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Poindexter Slough Project Summary:

The Beaverhead Watershed Committee is raising funds to complete a large-scale habitat rehabilitation project that will restore habitat conditions capable of supporting a world-class wild trout fishery to Poindexter Slough and needs your help.

Poindexter Slough is a 4.7 mile long valley-bottom channel of the Beaverhead River fed by a combination of groundwater and flow from the Beaverhead River. The lower 3.2 miles are located on a FWP Fishing Access Site and provide one of the few publically accessible spring creek angling experiences in southwest Montana. When good habitat conditions occur, abundances of over 2,000 adult trout per mile and excellent angling are supported by Poindexter Slough. Because of its accessibility and close proximity to the city of Dillon, Poindexter Slough is a heavily frequented sport fishery that has accommodated up to 4,095 angler days per year. Poindexter Slough is also important to the local economy of Dillon; during periods of high angler use it is estimated that over \$433,000 of direct expenditures are made annually in Beaverhead County by anglers fishing Poindexter Slough.

Periodic surveys completed by FWP have documented a steady decline in the fishery and angler use of Poindexter Slough over the past 12 years. Abundances of adult brown trout declined from about 2,400 fish per mile in 1999 to between 500 and 1,000 fish per mile during most of the 2000's. Annual angler also declined during this period from over 4,000 angler days to a low of 610 angler days and average angler satisfaction rating transitioned from "excellent" to "poor."

The observed declines are primarily related to changes in historical irrigation practices, primarily conversion from flood to pivot irrigation, in the areas surrounding Poindexter Slough. Poindexter Slough was traditionally fed largely by groundwater returning from flood irrigation. These "spring" sources were adequate to meet the irrigation demands of the Dillon Canal, which diverts its water right about half way down the slough, and create a very productive and stable spring creek fishery. As pivots replaced flood irrigation, groundwater inputs decreased and Poindexter Slough was supplemented with increasingly more water from the Beaverhead River in order to meet the Dillon Canal's water right and maintain instream flows. Diverted Beaverhead River water carries and deposits a large amount of fine sediment into Poindexter Slough, which has progressively filled pool and riffle habitat. As the streambed became covered in sediment fish abundance

and angler use, aquatic insect habitat declined.

In order to effectively mobilize and transport fine sediment and restore better habitat conditions, infrastructure to accommodate a flushing flow and eliminate backwatering caused by an irrigation diversion is required. Adequate flushing flows can be achieved throughout Poindexter Slough by a combination of increasing the size of the Beaverhead River head gate and selectively narrowing the channel in lower reaches. This alternative seeks to employ an active approach to channel enhancement by increasing the quantity and depth of pool habitat, restoring appropriate width-to-depth ratios for riffles and pools, removing or isolating fine sediment deposits from stream bed, and encouraging natural recruitment of willows and other woody riparian vegetation. A new head gate would be installed at the top of Poindexter Slough to route flushing flows of adequate magnitude and duration to mobilize and transport sediment through the slough and maintain and rejuvenate restored habitat features. To permanently eliminate backwatering and a barrier to fish movement, the Dillon Canal would be re-graded and its pin-and-plank control structure and head gate would be lowered in elevation. A flow management plan that describes desired magnitude and duration of flushing flows required to mobilize various sized particles has been developed and a new grazing management plan would be implemented to promote recruitment of woody riparian vegetation on private land.

This project will enhance wild fish habitat, adult fish abundances, and improve angling quality on Poindexter Slough. By providing infrastructure capable of conveying flushing flows designed to mobilize and transport fine sediment that is the quality and quantity of spawning, rearing, adult fish, and aquatic macroinvertebrate habitat that previously supported excellent fish abundances will be restored to Poindexter Slough.

The restoration of Poindexter Slough is estimated to cost \$445,000. The Beaverhead Watershed Committee has secured \$358,000 through various grants, in-kind services, and private donations. We are presently trying to raise the final \$87,000 required to complete the project. Construction on the first three phases is scheduled to start in the fall of 2014.