FUTURE FISHERIES IMPROVEMENT PROGRAM

FWP RECOMMENDATIONS TO THE FISH & WILDLIFE COMMISSION WINTER 2021

1) **Big Hole 40 Bar streambank restoration (001-2021).** The Big Hole River (Beaverhead County) is a tributary to the Jefferson River. The project site is near Jackson in the upper Big Hole Valley and contains populations of westslope cutthroat trout, western pearlshell mussel, and Arctic grayling. This project intends to reestablish a functional riparian corridor to improve stream habitat for Arctic grayling, prevent future infrastructure loss for downstream infrastructure, and serve as a demonstration project for potential future restoration. The proposed restoration is part of a larger effort to restore and enhance native fish (including the Candidate Conservation Agreement with Assurances [CCAA] program). The 40 Bar Ranch is not enrolled in the CCAA and is not eligible for funds, but has some of the lowest riparian vegetation scores. Past land use practices and infrastructure (i.e. grazing, haying, roads, bridges) contributed to the impaired habitat and riparian vegetation. The project would address 1,260 feet of riparian area along three reaches. Streambanks will be regraded with a minimum slope of 2:1, mature willow will be planted at baseflow and bankfull elevations. Cobble will be installed at the toe of the streambanks. Willow stakes and sedge mats will also be transplanted. Disturbed areas will be seeded with native riparian species. Electric fence will be installed around each of the restored streambanks to prevent lateral erosion from livestock grazing and trampling and long term grazing management will incorporate long term maintenance.

REQUEST	$15,000	ITEMS REQUESTED BY APPLICANT	Excavators and dump truck
MATCH	$100,337.22		
OTHER CONTRIBUTIONS	$0		
% REQUESTED	13%		
TOTAL COST	$115,337.22		
FWP STAFF RECOMMENDATION: We recommend full funding ($15,000).			
REVIEW PANEL RECOMMENDATION: We recommend full funding ($15,000).			

2) **East Fork Bitterroot River riparian revegetation (002-2021).** The East Fork Bitterroot River (Ravalli County) is a tributary to the Bitterroot River and contains bull trout, westslope cutthroat trout, rainbow trout, brown trout, and mountain whitefish. The project area has been affected by riparian grazing and road infrastructure adjacent to the stream and currently has less than 25% vegetative cover. Poor water quality due to high sediment loads, elevated water temperatures, and alterations in streamside vegetation have impaired aquatic life. This project would address these issues by planting riparian vegetation along 1.6 miles of the East Fork and by treating two eroded streambanks near Edwards Road. Riparian fencing and grazing management will be incorporated into the bank treatment plan. The goal is to improve

aquatic habitat and water quality in the East Fork. This project builds upon previous restoration work and includes opportunities for education, outreach, and developing partnerships.

REQUEST	$9,000	ITEMS REQUESTED BY APPLICANT	Construction materials (bank treatment, plants, browse protectors)
MATCH	$65,907.40		
OTHER CONTRIBUTIONS	$692,477		
% REQUESTED	1%		
TOTAL COST	$767,384.40		
FWP STAFF RECOMMENDATION: We recommend full funding ($9,000), recognizing that even without the bridge as match, the ask is still only 12% of the cost. We ask the applicant to clarify: 1) What the budget item 'bank treatment' includes 2) Can you provide photographs of the streambanks with only revegetation / plantings? 3) It appears (from design sheet 1) that the primary bank work (soil lift) will be on the North side of the stream, adjacent to the road. Is fencing a buffer going to be enough to protect the road?			
REVIEW PANEL RECOMMENDATION: We recommend full funding ($9,000).			

