

FUTURE FISHERIES IMPROVEMENT PROGRAM

FWP RECOMMENDATIONS TO THE FUTURE FISHERIES PANEL SUMMER 2014

- 1. FFI-011-2014: Bean Creek Channel Restoration.** Bean Creek, a tributary to the Red Rock River, Supports purestrain westslope cutthroat trout. The stream reach proposed for treatment has been channelized to accommodate irrigation and reroute flows during ice jams. An undersized culvert has exacerbated ice jam problems. This proposal is to restore 800 feet of Bean Creek on private property by increasing sinuosity, decreasing gradient, building 30 pools, improving riparian vegetation, and protecting the channel with riparian fence. It also includes replacing an undersized culvert at a county road crossing. The applicant is requesting \$14,945 for fencing, channel and headgate work, and willow installation, and is contributing \$12,656 cash and \$82,379 cash from other sources. We support the project as proposed (\$14,945); RIT eligible.
- 2. FFI-012-2014: Deadmans Basin Diversion Dam Fishway.** Deadmans Basin Diversion Dam is located on the Musselshell River approximately 19 miles downstream from Harlowton. The diversion dam was damaged by the 2011 flood, and it and the canal headgate leak water to the canal reducing flow to the river by approximately 3,000 acre-feet annually. A pool/rock weir fishway would be constructed to improve passage for brown trout and (up to 500 cfs) several native species, including a hybrid dace species of special concern. Better water control and less leakage could improve instream flow, although no agreement for this provision accompanies this project. The applicant is requesting \$50,000 in Program funds for rock and grouted rock, and is contributing \$14,000 in cash and \$693,942 from outside sources. We support the project as proposed (\$50,000); RIT eligible.
- 3. FFI-013-2014: East Gallatin Restoration at Story Mill.** The Story Mill site is located at the confluence of Bozeman Creek and the East Gallatin River within the City of Bozeman. These streams, within this vicinity, support primarily brown and rainbow trout and longnose suckers. Both streams have been modified over the years for agricultural and industrial uses, with evidence of channelizing, vegetation removal, bank armoring, and floodplain fill. This proposal includes removal of concrete debris, auto/machinery parts, etc.; removing some floodplain fill; and revegetating banks. The applicant is requesting \$51,953 in Program funds mainly for revegetation materials and for equipment rental, and is contributing \$120,341 in in-kind services. (The contribution of \$106,350 for design and planning appears disproportionate and likely relates to the overall site restoration.) We support the project as proposed (\$51,953).
- 4. FFI-014-2014: Keep Cool Creek Fish Passage Improvement.** Keep Cool Creek is a spring creek that enters the upper Blackfoot River just north of Lincoln. It supports primarily brown trout, with westslope cutthroat trout found mainly in headwater tributaries. The proposed project involves replacing a pair of 24-inch culverts with a timber bridge designed to allow full channel function and aquatic organism passage. The applicant is requesting \$8,500 in Program funds for bridge parts, equipment rental, and labor, and is contributing \$2,932 in in-kind services and \$16,790 in in-kind cash. We support the project as proposed (\$8,500).

- 5. FFI-015-2014: Little Blue Joint Creek Culvert Replacement.** Little Blue Joint Creek flows into Blue Joint Creek, which enters Painted Rocks Reservoir. It supports primarily westslope cutthroat trout, with some brook trout and a few bull trout. This proposal calls for replacing a culvert that represents a partial fish-passage barrier to allow better access to 2.5 miles of suitable habitat, and perhaps increase recruitment to the reservoir. The applicant is requesting \$15,000 in Program funds and is contributing \$101,000 in in-kind services, and anticipates another \$5,000 in cash from outside sources. We support the project as proposed (\$15,000); RIT eligible.
- 6. FFI-016-2014: Liverpool Creek Fish Passage/Entrainment/Flow.** Liverpool Creek is a tributary to Keep Cool Creek, which enters the upper Blackfoot River just north of Lincoln. Beginning where the creek leaves the mountains, it is disrupted by two irrigation diversions that lack headgates and require boards being placed in-channel to divert flows. A nearby stream crossing is undersized, representing a fish migration barrier. The project proposal involves replacing the undersized crossing (paired culverts) with a fish- and channel-friendly bridge, eliminating the upper irrigation diversion, upgrading the lower diversion with a fish screen, and pursuing a long-term water lease for instream flows. The applicant is requesting \$11,255 for bridge and diversion construction materials and equipment rental, and is contributing \$44,442 (\$3,655 cash and \$8,532 in-kind, and well as \$21,000 from outside sources). We support the project as proposed (\$11,255); RIT eligible.
- 7. FFI-017-2014: North Fork Blackfoot River Instream Flow Enhancement.** The North Fork Blackfoot River is the largest tributary to the Blackfoot River, with its confluence near Ovando. The North Fork is a bull trout core area stream and also supports westslope cutthroat trout. The river frequently goes dry in the late summer below the lowest diversion in the drainage. This proposal calls for replacing an existing open ditch with a pipeline that will serve systems upgraded from flood to sprinkler irrigation, resulting in flow savings that could be realized in the river; however, no instream flow agreement accompanies this project. The applicant is requesting \$35,000 in Program funds for pipe and installation, and is contributing \$182,319 cash from outside sources and \$43,600 cash and \$5,190 in-kind. We support the project as proposed (\$35,000); RIT eligible.
- 8. FFI-018-2014: North Willow Creek Riparian Fence.** North Willow Creek (near Harrison) is a tributary to Willow Creek, which is tributary to the Jefferson River. The stream supports brown, rainbow, brook, and westslope cutthroat trout. Livestock grazing at the project site is causing loss of riparian vegetation and streambank erosion. This proposal calls for installation of riparian jack-leg fencing along .26 miles of North Willow Creek. The applicant is requesting \$7,232 in Program funds for fence materials and is contributing \$7,232. We support funding this project at a more conventional rate of \$2.00 per foot or \$2,746.
- 9. FFI-019-2014: Piney Creek Fish Screen Leak Prevention.** Piney Creek is a small, spring-fed tributary to Sage Creek that emerges along the west flank of the Pryor Mountains and flows $\frac{3}{4}$ miles before being diverted into an irrigation system. It harbors a small, pure-strain Yellowstone cutthroat trout population. Fish screens were installed in 2009 to prevent entrainment into the irrigation system; however, water still leaks from pond headgates, wasting scarce water in an arid environment. According to a letter of support, the project consists of installing a synthetic liner and bentonite seal in the reservoir. The applicant is requesting \$25,000 for materials and

