

DECISION NOTICE
KICKABUCK SPRING CREEK SPAWNING HABITAT ENHANCEMENT
PROJECT

Prepared by
Montana Fish, Wildlife and Parks
March 24, 2009

I. Proposal

Montana Fish, Wildlife and Parks (FWP) proposes to provide partial funding through the Future Fisheries Improvement Program for a spawning channel enhancement project on Kickabuck Creek, a tributary to the Yellowstone River.

II. Montana Environmental Policy Act (MEPA)

MEPA required FWP to assess the potential consequences of the proposed action for the human and natural environment. The proposal was detailed in an Environmental Assessment (EA) released by FWP on February 20, 2009. The 30-day comment period for this EA ended March 23, 2009.

Issues raised during the public comment period for this EA are addressed in the Comments section of this Decision Notice. The draft EA and Decision Notice will serve as the final document.

III. Summary of Public Comment

One written e-mail comment was received in response to the draft EA. No other comments were received. The commenter **“is supportive of the intent of this proposed project but is unable to support it in its present form. We feel it is appropriate to either rewrite the document and include the missing supporting data or, in the absence of the availability of those data, generate them and submit the proposal in a complete form at another date.”**

Issues brought forward from this written comment included:

- 1. The opening statement asserts that Yellowstone cutthroat numbers in the reach adjoining the project site have declined and that the decrease in numbers is attributed to limited tributary spawning habitat. How was this conclusion reached? It would seem that the decline in river cutthroat numbers could only be ascribed to limited spawning habitat if that habitat previously available had diminished in size or quality. Please present those data. How is it known that recruitment is responsible for the river cutthroat decline? The supporting information should be presented here. Obviously, if the decline in cutthroat abundance in the river is the result of some other factor or factors than recruitment**

limitation then expanded spawning opportunity will be of no utility in increasing their abundance.

Response: Our understanding of the role of tributary access and recruitment of Yellowstone cutthroat trout (YCT) goes back to investigations in the 1980s (Clancy 1988), which identified dewatering in tributaries as a major constraint on fluvial YCT populations. Investigations in streams where FWP has leased water rights such as Cedar Creek, Big Creek, Locke Creek, and Mill Creek, confirm the importance of maintaining tributary flows in promoting recruitment of YCT (Roulson 2002). The decline in the Springdale to Big Timber reach coincides with extended drought, and the resulting reductions in water supply have exacerbated low flows during sensitive incubation, emergence, and drift periods. Another factor relating to the decline of fluvial YCT in this portion of river has been changes in river morphology at the mouth of Locke Creek, a major source of YCT fry, during the 1997 flood. A shift in the thalweg of the river has decreased backwatering of a railroad culvert during the spawning period, which now presents a barrier to upstream movement of spawners in most years. Locke Creek is the only stream in the Springdale and Big Timber reach of the Yellowstone River with a water lease resulting in reliable flow during early life history stages, and its period of inaccessibility also coincides with the decline in fluvial YCT. Modifying the railroad culvert in Locke Creek and securing spawning habitat in other streams with reliable flow are priority actions in conserving fluvial YCT in this part of the river. *References:* Clancy, C. G. 1988. Effects of dewatering on spawning by Yellowstone cutthroat trout in tributaries to the Yellowstone River, Montana. American Fisheries Society Symposium 4: 37-41.; Roulson, L. H. 2002. Water Leases and Yellowstone Cutthroat Trout Fry Outmigration from Four Tributaries of the Upper Yellowstone River, Project Year 2001. Report prepared for Montana Fish, Wildlife & Parks. Garcia and Associates, Bozeman, Montana.

- 2. The statement is made that the stream in question is unmapped. What is its source? Is it a natural flow or the result of upslope irrigation? Its flow may be, as stated, both ample and cool, but it would be more useful to present more scientific descriptors. What is the flow volume during the period of Yellowstone cutthroat spawning, incubation and rearing? Are there barriers to upstream and downstream fish movement? Irrigation diversions that might entrain down migrant juveniles?**

Response: Flows in Kickabuck Spring Creek respond to the rise of the spring hydrographs in the Boulder and Yellowstone rivers, with a slight lag, and remain at or above 5 cfs from mid June through the fall. Irrigation return flows may contribute to flow volume later in the season, although the extent is unknown. Fluvial YCT do not rear in tributary streams, but drift soon after emergence to the Yellowstone River (Byorth 1990), so flows through mid August are of the greatest significance, and at 5 cfs, these are sufficient to transport fry. No barriers block upstream or downstream movement of fish, and no

irrigation diversions occur on this stream. *Reference:* Byorth, P.A. 1990. An evaluation of Yellowstone cutthroat trout production in three tributaries of the Yellowstone River, Montana. Master's Thesis. Montana State University, Bozeman.

