

Restoration Project Technique Selection and Design Consideration: Differences between Biologists, Hydrologists and Engineers – Lessons Learned

Dean Hughes¹ and Brie Darr²

Since its inception, the Kenai River Fish Habitat Restoration and Protection Cost Share Program has funded approximately 400 projects. Working with concerned landowners, the Program has completed projects that re-vegetated over 2 miles of riverbank, protected over 6 miles of streamside fish habitat using primarily elevated light penetrating gratewalks, and removed over one-half mile of structures detrimental to juvenile fish such as rip rap, bulkheads, jetties, and metal debris. These projects revealed two adjustments in the conduct of the Program: changes in the way that we select and install restoration techniques and differences in the way that various agencies view restoration projects.

Having the opportunity to observe a wide range of techniques over longer time periods allowed modifications to those techniques to maximize fish habitat attributes in projects. Altering restoration techniques has allowed greater survival of installed vegetation and improved riparian vegetation and function. These changes improved fish habitat while improving the long-term stability of the riverbank. These attributes are the goals of restoration projects designed by biologists.

As to different agencies goals and end products, what is a bigger challenge? Convincing a biologist to use “hard” structures like bulkheads, sheet pile and riprap to stabilize riverbank and protect critical infrastructure or convincing an engineer to use “soft” bioengineering techniques to improve fish habit, riparian vegetation and function, and stream health? Sound like a trick question? Maybe it is. However, this question reflects the fundamental differences in the way that various agencies approach bank restoration/stabilization projects.

¹Habitat Biologist, Alaska Department of Fish and Game, 907-267-2207

²Fish & Wildlife Biologist, US Fish and Wildlife Service, 907-260-0125