# USDA-CSREES 2006 National Water Quality Conference

## Maintaining Agricultural Waterways in King County, Washington

Maintaining agricultural ditches is an important practice for protection of valuable farm land in the Pacific Northwest. Waterways can become choked with reed canarygrass and sediment making adjacent agricultural lands prone to flooding and impacting the yield of the land after seasonal flooding events. However, there is concern that maintenance activities may negatively affect salmonid habitat. For example, about 3,500 fish, representing 19 different species were captured near or in farm ditches during our 2004 quarterly monitoring activities. Salmonid species represented 18% of the fish collected, showing the importance of these ditches as salmonid habitat. As a result of these concerns, the King County Department of Natural Resources & Parks funded a collaborative study between Washington State University and the University of Washington to investigate ways to avoid or minimize agricultural maintenance related impacts on salmonid habitat by: 1) evaluating both reach-specific and upstream factors that determine the function of lowland agricultural watercourse habitat for salmonid fishes, 2) assessing the effects of agricultural drainage maintenance activities on these factors, and 3) identifying drainage maintenance activities that can be undertaken to effectively avoid and minimize habitat impacts.

Research has revolved around 12 primary goals representing topics including fish utilization by habitat and water quality, temperature impacts of different types of riparian vegetation, reed canarygrass control measures, and erosion minimization techniques. Research finding show how through proper timing and mitigation, maintenance of waterways can provide a net positive impact on fish habitat. Outreach is an important part of this project as it is essential that the regulators, farmers, and general public become aware of these finding. University and extension faculty are part of the multi-disciplinary research team involved in this project. Through their combined efforts, this research project will be better able to help shape policy decisions that benefit both farmers and fish.

Author: Michael Barber
Coauthor(s): Shulin Chen, Tom Cichosz, Dawn Shepard, Jim Dobrowolski and Lizbeth Seebacher