NSF EPSCoR Enables Digital Access to Seminal NSF-Funded Legacy Stream Ecology Data

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In the late 1970's, NSF funded a broad, collaborative stream ecology study (NSF Grant #BMS-75-07333) of specific sites spanning the lengths of multiple, representative river systems across the United States. This seminal study explored changes in river ecology across the entire lengths of these rivers.

NSF funded a subsequent renewal grant (NSF Grant #DEB-7811671) that focused entirely on additional, specific studies of the Salmon River in Idaho. (approx. '78-'84). Dr. G. Wayne Minshall from ISU was the PI and/or key collaborator across both grants. These NSF grants were highly collaborative and included the Stroud Water Research Center, Battelle-Pacific Northwest Laboratories, Idaho State University, Michigan State University, Oregon State University, the University of Lund in Sweden, and the US Forest Service.

These NSF-funded studies resulted in many publications, especially surrounding the idea of the River Continuum Concept (RCC). The original RCC paper[1] remains the single most cited publication in the field of stream ecology.

The current NSF EPSCoR RII grant has enabled Idaho researchers to revisit and resample the same sites along the Salmon River and collect new data. By comparing new samples to the legacy ecology data, researchers can explore changes in river ecology over the last several decades. Revisiting these sites is serving as a nexus for river scientists from Idaho institutions, but has drawn collaborators to Idaho as well. For instance, during the last two summers researchers from ISU were joined at the original "RCC sites" by faculty and student collaborators from Notre Dame University, University of Wyoming, Utah State University, the Cary Institute of Ecosystem Studies, Monash University in Australia, and Ehime University in Japan. More fundamentally, EPSCoR has made it possible to recover the original legacy data (and some cases, even organism specimens) collected in the 1970's. Until very recently, these original data existed only in a large number of physical field notebooks, obsolete mainframe punch cards, or other relatively inaccessible and unsharable forms. Thanks in large part to EPSCoR funding, these data now exist in modern digital form and are actively being made available for the first time ever to the broader public via the Internet.

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[1] Vannote R.L. , G.W. MINSHALL, K.W. Cummins, J.R. Sedell, C.E. Cushing: "The River Continuum Concept". Canadian Journal of Fisheries and Aquatic Sciences. 37.1980,1 Ottawa, 130-137.