

# **CHESAPEAKE BAY BASINWIDE MONITORING STRATEGY: FROM AIRSHEDS TO LIVING RESOURCE POPULATIONS**

Workplan for the development of a framework for  
integrating ongoing, planned, and future monitoring  
across the Chesapeake Bay ecosystem  
in support of Bay restoration and protection

**November 1996**

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**Chesapeake Bay Program**

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**Workplan for the development of a framework for  
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**Prepared by**

**The Monitoring Subcommittee  
Chesapeake Bay Program**

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for the Chesapeake Bay Program*

## **Basinwide Monitoring Strategy**

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Corps, and the U.S. Army Corps of Engineers seek to develop a protocol by which a small group of volunteers could inventory streams within the watershed. The field data collected includes information on eroding streambanks, inadequate stream buffers, fish migration barriers, potential stream restoration/water quality retrofit sites, and biological resources. Data is organized via an integrated GIS mapping/data base/photo library system and problem areas are prioritized based upon severity, access, and potential for correction. The information gathered during this inventory will be used to set up permanent stream cross sections and will help local governments compete more effectively for Federal and State grants.

*Contact for parallel effort: Christine Buckley and Ken Yetman*

*Monitoring Subcommittee designated lead: Paul Sneeringer*

**Nutrient Subcommittee Review of Nonpoint Source Monitoring Needs** - ongoing evaluation of recommendations from U.S. Geological Survey synthesis of nutrient and sediment data (see below) and seeks to implement those recommendations supporting the 1997 reevaluation.

*Contact for parallel effort: Russ Mader*

*Monitoring Subcommittee designated lead: Scott Phillips*

**Mid-Atlantic Integrated Assessment** - combines a number of complex state, regional, and national environmental monitoring programs into an assessment process specifically targeted to the management needs of U.S. EPA Region III and the surrounding states. It also provides a conceptual framework for focusing the EPA Office of Research and Development research to ensure that it is consistent with EPA's needs. In addition to improving the overall assessment process, the Mid-Atlantic Integrated Assessment will strengthen the scientific basis of EPA's Environmental Monitoring and Assessment Program through integrated, place-based research that addresses critical scientific issues raised by the National Research Council and other peer reviewers. When fully developed, Mid-Atlantic Integrated Assessment will provide a suite of environmental assessment tools to integrate land cover information, other measures of human-caused environmental stress, and the biological assessment of multiple resource categories.

*Contact for parallel effort: Tom Pheiffer*

*Monitoring Subcommittee designated lead: Joseph Macknis*

**Mid-Atlantic Highlands Assessment** - combines a number of state, regional, and national environmental monitoring programs to gauge the current condition and environmental changes occurring in the mid-Atlantic highlands, an 65,000 square mile area overlapping the Chesapeake Bay nontidal watershed. When fully developed, it will provide an integrated suite of environmental assessment tools to link environmental stressors (land use/land cover changes and other human-caused environmental stress) with biological response (stream and fish communities, forest ecosystems, etc.). Provides opportunity to leverage outside resources to meet management information needs and to apply new resources towards gaps identified in the basinwide strategic monitoring plan.

*Contact for parallel effort: Tom Pheiffer*

*Monitoring Subcommittee designated lead: Joseph Macknis*

**National Environmental Monitoring and Research Network: Mid-Atlantic Regional Pilot** - seeks to integrate data and programs across resources, agencies and temporal and spatial scales through research and monitoring; increase the utility of information obtained through satellites; coordinate and enhance existing survey and monitoring programs; identify critical regional or national resources or problems that are not being currently addressed; and establish a network of environmental index areas that will provide standardized information on major variables that effect ecosystem processes. The Mid-Atlantic pilot, focusing on the Delaware Bay, Chesapeake Bay and Albermarle-Pamlico Sound watersheds, has been selected as the first pilot for fast track implementation of the National Monitoring and Research Network. Provides opportunities to leverage federal programs and opportunities for new resources to fill gaps identified by the basinwide monitoring strategy.

*Contact for parallel effort: Don Boesch*

*Monitoring Subcommittee designated lead: Rich Batiuk*

**FY96 Monitoring Subcommittee Coordinated Atmospheric Deposition Monitoring Budget Initiative** - seeks to assess the current state of wet and dry deposition monitoring in the Chesapeake Bay region and identify areas for improved data linkage between water monitoring and air deposition modeling. Identifies ongoing atmospheric monitoring and management information needs related to atmospheric deposition modeling.

*Contact for parallel effort: Rick Artz*

*Monitoring Subcommittee designated lead: Rick Artz*

**FY96 Monitoring Subcommittee Application and Integration of New Technologies Budget Initiative** - evaluates three target technologies to determine the specific management information needs that these technologies might supply, whether and how the data generated by these technologies can be managed and brought into a form that can be effectively utilized by the monitoring program, and the prospects for long term availability of the data. Supports the planned workshops directed towards evaluating new and innovative technologies to collect desired monitoring data quicker, cheaper, and better.

*Contact for parallel effort: Larry Haas*

*Monitoring Subcommittee designated lead: Larry Haas*

## **B. Research**

**USGS Chesapeake Bay Ecosystem Program** - a U.S. Geological Survey funded program directed towards collecting and interpreting appropriate earth science information to help Chesapeake Bay Program resource managers determine the effectiveness and response of the Bay ecosystem to progress toward the baywide 40 percent nutrient reduction goal. The primary objectives of the ecosystem program are: 1) determine the response of water quality and selected living resources of the Bay watershed and estuary when nutrient and sediment loads are reduced over several temporal scales; 2) better define and evaluate the responses in water quality and



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