# THE FUTURE OF THE NATIONAL MARINE SANCTUARIES ACT IN THE TWENTY- FIRST CENTURY

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ABSTRACT

This thesis explores the history of the National Marine Sanctuaries Act in achieving its purpose of preserving marine biodiversity. The author contends that the National Marine Sanctuary Program, administered by the National Oceanic and Atmospheric Administration (NOAA) of the Department of Commerce, is hampered by an ambiguous legislative mandate, lacks flexibility to keep up with scientific advances, is insufficiently coordinated with other marine biological management laws, and has been stymied by ocean user groups, especially commercial and recreational fishing interests.

This thesis is based on extensive legal research, review of congressional hearings and government reports, analysis of journal articles, personal interviews with stakeholders and policymakers, and presentation of unpublished information on the Sanctuary Program. Chapter 2 discusses the major themes of the scholarly literature. Chapter 3 provides an in-depth summary of the complex and confusing legislative history of the Sanctuaries Act. Chapter 4 describes the legal context of the Sanctuary Program with a focus on four related biological conservation laws: the Marine Mammal Protection Act, the Endangered Species Act, the Magnuson-Stevens Fishery Conservation and Management Act, and Executive Order 13158 on marine protected areas. In Chapter 5, the author defines several quantitative and qualitative measures of program achievement, and assesses how well the Sanctuary Program has performed against these benchmarks. To the author's knowledge, this is the first work to attempt such a macro assessment.

Chapter 6 presents the author's findings, conclusions and recommendations. In 33 years, the Sanctuaries Act has produced 13 sanctuaries, which encompass less than 0.5 percent of the nation's oceans. The sanctuaries are managed by NOAA for multiple use,

and only a few of them contain fully protected marine reserves. In order to preserve the full array of America's living marine resources and ecosystems, the author concludes that the Sanctuaries Act needs substantial amendment to focus its purpose on the singular goal of preservation, to align it with current scientific thinking about the desirability of marine reserves, to clarify its relationship to other marine management laws, and to attract broader public support. These reforms, however, are unlikely to occur until marine conservation organizations are far better organized and powerful enough to get Congress interested in the Act's reformation.

# PREFACE

The author wishes to acknowledge several individuals whose work contributed to this thesis. Hannah Gillelan Goldstein, the author's colleague at Marine Conservation Biology Institute (MCBI) for five years, conducted extensive research on the Sanctuary Program and co-authored a legislative history of the Act on which this thesis partly depends. Mrs. Goldstein also supervised preparation of the MCBI fact sheets on the 13 sanctuaries that are reproduced with the permission of MCBI in Appendix 2. Goldstein's research assistants included MCBI staff members Stephanie Danner, Caitlin Frame, and Kristina Raab.

The author thanks the staff of the National Marine Sanctuary Program of NOAA for their collective assistance in responding to research inquiries. Several NOAA staff significantly shaped the author's understanding of both the program and law. The Marine Mammal Commission gave permission to reproduce their list of endangered marine mammals in the appendices, and the commission's staff was helpful with their time. The Pew Charitable Trusts shared an unpublished analysis of the Sanctuaries Act prepared by the Turnstone Group which helped both shape and confirm the author's thinking. Douglas Scott, who sparked the author's interest in this study, has been an encyclopedia of knowledge on the Wilderness Act. The author's colleagues at MCBI, Dr. Elliott Norse and Dr. Lance Morgan, have patiently tutored him in marine science issues, and especially on the science of marine protected areas and marine reserves. They are both expert scientists and inspirational conservation advocates.

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# CHAPTER 1. INTRODUCTION

The explosive birth of the modern environmental movement in the United States in the late 1960s focused public attention on the state of the nation's and world's ecology, and galvanized action on a host of environmental problems. Major concerns at the time included air and water pollution, solid waste disposal, human poisoning from toxic substances, ocean contamination and destruction of marine wildlife, degradation and loss of natural lands and species, and the decline of coastal areas and natural resources. In the decade and a half following the first Earth Day in 1970, Congress enacted a number of laws to address the most salient problems. This thesis deals with one of those congressional initiatives, the National Marine Sanctuary Program, authorized by Title III of the Marine Protection, Research and Sanctuaries Act of 1972 (also known as the Ocean Dumping Act).[1] Since its inception, the Sanctuary Program has been administered by the Secretary of Commerce acting through the National Oceanic and Atmospheric Administration (NOAA), a major agency within the department.

The Sanctuaries Act, as Title III came to be known, was intended to preserve, restore, and protect important marine areas along America's coasts and on the continental shelves from industrial development, particularly oil and gas development. As initially conceived in the mid-1960s, sanctuaries were thought of as the marine analog to America's national parks and wilderness areas whose fundamental purpose is preservation. However, the sanctuaries law enacted by Congress in 1972 hedged on the preservation goal by making sanctuaries multiple use areas in which preservation was

[1] Marine Protection, Research and Sanctuaries Act of 1972, 16 U.S.C. § 1431 (2006).

supposed to be balanced with commercial and recreational uses. Making matters worse, Congress provided sparse guidance as to how this balance was to be achieved.

The tension between preservation and multiple use has led to numerous controversies over sanctuary designations, and has limited the program's in-the-water results. As of January 1, 2006 only 13 federal marine sanctuaries had been designated. Sanctuaries range in size from 0.83 square miles to 5,321 square miles, and are irregularly distributed. Many ocean regions of the United States have no sanctuaries, and representation of the full array of the nation's marine ecosystems in the sanctuary system is lacking. The 13 sanctuaries collectively encompass approximately 18,500 square miles of the ocean domain of the United States, or less than 0.5 percent of this vast area whose size exceeds that of the U.S. land mass by approximately 29%.[2]

A proposed fourteenth sanctuary, which would incorporate the extremely large Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve established in 2000 by President Clinton under an executive order, is proceeding toward designation in late 2006 or 2007. If designated, the Northwestern Hawaiian Islands sanctuary would expand the sanctuaries system seven fold. However, the pending Hawaii sanctuary is an exception to the general state of affairs. NOAA lacks a strategy for new sanctuary designations. Furthermore, at the time it authorized consideration of a Northwestern Hawaiian Islands sanctuary, Congress also prohibited additional designations until NOAA meets certain

[2] The U.S., in accordance with the terms of the Untied Nations Convention on the Law of the Sea, claims as its territorial waters those waters between the mean low water mark of its coastline (also known as the baseline) to a boundary lying 12 nautical miles seaward. The U.S. further claims an exclusive economic zone (EEZ), the zone lying between its territorial sea boundary and the line 200 nautical miles seaward of the baseline. Within the EEZ, the U.S. claims sovereign rights for managing biological resources in the water column and on the seafloor. The total ocean area lying between the baseline and the 200 nautical mile outer boundary of the EEZ is approximately 4.5 million square miles. The land mass of the United States is approximately 3.5 million square miles.

management benchmarks for the existing system, benchmarks whose achievement partly depends on adequate congressional appropriations for the program.

From a preservation perspective, the achievements of the Sanctuaries Act have been modest, especially when compared with those of terrestrial conservation statutes. For example, 106.6 million acres, or approximately 4.7 percent of the nation's land base, lie within the 680 units of the National Wilderness Preservation System, which is only eight years older than the sanctuary system.[3] Under terms of the Wilderness Act, wilderness areas are managed to maintain their undeveloped primeval character, and are generally protected from all commercial activity.[4]

Despite the common meaning of the word "sanctuary," none of the 13 sanctuaries is protected to the degree most national parks and wilderness areas are. The Sanctuaries Act does not categorically prohibit commercial activities or human uses that could harm sanctuary resources. Although the Sanctuary Program has prohibited certain incompatible uses in sanctuaries, particularly oil development and seabed mining, only three sanctuaries, Florida Keys, Channel Islands and Monterey Bay, have preservation zones (or marine reserves) that are fully protected from all extractive activities.

The underachievement of the Sanctuaries Act is indeed ironic, given that the world's marine science community calls for creation of a network of fully protected marine reserves to cover the equivalent of at least 20% of the world's oceans as a necessary strategy for restoring and protecting ocean ecosystems.[5] Yet, there is little

[3] "The National Wilderness Preservation System: Facts at a Glance," 20 May 2006 <http://www.wilderness.net/index.cfm?fuse+NWPS&sec+fastFacts>.
[4] Wilderness Act of 1964, 16 U.S.C. § 1131 (2006).
[5] National Center for Ecological Analysis and Synthesis, "Statement on Marine Reserves and Marine Protected Areas," 17 Feb. 2001, U. of California, Santa Barbara. Marine Conservation Biology Institute, "Troubled Waters: A Call for Action," statement released at press conference, U.S. Capitol, Washington, 6 Jan. 1998.

probability that the Sanctuaries Act as presently written will ever deliver such results. Why not? What should be done to make the Act more robust and in tune with the latest science?

***Thesis Statement and Argument***

This thesis explores the history of the Sanctuaries Act in achieving its preservation purpose, the factors and conditions that have limited its results, and the Act's potential for meeting today's ocean preservation needs. The author, who is Vice President of Marine Conservation Biology Institute, a charitable non-profit organization whose purpose is to protect, restore and maintain marine biodiversity, contends that the Sanctuary Program is hampered by a weak and ambiguous legislative mandate, lacks the flexibility to keep up with scientific advances, is poorly coordinated with other marine laws, has been sub-optimally managed by an agency with oppositional missions, and is stymied by interest groups that have prevailed over preservation interests. In order to preserve the full array of America's living marine resources and ecosystems, the author concludes that the Sanctuaries Act needs substantial amendment to focus its purpose on the singular goal of preservation, to align it with twenty-first century thinking regarding ocean science and management, to clarify its relationship to other marine management laws, and to attract broader public support. These reforms, however, are unlikely to occur until marine conservation organizations are far better organized and powerful enough to get Congress interested in the Act's reformation, and until the Sanctuaries Act's authorization committees—the House Committee on Resources and the Senate Committee on Commerce, Science and Transportation—come to grips with the reality of the Act's weaknesses.

The fate of the Sanctuaries Act is important for several reasons. First, whether we realize it or not, all of us have a stake in healthy oceans, and therefore a stake in government programs to conserve them. The oceans drive our climate, supply food, provide leisure opportunities, generate billions for our economy, and support national security. "We also love the oceans for their beauty and majesty, and for their intrinsic power to relax, rejuvenate, and inspire. Unfortunately, we are starting to love our oceans to death."[6]

National attention has been drawn to the health of the oceans by climate change discussions, concerns about declining fisheries, and the reports of two commissions on ocean policy—the privately funded Pew Oceans Commission and the congressionally established U.S. Commission on Ocean Policy.[7] Over the last ten years, a cascade of scientific studies on the status and trends of ocean resources has poured forth from the scientific community. These trends and conditions are alarming. Although significant progress has been made on some problems of marine conservation since ocean ecology was made an issue by Jacques Cousteau and others over three decades ago, other problems have worsened. Some examples:

- It is estimated that, worldwide, 90% of the biomass of large fish has been removed from the oceans since the 1950s.[8]
- In 2004, overfishing continued to occur in 47% of the fisheries rated by the National Marine Fisheries Service as already overfished (i.e., depleted).[9]

[6] Thomas E. Fish, Theresa G. Coble, and Phyllis G. Dermer, "Marine Protected Areas: Framing the Challenges, an Overview," Current: The Journal of Marine Education 20.3 (2004): 2.
[7] Pew Oceans Commission, America's Living Oceans: Charting a Course for Sea Change (Philadelphia: Pew Charitable Trusts, 2003). U.S. Commission on Ocean Policy, An Ocean Blueprint for the 21st Century, Final Report of the U.S. Commission on Ocean Policy (Washington, D.C., 2004) 2. (Available at http://www.oceanscommission.gov) (hereinafter "U.S. Commission").
[8] Ransom A. Myers and Boris Worm, "Rapid Worldwide Depletion of Predatory Fish Communities," Nature 423:280 (2003).

- Marine ecosystems are increasingly altered by invasive species; for example, more than 175 non-native species have found a home in San Francisco Bay.[10]
- Deep sea coral and sponge habitats off U.S. coasts and around the world have been and continue to be degraded and destroyed by bottom trawl fishing boats and other seafloor-impacting gear.[11]
- Many anoxic "dead zones" have formed in coastal waters, including one at the mouth of the Mississippi that is the size of Massachusetts.[12]
- Over 50 marine animal and plant species of the U.S. are listed as endangered or threatened with extinction.[13]
- In 2002, more than 2 billion pounds of unwanted marine life—fish, sea turtles, marine mammals—is estimated to have been caught in 27 of the nation's major fisheries; these unwanted animals were discarded dead or dying.[14]

As the Pew Commission notes, "Our very dependence on and use of ocean resources are exposing limits in natural systems once viewed as too vast and inexhaustible to be harmed by human activity. Without reform, our daily actions will increasingly jeopardize a valuable natural resource and an invaluable aspect of our natural heritage."[15]

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[9] Marine Fish Conservation Network, Shell Game: How the Federal Government is Hiding the Mismanagement of Our Nation's Fisheries (Washington: Marine Fish Conservation Network, 2006) 7.
[10] Pew Oceans Commission, vi.
[11] Santi Roberts and Michael Hirshfield, "Deep Sea Corals: Out of Sight but No Longer Out of Mind," Frontiers in Ecology 2.3 (2004): 126-128. L. Watling and E. A. Norse, "Disturbance of the Seabed by Mobile Fishing Gear: A Comparison with Forest Clear-cutting," Conservation Biology 12: 1189-1197.
[12] Pew Oceans Commission vi.
[13] United States, Dept. of Commerce, NOAA, NMFS Fisheries, Office of Protected Resources, "Species Under the Endangered Species Act," 14 Mar. 2006 <http://www.nmfs.noaa.gov/pr/species/esa.htm>.
[14] Marine Fish Conservation Network, Turning a Blind Eye (Washington: Marine Fish Conservation Network, 2006) 3.
[15] Pew Oceans Commission v.

Both commissions endorse the concept of ecosystem-based management of the oceans, in which the general goal is to maintain ecosystem health for long-term sustainability. Current ocean management approaches that focus on single-species management or regulation of one category of human activity are simply inadequate. The commissions also endorse the use of marine protected areas and marine reserves as important tools of ecosystem-based management, yet neither commission addressed the Sanctuaries Act in relation to these concepts.[16] This omission is odd since the Sanctuaries Act was enacted to help prevent the deterioration of the nation's oceans, whose condition the commissions contemn. If the commission-recommended governance reforms are pursued, what should be the fate of the Sanctuaries Act? Sooner or later this question will have to be addressed. This thesis explores how a reformed Sanctuary Program should fit within a new ecosystem-based management governance structure.

Second, the Sanctuaries Act is seriously out of date with current knowledge and needs to be aligned with the latest scientific thinking. When the Act passed in 1972, scientific theories and principles for conserving complex ocean ecosystems were not well developed. Today, marine science has caught up with the sanctuary concept and preservation of marine areas is viewed as a major strategic tool for restoring ocean ecosystems. In particular, scientists call for the creation of marine reserves, "areas of the sea completely protected from all extractive activities," such as mining, seabed alteration,

[16] For the purpose of this thesis, the author defines marine protected area (MPA) as a legally established area designed to enhance the conservation and management of a variety of marine resources within the area. A marine reserve is a type of MPA in which the extraction or significant disturbance of resources is prohibited and only low-impact human uses, including research, are allowed.

commercial or recreational fishing, collecting, etc.[17] Marine reserves perform several valuable functions. They increase the abundance, productivity and diversity of species within them; protect ecosystem components and functions, including unique species and their habitats; help replenish sea life in adjacent areas through migration and larval transport; and serve as "safety nets" against natural and man-made disasters that affect similar less-protected ecosystems. Yet, few marine reserves have been created within sanctuaries, and no sanctuary in its entirety is a fully-protected reserve.

Although environmental non-governmental organizations (NGOs) support the creation of marine reserves, and NOAA has been able to establish them in a few sanctuaries, the concept is strongly opposed by some user groups, particularly fishing interests who dispute the value of reserves in enhancing commercial and recreational fisheries and are leery of permanent closures that limit fishing access. It is the author's belief that if the nation is serious about preserving its ocean heritage and maintaining healthy ocean ecosystems, then Congress must take a fresh look at the Sanctuaries Act in light of new scientific knowledge, and make appropriate adjustments that facilitate the establishment of marine reserves.

Third, the Sanctuaries Act is up for renewal at a time when the Sanctuary Program is once again under attack from user groups. The Act was due to be reauthorized in 2005, but Congress did not schedule action. (The Program continues because Congress provides appropriations for it.) Meanwhile, the latest controversies over fishing and oil development in sanctuaries could lead to further erosion of the Act's preservation mission. NOAA's efforts to create marine reserves within portions of existing sanctuaries have drawn strong opposition from the commercial and sport fishing

[17] National Center for Ecological Analysis and Synthesis 2.

industries and their allies, the regional fishery management councils–quasi-governmental advisory bodies that play a major role in federal fisheries management.[18] Fishing interests and the councils seek prophylactic amendments to the Act that would deny sanctuary managers the authority to manage fish populations within sanctuaries and hamstring creation of marine reserves. The author believes such amendments would make the Sanctuary Program even weaker, and could reduce it to the point of ecological irrelevancy.

In addition, attempts to deal with the nation's most recent energy crisis have led to renewed efforts to open untapped portions of the outer continental shelf to oil and gas exploration and development. All marine sanctuaries are now closed to new oil and gas leases under their designation terms, by presidential memo, or both.[19] Although marine NGOs and fishing interests have at times joined ranks against big oil, there may be insufficient interest in Congress for protecting the sanctuaries from outer continental shelf (hereinafter "OCS") energy development. For instance, the Energy Policy Act of 2005 authorizes an inventory of all oil and gas resources in federal waters, including, it appears, the sanctuaries; other OCS energy development legislation is pending in the 109th Congress.[20]

In view of the significant controversies swirling around the Act's reauthorization, it is timely to re-examine the mission, achievements, and effectiveness of the Sanctuary Program.

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[18] The councils are authorized by the Magnuson-Stevens Fishery Conservation and Management Act, which is discussed in more detail in Chapter 4.

[19] NOAA closed some sanctuaries to oil exploration at the time of their designations and Congress has closed others through congressional action. In 1998, President Clinton issued a memorandum indefinitely prohibiting new leasing activities in all sanctuaries. Memorandum on Withdrawal of Certain Areas of the United States Outer Continental Shelf from Leasing Disposition, 34 WEEKLY COMP. PRES. DOC. 1111 (June 12, 1998).

[20] Energy Policy Act of 2005, 42 U.S.C. § 15912 (2006).

***Methodology and Approach***

This thesis is a case study of the Sanctuary Program, with a prescription for how it should be adapted to meet ocean conservation needs in the twenty-first century. This work is an outgrowth of an article published in 2004 by the author and Hannah Gillelan on the history and evolution of the Sanctuaries Act.[21] That article, prepared under the author's direction in his capacity as an officer of Marine Conservation Biology Institute, was based on extensive legal research, review of congressional documents and hearings and government reports, analysis of legal and policy journal articles, searches of historical media articles, personal interviews with stakeholders and policy makers, and analysis of unpublished information on the Sanctuary Program. In this thesis, the author presents additional data drawn from the literature, interviews and personal communications with government officials and stakeholders, and unpublished research conducted by the author and the staff of MCBI.

The thesis proceeds in the following order:

Chapter 2 surveys the scholarly literature. In 34 years, a modest amount of scholarly literature has been generated on the Sanctuary Program and Sanctuaries Act. Four themes stand out: (1) debate over the purpose of the Act and the proper application of its provisions; (2) implementation concerns at various stages of the Program's evolution; (3) the unrealized potential of the Program and how it could be improved to deliver better results; and (4) the general failure of the Act to achieve its preservation mission.

[21] William J. Chandler and Hannah Gillelan, "The History and Evolution of the National Marine Sanctuaries Act," Environmental Law Reporter News & Analysis 34 (2004): 10505-565.

Chapter 3 provides an in-depth summary of the legislative history of the Sanctuaries Act with regard to its preservation and protection provisions. The Act has undergone a complex and turbulent evolution, and been amended many times. A thorough understanding of this history is a necessary step in assessing the Act's achievements and failures.

Chapter 4, "The Ocean Conservation Framework," describes the legal framework relevant to implementation of the Sanctuary Program's biological preservation mission. According to the Pew Oceans Commission, the Sea Grant Law Center of the University of Mississippi has identified more than 140 laws, major and minor, that relate to the nation's coasts and oceans.[22] However, only four of them are considered by the author to be central to the ecological preservation mission of the Sanctuary Program which is the focus of this thesis: The Marine Mammal Protection Act, the Endangered Species Act, the Magnuson-Stevens Fishery Conservation and Management Act, and President Clinton's Executive Order 13158 on marine protected areas. The three acts have not been adequately harmonized with the Sanctuaries Act, nor has the executive order been aggressively implemented. This has produced confusion over the Sanctuaries Act's implementation, generated intra-agency friction within NOAA, and led to attempts by interest groups to advance their own versions of statutory harmonization.

Principal stakeholders of the Sanctuary Program include the oil industry, the commercial and recreational fishing industries, recreational angler associations and conservation NGOs.[23] The roles and influence of these groups is highlighted as

[22] Pew Oceans Commission 27.

[23] Many ocean user groups may be directly affected by marine sanctuaries both positively and negatively. These include commercial and recreational fishermen and the businesses that cater to them, recreational boaters and scuba divers, marine transport businesses, ocean tourism operators, the oil industry, the

appropriate throughout this thesis. However, concerned as it is with the macro view of the Program's results, this thesis does not delve deeply into the complex relationships and interactions of these groups. The principal players or policy makers include officials of the Department of Commerce, including the National Ocean Service (NOS), which manages the Sanctuary Program, and the National Marine Fisheries Service (NMFS), which oversees the nation's fisheries and marine mammals and endangered species programs; officials of the Department of the Interior who manage the offshore oil program; and Congress, which drove creation of the Sanctuaries Act and has kept the program going through thick and thin.[24] The actions of these players are discussed throughout the thesis, with the most attention being paid to the congressional authorizing committees and NOAA. The role of oil development in the Sanctuary Program has been very significant, as shown in Chapter 3. The Department of the Interior has consistently favored oil development as a compatible use of sanctuaries. However, because the principal focus in this thesis is preservation and management of biological resources by the Sanctuary Program, the author's treatment of the oil issue will be limited in nature.

In Chapter 5, the author defines several measures of Sanctuary Program success and assesses how well the Program has performed in preserving the full array of marine ecosystems and habitats of the United States. To the author's knowledge, this is the first work to attempt such a quantitative assessment. A second important question considered in this chapter is the kind of protection the Act provides to resources within the sanctuaries, a subject that is little discussed in marine policy circles today. Consideration

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scientific community and conservationists or preservationists (typically represented by nonprofit conservation organizations).

[24] Department of Defense agencies also may get involved with individual sanctuaries, especially but not exclusively the Navy.

of these two subjects shows how the Sanctuary Program has fallen short in its preservation mission.

Chapter 6 presents the author's findings, conclusions and recommendations. The author discusses how to achieve a truly effective Sanctuary Program that meets today's ocean management needs and preserves the full array of the nation's biodiversity resources for future generations. To achieve these goals, the author contends that a major realignment of the Sanctuaries Act is necessary.

The Appendices include several maps and tables:

1. Map of the National Marine Sanctuaries.

2. Profiles of Current Sanctuaries: Name, designation date, size, location, key resources, and activities regulated.

3. Sanctuary Representation of the Nation's Marine Biogeographic Provinces.

4. Marine Mammal Species Listed as Threatened, Endangered or Depleted.

## CHAPTER 2. THE SCHOLARLY LITERATURE

The Sanctuary Program has been the subject of scholarly articles, several NOAA-funded reviews, two congressionally-ordered assessments, and many congressional oversight and reauthorization hearings. Scholarly works range from short descriptions of the Program's purpose and implementation, to in-depth monographs examining the Program's problems and potential, to prescriptive works on how to improve the Sanctuaries Act. Four themes stand out: (1) debate over the purpose of the Act and the proper application of its provisions; (2) implementation concerns at various stages of the Program's evolution; (3) the unrealized potential of the Program and how it could be improved to deliver better results; and (4) the general failure of the Act to achieve its preservation mission.

### *Legislative Purpose*

During the first 16 years of the Sanctuary Program, articles about it provide only brief sketches of the Act's legislative history. Then the subject pretty much disappears from view until the period, 2002 to 2004, when articles by Jeff Brax, David Owen, and the author and Hannah Gillelan addressed the subject in more depth.[25] The ambiguity of the Act's legislative history and its continually evolving nature have led to different interpretations over time regarding the purposes of the Act and how much emphasis it places on preserving and restoring resources versus managing them for multiple use. As a result, the Act can be a puzzle to any scholar who approaches it. Chapter 3 provides an extensive treatment of the original law and subsequent amendments for the purpose of

[25] Jeff Brax, "Zoning the Oceans: Using the National Marine Sanctuaries Act and the Antiquities Act to Establish Marine Protection Areas and Marine Reserves in America," Ecology Law Quarterly 29 (2002): 71-129. David Owen, "The Disappointing History of the National Marine Sanctuaries Act," N.Y.U. Environmental Law Journal 11 (2003): 711-758. Chandler and Gillelan.

explaining how the Act came to be what it is today. In this chapter, the author summarizes key points made by previous authors about the Act's purposes and intent.

