total of over $300,000 for design costs on 7 diversions on the mainstem Clark Fork River). TU has secured approximately $1 million for implementation of these projects from the National Fish Passage Program Bipartisan Infrastructure Law: Restoring River, Floodplain, and Coastal Connectivity and Resiliency grant opportunity.

Valiton Diversion Project

The Valiton Ditch diversion is a full-spanning rock grade control structure in the Clark Fork River and an aging, unscreened headgate structure. The existing structure is not an upstream fish passage barrier but poses significant ditch entrainment risk, particular during early irrigation season. One of the water users relayed personal knowledge of thousands of fish being entrained in the ditch on an annual basis and fish die-off when the ditch is turned off. The water right holders, which include NRDP, are interested in considering improvements to this diversion and reducing fish entrainment.

In 2025, TU, CFC and NRDP under TU's WaterSMART Aquatic Ecosystem Restoration Project Grant, completed a conceptual design for this diversion. The design allows water users to continue using water under the terms of the split season lease (see Valiton Ditch Split Season Lease above) and includes installation of a fish screen to prevent fish from becoming entrained in the ditch. This project is currently on hold until the higher priority Kohrs-Manning Diversion Project can be completed and additional funding can be secured.

Kohrs-Manning Diversion Project

The Kohrs Manning Ditch diversion is a full spanning rock weir on the Clark Fork River within the City of Deer Lodge and partially located on Department of Interior – National Park Service (NPS) – Grant-Kohrs Ranch National Historic Site property. The infrastructure associated with this ditch also includes a full channel spanning pin and plank style diversion and canal crossing on Cottonwood Creek. The ditch entrains fish from both the Clark Fork River and Cottonwood Creek and restricts fish movement during low water. Entrainment from Cottonwood Creek is particularly problematic because this ditch often diverts nearly 100% of the flow of Cottonwood Creek about 50 feet before it enters the Clark Fork. The current structure at Cottonwood Creek also impedes upstream passage of all fish except during exceptional high flows. The Kohrs Manning diversion structure in the Clark Fork River needs annual maintenance, discouraging its use during early season high water if Cottonwood Creek has sufficient flow to satisfy irrigator demand.

In 2025, TU, CFC and NRDP under TU's WaterSMART Aquatic Ecosystem Restoration Project Grant, worked with the water users to complete designs for the Clark Fork River and Cottonwood Creek diversions. Permitting is currently in progress with the NPS, City of Deer Lodge, Powell County, and State and Federal permitting agencies. It is anticipated that this project will be bid in 2026 and implemented after irrigation is turned off for the season.

The project involves the following work: replacement of the diversion structure in the Clark Fork River with a structure that will allow fish and recreational passage while maintaining water delivery, installation of a conical fish screen, removal of the existing wood and rock structure on Cottonwood Creek, construction of a roughened riffle and fish passage channel in Cottonwood Creek, metal pipe flume over Cottonwood Creek, and other associated streambanks reconstruction and site reclamation activities.

Match Funding

TU has approximately $1 million of National Fish Passage Program Bipartisan Infrastructure Law: Restoring River, Floodplain, and Coastal Connectivity and Resiliency funds to implement this project. CFC and TU intend to seek additional funding through the Future Fisheries Program in the spring funding cycle. NRDP will fund the remainer of the project out of the Clark Fork River Mainstem allocation for the Clark Fork River diversion and fish screen and the Cottonwood Creek Aquatic fund allocation for the aquatic improvements on Cottonwood Creek.

Whalen Diversion Project

In 2025, NRDP, TU and CFC initiated conversation with the Whalen Ditch water users. Initial discussions have focused on eliminating almost 3 miles of the leaky ditch and relocating the Point of Diversion closer to the irrigated area.

Westside Diversion Project

In 2025, NRDP had multiple conversations with the Westside Ditch Company regarding upgrading their irrigation infrastructure to allow passage and reduce entrainment. To date, the Westside Ditch Company has not allowed NRDP or project partners to access their infrastructure to perform survey work and has not participated in design work. NRDP is hopeful that continued discussion with the ditch company may lead to future projects with the Westside Ditch. The Westside Ditch continues to be a major irrigation withdrawal of water from the Clark Fork River.

Silver Bow Creek Riparian Protection Enhancement

In 2024, the State allocated the first $500,000 from the reimbursement funds from the Parrot Tailing Waste Removal project to Silver Bow Creek to develop and implement aquatic and riparian protection/enhancement along Silver Bow Creek. Preliminary assessments of areas with little to no woody cover along Silver Bow Creek are being conducted with project partners. Priorities and alternatives will be developed and implemented with the goal of improving floodplain function and establishing a robust native woody canopy along the stream that will provide improved habitat and shade, which should help prevent increases in surface water temperature.

In 2025, NRDP released a solicitation for a restoration feasibility study on Silver Bow Creek in Durant Canyon. The objective of the feasibility is to evaluate restoration options and cost effectiveness with the $500,000 allocation described above. NRDP will select a firm to perform the work and develop a task order by the end of 2025.

Flint Creek to Rock Creek: Fish Population Evaluation and Follow-up Actions

Beginning in July 2015, University of Montana (UM) gathered and organized background information on the sources of nitrogen within the Clark Fork River between Flint Creek and Rock Creek (Reach C) of the Clark Fork River. UM began an extensive field data collection campaign and evaluated the findings during the winter. The UM study was extended for a second year to expand on the preliminary findings. Following evaluation of the data collected from July 2016 through June 2017, UM identified the Dutchman Wetland Complex as a potential nitrogen source leading to Cladophora blooms in Reach C. NRDP expanded the investigation to include the Dutchman Wetland Complex and other nutrient sources that contribute to compromised habitat conditions in Reach C of the Clark Fork River. UM completed a preliminary evaluation of the Dutchman Wetland Complex in 2018 and 2019 and worked with NRDP to narrow the focus to develop restoration projects that will result in improved nutrient loading conditions in the Clark Fork River. In addition, the UM's National Science Foundation award has been integrated with NRDP work to further investigate how the trout food-web is being impacted. The Clark Fork River Working Group was established and successfully held monthly meetings throughout 2021 discussing a variety of topics to help share information on the various projects being implemented within the UCFRB. In 2022, UM gathered fish population and biomass data for trout as well as mountain whitefish. This study documented that mountain whitefish are the most abundant fish species in all reaches of the Clark Fork River and recommended that whitefish receive more monitoring attention. In 2023, UM completed analyses of body condition, tissue metals burdens, and trophic relationships among different fish species in the Upper Clark Fork River. Results from this study revealed that brown trout in Reach B had poor body condition compared to other reaches of the Clark Fork River. Comparisons of metals concentrations in trout fish tissue indicated little change in the concentrations over the last 30 years.

In 2022, NRDP's consultant completed a master plan that identifies and evaluates restoration alternatives to decrease the release of nitrogen from the Dutchman Wetland Complex and improve water quality in the main stem of the Clark Fork River. NRDP coordinated with various stakeholders to evaluate the feasibility of specific projects and begin the planning and design process. This included working with Anaconda/Deer Lodge County on improvements to the wastewater treatment system, which was identified as a source of nitrogen to the Dutchman Wetland Complex. In addition, NRDP coordinated with downstream water users, Atlantic Richfield (AR; landowner), Environmental Protection Agency (EPA), Department of Environmental Quality (DEQ), and the U.S. Fish and Wildlife Service (USFWS) to develop a pilot project to install check dams in Dutchman Creek to improve nitrogen cycling. In 2023, NRDP continued to collaborate with Anaconda/Deer Lodge County, water users, AR, EPA, DEQ, USFWS, and members of the public on project design and development. In 2024, NRDP decided to pause the work on Dutchman Creek until more is known from the basin aquatic monitoring and research into factors impacting the mainstem fish populations. NRDP is considering work with BP-AR on habitat enhancement in the area using terrestrial funds

Match Funding

NRDP has discussed match funding with AR and will continue these discussions related to future terrestrial projects.

Summary of Priority Tributary Watersheds Projects

Blacktail Creek (Section 3.2.2.3)

Butte Golf Course Irrigation Pond

This project will provide upstream fish passage by removing an instream pond. Blacktail Creek is currently dammed to create the Butte golf course irrigation pond. Starting in 2019, NRDP and a contractor initiated design of a diversion structure and screened intake to be installed upstream of the irrigation pond. The diversion structure will divert 600 gallons per minute into the pond for irrigation. The pond outlet will be reconstructed to exclude fish from the pond. NRDP continued to work on this project in tandem with the Butte-Silver Bow Sanitary Sewer Line. NRDP received a Conditional Letter of Map Revision (CLOMR) from Federal Emergency Management Agency (FEMA) and a change in diversion point for the water rights from DNRC, which was the last permit requirement. In 2024, NRDP completed final design for these projects. ***In the summer of 2025, NRDP publicly advertised these projects and received favorable bids. NRDP has contracts in place and intends to complete these projects over the winter prior to the golf course opening in spring 2026.***

Butte-Silver Bow Sanitary Sewer Line

A sewer line across Blacktail Creek is currently blocking fish passage. In 2024, NRDP completed final design for these projects. ***In the summer of 2025 NRDP publicly advertised these projects and received favorable bids. NRDP has contracts in place and intends to complete these projects over the winter prior to the golf course opening in spring 2026.***

Match Funding (Irrigation Pond and Sewer Line)

NRDP obtained $30,000 in match funding from the Future Fisheries Program and $2,000 from the George Grant Chapter of Montana TU. In addition, BSB is donating materials to the projects, and the country club is donating in-kind services of staff time.

Redfern Diversion

Project completed. In November 2018, TU, along with NRDP and Great West Engineering, completed construction of the Redfern Diversion and fish screen project. The project provides upstream fish passage through a series of constructed rock step-pool weirs and eliminates fish entrainment with a fish screen located in the throat of the upstream most rock weir. In 2024, NRDP and project partners provided project monitoring, operations, and maintenance assistance on this fish screen.

Blacktail Creek Culverts at Roosevelt Drive

In 2022, BSB was granted funds from the Federal Lands Access Program (FLAP), administered by the U.S. Department of Transportation, to repair culverts under Roosevelt Drive. Multiple undersized and failing culvert crossings, through which the Blacktail Creek flows under Roosevelt Drive, are impediments to connectivity within the middle and upper reaches of the creek. NRDP supports this project and agreed to provide matching funds for the FLAP grant. The state considers replacement of these culvert crossings as the top priority fisheries project in the drainage. Replacing these culverts will improve connectivity within the core range of the westslope cutthroat trout in the Blacktail Creek population and will likely help this population become more robust and resilient.

