

**FUTURE FISHERIES IMPROVEMENT PROGRAM
CITIZEN REVIEW PANEL RECOMMENDATIONS TO THE
FISH & WILDLIFE COMMISSION
WINTER 2017**

- 1) **Bender Creek fish barrier** (001-2017). Bender Creek is a tributary to Johnson Creek and the North Fork of the Big Hole River. It currently supports a non-hybridized (pure) population of Westslope Cutthroat Trout, but they are isolated to a <0.25 mile section of stream. Brook Trout have out-competed cutthroat trout in much of the stream and are moving into the headwaters area. This project would install a treated lumber fish barrier immediately upstream of a bridge crossing. Once the barrier is installed, the cutthroat trout would be salvaged and Brook Trout would be removed using rotenone. Westslope Cutthroat Trout would be returned to the stream and four miles of habitat would be open for the conservation of this species.

REQUEST	\$6,000	ITEMS REQUESTED BY APPLICANT	Lumber, rock, equipment time and labor
MATCH	\$16,000		
% MATCH	73%		
TOTAL COST	\$22,000		
FWP STAFF RECOMMENDATION: Full funding (\$6,000) if the applicant can provide additional detail.			
PANEL RECOMMENDATION: Full funding (\$6,000).			

- 2) **Big Otter Creek riparian protection and improvement** (002-2017). Big Otter Creek (Judith Basin County) is a popular recreational fishery for Brown Trout, Rainbow Trout, and Brook Trout. Currently, cattle congregate at the stream bottom of Big Otter Creek. This project would fence ¼ mile of stream to encourage vegetation and improve stream health and install a culvert on an ephemeral tributary to provide a better route for livestock movement and keep sediment out of the stream.

REQUEST	\$4,249	ITEMS REQUESTED BY APPLICANT	Fencing, culvert, gravel, excavator
MATCH	\$5,672.33		
% MATCH	57%		
TOTAL COST	\$9,921.33		
FWP STAFF RECOMMENDATION: Full funding (\$4,249) if the applicant can provide additional detail.			
PANEL RECOMMENDATION: Full funding (\$4,249).			

- 3) **East Fork Bitterroot River riparian fencing and revegetation** (003-2017). The East Fork of the Bitterroot River (Ravalli County) is a headwater stream to the Bitterroot River and supports populations of Bull Trout and Westslope Cutthroat Trout. It is listed as impaired for sediment and temperature by the Department of Environmental Quality (DEQ). This project aims to reduce sediment and thermal loading by increasing riparian vegetation and encouraging point bar development and sinuosity. Riparian fencing will be installed along 2,000 feet of the stream, nursery plants and shrub transplants will be used, and browse protectors will protect many plants. The fencing configuration will create a large buffer and restoration activities are meant to enhance natural recruitment and repair banks when necessary.

REQUEST	\$15,207	ITEMS REQUESTED BY APPLICANT	Permitting, monitoring, travel, fencing, plants, browse protectors, excavator operation, and plant installation.
MATCH	\$39,555		
% MATCH	72%		
TOTAL COST	\$54,762		
FWP STAFF RECOMMENDATION: Fund the project at \$13,800 as monitoring (\$1,000) and travel (\$407) are not allowable Program costs.			
PANEL RECOMMENDATION: Fund at \$9,000 for riparian fencing and some plantings, allowing for natural plant growth and recruitment and/or additional plantings in subsequent years.			

- 4) **Fresno Reservoir habitat enhancement** (004-2017). Fresno Reservoir (Hill County) was the second most fished waterbody in FWP Region 6 in 2015 and contains sportfish populations of Yellow Perch, Walleye, Northern Pike, and Black Crappie. Fish abundance and condition are currently limited by prey availability and habitat. This project intends to install Christmas tree habitat structures at critical points in the reservoir for five years, which should improve spawning and rearing habitat for Yellow Perch, thereby improving sportfishing opportunities for Yellow Perch and their predators. The applicant will monitor the response of the fish community.