Robert Kifer, who managed the Program in its early years, correctly observes that a "key conceptual transition took place" as sanctuary legislation moved from original concept to final form: Early measures that focused on preventing the despoliation of scenic and resource-rich marine areas by prohibiting offshore oil development in sanctuaries were superseded by a law that sought to protect and restore significant areas for balanced use.[26] John Epting argues that the Act allows multiple uses of sanctuaries "as long as such uses are consistent with the sanctuary's resource protection purposes. The crux of any sanctuary proposal is determining the appropriate balance between protection and use."[27]

Diane Schenke asserts that the two primary purposes of the Act were "to acquire baseline data on various types of marine ecosystems;" and to provide "a means whereby various competing [ocean] uses could be weighed against the particular values of the individual sanctuary, an evaluation not provided for by other federal law in existence at that time."[28] Schenke's conclusion is only partly correct. The House report on the legislation clearly states that the Act's major rationale is to protect "important ocean areas of the coastal zone from intrusive activities by man," and that marine sanctuaries would "provide a means whereby important areas may be set aside for protection and may thus be insulated from the various types of 'development' which can destroy

[26] Robert R. Kifer, "NOAA's Marine Sanctuary Program," Coastal Zone Management Journal 2.2 (1975): 177.
[27] John Epting, "National Marine Sanctuary Program: Balancing Resource Protection with Multiple Use," Houston Law Review 18.5 (1981): 1045.
[28] L. Diane Schenke, "The Marine Protection, Research, and Sanctuaries Act; The Conflict Between Marine Protection and Oil and Gas Development," Houston Law Review 18.5 (1981): 1013.

them."[29] David Tarnas holds that the primary purpose of the original legislation was resource conservation, but argues that Congress modified this purpose in 1984 to emphasize multiple uses of sanctuaries compatible with resource protection.[30] However, the amendments did not fully clarify the Act's purposes. Tarnas concludes:

> Marine sanctuaries are not the strictly regulated preservation areas the name implies. Nor are they strictly multiple-use areas. Rather they are intended to be marine protected areas using a combination of these two management approaches, possibly including core areas of strict resource protection with surrounding areas having limitations on other uses to ensure resource protection and conservation.[31]

Michael Weber, a former nonprofit conservation organization staff member and former NOAA official, argues that despite the many amendments to the Act, its core purpose remains conservation.[32] In his review of the Act's history, attorney Jeff Brax observes that Congress clearly intended to establish "a new system" of marine protected areas called sanctuaries, which are "to be protected for multiple uses and subject to a great deal of public and legislative input."[33] Brax believes that as a whole, the Act is intended to "protect natural resources from human impacts," and that sanctuaries are to be managed "in a cohesive manner."[34] However, he also acknowledges the Act's consideration of the economic impacts of sanctuary designation which opens "dozens of access points for user groups seeking to block particular proposed designations."[35] David Owen similarly concludes the Act was supposed to be a vehicle for sustainable management and use of ocean resources, but that Congress mismatched its ambitious

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[29] H.R. REP. No. 92-361, at 15 (1971).
[30] David A. Tarnas, "The U.S. National Marine Sanctuary Program: An Analysis of the Program's Implementation and Current Issues," Coastal Management 16 (1988): 276, 281.
[31] Tarnas 281.
[32] Michael Weber, personal interview, December 2001.
[33] Brax 82.
[34] Brax 84.
[35] Brax 85.

goals with an "anemic, ill-designed law."[36] According to Owen, the floor debate on the original Act suggests Congress thought it was creating a program "likely to ensure balanced planning for a wide range of uses on a broad geographic scale—in effect, a program to provide for comprehensive multiple-use management of the oceans."[37] However, says Owen, the terms of the Act did not "comport with such a grandiose vision."[38]

While congressional rhetoric might support such an interpretation of congressional intent, the author believes Owen reads too much into the debate and is therefore somewhat off the mark. Congress knew very well it was not launching a comprehensive ocean zoning program, but rather a program to both protect and manage discrete areas or sites for a variety of uses, the mix of which was to be determined by the Secretary of Commerce in consultation with other federal and state agencies involved in managing ocean resources. Had it meant to launch a comprehensive ocean zoning program, Congress would have had to harmonize the Sanctuaries Act with the many other ocean laws on the books at the time, something it did not do. In the most extensive legislative history of the Act ever published, the author and Hannah Gillelan concluded that the Act is fundamentally ambiguous in purpose and internally at war with itself, seeking both resource protection and multiple use.[39] Thus, the Act is susceptible to different interpretations from all sides.

[36] Owen 713.
[37] Owen 716.
[38] Owen 718.
[39] Chandler and Gillelan 10506-10507.

***Program Implementation Problems***

A second focal point of the literature is NOAA's lack of skill in implementing the program during its formative years, 1973 to 1984, and the problems that resulted. Nearly all assessments find fault with NOAA's design and implementation of the Program, or the agency's lack of vision and aggressiveness in securing funding and making the Program a showcase comparable to the national park and wildlife refuge systems. The list of criticisms is too long to be dealt with here, but examples are illustrative.

Blumm and Blumstein note the Program's slow start, lack of appropriations for the first five years, and near invisibility until goaded into action by the Carter Administration in 1977.[40] Once the Program got rolling, Daniel Finn concludes that NOAA failed to assign the Program a "definite meaning and purpose" and that managers "failed to institute an effective and open process for sanctuary proposals and thereby to develop a public constituency."[41] Schenke was critical of President Carter's use of the Program to protect areas threatened with offshore oil and gas development because she believes the primary purposes of the Program are to establish areas for research and multiple use, not stop development.[42] Tarnas criticized the lack of a program strategy for developing a sanctuary system fully representative of all marine ecosystems, and NOAA's inadequate coordination and cooperation with other governmental agencies.[43] In 1991, an independent review team established by NOAA cited the Program's insufficient budget and "congressional impatience with the pace and operation of the

[40] Michael C. Blumm and Joel G. Blumstein, "The Marine Sanctuary Program: A Framework for Critical Areas Management in the Sea," Environmental Law Reporter 8 (1978).
[41] D.P. Finn, Managing the Ocean Resources of the United States: The Role of the Marine Sanctuary Program (Berlin: Springer-Verlag, 1982) 84-86.
[42] Schenke 990, 1012-1016.
[43] Tarnas 294-295.

program," which prompted congressional intervention to designate several sanctuaries.[44] Finally, the National Academy of Public Administration (NAPA) found that sanctuaries did not have fulltime managers until 1990, and that the Program was dragged down by controversy for years.[45]

***A Program of Unfulfilled Promise***

A third theme in the literature is that of a program with great but unrealized potential. After President Carter jump-started a slumbering Sanctuary Program in 1977, Blumm and Blumstein touted the Program as one that "provides a means of comprehensively managing marine activities by designating and assuring the protection of marine areas of environmental values," and one that could link single-use and single-activity programs "in the ongoing efforts to develop a balanced and comprehensive marine policy" called for by the Stratton Commission in their 1969 report on federal ocean policy.[46]

The worthy-program-with-unrealized-potential theme is especially salient in two NOAA-funded assessments of the Sanctuary Program conducted in the 1990s. Citing America's strong national park leadership (America was the first nation to establish national parks), a non-federal program review team challenged NOAA to "make a strong commitment to a new standard of environmental stewardship. A relatively small investment of resources could produce enormous returns in the form of a model resource protection system."[47] The benefits of such an effort, the team noted, include restoration

[44] Review Team, National Marine Sanctuaries: Challenge and Opportunity, A Report to the National Oceanic and Atmospheric Administration (Washington: Center for Marine Conservation, 1993 reprint) 4.
[45] National Academy of Public Administration, Protecting our National Marine Sanctuaries (Washington: National academy of Public Administration, Feb. 2000) 2 [hereinafter "NAPA"].
[46] Blumm and Blumstein 50016-50017.
[47] Review Team i, 2-3.

of depleted fisheries, promotion of environmentally sound recreation, research programs on environmental change, and prevention of further environmental degradation.[48] A second assessment, undertaken eight years later by the National Academy of Public Administration (NAPA), found that the Sanctuary Program is "beginning to demonstrate notable successes in protecting valuable parts of the ocean," but that "some sanctuaries are still without 'defenses'—that is without enough resources, authority, or community support to protect their valuable resources."[49] NAPA urged NOAA to protect sanctuary resources "more effectively," to build better relationships with local communities, and to focus on resource protection results rather than endless planning.[50] NAPA also urged NOAA to provide more internal support to the program and Congress to provide more funding and better oversight. The report concluded: "The future of the program is promising. It has the potential to begin to establish in parts of the ocean the civic culture and public support that is the foundation of governance."[51]

An opposing view is held by several nonprofit conservation professionals, including the author. In general, they see the Sanctuary Program as a relatively weak one that is failing to meet its preservation and protection mission. A commonly heard complaint is that NOAA fails to protect natural resources within sanctuaries from damaging activities. For example, commercial fishing is not generally prohibited in sanctuaries even though it removes sanctuary fish, and some fishing gears, such as bottom trawls, damage seafloor habitat and degrade natural ecosystems. Furthermore, NOAA does not yet have an adequate monitoring and research program in place to assess

[48] Review Team i.
[49] NAPA 1.
[50] NAPA ix.
[51] NAPA x.

the status of all sanctuary resources, and hence no baseline against which to measure resource status and trends.[52]

Embedded within the "weak program" critique is a concern about whether or not the Sanctuary Program ever can achieve its potential given the culture of the agency in which it operates. The review team defined the NOAA "culture issue" as follows:

> In the past, NOAA's administration of the sanctuary program has lacked leadership, focus, resources and visibility, and the program has suffered for it . . . From its inception, NOAA has been cautious about assuming the mantel of manager of resources entrusted to it. There has always been a certain tension between the worlds of science and information development, on the one hand, and active management involvement with resources on the other.[53]

In other words, NOAA is populated by scientists more interested in, and capable of, conducting research than fighting political battles or managing regulatory programs required to conserve the ocean resources entrusted to them. The NAPA report made a similar observation: "Most close observers . . . say that the program is uncertain, weak and pitifully small. They complain that the sanctuary program is buried inside an organization . . . which has very different traditions, constituencies, and culture than the sanctuary programs' place-based, comprehensive, civic approach."[54] While NOAA's culture may be a stumbling block to good management, this issue has never been probed in depth by scholars. Yet, as James Q. Wilson notes, "organization matters" and so do the "organizational systems" that bureaucracies employ.[55]

***Insufficient Achievement***

A fourth theme centers on the Sanctuaries Act's lack of results. Beginning around the Act's thirtieth anniversary, several authors attempted to assess the overall benefit of

[52] Michael Weber, personal interview, Dec. 2001.
[53] Review Team 6.
[54] NAPA 1.
[55] James Q. Wilson, Bureaucracy (Basic Books, 2000) 23.

the Sanctuary Program. Both Brax and Owen point out how the Program can stagnate when ignored by presidential administrations, and argue the Program has been a disappointment because of insufficient results in protecting and preserving marine areas.[56] The Turnstone Group concluded the Sanctuaries Act is ill-designed for establishing fully protected marine reserves.[57] And Chandler and Gillelan found that NOAA has not been effective in establishing a strategy to preserve the full array of the nation's marine biodiversity, nor does it use the Program to complement the agency's other conservation programs for marine mammals and endangered species. Furthermore, Chandler and Gillelan agree with Brax, Owen and the Turnstone Group that sanctuaries provide inadequate protections for sanctuary resources.[58]

***Conclusion***

In sum, previous literature provides valuable perspectives that help explain why the Sanctuaries Act, given its potential scope and benefits, has achieved relatively modest results in its 33 years. However, in the author's opinion, none of the earlier works, except that of Chandler and Gillelan, place sufficient emphasis on the Act's fatal flaw—its ambiguous purpose—which colors the Program's entire history. In the following chapter, the author will show how the Sanctuary Program's preservation and restoration mission was compromised the day the Act was signed. The Program was further hobbled by subsequent amendments that encouraged the creation of multiple use sanctuaries and weakened the Act's preservation and protection provisions. The Program's ambiguity is underscored by congressional rhetoric, which often asserts that the Sanctuary Program is

[56] Brax 90-92. Owen 712-713.
[57] Turnstone Group, "An Assessment of the Adequacy of the Authority of the National Marine Sanctuaries Act to Establish A Network of Fully Protected Areas," 2003, unpublished manuscript on file with Marine Conservation Biology Institute.
[58] Chandler and Gillelan 10562.

analogous to the national parks program, yet none of the 13 sanctuaries is protected like the national parks. The Sanctuaries Act is a paradox, even to its congressional overseers, because what the Act is said to be and what it is are two very different things.

## CHAPTER 3. ISSUE AND LEGISLATIVE HISTORY

The existing literature fails to do justice to the complex and tortuous history of such a baroque law as the National Marine Sanctuaries Act. Originally constituting three brief sections, the Act has been expanded to 18 over its 33-year life. The objective of this chapter is to provide a comprehensive history of the Act's preservation and protection provisions to facilitate a clearer understanding of the law's intent and to set the stage for evaluating the Act's achievements. At the same time, the author traces major events in the Act's implementation history and how they influenced the law's evolution.

### *Historical Overview*

In response to intense concern manifested in the late 1960s and early 1970s about the declining state of America's coastal and ocean waters, Congress enacted the Marine Protection, Research and Sanctuaries Act of 1972.[59] This measure, also known as the Ocean Dumping Act, regulated the dumping of wastes in ocean waters, launched a study of the long-term impact of pollution on marine ecosystems, and created a marine Sanctuary Program for the "purpose of preserving or restoring . . . areas for their conservation, recreational, ecological, or esthetic values."[60] The earliest proponents of marine sanctuaries had envisioned a system of protected ocean areas analogous to those established for national parks and wilderness areas. Unfortunately, the architecture of the Sanctuaries Act did not replicate that of the parks or wilderness systems. Moreover, the Act proved to be highly unstable because of its overly broad and imprecise provisions.

[59] Marine Protection, Research and Sanctuaries Act of 1972, Pub. L. No. 92-532, 86 Stat. 1052 (codified as amended at 16 U.S.C. § 1431 (2006)).
[60] *Id.* § 302.

As a result, for much of its history the Sanctuaries Act has been a work in progress. A fundamental reason for the law's mutability has been the ambiguity surrounding the Act's intent. Is the overriding purpose of the Act preservation and protection of marine areas, or is it the creation of multiple use management areas in which preservation (a type of use) must contend with other uses, even exploitive ones like oil and gas extraction? If the latter interpretation is correct, then how is the balance of uses to be achieved?

Congress failed to clearly and definitively answer these questions at the outset, and in fact gave conflicting signals. The original law and accompanying legislative history were incongruous in that the law directed the Secretary of Commerce, acting through the National Oceanic and Atmospheric Administration (NOAA), to establish sanctuaries for preservation and restoration purposes, but the House legislative history, specifically the floor debate, stressed balancing preservation and human uses within sanctuaries. This ambiguity produced confusion and led to implementation difficulties, which in turn triggered periodic efforts by NOAA and Congress to clarify the Act's purposes and provisions.

Over time, Congress made multiple use one of the several purposes of the Act and diminished the Act's preservation authorities in other ways. Although amended numerous times, the statute remains incongruous, calling for both preservation and multiple use. The author's thesis is that the principal reason the Sanctuary Program has failed to establish a comprehensive national network of marine preservation areas that restores, protects, and preserves the full range of the nation's ecologically valuable marine resources is because of the Act's lack of a clear preservation mandate. Before

exploring this point further, it is necessary to trace in some detail the legislative history of the Sanctuaries Act as originally conceived, and to summarize key changes that have affected its preservation mission. The discussion that follows is mainly drawn from the lengthy legislative history published by the author and Hannah Gillelan.[61]

***Origins of the Act***

Coastal and ocean degradation caused by pollution, industrial and commercial development, and unregulated ocean dumping became a major national issue in the late 1960s and 1970s. Public awareness was heightened by a number of pollution events, including several major oil spills, local "dead seas" created by the dumping of dredge spoil and sewage sludge, by scientific reports detailing the environmental decline of coastal areas, and by media publicity surrounding the exploits and calls to action of marine explorer Jacques Cousteau and other environmental spokespersons. The first Earth Day, which took place in 1970, galvanized political action on the "ecology" issue. Ultimately, Congress considered and approved a number of remedial measures to protect America's environment, including her coasts and estuaries. These measures included a federal assistance program to help states develop coastal zone management plans (today's Coastal Zone Management Program), new pollution control and ocean dumping laws, and separate programs to establish estuarine and marine sanctuaries. Additional legislative measures were aimed at protecting marine mammals, endangered species and commercial fisheries.

***Early Legislation***

The concept of a "marine wilderness preserve" was raised in 1966 by Effective Use of the Sea, a report issued by President Johnson's Science Advisory Committee just

[61] Chandler and Gillelan.

two years after passage of the Wilderness Act.[62] The committee envisioned a permanent system of marine preserves similar in purpose and design to that established for terrestrial wilderness areas. Marine wilderness preserves were to be areas managed for the purpose of maintaining their natural characteristics and values, and human uses would have to be compatible with this standard.[63]

The idea of a marine wilderness system was quickly embraced by members of Congress desirous of protecting special ocean areas. In 1967, Representatives Hastings Keith (R) of Massachusetts and Phil Burton (D) and George E, Brown, Jr. (D) of California, introduced bills in the House of Representatives to direct the Secretary of the Interior to study the feasibility of a national system of marine sanctuaries patterned after the wilderness preservation system.[64] A principal factor prompting this legislation was the desire to protect special coastal areas and marine resources from harm by industrial development, especially oil and gas development at a time when the oil industry was expanding its operations offshore on both the east and west coasts. The California legislators had Santa Barbara in mind, whereas Keith was interested in protecting the rich fishing grounds on George's Bank. Similar bills were introduced by several other House members during the 90th Congress.

In 1968, eleven sanctuary "study bills" received a hearing by the House Merchant Marine and Fisheries Committee (hereinafter the Merchant Marine Committee). The bills were opposed by the Department of the Interior on grounds that existing law permitted Interior to manage the oceans for multiple use, including environmental

[62] Panel on Oceanography, President's Science Advisory Committee, Effective Use of the Sea (1966).
[63] Panel on Oceanography 16-18.
[64] H.R. 11460, 90th Cong. (1967); H.R. 11469, 90th Cong. (1967); H.R. 11584, 90th Cong. (1967).

protection, and that sanctuaries might restrict offshore energy development.[65] The committee took no further action in the 90th Congress, but Keith and other House members persisted in promoting sanctuary study legislation in the next two Congresses (1969-1972).

Concurrently, an alternative strategy for protecting ocean places was advanced by members of the California delegation who sought to delimit areas on the Outer Continental Shelf (OCS) of California where oil drilling would be prohibited. In 1968, bills were introduced in the House and Senate to ban drilling in a section of waters near Santa Barbara, California.[66] Following the massive oil spill from a ruptured well in the Santa Barbara Channel in 1969 (which helped spark Earth Day), Senator Alan Cranston (D) of California became the foremost advocate for banning offshore drilling at Santa Barbara and other sites along the California coast. Beginning in 1969, and continuing over several years, Cranston introduced a number of measures to ban oil drilling at sites on the OCS.[67] The oil industry opposed the Cranston bills, as did the Department of the Interior, which claimed that new drilling guidelines and procedures it adopted after the Santa Barbara incident would be sufficient to prevent future spills, and that the nation needed more offshore energy sources.[68] The Senate and House Interior and Insular Affairs committees, which had authority over the OCS minerals leasing program, did not advance the Cranston anti-drilling measures.

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[65] *Oceanography Legislation: Hearing on H.R. 11460, 11469, 11584, 11769, 11812, 11868, 11984, 11987, 11988, 12007, and 13150 Before the Subcomm. on Oceanography of the House Comm. on Merchant Marine and Fisheries*, 90th Cong. 89, 129, 131 (1968).
[66] H.R. 16421, 90th Cong. (1968); S. 3267, 90th Cong. (1968).
[67] S. 1219, 91st Cong. (1969).
[68] *Santa Barbara Oil Spill: Hearing on S. 1219 Before the Subcomm. on Minerals, Materials, and Fuels of the Senate Comm. on Interior and Insular Affairs*, 91st Cong. 44, 47-48 (1969) (testimony of Hollis Dole, Asst. Sec. of the Interior for Mineral Resources).

A third strategy for protecting ocean areas was spawned by concerns about the impact of waste dumping in the ocean which at the time was virtually unregulated. Oil-covered beaches, closed shellfish beds and "dead seas" around ocean dump sites received heavy media attention, and prompted the introduction of a variety of House bills in 1970 to regulate ocean dumping or prevent discharges in ecologically significant areas. Impelled by the "ocean dumping crisis," President Nixon's Council on Environmental Quality (CEQ) issued a report in late 1970 that called for comprehensive legislation to regulate waste dumping in the oceans; however, the report was silent on marine sanctuaries.[69] Given the Interior Department's position in support of offshore oil development, this was not surprising. CEQ did, however, endorse the idea of protecting biologically valuable areas in near shore waters from dumping, and recommended establishment of "marine research preserves" to protect representative marine ecosystems as baseline areas for evaluating environmental change.[70]

As the 91st Congress drew to a close, momentum for an ocean dumping law had become unstoppable. Despite the Nixon administration's opposition, the House Merchant Marine Committee was determined to act on marine sanctuary legislation as well. As it turned out, the ocean dumping crisis gave the committee the vehicle it needed to create a marine sanctuary program.

[69] MESSAGE FROM THE PRESIDENT OF THE UNITED STATES TRANSMITTING A REPORT OF THE COUNCIL ON ENVIRONMENTAL QUALITY ON OCEAN DUMPING, H.R. DOC. NO. 91-399 (1970).
[70] *Id.* at vi-vii.

***The Ocean Dumping Act of 1972***

On the first day of the 92nd Congress, 17 bills to regulate ocean dumping were introduced in the House.[71] President Nixon's draft ocean dumping bill, an outgrowth of the CEQ report, was forwarded to Congress on February 8, 1971 and introduced in both houses.[72] Meanwhile, sanctuary proponents continued to move on several fronts. Early in the session, Rep. Keith re-introduced his sanctuary study bill (unchanged from previous versions), as well as a separate measure to designate a Cape Cod National Marine Sanctuary.[73] Representatives Murphy (D) and Rogers (D) re-introduced bills they had sponsored in the last Congress to protect marine ecology from waste dumping.[74] And Rep. Frey (D) introduced a new version of his bill to both regulate dumping and establish marine sanctuaries.[75]

In the Senate, Senator Cranston continued his campaign to ban oil and gas development in the Santa Barbara Channel and other areas along the California coast. On January 27, 1971, he introduced legislation to terminate oil leases in the Santa Barbara Channel and to establish a permanent Federal Ecological Preserve.[76] In April, Cranston introduced a series of bills to establish "marine sanctuaries from leasing" in federal waters at six other areas along the California coast.[77] All of Cranston's bills were

[71] H.R. 285, 92d Cong. (1971); H.R. 336, 92d Cong. (1971); H.R. 337, 92d Cong. (1971); H.R. 548, 92d Cong. (1971); H.R. 549, 92d Cong. (1971); H.R. 805, 92d Cong. (1971); H.R. 807, 92d Cong. (1971); H.R. 808, 92d Cong. (1971); H.R. 983, 92d Cong. (1971); H.R. 1085, 92d Cong. (1971); H.R. 1095, 92d Cong. (1971); H.R. 1329, 92d Cong. (1971); H.R. 1381, 92d Cong. (1971); H.R. 1382, 92d Cong. (1971); H.R. 1383, 92d Cong. (1971); H.R. 1661, 92d Cong. (1971); H.R. 1674, 92d Cong. (1971).
[72] H.R. 4247, 92d Cong. (1971); H.R. 4723, 92d Cong. (1971); H.R. 5239, 92d Cong. (1971); H.R. 5268, 92d Cong. (1971); H.R. 5477, 92d Cong. (1971); H.R. 6771, 92d Cong. (1971); S. 1238, 92d Cong. (1971).
[73] H.R. 4568, 92d Cong. (1971); H.R. 4567, 92d Cong. (1971).
[74] H.R. 285, 92d Cong. (1971); H.R. 1095, 92d Cong. (1971).
[75] H.R. 4359, 92d Cong. (1971); H.R. 4360, 92d Cong. (1971); H.R. 4361, 92d Cong. (1971).
[76] S. 373, 92d Cong. (1971).
[77] S. 1446, 92d Cong. (1971); S. 1447, 92d Cong. (1971); S. 1448, 92d Cong. (1971); S. 1449, 92d Cong. (1971); S. 1450, 92d Cong. (1971); S. 1451, 92d Cong. (1971); S. 1452, 92d Cong. (1971).

referred to the Senate Interior and Insular Affairs Committee, which dutifully gave them a hearing but took no action.[78]

Regardless of approach, the basic intent of sanctuary proponents was essentially the same: To preserve special marine areas for their intrinsic natural values and for uses deemed compatible, by protecting these areas from industrial development and pollution. Legislators sought to protect cherished areas like George's Bank and Santa Barbara Channel for their scenic, wildlife, fishery, ecological, scientific research and recreational values. Representatives Keith, Brown, Frey and others envisioned a marine sanctuary system similar to that established for terrestrial wilderness areas by the Wilderness Act. Without such a system, legislators feared the destruction of unique ocean resources as had occurred to America's forests, prairies and wildlife.

While sanctuary proponents were against oil development, they were not against all commercial uses of sanctuaries. (In this aspect, sanctuary bills were unlike the Wilderness Act, which generally prohibits commercial activities in wilderness.) Legislators saw sanctuaries as accommodating commercial and recreational fishing, recreation and other compatible uses, yet somehow preserving these areas for sustained use. Indeed, a major objective of Keith was to protect the Georges Bank commercial fishery from oil pollution.[79] The idea that commercial fishing itself might pose a serious threat to sanctuary resources was never part of the debate. Hence, fishing interests did

[78] *Bills to Create Marine Sanctuaries from Leasing Pursuant to the Outer Continental Shelf Lands Act in Areas Off the Coast of California Adjacent to State-Owned Submerged Lands in Which Such State Has Suspended Leasing for Mineral Purposes: Hearings Before the Subcomm. on Minerals, Materials, and Fuels of the Senate Comm. on Interior and Insular Affairs*, 92d Cong. (1971).
[79] 113 CONG. REC. 19,481 (1967) (statement of Rep. Keith).

not oppose sanctuary study legislation, and in fact Massachusetts fishermen testified in favor of it.[80]

The major opponents of sanctuary legislation were the Department of the Interior and the oil industry, both of whom opposed restrictions on offshore oil development. Although the Santa Barbara blowout and other oil spills had drawn attention to the dangers of offshore oil and gas development, there was no consensus on prevention remedies. A strong countervailing concern at the time was the need to develop additional oil and gas supplies to meet domestic energy needs.[81]

*House Action.* The House Merchant Marine Committee held hearings on ocean dumping bills in early April 1971.[82] Although the principal focus of the hearings was ocean dumping, other ocean conservation and sanctuary bills also were formally considered. Representative Keith did not testify, but did ask a few questions about sanctuaries, as did other committee members. The Nixon Administration's witnesses urged passage of the President's ocean dumping bill, which put the Environmental Protection Agency (EPA) in charge of issuing permits for the dumping of certain wastes. Russell Train, Chairman of CEQ, told the panel that the administration's bill gave the EPA administrator authority to identify areas where dumping would not be permitted, implying this achieved the same objective as sanctuaries.[83] But Train also noted that the sanctuary concept involved more than just dumping considerations, and urged that

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[80] *Oceanography Legislation: Hearing on H.R. 11460, 11469, 11584, 11769, 11812, 11868, 11984, 11987, 11988, 12007, and 13150 Before the Subcomm. on Oceanography of the House Comm. on Merchant Marine and Fisheries*, 90th Cong. (1968).
[81] H. Ketchum Bostwick, ed., The Water's Edge: Critical Problems of the Coastal Zone (Cambridge: MIT Press, 1972) 66-69.
[82] *Bills to Create Marine Sanctuaries from Leasing Pursuant to the Outer Continental Shelf Lands Act in Areas Off the Coast of California Adjacent to State-Owned Submerged Lands in Which Such State Has Suspended Leasing for Mineral Purposes: Hearings Before the Subcomm. on Minerals, Materials, and Fuels of the Senate Comm. on Interior and Insular Affairs*, 92d Cong. (1971).
[83] *Id.* at 164, 167-168.

sanctuaries be considered in separate legislation.[84] William Ruckelshaus, EPA Administrator, testified that EPA was in complete accord that critical marine areas should be protected from dumping.[85] The Interior Department did not raise concerns about sanctuaries in its submitted written views, but other agencies did.[86] The State Department expressed concern about the designation of sanctuaries in international waters, and the Navy over conflicts sanctuaries might pose for military activities.[87] In general, however, the Nixon Administration raised no concerted public defense against sanctuaries at the hearing, a position that would change as sanctuary legislation progressed.

