











March 26, 2007 Elliot Alumni Center University of New Hampshire The cover illustration is a high-resolution bathymetric map providing unprecedented detail on seabed topography in a portion of the WGOMCA. Larry Mayer and his lab at UNH's Center for Coastal and Ocean Mapping generated the map using multi-beam sonar as part of a multi-investigator project funded by the Northeast Consortium.

A few words of thanks:

The WGOMCA 2007 Symposium and this publication required the time, talents and resources of a range of individuals and organizations. The symposium convenors, Ray Grizzle of the UNH Department of Zoology, Ken La Valley of NH Sea Grant and UNH Cooperative Extension, and Rachel Gallant of the Northeast Consortium, would like to thank the presenters who shared their work, thoughts and plans with the participants. They would also like to express their great appreciation and gratitude to Holly Bayley '07, Caitlin Cavanaugh '08 and Pauline Galardi '08, three UNH students who tackled coauthoring, coediting and codesigning this publication as part of the University's Technical Writing 502 course; to Steve Adams of NH Sea Grant who worked with them to achieve those ends; to Chris Manning of the Northeast Consortium for his work in documenting the event; and to Troy Hartley of the Northeast Consortium for facilitating the symposium discussions. Finally, they would like to thank the UNH Marine Program, NH Sea Grant, UNH Cooperative Extension and the Northeast Consortium for funding the symposium and this publication.



- 3 Introduction
- 4 Management of the WGOMCA

 Tom Nies, Senior Fishery Analyst, New England Fishery

 Management Council
- 8 A Mixed Blessing: Tracing the Effects
 of the WGOMCA on New England's
 Commercial Fishing Fleet
 Madeleine Hall-Arber, Anthropologist, MIT Sea Grant
 College Program
 Kevin St. Martin, Geographer, Rutgers University
 Caroline Butler, Anthropologist, University of Northern British
 Columbia
- 13 Recovery of Seafloor Habitats Inside the WGOMCA and Some Potential Impacts on Groundfish Populations Ray Grizzle, Research Associate Professor, University of New Hampshire
- 16 An Industry Perspective of the Impacts of the WGOMCA

 Peter Kendall, Commercial Fisherman, Rye, NH

- 19 Assessing Bottom Gear Impacts in the WGOMCA:
 A Multifaceted Approach

 Mashkoor Malik, Graduate Student, and Larry Mayer,

 Director, UNH Center for Coastal and Ocean Mapping
- 23 Efficacy of Fishery Closures in the Gulf of Maine Mike Fogarty, Fisheries Biologist, NOAA Fisheries Northeast Fisheries Science Center
- 26 Is the Northern Section of the WGOMCA Important Habitat for Juvenile Groundfish? Jonathan Grabowski, Research Scientist, Gulf of Maine Research Institute
- 29 Effects of Mobile Fishing Gear on Benthic Habitats

 Joseph DeAlteris, Professor, University of Rhode Island

 Fisheries Center
- 33 Stable Isotopic Signatures in Catch Composition in Groundfishes Indicate Local Processes at Work in the WGOMCA

 Les Kaufman, Professor, Boston University; Elizabeth Soule

es Kaufman, Professor, Boston University; Elizabeth Soule and Briana Brown, Graduate Students; and Paul Vitale, Fisherman

An Overview of the Seafloor Habitat Recovery and Monitoring Program (SHRMP) at Stellwagen Bank National Marine Sanctuary Peter Auster, Science Director, National Undersea Research Center, University of Connecticut

38 Summary and Conclusions

Introduction

For almost a decade, the Western Gulf of Maine Closure Area (WGOMCA) has been a predominant fisheries management strategy for the Gulf of Maine. The Closure was established to protect spawning and nursery areas of key species, maintain age structure by retaining older and proportionately more fecund individuals, protect key habitats, and reduce bycatch of overfished and threatened stocks. With the increased drive to manage fisheries with more holistic approaches, it is important to rigorously evaluate current and proposed management strategies and the impacts they are having on the environment and traditionally harvested species.

The Western Gulf of Maine Closure Area 2007 Symposium was held at the University of New Hampshire on March 26. The meeting was open to the public and drew more than 80 commercial and recreational fishermen, scientists, fisheries managers and representatives of non-profit organizations, all eager to share their knowledge and collaboratively develop answers to the following questions:

- Is the Closure meeting its goals?
- What are the effects of the Closure?
- How far have we come in understanding the Closure?
- What future research is needed to evaluate the Closure?
- What does the future hold for the Closure?

We hope you find this publication a useful snapshot of the symposium and an aid in determining the utility of the Closure and its appropriate management.

Ray Grizzle	Ken La Valley	Rachel Gallant
Jackson Estuarine	New Hampshire	Northeast
Laboratory	Sea Grant	Consortium

Management of the WGOMCA

Tom Nies, Senior Fishery Analyst, New England Fishery Management Council

Tom Nies presented a history of the Closure within the context of other fisheries management measures in the region. He then talked about whether the Closure is meeting its goals, pending management actions that could influence the Closure, and information gaps that still exist and must be filled inorder to evaluate the success of the

Closure.

Management History

The Western Gulf of Maine Closure Area, as currently defined, was created in 1998 with Framework 25 to the Multispecies Fishery Management Plan (FMP). However, the first restrictions on commercial fishing in the area were in 1994 with FMP Amendment 5. This established a juvenile cod protection area on Jeffrey's Ledge and required extensive new regulations



on minimum mesh sizes, minimum size limits, new fishing permits and logbook reporting. The goal was to reduce fishing effort on cod, haddock and yellowtail flounder stocks by 50% over five years. In addition, Amendment 5 established the days at sea (DAS) program. Closure boundaries, seasons and purposes were adjusted several times in the intervening years.

In 1996, Amendment 7 was passed. The objective of Amendment 7 was to broaden and reinforce regulations enacted under Amendment 5; this included extending sink gillnet closures to all fishing vessels. Amendment 7 also recognized that more closures would be developed

and had seasonal closures along the coast. The seasonal closures from November to December were unpopular with fishermen, because demand and prices were high during these times.

On Oct. 6, 1996, Framework 19 replaced the seasonal closures enacted by Amendment 7 with a one month closure in March. Gillnet clo-

sures were also modified. Framework 25 (1998) established seasonal (rolling) closures and the WGOMCA as a year-round closure. The WGOMCA was to be in place for three years. The purpose of these closures was to specifically reduce cod landings. The closures excluded commercial groundfishing gear, but allowed other fishing activities, such as recreational fishing, shrimp trawling and eventually herring midwater trawling in 2001. The WGOMCA bound-



aries remained the same through subsequent frameworks and were extended to 2002 by Framework 33. A court order then extended the Closure until the next major management action, the 2004 FMP

Amendment 13.



Many fishermen were interested in modifying the Closure parameters to restore access to several stocks thought to be in healthy condition, such as pollock, haddock, witch flounder and plaice. From 1999 to 2004, Amendment 13 explored options to modify the Closure boundaries, however none were adopted.