

*U.C. Riverside- CSU Fresno
Joint Environmental Science Degree Program
Presents:*

***Resource Management, Economics and Entropy in
Redwood Creek and the San Joaquin Valley***

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Date & Time: Thursday Nov. 6, 2003: 3:40 – 4:30 P.M.

Location: McLane Hall (H-wing), Room 280

Abstract: Interest and applications of micro spatial analysis are being driven by two factors, the need to account for resource heterogeneity in setting agricultural environmental policy, and the emergence of a very large amount of micro level physical data from what can be termed the GIS revolution. Using this new data effectively in economic analysis raises several new questions on the optimum scale of analysis, the efficiency gains from targeted micro based policy, the application of estimation methods to large data sets in space and time, and the integration of more aggregate economic data with microspatial physical data.

The first paper applies a sequential entropy filter to the sediment load management program for Redwood Creek, which flows through Redwood National Park in northwestern California. Dynamic budget-constrained management with information acquisition and learning is simulated, and compare the results with those from the current policy. The analysis shows that a fiscally constrained manager can reallocate resources from abatement efforts to information acquisition, resulting in lower sediment generation than would otherwise exist. Extensions to a current problem of water temperature pollution in the Navarro River, and TMDL policies will be briefly discussed.

A second paper discussed develops a data-consistent approach to the estimation of cropping choices by farmers at a disaggregate field level using more aggregate regional-level data. The first step in the process consists of specifying a dynamic model of crop allocation and estimating it using aggregate data. In the second step, the outcomes of aggregate model are disaggregated to the field level using maximum entropy (ME). The data disaggregation procedure is applied to a sample of 190 fields located in California and observed from 1986 to 1990.

All members of the professional, educational and research communities are welcome. For additional information, please contact the Earth and Environmental Sciences Department office at (559) 278-3086.