In 2023, NRDP monitored project development. The Federal Highway Administration started work on the FLAP grant the was awarded to Butte-Silver Bow for the reconstruction of Roosevelt Drive, including the culverts for Blacktail Creek. Total value of the project was estimated at approximately $7.9 million, and the FHA will implement the entire project. This project ranked high enough that the FHA waived the 13.5% match from the local government. The project construction is scheduled for 2025 through 2026.

Blacktail Creek Aquatic Monitoring

FWP conducts watershed monitoring in the Blacktail Creek Watershed every 2-3 years. In 2022, FWP also collected baseline fish population data related to the Butte Golf Course Project. Refer to the Aquatic Resource Monitoring and Maintenance section of this update for more details. In 2023 and 2024, FWP monitored the effectiveness of past fish passage projects in Blacktail Creek and the connection to Silver Bow Creek in a radio telemetry study. This monitoring data will be used to prioritize future projects.

Browns Gulch (Section 3.2.2.4)

NRDP and WRC have led project development and design/permitting on numerous diversions, streambanks stabilization, and crossing projects on Browns Gulch. As of 2021, all allocated funds for Browns Gulch have been expended on priority projects in the watershed. In 2024, FWP continued monitoring fish movements of trout in the main stem of Silver Bow Creek. Results from 2023 and 2024 indicated that trout are finding their way up Browns Gulch to spawn. As provided in the 2024 revisions to the Restoration Plans, when excess funds from the Parrot Waste Removal Project become available, up to $200,000 ($100,000 in Aquatics and $100,000 of Parrot reimbursement) could be used to implement priority projects with willing landowners in Browns Gulch.

Balentine Ranch

In 2021, final designs for four diversions on the Balentine property were completed based on the conceptual designs developed in 2020. In 2024, the CFC raised funds from USFWS, Gorge Grant Trout Unlimited, FWP's Future Fisheries Program, private donations and significant match funding to

complete the Balentine Diversions. The total construction costs for these diversions were approximately $160,000.

Brothers Ranch

In 2021, construction work at diversion #4 on the Brother's Ranch was completed. This diversion was identified as a high priority fish passage barrier on Brown Gulch. The project also included replacing two undersized culverts that were fish passage barriers and stabilization of a streambank adjacent to a dry fire hydrant. This work was performed with ~$27,500 in match funding from a Natural Resource Conservation Service (NRCS) grant. Previous work on this ranch began with placing an open bottom arch culvert in 2018. The culvert provides upstream fish passage and improves hydraulic conveyance for the landowner. The previous culvert was a fish barrier at a wide range of flows and caused significant scour and stream degradation of Browns Gulch downstream. This project complements riparian and streambank restoration actions completed in 2017. ***In 2025, a contractor working under NRDP's task order with WRC for fish screen maintenance identified maintenance needs at the Brother's Ranch Diversion #4 because water was piping under the structure. In fall 2025 NRDP, the contractor, and the landowner coordinated to plan repairs to the structure. These repairs will be implemented in fall 2025 or winter/spring 2026.***

Liva Ranch

Project completed**.** Restoration actions including off-stream water, fencing, irrigation diversion, and fish passage improvements began in 2017 and were completed following high water in 2018. Off-stream water was provided to reduce cattle use of Browns Gulch to improve the riparian corridor. A diversion at the north end of the property was replaced with a new wooden pin and plank diversion that, when boards are placed to check water, activates a fish bypass channel allowing for upstream fish migration.

Myers Ranch

Project completed. A robust riparian planting effort occurred in June 2018 including two reaches of Browns Gulch on the Myers property. In October 2018, work began on ~1,100 feet of channel restoration and was completed in November 2018. Additional plantings were completed in June 2019. This newly reconstructed reach of Browns Gulch provides improved pool and riffle habitat for fish. This project occurred immediately upstream of the new fish bypass channel and riparian improvement projects on the Liva Ranch. In 2021, emergency maintenance of the river right floodplain took place to address adverse effects to ranch operations outside the identified riparian zone. Two outside bends were elevated to direct high flows to targeted floodplain areas.

Heavens Valley Ranch

Project completed. In 2017, beaver mimicry and riparian protection via downed trees were completed.

Woods Ranch

Project completed. In 2016, riparian fencing (~3,100 feet) along Browns Gulch and a hardened water gap for cattle watering were installed to reduce grazing on streambanks.

Browns Gulch Aquatic Monitoring

FWP conducts watershed monitoring in the Browns Gulch Watershed every 4-5 years. Refer to Section: Aquatic Resource Monitoring and Maintenance Plan (Section 3.2.3) for more details. In 2023 and 2024, FWP monitored the effectiveness of past fish passage projects in Browns Gulch and the connection to

Silver Bow Creek in a radio telemetry study. This monitoring data will be used to prioritize future projects.

Cottonwood/Baggs Creek (Section 3.2.2.5)

NRDP and the WRC are working on developing numerous projects on Cottonwood and Baggs creeks.

McQueary Ranch

In December 2019, WRC completed work on the Cottonwood Creek Irrigation Improvement and Fish Screen Project. The project involved irrigation infrastructure improvements, including a fish screen, to improve fish passage and reduce entrainment of trout. In 2021, minor modifications were made to the fish screen to allow the landowner to better manage sediment in and around the fish screen. The project will benefit cold-water fish migration into and out of Cottonwood Creek and its tributaries (Baggs Creek, North, Middle, and South Forks of Cottonwood Creek), together comprising a 42-square mile drainage. The WRC has brought $118,330.00 of matching NRCS funding***. In 2023, 2024, and 2025 NRDP and WRC provided project monitoring, operations, and maintenance assistance on this fish screen.***

Upper Cottonwood Diversions

In 2020, four diversions on Upper Cottonwood Creek were identified as high priority projects that have a high potential for entraining fish. In 2021, several conceptual designs for these diversions were evaluated. NRDP, along with NRCS project funding, finalized the design for a large fish screen and irrigation improvements on the Aspen Grove Ranch.

The Aspen Grove Irrigation Improvement and Fish Screen project had two phases. Phase 1 of this project, constructed in Fall 2020 and funded by NRCS, consisted of a temporary inlet control structure and construction of two irrigation pivots. Phase 2 of this project, funded by NRCS and Restoration Funds, started in 2022 and was completed in spring of 2023. Phase 2 consisted of installation of a new Farmers Conservation Alliance (FCA) modular fish screen, a new headgate, and over one mile of irrigation pipeline and irrigation pivots. This project eliminates one of the existing irrigation diversions on Cottonwood Creek, allows for upstream and downstream fish passage, and prevents entrainment. Water will be saved by replacing a leaky irrigation ditch with a pipeline and improved irrigation infrastructure. This project was implemented in conjunction with the NRCS and the landowner who provided technical expertise and match funding.

Lower Applegate Diversion

FWP identified the lower Applegate diversion on lower Cottonwood Creek to be a high priority project with a high potential for entraining fish. In 2021**,** NRDP along with project partners, replaced the existing irrigation diversion with a series of rock step pools and installed a Corrugated Water Screen on the irrigation ditch. In 2022, NRDP and project partners provided project monitoring, operations, and maintenance assistance on this fish screen.

Cottonwood Creek Aquatic Monitoring

FWP has collected extensive baseline fish population data in the Cottonwood Creek Watershed. In 2023 and 2024, FWP coordinated with NRDP to initiate a fish tagging study to evaluate the effects of fish screen and fish passage projects and identify future projects.

Flint Creek and Boulder Creek (Section 3.2.2.7)

Allendale Diversion

Project completed. NRDP, TU, DNRC, and water users worked cooperatively to design the fish screen and diversion for the Allendale Ditch, a large State-owned irrigation canal known to entrain up to 50% of fish that encounter the diversion. DNRC led the design and construction of this project. DNRC completed an environmental assessment (EA) and issued a decision notice in Fall 2018 selecting the preferred alternative (vertical plate screen and new diversion infrastructure – including fish passage). Construction began in October 2020. Due to project delays (COVID-19, ice jams, irrigation delivery demands, etc.) the Allendale diversion and roughened riffle rock ramp were completed in November 2021. In 2022, NRDP worked extensively with DNRC, TU, and the water users on operation and maintenance of the new headgate and fish screen during this project's first full irrigation season. In 2023, NRDP and DNRC performed maintenance on the brush mechanism and electronic components of the fish screen cleaning system on the Allendale screen. In 2024, the Allendale fish screen did not operate effectively as the Flint Creek Water Users, who operate the Allendale Diversion and fish screen, identified issues with the brush mechanism. NRDP worked with DNRC and the water users to update the maintenance agreement that allows NRDP to fund operation and maintenance.

In 2025, NRDP hired a contractor to conduct maintenance and improvements to the Allendale fish screen including replacing worn out bushings and pulleys, installing baffle plates to increase flow to sweep debris out of the system, and improvements to the motorized brush system. This work cost $46,000 and was paid for with the Upper Clark Fork River Basin Operation and Maintenance allocation. These improvements will allow for more efficient operation of the fish screen.

Flint Creek Private Diversions

Immediately downstream of the Allendale Diversion is a private rock and tarp irrigation diversion that is a fish passage barrier at low flows and includes three ditches that are high risk for fish entrainment. In 2020, NRDP, TU, DNRC, and the private diversion owners worked together to design and construct a roughened riffle rock ramp diversion for fish passage and install fish screens on the three ditches. NRDP and DNRC incorporated this project with the Allendale project, described above, to operate under one State contract for construction. Water delivery was maintained throughout the irrigation season, despite record low flows late season. Construction was completed on all major infrastructure components in 2021. In 2022, NRDP worked extensively with TU, consultants, and the water users on operation and maintenance of the new headgate and fish screen during this project's first full irrigation season. In 2023, NRDP hired a contractor to regrade a small private ditch that diverts water off one of the main private ditches. This small ditch was not part of the original fish screen project and needed to be regraded to improve the performance of the fish bypass system. In 2024, NRDP worked with an engineer and procured a construction contractor to reconstruct the fish bypass system for the three private corrugated water screens, which greatly improved the amount of time the fish screens can be in operation during a given year.

Spencer Ranch

In 2018, WRC completed a riparian fencing and revegetation project on a highly productive spring creek that produces cold water and provides spawning and rearing habitat for mainstem fish. The project was funded out of terrestrial dollars allocated to Flint Creek riparian protection and restoration.

Corbett Downs

NRDP and TU completed a stream restoration and riparian revegetation project on a reach of Flint Creek east of Hall in 2021. The stream restoration portion of the project was funded with matching funds from TU. NRDP funded the revegetation out of terrestrial dollars allocated to Flint Creek riparian protection and restoration. In 2022, NRDP, TU, and River Design Group coordinated to conduct vegetation and geomorphic monitoring for this project.