REQUEST	\$3,000	ITEMS REQUESTED BY APPLICANT	Concrete blocks, cable, cable clips
MATCH	\$3,582		
% MATCH	54%		
TOTAL COST	\$6,582		
FWP STAFF RECOMMENDATION: Full funding (\$3,000).			
PANEL RECOMMENDATION: Full funding (\$3,000).			

- 5) **Horse Creek grazing management and stream restoration** (005-2017). Horse Creek (Park County) is a tributary to the Shields River and currently supports populations of nonhybridized Yellowstone Cutthroat Trout and is considered to be of high conservation value. The project area

has been degraded by grazing practices. The applicant proposes to install riparian fencing, create off stream stock water, and restore eroding terraces by creating floodplain benches with wetland sod. Mature willow will be planted on site. The goal is to improve water quality and improve habitat in an important cutthroat trout stream.

REQUEST	\$25,471.75	ITEMS REQUESTED BY APPLICANT	Fencing, pipe line installation, well, solar pump installation, stock tank, seed, stakes
MATCH	\$45,570		
% MATCH	64%		
TOTAL COST	\$71,071.75		
FWP STAFF RECOMMENDATION: We recommend full funding (\$25,471.75).			
PANEL RECOMMENDATION: Tabled , due to uncertainty in the landowner's long-term plan for off stream water.			

- 6) **Jack Creek riparian restoration** (006-2017). Lower Jack Creek (Madison County), near the confluence with the Madison River, supports populations of Brown Trout and Rainbow Trout and has been the site of active channel migration and heavy erosion. This location has been historically dynamic and experienced alterations such as channel straightening, placement of carbody bank armor, and unfavorable management practices. This project takes place on three private property holdings and 1,200 feet of stream. Four actively eroding bank sites will be restored with bankfull benches, sloping, and native plantings.

REQUEST	\$25,509.60	ITEMS REQUESTED BY APPLICANT	Construction materials, mobilization
MATCH	\$85,395.25		
% MATCH	77%		
TOTAL COST	\$110,904.85		
FWP STAFF RECOMMENDATION: Full funding (\$25,509.60).			
PANEL RECOMMENDATION: Partial funding (\$10,014.48) as a result of the Future Fisheries prioritization protocol. Funding is limited and this project had the lowest prioritization rank; therefore, it was funded until the budget was exhausted.			

- 7) **LaValle Creek culvert replacement** (007-2017). LaValle Creek (Missoula County) is a tributary to the Clark Fork River that supports only non-introgressed (genetically pure) Westslope Cutthroat Trout. This population occupies approximately 4-5 miles of stream and is managed to sustain genetic purity. This project is intended to ensure connectivity within the reach they currently occupy. Two undersized culverts, likely serving as velocity barriers during high flow periods and disrupting natural hydrologic function, would be replaced with wood bridges that meet stream simulation and 100-year flood criteria. The goal is to enhance upstream passage for stream-resident, genetically pure Westslope Cutthroat Trout and help ensure long-term persistence.

REQUEST	\$18,520	ITEMS REQUESTED BY APPLICANT	Bridge brackets, bridge abutments, skid-steer, dump truck, labor, mobilization/demobilization
MATCH	\$24,631		
% MATCH	57%		
TOTAL COST	\$43,151		
FWP STAFF RECOMMENDATION: Full funding (\$18,520).			
PANEL RECOMMENDATION: Tabled , as funds are limited and this project has the flexibility to be postponed.			

- 8) **Marshall Creek fish passage** (008-2017). Marshall Creek (Missoula County) is a third order tributary to the Clark Fork River located just upstream of the City of Missoula. It is an important source of natural cutthroat trout recruitment that is located near a large city and significant angling constituency. This project would continue fish habitat enhancement work in the lower watershed by replacing two undersized culverts, which act as velocity barriers during moderate and high flow periods, with larger counter-sunk culverts that will accommodate 100-year flows and bankfull channel width. The goal is to enhance upstream fish passage for adult and juvenile cutthroat trout in an established spawning and rearing area.

