



## WATER RESOURCES RESEARCH GRANT PROPOSAL

**Project ID:** 2003DC34B

**Title:** Sources of Bioavailable Toxic Pollutants in the Anacostia Watershed (Part III)

**Project Type:** Research

**Focus Categories:** Toxic Substances, Water Quality

**Keywords:** pollutants, tributary, urban, biomonitoring, corbicula

**Start Date:** 03/01/2003

**End Date:** 02/28/2004

**Federal Funds:** \$12237.00

**Matching Funds:** \$2810.00

**Congressional District:** District of Columbia

**Principal Investigators:** Phelps, Harriette (University of the District of Columbia)

**Abstract:** In 2001 and 2002 Parts I and II of this program put Asiatic clams (*Corbicula fluminea*) gathered from the Potomac in cages placed at sites in the Anacostia and its watershed. The clams accumulated bioavailable contaminants for eight weeks and their tissues were analyzed by Severn-Trent laboratories for 18 PAHs, 21 pesticides, six metals and 28 PCB congeners. Clams put just above head of tide at Northwest Branch and Hickey Run tributaries had no contaminant levels significantly exceeding control. Clams placed at Watts Branch tributary had high levels of low molecular weight PAHs; those at Lower Beaverdam Creek had high levels of low molecular weight (fresh) PCBs and DDT and PAHs, and those at Northeast Branch had high levels of chlordane and PAHs. Clams that were placed at four locations within the Anacostia estuary had levels of PAHs and some pesticides significantly above control. Metal levels except iron did not exceed control. Part III of this project will have two objectives. The main research objective will be to locate the areas that are sources of contaminants within the Northeast Branch (MD) and Lower Beaverdam Creek (MD). This will be done by placing clams for biomonitoring at consecutive upstream locations. The second objective will be to determine the time course of pollutant accumulation by doing a study at one location.

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