3. What other species are (sic) present that might access the stream and how may their presence affect the success of Yellowstone cutthroat spawning and recruitment. Are rainbow trout present and potential spawners in the creek? What will prevent hybridization with the cutthroats?

Response: Kickabuck Spring Creek will be accessible to the entire fish assemblage residing in the Yellowstone River, including rainbow trout. Temporal segregation in spawning is the mechanism that has allowed pure strain YCT to exist despite nearly 100 years of living in sympatry with rainbow trout in the Yellowstone River (DeRito 2004). Rainbow trout spawn earlier, during the rise of the spring hydrograph, while YCT spawn later, coinciding with the decline. Rainbow trout use of the spring creek for spawning is expected to be low, as the stream conveys little water during their spawning period. Although some level of hybridization may occur, as it does throughout the portion of the Yellowstone River where these species coexist, the existing temporal segregation has been sufficient to allow YCT to persist. *Reference:* DeRito, J. N. 2004. Assessment of reproductive isolation between Yellowstone cutthroat trout and rainbow trout in the Yellowstone River, Montana. Masters Thesis, Montana State University, Bozeman, Montana.

4. Why are no willows scheduled to be planted along the reconstructed channel?

Response: Willows are inappropriate for this type of wetland.

5. Temporary electric fencing is stated to be placed to control livestock along the rehabilitated stream. How many years will grazing be deferred?

Response: The details of the grazing strategy have not yet been developed. At a minimum, cattle will be excluded from the stream and surrounding wetland until the vegetation recovers. The grazing management plan will be developed with technical assistance from the local NRCS district conservationist, and will emphasize ecological goals and objectives. The Future Fisheries project agreement will call for the riparian corridor to be excluded from livestock grazing for a minimum of three years.

6. Of the stated total cost of \$61,000, Future Fisheries is said to comprise \$39,000. Where will the remainder of the money be secured?

Response: The total cost of the proposed project is estimated to be \$61,071, with Future Fisheries contributing up to \$38,857. Match is being provided through FWP's State Wildlife Incentives Grant Program (\$11,764), Montana Trout Foundation (\$5,000) and the landowner (\$6,000).

7. Will trout have unimpeded access from the river to the creek? If so, what species of fish currently inhabit the creek? If not, what measures are planned to allow access? What species might be expected to ascend?

Response: No structures or other features will impede access of fish to the stream, although low flows during winter and early spring may prevent upstream or downstream movement. A fisheries investigation in May of 2008 found low densities of brown and rainbow trout (all juveniles), mottled sculpin, and brook stickleback in the stream. Other species with potential to occupy the stream incidentally or seasonally include mountain whitefish, longnose dace, white sucker, longnose sucker, mountain sucker, lake chub, common carp, and burbot.

8. Why does a category labeled "Access to and quality of recreational activities" never mention access? The statement that river fisheries are expected to improve is unfounded. See the first comment presented.

Response: The intent of this proposed project is not to create a public fishery on Kickabuck Spring Creek. Rather, the intent of the proposed project is to enhance recruitment of Yellowstone cutthroat trout to the Yellowstone River. The Yellowstone River is readily accessible by the public. The response of fish populations to any habitat alteration is speculative. However, the local FWP fisheries biologist thinks that this project provides a good opportunity to benefit Yellowstone cutthroat trout, classified as a species of special concern in Montana.

9. Attachment 2 is impossible to read or use.

Response: We apologize for the poor quality of Attachment 2. The only way we can include this information is to photocopy the documents from the original application to the Future Fisheries Improvement Program. The quality of documents received from Future Fisheries applications can vary greatly and poor quality becomes compounded when we attempt to photocopy a document for inclusion in an EA. Although occasionally these documents are poor in quality, we feel that the information they provide is better than not including them at all. We will send out another copy of Attachment 2 should we be requested to do so, although the quality may continue to be unacceptable to the reader.

IV. Modifications to the Environmental Assessment

Modifications to the draft EA are deemed to be unnecessary.

V. Decision

After review of the proposal, it is my decision to proceed with funding though the Future Fisheries Improvement Program for the Kickabuck Spring Creek Spawning Habitat Enhancement Project. The action will benefit the fishery in the Yellowstone River.

I find there to be no significant impacts associated with this action and conclude that an Environmental Impact Statement is not needed. The completed EA and the Decision Notice provide an adequate level of analysis.

Jim Darling, Habitat Bureau Chief
Fisheries Division