Rue Slaughter

In 2023, NRDP and TU completed a stream restoration and riparian vegetation enhancement project on Flint Creek on the Rue and Slaughter properties. This project will improve fish habitat and riparian condition on over one mile of Flint Creek. This project was funded by a combination of NRDP aquatic and terrestrial funding, the DEQ 319 program, FWP future fisheries, and Trout Unlimited. In 2024, NRDP hired a contractor to conduct vegetation and bank condition monitoring in the project area.

Flint Creek Phase 3

In 2024, in collaboration with TU, NRDP hired an engineer to start design work on the next phase of stream and riparian restoration on Flint Creek. This area is the next two miles upstream of the Rue Slaughter project. These restoration designs provided valuable documentation for TU's match funding applications***. Construction of Phase 3A of this project is being led by TU and began in Fall 2025. It is anticipated that the work will be complete by November 2025.***

Olson Property

In 2017, WRC, NRDP, and the Olsons worked cooperatively to return Boulder Creek to its pre-2011 channel. This project provides unimpeded up and downstream fish migration. In 2011, the Boulder Creek channel captured a private pond, creating native trout passage issues as well as higher levels of predation. The project was completed in May 2018 and included the placement of topsoil in the de-activated stream channel and a robust revegetation effort with native plants.

Lundgren Project

In 2017, a riparian and streambank restoration project were completed on the Lundgren property on Boulder Creek. The project improved fish habitat through improved woody debris conditions and overhanging cover, providing stability while riparian plant communities are reestablished.

Buxbaum Diversion – Boulder Creek

TU has been engaging a water user on lower Boulder Creek about a fish screen and potential irrigation improvement project. In 2024, NRDP is working in collaboration with TU to solicit an engineer to develop concepts for this project. ***In 2025, NRDP, TU, and an engineering firm began to develop concepts for fish screen and irrigation efficiency project. The project team coordinated with water users and Watson Irrigation to examine opportunities for a flood to pivot conversion and options to reduce ditch loss.***

Flint Creek and Boulder Creek Aquatic Monitoring

NRDP and project partners have conducted monitoring on the following projects in Flint Creek and Boulder Creek:

- **Allendale and Flint Creek Private Diversions** – FWP, in coordination with NRDP, is conducting a long-term, large-scale fish tagging study to document how fish are using the new diversions and fish screens associated with these projects. Prior to the new diversions being built, the Flint Creek Private Diversion was virtually a complete barrier to upstream fish movement

during low flow periods. After the installation of the new diversion, FWP documented tagged trout and suckers successfully moving up over the structure. Before the fish screen was installed on the Allendale Canal, FWP documented that 53% of the fish moving downstream of the diversion were lost into the irrigation canal. Monitoring in 2022 and 2023 indicated that no tagged fish were entrained into the canal. Two of the fish that were bypassed by the Allendale fish screen in 2022 were cutthroat trout that were tagged approximately 20 miles downstream in the Clark Fork River and that migrated into Flint Creek to spawn. FWP fish tagging data from 2023 also showed several cutthroat trout using the structures at Allendale that were migrants from the Clark Fork River. FWP monitored the benefits of these fish screen and diversion projects on the Flint Creek fishery in 2024.

- **Corbett Downs –** After this project was completed in 2021, FWP conducted a trout population estimate on Flint Creek through the Corbet Downs project. FWP estimated 870 brown trout per mile and 14 westslope cutthroat per mile. One bull trout was also found in the project reach.
- **Olson Property –** The WRC completed project monitoring for year 1 in September of 2019. In August 2020, FWP fisheries staff completed fish sampling within the project area. Forty (40) westslope cutthroat trout and 14 bull trout were found.
- **Lundgren Project** – The WRC completed year 2 project monitoring in September 2019. In August 2020, FWP completed fish sampling within the project area. Seventy (70) westslope cutthroat trout and 11 bull trout were found.

Flint Creek and Boulder Creek Match Funding

In 2024 and 2025, TU applied for funding from FWP Future Fisheries, DEQ's 319 Program, the Bureau of Reclamation, and a DNRC grant to fund construction of the Phase 3 riparian project on Flint Creek. These funding requests resulted in $$1.55 million of match funding for the project TU also secured $100,000 from USFWS and $8,000 from the Columbia Basin Water Transaction Basin Program for the Buxbaum Diversion Project.

German Gulch/Silver Bow Creek (Section 3.2.2.8)

Project completed. Tailings were removed from the German Gulch floodplain by DEQ during Silver Bow Creek remedial action and a fish barrier was constructed to prevent non-native trout from migrating upstream.

German Gulch and Silver Bow Creek Aquatic Monitoring.

FWP conducts electrofishing in Silver Bow Creek twice a year as part of basin-scale monitoring. Summer sampling is conducted during low flows and high-water temperatures. Low dissolved oxygen has been documented in the past during the summer and hypoxic areas of Sliver Bow Creek tend to be devoid of trout during this period. Fall sampling is focused on evaluating fish numbers and distribution when water temperatures have cooled, and dissolved oxygen concentrations are more favorable to fish. In coordination with FWP, NRDP contracted with a professor at Montana Tech to document dissolved oxygen and water temperatures throughout 2022. Dissolved oxygen monitoring indicated improvements following the upgrade of the Butte Municipal Water Treatment Plant in 2016, but oxygen concentrations still may be too low for trout in certain reaches of Silver Bow Creek during the summer. FWP conducts watershed monitoring in German Gulch every 2-5 years. See Section 3.2.3 of the Aquatic Resource Monitoring and Maintenance Plan of this update for more details.

Harvey Creek (Section 3.2.2.9)

All projects are completed. TU assisted in the completion of most of the identified fisheries improvement projects on Harvey Creek. The failing culvert and manmade fish barrier on Mullan Road that crosses Harvey Creek were replaced by a new concrete box culvert and an eight-foot concrete vertical fish barrier in April 2016. Additionally, the following work was completed: irrigation improvements have been installed, a 100-foot bioengineered bank stabilization project was completed to protect corrals on the Harvey Creek Ranch from erosion and to provide a natural vegetative buffer between the corrals and Harvey Creek, and riparian fencing was installed. In 2019, DNRC issued a favorable preliminary decision on the instream flow water rights change applications. After the decision, final steps were taken to consolidate all irrigation diversions into a single screened diversion. All other diversions were removed from the stream channel and ditches blocked. This will allow for unrestricted upstream and downstream movement of native fish from the Mullan Trail to the headwaters of Harvey Creek. In 2022, TU worked with the landowner, NRDP, and a fabricator to perform maintenance on the paddlewheel that powers the fish screen cleaning system.

Harvey Creek Aquatic Monitoring

In coordination with NRDP, FWP has collected extensive pre- and post- project fish abundance and distribution data in the Harvey Creek Watershed. These data indicated an immediate post-project increase in cutthroat trout numbers in Harvey Creek just downstream of the fish screen. FWP's monitoring data also showed an increase in bull trout abundance and distribution throughout the project area after the restoration projects were completed. Project partners provided project monitoring, operations, and maintenance assistance on this fish screen. FWP conducted watershed monitoring on Harvey Creek in 2023.

Little Blackfoot River (Section 3.2.2.10)

The Little Blackfoot River experienced long duration high flow during 2018 and made vertical and lateral adjustments in many locations. TU is evaluating the effects of the 2019 high flow and NRDP, TU, and the WRC are actively working to identify potential restoration actions that will benefit the Little Blackfoot River, with potential benefits to affected landowners.

In 2025, NRDP worked with TU to prioritize projects in the Little Blackfoot Watershed. Efforts included field visits to orient new staff to the area, discussion with FWP on fisheries priorities, and ongoing task order development to support TU's work in the watershed.

D.W. Beck Property

In 2018, the Little Blackfoot River captured an existing ranch road causing a channel avulsion. In 2019, NRDP and TU worked on design, engineering, and permit channel and floodplain restoration activities on the Little Blackfoot River, DW Beck Ranch. The project includes approximately 1,800 feet of the Little Blackfoot River. In 2022, NRDP and TU learned the DW Beck Ranch was not interested in moving forward with the project at this time.

Janke Property

Project completed**.** High flows in 2018 impacted the riparian fencing project implemented in 2017. TU worked with the landowner to repair and replace fencing that was adversely impacted. TU also completed some riparian pole planting to complement the riparian fencing.

Snowshoe Creek

Project completed. In 2017, a fish screen and fish-friendly diversion were installed to address entrainment and fish passage issues. Project partners provided project monitoring, operations, and maintenance assistance on this fish screen.

Lower Spotted Dog Creek

Between 2013 and 2017, the lower section of Spotted Dog Creek was identified as a location to complete irrigation efficiency projects to reduce the number of instream diversions, thus reducing passage and entrainment issues while realizing incidental instream flow. The potential exists to relocate or restore several sections of lower Spotted Dog Creek from its current degraded condition.

In 2024, NRDP worked with TU to develop a conceptual project to present to Cross Canyon Ranch (landowner). The concept project combined several diversions and rewater a section of the creek that historically is dewatered during mid-late summer.

In 2025, the following activities occurred on Lower Spotted Dog Creek:

- ***TU advanced design of a fish screen of the Spotted Dog 1 diversion on Cross Canyon Ranch. NRDP funds will be used for construction, anticipated to start in 2026.***
- ***The channel realignment discussion was re-initiated and will progress to conceptual design in 2026.***

Little Blackfoot River Watershed Aquatic Monitoring

FWP has collected extensive baseline and trend fish population data throughout the Little Blackfoot River Watershed. Electrofishing is now conducted in the Little Blackfoot River Watershed every two years. FWP conducted watershed monitoring on the Little Blackfoot River in 2023.

Mill/Willow Creeks (Section 3.2.2.12)

In fall 2020, NRDP along with project partners, FWP, NRCS, TU, and CFC, completed the Mill Creek Diversion No. 4 Irrigation Improvement Project. This project involved installing a rock weir, replacing a headgate, construction of a new irrigation ditch, installation of a fish screen, and streambank stabilization. This project provides irrigation water to the Mill Creek Irrigation Company, prevents entrainment of fish in the ditch, and provides upstream and downstream fish passage on Mill Creek. NRCS contributed approximately $25,000 to this project. In 2021**,** additional streambank stabilization was completed in the project area.

