

## **FUTURE FISHERIES IMPROVEMENT PROGRAM**

### **FWP RECOMMENDATIONS TO THE FUTURE FISHERIES REVIEW PANEL SUMMER 2013**

1. The Big Hole River (Madison County), located near the town of Twin Bridges, supports a mixed salmonid assemblage. A series of five rock weirs were constructed across the river in 2010 as part of an irrigation rehabilitation project owned by the Big Hole Cooperative Ditch Company. This project replaced a single diversion structure, composed of about a 4-foot elevation drop, which acted as a partial fish passage barrier and hindered boat traffic. The high water event in 2011 created erosion on the west ends of the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> newly installed weir structures. This erosion damage has increased the potential for undermining the weirs and floater passage over the structures has become more difficult because a significant amount of flow is now directed to the west side of the river. This proposal calls for repairing the damaged weirs by adding rock and tying the existing structures back into the river bank approximately 15 to 20 feet. The applicant is requesting \$12,500 in Program funds and is contributing \$2,500 in cash. Although this project likely would improve floater passage over the diversion, it appears to provide little benefit to fish. The request to the Program is about 84% of the total project cost. We recommend supporting the project at \$2,500 as a partial contribution toward helping ensure the original project remains functional (about 17% of the total project cost). (Reduce to \$2,500).

2. Braziel Creek (Powell County) is a small tributary to Nevada Creek located south of Helmville that supports a hybridized population of westslope cutthroat trout. In 2010, a reach of the stream that had been historically channelized was reconstructed and a new grazing management plan was implemented. This 2010 project resulted in an increase in westslope cutthroat trout densities. A downstream reach of Braziel Creek, located on property owned by Jay Stitt, currently is degraded by channel incision, the lack of riparian woody vegetation and cross-valley channel realignment. This project calls for restoring the stream channel and floodplain morphologies, restoring the riparian vegetative community and implementing a livestock grazing management plan. Approximately 540 feet of stream channel would be restored. The applicant is requesting \$10,700 in Program funds and is contributing \$20,370 in cash from outside sources and \$1,550 in in-kind services. Although we have some design concerns, we support the project as proposed (\$10,700).

3. Cameron Creek (Ravalli County) is a tributary to the East Fork Bitterroot River, located near the community of Sula, which supports populations of hybridized westslope cutthroat trout and brook trout, as well as rainbow trout and brown trout in its lower reaches. Years of heavy livestock grazing have damaged several short segments of stream bank located on USFS property. The USFS, however, recently implemented a rest-rotation grazing system where pastures receive a full year of rest and then are restricted to a short term grazing under low stocking densities. This project

proposes to treat seven bank sites, totaling approximately 400 lineal feet. At each site, eroding stream banks would be reconstructed using soil lifts, willow stakes and brush fascines. The Bitterroot Water Forum, a local watershed group, separately is planning to undertake additional riparian and stream bank restoration work on private property located both upstream and downstream of this proposed project. The applicant is requesting \$3,000 in Program funds and is contributing \$3,000 in cash from outside sources, as well as providing \$8,200 in in-kind services. Small bank stabilization efforts typically do not provide measurable benefits to the local fishery. However, since this project is being undertaken in conjunction with a larger riparian protection and stabilization effort, as conducted by the local watershed group, we support the project as proposed (\$3,000). Additionally, we also think that the riparian corridor should be fenced, instead of relying on a rotational grazing plan, and would be willing to consider additional Program funding to pay for half the fencing costs.