3) **Elk Springs Creek restoration phase 2 (003-2021).** Elk Springs Creek (Beaverhead County) is located in the Centennial Valley and is a tributary to Upper Red Rock Lake. It contains brook trout, white suckers, sculpin, burbot, and Arctic grayling. Historically, it supported one of Montana's most prolific Arctic grayling spawning populations and the location is within the Red Rock Lakes National Wildlife Refuge. In the 1950's, an on-channel pond (MacDonald Pond) was constructed on Elk Springs Creek to increase waterfowl habitat. Elk Springs Creek was subsequently degraded due to sedimentation and the shift from stream to pond habitat. MacDonald Pond was removed in 2009 and in 2016, fifteen hundred feet of the formal stream channel was restored. This project would reconstruct the final 1,750 feet of formerly inundated channel. The channel is currently over widened, shallow, unable to transport the large volumes of lake bed and alluvial deposits that remain, and encourages the growth of macrophytes. The degraded condition holds few resident fish and impedes Arctic grayling from moving upstream. The goal is to complete restoration of Elk Springs Creek by improving stream function and the Arctic grayling population, as part of the Arctic grayling recovery plan in Montana. The previous phase resulted in dramatic increases in salmonid abundances, decreased water temperature, increased and stabilized dissolved oxygen, and improved fish migrations.

REQUEST	$29,550	ITEMS REQUESTED BY APPLICANT	Equipment, labor, mobilization
MATCH	$35,000		
OTHER CONTRIBUTIONS	$0		
% REQUESTED	46%		
TOTAL COST	$64,550		
FWP STAFF RECOMMENDATION: We recommend full funding ($29,550).			
REVIEW PANEL RECOMMENDATION: We recommend full funding ($29,550).			

4) **Lake Elmo fish habitat supplement (004-2021).** Lake Elmo (Yellowstone County) is part of Lake Elmo State Park in Billings. In 2019, Asian clams were found at Lake Elmo, leading to a decision for a partial and complete draw-down in 2020 and 2021. During draw down, the applicant intends to create complex fish habitat using rock, gravel, and artificial reefs (Christmas trees or other large woody debris) to encourage self-sustaining populations of channel catfish, crappie, bluegill, yellow perch, and bass. Habitat structures will be based on successful installations in other warmwater lakes. The goal is to enhance wild fish populations and angler opportunities at Lake Elmo State Park while capitalizing on a unique opportunity to add habitat during a draw-down. The lake has very high angler use. This project received $40,000 in the Summer 2020 cycle for the highest priority habitat structures.

REQUEST	$96,675	ITEMS REQUESTED BY APPLICANT	Design/build, construction materials
MATCH	$115,000		
OTHER CONTRIBUTIONS	$361,000		
% REQUESTED	20%		
TOTAL COST	$476,600		
FWP STAFF RECOMMENDATION: We recommend partial funding ($30,000) for design/build, to complement the previous grant for construction.			
REVIEW PANEL RECOMMENDATION: We recommend partial funding ($30,000) for design/build. **prioritization and limited funds reduced this funding to $6,298.84. The Review Panel voted to allow the Summer 2020 $40,000 grant to be used for design/build or construction.*			

5) **Little Gold culvert replacement supplement (005-2021).** Little Gold Creek (Granite County) is a tributary to Boulder Creek (and Flint Creek) northeast of Phillipsburg. It supports populations of westslope cutthroat trout and bull trout. In the project area, an undersized culvert is blocking fish passage at a forest road. The Boulder Creek drainage is the only location within the Flint Creek drainage with viable populations of both bull trout and westslope cutthroat trout. By opening fish passage on Little Gold Creek, two miles of stream could be reconnected to Boulder Creek and then, Flint Creek. The applicant proposes to replace the undersized culvert with an Aquatic Organism Passage (AOP) culvert that installs a natural stream channel within the culvert and can pass a 100-year flow event of 123 cubic feet per second. The goal is to reconnect Little Gold Creek, improve habitat quantity and connectivity, and maintain additional coldwater refugia. This project was fully funded in the Summer 2020 cycle for $29,475 but a reduction in match funding led to additional funds needed for project completion. This is a supplemental request.

REQUEST	$10,000	ITEMS REQUESTED BY APPLICANT	Equipment, labor, mobilization
MATCH	$40,222		
OTHER CONTRIBUTIONS	$29,475 *(past FFIP grant)*		
% REQUESTED	13%		

TOTAL COST	$79,697		
FWP STAFF RECOMMENDATION: We recommend full funding ($10,000).			
REVIEW PANEL RECOMMENDATION: We recommend full funding ($10,000).			