Shortly after the hearings ended, the Merchant Marine Committee commenced a series of executive sessions to develop an ocean dumping bill. It was during the course of these deliberations that a marine sanctuaries title was added. A preview of the sanctuaries title emerged on June 17, 1971 when Representative Alton Lennon (D), chairman of the oceanography subcommittee, introduced a measure to establish a National Coastal and Estuarine Zone Management Program and a Marine Sanctuary Program; Keith cosponsored the Lennon measure.[88] The sanctuaries title of Lennon bill's was almost identical to that included as Title III of the Merchant Marine Committee's ocean dumping bill, H.R. 9727, introduced a few days later by committee chairman, Leonard Garmatz (D) of Maryland.[89] The Garmatz bill, entitled The Marine Protection, Research and Sanctuaries Act, was a three-part measure that established a

[84] *Id.* at 164, 169-170.
[85] *Id.* at 95, 99.
[86] *Id.* at 107-109.
[87] *Id.* at 111-113.
[88] H.R. 9229, 92d Cong. (1971).
[89] H.R. 9727, 92d Cong. (1971).

regulatory scheme for ocean dumping, a comprehensive research program to investigate the short and long term affects of pollution on the ocean, and a marine Sanctuary Program.[90] The committee viewed the three titles as complementary.[91] Title III provided the Secretary of Commerce with broad discretionary authority to designate in coastal, ocean and Great Lakes waters those marine sanctuaries the Secretary determined necessary for the purposes of preserving and restoring an area's conservation, recreational, ecological or esthetic values. The Secretary was given two years to make his first designations, and was to make others thereafter as he saw fit. In established sanctuaries, the Secretary had full power to regulate uses and ensure they were consistent with a sanctuary's purposes. The Program was authorized for three years and given annual budget authority of up to $10 million.[92]

Title III did not mirror the Wilderness Act by establishing a marine wilderness system, as had been recommended by President Johnson's Science Advisory Committee and proposed in various study bills. Perhaps even more striking was that Title III lacked any prohibitions on commercial or industrial development, including oil development, within sanctuaries, one of the principal goals of sanctuary proponents Keith, Frey and others.

The Merchant Marine Committee unanimously reported H.R. 9727 a month later on July 17, 1971. House floor debate began September 8, and the bill passed the House by a vote of 300 to 4 on September 9. Two significant challenges relating to offshore oil development were raised on the floor during the bill's consideration. Representatives Lent (D) of New York and Teague (R) of California objected to the absence of

[90] *Id.*
[91] H.R. REP. NO. 92-361, at 15 (1971) (Comm. report on H.R. 9727).
[92] H.R. 9727, 92d Cong., tit. III (1971).

prohibitions on offshore oil development, while House Interior and Insular Affairs Committee chairman, Wayne Aspinall (D) of Colorado, feared the bill still would restrict offshore energy development.[93] Aspinall also claimed the bill infringed upon his committee's jurisdiction because it affected the OCS leasing program over which the Interior committee had authority. The Lent-Teague amendment to prohibit oil drilling in both sanctuary study areas and designated sanctuaries was defeated by a non-recorded vote.[94] Likewise, Aspinall's attempt to delete the sanctuaries title from the Ocean Dumping Act failed.[95]

*Action in Senate.* The Senate Commerce Committee had shown little interest in marine sanctuaries during previous Congresses. The committee's top ocean priorities in the 92nd Congress were scientific research, control of ocean pollution and coastal zone management. In March and April 1971, the Senate Subcommittee on Oceans and Atmosphere, chaired by Senator Ernest Hollings (D) of South Carolina, held hearings on the Nixon Administration's ocean dumping bill and a Hollings measure (S. 307) to foster oceanic research and development programs.[96] The Hollings bill included a provision to authorize grants to coastal states for acquisition, development, and the establishment of estuarine sanctuaries within U.S. territorial waters for research purposes, as had been recommended by CEQ and the Stratton Commission.[97] Estuarine sanctuaries were conceived to be coastal research areas where scientists could learn how to better manage and restore coastal natural resources. As their name connotes, estuarine sanctuaries were

[93] 117 CONG. REC. 30,853, 31,137-38, 31,144, 31,147 (1971).
[94] *Id.*
[95] *Id.* at 31,144.
[96] *Ocean Waste Disposal: Hearing on S. 307, 1082, 1238, and 1286 Before the Subcomm. on Oceans and Atmosphere of the Senate Comm. on Commerce*, 92d Cong. (1971).
[97] S. 307, 92d Cong. § 410 (1971).

focused on the problems of estuaries, not on offshore marine preservation. Despite their obvious similarities in purpose and overlap with estuarine sanctuaries, marine sanctuaries were not considered at the Senate hearing.

The House-passed Ocean Dumping Act was received in the Senate on September 10, 1971 and referred jointly to the Committee on Commerce and Committee on Public Works, both of which claimed jurisdiction over water pollution in the oceans. Commencing September 15, and continuing into October, the Commerce Committee marked up its version of the bill and engaged in discussions with the Public Works Committee to harmonize the bill's content with other pollution laws. The Commerce Committee's version of the ocean dumping bill was reported with the concurrence of the Public Works Committee on November 12, 1971.[98]

The sanctuaries title was deleted at the outset of the Commerce Committee's deliberations. In its report on the bill, the committee acknowledged the value of marine sanctuaries:

> The Committee believes that the establishment of marine sanctuaries is appropriate where it is desirable to set aside areas of the seabed and the superjacent waters for scientific study, to preserve unique, rare, or characteristic features of the oceans, coastal, and other waters, and their total ecosystems. In this we agree with the Members of the House of Representatives. Particularly with respect to scientific investigation, marine sanctuaries would permit baseline ecological studies that would yield greater knowledge of these preserved areas both in their natural state and in their altered state as natural and manmade phenomena effected change.[99]

The committee deleted the sanctuaries title, it said, because "the principal purposes for which marine sanctuaries should be established would not be accomplished

[98] S. REP. NO. 92-451 (1971) (Comm. report on H.R. 9727).
[99] *Id.*

by the proposed [House] legislation."[100] The committee explained its reasoning as follows: (1) the United States does not have authority under international law to establish sanctuaries beyond its territorial limits; (2) marine sanctuaries in international waters would be ineffective as the United States could not control the actions of foreign nationals on the highs seas portion of a sanctuary; (3) new authority is not needed to regulate the exploitation of seabed resources because the Outer Continental Shelf Lands Act already provides this authority; and (4) U.S. assertion of authority to create sanctuaries in portions of the high seas undermines the nation's foreign policy goal of maintaining narrow geographical claims by all nations over the world's oceans.[101]

The Senate ocean dumping bill passed on November 24, 1971 by a vote of 73-0, but only after a floor amendment concerning marine sanctuaries was withdrawn.[102] Senator Gaylord Nelson (D) of Wisconsin, founder of Earth Day, offered an amendment to restore the committee-deleted sanctuaries title and to invoke a moratorium on oil and gas leases off the East Coast until the Secretary of Commerce made his first sanctuary designations. Nelson said he wished to avoid Santa Barbara-like disasters from harming the East Coast.[103] Both the Nixon Administration and the Senate Commerce Committee opposed Nelson's amendment to restore the sanctuaries title, using many of the same arguments Interior and other agencies had raised against the House sanctuaries provision.[104] Senator Hollings reiterated his committee's concerns about marine

[100] *Id.* at 15.
[101] *Id.*
[102] 117 CONG. REC. 43,078 (1971).
[103] 117 CONG. REC. 43,056-57, 43,217-19 (1971).
[104] 117 CONG. REC. 43,061-62 (1971).

sanctuaries, particularly the extension of U.S. jurisdiction into international waters.[105] This, he said, was the Nelson amendment's "fatal flaw."[106]

Hollings also bolstered his opposition with a new argument: The amendment was not needed because the Commerce Committee already had acted to establish estuarine sanctuaries when it approved legislation to create a Coastal Zone Management Program.[107] Estuarine sanctuaries complied with international law in that they were only to be established within the three-mile territorial limit of the United States. Estuarine sanctuaries were needed, said Hollings, to provide a "rational basis for intelligent management of coastal and estuarine areas."[108] The Senate Commerce Committee, explained Hollings, "envisioned [estuarine] sanctuaries as natural areas set aside primarily to provide scientists with the opportunity to make baseline ecological measurements. . . . Such sanctuaries should not be chosen at random, but should reflect regional differentiation and a variety of ecosystems so as to cover all significant natural variations."[109] The Commerce Committee's approach echoed the Stratton Commission's and CEQ's recommendations for a system of marine research reserves.[110]

Senator Gordon Allott (R), a member of the Interior Committee, supported the Commerce Committee's and Administration's views that ample authority existed under the Outer Continental Self Lands Act to regulate minerals leasing (and its environmental effects) on the OCS.[111] Furthermore, he argued, giving the Secretary of Commerce the authority to lock up offshore energy resources [in sanctuaries] was premature because the

[105] 117 CONG. REC. 43,057-58 (1971).
[106] *Id.*
[107] 117 CONG. REC. 43,078 (1971).
[108] 117 CONG. REC. 43,057 (1971).
[109] *Id.*
[110] Commission on Marine Science, Engineering, and Resources, Our Nation and the Sea, (Washington: GPO, 1969) 10. H.R. DOC. NO. 91-399 (1970).
[111] Outer Continental Shelf Lands Act, 43 U.S.C. § 1331 (2006).

Interior and Insular Affairs Committee's national energy study had not been completed.[112] Nelson withdrew his amendment after receiving assurances from the chairmen of the Commerce, Interior, and Public Works committees that a joint committee hearing would be held on marine sanctuaries the following year.[113] Shortly before Congress adjourned, Nelson introduced his amendment as a separate bill, but the promised hearings were never held.[114]

*Conference Committee and Final Enactment.* The conference committee named to resolve differences between the House and Senate ocean dumping bills immediately hit a snag that tied up action for almost a year. The disagreement was about which agency would regulate dredge spoil dumping, EPA or the Corps of Engineers.[115] It took until late 1972 to resolve the dispute and issue the conference report.[116] The compromise that finally emerged included Title III of the House bill with only a few minor changes. Among other things, these included an expansion of the waters subject to sanctuary designation and changes in the enforcement provisions. The conference report was approved October 13, 1972 by both the Senate and the House.[117] The Marine Protection, Research and Sanctuaries Act of 1972 was signed into law by President Nixon on October 23, 1972.

***Detailed Provisions of the Sanctuaries Title***

The sanctuaries title of the Ocean Dumping Act was a hybrid of various legislative concepts that preceded it, and the compromises forged in the committee's

[112] 117 CONG. REC. 43,057-59 (1971).
[113] *Id.* at 43,057-58.
[114] S. 2971, 92d Cong. (1971).
[115] 118 CONG. REC. 13,401 (1972).
[116] H.R. CONF. REP. NO. 92-1546 (1972).
[117] 118 CONG. REC. 35,842, 36,045 (1972).

executive sessions. Title III did not fully implement the recommendation of President Johnson's Science Advisory Committee for a national marine wilderness preserve system modeled after the standards and principles of the Wilderness Act. The Sanctuaries Act did not formally establish a national sanctuary system or designate the first set of sanctuaries, as did the Wilderness Act for wilderness areas. Furthermore, the Sanctuaries Act did not provide a definition of a marine sanctuary, specific guidance on how the system was to be developed or how big it should be, or specific uses which would be allowed or prohibited. Rather, Title III gave the Secretary of Commerce broad discretionary authority to designate sanctuaries on a case-by-case basis if he determined they were "necessary for the purpose of preserving or restoring" marine areas for their "conservation, recreational, ecological, or esthetic values."[118] The Secretary was directed to make his first designations within two years and periodically thereafter, and to manage sanctuaries consistent with their designated purposes. Authority for the program was limited to two fiscal years after the fiscal year in which it was enacted, meaning the program would require periodic reauthorization. In contrast, the Wilderness Act had permanent authority.

*Problem Addressed by the Legislation.* The problem Title III addressed was fundamentally the same as that identified in the earliest sanctuary bills—the need to preserve ocean places of special value from industrial development. In its report on the bill, the committee stated:

> Title III deals with an issue which has been of great concern to the Committee for many years: the need to create a mechanism for protecting certain important areas of the coastal zone from intrusive activities by man. This need may stem from the desire to protect scenic resources, natural resources or living organisms; but it is

[118] Marine Protection, Research and Sanctuaries Act of 1972, Pub. L. No. 92-532, § 302, 86 Stat. 1052, 1061-62 (codified as amended at 16 U.S.C. § 1431 (2006)).

> not met by any legislation now on the books. . . . The pressures for development of marine resources are already great and increasing. It is never easy to resist these pressures and yet all recognize that there are times when we may risk sacrificing long-term values for short-term gains. The marine sanctuaries authorized by this bill would provide the means whereby important areas may be set aside for protection and may thus be insulated from the various types of "development" which can destroy them.[119]

Representative Dingell referred to Title III as a "badly needed" tool "with which we may begin to repair some of the damage that has been done to the oceans in the past, and can protect important areas from further impairment."[120] In short, preservation and restoration was professed to be the Act's goal.

*Purpose and Policy, Goals and Deadlines.* Consistent with the House Merchant Marine Committee's preservation intent, Title III authorized the Secretary of Commerce, after consulting with other federal agencies and with the approval of the President, to "designate as marine sanctuaries those areas . . . which he determines necessary for the purpose of preserving or restoring such areas for their conservation, recreational, ecological or esthetic values."[121] Sanctuaries could be designated within ocean areas "as far seaward as the outer edge of the Continental Shelf . . . other coastal waters where the tide ebbs and flows," and the Great Lakes and their connecting waters.[122] No specific guidance was provided as to how sanctuary resources and sites should be inventoried, as had occurred for wilderness areas under the Wilderness Act, which required that all Forest Service primitive areas, and all roadless areas of 5,000 acres or more and all roadless islands of the national park and wildlife refuge systems, be studied for their

[119] H.R. REP. NO. 92-36, at 15 (1971).
[120] 117 CONG. REC. 30,853 (1971).
[121] Marine Protection, Research and Sanctuaries Act of 1972 § 302.
[122] *Id.*

wilderness values within 10 years.[123] Further, no size limits for sanctuaries were specified. Although the Secretary could designate as many or as few sanctuaries as he or she saw fit, Congress clearly expected the Secretary to execute the Program with dispatch because it directed the Secretary to make initial designations within two years and periodically thereafter.

According to the Merchant Marine Committee:

> The reasons for designating a marine sanctuary may involve conservation of resources, protection of recreational interests, the preservation or restoration of ecological values, the protection of esthetic values, or a combination of any or all of them. It is particularly important therefore that the designation clearly states the purpose of the sanctuary and that the regulations in implementation be directed to the accomplishment of the stated purpose.[124]

However, the Act's preservation purpose was not as clearly distinctive as it could have been. For example, the Act did not expressly prohibit oil drilling, pollution discharges or other development uses in sanctuary study areas or designated sanctuaries. Neither was there any language specifying the particular uses to be affirmatively allowed in sanctuaries once established. Instead of precise guidance, the Act gave the Secretary discretionary authority to decide exactly what kind of protection was to be afforded each area (see following discussion on management). To a large degree, the Merchant Marine Committee intended the Secretary to resolve existing or potential use conflicts in proposed sanctuaries through consultations with other federal agencies prior to a sanctuary's designation. "In any case where there is no way to reconcile competing uses, it is expected that the ultimate decision [to designate a sanctuary or not] will be made at a higher level in the executive branch."[125]

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[123] Wilderness Act of 1964 § 3, 16 U.S.C. § 1132 (2006).
[124] H.R. REP. NO. 92-361, at 27 (1971).
[125] *Id.*

During House floor debate, Merchant Marine Committee members explained the Act as giving dual or balanced emphasis to preservation and multiple use in sanctuaries, including exploitative uses, even though the Act made no mention of multiple use.[126] But if sanctuaries were to be multiple use areas, preservation and restoration could hardly be the Act's singular goal. Thus, from the start, the Act's preservation purpose was clouded by the House's interpretive guidance. Because of its long-term importance to the evolution of the Act, the preservation versus multiple use debate is dealt with extensively in the following subsection.

*Preservation vs. Multiple Use.* In explaining the bill and opposing the amendments offered by Lent and Aspinall, the House floor managers and other committee members made extensive remarks about the bill's purpose and management provisions. In retrospect, these statements were often ambiguous, internally conflicted, contradictory of other statements, or at times at odds with the plain meaning of the statute and the committee's own report. Thus, any synthesis of the debate is somewhat in the eye of the beholder. The overall thrust of the argument put forth by the bill's managers was that Title III was intended to protect special places in the ocean to preserve a variety of resource values and uses, and that the Secretary was to pursue this goal with a balanced approach, meaning that both preservation and development uses could occur within a sanctuary if the Secretary decided they should. Especially important are the statements made by the bill's floor managers: Representatives Dingell and Lennon on the Democratic side, and Pelly and Mosher for the Republicans. Dingell spoke first. Citing the Santa Barbara spill, Dingell noted the human propensity to "sacrifice long-term

[126] 117 CONG. REC. 30,855, 30,858 (statements of Rep.s Mosher and Keith) (1971).

values for short-term gain."[127] Dingell called Title III "an expeditious means of protecting important values. . . . In Title III we do no more than provide the tools with which to preserve important assets for generations yet unborn."[128] Representative Lennon, chairman of the oceanography subcommittee that helped shape the bill, said that Title III "provides a scheme whereby areas may be preserved or restored in order to insure their maximum overall potential, and would in effect provide for rational decisions on competing uses in the offshore waters."[129]

Representative Mosher, the floor manager for the Republicans, addressed the multiple use issue head on. Mosher said that the purpose of Title III "is to insure the highest and best use of this national asset [the oceans]."[130] Mosher assured his colleagues that he was not against using the sea's resources, living or mineral, but that "development must be conducted with an understanding and awareness of its consequences."[131] He went on to say:

> These various uses of the oceans, the water column, and the seabed can exist in harmony. They are not mutually exclusive nor [sic] incompatible. Experience with offshore platforms in the Gulf of Mexico has proven, for example, that a net increase in the fish population generally results . . .
>
> The report of your committee makes it abundantly clear that the designation of a marine sanctuary is not intended to rule out multiple use of the sea surface, water column or seabed. Any proposed activity must, however, be consistent with the overall purpose of this title. An inconsistent use, in my opinion, would be one which negates the fundamental purpose for which a specific sanctuary may be established.
>
> This title . . . is intended to insure that our coastal ocean waters are utilized to meet our total needs from the sea. Those needs include recreation, resource exploitation, the advancement of knowledge of the earth, and the preservation of unique areas. All are important.

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[127] 117 CONG. REC. 30,853 (1971).
[128] *Id.*
[129] 117 CONG. REC. 30,857 (statement of Rep. Lennon) (1971).
[130] 117 CONG. REC. 30,855 (1971).
[131] *Id.*

> This title is not designed to terminate the use of our coastal waters to meet any of these needs.[132]

Representative Keith, who had sought to protect Georges Bank from oil development since 1967, explained that "the original marine sanctuaries concept has been changed from one which would have called for a complete oil drilling moratorium to one which would permit drilling within the purposes of this title."[133] Elaborating further on multiple use, Keith argued that preservation and development uses should be "balanced:"

> Certainly we do not intend, here, to punish consumers by denying them the necessary food and energy of the sea and seabed. Neither do we intend to be so responsive to the mineral interests that we adversely affect the essential protein resources of the sea.
>
> I certainly believe in the dual usage concept for our coastal ocean waters. But I also believe such dual usage must be balanced. Neither usage should be permitted to destroy the other. In short, we need the oil and gas and we need the fish. Our bill recognizes this key fact. And it provides the proper safeguards to preserve that balanced basis.
>
> I must admit that the word, "sanctuaries," carries a misleading connotation. It implies a restriction and a permanency not provided in the title itself.
>
> Title III simply provides for an orderly review of the activities on our Continental Shelf. Its purpose is to assure the preservation of our coastal areas and fisheries, and at the same time assuring such industrial and commercial development as may be necessary in the national interest . . .
>
> It provides for multiple usage of the designated areas. It provides a balanced, even-handed means of prohibiting the resolution of one problem at the expense of the other. It guards against "ecology of the sake of ecology." It also guards against the cynical philosophy that the need for oil is so compelling that it justifies the destruction of the environment.[134]

In sum, Keith explained the Act as providing for multiple uses within sanctuaries, including oil development, but with "proper safeguards," referring presumably to the Act's provision that required the Secretary to regulate sanctuary uses and to certify that

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[132] *Id.*
[133] 117 CONG. REC. 30,858 (1971).
[134] *Id.*

uses authorized under other laws are consistent with the purposes of the title and with individual sanctuary regulations.[135]

In responding to Representative Aspinall's fears that Title III would lock up the oceans from oil and gas development, Representative Pelly backed Mosher's and Keith's claims that the Act was not intended to be used to block oil development.

> Let me reemphasize the fact that marine sanctuaries . . . are not intended to prevent legitimate uses of the sea. They are intended to protect unique areas of the ocean bordering our country. How many such marine sanctuaries should be established remains to be determined. It is likely that most of them will protect sections of our national seashores. A sanctuary is not meant to be a marine wilderness where man will not enter. Its designation will insure very simply a balance between uses.[136]

Pelly went on to argue that mere designation of a sanctuary did not prohibit current or prospective oil development. While oil and gas activities conceivably could be banned under the provision allowing the Secretary to regulate uses inconsistent with sanctuary purposes, Pelly did not envision that this would "frequently be the case."[137]

When Representatives Lent and Teague offered their floor amendment to prohibit both new oil and gas exploration and development activities in areas being studied for sanctuary status, and all energy development in designated sanctuaries, Lent argued that Title III was only a partial solution to coastal degradation because it did not specifically deal with offshore oil development, the biggest threat to the coastal areas and values the bill sought to protect.[138] "If there is any activity that can be judged more totally

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[135] *Id.*
[136] 117 CONG. REC. 31,136 (1971).
[137] *Id.*
[138] 117 CONG. REC. 31,138 (1971).

incompatible with the concept of marine sanctuaries . . . it must be the offshore drilling of oil," argued Lent.[139] In response, Pelly said:

> Your committee considered this most carefully and rejected the concept [of proscribing oil development]. We are, as I have indicated, in favor of a balanced and rational use of the oceans, not an exclusive use for any one industry or group. . . .
>
> Offshore oil can be produced safely, and it is needed to meet our growing energy requirements. It is not a sacred cow, however, and is subject to the National Environmental Policy Act.
>
> Moratoriums are not the answer. We cannot bury our heads in the sand.[140]

Representative Keith explained that although his constituents were adamantly opposed to further oil and gas activities off the Massachusetts coast, he could not support the Lent-Teague amendment, which was similar to one he had advanced previously in his own bills, because the President would veto the measure if it restricted oil development.[141] Lennon also spoke against the Lent-Teague amendment, saying that the Secretary should not be constrained from deciding that oil drilling was "consistent with sanctuary designation."[142] Toward the end of the debate, Lennon submitted for the record a list of committee-prepared questions and answers to "clarify certain points on the bill."[143] These represent perhaps the most carefully crafted expression of the committee's intent. Among other points:

1. Title III was included to extend "protections to specific areas which need preservation or restoration by providing a process through which rational choices as to competing uses of those areas may be made;"

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[139] *Id.*
[140] 117 CONG. REC. 31,143 (1971).
[141] 117 CONG. REC. 31,144 (1971).
[142] 117 CONG. REC. 31,143-44 (1971).
[143] 117 CONG. REC. 31,157 (1971).

2. The committee opposed prohibitions on oil and gas development in study areas because studies could take a long time and might not result in a designation, thus restriction on industrial development or oil exploration would be "undesirable;" and

3. Oil development in sanctuaries should not be prohibited by the Act. The Secretary of Commerce should have the flexibility to certify oil development as consistent with the sanctuary's purpose:

> While in most cases oil exploitation activities would probably be inconsistent with the purpose of a sanctuary and, therefore, could not be certified under present language as consistent, there might be some instances where this would not necessarily be the case. . . . Therefore, to automatically forbid oil exploration in any sanctuary no matter whether it really violated the purposes of the sanctuary, would be inconsistent with the purposes of the Act and would remove from the Secretary the desirable flexibility now provided.[144]

In sum, during floor debate members of the Merchant Marine Committee infused a sparely drawn Act with added meaning beyond its plain meaning. Despite the statute's clear preservation and restoration purpose language, and its "safeguard" provision enabling the Secretary to prohibit uses inconsistent with these purposes, the Act was explained as one intended to allow, or even actively promote, multiple-use sanctuaries for both preservation and other uses, including resource exploitation. Through some undefined balancing process, the Secretary was supposed to preserve and restore "unique areas" from development, yet at the same time sort out and reconcile other competing uses, to preserve important values of the ocean but not prevent "legitimate uses of the sea," to not rule out oil development but not rule it in if it was inconsistent with a sanctuary's purposes. In short, the terms of the Act as explained by its House authors were incongruous and ambiguous, and a far cry from the Wilderness Act model.

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[144] *Id.*

Representative Keith had provided a telling answer as to why the legislation had so radically changed from its original conception: The President would veto the bill if it prohibited oil development in sanctuaries. Another prominent factor that shaped the legislation may be deduced from the vocabulary and arguments of the debate. At the time the Act was considered, multiple use of the national forest and public lands was a well-known concept. Various federal studies of coastal and ocean issues in the 1960s embraced this concept without clearly defining its application in an ocean context.[145] For example, the Stratton Commission recommended that state management of their coastal zones "should include the concept of fostering the widest possible variety of beneficial uses so as to maximize net social return."[146] Caught up in the conventional wisdom of the times and faced with a presidential veto if offshore oil development were banned in sanctuaries, it is understandable why the House took the approach it did, emphasizing multiple use sanctuaries, even if the final Act was less than clear. Moreover, the die was cast; later amendments to the Act would strengthen the focus on multiple use to the further detriment of preservation.

*Designation Process.* In contrast to the Wilderness Act, which provided detailed guidance on the survey, identification, nomination, and designation of wilderness areas, the Sanctuaries Act left it to the Secretary of Commerce to work out the details. The House committee report stated that the Secretary may develop "preliminary information" on potential sanctuaries "in any manner he sees fit; however a scheme for processing preliminary information is considered necessary if the process is to be responsive to the

[145] Chandler and Gillelan 10516-17.
[146] United States, Commission on Marine Science, Engineering, and Resources, Our Nation and the Sea, (Washington: GPO, 1969) 57.

public interest and need, and the Secretary is expected to publish such a scheme."[147] Whereas the Wilderness Act required wilderness areas to be designated by Congress, the sanctuaries law gave that power to the Secretary of Commerce, with the approval of the President. There is no discussion in the record of why this approach was taken, but the House committee may have patterned the Secretary's role after the practice of executive branch designations of wildlife refuges under the Fish and Wildlife Act, which the committee oversaw and had experience with.[148]

The Sanctuaries Act required the Secretary to consult with federal agencies and allow them to comment on proposed designations, and to hold public hearings to solicit the views of interested parties before making a designation. In the case of sanctuary proposals that encompassed state territorial waters, the Secretary was to consult with state officials. Governors had the power to veto inclusion of any portion or all of state waters within a sanctuary within 60 days of its designation.[149] For sanctuaries that included extraterritorial waters (i.e., waters further than three miles from shore) the Secretary of State was directed to enter into negotiations with foreign governments to conclude protection agreements and "promote the purposes" for which the sanctuary was established.[150]

The sketchy guidance regarding sanctuary designation would prove to be a problem once implementation got underway. Developing the program fell to NOAA, a new agency created in 1970 which had little experience managing discrete ocean areas and the vested interests within them. Congress later would spend a good deal of time

[147] H.R. REP. NO. 92-361, at 28 (1971).
[148] Daniel Ashe, personal interview, 13 June 2003.
[149] H.R. REP. NO. 92-361, at 27-29.
[150] Marine Protection, Research and Sanctuaries Act of 1972, Pub. L. No. 92-532, § 302, 86 Stat. 1052, 1061-62 (1972) (codified as amended at 16 U.S.C. § 1431 (2006)).

providing more specific guidance to NOAA and clarifying its own role in the designation process.

