

Preface

The Deepwater Horizon accident and oil spill in the Gulf of Mexico from the Macondo well began on April 20, 2010. Oil flowed into the Gulf for 87 days until the well was capped on July 15, 2010, and declared sealed on September 19, 2010. The United States (USA) Government initially estimated that a total oil discharge into the Gulf of 4.9 million barrels (210 million U.S. gallons) resulted from the spill; however, the estimate was challenged in litigation, reduced to 3.19 million barrels by a trial court, and remains in dispute. A massive cleanup, restoration, and research program followed and continues to the present, mostly funded by BP Exploration & Production Inc. (BP).

The Deepwater Horizon accident and oil spill quickly polarized factions of both the government regulatory and scientific communities, which resulted in a continuing barrage of conflicting opinions and reports in the media and at scientific meetings. In the aftermath of the oil spill, it quickly became apparent that much of the differences in opinion being expressed about biological and ecological effects were based on individual perceptions of the status and health of the Gulf of Mexico before the spill. Because of the very large differences between the Deepwater Horizon oil spill and the next largest oil spill in the Gulf (Ixtoc 1), few comparisons of pre-spill conditions and post-spill effects could be made.

BP funded cooperative research with government agencies on the effects of the Gulf oil spill and external competitively awarded independent research through their \$500 million Gulf of Mexico Research Initiative (GoMRI) program. However, little of the research addressed the status and ecological health of the Gulf of Mexico *before* the Deepwater Horizon accident to serve as baseline to help assess post-spill effects.

Perhaps because of my 30-year background as the founding Editor in Chief of *Environmental Toxicology and Chemistry*, in teaching oil spill cleanup courses in the 1980s, in editing the *The Offshore Ecology Investigation* volume, and my work on tar ball formation from oil spilled in the Gulf, BP asked me to identify potential authors with appropriate expertise to research and write baseline white papers on the status and ecosystem health of the Gulf of Mexico before the Deepwater Horizon accident. Dozens of potential authors were identified and vetted for conflicts. Those selected as authors of white papers were given complete freedom to research and write their papers. I worked with the authors much in the mode of a journal editor to help them develop advanced drafts of their papers suitable for external peer review. As editor I researched and selected the peer reviewers for each paper and worked with the authors to address peer reviewer comments, which at times required preparation of additional text, figures, and tables. Author coordination meetings were held at the James A. Baker III Institute for Public Policy at Rice University.

After most of the white papers had been written, edited, and vetted by peers, BP proposed to publish them as a SpringerOpen two-volume series under the Creative Commons License for noncommercial use to promote wide distribution and free access.

In organizing and editing this two-volume series on baseline conditions in the Gulf of Mexico before the Deepwater Horizon oil spill, I have been assisted by Diana Freeman and Mary Cormier at Rice University, Alexa Wenning, Michael Bock, Laura Leighton, Jonathan Ipock^a, and Richard Wenning at Ramboll Environ and Catherine Vogel who prepared the text and figures for preparation of page proofs by Springer. All involved in writing and editing this book series have been compensated for their time and efforts.

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^aThe late Jonathan “Jon” Ipock (1986-2015) tragically died too young. While working with Ramboll Environ, Inc., he tirelessly obtained documents, compiled data and references, and prepared maps and graphs for Chapter 7 (Offshore Plankton and Benthos of the Gulf of Mexico), Chapter 9 (Fish Resources of the Gulf of Mexico), and Chapter 11 (Sea Turtles of the Gulf of Mexico). During his short career Jon worked at two environmental consulting firms for more than eight years, first as a volunteer student intern, then as an associate ecologist. Jon’s thirst for ecology was endless; he eagerly learned all he could and was one of ecology’s rising stars.

Habitats and Biota of the Gulf of Mexico: Before the
Deepwater Horizon Oil Spill

Volume 1: Water Quality, Sediments, Sediment
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