



WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2002DC6B

Title: Teacher Education: Technology of Water Environmental Education

Project Type: Education

Focus Categories: Education

Keywords: Environment; Environmental Studies; Water Science; Middle School/Junior High Schools Science Curriculum

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Federal Funds: \$14,560

Non-Federal Matching Funds: \$13,136

Congressional District: DC

Principal Investigator:

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Abstract

We are constantly being made more aware of the great damage being imposed upon the environment and, in turn, on ourselves and our future generations around the world. Animal life is suffering and many species are on the borderline of extinction. We are being warned of global warming through the hole in the ozone, and periodically, at least here in the District of Columbia Metropolitan Area, we are given warnings about the local water. Key to the conservation of our natural world is the education of the citizenry. Some level of destruction by people is out of ignorance. However, education for the masses has not been introduced into the institutions of learning at the level it will take to overcome the problems. The Water Environment Studies In Schools ("WESS") Teacher Training Program is a first step to initiating teachers in the local public school system to elements that can provide them with a foundation for teaching environmental studies at the same level of importance as other disciplines in the school day. The WESS TTI was implemented this past summer. 30 teachers of the D.C. metropolitan area participated in the institutes. This proposal is designed to support the implementation of the WESS in-school program. WESS in-school gives the teachers an opportunity to share the knowledge gained through the institutes with their students. It allows the program designers to test the results of the TTI as teachers move into their classrooms to teach youngsters.

The Anacostia River is the environmental focus of this Teacher Training Program. The Anacostia River Watershed, a heavily polluted tributary to the Potomac River, spans 176 square miles (456 kilometers) within the District of Columbia and Suburban Maryland. Location in a densely populated area and suffering years of environmental neglect has made this Watershed become known as a "degraded urban ecosystem". Once a thriving center for Indian culture and a highly productive ecosystem, the Anacostia River Watershed has undergone numerous changes over the centuries. The watershed has a history and culture specific to the people who live here. The Anacostia River suffers from the detritus of daily activities, such as chemicals and fertilizers, human and animal wastes, trash and oil from city streets. Long periods of neglect have caused the loss of the benefits of a clean watershed for the local community.

Additionally, urbanization and land-use changes have dramatically altered this watershed. Decline in the ecological health of the watershed has been contributed to soil erosion, which has caused increased sedimentation resulting in mud flats along the banks of the tidal river; expanding human population; loss of forest and wetland habitat; loss and reduction in vegetation; land runoff; discharge of combined sewer overflow; increase in non-point source pollution; and industrial overflow. An informed citizenry, empowered by the realization of the benefits of healthy rivers and watersheds along with the knowledge that they know what to do to improve the river can provide substantial support in the pursuit of clean rivers.

The decisive link between the realization that an informed citizenry can provide substantial support in the pursuit of clean rivers and the availability of that citizenry is the institution of education. At this time, three middle schools -P.R. Harris Education Center, Browne Junior High School and R.H. Terrell Junior High School have agreed to implement a water environment study of the Anacostia River. The District of Columbia Public School System has recently given their approval and partnership support. These schools will work together as a team.