



# WATER HIGHLIGHTS

D.C. WATER RESOURCES RESEARCH CENTER, WASHINGTON, D.C.

COLLEGE OF LIFE SCIENCES  
University of the District of Columbia



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## A Plan for Anacostia River Research

The Center staff recently met to discuss research recommendations to support The Anacostia Restoration work. Dr. H.M. Watt, Director of the Center, who also serves as a commissioner on the Interstate Commission on the Potomac River Basin, presented the following recommendations at the Commission's Annual Meeting on September 24,

### ASSESS STATUS OF ANACOSTIA RESEARCH AND RESTORATION EFFORTS

- a. Literature search of research and restoration efforts concerning the Anacostia River
- b. Establish current knowledge on physical and chemical characteristics of Anacostia River
- c. Compile existing data to analyze trends in water quality and flow, possibly in the form of a geographic information system (GIS)

### USE INFORMATION FROM ALL AGENCIES

In order to determine what is known about the Anacostia River, the separate efforts by a variety of agencies need to be consolidated. As a result of the proposed background study, information on who did what, when, where, and how will be centrally available. An additional step in this assessment could be the evaluation of current Best Management Practices (BMPs) and other restoration efforts already implemented.

### IDENTIFY GAPS IN CURRENT KNOWLEDGE

1992:

For example, it may be necessary to analyze river water for additional parameters. More detail may be required in research concerning sediment transport and sediment/water interaction. The monitoring network may be too wide or sampling intervals spaced too far apart.

MAKE RECOMMENDATIONS FOR FURTHER RESEARCH

While research recommendations should eventually be based on the results of the background survey, a few preliminary recommendations are listed on the following page:

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**PRELIMINARY RECOMMENDATIONS FOR ANACOSTIA RESEARCH:**

- a. Study of flow dynamics and sedimentation processes in the Anacostia River estuary funnel (hydrodynamics of river flow and wave/tidal energy)
  - b. Study of physical, chemical and biological characteristics of the sediment in estuary funnel (threat to water quality from toxic/nutrient release, shipping channel depth, etc.); also: possible impacts of dredging on toxic/nutrient release from sediments
  - c. Study of sediment distribution/siltation along the Anacostia River (determine areas of high deposition/input; correlate with urban runoff dynamics; develop sediment reduction strategies under source reduction aspect)
  - d. Study of floatable debris distribution along Anacostia (determine areas of accumulation; correlate with urban runoff dynamics; develop trash reduction strategies under source reduction aspects; locate target areas for public education efforts)
  - e. Study of ground water/surface water interaction: establish monitoring wells to determine degree of interaction (temporal variations in ground water levels due to tidal impact, level of base flow, pollutant input from ground water in low and high flow periods (shallow water tables adjacent to the Anacostia River may be contaminated and they may be releasing pollutants into the river);
- Six-Point Action Plan to Restore the Anacostia**
- f. Study of storm sewer input into the Anacostia River (quality)
  - g. Study role of wetlands in urban environment

- h. Study air pollution impact on water quality

Study role of "forgotten" tributaries (partly sewerred), potential for recreational or ecological use, water quality, protection/restoration potential with citizen participation

- k. Develop flow and sedimentation model of the Anacostia River to evaluate impact of BMPs and other restoration efforts ("What If"-Model)

- I. Feasibility study of recreational potential along the Anacostia River and its tributaries

As a river with a largely urbanized watershed, the Anacostia has unique problems related to its quality. The governments of the District of Columbia, Montgomery County and Prince George's County have organized to restore the Anacostia River. The Six-Point Action Plan prepared by the Anacostia Restoration Team of the Metropolitan Council of Governments presents six goals and corresponding strategies in *the Watershed Restoration Source Book*. The six goals are as follows:

Goal 1: Reduce Pollutant Loads to Tidal Estuary  
 Sewage overflow controls  
 Urban stormwater retrofits Urban BMPs for new devlp. Control of trash and debris

Goal 2: Restore Ecological Integrity of Streams  
 Urban stream restoration  
 Urban stream protection

Goal 3: Restore Habitat for Fish Removal of fish barriers u Habitat improvement

Goal 4: Restore and Enhance Wetlands  
 Wetlands protection  
 Urban wetland restoration Urban wetland creation

Goal 5: Restore and Expand Forest Cover

- Forest protection
- Watershed reforestation
- Riparian reforestation

Goal 6: Increase Public Involvement

- Outreach and education
- Restoration stewardship

**Anacostia River Miscellaneous**

The "Tree-Mendous Program" is encouraging citizens to purchase trees in honor of a person or event. The trees will be planted in the Anacostia watershed--to enhance green ways and natural habitats. The goal of the "Tree-Mendous" Program in Maryland is to plant more trees every year than those that are lost.

