Abundance of Juvenile Salmonids along Stabilized and Natural Main-Channel Banks of the Upper Yellowstone River[AFS]

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We compared juvenile salmonid use of stabilized banks (riprap, barbs, jetties) of the upper Yellowstone River to their use of natural, unaltered habitats by electrofishing in spring, summer, and fall, 2001 and 2002. Total fish captured during the study, by species, were rainbow trout (n = 2763, 62%), brown trout (n = 1189, 27%), mountain whitefish (n = 334, 8%), Yellowstone cutthroat trout (n = 166, 4%), and brook trout (n = 1, < 1%). Mean abundances of all species combined along 50-m sites were highest at riprap (12.2/ site), followed by jetties (10.6), outside bends (8.4), barbs (7.9), straight sections (5.4), and inside bends (1.5) were the lowest. Presence of boulders, either natural or artificially placed, was

the best indicator of juvenile fish presence regardless of bank type. Somewhat surprising, bank stabilization did not directly decrease quality or quantity of juvenile salmonid habitat along the main channel of the upper Yellowstone River. However, our study only looked at juvenile salmonids and did not address the effects of bank stabilization on habitat for sub-adult or adult fish, invertebrate availability and or spawning habitat.