2005 Fisheries Restoration Project Summary – Lolo NF

State: Montana
National Forest: Lolo National Forest, Ninemile Ranger District
Project Name: Upper Stony Creek Diversion Fish Screen

Project Purpose / Objectives:

Small stream diversions can be a major mortality component to fish population segments. In the middle Clark Fork River, some of the most productive native fish areas are on tributary stream segments which also often have unscreened water diverted directly from surface water. As can be seen from **Figures 1 and 2**, these small diversions can tra[large numbers of fish. The Lolo National Forest is working with special use permit holders at time of permit renewal to screen these water diversions to keep fish production from being lost to stream diversions. The upper Stony Creek diversion (**Figures 3 and 4**) is in the upper portion of the creek, which is a tributary to lower Ninemile Creek. It has some of the better native fish production capability of this lower Ninemile area. All fish in this area of Stony Creek are westslope cutthroat trout. The primary objective of the screen is to provide a low maintenance structure that will keep fish from being entrained and lost into the ditch.

Figures 1 and 2 show a fairly typical small tributary diversion ditch and the amount of fish production that such a ditch can entrain.

Work Performed:

The Ninemile Ranger District worked with the Fisheries Restoration and Irrigation Mitigation program and a local water user to fund, design and construct a Bren-Cail passive (no moving parts) fish screen. This fish screen has been used locally on other important native fish production streams such as Rattlesnake and Rock creeks. **Figures 3 and 4** demonstrate what the site looked like before and after screen placement. The screen is a punched stainless steel trapezoid with pores approximately 3mm in diameter placed inside a split 24 inch diameter steel culvert. This allows water to travel down through the pores, into the culvert and delivered to the irrigation ditch. Fish are kept above the stainless steel pores. The sweeping current focuses fish to the back of the screen structure where a 3-inch plastic pipe returns fish back to the stream channel.

Expected Benefits:

This upper Stony Creek fish screen will lead to much less diversion loss of native fish production from upper Stony Creek. This upper Screen has also led to our ability to obtain additional funds for the construction and placement of a lower Stony Creek screen, at a site that is administered solely by the Forest Service. These two screening projects will help protect the upper half of the Stony Creek watershed fisheries. Other activities in the watershed such as stream crossing removal and upgrades, and road decommissioning will provide additional watershed and native fish production benefits.

Figures 3 and 4. Upper Stony Creek diversion structure without (left) and with new Bren-Cail Fish screen.