For more information on the "Tree-Mendous" Program, contact the Maryland Department of Natural Resources: (410) 974-3776. For information on Anacostia Reforestation, call the Council of Governments: (202) 962-3218.

**UPCOMING EVENTS**

Local

International Development Conference (January 11-13, 1993) Themes include: Listening to the Voice of Poverty, Causes and Manifestations of Poverty, Overcoming Poverty, Poverty and its Alleviation, Human Development, Human Issues and The Meaning of the 1992 Elections for the Elimination of Poverty at Home and Abroad. \$ 150 Individual Early Bird Registration. For information, call (703) 642-3628

DC Water Resources Research Center Technology Transfer Program (All seminars at Van Ness Campus, Bldg.44, Room A03 )

DC Water Treatment Plants: A Field Trip. Places to be visited are: A) Delacarla Water Supply and B) Blue Plains Water Treatment (January 27, 1993. starting at 8:30 and lasting all day - Bring

Lunch). Meet at Plaza near Bldg. 44. Conductor Prof. James O'Connor. "Transportation limited to first 12 people\*"

Black History Month Commemoration. Urban Environmental Health Issues (February 4, 1993 from 12:00 pm to 1:00 pm). Dr. Ocran, Convenor with Dr.W. Wilson and Dr. J. Phoenix as panelists.

Anacostia River Ecology Seminar (March 11, 1993 from 12:00pm to 1:00pm). Dr. Victoria Guerrero.

Testing and Exploring Water Quality in DC: A Field Trip (March 16 from 8:30 to 12:00 pm) Conducted by Prof. James. O'Connor. "Transportation limited to first 12 people" Meet at Plaza near Building 44.

UDC Faculty Water Resources Research\_Seminar (April 22, 1993 from 1:00 pm to 4:00 pm).

For additional Information, call Mr. J. Hannaham x(202) 673-3443 4

**INTERNATIONAL NOTES**

National Historically Black Colleges Week

On September 9, 1992, the DC Water Resources Research Center participated in an exhibit organized by the University of the District of Columbia as part of the White House Initiative. This exhibit was displayed at the Agency for International Development, The Department of State, Washington, D.C. The purpose of the exhibit was to honor the nation's Historically Black Colleges and Universities.

**The Rio Earth Summit**

Two major water resources publications related to the Rio Earth Summit on the Environment are available. They are:

*"Protection of the Quality and Supply Of Freshwater Resources: Application of Integrated Approaches to the Development, Management and Use of Water Resources"* (Agenda 21, Chapter 18.)

This publication is a final, advanced version of a chapter of Agenda 21, *as* adopted by the plenary in Rio de Janeiro, on June 14, 1992. This document will be further edited, translated into the official languages, and published by the United Nations for the- General Assembly this autumn.

*"International Conference on Water and the Environment: Development issues for the 21st Century - The Dublin Statement"*

## **PUBLIC OUTREACH NOTES**

### **DC WRRC at Black Family Reunion**

On September 12 and 13, 1992, the DC WRRC participated in the Black Family Reunion which took place near the Washington Monument on the Mall. The Center's exhibit on local and international water resource issues drew attention from many of the approximately 20,000 visitors. It is hoped that our presence at this event inspired many visitors to become more involved in the problems and potential of water resources in Washington, DC.

#### **"Water: Essential to Life"**

Water education poster contest for all elementary school students (Grades K-6) is being considered by the DC Water Resources Research Center. Should funding for the project be obtained, elementary school students will be invited to draw, print or paint a poster for the contest.

For more information, contact Mr. James Hannaham at (202) 673-3445

The International Association of Water Pollution & Research is now the International Water Quality Association.

### **Awards presented to D.C. Officials**

Mr. Ira Palmer and Mr. Emmett Durrum were the recipients of awards presented by Mayor Kelly at the August 1992 Chesapeake Bay Executive Council Meeting for their initiatives on youth environmental education and local river clean up efforts, respectively.

## **Name Changes**

The National Association of Water Institute Directors (MAWID) has become the **National Institutes for Water Resources (NIWR)**.

The National Water Well Association (NWWA) has become the **National Ground Water Association (NGWA)**.

The Water Pollution Control Federation is now the **Water Environment Federation**.

"Non Point Source Pollution" may soon be substituted by "**Polluted Runoff**"

#### **\* Source: U.S. Water News 9/92**

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