In 2023, NRDP and project partners continued to work with other water users and landowners on Mill and Willow Creek to identify other potential projects. NRDP and project partners provided project monitoring, operations, and maintenance assistance on this fish screen. ***In 2025, NRDP hired an engineer to develop concepts for fish screens and new diversions for Mill Creek Irrigation Company's No. 2 and No. 3 diversions. NRDP also worked with water users on maintenance issues on Mill Creek Irrigation Company's No. 4 diversion.***

Mill/Willow Creeks Aquatic Monitoring

FWP conducts watershed monitoring on Mill and Willow Creeks every 4-5 years. In 2021, FWP electrofished Mill Creek downstream of the Diversion No. 4 Project and captured 44 brook trout and 43 brown trout.

Racetrack Creek (Section 3.2.2.13)

In 2024, NRDP and WRC worked to prioritize projects in the Racetrack Creek watershed. Work on Racetrack Creek was on hold pending resolution of the Racetrack Lake water rights. Please see Racetrack Lake under aquatic flow projects (Section 3.2.1) for more information. In 2024, the State identified potential projects to improve brown trout spawning habitat in lower Racetrack Creek as well as potential projects to improved passage and potential improve flows.

In 2025, NRDP and CFC met with landowners to discuss opportunities to restore the lower mile of Racetrack Creek. This is a reach that was identified by FWP as an important refuge and spawning area for brown trout moving out of the Clark Fork River. Restoration conceptual design was developed for fencing repair and relocation, streambank treatments to reduce accelerated erosion, revegetation to increase woody riparian cover, stream channel realignment to relocate the channel away from irrigation pivots, and development of livestock water access in a way that reduces impacts to the creek. An irrigation diversion impeding upstream fish passage as well as an unscreened ditch were also identified during field visits. NRDP is working with CFC on a Future Fisheries funding application. Implementation of this project is anticipated to be fall 2026.

Racetrack Creek Aquatic Monitoring

FWP conducts watershed monitoring in the Racetrack Creek Watershed every 4-5 years. Refer to the Aquatic Resource Monitoring and Maintenance section of this update for more details.

Warm Springs Creek (Section 3.2.2.14)

Silver Lake Infrastructure

In 2022, NRDP, FWP, and TU worked with BSB to redesign the Silver Lake water delivery infrastructure at diversions on Storm Lake Creek, Twin Lakes Creek, and Meyers dam. These diversions pose barriers to upstream fish migration of native bull trout. In 2023 work continued on this project. Permitting processes were underway with USFWS, Army Corps of Engineers, Beaverhead National Forest, FWP, and Anaconda Deer Lodge County. Design has been completed for these diversion structures, which will facilitate trapping and passage of native fish by FWP staff and include the opportunity for volitional passage by native trout at the Twin Lakes diversions. This project has required close coordination between all partners and multiple permitting agencies.

Construction of fish traps to facilitate the passage of native bull trout at Meyers Dam, the Twin Lakes Creek diversion and the Storm Lake Creek diversion are a high priority aquatics project which have been completed. This was a highly collaborative project involving NRDP, TU, BSB, the Beaverhead-Deer Lodge National Forest, USFWS, ACOE and multiple contractors. Construction contracts were awarded in late 2023, all permitting was completed in the spring of 2024. Construction began in spring 2024 and was completed in the spring of 2025. The fish traps are in operation and have allowed for the passage of native bull trout to spawning habitats at the headwaters of Warm Springs Creek. Monitoring by FWP and USFWS is ongoing. NRDP expects that minor repairs and maintenance will be necessary to keep the traps functioning.

Match Funding

For 2024 and 2025 work, TU obtained match for approximately 50% ($542,000) of the construction costs for the Silver Lake Infrastructure project with funding from the Bipartisan Infrastructure Bill administered by the Beaverhead National Forest. USFWS provided $50,000 in match funding.

Anaconda Diversion

Project completed. Project monitoring, operations, and maintenance ongoing. Installation of a fish screen and diversion improvements for the "Anaconda Diversion" southwest of Anaconda was completed in the fall of 2016. Project partners provided project monitoring, operations, and maintenance assistance on this fish screen.

Gardiner and Warm Springs Wildlife Management Area (WMA) Diversion

Downstream of Anaconda, initial design for a fish screen and a rock ramp at the Gardiner Diversion to reduce entrainment and improve upstream fish migration was completed in 2018. Construction was put on hold, pending water user agreements. In 2023, TU re-opened discussions with the water users to determine the best next steps forward. In 2024, NRDP awarded an engineering contract to develop designs for these diversions incorporating new information about the efficacy of Farmers Conservation Alliance (FCA) fish screens. ***In 2025, design of the Gardiner Diversion continued. NRDP, TU, and the engineering firm met with landowners several times to discuss options for design and maintenance. It is anticipated that the design for the Gardiner Diversion will be completed in 2025, permitting will occur in the winter of 2026, and the project will be put out to bid in 2026.***

A small diversion on the Warm Springs WMA also impedes passage and may result in entrainment. FWP, TU, and NRDP are working to secure funding for design and construction of a fish screen.

When completed, the Gardiner and Warm Springs WMA diversion projects, in tandem with the Silver Lake Infrastructure project, will reconnect 64 miles of native fish habitat in Warm Springs Creek and complete fish passage projects in the watershed.

Upper Warm Springs Creek

Project completed. NRDP provided funding to TU as a cost share for fish passage improvements in the Upper Warm Springs Creek drainage. NRDP funds helped replace a failing culvert that was a known fish passage barrier with a clear span bridge. The project was completed in the summer of 2017.

Warm Springs Creek Aquatic Monitoring

FWP conducts watershed monitoring in the Warm Springs Watershed every 2 years. Refer to the Aquatic Resource Monitoring and Maintenance section of this update for more details.

Basin Creek (Section 3.2.2.15)

Basin Creek Reservoir Infrastructure

In 2019, NRDP, FWP, and TU began working with BSB on an aquatic project to address fish passage between the lower Basin Creek Reservoir and Upper Basin Creek Reservoir. In 2021**,** NRDP and BSB signed an agreement to implement the project. NRDP bid the project in late 2021 and awarded a contract for this work. In 2022, BSB notified NRDP that they were planning an extensive fuels reduction project in this area, and this project would interfere with the fish passage project. As a result, BSB requested to postpone the fish passage project until at least 2027. Since a contract was already awarded for this work, NRDP had to pay the contractor for lost "profit and expenses." No further work on this project is anticipated.

Basin Creek Re-routing Near Burt Mooney Airport

In 2021, NRDP examined whether re-routing Basin Creek south of the airport into Blacktail Creek is a feasible and cost-effective project consistent with the goals of the Restoration Plans. The project would

entail construction of up to a mile of new stream channel across multiple ownerships and would impact water use of downstream users on both Basin and Blacktail Creeks. This would be a costly and complicated project with uncertain benefit to aquatic resources. Currently NRDP does not consider this to be a feasible project.

Basin Creek Aquatic Monitoring

FWP conducts watershed monitoring in the Basin Creek watershed every 4-5 years. In 2021, FWP collected baseline fish population and movement data related to the Basin Creek Reservoir Project. Refer to the Aquatic Resource Monitoring and Maintenance section of this update for more details.

Gold Creek (Section 3.2.2.16)

In 2023, NRDP hired an engineer to begin planning and designing a fish screen for Gold Creek. ***In 2024 and 2025, NRDP is continuing to coordinate with the WRC and landowners to develop this project.***

Gold Creek Aquatic Monitoring

FWP conducts watershed monitoring in the Gold Creek Watershed every 4-5 years. In 2020, with help from the WRC and NRDP, FWP shocked six irrigation ditches on Gold Creek and discovered that many trout are being entrained in the ditches.

O'Neill Creek (Section 3.2.2.17)

In October 2020, a FWP contractor replaced the washed-out and clogged culvert on O'Neill Creek with a bridge. DNRC, FWP, and NRDP contributed to the cost of the new bridge. The new bridge will allow unimpeded fish passage in O'Neill Creek. NRDP and WRC were in discussions with the landowner to determine his interest in a fish screen, but the landowner passed away in December 2020. An NRDP engineer prepared a design options memorandum in early 2021. From 2022 through 2024, WRC was in contact with the new landowner, but the landowner wanted to wait until the legal transfer of the estate was complete. ***In 2025, NRDP has been in contact with WRC and the new landowner to discuss project options.***

O'Neill Creek Aquatic Monitoring

FWP conducts watershed monitoring in the O'Neill Creek Watershed every 4-5 years. In 2020, FWP and the WRC shocked the main irrigation ditch coming off O'Neill Creek and discovered that many trout are being entrained in the irrigation ditch.

Rock Creek (Section 3.2.2.18)

Bohrnsen-Marletto Fish Screen

Beginning in 2019, NRDP and TU, with engineering services provided by Great West Engineering, surveyed and evaluated the Bohrnsen-Marletto diversion and ditch on Rock Creek for a potential fish screen project. After identifying a preferred screen alternative, final design and bid package development occurred in 2020. Construction was completed in late 2020, with some site reclamation occurring in early 2021 prior to irrigation season. Project partners continue to provide project monitoring, operations, and maintenance assistance on this fish screen.

Upper Rock Creek Ditch Consolidation

Beginning in 2019, NRDP and TU, with engineering services provided by Great West Engineering, surveyed and evaluated the two diversions and irrigation ditches in upper Rock Creek and lower Middle Fork Rock Creek for a potential ditch consolidation and fish screen project. In 2023, NRDP and TU consulted with Great West Engineering to conduct an alternatives analysis to select a preferred fish

screen type. ***In 2024, NRDP, in conjunction with project partners, met with the landowners to review the alternatives analysis. The final design was developed in 2024. Construction will take place using TU's matching funds as was scheduled to be completed in 2025. However, construction was delayed because a final landowner agreement could not be agreed upon. Negotiations with the landowner are in process.***

Upper Rock Creek Diversions

In 2025, TU, in partnership with NRDP, hired an engineer to develop preliminary designs for fish screens and diversion improvements on three ditches on mainstem Rock Creek. These ditches (Marletto, Rhodda, and Breededn-Wilson) were identified by FWP as the highest priorities for addressing entrainment on mainstem Rock Creek.

Rock Creek Aquatic Monitoring

FWP conducts watershed monitoring on the mainstem of Rock Creek every two years. Refer to the Aquatic Resource Monitoring and Maintenance section of this update for more details.

Match Funding

In 2024, TU received $275,000 from the Bureau of Reclamation WaterSMART Program to complete design for three fish screen projects on the mainstem of Rock Creek. In 2025, TU also secured $600,000 from USFWS and has additional requests pending from private parties for the Upper Rock Creek Ditch Consolidation Project.

