FUTURE FISHERIES IMPROVEMENT PROGRAM

FWP RECOMMENDATIONS TO THE FUTURE FISHERIES REVIEW PANEL WINTER 2014

1. Bozeman Creek (Gallatin County) is a tributary to the East Gallatin River that supports a mixed salmonid assemblage. A portion of the stream, as it flows through Bogart Park within the city of Bozeman, historically was channelized. This reach of stream currently is entrenched with high, unstable banks, little hydraulic diversity and poor fish and wildlife habitat. This proposal calls for re-aligning approximately 820 feet of the channelized stream to improve plan form, profile and cross sectional characteristics. Additionally, an inset floodplain will be constructed and the riparian vegetative community will be augmented. As part of the overall project, additional recreational amenities will be installed to protect resources and better accommodate public use. The purpose of the project is to improve the stream's amenities for nature based recreation and environmental education purposes. The applicant is requesting $30,000 in Program funds and is contributing about $193,000 in cash and $5,000 in in-kind services toward the stream channel and riparian work. The applicant is also providing about $375,000 in cash and in-kind services toward improving recreational amenities within the park. We support the project as proposed ($30,000.00).

2. Cabin Creek (Madison County) is a tributary to the Madison River located near Hebgen Reservoir that supports a slightly hybridized population of westslope cutthroat trout. The 1959 Quake Lake earth quake created a scarp that effectively isolated a genetically pure westslope cutthroat trout population residing in Cabin Creek. This scarp has slowly eroded away over time, allowing a few non-native rainbow trout to pioneer into the drainage. Non-native rainbow trout are now hybridizing with native westslope cutthroat trout. This proposal calls for installing a permanent fish migration barrier at the lower end of the drainage to preserve the current level of genetic purity within this relatively large population of westslope cutthroat trout. The barrier would be located within a confined canyon and would consist of a concrete dam with two, 4-foot drops separated by a gently sloping concrete slab. The applicant is requesting $75,000 in Program funds and is contributing $329,000 in cash from outside sources and $35,000 in in-kind services. We support the project as proposed ($75,000.00) RIT eligible.

3. French Creek (Deer Lodge County) is a tributary to Deep Creek, and ultimately the Big Hole River, that drains a portion of the Mount Haggin Wildlife Management area owned by Montana Fish, Wildlife and Parks. The stream currently supports non-native brook trout and rainbow trout, as well as native mountain whitefish, longnose dace and mottled sculpin. This proposal calls for the installation of a permanent fish migration barrier located near the mouth of the stream. The barrier would consist of a concrete dam structure with an accompanying 140-foot long earthen berm installed across the floodplain. Once the barrier is in place, the plan is to remove all of the non-native fish using a piscicide, followed by the reintroduction of westslope cutthroat trout and arctic grayling. The applicant is requesting $73,000 in Program funds and is contributing $145,000 in cash from outside sources, as well as providing $110,000 in in-kind materials. Although we have concerns about constructing a barrier in a relatively unconfined valley due to increased risks of failure and greater maintenance needs, we support the project as proposed ($73,000.00) RIT eligible.

4. Gleason Creek (Powell County) is a tributary to Nevada Creek located on USFS property near the community of Finn. The stream supports a slightly hybridized population of westslope cutthroat and possibly some limited bull trout use. An existing USFS road culvert on the stream currently acts as a partial upstream barrier to migrating fish. This project calls for replacing the existing 48-inch culvert with a 137-inch span by 87-inch rise corrugated steel arch pipe. A series of 4 rock weirs would be installed inside the new pipe to maintain the streambed. The applicant is requesting $10,000 in Program funds and is contributing $45,270 in cash from outside sources and $3,380 in in-kind services towards completion of the project. We support improving fish passage at this road crossing but question the proposed design for being able to retain rock weirs in a culvert at a 5% slope. We would like to hear why this alternative was selected over other alternatives such as a bridge or a bottomless arch culvert before making a recommendation. RIT eligible.

5. Johnson Creek (Silver Bow County) is a tributary to the Big Hole River located near Wise River that supports a slightly hybridized westslope cutthroat trout population, as well as a brook trout population. Cattle trespassing onto properties owned by Joel Webster and John Tierney have led to trampled stream banks and over-widening of the stream channel. This project calls for installing riparian fencing that would tie into existing fencing to eliminate the cattle trespass problem. Approximately 2,200 feet of wire fence and 150 of jack-leg fence would be installed. Additionally, a cattle guard would be installed at an access road leading to private property. Livestock grazing would be excluded from the riparian corridor once the fencing is installed. The applicant is requesting $9,470 in Program funds and is contributing $2,000 in cash from outside sources. Although we'd like to see additional match for this project, we support the project as proposed ($9,470, RIT eligible); as long as the applicant obtains 3 competitive bids for the fencing.

