SCIENCE FOR SOLUTIONS

NOAA COASTAL OCEAN PROGRAM
Decision Analysis Series No. 23, Volume 1

SCIENCE-BASED RESTORATION MONITORING OF COASTAL HABITATS

Volume One: A Framework for Monitoring Plans Under the Estuaries and Clean Waters Act of 2000 (Public Law 160-457)

Gordon W. Thayer
Teresa A. McTigue
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Perry F. Gayaldo
Pamela J. Polmateer
P. Thomas Pinit

OCTOBER 2003

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
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NOAA Coastal Ocean Program (N/SCI2)
Center for Sponsored Coastal Ocean Research
1305 East West Highway, Room 8243
Silver Spring, MD 20910-3282

phone: 301-713-3338
fax: 301-713-4044
web: www.cop.noaa.gov

Cover photo. A coastal wetland complex on the Lake Ontario shoreline. Photo courtesy of Doug Wilcox, United States Geological Survey.

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U.S. DEPARTMENT OF COMMERCE
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National Ocean Service
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National Centers for Coastal Ocean Science
Gary C. Matlock, Ph.D., Director
Center for Sponsored Coastal Ocean Research
Robert Magnien, Ph.D., Director

Report Authors

Gordon W. Thayer, NOAA Center for Coastal Fisheries and Habitat Research,
Beaufort, North Carolina

Teresa A. McTigue, NOAA National Centers for Coastal Ocean Science,
Silver Spring, Maryland

Russell J. Bellmer, U.S. Fish and Wildlife Service,
Stockton, California

Felicity M. Burrows, NOAA National Centers for Coastal Ocean Science,
Silver Spring, Maryland

David H. Merkey, NOAA Great Lakes Environmental Research Laboratory,
Ann Arbor, Michigan

Amy D. Nickens, NOAA National Centers for Coastal Ocean Science,
Silver Spring, Maryland

Stephen J. Lozano, NOAA Great Lakes Environmental Research Laboratory,
Ann Arbor, Michigan

Perry F. Gayaldo, NOAA Restoration Center,
Silver Spring, Maryland

Pamela J. Polmateer, NOAA National Centers for Coastal Ocean Science,
Silver Spring, Maryland

P. Thomas Pinit, NOAA Restoration Center,
Silver Spring, Maryland

For more information or to request a copy of this document, please email: Restoration.Monitoring@noaa.gov
or visit http://coastalscience.noaa.gov/ecosystems/estuaries/restoration_monitoring.html

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Note to Readers

Science-Based Restoration Monitoring of Coastal Habitats, Volume One: A Framework for Monitoring Plans Under the Estuaries and Clean Waters Act of 2000 (Public Law 160-457), is a guidance manual that provides technical assistance, outlines necessary steps, and provides useful tools for the development and implementation of sound scientific monitoring of coastal restoration efforts. This document is a result of the Estuary Restoration Act (ERA), Title I of the Estuaries and Clean Waters Act of 2000. The National Oceanic and Atmospheric Administration (NOAA) was tasked with providing guidance for the development and implementation of restoration monitoring for projects funded under the Act. In addition to it's usefulness to restoration practitioners undertaking ERA projects, this document has broad application and will assist in the monitoring of coastal restoration projects regardless of their funding source.

The manual represents the first of a two volume series. This first volume contains a background on restoration and monitoring, stages of a restoration and monitoring plans, how to create a monitoring plan, and important information that should be considered when monitoring specific habitats. The second volume, to be published in 2004, provides detailed information on the habitats, an inventory of coastal restoration monitoring programs, a review of monitoring techniques manuals and quality control/quality assurance documents, an overview of governmental acts affiliated with monitoring, a cost analysis of monitoring expenses, a glossary of terms, and a discussion of socioeconomic issues affiliated with coastal habitat restoration.

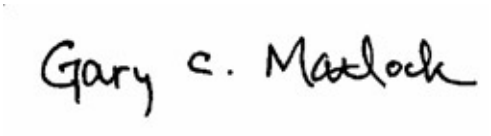
The authors envision several possible outcomes that may result from this document. Improved and consistent restoration monitoring plans may be developed based on the standards this document presents. Restoration practitioners may more confidently conduct sound scientific monitoring of their coastal restoration efforts by utilizing the technical assistance and useful tools this document provides. In addition, this manual may allow restoration practitioners to detect early warnings that the restoration effort is not on track, to gauge how well a restoration site is functioning, to coordinate projects and efforts for consistent and successful restoration, and to evaluate the ecological health of specific coastal habitats both before and after project completion.

The National Centers for Coastal Ocean Science (NCCOS) provide a focal point through which NOAA, together with other organizations with responsibilities for the coastal environment and its resources, can make significant strides toward finding solutions to critical problems. By working together toward these solutions, we can ensure the sustainability of these coastal resources and allow for compatible economic development that will enhance the well-being of the Nation now and in future generations. The National Centers for Coastal Ocean Science thanks NOAA's Office of Response and Restoration and the Office of Habitat Conservation for their support in the creation of this document.

A specific objective of the NCCOS is to provide the highest quality scientific information to coastal managers in time for critical decision making and in formats useful form these decisions. To this end, the Decision Analysis Series was developed by the NCCOS Center for Sponsored Coastal Ocean Research, Coastal Ocean Program to synthesize information on issues of high priority to coastal managers. As a contribution to the Decision Analysis Series, this report provides a

critical synthesis of information need to successfully plan and execute a coastal habitat restoration monitoring plan. A list of available documents in the Decision Analysis Series can be found on the inside back cover.

As with all of its products, the NCCOS is very interested in ascertaining the utility of *Science-Based Restoration Monitoring of Coastal Habitats, Volume One: A Framework for Monitoring Plans Under the Estuaries and Clean Waters Act of 2000*, particularly in regard to its application to the management decision process. Therefore, we encourage you to write, fax, call, or email us with your comments. Please be assured that we will appreciate these comments, either positive or negative, and that they will help us direct our future efforts. Our contact information is below.



Gary C. Matlock, Ph.D.
Director
NOAA National Centers for Coastal Ocean Science

NOAA National Centers for Coastal Ocean Science
1305 East-West Highway, Silver Spring, Maryland 20910
phone: (301) 713-3020, fax: (301) 713-4353
email: nccoswebmaster@noaa.gov, web: http://coastalscience.noaa.gov/

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