Aquatic Resource Monitoring and Maintenance Plan (Section 3.2.3)

The Aquatic Resource Monitoring and Maintenance Plan aims to develop consistent monitoring protocols to evaluate the effectiveness of implemented restoration actions and make adaptive management decisions.

Through an interagency agreement, NRDP funds FWP to conduct fisheries monitoring in the UCFRB. As described in the Aquatic Resource Management and Maintenance Plan, this monitoring occurs on three levels: project monitoring, watershed monitoring, and basin monitoring. Monitoring is focused on evaluating the effectiveness of restoration projects in meeting the aquatic goals of the Restoration Plans and identifies further opportunities for fisheries restoration. Details of 2024 FWP monitoring activities and results will be compiled in a report and available in spring 2025**.** Previous years' monitoring reports can be found on FWP's FishMT webpage. Below is a summary of recent monitoring activities. A summary of the monitoring associated with each project, watershed, and basin is also included in Table 2.

Basin Monitoring

FWP conducts trout population estimates on seven sections of the Clark Fork River between Warm Springs and Bearmouth every spring. Results from this monitoring have shown that the brown trout population upstream of Deer Lodge has been well below average for the last 6 years. The reduced brown trout numbers are of concern to the public as well as to agencies such as NRDP and FWP. The reason for the decline in the trout population is not well understood, but it is related to reduced spawning and rearing success. In March 2022, NRDP and UM organized a meeting with academic, agency, and non-governmental organization partners to identify reasons for the decline in the trout population and identify critical areas for future fish studies. At this meeting, USGS and FWP presented a study that indicated that prolonged drought is likely affecting brown trout in many Montana rivers. Following this meeting, FWP and NRDP made plans to conduct in-depth studies on trout spawning and

rearing in the Upper Clark Fork River, including repeating a previous study that showed which areas (tributary and mainstem) contribute the highest numbers of brown trout to the Clark Fork River.

A study using otolith microchemistry completed in 2017 provided valuable data about where brown trout living in the Upper Clark Fork River originated. This study utilized differences in the chemical composition of fish ear bones (otoliths) to assign fish from the mainstem Clark Fork River to specific spawning and rearing areas throughout the UCFRB. Some of these areas are in tributaries and some are in the mainstem. For example, 36% of brown trout sampled upstream of Deer Lodge were born in the UCFR and 64% were born in tributaries. In this way, NRDP was able to identify important sources of brown trout to the Clark Fork River.

Because of the dramatic decline in brown trout numbers in the Clark Fork River upstream of Deer Lodge, FWP and NRDP have been working to repeat the otolith microchemistry study to evaluate what changes may have occurred in these sources of trout. Brown trout otoliths were collected in 2021 and 2022 and were analyzed for microchemistry in 2023. In 2024, the 2023 microchemistry data were compared to the results from 2017 to look for changes in recruitment sources. In 2023, the sources of recruitment had shifted to 92% of fish coming from tributaries and 8% coming from the mainstem. These results indicate that mainstem recruitment has decreased since 2017. However, loss of mainstem recruitment alone cannot explain the greater than 1000% decline in brown trout abundance over the last ten years.

As part of the 2024 revision of the Restoration Plans, $1 million was allocated to identify factors contributing to low fish numbers in the upper part of the Upper Clark Fork River. In 2024, NRDP developed a plan for utilizing these funds. Part of the funds are being used to fund FWP to conduct additional fish monitoring and two research projects with Montana Tech. NRDP is also coordinating with the USGS and DEQ to enhance water quality in the upper river.

NRDP and partners continued working on the "Where's the Fish" investigation in 2025. These efforts focused on water quality evaluations, fisheries research, and habitat and geomorphology investigations. NRDP signed a cooperative funding agreement with the USGS to analyze existing datasets and collect new water quality data on the Clark Fork River from Deer Lodge to Warm Springs. NRDP hired contractors to provide detailed geomorphic and fish habitat data on remediated and unremediated phases. FWP installed screw traps in the Clark Fork below the confluence of Warm Springs Creek, Lost Creek, and Gold Creek to capture and tag trout migrating downstream. FWP also installed PIT tag antenna stations at two locations in the mainstem and in Racetrack and Lost creeks. FWP also secured funding for a Montana State University graduate research project assessing trout survival that will begin field work in 2026.

Watershed Monitoring

FWP collects baseline and trend trout population data in all priority 1 and 2 tributaries. Watershed monitoring entails sampling fish at established locations spread throughout the watershed. Because not every restoration project can receive detailed fisheries monitoring, the intent is that watershed monitoring will capture any trends in the fish populations. Larger tributaries such as Warm Springs Creek, the Little Blackfoot River, and Flint Creek are sampled every two years. Smaller tributaries were sampled annually from 2015-2017 and are now sampled every 2-5 years. More time and/or more projects are needed before measurable changes in fish populations may be realized in some

watersheds. In smaller watersheds where restoration actions are complete (see Section 3.2.2.9 *Harvey Creek*, improvements in fish populations may appear earlier in the monitoring data.

Project Monitoring

Due to time and funding limitations, not every project can be monitored by NRDP or FWP. Therefore, project monitoring focuses on high-priority projects or projects where lessons learned can be applied to future projects. Examples listed above include fish screen and fish passage projects in the Cottonwood and Flint creek watersheds. These studies focus on answering two questions related to fish screens: 1) How much of the trout population in the tributary is influenced by these projects, and 2) Do the screened fish make it to the Clark Fork River? Project monitoring continued in Cottonwood and Flint creeks in 2024.

Fish Screen Project Operation and Monitoring

In 2023, a contract was established with the WRC to complete operation, maintenance, and monitoring of 12 fish screens where agreements were not in place. The WRC hired a technician to work with water users to ensure proper operation of fish screens was occurring throughout 2023. ***The WRC fish screen operation and maintenance program continued in 2025. Work was conducted on 13 fish screens and major maintenance activities included cleaning, optimization for landowners, alterations and repairs, and landowner coordination.***

Terrestrial Restoration Plan (Section 4.0)

In 2012, NRDP, in consultation with the AC, stakeholders, and the public, prepared the *UCFRB Terrestrial Restoration Plan* for public comment, consideration, and approval by the Governor. Following public comment and Governor approval, this restoration plan was amended in 2016, 2019, and 2024.

The core elements of the plan are:

- Terrestrial Resource funding ($19.6 million allocated in 2012).
- Nine Priority Areas identified by scientific data, resource managers, and stakeholders.
- Fee title acquisitions/conservation easements are the highest priority.
- Landowners must allow public access as part of agreements to participate in projects.
- Close coordination with willing landowners, FWP, DNRC, and WRC is necessary.

TERRESTRIAL RESOURCE RESTORATION GOALS

1. Restore injured terrestrial resources and associated ecological and recreational services.
2. Replace injured terrestrial wildlife resources by protecting and enhancing habitats similar to those injured.
3. Replace lost hunting, wildlife viewing, bird watching, and other wildlife-related outdoor recreational opportunities by enhancing wildlife habitat, wildlife populations, and ensuring public access to these wildlife resources.

Terrestrial Projects

A land project near Galen on Lost Creek was considered for several months in 2021 but ultimately rejected because of uncertainty regarding which water rights were available for instream flow.

Terrestrial restoration actions in 2022 were focused on wildlife habitat improvement. Habitat enhancement projects in 2022 were completed in the Garnet, Philipsburg West, and South Deer Lodge Landscapes. Wildlife habitat enhancement projects are the current focus of terrestrial funding. Enhancement projects designed to improve riparian and range management on a ranch near Gold Creek as well as on DNRC land in Brock Creek were completed in 2023 and 2024 in the Garnet Landscape. Monitoring of those water development and fencing projects is ongoing. ***In 2025, NRDP will award a contract to remove encroaching conifers from approximately 300 acres of shrub grasslands and aspen stands in Gough Creek and Brock Creek. This project as well as two other conifer removal projects led by WRC, with DNRC funding, will enhance wildlife habitat on up to 800 acres in 2026. Terrestrial projects are summarized in the sections below and in Table 3.***

Land Projects—Conservation Easements and Fee-title Acquisitions

Per the Restoration Plans (Section 4.2.4), purchase of conservation easements from willing landowners and fee title acquisition of lands are high priority actions to acquire equivalent resources (and services) to those that were damaged by historic mining and smelting in the UCFRB. Acquisition of equivalent resources is a core part of NRDP's mission. Since approval of the 2012 Restoration Plans, NRDP has provided funding for three conservation easements on private lands (the Buxbaum, Graveley, and the Dry Cottonwood Creek Ranches) as well as three fee title purchases of land in the Anaconda area—which added a total of 1,394 acres to FWP's Garrity Mountain Wildlife Management Area (WMA) Below are updates on recent work on these lands.

Buxbaum Conservation Easement (Lower Flint Creek Landscape, Section 4.2.4.2)

Project completed. Monitoring ongoing.

Five Valleys Land Trust (FVLT) and NRDP worked with the Buxbaum family to protect 1,193 acres of grassland, wetland, and forest habitat near Maxville with a permanent conservation easement in 2018. FVLT also worked with FWP to secure public hunting opportunities on the property and USFS lands east of the property. The property is located east of Highway 1 in the foothills of the Flint Creek Mountain Range. In September 2018, the AC and Trustee Restoration Council recommended allocation of $200,000 in funds to assist in the acquisition of this conservation easement, which were subsequently approved by the Governor. The majority of the project funding came from NRCS. The Buxbaum property was encumbered with a conservation easement to protect its natural resource values and provide for public access in February 2019. One hundred hunter days of access must be provided to lands in this conservation easement every year.

The property's grasslands, forests, wetlands, and aspen groves are connected to wildlife habitat in the Flint Creek range to the south and the John Longs to the west. Most of the property is undeveloped and provides rangeland and wildlife habitat. The conservation easement provides an effective and cost-efficient way to permanently protect the properties' conservation values, while keeping the land in private ownership and management. No residential development is permitted, thereby protecting in perpetuity the wildlife habitat and open space values the property offers.

FVLT and NRDP staff when available visit the Buxbaum conservation easement as part of their annual stewardship monitoring visits. No breaches of the conservation easement terms have been documented since adoption of the conservation easement. FWP and the landowner report 50 hunter use days on an annual basis, which is consistent with the terms of the conservation easement.

Graveley Conservation Easement (Garnet Landscape, Section 4.2.4.3)

Project completed. Monitoring ongoing.