excavation and is contributing \$5,000 in cash. Lack of design and minimal description of fishery benefits make this application difficult to evaluate. We recommend tabling the request for later submittal.

- 10. FFI-020-2014: Prickly Pear Spring Creek Bank Stabilization.** This unnamed spring creek enters Prickly Pear Creek approximately 6.5 miles upstream from the latter's confluence with Lake Helena. It supports brown and rainbow trout. Habitat in the spring creek has been degraded by livestock grazing, and undersized culvert at a road crossing, and intrusion by Prickly Pear Creek. The latter has channel alignment and debris issues. The project calls for improving pool and riffle habitat in selected meander bends of the spring creek, replacing the culvert with a bridge, and reconnecting the original confluence with Prickly Pear Creek. Prickly Pear would receive some realignment, juniper/willow/rock revetments, and debris cleanup. The applicant seeks \$49,837 (materials and equipment) and is contributing \$14,800 in cash, \$750 in in-kind services, and \$12,500 cash from other sources. It appears that the budget sheet for another project (Tenmile Creek) was submitted with this application. The application also lacks detailed designs for the stream restoration. We recommend tabling this request pending a more complete application.
- 11. FFI-021-2014: Sauerkraut Creek Phase 2 Channel Restoration.** Sauerkraut Creek, a tributary to the upper Blackfoot River, supports genetically pure westslope cutthroat trout and bull trout. To accommodate placer mining, upper reaches of the stream were confined to the toe of the hillslope, resulting in a channel with long, extended riffles and lacking pools, vegetation, and large wood. An existing ford has damaged and lowered streambanks, altering channel morphology and causing sediment deposition. Project specifics involve relocating 770 feet of Sauerkraut Creek and restoring riffle-pool and step-pool channel morphology within a sloping, well-vegetated riparian corridor and restored floodplain. The ford crossing will be rehabilitated. The applicant is requesting \$34,500 in Program funds for plant-related materials and equipment rental, and is contributing \$4,730 cash and \$100,850 from outside sources (\$87,450 cash; \$13,400 in-kind). We support the project as proposed (\$34,500); RIT eligible and mining-related.
- 12. FFI-022-2014: Spokane Creek Riparian Fence.** Spokane Creek is a tributary to Hauser Lake in the Missouri River drainage near East Helena. It supports primarily rainbow and brown trout. Livestock currently have access to 190 feet of stream channel adjacent to a newly constructed bridge project. The applicant is requesting \$1,400 in Program funds for fencing materials and shows no contributions in the submitted budget. We support the project at \$2.00 per foot of fencing for a total of \$800.
- 13. FFI-023-2014: Tenmile Creek Bank Stabilization and Fencing.** Tenmile Creek is a tributary to Prickly Pear Creek that enters the latter 2.3 miles upstream from Lake Helena. The stream supports brook, brown, and rainbow trout. Livestock grazing has removed riparian vegetation and accelerated erosion at two areas along the stream. This proposal calls for stabilizing 430 feet of streambank using juniper, willow, and rock, and fencing both sides of the stream (5,350 feet total) to exclude livestock. The applicant is requesting \$36,587 in Program funds for construction materials and equipment rental, and is contributing \$4,720 in cash. Without a design, it is difficult to determine the fishery benefits of the bank revetments and stream relocation. We

recommend funding 5,350 feet of fencing at \$2.00 per foot (\$10,700), along with gravel and logs for water gaps (\$550) for at total of \$11,250.