*Management and Protection Standards.* The Act gave the Secretary broad regulatory power for the management and protection of designated sanctuaries:

> The Secretary . . . shall issue necessary and reasonable regulations to control any activities permitted within the designated marine sanctuary, and no permit, license, or other authorization issued pursuant to any other authority shall be valid unless the Secretary shall certify that the permitted activity is consistent with the purposes of this title and can be carried out within the regulations promulgated under this section.[151]

In other words, under the plain meaning of the statute, the Secretary had clear authority to establish sanctuaries that preserved resources for specified preservation and restoration purposes, and to certify that allowed uses were consistent with these purposes. Furthermore, the Secretary could limit or ban uses authorized by other laws that were deemed inconsistent with the Sanctuaries Act's purposes and regulations. Violations of a regulation were punishable by a civil penalty of $50,000 per violation.[152]

Although the Act contained no general prohibition of any type of use, the Secretary's discretionary power to block inconsistent uses, such as offshore oil development, undoubtedly helped generate opposition to Title III by the Nixon Administration and members of Congress who supported the offshore oil program. In the floor debate on multiple use, Merchant Marine Committee members frankly acknowledged that the Secretary's authority to certify uses as being consistent with the Act constituted a "safeguard," but they also seemed to suggest that application of the safeguard might be limited if NOAA focused on creating sanctuaries where preservation and development uses were balanced; hence, no conflicts would theoretically exist and

[151] *Id.*
[152] *Id*. at § 303.

the provision need not be applied. Even so, the floor guidance was insufficient to save the Act from controversy. The safeguard provision would be one of the first provisions of the law to be changed because of its potential to hamper uses.

*Relation to Other Laws.* Title III contained no specific provisions regarding its relationship to other federal laws in existence at the time. Irrespective of the assertion of the Department of the Interior that it had authority under the National Environmental Policy Act and the Outer Continental Shelf Lands Act[153] to protect the environmental values of the ocean that were to be protected under Title III, the Merchant Marine Committee clearly believed the sanctuaries filled a gap in ocean protection. Noting that the committee had considered sanctuary bills for several years, Representative Dingell said: "The Congress has been continually impressed with the fact that we have had no policy for the protection of these areas in the offshore lands which have significant ecological, environmental and biological values."[154] In terms of the Act's effects on existing federal programs, the committee assumed that the provision requiring secretarial consultation with federal agencies and states would help resolve conflicts and provide coordination:

> The consultation process is designed to coordinate the interests of various Federal departments and agencies, including the management of fisheries resources, the protection of national security and transportation interests, and the recognition of responsibility for the exploration and exploitation of mineral resources. It is expected that all interests will be considered, and that no sanctuary will be designated without complete coordination in this regard.[155]

[153] National Environmental Policy Act, 42 U.S.C. § 4321 (2006); Outer Continental Shelf Lands Act, 43 U.S.C. § 1331 (2006).
[154] 117 CONG. REC. 31,146 (1971).
[155] H.R. REP. NO. 92-361, at 27 (1971).

The committee expected disagreements between departments to be resolved at a higher level, presumably meaning the President's Office of Management and Budget or ultimately the President himself.[156]

*Summary.* As enacted, the Sanctuaries Act only partially reflected the preservation intent of President Johnson's science advisers and its early legislative champions. Representative Keith and others had initially envisioned a system of marine wilderness preserves comparable to that established for terrestrial lands by the Wilderness Act. Sanctuaries originally were proposed as a tool for preserving the environmental integrity of special marine areas and managing them for human uses deemed compatible with the natural environment, including recreation and commercial and sport fishing. Industrial and commercial development that conflicted with the preservation purposes and desired uses of sanctuaries would be precluded. However, the law that emerged fell short of the original vision: It neither prohibited commercial uses within sanctuaries, nor provided guidance on how multiple use management of sanctuaries should be conducted. This ambiguous outcome created confusion about the Act's preservation mission, led to controversy over designations, and opened the door to subsequent amendments to clarify the Act's purposes and application.

***The Rise of Multiple Use, 1974-1984***

Once implementation began in earnest under the Carter Administration, and NOAA attempted to designate such areas as Flower Garden Banks, Channel Islands, Georges Bank, and Farallon Islands, intense controversies erupted over the scope, requirements and impacts of the program. In particular, the oil industry opposed proposed restrictions on its activities, and fishermen became concerned they might be

[156] *Id.*

shut out of their fishing grounds. In the face of this backlash, Congress debated and made significant changes to the Act while NOAA adjusted its regulations in tandem. The cumulative effect was a watering down of the Act's preservation mission and the elevation of multiple use as an explicit purpose of the Act. The changes in the Act and Program summarized in this section are principally based on the discussion of multiple use prepared by Hannah Gillelan in "The History and Evolution of the National Marine Sanctuaries Act."[157]

*First Regulations.* Implementation of the Sanctuary Program got off to a slow start as little money was spent to develop the Program and few sites were proposed for designation. Taking the cue from the House floor debate, NOAA signaled its intent to move the Program in the direction of multiple use in its first regulations issued in 1974.[158] The regulations emphasized the Act's preservation and restoration purposes, and identified five types of areas that would qualify for sanctuary designation based on their principal values, characteristics or purposes, as follows: Habitat, species, research, recreational and esthetic, and unique areas (including geological, oceanographic or living resources). The regulations specified that multiple use would be allowed in any sanctuary "to the extent the uses are compatible with the primary purposes of the sanctuary."[159] Multiple use was defined as follows: "The contemporaneous utilization of an area or reserve for a variety of compatible purposes to the primary purpose so as to provide more than one benefit. The term implies the long-term, continued uses of such

[157] Chandler and Gillelan.
[158] 39 Fed. Reg. 23,254 (1974).
[159] *Id.* at 23,256.

resources in such a fashion that one will not interfere with, diminish, or prevent other permitted uses."[160]

Exactly what did this mean? NOAA elaborated as follows:

> The question of multiple use will need to be examined on a case by case basis. The legislative history of the Title clearly indicates that multiple use of each area should be maximized consistent with the primary purpose. Additionally, the statute clearly indicates, as a safeguard that "no permit, license, or other authorization issued pursuant to any other authority shall be valid unless the Secretary (Administrator) shall certify that the permitted activity is consistent with the purposes of this title and can be carried out within the regulations promulgated."[161]

In fact, the legislative history did not use the term "primary purpose," nor did it require various multiple uses to be maximized everywhere in a sanctuary at the same time. But given Congress' failure to define multiple use in the statute, NOAA's interpretation was one of several that could have been made to establish a congressionally-sought "process through which rational choices as to competing uses of . . . [sanctuaries] may be made."[162] An alternative interpretation that could have been made by NOAA, and that would have been more in keeping with the Act's preservation goal, had it been adopted, was "that while multiple use *could* be allowed, it was not mandated or required to be 'maximized,' and therefore was not intended to trump or diminish the Act's preservation and restoration purposes."[163] For example, a sanctuary might be zoned to separate compatible uses from incompatible ones. Conceivably, NOAA might even designate a sanctuary to be a single-use preservation area, and exclude all disturbing (or incompatible) uses as President Johnson's science advisors had suggested in their 1966 report. But this was the road not taken.

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[160] *Id*.
[161] *Id.* at 23,255.
[162] 117 CONG. REC. 31,157 (1971).
[163] Chandler and Gillelan 10529.

The 1974 regulations set out guidelines for the nomination and designation of sanctuaries, but did not provide a comprehensive road map for the Program:

> NOAA established a loose system whereby nominations could be made by any member of the public or government official. Only the barest of information on an area was required and there were no specific standards a nomination had to meet. A nomination was subject to preliminary review by interested agencies to determine *feasibility*, but again no criteria were provided. . . . If a nomination were deemed feasible, a more in-depth study would be made. Among other things, the in-depth study was to include an analysis of "how the sanctuary will impact on the present and potential uses, and how these uses will impact on the primary purpose for which the sanctuary is being considered." If the study were favorable, a Draft Environmental Impact Statement and proposed regulations would be prepared, a public hearing held, and a consultation undertaken with other federal agencies before designation. Finally, the Secretary would designate the area with a clear statement of the sanctuary's purpose, and issue regulations and guidelines for its management. A "revision" of a sanctuary could be made by the same procedure as the nomination.[164]

In responding to concerns about the number and size of potential sanctuaries that might be nominated, NOAA stated: "It is not expected . . . that large areas of the oceans and coastal waters will be designated as marine sanctuaries, and all activity prohibited or drastically reduced. It is expected that sanctuaries will be only large enough to permit accomplishment of the purposes specified in the Act."[165]

Funding for sanctuaries was extremely deficient in the early years, and the Program slowly crawled forward. With regulations in place, nominations began to trickle in. NOAA designated two small sanctuaries in 1975: The site of the *USS Monitor* shipwreck off the coast of North Carolina, and a 75 square nautical mile area of coral reefs off Key Largo, Florida. Neither designation was controversial. In 1976, Congress passed the Fishery Conservation and Management Act (later known as the Magnuson-Stevens Act) to regulate federal fisheries in the EEZ of the United States. This measure

[164] Chandler and Gillelan 10529.
[165] 39 Fed. Reg. at 23,256-57 (1974).

focused on enhancing and maintaining commercial fish populations and fishery yields. Despite having been written by the same authorizing committees as the Sanctuaries Act, the fishery law contained no provisions as to how it related to the Sanctuary Program.

*Implementation under Carter.* President Carter was the first president (and one of the few) to make the Sanctuary Program an environmental priority. In his 1977 message to Congress, Carter directed the Secretary of Commerce "to identify possible sanctuaries in areas where development appears imminent, and to begin collecting the necessary data to designate them."[166] In response, NOAA

> issued a "Plan to Implement the President's Mandate to Protect Ocean Areas from the Effects of Development," solicited sanctuary recommendations, and issued draft site selection criteria by which the nominations would be judged. By February 1, 1978, 169 nominations had been received, including those for Monterey Bay, Channel Islands, and Point Reyes-Farallon Islands. Forty-five of the nominations were for sites in Alaska, none of which were smaller than 10,000 square miles in size. An additional 100 nominations were submitted by various fishery management councils, but were withdrawn because two councils opposed the action.[167]

As the reality of the Sanctuaries Act's potential to close numerous areas to commercial use became more tangible, the petroleum and fishing industries reacted vigorously to limit the Act's control of their operations. Although the fishing industry was happy to support sanctuary proposals that kept the oil industry out of fishery areas, fishing interests doggedly sought exemptions to protect themselves from regulation within sanctuaries. Concerns about multiple use and other matters were aired at hearings held in both houses of Congress in 1978. Issues considered included the nomination process and public participation in it; the Act's purposes; the regulation of sanctuary activities; coordination with other statutes; consultation with other agencies, especially

[166] President's Message to the Congress on the Environment, 13 WEEKLY COMP. PRES. DOC. 22 (May 23, 1977).
[167] Chandler and Gillelan 10529.

the regional fishery management councils created by the Fishery Conservation and Management Act of 1976; and the size of sanctuaries and who should have the power to designate them. Re-authorization bills were drafted to clarify the Sanctuaries Act's mission, scope, and procedures but no final action was taken before Congress adjourned.

When NOAA proposed in early 1979 to designate a small site in the Gulf of Mexico nestled within an area of oil and gas development, an area known as Flower Garden Banks, as a sanctuary in which no oil development would be allowed, Rep. John Breaux (D) of Louisiana, a member of the House Merchant Marine Committee, was so unhappy he introduced legislation to repeal the Act because of its vagueness and redundancy to other marine management statutes—this just 6 years after the law's enactment![168] Breaux's bill added more fuel to the reauthorization fire that burned during the 96th Congress and led to major amendments to the Act in 1980.

*1979 Regulations*. In the wake of growing controversy over site designations, NOAA issued new program regulations in 1979 that reflected congressional concerns manifested in the 1978 reauthorization hearings and in un-enacted bills.[169] The 1979 regulations

> were a significant departure both from the 1974 regulations and from the language and intent of the 1972 Act, in that they gave those with an economic stake in use of the resources their first real power. As implemented by the 1979 regulations, the Act was no longer viewed as a pure preservation statute, but rather as a statute that *balanced preservation and human uses* in sanctuaries. Among other things, the regulations reformulated NOAA's approach to uses of sanctuaries, altered the way the Act's safeguard provision was applied, revised the site selection criteria proposed in 1977 to screen nominations, and created a List of Recommended Areas from which to select candidate sanctuaries.[170]

[168] H.R. 5018, 96th Cong. (1979).
[169] 44 Fed. Reg. 44,831 (1979).
[170] Chandler and Gillelan 10533.

Although the 1979 regulations emphasized that "protection of natural and biological resources" was the Sanctuary Program's primary goal, NOAA sought to allay user group fears by replacing its multiple use definition with a compatibility one:

> Human activities will be allowed within a designated sanctuary to the extent that such activities are *compatible* with the purposes for which the sanctuary was established, based on an evaluation of whether the *individual or cumulative impacts of such activities may have a significant adverse effect* on the resource value of the sanctuary.[171] (emphasis added)

As Gillelan notes,

> a big difference between the new compatibility standard and the 1974 definition was that the new standard only restricted uses that may have a "significant adverse" impact, whereas the 1974 multiple use definition called for "long-term, continued uses of . . . resources in such a fashion that one will not interfere with, diminish, or prevent other permitted uses." Whereas the 1974 definition merely required NOAA to show *some level* of interference with, or diminution of, another use in order to disallow a proposed use, the 1979 standard required proof of a *significant, adverse* impact. Under this narrower definition, more uses could be allowed.[172]

Another regulatory change that enhanced economic use of sanctuaries was language that limited application of the safeguard provision—the provision requiring the Secretary to certify uses as consistent with the Act and a sanctuary's purposes—to only those uses specified in a sanctuary's official designation document. According to Gillelan,

> while this technically left intact the Secretary's ability to regulate or prohibit any or all uses when a sanctuary was designated, it opened the door to the future erosion of the safeguard [provision] by requiring the Secretary to name upfront all activities that he wished to regulate. A lack of foresight on the part of the Secretary as to what uses might need regulation or prohibition could lead to damaging delays in protection, because the 1979 regulations [also] specified that the entire time-intensive designation process needed to be repeated in order to amend any of the sanctuary's terms of designation.[173]

[171] 44 Fed. Reg. 44,837 (1979).
[172] Chandler and Gillelan 10533.
[173] Chandler and Gillelan 10533-54.

NOAA also made changes to the site selection criteria and process that both improved and further undercut the preservation mission. Over 170 sites had been nominated by 1978, which was alarming to ocean user groups, and undoubtedly to NOAA which would have to review and process the nominations with a tiny budget and staff. The 1979 regulations retained the open nomination process, but enabled NOAA to more rigorously screen the already received nominations, as well as future ones. Only sites with one or more of the following characteristics would be considered for inclusion on the List of recommended Area (hereinafter "LRA"):

1. Important habitat . . . ;
2. A marine ecosystem of exceptional productivity . . . ;
3. An area of exceptional recreational opportunity . . . ;
4. Historic or cultural remains of widespread public interest . . . ; or
5. Distinctive or fragile ecological or geologic features of exceptional scientific research or educational value.[174]

The notable change from the 1974 regulations was the inclusion of historic and cultural sites and marine ecosystems of exceptional productivity as important sanctuary resources. To be named an active candidate for study, a site was to be further evaluated using a number of factors:

1. The significance of the . . . resources;
2. The extent to which the means are available [to fully review the site within no longer than nine months of it being listed];
3. The severity and imminence of existing or potential threats to the resources including the cumulative effect of various human activities that individually may be insignificant;
4. The ability of existing regulatory mechanisms to protect the values of the sanctuary and the likelihood that sufficient effort will be devoted to accomplishing those objectives without creating a sanctuary;
5. The significance of the area to research opportunities;
6. The value of the area in complementing other areas of significance to public or private programs with similar objectives;
7. The esthetic qualities of the area;
8. The type and estimated economic value of the natural resources and human

[174] 44 Fed. Reg. 44,838 (July 31, 1979).

uses within the area which may be foregone as a result of marine sanctuary designation, taking into account the economic significance to the nation of such resources and uses and the probable impact on them of regulations designed to achieve the purposes of sanctuary designation; and

9. The economic benefits to be derived from protecting or enhancing the resources within the sanctuary. [175]

The regulations did not rank these factors in importance, nor explain their application, but in theory, sites with significant resources ultimately might still be rejected if agency funds were not available to process a site, the area could be protected using other marine laws (whether or not these laws were being applied), or the value of the site for economic use was high. Yet, the Sanctuaries Act itself did not specify that any of these factors be considered, and certainly gave no hint that proposed sanctuaries could be eliminated on cost of designation grounds or based on the hypothetical or actual protection of candidate areas by other agencies. NOAA later removed several sites from active status based on factors two and four, specifically Georges Bank and Norfolk Canyon.[176] Finally, once designated, the regulations specified that any change in the designation terms, such as the size of the site or the activities subject to regulation, could be amended only by the same lengthy designation process. This assured user groups that if they escaped initial regulation, they would not be easily subject to it later without a public process in which they would be participants.

In response to a public comment about the relationship between sanctuaries and the fishery management program authorized by the Fishery Conservation and Management Act, NOAA explained that although a sanctuary could include commercially important species and their habitats, the new regulations did not suggest

[175] *Id.* at 44,838-39.
[176] 44 Fed. Reg. 58,136 (1981) (removal of Georges Bank); 51 Fed. Reg. 7097 (1986) (removal of Norfolk Canyon).

that sanctuary regulations "will include fishing activities or will interfere with the management responsibility of the fishery management councils."[177] The regulations themselves contained only a general requirement that NOAA consult with the fishery councils. This early expression of NOAA's hands-off attitude toward regulating commercial fishing in sanctuaries was undoubtedly influenced by congressional hearings on the 1978 reauthorization bills. In a Senate hearing, Senator Warren Magnuson (D), author of the Fishery Conservation and Management Act, "went so far as to suggest eliminating altogether the Secretary's power over commercial fishing in sanctuaries."[178] However, his idea was not adopted.

In late 1979, NOAA issued a final List of Recommended Areas (hereinafter "LRA") containing 75 sites, and declared seven of them to be active candidates: Flower Garden Banks (LA/TX), Northern Channel Islands/Santa Barbara (CA), Monterey Bay (CA), Point Reyes/Farallon Islands (CA), Looe Key (FL), St. Thomas (U.S.V.I.), and Gray's Reef (GA).[179] Of the seven sites, six would be designated over the next thirteen years. Meanwhile, as the LRA regulations were wending their way forward, one of the plaintiffs in a lawsuit attempting to block the Department of the Interior from making an OCS oil and gas lease sale off New England petitioned the Secretary of Commerce to make Georges Bank an active sanctuary candidate as well. NOAA did so in August 1979, but soon withdrew the site from consideration after concluding a deal with Interior and EPA that NOAA claimed would protect the area's values under other regulatory programs as well as a sanctuary could.[180] Georges Bank was reconsidered as a potential

[177] 44 Fed. Reg. 44,832 (1979).
[178] Chandler and Gillelan 10532.
[179] 44 Fed. Reg. 62,553 (1979).
[180] Finn 366-370.

active candidate, but again rejected by NOAA in November 1981.[181] By this time, Representative Keith, who had first sought sanctuary status for Georges Bank in 1967 and had been one of the driving forces behind the Sanctuaries Act, was no longer in office.

*1980 Amendments to the Sanctuaries Act.* The reauthorization debate on the Sanctuaries Act begun in the previous Congress culminated in 1980. The 1980 Amendments both codified parts of NOAA's 1979 regulations, and further advanced the multiple use goal. Among other things, the 1980 Amendments reversed the safeguard provision; required the Secretary to name the activities and uses to be regulated upfront in the sanctuary designation document; specified that any changes to the list of formally regulated activities go through the same lengthy process of designation; and gave Congress the power to disapprove of designations within 60 days by means of a joint resolution (which would still have to be signed by the President).

Safeguard provision. Whereas the 1972 Act specified that any use of a designated sanctuary had to be certified by the Secretary as being consistent with the Act and its regulations or else it was invalid, the 1980 amendments reversed this policy, stating:

> The Secretary, after consultation with other interested Federal and State agencies, shall issue necessary and reasonable regulations to implement the terms of the [sanctuary] designation and control the activities described in it, except that all permits, licenses, and other authorizations issued pursuant to any other authority shall be valid unless such regulations otherwise provide.[182]

According to Gillelan:

> While in theory the new language still allowed the Secretary to invalidate any permits he chose at the time he designated a sanctuary, the burden of proof had shifted. The Secretary would have to demonstrate why a permit or other

[181] 46 Fed. Reg. 58,136 (1981).
[182] Sanctuaries Act Amendments of 1980, Pub. L. No. 96-332, § 2(2), 94 Stat. 1057, 1057-58 (1980) (codified as amended at 16 U.S.C. § 1431 (2006)).

> authorization was invalid and should be disallowed, rather than say which permits were consistent with the sanctuary's purpose and therefore valid. The possibility was therefore greater that harmful uses could slip through the cracks and be allowed because the Secretary was under funded, overworked, or had misjudged impacts. The precautionary principle, based on taking no action unless it is determined the action would cause minimal or no harm, was therefore reversed.[183]

The change was driven by Congress's concern about the sweeping and perhaps excessive authority it had given the Secretary over all uses in sanctuaries, a concern that manifested itself during the uncompleted 1978 reauthorization process. In the view of the Senate Commerce Committee, the Secretary was in the burdensome position of automatically having to regulate all activities in a sanctuary without the right to choose which ones he desired to regulate and which not. There was also sentiment that sanctuaries should accommodate uses allowed under other marine statutes passed since 1972 to the degree they were consistent with the sanctuary's purposes.[184] In addition, there was a desire to "avoid duplicative regulatory authority and additional layers of bureaucracy where existing law and regulations provide sufficient protection. . . ."[185] Gillelan concludes:

> The reversal of the safeguard provision seems to have been viewed as a means of reducing secretarial involvement in other agencies' decisionmaking, unless warranted by the needs of a particular sanctuary. By reducing the Secretary's involvement, the committee seemed to view the new provision as reducing the layers of bureaucratic control over marine resources.[186]

The effect of the reversal was to lessen NOAA's singular authority to comprehensively manage sanctuaries and to resolve inconsistencies with other marine management statutes in favor of resource preservation.

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[183] Chandler and Gillelan 10531.
[184] S. REP. NO. 95-886, at 5 (1978).
[185] H. REP. NO. 96-894, pt. I, at 12 (1980).
[186] Chandler and Gillelan 10536.

Designation document. A related change made by the 1980 Amendments was that NOAA specify at the time a designation was being considered the uses it intended to regulate. This provided notice to other agencies and stakeholders as to how sanctuary management would be coordinated with other ocean laws and programs, and triggered application of the safeguard provision. Furthermore, the 1980 Amendments required that any revision of a sanctuary's designation terms be accomplished following the same steps as the original designation; this mirrored NOAA's 1979 regulations. According to Gillelan:

> While there was no recorded discussion of the [document revision] provision by Congress, it seems to address concerns about informing the public, other agencies, and state governors about what a sanctuary would mean to them. Without this requirement, there was a lack of assurance to a party that designation negotiations and compromises would not be disregarded at the last instant by NOAA. The 1980 Amendments, therefore, ensured the continued participation of those consulted for the original designation and helps to increase accountability and accurate expectations. However, by requiring changes to go through the entire process rather than a simplified, shortened version, the provision has been a significant deterrent to changing the terms of designation. The provision has increased public "buy-in" of the Sanctuaries Program, but has also created a disincentive for NOAA to promptly address changes in circumstances or knowledge, because of the expensive and time-consuming process required for any changes to a sanctuary's designation terms.[187]

Congressional Disapproval. In view of the large number of sanctuary nominations, many of substantial size, Congress debated whether it should specifically authorize sanctuaries as it does wilderness areas. The Senate considered shifting the designation power to Congress for sanctuaries over 1,000 square nautical miles in size, but ultimately Congress opted to give itself the power to object to a designation by means

[187] Chandler and Gillelan 10535-36.

of enacting a joint resolution within 60 days of the designation's announcement in the Federal Register. However, this power was never used and would be dropped in 1992.[188]

Meanwhile, studies of active candidates continued. In the last few months of his term, President Carter designated four sanctuaries: Channel Islands, Gulf of the Farallones, Gray's Reef, and Looe Key. NOAA's decisions to ban new oil and gas development at Channel Islands and all oil development in the Farallones, were challenged by the oil industry and reviewed by the incoming Reagan Administration. Ultimately the bans were upheld. Still embroiled in controversy were proposals for Flower Garden Banks, where NOAA proposed to ban oil development, Monterey Bay, and St. Thomas, U.S. Virgin Islands.

*Program Development Plan.* NOAA's shortened List of Recommended Areas and its new designation criteria failed to quell controversy. User groups viewed the LRA as a blueprint for the planned system, not as a mere study guide. In an attempt to clarify program objectives and build public support, NOAA issued a comprehensive Program Development Plan (hereinafter "PDP") in 1982.[189] In the plan, NOAA stated that the mission of the Program "is the establishment of a system of national marine sanctuaries based on the identification, designation, and comprehensive management of special marine areas for the long-term benefit and enjoyment of the public."[190] The goals of the program were to be focused on enhancing resource protection "through the implementation of a comprehensive, long-term management plan" tailored to individual sanctuary resources, promoting research, enhancing public awareness, and providing for

[188] Chandler and Gillelan 10532, 10536.
[189] United States, Department of Commerce, NOAA, Office of Coastal Zone Management, National Marine Sanctuary Program: Program Development Plan (Washington: NOAA, 1982) (hereinafter PDP).
[190] PDP 2.

"optimum compatible public and private use of special marine areas."[191] NOAA continued to assert that "resource protection is primary and will be the principle focus in each designated sanctuary,"[192] but that marine sanctuaries "include to the maximum extent feasible, multiple use of the site by public and private interests."[193] "The Program is not intended to be used as a means to block or unduly restrict human use and development of marine resources."[194]

The PDP replaced the LRA process with the so-called Site Evaluation List (hereinafter "SEL") process, one designed to bring more scientific scrutiny to bear on nominated sites. Under the SEL process, eight regional resource evaluation teams were commissioned to help identify three to five significant sites per region for inclusion on the SEL list. Study sites would be drawn exclusively from the SEL. The PDP directed the review teams to nominate sites based on four factors: Their natural resource values, human resource values, impacts of human activities and management concerns.[195] Sites would be selected for further study based on a "balance of relevant policy considerations including: ecological factors; immediacy of need; timing and practicality; and public comment."[196] The idea was to find sites that "represent the most significant marine resources in the regions."[197] "A primary reason for considering a site as a marine sanctuary candidate is its inherent natural resource quality and ecological value."[198] The PDP proposed a classification system to guide the selection process so as to include sites that represented the major biogeographic regions of the country and the diversity of

[191] PDP 2.
[192] PDP 13.
[193] PDP 2.
[194] PDP 3.
[195] PDP 19-24.
[196] PDP 30.
[197] PDP 28.
[198] PDP 30.

ecosystems found within them.[199] With regard to the Program's scope, NOAA stated that the 1,252 square nautical mile Channel Islands sanctuary represented the upper limit of sanctuary size, and that it expected the sanctuary system to be composed of fewer than 40 sanctuaries.[200]

The SEL process promulgated in May 1983 did not calm furor over the Program in certain quarters.[201] When it was learned that the review team for Alaska intended to nominate 10 of the 18 sites under consideration to the SEL, commercial fisherman reacted so strongly that the governor of Alaska asked that all sites be withdrawn from the process; his request was supported by Senator Stevens (R) and Representative Young (R). NOAA, under the Reagan Administration, dutifully complied.[202] Also, fishermen in Maine objected to inclusion of Frenchman's Bay on the SEL, and this site too was dropped from consideration.[203] The final SEL with 29 sites was issued in August 1983. The SEL contained sites from every region except Alaska, and had the effect of administratively exempting the Alaska region from further consideration under the Sanctuary Program. [204]

*1984 Amendments.* Amidst continuing controversy, Congress essentially re-wrote the Sanctuaries Act in 1984. The Program had been battered by user group opposition since the late 1970s, and active candidate sites continued to languish. In 1983, NOAA removed Monterey Bay from further consideration. The same year, Representative Young introduced legislation to abolish the Program, because he said it threatened to set

[199] PDP 24-31.
[200] PDP 3, 47.
[201] 48 Fed. Reg. 24,296 (1983).
[202] Chandler and Gillelan 10538.
[203] H. REP. NO. 98-187, at 14 (1983).
[204] 48 Fed. Reg. 35,568 (1983).

aside numerous areas that Congress never intended and threatened to disrupt the fishing industry. Representative Breaux, now chairman of the House Subcommittee on Fisheries and Wildlife, and an opponent of the Flower Garden Banks sanctuary still under study, continued to believe the Act was redundant to other ocean resource statutes. The oil industry continued to assert that sanctuaries should not block oil development and that sanctuaries only be designated for small unique areas.[205] Yet, the Program still had its defenders in both the House and Senate and in the environmental community, and they combined to fend off attacks. Ultimately, a compromise bill was enacted that further constrained the Act's preservation potential. Among other things, the 1984 Amendments revised the purposes of the Act; abolished the safeguard provision; laid out a detailed designation process based on NOAA's PDP regulations; required more extensive consultation; and gave fishery management councils the authority to provide draft fishing regulations for proposed sanctuaries.

