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## Voluntary Estuary Monitoring Manual

Front Matter: Acknowledgements, Table of Contents, and Executive Summary

March 2006



*Volunteer Estuary Monitoring*  
*A Methods Manual*  
 Second Edition





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# *Volunteer Estuary Monitoring* *A Methods Manual*

*Second Edition*

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## Executive Summary

This manual focuses on volunteer estuary monitoring. As concern over the well-being of the environment has increased during the past couple of decades, volunteer monitoring has become an integral part of the effort to assess the health of our nation's waters. Government agencies, often strapped by financial limitations, have found that volunteer programs can provide high-quality, reliable data to supplement their own water quality monitoring programs.

It may seem obvious, but should nonetheless be stated: **without individual volunteers who commit their time and energy to the effort, there would be no volunteer monitoring programs.** As people learn more about how an estuary functions and come to recognize its signs of distress, their concern for its future is increased. So too is their commitment to its protection.

Thus, volunteer monitoring of estuaries has grown significantly from the early programs that monitored only a few simple parameters. As these monitoring programs have developed, so has the interest of the Environmental Protection Agency (EPA), which has supported volunteer monitoring since 1987. The EPA sponsors national symposia on volunteer monitoring, publishes a newsletter for volunteers, has developed guidance manuals and a directory of volunteer organizations, and provides technical support to volunteer programs. Through these efforts, the EPA hopes to foster the interest and support of state and other agencies in these programs.

The EPA developed this manual as a companion to three other documents:

- *Volunteer Water Monitoring: A Guide for State Managers;*
- *Volunteer Lake Monitoring: A Methods Manual;* and
- *Volunteer Stream Monitoring: A Methods Manual.*

This document presents information and methodologies specific to estuarine water quality. Both the organizers of volunteer programs and the volunteers themselves should find it of use.

The first eight chapters of the manual deal with typical issues that a new or established volunteer estuary monitoring program might face:

- understanding estuaries, what makes them unique, the problems they face, and the role of humans in solving the problems;
- establishing and maintaining a volunteer monitoring program;
- working with volunteers and making certain that they are well-positioned to collect water quality data safely and effectively;
- ensuring that the program consistently produces data of high quality; and
- managing the data and making it available to data users.

The remaining chapters focus on several water quality parameters that are important in determining the health of an estuary. These chapters are divided into three units, which characterize the parameters as measures of the chemical, physical, or biological environment of the estuary.

The significance of each parameter and specific methods to monitor it are detailed in a step-by-step fashion. The manual stresses proper quality assurance and quality control techniques to ensure that the data are useful to state agencies and any other data users.

References are listed at the end of each chapter. Appendices containing additional resources are also supplied. These references should prove a valuable source of detailed information to anyone interested in establishing a new volunteer program or a background resource to those with already established programs.