Executive Summary
A MARIBS MARICOOS: Inundation Design Workshop sponsored by MACOORA and the UMass Center of Excellence on Applied Ocean Observation Systems was conducted on 14-15 September 2006 at the UMass Dartmouth’s ATMC. About 25 participants attended the workshop that was launched with a set of plenary talks, keynoted by Hayden Frank (NWS - Taunton, MA), that outlined many of the existing regional and sub-regional ocean observing assets, including operational and research-operational observations, research-operational and research numerical ocean and meteorological modeling, and information systems were previewed by the participants. After a day of design discussions the workshop reached consensus on the following action items are to:

- **Conduct a Navy Wave Model Validation Project;** Hayden Frank (NWS), Frank Bub (NAVOCEANO), Dan MacDonald (UMassD) will collaborate to determine which wave observations are needed to improve their present inundation forecast protocol.
- **Compare QUODDY with the SWAF and other inundation models;** Wendell Brown (UMassD) and others
- **Explore the possibilities of using NITES-II as a decision-making tool;** Wendell Brown (UMassD) and Mike Incze (NUWC)
- **Encourage WHOI NOAA-CICOR student interest in MARICOOS;** Patricia White (WHOI)
- **Conduct Additional MARICOOS Inundation Design Workshops;** Dave Chapman (MACOORA) will recommend funding for additional MARICOOS workshops that can respond to the “needs assessment outcomes of the MACOORA/COS mid-November workshop.
- **Analyze the A. Baptista (OGI) “Formula for Success”;** and Avijit Gangopadhyay (UMassD)
- **Participate in the MACOORA/COS Inundation Workshop;** Wendell Brown (UMassD)
1. Introduction

The MARIBS MARICOOS: Inundation Design Workshop was convened at 9am on Thursday 14 September 2006 at the UMass Dartmouth’s ATMC. About 25 participants (see list Attachment 1) gathered to be welcomed to the ATMC facility by Director Louis Petrovic (see agenda Attachment 2). Avijit Gangopadhyay (UMASSD/MAST) indicated that the UMass collaborative Center of Excellence on Applied Ocean Observation Systems (a workshop sponsor) is focusing today on Buzzards Bay and Massachusetts Bay forecasting. David Chapman (MACOORA – a workshop sponsor) welcomed the MARIBS/MARICOOS participants. Robert Kispert (Mass Tech Collaborative) described the John Adams Innovation Institute interest in encouraging the development of academic science and technology centers that will collaborate with industry to grow a marine technology cluster in Massachusetts.

This workshop focused on designing a MARICOOS module for coastal inundation – an area for which there might soon be resources to begin to build such a system. As presented by Wendell Brown (UMASSD/MAST), the workshop terms of reference (see Attachment 3) are a natural extension of the March 2005 MARIBS workshop and a later white paper that outlined a plan for constructing a Massachusetts and Rhode Island Ocean Observing System (MARICOOS; see MARIBS website at http://www.smast.umassd.edu/MARIB/). That plan is to conduct several MARICOOS workshops; each focused on the design of an issue-oriented information production module (e.g. flooding, hypoxia, fisheries). Then where possible begin prototype construction using existing assets.

2. Workshop

The MARIBS/MARICOOS region lies on the cusp of the MACOORA region from Massachusetts to the southwest and the Northeastern Regional Association (NERA) region from Rhode Island to the northeast. There already are substantial assets out of which a prototype MARICOOS could be framed. The following federal operational ocean measurement assets are augmented by those of the Gulf of Maine Ocean Observing System (GoMOOS; http://www.gomoos.org) and together represent the operational framework in which a MARICOOS will be constructed. For example, there are the arrays
of NOAA NOS sea level stations, NDBC meteorological buoys, NWS meteorological CMANN stations, and PORTS harbor measurement systems. The U.S. Navy provides real-time meteorological model information through its Fleet Numerical Meteorological and Oceanographic and surface wave information and forecasts. These assets are augmented by a spectrum of non-federal real-time observation systems, including and the WHOI Martha’s Vineyard Observatory (MVO), and research data-assimilation modeling systems. The suite of plenary talks on MARICOOS regional assets (see agenda Attachment 2 for titles and Attachment 4 for talk outlines) set the stage for the plenary design effort that is described next.