REQUEST	\$8,000	ITEMS REQUESTED BY APPLICANT	culverts
MATCH	\$26,355		
% MATCH	77%		
TOTAL COST	\$34,355		
FWP STAFF RECOMMENDATION: Full funding (\$8,000).			
PANEL RECOMMENDATION: Full funding (\$8,000).			

- 9) **Mill Creek fish ladder** (009-2017). Mill Creek (Missoula County) is a tributary to the Clark Fork and supports populations of Rainbow Trout, Rainbow X Cutthroat Trout hybrids, Brown Trout, and Mountain Whitefish. In 2005, a fish ladder was installed to allow fish passage on the recruitment-limited and heavily fished stream. The ladder has functioned adequately for a decade but is now in need of replacement. This project would replace the fish ladder with a larger, more operational unit to provide year-round fish passage on Mill Creek.

REQUEST	\$9,000	ITEMS REQUESTED BY APPLICANT	Fish ladder
MATCH	\$15,096		
% MATCH	63%		
TOTAL COST	\$24,096		
FWP STAFF RECOMMENDATION: Full funding (\$9,000).			
PANEL RECOMMENDATION: Full funding (\$9,000).			

- 10) **Moore’s Creek channel and riparian restoration** (010-2017). Moore’s Creek (Madison County) is a tributary to the Madison River immediately west of Ennis. The stream is assumed to support Rainbow, Brown, and/or Brook Trout. The stream and riparian areas are highly degraded because of past management practices and channel manipulations; currently water quality is impacted by *E. Coli* and sediment. This project would restore the stream channel to the proper dimensions and improve riparian areas and water quality through fencing, riparian plantings, livestock management, and irrigation improvement. An upstream project was completed in 2016 (010-2015).

REQUEST	\$40,041.60	ITEMS REQUESTED BY APPLICANT	Travel (\$5,040), construction materials, mobilization
MATCH	\$155,372.60		
% MATCH	80%		
TOTAL COST	\$195,414.20		
FWP STAFF RECOMMENDATION: Fund the project at 50% of the request (\$20,020.80), as funds are limited and the magnitude of fishery impact is questionable.			
PANEL RECOMMENDATION: Fund the project at 50% of the request (\$20,020.80).			

- 11) **Nevada Creek channel restoration** (011-2017). Nevada Creek (Powell County) is a tributary to the middle Blackfoot River and supports populations of Westslope Cutthroat Trout, Rainbow Trout, and Brown Trout. The project area was historically straightened and a non-functional riparian area caused the channel to erode and downcut. In 2010, an adjacent channel restoration project (038-2010) reduced sediment, increased stream complexity, improved riparian condition, and created fish habitat that resulted in increased trout abundance. This project is considered phase two and would continue the restoration downstream. The channel would be restored to proper dimensions, plantings and bank treatments would be used to improve the riparian areas, and fence would be installed to operate a grazing management system.

REQUEST	\$47,000	ITEMS REQUESTED BY APPLICANT	Willow cuttings, fence, heavy equipment
MATCH	\$155,372.60		
% MATCH	77%		
TOTAL COST	\$203,435		
FWP STAFF RECOMMENDATION: Full funding (\$47,000).			
PANEL RECOMMENDATION: Full funding (\$47,000).			

- 12) **Ninemile Creek channel restoration** (012-2017). Ninemile Creek (Missoula County) is a tributary to the Clark Fork River and supports populations of Westslope Cutthroat Trout, Brook Trout, and Bull Trout. Past placer mining practices and associated activities led to alteration of channel morphology, disconnection from tributaries, eroding banks, and fish passage barriers. This

project is one phase of a much larger project that has been systematically restoring the upper Ninemile drainage. Future Fisheries funded projects in many tributaries (e.g Sawpit, Mattie V, Kennedy Creeks). Fish response, in the form of large spawning redds, was observed in 2016. This project involves revegetation of the site, re-sloping of site topography, and reconstruction of the stream channel. Mining spoil piles on Ninemile Creek will be removed to decrease sediment sources and establish a natural floodplain.

