



WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: WV2941

Title: Water Quality Measurement in Polishing Ponds of AMD Treatment Plants for Selection of Commercial Aquaculture Sites and Waste Management Studies

Focus Categories: Water Quality, Treatment

Keywords: post mining land use, waste water, water quality, site selection, waste reduction, parameter of comparison, aquaculture

Start Date: 04/01/2001

End Date: 03/31/2002

Federal Funds: \$14,900

Non-Federal Matching Funds: \$78,241

Congressional District: WV 1

Principal Investigators:

Ken Semmens
Associate Professor, West Virginia University

Daniel J. Miller
Professional Staff, West Virginia University

Abstract

The critical state water problem addressed in this proposal is the use of impaired water from mine sites for fish production to explore the possibility of using aquaculture as a post mining land use. Large volumes of flowing water are necessary for production of cool water species such as rainbow trout. The temperature of the water discharged from mines is constant and remains in the ideal growth range for trout throughout the entire year. By utilizing the mine water discharges, West Virginia can take advantage of the constant ideal temperatures for trout, the most marketable species grown in Appalachia. By locating aquaculture sites in close proximity to mine discharges the temperature advantages will allow for better growth and greater annual production for a given site. This research will improve the decision making process for aquaculture site selection at AMD sites and help to determine the level of production that can be sustained at a particular site without environmental damage.