Region One Fisheries
490 North Meridian Road
Kalispell, MT 59901
(406) 752-5501

ENVIRONMENTAL ASSESSMENT AND DECISION NOTICE FOR THE LOWER PIPE CREEK RESTORATION PROJECT

March 25, 2010

Project Proposal and Justification:

Pipe Creek is an important bull, rainbow, and cutthroat trout spawning and rearing tributary to the Kootenai River below Libby Dam. The watershed area of Pipe Creek is approximately 106 square miles (67,721 acres), with elevations ranging from approximately 2,900 feet at the confluence with the Kootenai River to over 6,000 feet at the watershed divide. Lower Pipe Creek has been subject to residential and urban infrastructure encroachment, removal of riparian vegetation, inadequate bridge capacities, and channelization. Areas of lower Pipe Creek have also been straightened and leveed to accommodate development in the floodway. The cumulative effect of these activities has resulted in displacement of bank stabilizing vegetation, resulting in accelerated lateral extension of the streambank and terrace erosion, which have reduced the quantity and quality of available fisheries habitat and increased sediment within this section on Pipe Creek. Montana Fish, Wildlife & Parks (FWP) is proposing to restore fisheries habitat within approximately 2,450 feet of lower Pipe Creek near the Kooentai River confluence by restoring the dimension, pattern, and profile of Pipe Creek. The primary objectives of this project are to enhance fisheries habitat, reduce stream bank erosion, and restore a healthy and functional riparian community. The restoration project will install a total of seven log vanes and twelve engineered logjams that are designed to increase bank stability by reducing near-bank stress and redirecting flow away from the streambanks. These structures would also provide pool habitat for salmonids. Montana FWP will also install twelve boulder energy dissipater structures and seven boulder grade control structures throughout the project area, which are designed to provide streambed grade control in run and riffle features, respectively, until natural streambed armoring/sorting processes develop and control long-term vertical stability. Montana FWP will also install several structures designed to restore a healthy and functioning riparian community and promote long-term bank stability. These structures include ten vegetated soil lifts (approximately 835 feet total length), five anchored coir log structures, and five sod brush trenches.

Location of Project:

This project will be conducted on lower Pipe Creek located approximately 2 miles northwest of the town of Libby, Montana, within Township 31 North, Range 31 West, Sections 29 and 30 in Lincoln County, Montana. Pipe Creek is a third order tributary at the proposed project site and a fourth order tributary at the confluence with the Kootenai River. The project site is located on nine privately owned parcels and is situated in a rural residential area between Kootenai River Road Bridge and Bothman Drive.

Environmental and Social Impacts of Project:

There will be short-term increases in turbidity during the project construction phase. During construction, all reasonably applicable Best Management Practices will be employed to minimize sediment in Pipe Creek and the Kootenai River including the following: All in-channel construction activities will be performed during July/August during low flow period to reduce turbidity. Construction in the dry conditions will be maximized to practical extents, stream crossings will be minimized, straw bales and silt fencing will be used to restrict sediment access to the stream channel, and temporary diversion channels may be constructed to divert water away from construction areas. Construction activities will protect and preserve as much of the existing vegetation as possible, and efforts to restore a healthy, functioning riparian community will minimize future sediment delivery to this section of Pipe Creek. Montana FWP expects that any short-term increases in turbidity will not adversely impact the aquatic biota within Pipe Creek or the Kootenai River.

Montana FWP expects that the long-term benefits of this project will outweigh any short-term and nonsignificant impacts. Soils along the stream margin would be disturbed during channel construction, but would quickly stabilize following proposed revegetation efforts. Overall, the project is expected to reduce bank erosion and improve channel stability by restoring a degraded portion of the channel to a proper dimension, pattern, and profile, and reestablishing a healthy riparian zone. Likewise, riparian vegetation and cover would experience minor disturbance during the period of construction. However, proposed revegetation efforts would ultimately improve the riparian community and the overall aesthetics within this area. This restoration project will improve salmonid rearing and migration conditions by increasing the frequency and quality of pool habitat, stabilizing eroding stream banks and shifting stream channels, lowering summer water temperatures, and increasing the abundance and complexity of instream cover. These habitat improvements may increase the long-term carrying capacity and productivity of local populations of resident fishes.

Montana FWP evaluated whether the proposed project would increase the flood hazard to local properties along Pipe Creek. These analyses indicate that, for a 100-year flood event of 1,900 cubic feet per second, proposed conditions will

decrease the water surface elevation upstream of the Bothman Drive Bridge by more than five feet and intermittently increase the water surface elevation at select locations as a result of changes in the vertical profile required to reconnect the proposed channel with its adjacent floodplain. However, despite the slight increases in water surface elevations within a small proportion of the project area, the overall extent of flood inundation remains generally unchanged and does not increase the flood risk for existing structures adjacent to the project area. In addition, basic stability checks for the proposed engineered logjam structures indicated sufficient factors of safety are maintained for failure due to buoyancy, sliding, and scour during the 100-year flood.

Public Involvement:

In compliance with the Montana Environmental Policy Act, an environmental assessment (EA) was prepared and circulated for public comment from February 17 through March 19, 2010. Notices were advertised in two local newspapers (Daily Inter Lake and Western News), a news release was done, and notification was mailed to local conservation groups, timber companies, selected businesses, natural resource agencies, and landowners. Copies of the EA were made available at three local libraries, the state library in Helena, the FWP Region 1 headquarters in Kalispell, and the FWP internet web site. Montana FWP received the following comments.

Citizen Comments Summary:

Montana FWP received comments from two citizens in full support of the project.

Montana DEQ Comments:

This looks like a worthwhile restoration project. The only concern is the emphasis on some of the heavier rock, logjam, and vane structures. There appears to be a fair amount of risk relative to them functioning as proposed and/or in some cases failure results that can then even compromise stream stability. We would encourage you to consider much more emphasis on the vegetated soil lift techniques that, if properly designed and built, seem to function very well in your harsh hydrologic environment.

Response:

Montana FWP believes that an integrated mix of structure types is best suited to restore vertical and lateral stability and aquatic habitat in this section of Pipe Creek. Vegetated soil lifts are an important component of this project. The project design specifies ten soil lifts (835 feet total length), which comprises 17% of the total length of streambanks within the project area. Vegetated soil lifts are specifically designed to provide site conditions directly along the channel that are suitable for growing riparian vegetation and reducing bank erosion rates, and

used in conjunction with other structures. Vegetated soil lifts do little to increase the quantity of pool habitat for fishes or control vertical streambed stability. The other structures such as the log vanes, engineered log jams, boulder energy dissipaters, and boulder gradient control structures are designed to accomplish these two objectives.

Decision Notice:

Based on the comments we received during the public comment period for the draft EA for the Lower Pipe Creek Restoration Project, we have prepared the final EA for this project. Montana FWP has decided to implement this restoration project in two phases. The first phase will occur in the upper half of the project area in 2010, and the second phase will occur in the lower half of the project area in 2011. Phased implementation of this project will not change the scope or the predicted impacts that were described in the draft EA. This decision notice and the draft EA will be considered the final EA for this project. Due to the urgent need to restore aquatic habitat in lower Pipe Creek, I recommend that Montana FWP implement plans to construct and restore approximately 2,450 feet of lower Pipe Creek.

James R. Satterfield, Jr.

March 25, 2010

James R. Satterfield, Jr., Ph.D., Supervisor Date
MT Fish, Wildlife & Parks, Region One