REQUEST	\$32,000	ITEMS REQUESTED BY APPLICANT	Excavation, channel shaping
MATCH	\$118,398		
% MATCH	79%		
TOTAL COST	\$150,398		
FWP STAFF RECOMMENDATION: Full funding (\$32,000).			
PANEL RECOMMENDATION: Partial funding (\$20,000).			

- 13) **North Fork Cottonwood Creek fish passage** (013-2017). North Fork Cottonwood Creek (Powell County) is a tributary to Cottonwood Creek in the Clark Fork River drainage and supports populations of Westslope Cutthroat Trout and Brook Trout. An undersized culvert has been a partial barrier to fish passage on the Beaverhead Deer Lodge National Forest. This project would replace the culvert with a larger culvert specifically designed to enhance fish passage for native trout. The goal is to maintain a single, connected population of cutthroat trout throughout the three forks of Cottonwood Creek and enhance the long-term viability of a large conservation population of pure Westslope Cutthroat Trout.

REQUEST	\$37,710	ITEMS REQUESTED BY APPLICANT	Survey, permitting, oversight, travel, arch culvert, equipment, mobilization
MATCH	\$90,250		
% MATCH	71%		
TOTAL COST	\$127,960		
FWP STAFF RECOMMENDATION: Funding the project with the exception of non-allowable Program costs of oversight (\$800) and travel (\$200) for a total of \$36,710 .			
PANEL RECOMMENDATION: Partial funding (\$36,710).			

- 14) **Racetrack Creek Johnson diversion replacement** (014-2017). Racetrack Creek (Powell County) is a tributary to the Clark Fork River that supports populations of Brown Trout, Mountain Whitefish, Westslope Cutthroat Trout, Longnose Sucker, and Slimy Sculpin. The project area has been limited by dewatering in mid to late summer and high temperatures. Other complementary projects have been focused on improving instream flows, so this project intends to build on those efforts by providing fish passage to the habitat features upstream to the Berg diversion (1.6 miles) and downstream to the lower, cold-water (groundwater) area of the creek. This project would replace an irrigation diversion that blocks upstream fish passage and entrains fish with a rock weir

diversion that enhances passage. The goal is to enhance fish passage and eliminate entrainment in a high priority watershed.

REQUEST	\$23,680	ITEMS REQUESTED BY APPLICANT	Survey, permitting, oversight, travel, construction materials, equipment and labor, mobilization
MATCH	\$13,550		
% MATCH	64%		
TOTAL COST	\$37,230		
FWP STAFF RECOMMENDATION: Funding the project with the exception of non-allowable program costs of oversight (\$600), and travel (\$200) for a total of \$22,880 .			
PANEL RECOMMENDATION: Partial funding (\$22,880).			

- 15) **Sauerkraut Creek instream flow lease (015-2017)**. Sauerkraut Creek (Lewis & Clark County) is a tributary to the Blackfoot River that supports populations of Westslope Cutthroat Trout and Bull Trout. Historically, the upper reaches of Sauerkraut Creek were severely modified by mining and the middle and lower reaches were impaired by irrigation withdrawals. Since 2008, Sauerkraut Creek has been the focus of stream restoration and conservation efforts and the current project is a continuation of those efforts. This project would lease a minimum of 3.0 cfs, up to 9 cfs, in a split-season water rights lease to augment stream flow, especially during the low-flow season, for 20 years. The goal is to improve conditions for resident and migratory cutthroat trout and Bull Trout that are most significant during the low flow season.

REQUEST	\$20,000 \$10,000	ITEMS REQUESTED BY APPLICANT	Instream flow lease (20 years)
MATCH	\$66,354.80 \$76,354.80		
% MATCH	77% 88%		
TOTAL COST	\$86,354.80		
FWP STAFF RECOMMENDATION: Full funding (\$20,000).			
PANEL RECOMMENDATION: Full funding (\$10,000), as the request was reduced by the applicant.			