In February 2019, the Governor approved the allocation of $3.5 million for the acquisition of two conservation easements on the Graveley and NCP Bayou properties, located northwest of Garrison. These properties, totaling approximately 8,276 acres, consist of montane grasslands, forests, wetlands, aspen groves, and two perennial creeks which are connected to wildlife habitat throughout the Garnet Range. The conservation easements, held by FVLT, provide an efficient and cost-effective way to permanently protect the public access and conservation values of these properties, while keeping the land in private ownership and management. FVLT makes annual site visits to monitor this conservation easement. In 2022, NRDP staff accompanied FVLT on their monitoring visits. No inconsistencies with the terms of the easement were observed in 2022. In 2023 NRDP staff again participated in the monitoring visit—ranch management remains consistent with the terms of the easement. The ranch is part of the Warm Springs Creek Block Management Area (BMA), which in 2024 provided 1,428 hunter days. The Graveley family remains a committed conservation partner, and they are interested in pursuing habitat enhancement projects on their property. In 2024, NRDP staff participated in the monitoring visits, which again showed that the landowners are meeting the terms of the conservation easement.

In 2025, NRDP, FVLT completed monitoring visits—FVLT reports found that the landowners remain in compliance with the terms of the easements and continue to support terrestrial plan actions to replace and restore high quality habitats.

Clark Fork River Ranch (Deer Lodge South, Section 4.2.4.6)

Project completed. Monitoring and management ongoing.

In April 2019, the Governor approved the purchase of the 2,650-acre Clark Fork River Ranch (CFRR), located several miles south of Deer Lodge. The CFRR includes 5.5 miles of the Clark Fork River corridor containing approximately 850 acres of riparian habitat and another 1,800 acres of high-quality grassland and shrub grassland habitat. Having this property in State ownership facilitates State remedial and restoration actions, provides flow to the dewatered reach of the Clark Fork River, and allows for permanent public access on the entire property. ***NRDP manages the ranch and in 2025 completed a management plan to guide its use.*** FWP and NRDP are managing access to the river and upland areas for public hunting, fishing, and other recreational activities. The BMA for this ranch, Sager Lane BMA, was launched in September 2019. FWP reports that the Sager Lane BMA had 404 hunter days in 2024.

After the property is no longer needed for remediation/restoration actions, NRDP will work with other state and local government agencies and seek public input regarding the property's disposition. Disposition options for the property must meet state requirements and could include establishment of additional conservation easements to protect Restoration Plan goals and retain some level of public access, transfer of the property to another state or local governmental entity or entities, or other options developed by NRDP with stakeholder and public input. Under the terms on a conservation easement on the property the state has the right to develop fishing access site on the property. If the property is sold, consistent with state requirements, the three funds will be reimbursed the pro rata share of the proceeds of the sale.

NRDP has a lease with the adjoining landowner that allows for cattle grazing and split season hay production on the 250 acres of pivot irrigated lands. In 2022, NRDP began to evaluate the efficacy of this approach to water management and cooperative management with a landowner. Work in 2022 consisted of vegetation monitoring and repairs to a fence along the Clark Fork River on the northern boundary of the property, as well as evaluation of water use associated with the pivots. In 2023 and 2024, NRDP continued monitoring and maintenance on the property. Repairs were made twice by the Montana Department of Transportation to down fences along the interstate right-of-way, evaluations of water use continued, NRDP met with Powell County disposal site staff to resolve fencing issues, and four vegetation monitoring enclosures were completed and monitored. NRDP has accompanied FVLT on their annual monitoring trips to the Broken Circle conservation easement, which includes the CFRR as well as two other ranches. FVLT is aware of the split season water lease as well as ongoing livestock management, planned water developments, range monitoring, and the potential use of uplands on the property as a repository. FVLT finds that all actions discussed above are compatible with the terms of the conservation easement.

In 2025 NRDP completed the Clark Fork River Ranch Management Plan, which will guide future management of the ranch. In addition, NRDP constructed an approximately 3,000' electric fence and three water gaps on the neighboring Broken Circle Ranch to prevent cattle trespass on the CFRR, the lessee constructed approximately 4,000' of fence in a pasture near the river, and NRDP worked with an engineer to design and award a bid to contractor to develop a water system on the CFRR and the lessees' property. The goal of these improvements to infrastructure on the CFRR is to facilitate long term sustainable, cooperative grazing management with the lessee to support the split season water lease.

Dry Cottonwood Creek Ranch Conservation Easement (Deer Lodge South, Section 4.2.4.6)

Project complete. Monitoring and development of additional projects ongoing.

The purchase and placement of a conservation easement on Dry Cottonwood Creek Ranch (DCCR) and Deer Lodge River Ranch (DLRR), located in Anaconda-Deer Lodge County approximately 13 miles northwest of Anaconda, was recommended by the AC and approved by the Governor in 2018. In 2019, NRDP and CFC acquired both properties. NRDP and CFC sold DCCR in April 2021 for $2.1 million with a conservation easement that protects the ranch's natural resource values.

The conservation easements placed on DCCR and DLRR ensure public access and habitat protection on 3,396 acres, including 5.3 miles of the Clark Fork River. The river corridor will have public access in perpetuity. Other riparian benefits from this project are access to 1.5 miles of Dry Cottonwood Creek and 1.2 miles of Modesty Creek. The 2,425 acres of uplands habitat surrounding the east side of the property are primarily native intermountain grasslands and conifer forests. These environments provide habitat for a variety of game and non-game species. This property is part of the Upper Clark Fork BMA, a heavily used BMA. FWP reported 2,249 hunter days on the BMA in 2024**.** The DCCR will continue to be available to hunting in perpetuity. Much of the property is important big game winter range, primarily for elk, white-tailed deer, and mule deer.

In 2022, NRDP contracted with the owners of the DCCR to remove high fencing around the Clark Fork River where remedial actions were completed in 2016. In total, 4.6 miles of fence were removed and replaced with 4.9 miles of fencing more compatible with wildlife passage and ranch operations. Montana Land Reliance (MLR) holds the conservation easement on the ranch. In 2022 it was found that the landowner had accidentally built a portion of a new home outside of the required building

envelope. In 2023 MLE and NRDP worked with the landowner to resolve this issue, which did not affect the conservation value of the property. NRDP has been in communication with the landowners since their purchase of the property regarding the conservation easement. In 2024, NRDP accompanied MLR on their easement monitoring trip. The ranch management was found to be compliant with the conservation easement terms.

Due to staffing changes MLR did not complete their conservation easement monitoring in 2025. In 2025, a conifer encroachment project was completed that provided woody materials for the Clark Fork River remedy and restoration project.

RY Addition to the Garrity WMA (Anaconda Landscape, Section 4.2.4.7)

Project completed. Operations and maintenance ongoing by FWP.

In 2014, the Governor approved the acquisition of 640 acres on the east side of the Garrity WMA. The property was initially owned by RY Timber Company, and the Conservation Fund acted as a bridge party while the State of Montana completed necessary due diligence and public processes. The property's value includes critical elk winter range, spring calving habitat and abundant aspen stands, which support multiple nongame species, including migratory neotropical birds. Since its purchase, FWP has used NRDP funding to complete fencing, control weeds and construct a wildlife viewing area.

In 2025 FWP used herbicides to treat weeds on 242 acres of the RY Addition and mechanically removed weeds from 60 acres.

YT Timber Addition to the Garrity WMA (Anaconda Landscape, Section 4.2.4.7)

Project completed. Operations and maintenance ongoing by FWP.

In April 2019, the Governor approved the acquisition of 154 acres of land adjacent to the Garrity WMA 7 miles west of Anaconda. This project provided a unique opportunity to conserve a private inholding of important wildlife and fish habitat along Warm Springs Creek and consolidate it with the rest of the Garrity WMA. The property provides habitat connectivity between the Flint Creek and Anaconda-Pintler Mountain ranges and protects key habitat for bull trout and westslope cutthroat trout.

Current management of this addition is consistent with the objectives of the purchase which were to: add critical fish and wildlife habitat to the WMA, enhance recreational opportunities and access, buffer the WMA from development on its northern border, and protect a bighorn sheep migration route.

Stumptown Addition to the Garrity WMA (Anaconda Landscape, Section 4.2.4.7)

Project completed. Operations and maintenance ongoing by FWP.

In June 2020, the Governor approved the purchase of an additional 600 acres to the Garrity WMA known as the Stumptown Addition. The Stumptown Addition provides critical winter range for elk, deer, and moose. It also provides spring calving habitat for elk. The property includes 0.7 miles of Warm Springs Creek and associated riparian habitats which constitute some of the most productive and diverse riparian habitats in the area. The addition supports a diversity of game species and many nongame species. Located only 1.5 miles west of Anaconda, the property offers a variety of recreational opportunities including hunting, fishing, hiking, picnicking, and wildlife-watching. The addition improves fishing access on Warm Springs Creek and provides access to a network of trails and old roads that pass through a diversity of habitats. The appraised value of the property was $1,740,600 with $1,465,600 coming from NRDP restoration funds. Closing for the property occurred in October

2020 and the property opened to public access in early November 2020. In 2023, FWP, using Restoration Funds, surveyed the boundary of the Stumptown addition.

Habitat Enhancement Projects

NRDP has worked with project partners on multiple habitat restoration projects in the UCRFB using terrestrial funds. In 2022 NRDP constructed two water development projects on DNRC properties—one in West Philipsburg and one in the Garnet landscape. Both were monitored in 2023, 2024, and 2025. The findings are discussed below.

NRDP is working with FWP and has contracted with the WRC to assist in assessing and implementing terrestrial restoration projects on private lands in the Deer Lodge North, Deer Lodge South and Garnet landscape areas. In 2024 and 2025, NRDP, FWP, and the WRC visited completed projects in the Garnet and Deer Lodge South landscapes. Monitoring and status updates of completed terrestrial priority projects were a high priority. A monitoring report from WRC that summarizes the status of all completed private lands terrestrial enhancement projects was completed in December 2022. In 2023,024 and 2025, NRDP contracted with TU to develop projects in riparian areas in the Philipsburg West landscape as well as tributaries of Rock Creek. Vegetation monitoring sites have been established in riparian areas in Philipsburg West and the Garnets to monitor water development projects as well as fencing and the projects' effect on riparian vegetation. Where fencing was constructed, there was a clear resource benefit.

Monitoring continued in 2025 with the following findings.