Program purposes. The 1984 Amendments replaced the Act's preservation and restoration purposes with five new ones, all but one of them taken from NOAA's 1983 regulations. The new purposes were

(1) to identify areas of the marine environment of special national significance due to their resource or human-use values;
(2) to provide authority for comprehensive and coordinated conservation and management of these marine areas that will complement existing regulatory authorities;
(3) to support, promote, and coordinate scientific research on, and monitoring of, the resources of these marine areas;
(4) to enhance public awareness, understanding, appreciation, and wise use of the marine environment; and
(5) to facilitate, to the extent compatible with the primary objective of resource protection, all public and private uses of the resources of these marine areas

[205] *NOAA Ocean and Coastal Programs: Hearings Before the Senate Comm. on Commerce, Science, and Transportation*, 98th Cong. 42-43 (1983).

not prohibited pursuant to other authorities.[206]

By requiring that all uses of a sanctuary be facilitated, and calling for coordinated management that complements existing regulatory authorities (and uses), Congress expressly confirmed its intent that sanctuaries be managed for multiple purposes and, impliedly, that NOAA tread lightly on sanctuary users. The Act's original preservation and restoration purpose was changed to "resource protection" in a modifier clause of the use facilitation purpose.[207] Still, any use of a sanctuary supposedly had to be "compatible with the primary objective of resource protection."[208] What Congress aimed for was for NOAA to select areas of limited size that were nationally significant, but not adequately managed under existing authorities by state and federal agencies, and to achieve both preservation and harmonious multiple use. "The key concept," noted the House report, "is protection of identified areas by controlling the mix of uses to maintain the recognized values of the site."[209] While the House committee recognized that "it may be both necessary and proper to regulate specific uses in order to conserve or manage the site's unique inherent resources or human use values," it did not discuss bans for any particular use, or the concept of segregating incompatible uses by zones within a sanctuary. [210]

*Designation Process.* Congress required that five designation standards be met by the Secretary before a site could be designated, and specified a long list of factors that

[206] Sanctuaries Act Amendments of 1984, Pub. L. No. 98-498, sec. 102, § 301(b), 98 Stat. 2296, 2296-97 (codified as amended at 16 U.S.C. § 1431 (2006)).
[207] *Id*.
[208] *Id*.
[209] H.R. REP. NO. 98-187, pt. I, at 8 (1983).
[210] *Id.*

must be considered in determining whether the standards are met. The Secretary may designate a sanctuary if the Secretary determines the designation will

> (1) . . . fulfill the purpose and policies of this title [i.e., the Sanctuaries Act]; and
> (2) finds that—
> (A) the area is of special national significance due to its resource or human-use values;
> (B) existing State and Federal authorities are inadequate to ensure coordinated and comprehensive conservation and management of the area, including resource protection, scientific research, and public education;
> (C) designation of the area as a national marine sanctuary will facilitate the objectives in subparagraph (B); and
> (D) the area is of a size and nature that will permit comprehensive and coordinated conservation and management.[211]

To help the Secretary make his findings, the 1984 Amendments required the Secretary to make a detailed assessment of a proposed site's existing and potential uses for commerce, recreation, research and education. The amendments also required the Secretary to name the specific activities to be regulated in order to protect the sanctuary's characteristics, and to issue a draft management plan that spelled out how uses would be regulated as part of the environmental impact statement.

Safeguard provision. In keeping with its desire to maintain existing uses within sanctuaries, Congress eliminated the safeguard provision. The 1984 law specified that the Secretary could not "terminate a valid lease, permit, license, or right of subsistence use or of access" if such right was in existence within designated sanctuaries as of the date of enactment, or in existence at the time of any future sanctuary designation.[212] However, the Secretary could regulate these existing uses "consistent with the purposes for which the sanctuary is designated."[213] This change constituted a grandfather clause

[211] Sanctuaries Act Amendments of 1984 § 303(a).
[212] *Id.* at § 304 (c).
[213] *Id.*

for existing uses and severely watered down the preservation potential of the Act. Moreover, if NOAA determined not to regulate an activity at the time of designation, regulation of selected existing uses could be avoided altogether. This created a major escape hatch for NOAA when it came to confronting the impacts of fishing and other uses on sanctuary resources.

Consultation. A major concern throughout the Sanctuaries Act's implementation history had been the effectiveness of NOAA's consultation with other agencies, stakeholder groups and the public. The complaints made by the oil and fishing industries, in particular, were a major factor in producing changes to the Act. The 1984 Amendments emphasized the need for comprehensive and coordinated management, and one of the designation standards required the Secretary to find that existing state and federal authorities are inadequate to manage the area. The 1984 Amendments also contained extensive guidance on the entities that should be consulted during the study of a sanctuary, including a wide range of state and federal agencies, congressional authorizing committees, and the public. Congress was sufficiently impressed by fishermen's fears that their livelihoods were threatened by the Act that it included a new provision requiring the Secretary to give regional fishery management councils the opportunity to prepare draft fishing regulations that were needed to implement sanctuary designations. The Secretary was directed to approve a council's regulations as drafted "unless the Secretary finds that the Council's action fails to fulfill the purposes and policies of this title [i.e., the Act] and the goals and purposes of the proposed regulations."[214]

[214] *Id*. at § 304(a)(5).

*Summary*. During the period 1974 to 1984, commercial fishing and oil interests and their congressional allies led a sustained counterattack against sanctuaries that challenged the Sanctuaries Act's very existence. Oil and commercial fishing industries in particular developed a growing antipathy toward the Act because of its potential to infringe upon their activities. The oil industry sought to have oil development routinely allowed in sanctuaries as an acceptable multiple use; the fishing industry sought to prevent sanctuaries from restricting their fishing grounds. Barring repeal of the Act, oil and fishing interests wanted to limit the law's application and water down its preservation purpose. In this they were largely successful. By the end of 1984, NOAA and Congress had made a series of regulatory and legislative decisions that clearly shifted the Act's purpose from preserving and protecting places for their distinctive natural values to balancing "resource protection" in sanctuaries with other human uses. In short, multiple use became the guiding mantra of sanctuary management, notwithstanding the Act's language that multiple use was only to be allowed "to the extent compatible with the primary objective of resource protection."[215]

***Reemphasizing Preservation, 1985 to 2000***

Implementation of the Sanctuaries Act after the 1984 Amendments continued to be weak and problematic. According to David Owen, President Reagan's term of office (1981-1989)

> may have been the program's nadir. Beset with the active opposition from the administration, the existing programs suffered. Staff positions went unfilled, and critics charged that management programs at existing sanctuaries languished. Funding levels stabilized at the beginning of the Reagan era but then actually declined during his second term. The levels of funding requested by the administration were even lower; Congress repeatedly allocated more money than the administration estimated was necessary. Most discouragingly for program

[215] *Id*. at § 301(b)(5).

> advocates, NOAA designated no new sites other than Fagatele Bay, allowed the designation process for others to stagnate, and even removed Monterey Bay from the list of proposed sites.[216]

Meanwhile, a series of events continued to highlight the broad need for marine protection. These included algal bloom outbreaks, mass dolphin deaths, contamination of Atlantic Coast beaches by medical waste, and the wreck of an ore carrier and a car carrier, which resulted in a spill of copper ore and bunker fuel oil adjacent to the Channel Islands sanctuary.

Increasing frustration over the lack of sanctuary designations by NOAA led to a new phase of congressional involvement in the Program in which Congress decided which sites would be designated and how. Ironically, Congress found itself bypassing the designation process and policies it had created in order to obtain the results it wanted. Between 1985 and 2000, Congress reauthorized and amended the Sanctuaries Act four times with the general intent of strengthening the Act's preservation mission. However, in so doing, it failed to revise the multiple use mandate; thus the impact of the changes on the Program's overall preservation mission were small even as the number of sanctuaries doubled. Furthermore, with the 2000 Amendments, Congress authorized a temporary moratorium on new sanctuaries until existing ones are better managed and adequately inventoried. This has thrown a blanket of uncertainty over the Program's future. This section summarizes the most significant changes to the Program between 1985 and 2000. The author draws principally on Hannah Gillelan's analysis in "The History and Evolution of the National Marine Sanctuaries Act."[217]

*Designations under Reagan.* During the period 1985-1988, NOAA continued its

[216] Owen 728.
[217] Chandler and Gillelan.

study of several active candidate sites. Ten Fathom Ledge/Big Rock off North Carolina was made an active candidate in 1986, but withdrawn in 1987 due to the Sanctuary Program's lack of budgetary resources to carry it forward. Norfolk Canyon was made an active candidate in 1986, but was withdrawn in 1997 for the same reason. In 1988 Fagatelle Bay in American Samoa became the seventh and smallest sanctuary; it was the only designation made during President Reagan's two terms.

*1988 Amendments.* Lack of NOAA action on sites it had been considering for years led to congressionally mandated studies and designations for a number of areas in the 1988 Amendments.[218] Congress specified deadlines for sanctuary designations at Cordell Bank, Flower Garden Banks, Monterey Bay and the outer Washington coast (Olympic); required NOAA to submit prospectuses for Stellwagen Bank off New England and for northern Puget Sound; and mandated studies of three sites in the Florida Keys and one at Santa Monica, California. Furthermore, Congress sought to end the interminable NOAA study process by requiring NOAA to issue a designation of a sanctuary within 30 months of it being named an active candidate, or else specify why no designation had been made. The Act's multiple use provisions received further clarification as well. Congress found that regulating special uses of sanctuaries, such as commercial diving tours, had been a continuing problem for sanctuary managers. As a supplement to existing regulations, Congress

> established a system of special use permits to regulate access to and use of sanctuary resources. The need for these permits was raised by the increased interest in commercial use of sanctuaries (e.g., recreational diving, whale watching, boat tours) and the failure of NOAA to issue final regulations implementing the 1984 Amendments; existing regulations only authorized permits for research, education, and salvage activities and left the agency with no clear

[218] Sanctuaries Act Amendments of 1988, Pub. L. 100-627, 102 Stat. 3213 (codified as amended at 16 U.S.C. § 1431 (2006)).

> means of controlling new concessions and other uses not contemplated at the time of designation.[219]

A special use permit could be issued if it was needed to "establish conditions of access and use" or "promote public use and understanding."[220] Finally, Congress again recognized that the Sanctuary Program was laboring with insufficient resources; it increased the appropriations authorization level for the Program and required NOAA to report program expenditures by program function.

*Additional Sanctuaries.* Congress' statutory deadlines for designation of the four sanctuaries were not met, although all eventually were designated. Cordell Bank was designated by NOAA in 1989, but oil and gas development was banned in only a portion of the sanctuary. After a public outcry in California and from environmental organizations, Congress banned all minerals development in the entire sanctuary.[221] In early 1992, twelve years after it was proposed as a sanctuary, Flower Garden Banks was finally designated; the oil development issue was settled by allowing oil extraction in a small part of the site. Meanwhile, Florida legislators successfully promoted the legislative designation of Florida Keys sanctuary in 1990.[222] The new sanctuary, which incorporated the existing Looe Key and Key Largo sanctuaries and additional areas, covered a total of 3,804 square miles.

One interesting feature of the Florida Keys legislation was a directive for NOAA to consider temporal and geographic zoning in preparing the management plan.[223] This was the first and only time Congress expressly authorized NOAA to consider zoning of a

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[219] Chandler and Gillelan 10546.
[220] Sanctuaries Act Amendments of 1988 § 310 (a).
[221] To Approve the Designation of Cordell Bank National Marine Sanctuary, Pub. L. 101-74, 103 Stat. 554 (1989).
[222] Florida Keys National Marine Sanctuary and Protection Act, Pub. L. 101-605, 104 Stat. 3089 (1990).
[223] *Id*.

sanctuary.[224] Another new feature was establishment of the Florida Keys Sanctuary Advisory Council to assist in the plan's development, the first such public advisory council. A third was a requirement that the management plan establish a long-term ecological monitoring program. Finally, the legislation mandated EPA and the governor of Florida to develop a comprehensive water quality protection program to deal with severe water quality problems associated with development in south Florida, including the Keys.

*1992 Amendments.* The 1992 Amendments to the Act were substantial and further added to the Sanctuaries Act's complexity and contradictions.[225] At the time they were enacted, public support for the Sanctuary Program had blossomed. This was in part because of campaigns by conservation groups to highlight the sanctuaries as part of the answer to recent events such as the devastating *Exxon Valdez* oil spill, freighter groundings in the Florida Keys, and two major oil spills on the Olympic Coast. Additionally, biodiversity conservation was a topic of increasing international attention. Finally, the not-yet-designated Stellwagen Bank was threatened by proposals for a floating casino, sand and gravel mining, and an EPA proposal for a sewage outfall pipe only 12 miles west of the proposed sanctuary's border.[226]

Two reports also generated interest about the Program's goals, direction and needs, and fed into reauthorization considerations. NOAA commissioned two scientists, G. Carleton Ray and M.G. McCormick-Ray, to prepare a dialogue paper as an aid to a

[224] The Sanctuaries Act itself does not expressly authorize zoning, but neither does it prohibit it. NOAA construes the Act as providing it with authority to zone sanctuaries, which NOAA has done in several instances, but not uniformly throughout the sanctuary system.
[225] Oceans Act of 1992, Pub. L. 102-587, tit. II, sec. 2203, 106 Stat. 5039, 5048-49 (codified as amended at 16 U.S.C. § 1433 (2006)).
[226] Chandler and Gillelan 10548-59.

Marine Sanctuaries Review Team that was commissioned to evaluate the overall Program. The Rays recommended that the Sanctuary Program be reconfigured to contribute to a "system of nationally significant and ecologically representative marine areas," and that the "future vision" of the Program include the goals of biodiversity protection, monitoring global change and sustaining ocean ecosystems and managing resources for sustainable use.[227]

The review team's report concurred with the main thrust of the Rays' recommendations, stating that the principal goals of the Program should be to protect and sustain America's marine biological and cultural heritage. The review team concluded the Program had been hampered by a lack of NOAA commitment and funding, and challenged both the Congress and NOAA to rejuvenate the Program through increased funding, making certain sanctuaries model areas, and communicating program goals to a wider audience.[228] But rather than overhaul the Program, Congress elected to add to the current structure, while adopting some of the Rays' and review team's ideas.

Revised Purposes. In the 1992 Amendments, Congress declared sanctuaries to be areas of special national significance, but did not define what national significance means. To the existing five purposes, Congress added four more: Develop coordinated plans for protecting and managing sanctuaries; create model management regimes and supporting incentives; cooperate with global marine conservation programs; and "maintain, restore, and enhance living resources by providing places for species that

[227] *The Current Status and Future Needs of the National Oceanic and Atmospheric Administration's National Marine Sanctuary Program: Hearing Before the Subcomm.s on Oceanography, Great Lakes and the Outer Continental Shelf of the House Comm. on Merchant Marine and Fisheries*, 102d Cong. 148-49 (1991) (reprinting in full the Ray and McCormick Ray report and the Marine Sanctuaries Review Team 1991 report).
[228] *Id.* at 92-93, 101.

depend upon these marine areas to survive and propagate."[229] This last purpose was complemented by a new finding that sanctuaries can "contribute to maintaining a natural assemblage of living resources for future generations."[230]

Coordinated management. The 1992 Amendments broadened consultation requirements with federal agencies knowledgeable about disposal of materials in the vicinity of sanctuaries, required consultation with the Secretary of the Interior in preparing the resource assessment report, and required NOAA cooperation with state and local fishery managers. Congress also gave the Secretary optional authority to create advisory councils for all sanctuaries, another way to broaden stakeholder involvement.

Concerns over the impacts of off-site activities on sanctuaries led to a new consultation provision that made

> *any Federal agency action* subject to consultation with the Secretary of Commerce, *even if it occurs outside of a sanctuary*, if it is likely to "destroy, cause the loss of, or injure any sanctuary resource." As part of this consultation, the acting agency must provide the Secretary of Commerce with a written statement describing the action and its potential effects on sanctuary resources and must consider the Secretary of Commerce's recommended alternatives. If the acting agency decides not to adhere to the Secretary's recommendations, it must provide a written statement giving reasons for acting otherwise.[231]

Congress' interest in the impact of other agencies' actions on sanctuaries was heavily influenced by Rep. Gerry Studds' (D) concern about a proposed sewer outfall pipe that would discharge its contents within 12 miles of the proposed Stellwagen Bank sanctuary off Massachusetts. The House report specified that the

> term "agency action" is intended to be broadly applied to direct actions, and licenses, permits, and other authorizations issued by federal agencies to third parties. The committee intended "that agency actions encompass all actions that are reasonably likely to affect sanctuary resources while those resources are

[229] Oceans Act of 1992, § 301(b)(9).
[230] *Id.* § 301(a)(6).
[231] Chandler and Gillelan 10550.

> within sanctuary boundaries, including the cumulative and secondary effects of such actions.[232]

However, the consultation provision did not authorize NOAA to stop harmful activities occurring outside sanctuaries or mandate that the acting agency stop them.

In addition, the 1992 Amendments included a requirement that a sanctuary's management plan be reviewed every five years to determine if the sanctuary's goals are being achieved, and directed NOAA to make any revisions in the plan as needed. Also, Congress raised the appropriations authority for the program from approximately $6 million annually in fiscal year 1992 to $ 20 million in fiscal year 1996.

New Sanctuaries. Continued frustration over the slowness of the NOAA designation process prompted congressional designations of Stellwagen Bank, Monterey Bay, and Hawaiian Islands Humpback Whale sanctuaries under the 1992 Amendments. Among other things, Congress prohibited oil development at Monterey Bay and sand and gravel mining at Stellwagen. The original focus of the Hawaii Humpback Whale sanctuary was to protect humpback whales and their calving habitat and educate the public about whales. According to Gillelan:

> What is most clear from the congressional designations of 1992 is that Congress felt that NOAA had failed to properly interpret and implement the Act. All three of the designated sanctuaries were chosen at large sizes, and two were protected from some industrial uses. In designating the largest of the size alternatives for Monterey Bay, . . . Congress essentially disregarded the size issue. At 4,023 square nautical miles, Monterey Bay was significantly larger than the 1,258 square-nautical-mile Channel Islands designation, which some in Congress had previously proposed as an upper size limit.[233]

NOAA designated the Olympic Coast sanctuary in 1994, 11 years after it was placed on the SEL. Congress had preemptively banned oil and gas development at

[232] Chandler and Gillelan 10550.
[233] Chandler and Gillelan 10553.

Olympic in the 1992 Amendments, an indication it was leery of NOAA arriving at this decision on its own. Meanwhile, NOAA's study of northern Puget Sound (also known as Northwest Straits), which had formally begun in 1989, had run into local opposition and was dragging along.

*1996 Amendments.* The 1996 Amendments were noteworthy for expanding two sanctuaries and prohibiting designation of a third.[234] A small, disjunctive area known as Stetson Bank was approved for addition to Flower Garden Banks; and the Hawaii Humpback Whale sanctuary grew by including Kahoolawe Island. However, Congress prohibited designation of a Northwest Straits sanctuary in Washington without specific pre-authorization by Congress. According to Gillelan:

> The provision prohibiting a Northwest Straits sanctuary was the result of failure of the local jurisdictions in the Puget Sound area to buy-in to the sanctuary process during the eight years that the area had been under consideration as an active candidate. Unlike most of the other marine sanctuaries, the Northwest Straits site is located predominately in State waters. Without local support, the Governor might exercise his power under the Act to veto the portion in State waters, thus negating the purpose of designation. The sense in the community and the local government was that local people and institutions were capable of management of the area and that a sanctuary would only add an extra layer of tension and federal bureaucracy without providing additional benefits.[235]

*Oceans and Sanctuaries Receive Increased Attention.* As time drew near for the next Sanctuaries Act reauthorization, several streams of thought and events converged. Some of the ideas found in the 1991 reports of the Rays and the program review team continued to have currency. To these were added those of the 1999 report of the National Academy of Public Administration (NAPA). NAPA concentrated on highlighting the Program's potential and felt the Sanctuary Program was starting to demonstrate success

[234] Sanctuaries Act Amendments of 1996, Pub. L. 104-283, 110 Stat. 3363 (codified as amended at 16 U.S.C. § 1431 (2006)).
[235] Chandler and Gillelan 10554.

after a long turbulent period. NAPA recommended NOAA invest in the current sanctuaries to deliver concrete results, rather than engage in more costly designation efforts.[236]

There was also increased public recognition of the declining state of the oceans. For example, a survey commissioned by SeaWeb, an NGO, found that 58 percent of a national sample believed the conditions of the oceans had gotten worse in the past few years.[237]

Heightened interest in marine conservation led to the National Ocean Conference held in Monterey in June 1998. On the second day of the conference, President Clinton issued an executive memorandum extending existing moratoria on OCS energy leasing, and prohibiting new federal oil and gas leases in sanctuaries indefinitely.[238] As Gillelan observes, "in one brief act, Clinton accomplished what Congress and NOAA had been haggling over for more than 25 years."[239]

In May 2000, at the urging of NGOs, Clinton issued Executive Order 13158 calling for relevant federal agencies to use their existing legal authorities to develop a national system of marine protected areas, including expansion of existing protected areas and creation of new ones. Clinton placed the Secretaries of Commerce and the Interior in charge of developing the system.[240] The order was important in that it broadened responsibility for placed-based ocean conservation to federal agencies other than NOAA,

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[236] NAPA ix, x, 1-2, 34.
[237] SeaWeb, National Ocean Study, May 1996 (Washington: SeaWeb, 1996).
[238] Memorandum on Withdrawal of Certain Areas of the United States Outer Continental Shelf from Leasing Disposition, 34 WEEKLY COMP. PRES. DOC. 1111 (June 12, 1998).
[239] Chandler and Gillelan 10555.
[237] Exec. Order No. 13,158, 65 Fed. Reg. 34,909 (2000) (on Marine Protected Areas); Exec. Order No. 13,178, 65 Fed. Reg. 76,903 (2000), as amended by Exec. Order No. 13,196, 66 Fed. Reg. 7395 (2001) (declaring the establishment of the Reserve complete and ordering the Secretary to "initiate the process to designate the Reserve as a National Marine Sanctuary").

and created a mechanism for state and local participation as well.

*2000 Amendments.* Congress made substantial changes to the Act in the 2000 Amendments, but from a preservation perspective, results were decidedly mixed.[241] On one hand, the amendments declared the sanctuaries to be a national system, strengthened the Act's purpose of conserving biological diversity, added cultural and archeological resources to the Program's coverage, and strengthened the federal agency consultation requirement. The amendments also authorized Clinton to issue his executive order creating a Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve, but required that the area be considered for sanctuary status. On the other hand, the 2000 Amendments established a moratorium on further sanctuary designations until NOAA achieved better management of the sanctuaries it had.

National system. Twenty-eight years after launching the Sanctuary Program, Congress declared that the sanctuaries constituted a "system" that would

> (A) improve the conservation, understanding, management, and wise and sustainable use of marine resources;
> (B) enhance public awareness, understanding, and appreciation of the marine environment; and
> (C) maintain for future generations the habitat, and ecological services, of the natural assemblage of living resources that inhabit these areas.[242]

This language echoed the review team's vision of an integrated system of the nation's most important marine areas, but there was no explanation of what the term "system" meant or how it was to be made operational. Congress revised and rearranged the Act's nine purposes to place more emphasis on biodiversity conservation and ocean restoration. Purpose (3) of the Act now states: "to maintain the natural biological communities in the

[241] Sanctuaries Act Amendments of 2000, Pub. L. 106-513, 114 Stat. 2381 (codified as amended at 16 U.S.C. § 1431 (2006)).
[242] *Id*. § 3(b), §3 (d).

national marine sanctuaries, and to protect, and, where appropriate, restore and enhance natural habitats, populations, and ecological processes."[243] Purpose (6) now contains the multiple use language of "facilitating" all uses "to the extent compatible with the primary objective of resource protection."[244] According to Gillelan:

> NOAA claimed the provisions "clarify that resource protection includes maintaining the entire ecosystem, including the structure of natural biodiversity and species assemblages and ecological processes." The impact of this reemphasis, however, was severely tempered by the failure to simplify the Program's purposes or to reduce the emphasis on facilitation of compatible uses. In fact, individual Members of Congress and committee reports all made comments that appear to strengthen the place of multiple use in the Program, rather than to diminish it.[245]

Senator John McCain, for example, stated: The "emphasis on complementary uses and management is the strength of the sanctuary program."[246] Interestingly, despite Clinton's 1998 action banning new oil leases in sanctuaries and the various moratoria then in effect on OSC leasing, and Congress' previous actions to ban oil development at sanctuaries like Cordell Bank, a permanent ban on oil and gas extraction in the sanctuary system was not part of Congress' agenda.

Moratorium. In contradiction to Clinton's executive order calling for a strengthened and larger national system of marine protected areas, the 2000 Amendments prohibited the designation of new sanctuaries, unless the Secretary finds that "the addition . . . will not have a negative impact on the System," and that sufficient resources are available in the year of the finding to "effectively implement" all sanctuary management plans and that resources would be available to complete site characterization

[243] *Id.* § 3(c).
[244] *Id.*
[245] Chandler and Gillelan 10556.
[246] 145 CONG. REC. S10,636 (daily ed. Oct. 17, 2000) (statement of Sen. McCain).

studies and inventories at all sanctuaries within ten years.[247] The idea of concentrating on existing sanctuaries had gained broad support in the authorizing committees. The moratorium was explained by Senator Olympia Snowe (R) as necessary to make the sanctuaries "fully operational before expanding the sanctuary system," and as a strategy to "drastically increase the public benefits" of an under-funded program.[248] In addition, Congress raised the Program's appropriations level over the upcoming six years to $40 million in fiscal year 2005; however, this still did not cover all of the Program's basic needs. A nearly completed sanctuary designation in the Great Lakes to preserve sunken shipwrecks was exempted from the moratorium. NOAA designated 447 square miles of Lake Superior as the Thunder Bay sanctuary at about the same time the 2000 Amendments were enacted.