6. Keep Cool Creek (Lewis and Clark County) is a tributary to the upper Blackfoot River located near Lincoln. The stream supports primarily brown trout, but also supports westslope cutthroat trout in the headwaters and limited bull trout use in its lower reaches. Presently, two undersized culverts located on the Grosfield Ranch act as partial upstream migration barriers to fish. This proposal calls for replacing the lower culvert with a hardened ford, since the need for access is very limited. The upstream 48-inch culvert would be replaced with an 8-foot, 1-inch by 6-foot, 1-inch, steel arch pipe. This new culvert would accommodate the bank full channel width and provide for floodplain function. The applicant is requesting $6,000 in Program funds and is providing $7,620 in cash from outside sources and $2,932 in in-kind services toward completion of the project. We support the project as proposed ($6,000.00).

7. Racetrack Creek (Powell County) is a tributary to the Clark Fork River that supports primarily brown trout and mountain whitefish in its lower reaches. An existing irrigation diversion owned by Carl Johnson, located about 2 miles upstream of the confluence with the Clark Fork River near the community of Racetrack, currently acts as an upstream fish migration barrier during the irrigation season. The diversion consists of a makeshift of t-posts, sections of roofing tin and tarps. This proposal calls for rebuilding the diversion by installing a folding jack-leg structure fitted with a Denil fish ladder and a simple wooden head gate with a screw gate. The new diversion would be folded down at the end of each irrigation season. The project is part of a larger fish passage and in-stream flow plan for the drainage. The applicant is requesting $10,100 in Program funds and is contributing $12,400 in cash from outside sources and $1,200 in in-kind services toward completion of the project. Although a very similar type of project was funded in the recent past, we have

developed concerns that these proposed pin-and-plank diversions would actually further hinder fish passage and potentially contribute to dewatering of the stream. Installation of a Denil fish ladder should be considered a band aid to fish passage, not a cure-all. As a result, we do not support using Program funds for construction of the diversion. Should this diversion be constructed, however, we support funding the retrofit of a Denil style fish ladder. We recommend approving funding for the cost of the Denil ladder, should the new diversion be constructed. (Reduce to $3,500.00 - to be used specifically for installing a Denil ladder).

8. The Shields River (Meagher County) is one of the few remaining strongholds for native Yellowstone cutthroat trout. However, expanding brook trout populations are threatening the persistence of these native fish, especially in the headwaters. This proposal calls for constructing a fish migration barrier at an existing USFS road crossing located within the Shields River headwaters, just downstream from the confluence of Crandall Creek. The barrier structure would be a precast box culvert that would replace an existing bridge and create a 4.2-foot drop from the end of the apron. Additionally, a 130-foot long berm would be installed along the west side of the channel to protect the existing road. By-pass pipes would be installed within the berm and in the existing road to allow for drainage during flows that exceed bank full. As part of the project, non-native brook trout would be removed from upstream waters by electro-fishing and by the use of piscicides. Salvaged Yellowstone cutthroat trout would be returned to reclaimed waters. A design component of this project allows for the new barrier to be removable with relative ease should the opportunity to expand Yellowstone cutthroat trout conservation efforts to downstream waters arise. The applicant is requesting $129,775 in Program funds and is contributing $275,450 in cash from outside sources. As with the French Creek project above, we support the project as proposed but continue to have concerns about constructing fish barriers in relatively unconfined valleys. Doing so increases the risk of failure and creates greater maintenance needs ($129,775) RIT eligible.

9. Stony Creek (Granite County) is a tributary to Rock Creek that supports brown trout, westslope cutthroat trout and bull trout. Radio telemetry has determined that fluvial bull trout also use Stony Creek. An irrigation diversion located just upstream of the USFS Stony Creek campground currently acts as a fish migration barrier and has been documented to entrain westslope cutthroat trout and brown trout. This diversion, owned by the Rock Creek Ranch, currently consists of a series of concrete ecology blocks and a simple screw-gate head gate. This project calls for rebuilding the diversion using a vortex rock weir structure and installing a horizontal flat-plate fish screen and bypass. The applicant is requesting $23,774 in Program funds and is contributing $20,559 in cash from outside sources and $4,480 in in-kind services toward completion of the project. We support the project as proposed, but want assurances that there is sufficient water to successfully operate a FCA fish screen ($23,774.00) RIT eligible.

10. Browns Gulch (Silver Bow County) is a tributary to Silver Bow Creek located near Butte that supports brook trout in its lower reaches and westslope cutthroat trout in its headwaters. With the ongoing clean-up of Silver Bow Creek, fluvial westslope cutthroat trout now found in Silver Bow Creek are beginning to pioneer into the lower reaches of Browns Gulch. A reach of the stream flowing through property owned by the Ueland Ranches, Inc. was historically channelized and currently is experiencing substantial bank erosion. This project proposes to replace 800 feet of channelized stream with about 1,400 feet of a newly constructed meandering channel. The new channel will have an accessible floodplain and will be re-vegetated with riparian shrubs and wetland

sods. Fencing will be installed to encourage the recovery of the riparian vegetation. A grazing management plan will be implemented once the riparian corridor has fully recovered. The old channel will be filled in and re-vegetated. The applicant is requesting $29,960 in Program funds and is contributing $68,225 in cash and in-kind services. We support the project as proposed ($29,960) RIT eligible. A previous proposal was submitted in 2012 and was tabled due to the lack of design information.