Philipsburg West Landscape Area (Section 4.2.4.1)

In 2022, NRDP completed the following wildlife enhancement projects in the Philipsburg West Landscape Area:

- **DNRC North Fork Spring Creek:** Two steam crossings as well as 5,896 feet of fence were constructed on a DNRC parcel to protect the North Fork of Spring Creek and associated riparian habitat on approximately 50 acres. This project was completed in 2022. Monitoring in 2023, 2024, and 2025 has shown that riparian vegetation has benefited from a rest from grazing. ***In 2025, monitoring completed showed that young cottonwoods are becoming established and willows are flourishing in the newly fenced riparian area.***

- **Habitat Enhancement Project Development*:*** In 2023 TU and NRDP began work with landowners to identify opportunities for riparian fencing, water gaps, beaver mimicry, and riparian enhancement projects in this area and a low-tech stream restoration project was completed along a half mile of Upper Willow Creek. Monitoring and maintenance of the Upper Willow Creek restoration project was completed in 2024. ***In 2025, monitoring shows that most beaver dam analogs constructed onsite are functioning as designed.***

Additional habitat enhancement projects in this landscape are conceptual.

Garnet Landscape Area (Section 4.2.4.3)

In 2022, NRDP worked on the following wildlife enhancement projects in the Garnet Landscape Area:

- **DNRC Brock Creek**: Construction of one spring development, a water gap, 300 feet of pipeline, two stock water tanks and fencing to keep cattle out of Brock Creek was completed in 2022. This work protected approximately 5 acres of riparian habitat.

In 2023, 2024 and 2025, NRDP worked on the following wildlife enhancement projects in the Garnet Landscape Area:

- **Hollenback Ranch*:*** Construction was completed in 2024 for a riparian habitat enhancement project that included the installation of four spring developments
- ***In 2025, NRDP has a project out for bid which will result in the removal encroaching conifers from 135 acres of shrub grasslands and aspen stands on the Hollenback Ranch in December 2025 or the winter of 2026.***
- ***DNRC Dutton lease: In 2025, NRDP has a project out for bid which will result in the removal of encroaching conifers from 170 acres of shrub grasslands and aspen stands in December 2025 or the winter of 2026.***
- Monitoring sites were established on the DNRC Dutton and Hollenback Ranch projects. Cattle are using the spring development as well as water gap on the DNRC parcel. Fencing has been only partially successful in keeping cattle out of Brock Creek. DNRC will work with the lessee in 2026 to assure that fences are maintained and cattle kept out of the riparian area.

Match Funding

In 2024, matching funds were secured by WRC for conifer removal projects in the Garnets: the DNRC provided $245,000 and the Mule Deer Foundation provided $20,000. ***It is anticipated that those funds will be spent in late 2025 or early 2026.***

Deer Lodge South Landscape (Section 4.2.4.6)

Habitat enhancement projects in the Deer Lodge South Landscape Area started in 2016 with the WRC working with local landowners on projects that enhance wildlife and wildlife habitat. Projects implemented to date include aspen regeneration, conifer encroachment removals, off stream stock water developments, riparian fencing, beaver mimicry, biological and chemical weed control, and other riparian enhancement work. Project identification, development, and implementation in the Deer Lodge South landscape continued in 2024 and 2025.

- **Dry Cottonwood Creek Ranch (DCCR)**: In 2022, 4.9 miles of fence were built to facilitate wildlife passage, and high fencing was removed and replaced with fence more compatible with wildlife passage and ranching around a 350-acre area on the DCCR. This included a 5-mile section of the Clark Fork River where remediation and restoration were completed. More information on activities on the DCCR is provided in the Lands Projects section of this summary.

- **Clark Fork River Ranch*:*** Detailed information on management and restoration efforts on the CFRR is provided in the Lands Projects section of this summary.

- **Anderson Ranch**: A habitat enhancement project was in the conceptual phase on the Anderson Ranch. This project could have included off-stream water development, riparian fencing, and beaver dam analogs. In 2023, WRC, NRDP and FWP made a site visit to the Anderson Ranch to evaluate a proposed water development as well as placement of beaver dam analogs. After consideration, it was determined that development of multiple water developments on the property would be a better fit for funding from the Farm Service Agency, or other partners, instead of NRDP. The benefit to natural resources for this project is not commensurate with the cost.

- **Lampert Ranch:** Significant habitat enhancement work has been accomplished on the Lampert Ranch beginning with construction of numerous beaver dam analogs on Cook Creek and Girard Gulch as well as eleven aspen enclosures in 2017. In 2021, two spring developments were constructed with 8,577 feet of pipeline to service four stock water tanks. In 2022, three laydown fences were constructed to accommodate wildlife passage. Also, a conifer encroachment project was completed on 12 acres in coordination with the CFR remediation/restoration. In 2023, a conifer encroachment project was completed in coordination with the CFR remediation/restoration. As of 2024, all identified terrestrial habitat enhancement projects have been completed on this ranch.

Monitoring

Ongoing monitoring of projects in the Garnet and Deer Lodge South landscapes shows that long-term maintenance is necessary to ensure that infrastructure investments provide long-term benefits. Other findings are:

- Beaver dam analogs have been effective in the short term but need consistent maintenance and monitoring to ensure that they remain effective after installation.
- Aspen clone enhancement through conifer thinning and grazing exclosures is most likely to generate suckering and stimulate growth in larger clones. Removal of conifers from aspen stands around springs has been especially effective.
- Laydown fences for wildlife passage are effective when used correctly.
- Riparian fencing must be maintained to be effective and coordination with landowners (and their lessees) is necessary to ensure fences remain intact and in good repair.
- Off stream water systems need better preliminary assessment to ensure they will continue to flow in dry years. Additional fencing or water gaps, rather than just the provision of water in the uplands, may be necessary to alter cattle grazing patterns.
- Conifer encroachment, precommercial thinning and slash filter windrows are all effective prescriptions.

Biological control of weeds needs additional assessment to determine its effectiveness because some of the appropriate species providing biological controls are already present.

FWP Wildlife Management Area Support (Section 4.2.5)

Per the Restoration Plans, NRDP and FWP have an MOU which allocates $2 million for habitat protection and enhancement for existing FWP WMAs acquired with NRD funds or within the UCRRB. These areas include the Spotted Dog, Garrity, Blue-eyed Nellie, Stucky Ridge, Warm Springs, Lost Creek WMAs, and a portion of the Mount Haggin WMA. Proposed actions for these WMAs are those beyond the routine operation and maintenance activities for which FWP is normally funded. These activities include riparian fencing, riparian restoration, acquisition of key private in holdings, biological and other weed control, road removal, wetland restoration, and habitat enhancement. Activities by FWP began in 2019 and have continued. In 2023, FWP completed a boundary survey of the Garrity Mountain—Stumptown addition, conifer thinning from aspen stands on the Mount Haggin WMA and forest inventory on the Mount Haggin WMA. FWP has completed the fencing of the Spotted Dog WMA; monitoring shows a subsequent reduction in trespass cattle impacting the WMA. In 2024, FWP began a

research project to evaluate the utility of a soil amendment (Nutrafix) to control cheatgrass and improve grassland health on the Willow Creek addition to the Mt Haggin WMA—findings from that study are not yet available. ***Activities on UCFRB WMAs in 2025 were focused on fencing and weed control to enhance and prevent degradation of riparian, grassland, and shrub grassland habitat.***

Conservation Reserve Enhancement Program (CREP) (Section 4.2.6)

In September 2016, the Governor formally submitted to the U.S. Department of Agriculture an application for a Conservation Reserve Enhancement Program (CREP) for the UCFRB. The CREP is administered by the Farm Service Agency and focuses on high-priority conservation issues identified by local, state, or tribal governments by removing environmentally sensitive land from production and/or introducing conservation practices in which farmers, ranchers, and agricultural landowners are paid an annual rental rate. In 2023 no CREP projects were initiated. In the winter and spring of 2024, FSA state and local staffers and NRDP met with conservation districts to provide them with additional information on the program and discuss opportunities for implementation with willing landowners. In 2024, no landowners approached FSA to complete CREP projects in the Upper Clark Fork River Basin***. In 2025, due to a lack of landowner interest, the Upper Clark Fork River Basin CREP agreement was dissolved.***

Blacktail Creek Riparian Habitat Enhancement

In 2022, NRDP, the WRC and NRCS prepared CREP proposals for several landowners along Blacktail Creek. These proposals would enhance wildlife and aquatic habitat along approximately 1.5 miles of Blacktail Creek. Securing public access to portions of a large property along Blacktail Creek is also a priority. In 2024, NRDP and FWP evaluated low tech stream restoration projects completed in 2017 and 2018 at the headwaters of Blacktail Cree. It was determined that beaver dam analogs constructed on several sites require maintenance***. In the fall of 2025 NRDP, MT Tech, WRC and RIPPLE completed a site visit to beaver dam analogs in Blacktail and Basin Creeks to determine how to best maintain beaver dam analogs in the future.***

Recreation Projects (Section 5.0)

The six recreation projects included in the Restoration Plans are funded with the proportionate allocations of aquatic and terrestrial priority funds identified in the Restoration Plans.

The following are key factors that the State relied on in developing its proposed plan for the enhancement of recreational services:

- That by restoring or replacing injured natural resources of the UCFRB, some of the recreational services lost due to those injuries will also be restored.
- That recreational projects must be natural resource-based and offer resource benefits in addition to recreational benefits.
- That general preferred types of recreational projects that offer resource benefits include those that: 1) prevent resource degradation by the user public; 2) enhance existing recreational projects; and 3) provide fishing and hunting access in a resource-protective manner.

Recreation projects are summarized below and in Table 4. Project sponsors are responsible for operation and maintenance of all recreational facilities.

Drummond Kiwanis Riverside Park

Following public comment and a favorable funding recommendation from the AC and Trustee Restoration Council, the Governor approved the property acquisition portion of this project for funding in November 2013, subject to several funding conditions. The land acquisition was completed in December 2014. In 2021, the Kiwanis completed the construction of the park trails, parking area, and fishing access locations. Other park amenities will be funded by Kiwanis.

Deer Lodge Trestle Park / Old Yellowstone Trail

NRDP and Powell County finalized a phased contract that enabled the County to conduct initial outreach and design tasks associated with Trestle Park. However, due to unforeseen circumstances, Powell County could not implement the Trestle Park project. In the 2015 Update to the Restoration Plans, Powell County submitted a project abstract, proposing to compose a Master Plan to create linkage between existing recreational opportunities in and around the City of Deer Lodge along the Clark Fork River, and connect to the trail system at the Grant-Kohrs National Park. This planning proposal was integral to the Deer Lodge Trestle Park project being funded through the Restoration Plans. Rather than include this project as a separate recreational project, NRDP worked with Powell County to integrate this project into Powell County's current Trestle Park project, as there were funds available. Powell County completed their Trails Master Plan in October 2016 and requested NRDP and UCFRB AC approval to proceed with development of the Branning Trail purchase and development.