New Hawaii Sanctuary. When it became known that President Clinton intended to designate a large coral reef ecosystem reserve in the Northwestern Hawaiian Islands by executive order, some members of Hawaii's congressional delegation objected. Senator Daniel Inouye (D) of Hawaii, a member of the Commerce Committee, negotiated language in the reauthorization bill that gave the President discretionary authority to designate any coral reef or ecosystem within this 1,200-mile stretch of remote uninhabited islands as a coral reef reserve to be managed by the Secretary of Commerce, provided the President consult first with the Governor of Hawaii. The 2000 Amendments also required the President to initiate a sanctuary designation process for the reserve, create an advisory council, and manage the reserve in accordance with the Sanctuaries Act prior to its formal designation. In late 2000, the President designated an 84-million

[247] Sanctuaries Act Amendments of 2000, Pub. L. 106-513, sec. 6(f), § 304(f), 114 Stat. 2381, 2385 (codified as amended at 16 U.S.C. § 1431 (2006)).
[248] 145 CONG. REC. S10,637 (daily ed. Oct. 17, 2000) (statement of Sen. Snowe).

acre coral reef ecosystem reserve by executive order and commenced the sanctuary designation process, which is expected to reach fruition in late 2006 or 2007. Shortly after entering office, President George W. Bush let the Clinton order stand.

The Northwestern Hawaiian Islands is the largest potential sanctuary ever to be considered and is seven times larger than the entire sanctuary system. Once again, Clinton's action highlighted the importance of presidential leadership in advancing new sanctuaries.

*Summary*. In summary, the 2000 amendments reaffirmed ecosystem conservation and restoration as a key goal of the Act, but left the Act constricted by its multiple use goal and a moratorium of uncertain duration. Throughout the history of the Act, Congress has steadfastly insisted that preservation can be harmonized with multiple use. However, as will be shown in Chapter 5, the record of the Act's preservation achievements contravenes this logic.

## CHAPTER 4. THE OCEAN CONSERVATION FRAMEWORK

The management of U.S. oceans is an exceedingly complex endeavor. Americans use the ocean for defense, transportation, fishing, recreation, waste disposal, minerals extraction, tourism, and as the scenic vista for millions and millions of homes. All these uses have their precedents, their doctrines, their laws. Conservation of the ocean and its various resources is a relatively recent endeavor. Not surprisingly, the arrival of conservation on the scene has been contentious because it requires limitations of use, and in some cases the cessation of activities altogether or at least their prohibition in specific locales. Dealing as it does with the preservation of discrete marine places, the Sanctuaries Act has had more than its fair share of controversy. Before considering the achievements of the Sanctuary Program, it is necessary to understand the governance context in which the Program operates today. This chapter outlines the legal setting for the Sanctuaries Act's implementation and its relationship to four other laws that deal with the conservation of marine resources. These include the Marine Mammal Protection Act (MMPA), the Endangered Species Act (ESA), the Magnuson-Stevens Fisheries Conservation and Management Act (MSA) and Executive Order 13158 on Marine Protected Areas.

### *Complexity of Laws*

According to the Sea Grant Law Center, University of Mississippi, there are over 140 laws that address U.S. oceans and coasts; of these 43 are considered major.[249] The Pew Oceans Commission concludes that U.S. ocean policy forms no coherent system, but rather "is a hodgepodge of individual laws that has grown by accretion over the years,

[249] Pew Oceans Commission 27.

often in response to crisis. . . . Collectively these statutes involve at least six departments of the federal government and dozens of federal agencies in the day-to-day management of our oceans."[250] Adding to the problem of uncoordinated authorities is the fact that jurisdictional authority is fragmented between federal and state governments based on legally defined territorial zones:

> The Submerged Lands Act of 1953 gave most states authority over submerged lands and overlying waters from the shoreline out three miles. Federal territorial sovereignty extends 12 miles offshore, and, consistent with the United Nations Convention on the Law of the Sea, the federal government controls ocean resources out 200 miles or more. This federal/state division of ocean jurisdiction makes it difficult to protect marine ecosystems because it divides their management into a nearshore and offshore component with insufficient means or mandate to harmonize the two.[251]

Similarly, the U.S. Commission on Ocean Policy identifies "a complex mosaic" of legal authorities affecting ocean management:

> Management of ocean and coastal resources and activities must address a multitude of different issues and involves aspects of a variety of laws—at local, state, federal and international levels—including those related to property ownership, land and natural resource use, environmental and species protection, and shipping and other marine operations—all applied in the context of the multi-dimensional nature of the marine environment. Several of those aspects of law may come into play simultaneously when addressing conflicts over public and private rights, boundaries, jurisdictions, and management priorities concerning ocean and coastal resources. In addition, some laws result in geographic and regulatory fragmentation and species-by-species or resource-by-resource regulation.[252]

Not surprisingly, this labyrinth of laws has not been successful in protecting ocean ecosystems, habitats or species. "Although our coasts and oceans would no doubt be in worse condition without them, environmental quality has nonetheless deteriorated

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[250] Pew Oceans Commission 26.
[251] Pew Oceans Commission 26.
[252] U.S. Commission on Ocean Policy, Review of U.S. Ocean and Coastal Law, Appendix 6 to An Ocean Blueprint for the 21st Century, Final Report of the U.S. Commission on Ocean Policy (Washington, D.C., 2004) 2. (Available at http://www.oceanscommission.gov).

since enactment of these laws."[253] Concludes the Pew Oceans Commission, "plagued with systemic problems, U.S. ocean governance is in disarray."[254]

Within this dense legal thicket lies the Sanctuaries Act. Although originally conceived as a measure to protect certain coastal and ocean areas from industrial development, thereby preserving these areas' natural resources and features for compatible uses, Chapter 3 shows how the Act evolved into a statute for identifying areas deemed nationally significant due to a wide variety of environmental attributes and human uses, and managing these areas for multiple use based on local circumstances and needs. As shown in the following sections, the Sanctuary Program's relationship to other marine conservation statutes provides tangible evidence of the disarray and lack of management coordination the Pew Commission found.

***National Marine Sanctuaries Act***

In its current form, the Sanctuaries Act charges the Secretary of Commerce with identifying, designating and managing a system of national marine sanctuaries in marine and Great Lakes waters under U.S. jurisdiction.[255] Within the department, implementation authority has been delegated to NOAA, and within NOAA to the National Ocean Service (NOS). Day-to-day management of the Sanctuary Program is the responsibility of the Office of National Marine Sanctuaries. The office has an annual operating budget of approximately $35 million (FY 2007) and a staff of approximately 264, of which 71 are at NOAA headquarters and 193 in the field.[256]

[253] Pew Oceans Commission 27.
[254] Pew Oceans Commission viii.
[255] Marine Protection, Research and Sanctuaries Act of 1972, 16 U.S.C. § 1431 (2006).
[256] NOAA, National Marine Sanctuary Program, "2007 Budget Factsheet." Elizabeth Moore, e-mails to the author, 26 and 29 June 2006. Staff includes both permanent and contract employees.

In the findings section of the Act, Congress elaborates three themes. First, certain areas of the marine environment are worth protecting because they "possess conservation, recreational, ecological, historical, scientific, educational, cultural, archeological, or esthetic qualities which give them special national significance."[257] Second, existing laws that are focused on single resources are not always sufficient for providing "coordinated and comprehensive conservation and management" of these special areas.[258] Third, managing special areas within a National Marine Sanctuary System will provide the nation with multiple benefits:

> (A) Improve the conservation, understanding, management, and wise and sustainable use of marine resources;
> (B) Enhance public awareness, understanding and appreciation of the marine environments; and
> (C) Maintain for future generations the habitat, and ecological services, of the natural assemblage of living resources that inhabit these areas.[259]

The findings are repeated or supplemented in the Act's nine purposes and policies, of which five may be deemed fundamental:

1. to identify and designate areas of the marine environment that are nationally significant because they possess "conservation, recreational, ecological, historical, scientific, educational, cultural, archeological, esthetic" qualities;

2. "to maintain the natural biological communities in the national marine sanctuaries, and to protect, and, where appropriate, restore and enhance natural habitats, populations, and ecological processes;"

3. to manage these areas and the activities affecting them in a comprehensive, coordinated way, and in a manner which "complements existing regulatory authorities;"

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[257] Marine Protection, Research and Sanctuaries Act of 1972 §301(a).
[258] *Id.*
[259] *Id.*

4. "to develop and implement coordinated plans for the protection and management of these areas" with appropriate federal, state and local entities and other interests; and

5. to "facilitate to the extent compatible with the primary objective of resource protection, all public and private uses of the resources . . . not prohibited pursuant to other authorities."[260]

The Act sets forth five standards to be met by the Secretary Commerce in determining whether to designate a discrete area as a national marine sanctuary:

> (1) the designation will fulfill the purposes and policies of this . . . [Act];
> (2) the area is of special national significance due to—
> (A) its conservation, recreational, ecological, historical, scientific, educational, cultural, archeological, or esthetic qualities;
> (B) the communities of living marine resources it harbors; or
> (C) its resource or human-use values;
> (3) existing State and Federal authorities are inadequate or should be supplemented or coordinated to ensure coordinated and comprehensive conservation and management of the area, including resource protection, scientific research, and public education;
> (4) designation of the area . . . will facilitate the objectives stated in paragraph (3); and
> (5) the area is of a size and nature that will permit comprehensive and coordinated conservation and management.[261]

In determining whether an area meets the designation standards, the Secretary must consider 12 factors, several of which pertain to biological resource preservation:

> (A) the area's natural resource and ecological qualities, including its contribution to biological productivity, maintenance of ecosystem structure, maintenance of ecologically or commercially important or threatened species or species assemblages, maintenance of critical habitat of endangered species, and the biogeographic representation of the site;

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[260] *Id.* § 301(a)-(b). Other purposes include enhancing "public awareness, understanding, appreciation, and wise and sustainable use of the marine environment;" supporting scientific research; cooperating with global marine conservation programs; and creating innovative management models and techniques for marine area management. *Id.* § 301(b).
[261] *Id.* § 303 (a).

> (B) the area's historical, cultural, archeological, or paleontological significance;
> (C) the present and potential uses of the area that depend on maintenance of the area's resources, including commercial and recreational fishing, subsistence uses, other commercial and recreational activities, and research and education;
> (D) the present and potential activities that may adversely affect the factors identified in subparagraphs (A), (B), and (C);
> (E) the existing State and Federal regulatory and management authorities applicable to the area and the adequacy of those authorities to fulfill the purposes and policies of the [Act]; . . .
> (G) the public benefits to be derived from sanctuary status, with emphasis on the benefits of long-term protection of nationally significant resources, vital habitats, and resources which generate tourism; . . .
> (L) the value of the area as an addition to the System.[262]

Clearly, protection of living resources in the marine environment is one of the principal purposes of the Sanctuaries Act, but it is not the only federal law that addresses this goal. Because it is not, Congress concluded that one rationale for a sanctuary is to provide comprehensive management of a discrete area so as to complement other laws that do not provide for holistic area management. Furthermore, Congress specifically made coordinated and complementary management of ocean resources two of the Act's purposes. Therefore, it is imperative to understand how the Sanctuaries Act relates to other federal laws concerned with conserving and managing marine biological resources.

***Marine Mammal Protection Act***

The Marine Mammal Protection Act (hereinafter "MMPA") was enacted in 1972, the same year as the Sanctuaries Act.[263] A driving force behind its enactment was public concern and anger over the thoughtless killing of porpoises by tuna fishermen, the continued world-wide hunting of whales, and the killing of baby seals for their fur.[264]

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[262] *Id.* § 303(b).
[263] Marine Mammal Protection Act, 16 U.S.C. § 1361 (2000).
[264] Pew Oceans Commission 27.

Michael Weber notes that passage of the MMPA signaled an end to the commercial exploitation of marine mammals by U.S. citizens.[265]

*Implementation.* Authority for implementing the MMPA is divided between the secretaries of Commerce and Interior, based on species groupings. The Secretary of Commerce has responsibility for all cetaceans (whales) and pinnipeds (except walruses). The Secretary of the Interior has authority for dugongs, manatees, polar bears, sea otters, and walruses. Within Commerce, management responsibility is assigned to NOAA's National Marine Fisheries Service (hereinafter "NMFS"), which as its name implies, also is responsible for managing the nation's federal fisheries. Within NMFS, the Office of Protected Resources has day-to-day authority for the Marine Mammal Program. The office has an annual budget of approximately $ 152 million (FY 2007) and a permanent staff of 400.

*Conservation provisions.* In the MMPA's findings, Congress acknowledges human-caused depletions and potential extinctions of some marine mammals, and declares that individual species or stocks of species "should not be permitted to diminish beyond the point at which they cease to be a significant functioning element in the ecosystem, . . . and consistent with this major objective, they should not be allowed to diminish below their optimum sustainable population."[266] Optimum sustainable population is defined as "the number of animals which will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element."[267] "In particular," said Congress, "efforts should be made to protect essential habitats, including

[265] Michael Weber, From Abundance to Scarcity (Washington: Island Press, 2001) 185.
[266] Marine Mammal Protection Act.
[267] *Id.* § 3.

the rookeries, mating grounds, and areas of similar significance for each species of marine mammal from the adverse effect of man's actions."[268] Congress also found that marine mammals "should be protected and encouraged to develop to the greatest extent feasible commensurate with sound policies of resource management and that the primary objective of their management should be to maintain the health and stability of the marine ecosystem."[269] The Act defines the terms "conservation" and "management' collectively to mean

> the collection and application of biological information for the purposes of increasing and maintaining the number of animals within species and populations of marine mammals at their optimum sustainable population. Such terms include the entire scope of activities that constitute a modern scientific research program, including but not limited to, research, census, law enforcement, and habitat acquisition and improvement. Also included . . . when and where appropriate, is the periodic or total protection of species or populations as well as regulated taking.[270]

To achieve its goals, the MMPA establishes a moratorium on the taking of all marine mammals by persons under U.S. jurisdiction, with certain limited exceptions, and prohibits the importation and sale of marine mammals or derivative products. The moratorium took effect in December 1972. Among other exceptions, marine mammals may be taken (killed) incidental to commercial fishing operations, for Alaska Native subsistence use, and for scientific research purposes, subject to various conditions. Any species or species stock whose population has dropped below its optimum sustainable population must be declared depleted by the Secretary of Commerce, and thus becomes a higher management priority. Species listed as threatened or endangered under the Endangered Species Act (hereinafter "ESA") are automatically considered "depleted"

[268] *Id.* § 2.
[269] *Id.*
[270] Marine Mammal Protection Act § 3.

under the MMPA. The Act declares that "measures should be taken immediately to replenish" depleted species or stocks.[271] These measures are to be set forth in a conservation plan, which must be prepared for any species or stock designated as depleted (or threatened and endangered), unless a plan would not be worthwhile. "Each plan shall have the purpose of conserving and restoring the species or stock to its optimum sustainable population," and shall be implemented expeditiously.[272] (If a marine mammal is listed under the ESA, the recovery plan required under the ESA is considered the equivalent of a conservation plan.)

The MMPA requires NMFS to prepare and periodically update stock assessments for all marine mammal species under its jurisdiction, to include among other things, a minimum population estimate, current population trend, and net productivity rate. The assessment also must include estimates for human-cause mortality by source, and for those stocks classified by the agency as "strategic," the factors that are causing decline or impeding recovery. A strategic stock is one that is experiencing overly high rates of human-caused deaths to the detriment of maintaining its optimum population size, or is declining and likely to be listed as threatened with extinction under the ESA, or has been listed as threatened or endangered under the ESA or as depleted under the MMPA. In cases where a marine fishery has serious interactions with a depleted marine mammal species or population (i.e., the mammal is killed by the fishery in significant numbers), NMFS is required to prepare a take reduction plan with the long-term goal of reducing marine mammal deaths and injuries to near zero. NMFS has discretionary authority to

[271] *Id.* § 2.
[272] *Id.* § 115(b)(2).

prepare a plan for non-strategic marine mammal species that interact with fisheries and suffer a high level of injury and mortality.[273]

*Relation to Sanctuaries Act.* Although drafted by the same authorizing committees as the Sanctuaries Act, and originally enacted in the same month and year, the MMPA does not mention marine sanctuaries or cross reference the Sanctuaries Act. Thus, any coordination of the two programs is at the Secretary of Commerce's discretion. However, the purpose and objectives of both acts are clearly overlapping: Both seek to maintain healthy marine ecosystems, habitats and species populations. Given the Sanctuaries Act's purposes of protecting areas of "special national significance," managing sanctuaries to complement "existing regulatory authorities," and maintaining "natural biological communities," it seems obvious that key areas of the ocean in which concentrations of marine mammals are found should be targeted as potential wildlife sanctuaries, or as sites to be included within broader-purpose sanctuaries.[274] In Chapter 5, the author examines the extent to which this has been achieved by NOAA.

***Endangered Species Act***

Another law of high overlap with the Sanctuaries Act is the Endangered Species Act (hereinafter "ESA").[275] The earliest version of this law was enacted in 1966, six years before the Sanctuaries Act. Congress substantially transformed the ESA in 1973, one year after the Sanctuaries Act was enacted. As under the MMPA, the Secretaries of Commerce and Interior have joint authority for managing marine mammals for those species assigned to them under the ESA. In general, Commerce is responsible for all marine and anadromous species of animals, and all marine plants. Interior, through the

[273] *Id.* §§ 117-18.
[274] Marine Protection, Research and Sanctuaries Act of 1972 § 301(b), 16 U.S.C. § 1431(b) (2006).
[275] Endangered Species Act, 16 U.S.C. § 1531 (2006).

U.S. Fish and Wildlife Service, is responsible for dugongs, manatees, polar bears, sea otters, and walruses.

*Implementation.* Within Commerce, responsibility for implementing the ESA has been delegated to NMFS. As for marine mammals, endangered species are managed by the Office of Protected Resources at the headquarters level of NMFS, and by staff in NMFS's eight regional offices. As of March 2006 there were 61 marine species or species populations listed by NMFS as endangered or threatened, most of which occur in U.S. waters. Species within U.S. jurisdiction include 12 marine mammals, 8 sea turtles, 30 marine and anadromous fish, 1 plant, and 1 invertebrate. Critical habit has been designated for 34 of the U. S. species, the majority (26) for anadromous fish.[276]

*Conservation Provisions.* In the findings section of the ESA, Congress states that species threatened or endangered with extinction are of value to the U.S., and that they merit conservation as elements of the Nation's natural heritage.[277] The purposes of the ESA are to "provide a means whereby the ecosystems upon which endangered and threatened species depend may be conserved," to establish appropriate conservation programs, and to comply with various international treaties for the conservation of species.[278] Congressional policy directs all federal agencies to conserve threatened and endangered species and to utilize their authorities to further the Act's purposes.[279] NMFS is responsible for identifying, scientifically evaluating and formally listing marine species of plants and animals that are threatened or endangered with extinction throughout all or a significant portion of their range; issuing regulations to protect the

[276] United States, Dept. of Commerce, NOAA, NMFS, "Species Under the Endangered Species Act (ESA)," 14 Mar. 2006 <http://www.nmfs.noaa.gov/pr/species/esa.htm>.
[277] Endangered Species Act §2(a).
[278] *Id.* § 2(b).
[279] *Id.* § 2(c).

species; demarking the critical habitat needed by listed species to survive; and preparing and implementing species recovery plans. Among other things, recovery plans may include specified protections for designated critical habitat. In preparing recovery plans, the Secretary must give priority to those species most likely to benefit from recovery efforts, "particularly those species that are, or may be, in conflict with construction or other development projects or other forms of commercial activity."[280] In general, it is unlawful for any person to take a listed species or violate regulations that protect the species or its critical habitat, unless the action is granted an exemption in advance. Furthermore, the Secretary of Commerce has a proactive duty to review all of the department's programs, such as NOAA's Fisheries Program and the Sanctuary Program, and to "utilize such programs in furtherance of " the ESA.[281]

The ESA also gives the Secretary of Commerce a significant role in ensuring that all federal agencies and departments comply with the conservation requirements of the Act. Each federal agency must consult as appropriate with the Secretary of Commerce to ensure that actions authorized, funded or carried out by it are not likely to jeopardize the existence of any threatened or endangered species that is listed or proposed for listing, or "result in the adverse modification of [the critical] habitat of such species."[282] Similarly, federal agencies must initiate consultation with NMFS if a private applicant for a permit or license requests it because an endangered or threatened species may be present in the project area and would be affected. After consultation is complete, the Secretary is required to issue a formal written opinion stating the action's effects on the species and its critical habitat. If the Secretary finds that the action will jeopardize the continued

[280] *Id.* § 4(f).
[281] *Id.* § 7(a).
[282] *Id.* § 7.

existence of the species or modify its habitat, he must provide the acting agency with reasonable and prudent alternatives that the agency can take to avoid jeopardizing the species. The Secretary's consultation duty for activities affecting marine species applies to all Commerce Department agencies. This has resulted in the bizarre circumstance of NMFS consulting with itself regarding actions of the Fisheries Program that may affect threatened or endangered marine species.

*Relation to Sanctuaries Act.* As is the case with the MMPA, several purposes of the Sanctuaries Act significantly overlap those of the ESA. Relevant Sanctuaries Act purposes include conserving areas of special national significance, managing sanctuaries to complement other authorities, maintaining natural biological communities, and restoring populations, habitats, and ecological processes. Further, the Sanctuaries Act specifically states that one of the factors to be considered in designating a sanctuary is the "area's natural resource and ecological qualities, including . . . maintenance of ecologically or commercially important or threatened species or species assemblages, [and] maintenance of critical habitat of endangered species . . ."[283] Close alignment of sanctuary designations with locations of endangered species populations and their habitats (such as feeding, breeding, calving or migratory stopover points) appears to be desirable even if the habitat is not formally listed, but such alignment does not routinely occur as will be discussed in Chapter 5.

***Magnuson-Stevens Fishery Conservation and Management Act***

In 1976, Congress enacted the Fishery Conservation and Management Act (now known as the Magnuson-Stevens Act and hereinafter referred to as the "MSA") to establish a comprehensive fishery management regime for commercial and recreational

[283] Marine Protection, Research and Sanctuaries Act of 1972 § 303(b), 16 U.S.C. § 1433(b) (2006).

fisheries in U.S. waters.[284] Enactment was driven by the need to restore and conserve depleted fish populations off the coasts of the United States, to stop rampant foreign overfishing of commercial species also fished by U.S. fishermen, and to build up the capacity of the American fishing industry.

*Conservation Provisions.* The law declared a fishery conservation zone between three and 200 miles offshore over which the U.S. has exclusive management authority; this zone excluded the area of state territorial waters, generally the area lying from the coastline to three miles seaward. In accordance with the 1982 United Nations Convention on the Law of the Sea, President Reagan in 1983 declared an exclusive economic zone (EEZ) in which the U.S. asserts sovereign rights of management; the proclaimed EEZ extends from the nation's shoreline (includes state waters) to a boundary 200 miles seaward. The MSA was amended in 1986 to re-designate the fishery conservation zone as the EEZ, but the MSA generally asserts federal management authority over fisheries in the portion of the EEZ outside of state waters.[285]

The basic goal of the MSA is to manage fisheries in federal waters so as to maintain a sustainable yield of fish for commercial and recreational exploitation. The species subject to management under the MSA include all "finfish, mollusks, crustaceans and all other forms of marine and plant life other than marine mammals or birds."[286] The MSA establishes eight regional fishery management councils made up of federal and state officials and private persons knowledgeable in fisheries (usually fishing industry

[284] Fishery Conservation and Management Act of 1976, Pub. L. No. 94-265, 90 Stat. 331 (codified as amended at 16 U.S.C. § 1801 (2006)).
[285] Michael J. Bean and Melanie J. Rowland, The Evolution of National Wildlife Law (Westport: Praeger, 1997) 150-153.
[286] Magnuson-Stevens Fishery Conservation and Management Act § 3(12), 16 U.S.C. § 1802(12) (2006).

representatives), who are charged with preparing a fishery management plan for each active fishery in the EEZ.

*Implementation.* The Secretary of Commerce is responsible for implementing the MSA in consultation with the regional councils. The Secretary must review and approve all fishery management plans prepared by the councils. To receive approval, plans must be consistent with the ten national conservation and management standards of the MSA, with other federal laws, and must contain such terms as are "necessary and appropriate for the conservation and management of the fishery to prevent overfishing and rebuild overfished stocks, and to protect, restore, and promote the long-term health and stability of the fishery."[287]

To help achieve plan objectives, the MSA authorizes councils, at their discretion to "designate zones where, and periods when, fishing shall be limited, or shall not be permitted, or shall only permitted only by specified types of fishing vessels or with specified . . . fishing gear."[288] Under this authority, the Secretary may approve council-recommended closures of ocean areas to some or all types of fishing for a specified period of time or until reopened.

A 1996 amendment to the MSA requires that a fishery management plan must "describe and identify essential fish habitat for the fishery, . . . minimize to the extent practicable adverse effects on such habitat caused by fishing, and identify other actions to encourage the conservation and enhancement of such habitat."[289] Essential fish habitat (hereinafter "EFH") is defined to mean "those waters and substrate necessary to fish for

[287] *Id.* § 303(a).
[288] *Id.* § 303(b).
[289] *Id.* § 303(a)(7).

spawning, breeding, feeding or growth to maturity."[290] Regulations implementing the EFH provision further specify that a fishery management plan assess the impacts on "habitat areas of particular concern" (hereinafter "HAPCs") and identify for potential designation as a HAPC "any EFH that is particularly vulnerable to fishing activities."[291] Councils must act to prevent, mitigate, or minimize any adverse effects from fishing, to the extent practicable, if there is evidence that a fishing activity adversely affects EFH in a manner that is more than minimal and not temporary in nature . . ."[292] Options for dealing with the harmful impacts of fishing gear include gear restrictions by season or area, closures of fisheries by time or area, designation of marine protected areas, and catch limits. The MSA requires the Secretary to assist the councils in incorporating information on essential fish habitat into all fishery management plans.

*Implementation.* The MSA has resulted in dozens of individual fishery management plans being prepared for single-species and mixed-species fisheries throughout the EEZ. These plans generally focus on the time, place and manner of fishing activity, and seek to conserve each fishery through a combination of regulations designed to meet an annual total allowable catch. Achieving sustainable fisheries has not been easy under the Magnuson-Stevens Act, and there have been notable failures, such as the collapsed fisheries for Atlantic cod and Pacific rockfish. An ecosystem-based approach to fisheries management under which fishery managers seek to address the broader ecological impacts of single-species fisheries is just starting to be pursued by NMFS and the regional fishery management councils. Nevertheless, it is not the explicit

[290] *Id.* § 3(10).
[291] Magnuson-Stevens Act Provisions, 50 C.F.R. § 600.815 (2005).
[292] *Id.*

goal of the MSA to conserve ocean ecosystems and their biological elements, but rather to manage fish populations for human extraction on a sustainable basis.

