

**STREAMLINING DATA COLLECTION AND ANALYSIS FOR SUPPORT OF
TMDL AND WATER QUALITY
RESTORATION PLAN DEVELOPMENT IN MONTANA^{AFS}**

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In recent years, the Lolo National Forest has participated in Total Maximum Daily Load (TMDL) and Water Quality Restoration Plan (WQRP) development for five watersheds in western Montana: Upper Lolo Creek (1999-2003), St. Regis River (2001-2004), Prospect Creek (2003 – 2004), Middle Blackfoot River (2003-2005) and Ninemile Creek (2003-2004). The TMDL development process for each of these 303 (d) listed water bodies has varied depending upon stakeholder participation, previous watershed assessment efforts, and the impaired beneficial uses and probable causes involved. “Aquatic life support” and “Cold-water fishery- trout” are impaired beneficial uses common to all of these water bodies with some of the probable causes including habitat alteration, siltation, flow alteration, and thermal modification (1996 and 2002 303(d) lists). After several years of providing collaborative support for TMDL development in these watersheds, specific data and certain analysis methods and models demonstrate greater potential for establishing targets and allocations in the resulting Water Quality Restoration Plans. An overview of field data, analysis methods and models used will be provided. These include Rosgen Surveys Level 1, 2 & 3, riffle stability index (RSI), R1/R4 fish habitat inventories, fish population surveys, water yield modeling (ECA), sediment modeling (WATSED/LoloSED, XDRAIN, Washington Method), culvert-fish passage assessments, queries of Forest Service databases including TSMRS and INFRA, and GIS analysis. Data, analysis methods and models with greatest potential will be highlighted, and their application to Water Quality Restoration Plans described in detail. The purpose of this presentation is to share insight into providing focused, efficient support of TMDL development so to expedite development and implementation of restoration plans.