In 2016, Powell County, on behalf of the Powell County Parks Board, used Restoration Funds to purchase 7.5-miles of the Old Milwaukee right-of-way to convert it into a recreational trail for public use. Powell County completed construction on eight miles of the trail, known as the Old Yellowstone Trail, in 2018.

In 2021, Powell County started the second phase of the project, which included planning and design to connect to the Grant-Kohrs Ranch trail system maintained by the National Park Service. In 2022, Phase 2 of the trail was constructed, completing an 11-mile trail system from Garrison to Deer Lodge. In 2023, Powell County performed maintenance on the trail and secured a $100k grant for surface improvements to the trail. In 2024, Powell County spent the $100k grant on trail improvements, including building the road grade in areas, improving drainage, and adding a fine gravel surface along the section from Kohrs Crossing to Deer Lodge. Powell County is also working on an agreement with Grant-Kohrs to allow bikes on the trail and install a bike-over-cattle-guard on the northern boundary of the trail. Powell County continues to seek additional funding for trail connections in partnership with neighboring municipalities.

Washoe/Hafner Dam Parks

Project completed. NRDP and Anaconda Deer Lodge County (ADLC) executed a contract in December 2013 for the second phase of work which includes project management, engineering, and design work for recreational improvements based on Phase I 2013 LIDAR results and Phase III implementation. ADLC entered into a contract with Jordan Construction and began construction in spring 2015. Work at Washoe/Hafner Park was completed in 2017. ADLC held a dedication ceremony in the summer of 2017 and the UCFRB AC was given a tour of the park in June 2017 by former AC member and project manager Mark Sweeney. In 2024, Citizens and ADLC have expressed interest in improved interpretive features at the Hafner Dam.

Milltown State Park

FWP and NRDP signed a memorandum of agreement for the Milltown State Park project work covered in the Restoration Plans. Most of the recreational trail and access feature development work at the park was conducted in 2013 was done pursuant to the 2009 Milltown State Park grant. FWP developed and implemented a trail plan to establish trails on the south side of the river upstream of the former dam site in 2015. The trails on the south side provide public access to the former reservoir area.

In 2018, after finalization of an access agreement with International Paper for the Confluence Area, FWP completed construction of the Milltown State Park Confluence area with its grand opening in June 2018. FWP is also working with the Bonner Development Group for a donation of property in the former Duck Bridge area. Efforts continue with the development of trails and other park amenities.

In 2019, along with operations and maintenance, FWP assessed the development of a connecting trail through the old Chicago-Milwaukee railroad tunnel and coordinated trail development up the Blackfoot River with the Montana Department of Transportation during the I-90 bridge replacement.

In 2020, FWP finalized a property donation from the Bonner Development Group to the Milltown State Park. This 17-acre parcel is located near the old Duck Bridge and includes established trails and a pavilion.

In 2021, FWP saw record visitation at Milltown State Park. FWP continues to work on trail connections within and to the park. The old Chicago-Milwaukee railroad tunnel evaluation continues as alternatives to safely open the tunnel are considered.

In 2022, FWP continued its operation of the Milltown State Park. A volunteer tree planting day was held on National Parks Day and in September a western red cedar tree was planted in the Confluence Area in recognition of former AC member and CSKT environmental staff member Mary Price for her years of dedicated work in the UCFRB. FWP did have to close the parks overlook area due to potential unstable areas near the cliff face, which FWP is evaluating in order to make a decision on how to manage this are

In 2023 and in 2024, FWP continued its operation of the Milltown State Park. A volunteer tree planting day was held on National Parks Day. FWP closed the Bluff Overlook due unstable geotechnical concerns observed in the area. FWP is developing plans to move the Overlook to safe location away from the unstable area.

In 2025, using allocated funds from 2012 Restoration Plan, FWP continued its operation of the Milltown State Park reporting over 100,000 visitors and relocated the Bluff Overlook visitor area a safe distance back from the unstable area.

Bonner Dam Removal

This work was completed in January 2014 with the removal of remaining dam infrastructure.

Clark Fork River Fishing Access Sites (FAS)

FWP and NRDP have established a memorandum of agreement for FWP to begin the scoping process on certain Upper Clark Fork River department-owned properties, which are currently undeveloped fishing access sites (FAS), to determine the feasibility of developing these FASs to include improvements such as boat launches, latrines, and designated parking.

- *Bearmouth FAS:* FWP completed the Bearmouth FAS in early 2019. The FAS is open to the public.
- *Gold Creek FAS:* FWP initiated work on the Gold Creek FAS in 2018. Gold Creek FAS was completed in 2019 and is open to the public.
- *Racetrack Pond FAS:* NRDP completed the Racetrack Pond FAS in 2018, except for the installation of the fishing pier, which occurred in spring 2019. FWP has stocked the pond with fish, and the FAS is open to the public.
- *Vet Clinic FAS:* NRDP assisted FWP in completing a Checklist Environmental Assessment released for public comment. FWP is gathering initial public input and has prepared an EA for this project. Some initial input from the public was in opposition to developing a FAS at the Vet Clinic site. FWP is continuing to engage with Powell County and other stakeholders on locating an appropriate site for a new FAS that would provide boat access between Arrow Stone Park and Kohrs Bend.
- *Kohrs Bend FAS:* NRDP, FWP, and DEQ evaluated new data related to possible contamination of sediments in the floodplain. NRDP is working with FWP and DEQ to develop an expected timeline for cleanup and recreational improvements at the site. FWP is proposing to construct a boat ramp and a new parking lot at this FAS. Users of the site are currently launching boats from a steep bank, causing erosion and safety concerns. FWP and NRDP concluded that making improvements to this site prior to full cleanup would be justified and cost-effective since cleanup is not scheduled at this location until 2035. ***In 2025, NRDP hired a contractor to characterize the contaminated soils that would be encountered when constructing FWP's improvements. This will allow NRDP and DEQ to plan the disposal of contaminated materials.***

Greenway Service District – Silver Bow Creek Greenway

In 2023, the Reach Q/R trail from Crackerville to the Observation Loop near the Montana Department of Transportation rest area off Highway 1 was completed in October 2023. The contract was for 10,656 feet of 10-foot-wide asphalt trail with a bid of $486,300. The engineer's estimate was $710,000. The persistent winter and wet spring delayed the start of the project, but the work is 99% complete. The Greenway Service District (GSD) and their engineering consultants have been working on the design for the trail through Durant Canyon and from the Observation Loop, under Highway 1, to its termination point at Stewart Street in Opportunity. ***In 2024 and 2025, no new construction occurred on the Greenway project. The GSD and their consultants focused on designing the remaining segments of trail, securing access and seeking matching funds. NRDP is working with the GSD on the new contract for the restoration funds allocated to the Greenway project in the 2024 Plan revision.***

Figure 2-1. Aquatic Priority Areas 1 and 2

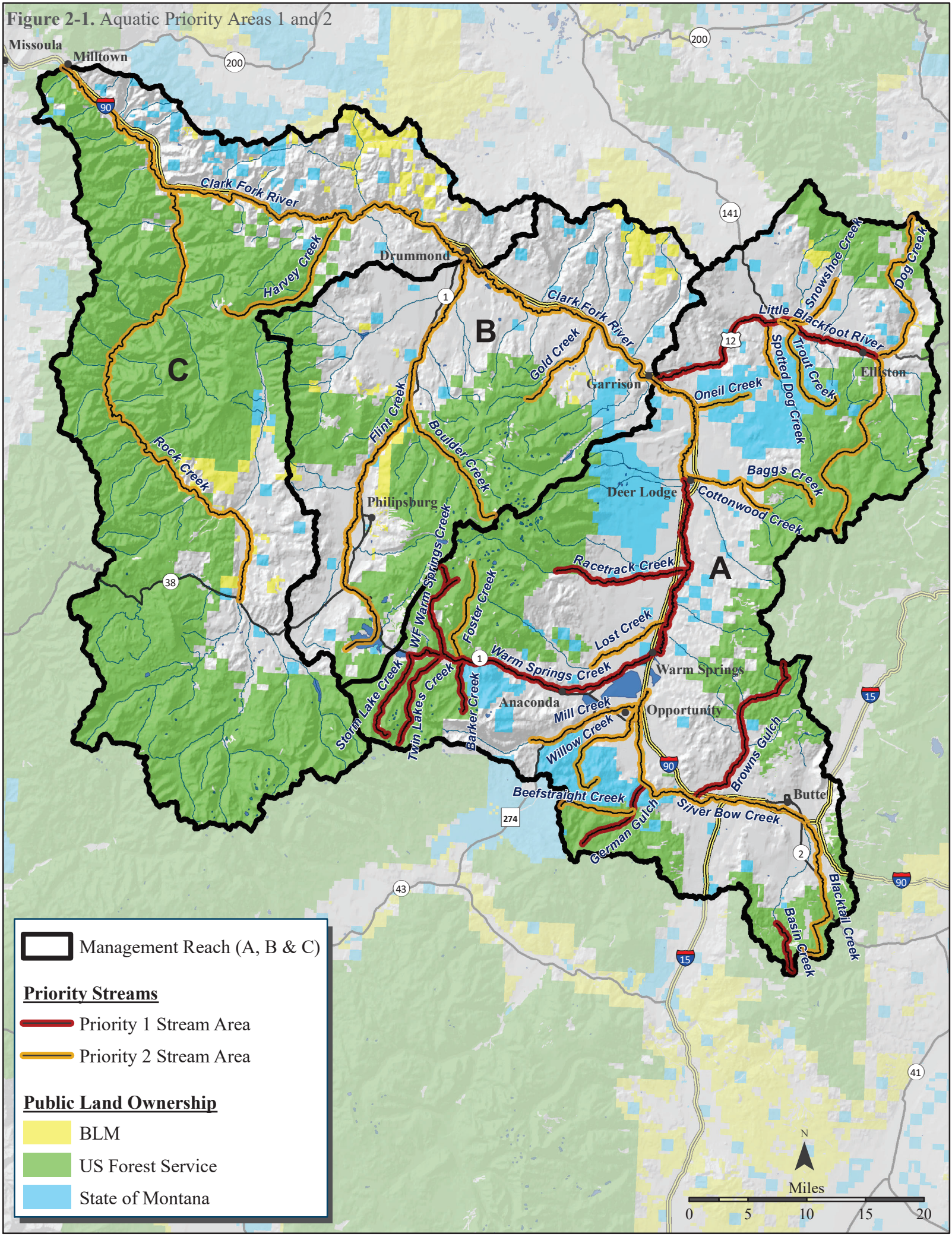

Figure 2-2 Terrestrial Priority Landscapes