6) **Poorman Creek culvert replacement (006-2021).** Poorman Creek (Lewis & Clark County) is a tributary to the Blackfoot River and is a critical bull trout habitat stream that supports fluvial bull trout and genetically pure westslope cutthroat trout. Several restoration projects have taken place in Poorman Creek over the last 15 years. This project would replace an undersized culvert stream crossing with a precast concrete bridge. The proposed design would mimic the natural stream channel and establish aquatic connectivity. Fill slopes and streambanks would be restored with sod mats, transplants, and seed mix. The current, undersized culvert has a diameter of 4 feet and the project would establish a bankfull width of 18 feet. The goal of this project is to restore access to the upper three miles of Poorman Creek for populations of fluvial and resident westslope cutthroat trout and bull trout.

REQUEST	$31,000	ITEMS REQUESTED BY APPLICANT	Concrete trideck beams, wingwalls, culvert removal
MATCH	$273,886		
OTHER CONTRIBUTIONS	$0		
% REQUESTED	10%		
TOTAL COST	$304,886		
FWP STAFF RECOMMENDATION: We recommend full funding ($31,000).			
REVIEW PANEL RECOMMENDATION: We recommend full funding ($31,000).			

7) **South Fork Lower Willow Creek fish passage (007-2021).** South Fork Lower Willow Creek (Granite County) is located in the Flint Creek watershed and eventually drains into Lower Willow Creek Reservoir. The drainage encompasses approximately 25 miles of westslope cutthroat trout habitat, separated from rainbow trout by the reservoir. The project is intended to build upon recently completed conservation efforts in the basin and fully reconnect fish passage in South Fork Lower Willow Creek. The applicant intends to improve the only irrigation diversion in the drainage above the reservoir, which blocks fish passage during periods of low streamflow and diverts 80% of streamflow. The diversion would be upgraded to a rock vane with a Farmers Conservation Alliance (FCA) fish screen. By improving the diversion and installing a fish screen, the water user can maintain their water right and fish would remain in the stream and have unobstructed movement. The project would eliminate entrainment and reconnect 25 stream miles of habitat for native and wild fish.

REQUEST	$21,914.88	ITEMS REQUESTED BY APPLICANT	Construction materials travel (ineligible)
MATCH	$37,380		
OTHER CONTRIBUTIONS	$33,680		
% REQUESTED	26%		
TOTAL COST	$83,484.88		

FWP STAFF RECOMMENDATION: We recommend funding for construction materials ($20,900), as travel is not an allowable expense.
REVIEW PANEL RECOMMENDATION: We recommend partial funding ($20,900).

8) **South Spread Creek decommissioning (008-2021).** South Spread Creek (Lincoln County) is a tributary to the Yaak River and supports populations of westslope cutthroat trout. Downstream species of concern include bull trout and Columbia River redband trout. Spread Creek and the Hidden Creek area provide critical spawning habitat for genetically pure westslope cutthroat trout. Habitat has been reduced due to fragmentation and degradation from historically unsustainable road building and logging practices. Sediment from the extensive network of forest roads has been identified as a major factor in habitat degradation. Best management practices and stream restoration activities that reduce sediment loading and increase riparian shading to reduce water temperatures and provide in-stream cover are high priorities. This project would reduce chronic sediment sources by re-distributing over-road flows, removing failed stream crossings, decommissioning 0.9 miles of unused Forest Service road, and storage of 7.4 of unused Forest Service road. The goal is to improve water quality, physical habitat, spawning habitat, and connectivity for westslope cutthroat trout.

REQUEST	$49,700	ITEMS REQUESTED BY APPLICANT	Construction materials, excavator rental, fire watch (not eligible)
MATCH	$11,225.25		
OTHER CONTRIBUTIONS	$8,910.30		
% REQUESTED	71%		
TOTAL COST	$69,820.55		
FWP STAFF RECOMMENDATION: We do not recommend funding this project, as it was submitted after the deadline. We do, however, recommend pursuing additional match and detail for a future submission. This includes information on the current conditions and scope of impairment, typicals of decommissioned crossings and road drainage structures, and how much impact this project would have in terms of sediment reduction to fisheries (e.g. has a BEHI been completed?). Note that USFS salaries cannot be used as match.			
REVIEW PANEL RECOMMENDATION: We determined this project to be disqualified due to the late submission, but encourage the applicant to reapply in June 2021.			