*Relation to Sanctuaries Act.* There is no mention of marine sanctuaries or the Sanctuaries Act in the MSA. However, several of the fishery law's provisions have an obvious nexus with the Sanctuaries Act. First, fishery management plans approved by the Secretary of Commerce must be "consistent with any other applicable law," such as the Sanctuaries Act and other marine laws. Second, the MSA requires that essential fish habitat, including habitat areas of particular concern, be identified in all fishery management plans and that the plans "minimize to the extent practicable" the adverse impacts of fishing on this habitat.[293] To the extent it is necessary to regulate the use of, or close certain areas of the ocean to particular fishing gears, the essential fish habitat provision intersects with the Sanctuaries Act's provisions to designate areas of special national significance based on their commercial fisheries values; comprehensively manage marine areas to complement existing regulatory authorities; maintain and restore natural biological communities; and enhance wise and sustainable use of the marine environment. For example, a key spawning area of a commercially valuable fish species could be included within a sanctuary to enhance the conservation and sustainability of the fishery under the MSA.

Whereas the MSA makes no mention of the Sanctuaries Act, Congress has amended the sanctuaries law several times to coordinate it with fishery activities managed under the MSA:

[293] Magnuson-Stevens Fishery Conservation and Management Act § 303(a)(7), 16 U.S.C. § 1853(a)(7) (2006).

1. The standards for sanctuary designation allow the designation of areas that are of national significance due to their special conservation qualities or "resource or human-use values," that are inadequately protected by state and federal authorities, or where existing state and federal laws "should be supplemented to ensure comprehensive and coordinated management." [294] In determining whether an area meets these standards, the Secretary must consider, among other factors, the area's "contribution to biological productivity, maintenance of ecosystem structure, [and] maintenance of ecologically or commercially important or threatened species or species assemblages," as well as "the present and potential uses of the area that depend on maintenance of the area's resources, including commercial and recreational fishing."[295] Further, the Secretary must consider the public benefits to be derived from sanctuary status, including the benefits of providing long-term protection to nationally significant resources, such as commercial fisheries.[296]

2. In making a designation decision the Secretary is mandated to consult with the appropriate officials of any fishery management council established under the MSA and local, state and federal officials affected by the decision.[297] The sanctuary designation document must include a description of the geographic area included, the area's characteristics that give it value, and the types of activities that will be subject to regulation to protect its characteristics.[298]

3. One purpose of the Sanctuaries Act is to facilitate all public and private uses of sanctuaries not prohibited by other laws, provided these uses are compatible with

[294] Marine Protection, Research and Sanctuaries Act of 1972 § 301(b), 16 U.S.C. § 1431(b) (2006).
[295] *Id.* § 303(b).
[296] *Id.*
[297] *Id.*
[298] *Id.* § 304(a).

resource protection. The Act further specifies that the Secretary shall not terminate "any valid lease, permit, license, or right of subsistence use or access that is in existence on the date of designation of any national marine sanctuary."[299] The combined effect of the foregoing provisions is to sanction commercial, recreational and subsistence fishing in sanctuaries; however, these activities are subject to regulation by the Secretary "consistent with the purposes for which the sanctuary is designated."[300]

4. With regard to fishing regulations in sanctuaries, the Sanctuaries Act provides that the appropriate regional fishery management council shall have the opportunity to prepare draft fishing regulations to implement a proposed sanctuary designation that calls for the regulation of fishing:

> The Secretary shall provide the appropriate Regional Fishery Management Council with the opportunity to prepare draft fishing regulations for fishing within the Exclusive Economic Zone as the Council may deem necessary to implement the proposed designation. Draft regulations prepared by the Council, or a Council determination that regulations are not necessary pursuant to this paragraph, shall be accepted and issued as proposed regulations by the Secretary unless the Secretary finds that the Council's action fails to meet the purpose of this chapter and the goals and objectives of the proposed designation. In preparing the draft regulations, a Regional Fishery Management Council shall use as guidance the national standards of section 301(a) of the Magnuson-Stevens Act . . . to the extent that the standards are consistent and compatible with the goals and objectives of the proposed designation. The Secretary shall prepare the fishing regulations, if the Council declines to make a determination with respect to the need for regulations, makes a determination which is rejected by the Secretary, or fails to prepare the draft regulations in a timely manner.[301]

In other words, draft fishing regulations must meet the purposes of the Sanctuaries Act and the specific goals and objectives of the proposed sanctuary; if these criteria are not met, the Secretary must reject the draft regulations.

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[299] *Id.* § 304(c).
[300] Marine Protection, Research and Sanctuaries Act of 1972 § 304(c), 16 U.S.C. § 1434(c) (2006). According to NOAA Sanctuary Program staff, permits with express expiration or renewal dates cease to be valid and may be subject to elimination.
[301] *Id.* § 304(a)(5).

As the MSA has gained strength over the years, the Sanctuaries Act has been little used to protect important commercial fish populations or their habitats. Moreover, as will be discussed in Chapter 6, the regional fishery management councils are now agitating to make the Sanctuaries Act subservient to the MSA in regulating fishing in sanctuaries.

***Marine Protected Areas Executive Order***

Executive Order 13158 issued by President Clinton in May 2000 has as its purpose the protection of "significant natural and cultural resources within the marine environment for present and future generations by strengthening and expanding the Nation's system of marine protected areas (MPAs)."[302] A marine protected area is defined as "any area of the marine environment that has been reserved by Federal, State, territorial, tribal or local laws or regulations to provide lasting protection for part of all of the natural and cultural resources therein."[303]

*Conservation Provisions.* The executive order directs the Secretaries of Commerce and Interior to be the lead agencies in developing a national system of MPAs, and establishes an advisory council. All federal agencies are directed to "take appropriate actions to enhance or expand protection of existing MPAs and establish or recommend, as appropriate, new MPAs." The order also requires all federal agencies to identify their actions that affect the resources protected in MPAs and to the maximum extent practicable under current law "avoid harm" to these resources.[304]

*Implementation.* Implementation of the executive order has moved at a slow pace. NOAA has established a small MPA Center whose charge is to coordinate the

[302] Exec. Order No. 13,158, 65 Fed. Reg. 34,909 (2000).
[303] *Id*.
[304] *Id*.

development of the framework for the national system. The center is located in the National Ocean Service, but is separate from the Sanctuary Program. The center is coordinating a national inventory of all existing marine protected areas in the United States and conducting other analyses. The Marine Protected Area Federal Advisory Committee, issued its recommendations for building a national MPA system in June 2005.[305]

*Relation to Sanctuaries Act.* Executive Order 13158 has a direct nexus with the Sanctuaries Act. Under the executive order, the Sanctuary Program is treated as one of several MPA programs conducted by governmental agencies. Among other things, and consistent with existing law, the order calls for NOAA to strengthen the management and protection of sanctuaries; to expand existing and create new sanctuaries that support a comprehensive national system of MPAs that represent diverse marine ecosystems; and to "avoid causing harm to MPAs [including sanctuaries] through federally conducted, approved or funded activities."[306] The major benefit of the MPA program lies in its potential to develop a national framework to protect examples of all the diverse marine ecosystems of the United States, a task the Sanctuary Program has so far failed to accomplish. A variety of federal, state and local agencies that manage ocean areas could contribute to this network, potentially expanding is completeness. For example the National Park Service and Fish and Wildlife Service manage some marine areas. The MPA executive order has the power to help better focus and coordinate the Sanctuary Program and other MPA efforts, but is a long way from fruition. The current MPA

[305] United States, Department of Commerce, NOAA, Protecting America's Marine Environment (Washington: NOAA, 2005).
[306] Exec. Order No. 13,158, 65 Fed. Reg. 34,909 (2000).

Program funding level of less than $2 million annually (projected for FY 2007) is a major hindrance to its effectiveness.

***Summary***

The relationship of the Sanctuaries Act to other marine conservation statutes has evolved in fits and starts, and is not always explicit or clear. This has led to confusion and missed opportunities for preserving the full array of marine ecosystems, habitat and species populations, and to conflicts between fisheries managers and sanctuary managers. These issues will be further addressed in the following chapters.

## CHAPTER 5. ACHIEVEMENTS AND LIMITATIONS

Having precipitated numerous sanctuary designation battles, suffered stop and go implementation, and been the subject of repeated regulatory and legislative changes over three decades, how effective has the Act been in achieving its ecological preservation and protection purposes? There are no easy answers to this question, which may be subdivided into two parts: How well has the Act performed in conserving the full range and nation's most important ecological resources? and How adequately does NOAA protect resources once they are included within sanctuaries?

No one, not even NOAA, has quantified the Program's ecological preservation achievements in any sort of systematic and comprehensive way. Most previous assessments of the Sanctuary Program have focused on specific implementation issues, such as the site selection and designation processes or the Program's focus and direction. The two in-depth assessments commissioned by NOAA in the 1990s did not measure preservation results against a baseline, or explore sufficiently the adequacy of the protection regimes within existing sanctuaries. An obvious and significant reason for the lack of measurement, no doubt, is the long time it took to get the Program up and running. Until the 1990s, sanctuary designations were contentious and sporadic, and there were few permanent staff on the ground to hold accountable.[307] Simply put, there was little to measure.

Furthermore, there are no clear statutory benchmarks against which preservation or protection results may be measured. The Act is open-ended in scope; it gives no guidance on how many sanctuaries are desired, what kinds of ecological resources should

[307] NAPA 2.

be protected or how many, or even what percentage of the nation's ocean domain should be set aside in sanctuaries. Rather, the Act simply mandates the protection of nationally significant areas for their multiple values. Although the Secretary of Commerce has the authority to establish and track meaningful program benchmarks, NOAA has not done so.

Despite lack of quantifiable data, it is possible to suggest reasonable ideas about what the Sanctuary Program should be conserving, and use available information to determine whether progress has been made. For purposes of contrast, the author periodically compares the Sanctuaries Act's achievements to those of the Wilderness Act, which was enacted eight years before the Sanctuaries Act, and which was one inspiration for early sanctuary concepts.

***Sanctuaries Act Achievements***

*Number of Sanctuaries.* One achievement indicator is the number of sanctuaries designated and the percentage of U.S. oceans they include. Thirteen sanctuaries have been established and a fourteenth is under active consideration in the Northwestern Hawaiian Islands, a little-known archipelago stretching between the main Hawaiian Islands and Midway. All but two of the thirteen sanctuaries have been designated to protect environmental values and resources, the exceptions being the *USS Monitor* and Thunder Bay sanctuaries, which protect sunken shipwrecks. Designated sanctuaries encompass a combined area of approximately 18,500 square miles, equivalent to less than 0.5 percent of the nation's EEZ.[308] Sanctuaries range in size from the tiny *USS Monitor* shipwreck at 0.83 square miles, to Monterey Bay, the largest sanctuary at 5,322 square miles. Four sanctuaries are less than 100 square miles in size; three are 100 to 1,000

[308] Statistics regarding sanctuary size are maintained by the National Marine Sanctuary Program, NOS, NOAA. Sanctuary Program statistics used in this thesis are current as of May 1, 2006.

square miles; three between 1,000 and 2,000 square miles; and three between 3,000 and 6,000 square miles. For the period 1972-2005, the average rate of sanctuary creation was about one every two and one-half years. Designations have come in spurts, with two in 1975, four in 1980-81, one in 1986, seven between 1989-1994 (Florida Keys incorporated two previously designated sites), and one in 2000.

The geographic distribution of sanctuaries is also uneven. In the Pacific, there are seven sanctuaries: Four off California, one off Washington, one in Hawaii, and one in American Samoa, but none adjacent to Alaska or Oregon, and none near the other Pacific possessions of the United States. In the entire Gulf of Mexico, there is just one small sanctuary 130 miles off the Texas coast. No sanctuaries have been established around the nation's Caribbean territories and possessions. There are four Atlantic sanctuaries: One at the southern tip of Florida encompassing the Florida Keys, one off Georgia, the *USS Monitor* shipwreck site off North Carolina, and one off Massachusetts. One sanctuary has been designated in Lake Superior, the sole sanctuary in the Great Lakes.

By way of contrast, 680 wilderness areas have been designated in 42 years. These areas are spread over 44 states and constitute approximately 4.7 percent of the U.S. land base. On average, 17 wilderness areas per year have been designated since 1964.[309]

*Candidate Sanctuaries.* If the number of sanctuaries is relatively small, the number of candidate sites is not much greater given the universe of potential resources worthy of sanctuary protection. Over the Program's 33-year history, NOAA has issued only two official lists of candidate sites. The initial List of Recommended Areas (LRA), published in 1979, identified 68 potential sites and named seven additional ones as active

[309] "Facts at a glance," 30 May 2006 <www.wilderness.net/index>.

candidates.[310] The LRA was supplanted in 1983 by a Site Evaluation List (SEL) that contained 29 sites.[311] Since its publication, the SEL essentially has been static. Several sites have been designated and several others studied and rejected. In addition, a few sites not on the SEL later received scrutiny either due to NOAA's initiative or congressional interest. Neither the LRA nor the SEL was based on a comprehensive, scientific field survey.

In contrast, the Wilderness Act originally mandated that certain national forest lands be designated as wilderness upon the Act's enactment and that certain other areas within national forests, and all lands within national parks and wildlife refuge areas be surveyed for suitable wilderness sites. In 1976, Congress required that all lands administered by the Bureau of Land management also be surveyed. In short, Congress directed that all suitable lands managed by the four land conservation agencies be comprehensively surveyed for their wilderness potential and appropriate sites recommended to Congress for designation.

*Ecological Coverage.* Although raw numbers of sanctuaries and the percentage of ocean area they cover give a rough idea of what has been achieved, they do not tell us much about how effective the Program has been to date in conserving the full array of marine biodiversity in U.S. waters. Although the Sanctuaries Act does not have biodiversity preservation as its express goal, the Act clearly may be interpreted as pointing in this direction. The constituent elements of biodiversity include ecosystems (and their communities and habitats), species, and the genetic material found in all marine life. Theoretically, protecting the full array of marine biodiversity would require

[310] Initial List of Recommended Areas, 44 Fed. Reg. 62,552 (1979).
[311] National Marine Sanctuary Program Final Site Evaluation List, 48 Fed. Reg. 35,568 (1983).

a sanctuary system that included one or more representative examples of each of the marine ecosystems of the U.S., plus the key habitats of all species, including unique or imperiled ones.

NOAA regulations state that the mission of the Sanctuary Program is to "identify, designate and manage areas of the marine environment of special national, and in some cases international, significance due to their conservation, recreational, ecological, historical, research, educational, or aesthetic qualities."[312] The meaning of "special national significance" is not defined by the Act or by NOAA regulations, nor have the terms "ecological" and "conservation qualities" been detailed. However, from the Program's first days, NOAA has repeatedly stated that protecting the environmental or ecological attributes of select marine areas is the fundamental purpose of the Program. Over the years, the Act's purposes have been the subject of continued debate and evolution. Today, one of the Act's nine purposes is "to maintain the natural biological communities in the national marine sanctuaries, and to protect and, where appropriate, restore and enhance natural habitats, populations, and ecological processes."[313] NOAA regulations specify that

> Particular attention will be given to the establishment and management of marine areas as National Marine Sanctuaries for the protection of the area's natural resource and ecosystem values; particularly for ecologically or economically important or threatened species or species assemblages, and for offshore areas where there are not existing special area protection mechanisms.[314]

In other words, without directly saying so, NOAA affirms that protecting the elements of biodiversity—especially as manifested in ecosystems and species—is the Program's central focus. So, what progress has been made toward the preservation of these targets?

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[312] National Marine Sanctuary Program Regulations, 15 C.F.R. § 922.2 (2006).
[313] Marine Protection, Research and Sanctuaries Act of 1972 § 301(b)(3), 16 U.S.C. § 1431(b)(3) (2006).
[314] 15 C.F.R. § 922.2 (2006).

NOAA is unable to answer this question because it does not conduct a macro accounting of the Program's biodiversity targets and achievements. But it could, as the following discussion suggests.

*Classification Problem.* Measuring achievement toward protecting biological resources presupposes a classification system for the resources one seeks to protect. Several approaches to classifying marine ecosystems have been developed by marine scientists and biogeographers over the years, especially at the macro classification level. However, no definitive, commonly accepted classification system exists for the ocean regions of the United States.[315] The challenge NOAA faces is how to use existing classification systems in a way that is useful to its own purposes, or alternatively create a new classification system. For instance, officials in charge of managing the Great Barrier Reef Marine Park in Australia, which protects the largest coral reef ecosystem in the world and stretches 1,429 miles along Australia's northeast coast, established a classification system that divides the park into 70 ecological regions. Today, the park has as its goal the zoning of at least 20% of each region for full protection.[316]

The first sanctuary identification and selection process, which produced the LRA in 1979, was based on subjective nominations and lacked any ecosystem classification scheme. The successor SEL process, promulgated in 1982 as part of the Program Development Plan, was designed to correct this flaw. The SEL employed a more rigorous site identification and selection methodology, based partly on ecological criteria and partly on other criteria such as human uses, threats and management concerns. One of the goals of the SEL process was to identify sanctuaries "illustrative of the variety of

[315] Elliott A. Norse, e-mail to the author, 26 Jan. 2006.
[316] Great Barrier Reef Marine Park Authority, "Frequently Asked Questions," 1 Apr. 2006 <.http://www.gbrmpa.gov.au/corp_site/management/zoning/rap/rap/pdfFAQs_3Dec2003.pdf>.

ecosystems found in the United States."[317] NOAA sought to classify potential sites based on their representation of 12 regional biogeographic regions (and their respective sub-regions), distinct ecological communities within the sub-regions, biological productivity (primary or secondary), presence of important species, importance of the area to the life history of particular species or assemblages of species, and special chemical, physical or geologic features. This smorgasbord of ecological characteristics helped NOAA construct environmental profiles of various sites which could be compared with one another. NOAA stated in the Program Development Plan that its classification system "is not intended to be a 'sanctuary want list' where every classification is meant to be represented by a site, but rather it serves as a point of reference for guiding the Program towards its mission."[318] In other words, ecology alone would not singularly drive the selection process; perfectly good examples of an ecosystem type might be rejected for political, economic or management reasons.

To develop the SEL, NOAA deployed eight regional review teams to gather available information and expert recommendations, and to identify potential sites with natural resource and human-use values that matched the SEL's various criteria. NOAA envisioned each team selecting three to five high-quality sites in each region for placement on the SEL. The teams focused on synthesis of existing information; they did not conduct new studies or inventories of their region's resources; thus, areas for which there was little knowledge at the time were ignored. The review process produced intense political controversy in Alaska and at Frenchman's Bay in Maine. The selection

[317] United States, Dept. of Commerce, NOAA, Office of Coastal Zone Management, National Marine Sanctuary Program: Program Development Plan (Washington: Dept. of Commerce, 1982) Appendix C [hereinafter PDP].
[318] PDP Appendix B-1.

process was aborted in Alaska altogether, and the Maine site was dropped from consideration. Thus, when the final SEL was issued in August 1983 with 29 sites, it already was deficient in its biogeographic representativeness (by excluding all sites in Alaska). Nonetheless, the SEL was a step forward from the LRA because it identified a number of diverse high-quality sites from which future sanctuaries could be drawn.[319]

*Ecosystem Representation.* To what extent do existing sanctuaries represent the ecosystem types identified in the SEL classification system? In a 1991 report to NOAA, E. Carleton Ray and M.G. McCormick-Ray discussed the issue of ecosystem representation in the sanctuaries, noting that just five of twelve coastal/marine biogeographic provinces of the U.S. and its territories were represented in the sanctuaries system at the time.[320] Today, six of the provinces named by the Rays are represented in the system and four of them are represented two or more times.[321] The Rays argued that "representativeness is not assured by the occurrence of a sanctuary within a biogeographic province" because finer scale analysis and classification must be done to capture the full range of sub-regions, communities, habitats and species populations.[322] Furthermore, the Rays informed NOAA that the SEL was out of date scientifically.[323] NOAA agreed, and in a 1991 hearing on the Act's reauthorization, testified to the House Merchant Marine Committee that NOAA was conducting a thorough review of the site

[319] National Marine Sanctuary Program Final Site Evaluation List, 48 Fed. Reg. 35,568 (1983).
[320] *The Current Status and Future Needs of the National Oceanic and Atmospheric Administration's National Marine Sanctuary Program: Hearing Before the Subcomm.s on Oceanography, Great Lakes and the Outer Continental Shelf of the House Comm. on Merchant Marine and Fisheries*, 102d Cong. 148 (1991) (reprinting in full the Ray and McCormick-Ray report, A FUTURE FOR MARINE SANCTUARIES).
[321] Chandler and Gillelan 10564 (Table 2).
[322] *The Current Status and Future Needs of the National Oceanic and Atmospheric Administration's National Marine Sanctuary Program: Hearing Before the Subcomm.s on Oceanography, Great Lakes and the Outer Continental Shelf of the House Comm. on Merchant Marine and Fisheries*, 102d Cong. 148 (1991).
[323] *Id.* at 150.

identification process, and that NOAA intended to revise the SEL to ensure that all biogeographic provinces of the nation would be covered.[324]

This produced an interesting reaction. The initial version of the 1992 House reauthorization bill added new findings that sanctuaries can contribute to "maintaining a natural assemblage of living resources for future generations," and that "sites representative of biogeographic regions" of the nation's coastal, ocean and Great Lakes waters could contribute to the maintenance of these assemblages.[325] Oddly, the bill's accompanying report explained that while the findings encouraged the inclusion of sites representing the various biogeographic regions, the committee did not believe "it is necessary" to ensure complete coverage of all biogeographic regions in the sanctuary system.[326] The finding on biogeographic representation ultimately was deleted from the enacted statute, whereas the finding on maintaining natural assemblages remained.

Nothing positive ever materialized from NOAA's review of the SEL which appears to have been overtaken by events. The 1991 review team report emphasized the need to adequately fund the Sanctuary Program and to continue designations.[327] Yet, a scant four years later, NOAA eliminated its criteria for new sanctuaries, including the SEL classification system, as part of President Clinton's National Performance Review to eliminate obsolete, duplicative and inappropriate regulations. Noting that the SEL was "not presently active," NOAA said it intended to issue revised criteria prior to the list's reactivation.[328] The reasons NOAA failed to re-issue a revised SEL after promising

[324] *Id*. at 170 (follow-up questions for Trudy Coxe, Director, Office of Ocean and Coastal Resource Management, NOAA).
[325] H.R. 4310, 102d Cong. §2 (1992).
[326] H. REP. NO. 102-565, at 9 (1992).
[327] Review team 17.
[328] 60 Fed. Reg. 66,875 (1995).

Congress it would do so, are not easily ascertained. At any rate, Congress did not follow up on the matter, indicating that re-issuance of the SEL was not a high priority for Congress either.

In 2000, Congress passed amendments to the Sanctuaries Act which placed a moratorium on the designation of new sanctuaries until such time as the Secretary of Commerce certifies that a new sanctuary would not have a negative effect on management of the overall system, and that there are sufficient Program resources available to manage existing sanctuaries and complete sanctuary site characterization studies of all sanctuaries within 10 years. While the law did not explicitly prohibit issuance of new site selection criteria or site surveys or studies, neither did it provide an incentive for NOAA to undertake such work. Congress' message was clear: It expects NOAA to focus on improving the management of existing sanctuaries before creating new ones.

In 2005, NOAA reported to Congress that "increased appropriations are necessary to fully implement sanctuary management plans for the existing sanctuaries," and that the Program would need additional resources to add a new sanctuary in order to avoid a "detrimental impact" on the system.[329] Therefore, impliedly, new designations will not be pursued by NOAA because NOAA cannot meet the conditions for lifting the moratorium. Currently, there are no active candidate sanctuaries, save for the Northwestern Hawaiian Islands, which Congress authorized. Neither is any inventory

[329] United States, NOAA, NOS, National Marine Sanctuary Program, Report to Congress as Required by the National Marine Sanctuaries Act (Washington: NOAA, 2004) 5.

work being conducted by NOAA to identify new potential candidate sites. Reportedly, a new system development plan is under discussion by Sanctuary Program staff.[330]

In summary, while the SEL sought to characterize known special sites according to selected ecological and other criteria, NOAA did not conduct a field survey of all U.S. ocean areas or identify a suite of areas and sites calculated to capture the full range of ecosystem and species diversity. In fact, no attempt was made to define the Program's ecological preservation goal in that way. Instead, the process focused on picking the most practicable known areas deemed worthy of designation at the time. Furthermore, a new site can be added to the list only if it is an "important" new discovery or "if substantial new information previously unavailable establishes the national significance" of the site, and the site meets the classification criteria.[331] The SEL process proved to be relatively static, and unable to incorporate new information as marine science evolved and the status and condition of species and ecosystems changed.

*Protected Species.* Conservation of marine wildlife has been a major objective of the Sanctuary Program since its inception. The first Program regulations, issued in 1974, identified areas valuable to wildlife as one desired type of sanctuary.[332] However, Congress soon complicated the picture by enacting other conservation statutes dealing with various marine species without always specifying clearly how the new laws related to the Sanctuaries Act. In the same year of the Act's passage, Congress enacted the Marine Mammal Protection Act, which gave the Secretary of Commerce responsibility for protecting most species of marine mammals and their habitats. In 1973, Congress enacted a revised Endangered Species Act, which assigned most marine animals, all

[330] Elizabeth Moore, e-mail to the author, 24 Jan. 2006.
[331] 48 Fed. Reg. 24,302 (1983).
[332] 39 Fed. Reg. 23,255 (1974).

anadromous species of fish, and all marine plants that are threatened or endangered with extinction to the care of the Secretary of Commerce. And in 1976, Congress passed the Fisheries Conservation and Management Act, which established a new management regime for federal fisheries in the EEZ with the goal of restoring, conserving and managing commercial fish stocks and their habitats. NOAA administers its marine mammal and endangered species responsibilities through the Protected Resources Program of the National Marine Fisheries Service (NMFS), one of several NOAA bureaus. The fisheries law is also administered by NMFS through the Sustainable Fisheries Program.

These single-resource laws have their own conservation goals, strategies, and requirements. Protecting depleted and endangered species is a challenge because generally they are wide ranging, and little may be known about their life histories, movements and key habitats. Moreover, human users of oceans are not keen to give up or change their activities that directly or indirectly impact marine species. NMFS' approach to protected marine species management has been to focus principally on regulating human interactions with these species, as opposed to identifying and designating essential or critical habitats and restricting access or closing these areas to incompatible uses.

One of the express purposes of the Sanctuaries Act, first stated in the 1984 Amendments, is to establish marine sanctuaries that complement existing regulatory authorities by conserving sites with biological resource values, including the habitats of protected species and commercial and recreational fish species. The PDP cites species representation as one of the desired natural resource values of a sanctuary site: "This

criterion would apply to marine habitat areas upon which ecologically limited species (e.g., threatened, endangered, rare, depleted, endemic, or peripheral species) are dependent during all or part of their lives."[333] Accordingly, the SEL classification system listed the presence of these species and their habitats as values to be considered in site surveys and characterization.[334]

In 1992, Congress mandated that one purpose of the Act is "to maintain, restore, and enhance living resources by providing places for species that depend upon these marine areas [i.e., sanctuaries] to survive and propagate."[335] Congress revised this language in 2000 to read: "To maintain the natural biological communities in the national marine sanctuaries, and to protect, and where appropriate, restore and enhance natural habitats, populations, and ecological processes."[336] The Sanctuaries Act further states that among the factors to be considered by the Secretary in determining whether to create a sanctuary are "maintenance of ecologically or commercially important or threatened species or species assemblages, maintenance of critical habitat of endangered species, and the biogeographic representation of the site."[337]

So, it is very clear that ecosystems and species' habitats should be focal points for sanctuary designations. Yet NOAA has no formal regulations regarding how the Sanctuary Program should be coordinated with and complementary to NMFS' Protected Resources Program so as to conserve marine mammals and endangered species. Both NOAA programs operate pretty independently, a classic example of stovepipe

[333] PDP, C-3.
[334] PDP, B-9 and 10.
[335] Oceans Act of 1992, Pub. L. 102-587, tit. II, sec. 2101(b), § 301(b)(9), 106 Stat. 5039, 5040 (codified as amended at 16 U.S.C. § 1433 (2006)).
[336] Sanctuaries Act Amendments of 2000, Pub. L. 106-513, sec. 3(c)(4), § 301(b)(3), 114 Stat. 2381, 2382 (2000) (codified as amended at 16 U.S.C. § 1431(b)(3) (2006)).
[337] *Id*. § 303(b)(1)(A).

government within a single agency. A major reason for this non-coordination is that preserving places in the ocean for wildlife would create conflict between the sanctuaries and fisheries programs, thus undermining NMFS' predilection for crafting actions to conserve marine mammals and endangered species that do not unduly disrupt economically important fisheries. It has been NOS practice to defer to NMFS on protected species management to the point that the Sanctuary Program has no independent strategy of its own for protecting the species Congress directed the Program to protect. NOS does not maintain an accessible program-level database detailing how many marine mammal or endangered species or populations and their habitats are protected in sanctuaries now, and has no well-defined process to identify species assemblages and habitats that may merit sanctuary status.

