

COASTAL BAYS HAZARD INITIATIVE



INITIAL WORK GROUP FINDINGS AND RECOMMENDATIONS

AUGUST 2004

Audra Luscher



Robert L. Ehrlich, Jr., Governor
Michael S. Steele, Lt. Governor
C. Ronald Franks, Secretary
W.P. Jensen, Deputy Secretary



Maryland Coastal Program
Watershed Services
Maryland Department of Natural Resources
Tawes State Office Building
580 Taylor Avenue
Annapolis, MD 21401

Toll Free in Maryland: 1-877-620-8DNR Ext. 8730
Out of State: 410-260-8730
TTY users call The Maryland Relay
www.dnr.maryland.gov

The facilities and services of the Maryland Department of Natural Resources are available to all without regard to race, color, religion, sex, sexual orientation, age, national origin or physical or mental disability.

This document is available in alternative format upon request from a qualified individual with a disability.



Financial Assistance provided by the Coastal Zone Management Act of 1972, as amended, administered by the Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration (NOAA). A publication of the Maryland Coastal Program, Department of Natural Resources pursuant to NOAA Award No. NAO3NOS4190086.



Printed on recycled paper.

Published 8/2004

Cover Photo by Dave Wilson, Coastal Bays Program

ACKNOWLEDGEMENTS

This report would not have been possible without the contributions of the following Agencies and individuals that participated in meetings and discussions and assisted in formulating the recommendations and conclusions.

*Worcester County Comprehensive
Planning*

Sandy Coyman, Director
Jason Dubow, Planner
Keota Silaphone, Planner
Tess Foster, GIS Technician

*Worcester County Emergency
Management*

Dave Fitzgerald

*Ocean City Department of Planning and
Community Development*

Jesse Houston, Director
Karen Zera, GIS Coordinator

Ocean City Engineering Department

Terry McGean, Engineer

Maryland Department of Planning

Rich Hall
Michael Lettré
Marshall Stevenson

Asseteague Coast Keeper

Jay Charland

*Maryland Department of the
Environment*

John Joyce, Floodplain Management
Dave Guignet, Floodplain GIS
Coordinator

*Maryland Department of Natural
Resources*

Audra Luscher, Planner
Ken Miller, Director, Watershed
Information Services
Kerry Kehoe, Coastal Program Manager
Zoë Johnson, Planner

*Maryland Emergency Management
Agency*

Kim Golden, State Hazard Mitigation
Officer
Carver Struve, State Mitigation Planner

Salisbury University

Dr. Michael Scott, Geography
Department

Maryland Coastal Bays Program

Dave Blazer, Director
Roman Jeisen, Science Coordinator

TABLE OF CONTENTS

	PAGE
EXECUTIVE SUMMARY	
I. INTRODUCTION.....	1
Coastal Hazard Vulnerability in the Coastal Bays.....	2
Hazard Mitigation Planning and Vulnerability Mapping.....	3
II. DATA AND TECHNOLOGY.....	5
New Data Sets.....	6
Coastal Hazard Management Tools.....	7
III. ISSUES AND RECOMMENDATIONS.....	12
Issue One: Institutional Structure and Technical Network.....	12
Issue Two: Communication and Coordination.....	14
Issue Three: Data and Information Needs.....	16
Issue Four: Technical Assistance and Capacity Building.....	18
Issue Five: Financial Resources and Needs.....	20
IV. CONCLUSION.....	22
IV. REFERENCES.....	24

EXECUTIVE SUMMARY

In February 2004, the Coastal Bays Policy Committee was presented with an overview of new technologies, which present an opportunity to greatly improve coastal hazards management in the Coastal Bays region. Key to taking advantage of the opportunities for improved management that these technologies present is a renewed focus on improving governmental coordination, developing formats for effective and practical presentation of data and information, and building local capacity to utilize data during the development and implementation of local plans and programs.

The Policy Committee called for the creation of a Work Group to:

- ❖ Review the current status of hazard mitigation planning;
- ❖ Identify deficiencies or gaps in current plans;
- ❖ Identify specific means for incorporating new data and information into plans; and
- ❖ Develop a recommended process, specific objectives, timeframe and budget requirements for developing and processing data, organizing and presenting information, and building state and local capacity.