4. Owl Creek (Missoula County) is a tributary to Holland Creek and ultimately the Swan River that supports populations of brook trout and slightly hybridized westslope cutthroat trout. Due to past land use activities; including grazing, road building and channelization; a portion of Owl Creek located on property owned by the Clark Family Trust has become unstable and old road prisms obstruct proper floodplain function. This project calls for restoring about 600 feet of Owl Creek and 650 feet of an associated tributary. Work would include the replacement of an undersized culvert with a larger arch pipe, removal of existing berms, lowering the existing road prisms to floodplain elevations, and realigning 400 feet of straightened channel back onto the historic floodplain surface. A variety of stream bank structures and grade control will be used in the channel re-construction. The applicant is requesting \$27,500 in Program funds and is contributing \$74,500 in cash from outside sources and \$2,500 in in-kind services towards completion of the project. Of troubling note, past alterations to the stream channel were conducted in violation of the Montana Streambed and Land Preservation Act (310 Law). None-the-less, we think that the need to restore channel and floodplain function overrides past wrongdoings. As a result, we support the project as proposed (\$27,500).

5. Racetrack Creek (Powell County) is a tributary to the Clark Fork River located south of Deer Lodge that supports a mixed salmonid assemblage. An existing, dilapidated, irrigation structure, owned by Carl Johnson, currently acts as a partial upstream migration barrier and is known to entrain fish into the ditch system. The diversion is located about 2 miles upstream from the confluence with the river. The project calls for replacing this rustic diversion with an NRCS designed pin-and-plank diversion structure. A Denil-style fish ladder would be installed to provide for upstream fish passage and a horizontal flat plate fish screen would be installed to prevent entrainment of fish into the ditch. The applicant is requesting \$12,500 in Program funds and is contributing \$15,000 in cash from outside sources and \$7,600 in in-kind services. Passive fish screens, as proposed for this project, commonly require substantial manual effort to keep the screen clean. We support this project as proposed, with the stipulation that the applicant/water user fully commit, in the project agreement, to maintaining the fish screen and ensuring that it remains functional (\$12,500).

6. The Redwater River (McCone County), located south of Poplar, is one of the largest tributaries to the lower Missouri River in Montana and is extremely important for the overall ecological function of the system. The Redwater River supports a very high diversity of fish species, including

several Montana species of special concern (northern redbelly dace, sauger, Iowa darter and sturgeon chub). Currently, a county road crossing - called the Nickwall Crossing - acts as an upstream fish passage barrier most of the time. This crossing currently consists of four, 24-inch diameter, concrete culverts spaced across the stream. The culverts are perched above the streambed. The road crossing, located about 1.25 miles upstream from the confluence with the Missouri River, essentially blocks upstream fish passage to about 25 miles of river habitat. This project calls for re-constructing the stream crossing by installing four, 12-foot wide by 5-foot tall, box culverts. The new culverts would be embedded below stream grade by about one foot and would be backfilled with gravel to provide resting areas for slower swimming fish species. The applicant is requesting \$100,000 in Program funds and is providing \$205,628 in cash from outside sources. Not all matching funds have been secured. We support the project as proposed (\$100,000) as long as all other matching funds become secured.

7. Tenmile Creek (Lewis and Clark County) is a tributary to Prickly Pear Creek located in the Helena valley that supports a mixed salmonid assemblage. An existing irrigation diversion, located on property owned by Dean Bjerke, has significantly deteriorated over the years and finally became inoperable after the 2011 runoff event. Recent proposals by the water users to repair the diversion would create an upstream passage barrier to fish. As an alternative, this project calls for moving the head gate upstream to provide for a more efficient withdrawal of water, as well as for the installation of a rock cross vane to provide for upstream fish passage. Additionally, the project calls for stabilizing approximately 1,100 feet of eroding stream bank using rootwads and tree revetment; installing approximately 5,300 feet of riparian fencing; and constructing a hardened livestock crossing. The applicant is requesting \$32,350 in Program funds and is contributing \$18,451 in cash from outside sources and \$4,600 in in-kind services. We support the diversion reconstruction, the bank protection adjacent to the head gate and the riparian fencing. However, we question whether the remainder of the proposed stream bank revetment would be permitted through the county floodplain coordinator and through the U.S. Army Corp of Engineers (without required mitigation). As a result, we recommend supporting the project at \$23,550 by cutting the equipment costs in half ( $\$17,600/2 = \$8,800$ ). (Reduce to \$23,550).