16) **Sevenmile Creek fish passage** (016-2017). Sevenmile Creek (Lewis & Clark County) is a tributary to Tenmile Creek that supports populations of Brown Trout and Brook Trout. In 2017, the Prickly Pear Land Trust acquired a 350-acre parcel of land in the Helena Valley that included approximately 2.2 miles of Sevenmile Creek. The stream has been heavily impacted by riparian clearing, intensive grazing, flow, diversion, and channelization. As part of a larger project to improve the property, this project addresses a diversion that blocks fish passage and is in danger of having an avulsion. This project would use the avulsion channel to develop a fish passage channel around the diversion. The diversion itself would remain in the stream to ensure legal the water right can be used by the landowner.

REQUEST	\$25,571.25	ITEMS REQUESTED BY APPLICANT	Administration, survey, permitting, oversight, mileage, per diem, lodging, construction materials, equipment, labor, mobilization
MATCH	\$26,895		
% MATCH	51%		
TOTAL COST	\$52,466.25		
FWP STAFF RECOMMENDATION: Funding the project with the exception of non-allowable Program costs of administration (\$1,250), oversight (\$2,090), and travel (\$868.75) for a total of \$21,362.50 .			
PANEL RECOMMENDATION: Partial funding (\$21,362.50).			

17) **Wegner Creek fish barrier** (017-2017). Wegner Creek (Lewis & Clark County) currently supports populations of Brook Trout, Rainbow Trout, and Rocky Mountain Sculpin. The location was recently acquired by FWP to add to the Beartooth Wildlife Management Area. The applicant proposes to blast and remove rock from a natural rock chute, creating a barrier that could be used for conservation of Westslope Cutthroat Trout and Rocky Mountain Sculpin. After the barrier is constructed, the stream would be reclaimed, genetically pure Westslope Cutthroat Trout would be introduced, and Rocky Mountain Sculpin would be returned. A six-foot high barrier is planned. The goal of this project is to expand conservation areas of Westslope Cutthroat Trout.

REQUEST	\$5,000	ITEMS REQUESTED BY APPLICANT	\$5,000 for mobilization and equipment use/labor
MATCH	\$10,000		
% MATCH	67%		
TOTAL COST	\$15,000		
FWP STAFF RECOMMENDATION: Full funding (\$5,000).			
PANEL RECOMMENDATION: Tabled , due to a need for additional design information and the ability to postpone the project.			

18) **Williams Creek riparian fencing** (018-2017). Williams Creek (Judith Basin County) is a tributary to Big Otter Creek near Raynesford. It supports populations of Brown Trout, Brook

Trout, and Rainbow Trout. Cattle currently access the stream and this project would install riparian fencing to control livestock access, construct a water gap, and develop a spring for off-stream water. The goals are to improve fish habitat through riparian growth, reduced sedimentation, and overall stream health.

REQUEST	\$9,220	ITEMS REQUESTED BY APPLICANT	Stock tank, pipe fittings, excavator, dozer, skid steer
MATCH	\$9,120		
% MATCH	50%		
TOTAL COST	\$18,340		
FWP STAFF RECOMMENDATION: Full funding (\$9,220) but request additional information.			
PANEL RECOMMENDATION: Full funding (\$9,220).			

- 19) **Thompson River riparian restoration** (019-2017). Thompson River (Sanders County) is a tributary to the Lower Clark Fork River and supports populations of Bull Trout, Westslope Cutthroat Trout, Rainbow Trout, Brown Trout, Brook Trout, and Mountain Whitefish. Temperature and sediment have been identified as limiting factors for trout populations, and this project intends to address those issues. This project would maintain and expand the protection of planted plants and native plants in a previously restored area. The goal is to improve riparian vegetation conditions, stream temperatures, instream habitat, and connectivity for bull and cutthroat trout (FFIP projects 018-2008, 021-2009; 2014 monitoring showed canarygrass as well as thriving and volunteer willows).

REQUEST	\$5,000	ITEMS REQUESTED BY APPLICANT	Personnel, construction materials, equipment, mobilization
MATCH	\$6,500		
% MATCH	57%		
TOTAL COST	\$11,500		
FWP STAFF RECOMMENDATION: Full funding (\$5,000) if the applicant can provide additional information.			
PANEL RECOMMENDATION: Deny .			