Efforts to identify issues and develop recommendations began in March 2004, with an initial meeting of stakeholders. Following group discussions, several individual meetings and correspondence occurred between May and June 2004. This report documents the results of this effort.

Findings

Major findings of this effort, include:

- Technology provides an unprecedented opportunity to integrate multiple databases to derive and visualize solutions to difficult and complex environmental and emergency management issues. As managers at all levels of government are under increasing pressure to do more with less, Geographic Information System technologies (GIS) offers a potential solution to this dilemma.
- Hazard mitigation planning must be tied to land use and comprehensive planning decisions in order to truly address an areas hazard vulnerability and mitigate impacts.
- Identification of hazard vulnerabilities, planning, and building of technical capabilities is an iterative process.
- The hurdles surrounding local government GIS capabilities are not limited to their ability to use spatial data. The issue is much boarder in scope and relates to statewide institutional and organizational structures and how data is gathered, shared, maintained and processed into information useful to decision makers and the public.

- Some of the report’s recommendations identify changes that could result in improvements in how organizations utilize staff and technical resources. A failure to consider such changes could result in less effective and efficient operations, lost or more costly opportunities and a longer transition to better methods of decision making using technological solutions.
- Support and buy-in by organizational management of using IT and GIS solutions for decision-making activities is essential in order to make the transition toward having more technological capabilities and methods.
- The availability of pertinent data at a scale relevant to county and local government is essential to the development of specific strategies and the identification of activities to mitigate coastal hazards vulnerability.
- Multi-faceted approaches rather than piecemeal changes to deal with technical issues at the local level have a better chance of resulting in improved local capacities to utilize data and technology. For example, don’t just purchase hardware unless also providing training to facilitate its use.
- Academic institutions represent an important mechanism to fill technical assistance gaps that cannot be filled through governmental organizations.
- Improved coordination and communication network links between planning and emergency managers need to be improved to achieve better decision making in a timely manner.
- When considering new data acquisition or collection opportunities, funding strategies should consider both the cost of creating data and address how information is shared and maintained.
- Essential to the funding strategy is the identification of mechanisms to make data accessible to a broader audience, particularly the public. Making information available through a web portal, supplying Internet mapping tools and providing access to downloadable data are viable options.

Recommendations

Specific recommendations provided in the report focus on five broad issues:

- 1) Institutional structure and technical framework;
- 2) Communication and coordination;
- 3) Data and information needs;
- 4) Technical assistance and capacity building; and
- 5) Financial needs and resources.

The Work Group recommended numerous immediate and long-range actions that are needed to improve coastal hazards management at both the local and State level. A need exists for a mechanism and process to regularly assess hazard data needs to provide the opportunity for enhanced coordination and leveraging of resources.

The following list contains an example of the recommendations contained in this report:

- 1) Enhance interagency coordination creating a local steering committee comprised of State and local agency and academic institution representatives that will be charged with coordinating and facilitating the activities contained in this report. The committee is to be responsible for establishing priorities, coordinating on-going activities, and strengthen relationships between emergency management and land planning agencies.
- 2) Provide outreach on the findings of this report to a broader audience such as other counties or municipalities, Maryland State Geographic Information Committee (MSGIC), etc. to seek input or increase coordination across jurisdictional boundaries.
- 3) Provide assistance on packaging pertinent data sets from State agencies into one application using a GIS interface such as the *MD Property View Find It* tool.
- 4) Identify potential sources of financial assistance to (a) acquire geospatial software packages and/or extensions as necessary to view new tools or technologies being developed, and (b) hire additional temporary staff that could be of service to the local government including a fellow, intern, IPA, contractor, etc.
- 5) Assist Worcester County with completing its updated hazard mitigation plan.
 - Introduce and instruct planners and managers on the utility of the new hazard mapping products completed by Maryland Emergency Management Agency.
 - Determine gaps in technical capabilities that could be supplemented by additional permanent/temporary staff to assist in finishing any GIS or mapping portions of the plan.
- 6) Provide County/City personnel with results of HAZUS – Multi-Hazard Loss Estimation Tool (Tier One Analysis) and the Sea Level Rise Inundation Study.