WATERSHED ASSESSMENT-WATERSHED ANALYSIS: WHAT ARE THE LIMITS AND WHAT MUST BE CONSIDERED

Ziemer, Robert R., USDA Forest Service, Pacific Southwest Research Station, 1700 Bayview Drive, Arcata, CA 95521 (TS#8) Watershed assessment or watershed analysis describes processes and interactions that influence ecosystems and resources in a watershed Objectives and methods differ because issues and opportunities differ. In particular, the management of federal lands must take into account the full range of uses and values present, so federal interagency watershed analysis includes wildlife, social, and economic components in addition to the physical and aquatic evaluations shared by other watershed analysis efforts. Management of private lands might be able to consider a more narrow range of concerns, although this range is becoming broader. In any case, the watershed or river basin defines the appropriate geography. The analysis should not be confined to specific land ownership or type of land use. The depth and focus of the analysis is strongly conditioned on the question being addressed. For example, an analysis concerning water quality degradation by sediment could result in a much more simple and focused approach than an analysis concerning changes in the number of returning salmon. For the salmon analysis, non-point source stream pollution by erosion and sediment would be only one of many factors that potentially affect salmon. Additional issues affecting salmon are possible changes in streamflow, water temperature, migration, food supply, spawning and rearing habitat, fishing, predation, ocean conditions and many more. Clearly, analysis at a watershed scale of a single issue, such as water quality degradation by sediment, cannot be expected to be an adequate analysis for a more complicated issue, such changes in the number of returning salmon.