Despite these handicaps, the Sanctuary Program has provided varying degrees of protection to some marine mammal populations. According to Randall Reeves, seven sanctuaries "were selected and designed at least partly to benefit marine mammals."[338] These include Farallones, Stellwagen, Cordell Bank, Monterey Bay, Channel Islands, Olympic, and the Hawaii Humpback Whale sanctuary. Animals within these sanctuaries receive differing levels of protection from human activities (discussed further below). However, the key habitats of many at-risk species have not been identified or protected by either the NMFS Protected Resources Program or the Sanctuary Program, even though some species have been listed as threatened, endangered or depleted for decades. For example, as of December 31, 2004, thirty-one marine mammal species or species'

[338] Randall Reeves, The Value of Sanctuaries, Parks, and Reserves (Protected Areas) As Tools for Conserving Marine Mammals, Final Report to the Marine Mammal Commission (Bethesda: Marine Mammal Commission, 2000) 21.

populations worldwide were listed as depleted (see Appendix IV). [339] Of these, 20 occur in U.S. waters and are subject to priority conservation measures under the MMPA. Fourteen of the 20 are listed as threatened or endangered under the ESA. As of March 13, 2006, draft or final recovery plans have been issued for eight marine mammals and critical habitat designated for seven of them: Hawaiian monk seal, eastern and western populations of the Steller sea lion in Alaska, northern right whale, West Indian manatee and two populations of the northern sea otter.[340]

Sanctuaries have not been used consistently as a management tool to fully protect the key habitats of protected marine mammals. For example, the extremely endangered northern right whale, whose population is estimated to be about 300, uses Stellwagen sanctuary as part of its summer feeding grounds, but the sanctuary is not closed to fishing or other activities during the whales' presence.[341] A known right whale calving area in the South Atlantic also has not been considered for sanctuary status. (The area is crossed by major shipping lanes.) No marine sanctuary protects the critical habitats of the West Indian manatee within the coastal waters of Florida or Puerto Rico. (The State of Florida has several manatee reserves.) Even the Humpback Whale sanctuary in Hawaii, the only sanctuary exclusively established to protect a depleted/endangered species' habitat, has no seasonally closed areas that protect whales from fishing operations or marine vessel traffic (and attendant noise), though this issue currently is under study.

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[339] Marine Mammal Commission, Annual Report to Congress 2004 (Bethesda: Marine Mammal Commission, 2004) 32.
[340] NOAA prepared the plans for the monk seal, Steller sea lion and right whale. Recovery plans for the manatee and two populations of northern sea otter were prepared by the U.S. Fish and Wildlife Service.
[341] United States, Dept. of Commerce, NOAA, 14 Mar. 2006 <http://www.nmfs.noaa.gov/pr/species/esa.htm>.

The one species that may soon receive close to full protection by a sanctuary throughout most of its range is the Hawaiian monk seal. The seal's entire designated critical habitat and a large portion of its foraging range lie within the proposed Northwestern Hawaiian Islands sanctuary, a 135,597 square mile expanse of small islands and banks and surrounding waters. The sanctuary would include a unique complex of coral reef ecosystems in which roughly 25 percent of the species are endemic, including the seal. Because of the seal's precarious status—the population has been in overall decline for 30 years and roughly 1300 individuals are left—full protection of the seal's habitat is warranted to limit interaction with humans, especially fishermen, and to limit vessel traffic and other disturbances. Because the area is remote and unsettled, and only a very small fishery for deep-dwelling bottomfish now occurs there, full protection is highly feasible if the fishery were to be terminated.

*Endangered Species.* The preservation record of the Sanctuary Program for marine species of plants and animals listed as endangered or threatened under the ESA is very similar to that for marine mammals. There are 61 marine species or species populations listed by NMFS as endangered or threatened, most of which occur in U.S. waters.[342] They include 12 marine mammals, 8 sea turtles, 30 marine and anadromous fish, 1 plant, and 1 invertebrate. All federal departments and agencies are mandated by the ESA to further the Act's conservation purposes.

As with its approach to marine mammals, in most cases NMFS has sought to protect marine endangered species by regulating human activities in waters where the species are found, rather than by designating closed areas that provide full protection to

[342] United States, Dept. of Commerce, NOAA, NMFS, "Species Under the Endangered Species Act (ESA)," 14 Mar. 2006 <http://www.nmfs.noaa.gov/pr/species/esa.htm>.

species' critical habitats. To the author's knowledge, no sanctuary was established mainly to benefit a listed endangered marine species or assemblage of endangered species except the Hawaii Humpback Whale sanctuary. However, partly by serendipity and partly by design, endangered and threatened species are found to some degree in all marine sanctuaries (see Appendix II).

In sum, NOAA could use the Sanctuary Program more effectively to complement its work under the ESA and MMPA by protecting key habitats of listed species within small wildlife sanctuaries, or assemblages of species in larger ecosystem-based sanctuaries. Using a sanctuary to fully protect just one endangered marine mammal or fish may be impractical in many cases, but preserving select ecosystems and their species assemblages is a feasible conservation strategy. Conservation International, an NGO, has pioneered the use of a biological "hotspot" strategy for identifying areas with high numbers of unique and threatened species, ecosystems, and habitats and targeting those areas for protection and sustainable management.

That NOAA has not aggressively used sanctuaries as a conservation tool for at-risk species may be ascribed to the Sanctuaries Act's ambiguous relationship to other biological protection laws, the unwieldiness of the sanctuary designation process, and conflict between NOAA's fishery management and biodiversity preservation mandates. Michael Weber, a former NGO and NOAA official, observes that "anytime the sanctuary program became overtly interested in marine mammals, NMFS either pushed back or dragged its feet. NMFS has resisted any kind of area management for as long as I can remember, and still does, when it comes to endangered and threatened species."[343]

[343] Michael Weber, e-mail to the author, 16 Mar. 2006.

*Commercially important species.* With regard to commercially and recreationally important species of fish and shellfish, the utility of the Sanctuary Program in protecting these species and their habitats, though mandated by the Sanctuaries Act, was made questionable by passage of the Magnuson-Stevens Act (MSA), which set up a self-contained fishery management regime focused on the economic exploitation of ocean fisheries on a sustainable basis. Under the MSA, NMFS is advised by regional fishery management councils made up of fishery managers and commercial or recreational fishermen whose first interest lies in protecting the economic benefits of the system, not in conserving marine biodiversity. Given their charge of managing all federal fisheries in the entire federal portion of the EEZ, NMFS and the councils have not expected the Sanctuary Program to do much in the way of fisheries conservation or protection except to prohibit oil drilling and waste dumping. Few sanctuaries have made the protection of commercial fisheries populations or habitats a primary focus, and fishing interests have consistently resisted any regulation of fishing in sanctuaries.

Congress watered down the incentive for the Sanctuary Program to preserve populations and habitats of commercial species when it amended the Sanctuaries Act in 1984 to clarify that all valid existing uses of the ocean (including commercial and recreational fishing) were to continue in newly designated sanctuaries; that all uses of a sanctuary are to be facilitated provided they are compatible with resource protection; that NOAA must choose at the time of designation what uses of a sanctuary it intends to regulate (giving NOAA the option of excluding fishing from regulation); and that the appropriate regional fishery management council have the opportunity to draft fishing regulations for the sanctuary which must be accepted as drafted by the Secretary, unless

the Secretary finds the regulations do not meet the purposes of the sanctuary or the Sanctuaries Act. NOAA interpreted these directives as a sign for the Sanctuary Program to defer to NMFS and the councils on fishing matters, though the Secretary of Commerce clearly has the legal duty of both protecting fish populations and their habitats in sanctuaries, and regulating fishing in accordance with sanctuary objectives.

Congress further complicated the picture when it passed amendments to the MSA in 1996 calling for the designation and protection of "essential fish habitat" and for the adverse effects of fishing to be minimized. In combination, all of these decisions have made it easier for the fishery councils and NMFS to ignore sanctuaries as a conservation tool and to tout the authority of the MSA as sufficient for all aspects of fishery conservation and management, including in the sanctuaries.

The one aspect of the Sanctuary Program that has been a clear boon to fisheries protection is the prohibition of polluting activities within sanctuaries, particularly oil development and waste dumping. This has significantly reduced the threat of pollution to fisheries that lie within or near sanctuaries. The authority to exclude oil development from fishery grounds is not available under the MSA. Fishermen and conservationists have mutually supported the exclusion of oil and gas development certain sanctuaries. Indeed, "[t]he West Coast sanctuaries were the product of local desire to stop offshore oil development."[344] Presently, all sanctuaries are protected indefinitely from new oil development under a presidential memo issued by President Clinton in 1998.[345]

*Summary.* In summary, after 33 years of administration, the preservation achievements of the Sanctuaries Act have been modest compared to what they could have

[344] NAPA 17.
[345] Memorandum on Withdrawal of Certain Areas of the United States Outer Continental Shelf from Leasing Disposition, 34 WEEKLY COMP. PRES. DOC. 1111 (1998).

been had the Secretary of Commerce used his discretionary power to pursue marine biodiversity preservation more aggressively and competently. The Sanctuary Program does not have a current classification system for the natural resources it is supposed to protect, or an ongoing survey process that builds on new knowledge and incorporates new information about ocean ecosystems and species habitats. While certain marine ecosystems have received enhanced protection due to sanctuary designation, the number of different ecosystem types protected is small compared to the total needing protection. Furthermore, site identification and study of new sanctuaries has ground to a halt until Congress lifts the moratorium it established on new designations and provides the Program with a larger budget. The Sanctuary Program has not been used strategically or consistently to complement NOAA's programs to conserve marine mammal and endangered species habitats. Finally, although the Sanctuaries Act has been used to protect commercial fisheries habitat from oil development, it has not been employed to protect key fisheries habitat from the harmful effects of fishing.

***Adequacy of Protection in Sanctuaries***

Another way of looking at the preservation achievements of the Sanctuaries Act is to ask: How well have ecological and biological resources been protected once they have been included within sanctuaries? Answering this question is fraught with difficulty. NOAA does not issue periodic reports concerning the ecological state of the sanctuaries or trends over time. Indeed, due to limited funding, the Sanctuary Program has yet to complete site inventories and characterizations of the resources managed at some of its sanctuaries, though progress is being made. NOAA seeks to have site characterizations for management purposes completed according to the following timetable: Four by 2000,

six by 2005, nine by 2010 and twelve by 2015.[346] Once a characterization is complete, the next step, hopefully, will be to monitor and report on the status and trends of the species at each sanctuary.

Furthermore, as previously noted, the Sanctuaries Act provides no uniform protection standards for sanctuaries, does not forbid any use of a sanctuary permitted under other authorities, and facilitates all uses of sanctuaries unless the Secretary of Commerce determines a use to be incompatible with resource protection. In short, a sanctuary is a highly plastic concept, and each sanctuary's protections are shaped by the context and individual circumstances of its creation. Due to these limitations and the lack of data on resources status and trends, the author does not attempt to provide a quantitative answer to the question of how effectively sanctuaries protect resources. Instead, the author examines the architecture of the Act's protection regime with the objective of making qualitative observations about its logic and efficacy. The following analysis is underpinned by the fact sheets in Appendix II that show which resources are protected and which activities regulated at each sanctuary.[347]

1. Preservation is not the singular goal of the Sanctuary Program. As has been noted, resource preservation (or "protection" as the Act now reads) is not the singular goal of the Sanctuaries Act. Congress has weighted the Act with no fewer than nine purposes. In contrast, the Wilderness Act's purpose is brief and to the point: To secure "an enduring resource of wilderness" and to maintain its "primeval character" in an "unimpaired" state for the American people.[348] The profusion of purposes in the

[346] Elizabeth Moore, e-mail to the author, 3 April 2006.
[347] The fact sheets were prepared by the staff of Marine Conservation Biology Institute in 2005-06, and are reproduced in full with the permission of MCBI.
[348] Wilderness Act of 1964 § 2, 16 U.S.C. § 1131 (2006).

Sanctuaries Act threatens to undermine the Program's focus and enables NOAA to spend time and resources on non-protection activities such as facilitating uses, public outreach and education. While these are laudable activities, and some of them support the protection mission, they can easily consume budgetary resources otherwise needed for research, monitoring, and protection activities.

Moreover, the Act's purpose of facilitating all uses (though seemingly constrained by language enabling the Secretary to forbid uses incompatible with protection), when combined with the Act's declaration that all valid rights of access and use of a sanctuary prior to its designation may continue, and with the lack of any statutory prohibitions of commercial or extractive uses, severely undermines the Act's protective power. According to the Turnstone Group,

> while the Act makes resource protection priority, it gives standing to resource users who can challenge the Secretary's decision to prohibit certain activities, and creates the expectation among resource users that their use will be facilitated. The Secretary must then defend his or her regulatory decisions by demonstrating that such activities are <u>not "compatible"</u> with resource protection as that protection is defined in the Act. . . . This fact raises the bar for determining whether an activity should be allowed and fundamentally changes the question the Secretary must answer before regulating an activity. Instead of the precautionary question "might this activity harm the resource?" the test is more complex. The Secretary must, in effect, answer . . . "Does this activity harm the resource enough in comparison to the benefits people get from that activity to justify regulating it?"[349]

Answering the question "involves a complex mixture of scientific assessment, economic and social analysis and value judgment."[350] It also "assures that any significant regulatory action" within a sanctuary, "will not only be controversial, but open to legal challenge."[351] The contentious history of sanctuary designations, and of efforts to establish fully protected zones within sanctuaries, proves the point. Due to stakeholder

[349] Turnstone 6.
[350] Turnstone 6.
[351] Turnstone 6.

opposition, many sanctuary designations have taken years to reach fruition, have been limited in scope, or dropped. For example, the oil industry vigorously fought the designation of Flower Garden Banks, whose designation took over 12 years. Georges Bank, a prime fishing ground, was studied twice and never designated. And other sites like those in Alaska were so controversial they did not even make the candidate list. So far, only two sanctuaries—Florida Keys and Channel Islands—have attempted to establish marine reserves (no-extraction zones) in a portion of their waters post-designation.[352] Both efforts generated intense opposition from some commercial and recreational fishing interests. Florida Keys has been successful in setting aside approximately six percent of its area in fully protected zones, a process that consumed 10 years. Channel Islands sanctuary, in partnership with the state, began a reserve zoning process in 1999 which is still in progress. Currently, there are no announced plans by NOAA to seek marine reserves at other sanctuaries. (The marine reserves issue is discussed further below.)

2. No clear, uniform protection standard pertains in sanctuaries. The Turnstone Group calls the Sanctuaries Act a "paradox" that provides "few real protections."[353] Unlike the Wilderness Act, which generally prohibits commercial activities and use of motorized vehicles in wilderness areas, the Sanctuaries Act has no statutory prohibitions on any use. Furthermore, the Act provides no definition of what protection means. In fact, the degree of protection varies from sanctuary to sanctuary due to the discretionary authority of the Secretary to decide at the time of designation what resources to protect

[352] A third sanctuary, Monterey Bay, incorporated three, small state-designated reserves that collectively make up less than 4 square miles of the sanctuary. They are Hopkins, Point Lobos and Big Creek marine reserves.
[353] Turnstone 5.

and which activities to regulate and to what degree. For example, if fishing stakeholders oppose a sanctuary, NOAA may gain their support (or their non-opposition) by not listing fishing as a regulated activity, as it did at Stellwagen and Monterey Bay sanctuaries. If significant vessel traffic crosses a sanctuary, potentially threatening resident whales with collisions or noise, NOAA can ignore the activity as it did when it designated the Hawaii Humpback Whale sanctuary. And if bottom trawling is causing damage to sanctuary resources, the Sanctuary Program can leave it to NMFS to regulate the activity or not.

> Even when a sanctuary does prohibit activities in general, there are often exceptions for specific and often significant exceptions.
>
> Some of these exceptions are minor but others substantially weaken protection. For instance, most sanctuaries prohibit discharge or deposit of materials in sanctuary waters, but include exceptions for minor activities such as discharge of deck washdown water. However, Monterey Bay and Gulf of the Farallones Sanctuaries include exceptions for disposing of dredge material and the Farallones provides an exception for the discharge of sewage. The Flower Garden Banks prohibits the use of explosives but then gives an exception to the use of explosives for oil and gas exploration.[354]

Although NOAA theoretically may prohibit activities in a sanctuary that are incompatible with the sanctuary's particular goals and objectives, this authority is significantly constrained by the Act's requirement that the Secretary cannot prohibit any use within the sanctuary that is valid under existing law, permit, or lease at the time the sanctuary is designated. This accounts for many of the exceptions described above. However, NOAA may regulate these uses, and potentially eliminate them at the time their authority expires.[355] There is no NOAA compilation of how many expired uses have been phased out on incompatibility grounds. In sum, the protection regime is variable at each sanctuary, and the term "sanctuary system" does not connote an aggregation of units with common management polices, practices and protection

[354] Turnstone 11.
[355] John Armor, personal interview, 31 Mar. 2006.

standards as does the National Wilderness Preservation System and the National Park System.

3. Permanency of protection in sanctuaries is not guaranteed. No protections in sanctuaries are necessarily permanent because protections are established administratively and at the discretion of the Secretary. In contrast, wilderness areas are established as an "enduring resource" for future generations of Americans, and wilderness designations and their protection status can only be altered by Act of Congress.[356]

Furthermore, protections, such as they are in sanctuaries, are subject to administrative change. Section 304(e) of the Sanctuaries Act, enacted in 1992, requires the Secretary to review a sanctuary's management plan ever five years:

> Not more than five years after the date of designation of any national marine sanctuary, and thereafter at intervals not exceeding five years, the Secretary shall evaluate the substantive progress toward implementing the management plan and goals for the sanctuary, especially the effectiveness of site-specific management techniques, and shall revise the management plan and regulations as necessary to fulfill the purposes and policies of this chapter. This review shall include a prioritization of management objectives.[357]

Ostensibly, a review at five-year intervals would lead to better management at each sanctuary, including increased protection, through integration of new knowledge and adjustments to changed conditions. However, it is also possible that protections could be weakened. For example, five-year reviews for the four sanctuaries off California have renewed the struggle over who should have authority to regulate fisheries in the sanctuaries: The regional fishery management councils and NMFS, or NOS under the Sanctuary Program.

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[356] Wilderness Act of 1964 § 2, 16 U.S.C. § 1131 (2006).
[357] Marine Protection, Research and Sanctuaries Act of 1972 §304(e), 16 U.S.C. § 1434(e) (2006).

If they are not done quickly, management reviews can become a burden on the Program. NOAA's implementation of the first reviews has proven to be lengthy. Because many sanctuary designation documents and management plans were seriously flawed or out of date, NOAA determined it needed to conduct a full-blown examination of each sanctuary's management needs, and if necessary, overhaul management plans (which may necessitate issuance of an EIS) and change sanctuary designation documents. NOAA is still in the process of conducting the first round of five-year reviews, with nine plans projected to be finished in 2006-2007.[358] Turnstone Group argues that the review interval should be lengthened in order to provide "sufficient stability and durability to the protections," and to allow for management adaptation based on the results of protections applied.[359] Given the length of time spent on the first cycle of reviews, this seems wise.

Although periodic adaptive management in sanctuaries is a laudable goal, the Sanctuaries Act's lack of an expeditious designation document amendment procedure is a constant hindrance to flexible management. The Sanctuaries Act is too inflexible when it comes to dealing with unforeseen protection issues that were not covered in original designation documents, and therefore not subject to regulation. Should the need arise to protect sanctuary resources from a looming threat, the Secretary may issue emergency regulations, but cannot simply amend the sanctuary management plan in an expeditious way. Instead, the Act requires that any change in the terms of designation go through the same steps as the original designation, a process that usually takes years. For example, some sanctuary designation documents do not identify fishing as subject to regulation, whereas others like that of Channel Islands specifically say fishing is not regulated in the

[358] Elizabeth Moore, e-mail to the author, 10 Apr. 2006; telephone interview, 21 Jan. 2006.
[359] Turnstone 16-17.

sanctuary.[360] If a fish population in the region declines and a portion of that declining population lives in the sanctuary for all or a portion of its life, or if a resident fish population is in trouble, the Sanctuary Program cannot simply stop the harvest of that stock in the sanctuary or ban harmful fishing practices like bottom trawling that affect the stock's habitat. Similarly, underwater noise has been implicated in the stranding deaths of several marine mammal species. No sanctuary designation document regulates underwater noise. Should compelling proof emerge that a certain ambient noise level is harmful to certain marine mammal species, regulation of the noise level in sanctuaries would require amendments to every sanctuary document. In short, the Act's designation document amendment procedure serves as a potential roadblock to smart, expeditious and cost-conscious resources management, which no five-year review can cure.

4. States have veto power over sanctuaries within state waters. Another factor affecting sanctuary protection is the authority of a state or territory (hereinafter referred to as "state") under the Sanctuaries Act to exclude its waters entirely from a sanctuary, or to not agree to specific terms (e.g., a management provision) within the state's portion of the sanctuary. In essence, this means a state may block the protection of nationally significant resources that lie within its jurisdiction. In contrast, states do not have this power with regard to national park and refuge designations (which may require set asides on federal lands or purchase of private lands), or with regard to wilderness area designations on federal lands.

The state veto power is grounded in the Submerged Lands Act of 1953, which gives states ownership of the submerged lands adjacent to their coasts, and to the natural

[360] United States, NOAA, National Marine Sanctuary Program, Compilation of National Marine Sanctuary Designation Documents as of March, 2006 (Washington: National Marine Sanctuary Program, 2006) 2-4.

resources within those waters.[361] In most cases, state territorial waters extend three miles seaward from a state's coastline. This ecologically rich zone is often characterized by a high diversity of species, ecosystem types and habitats. Because the Secretary is required to consult with states early in the sanctuary designation process, a state usually makes its desires known about a NOAA sanctuary proposal before exercising a formal veto. States have killed a number of potential or candidate sanctuaries at various stages of development. All sites in Alaska being considered by a review team for the SEL were dropped from consideration at the request of the governor and members of Congress, and have never been reconsidered. Several Hawaii governors fought a NOAA proposal for a multi-purpose sanctuary in the main islands before a deal was cut to limit the sanctuary's focus to some mild protections for humpback whales that winter and calve there; the sanctuary protects little else.[362] A site near St. Thomas, U.S.V.I. that included Virgin Islands territorial waters was abandoned because the territorial government did not issue the agreed-upon management regulations expeditiously.[363]

Most recently, Congress expressly forbade the designation of a Northwest Straits sanctuary in Puget Sound because of local government and public opposition. NOAA had listed the site, which lies wholly within state waters, as a candidate sanctuary on the SEL in 1983, and had been actively studying it for a number of years with no resolution. Essentially, local leaders and citizens felt they could mange their resources better and

[361] Submerged Lands Act of 1953, 43 U.S.C. § 1301 (2006).
[362] NAPA 90-91.
[363] 47 Fed. Reg. 10,271 (1982).

with more flexibility than could a NOAA sanctuary bureaucracy, and terminated the process by appealing to their congressional delegation.[364]

Under the lead of Senator Murray and Representative Metcalfe, Congress in 1998 established a Northwest Straits Commission and directed the Secretary of Commerce to provide it with technical and annual financial assistance. The broad purpose of the commission is to stop the decline of the region's natural resources by empowering "local communities and citizens to take the initiative to protect their home waters."[365] According to Murray, the commission represents an experiment to see if the local empowerment can work to protect and restore marine resources in lieu of a federal sanctuary.[366] The unique circumstances of the commission's creation are unlikely to be replicated elsewhere. What is notable about this case is the ability of local government to turn a sanctuary lemon into a lemonade of federal financial aid for a local conservation effort. The long-term protections achieved under the Northwest Straits model remain to be seen. The commission does, however, represent a more positive response than would have an outright state veto.

5. Threats from federal agency actions are not prohibited or mitigated. In its 1992 Amendments to the Act, Congress required agencies whose actions, or actions authorized by them, are "likely to destroy, cause the loss of, or injure any sanctuary resource" to consult with the Secretary of Commerce about the activity before it is approved.[367] The provision covers actions that take place both within and without

[364] *Oversight Hearing on the National Marine Sanctuaries Act Before the H. Subcomm. on Fisheries, Wildlife, and Oceans*, 104th Cong. (1996) (statement of Brian Calvert, Port Commissioner, Friday Harbor Port District).
[365] 144 CONG. REC. S10,439 (daily ed. Sept. 16, 1998) (statement of Sen. Murray on S. 2448).
[366] *Id.*
[367] Marine Protection, Research and Sanctuaries Act of 1972 §304(d), 16 U.S.C. § 1434(d) (2006).

sanctuaries, and requires the consulting agency to provide the Secretary with a "written statement describing the action and its potential effects . . . at the earliest practicable time, but in no case later than 45 days before the approval of the action unless such Federal agency and the Secretary agree to a different schedule."[368] If the Secretary finds the action is likely to destroy or injure sanctuary resources, he is required to recommend "reasonable and prudent alternatives" to the proposed action and about which the acting agency must further consult with the Secretary. The consulting agency is under no obligation to accept any alternatives, but must provide written reasons for rejecting them.[369] The Secretary is authorized to promulgate regulations to implement the consultation provision, but has not done so in the 14 years since the provision was enacted. It is not clear why this provision has never been implemented. NOAA certainly is not unfamiliar with agency consultations; it has similar duties and lengthy experience under both the Endangered Species Act and the Fish and Wildlife Coordination Act.[370] At a minimum, issuance of consultation regulations could heighten the visibility of sanctuaries and prompt voluntary actions by other agencies to protect them. Regulations could also help integrate wider ecosystem considerations into sanctuary management.

6. Sanctuaries do not effectively regulate fishing and its impacts. Perhaps the most glaring gap in the Sanctuary Program's protection regime is NOAA's failure to protect sanctuary environments from the impacts of overfishing and the environmental impacts of destructive fishing practices. Commercial overfishing has caused severe population declines of some commercial fish species. Depleted or devastated populations

[368] *Id.*
[369] *Id.*
[370] Endangered Species Act, 16 U.S.C. § 1531 (2006); Fish and Wildlife Coordination Act, 16 U.S.C. § 661 (2006).

include Atlantic cod, snapper-grouper reef fish in the South Atlantic and Gulf of Mexico, various species of rockfish and the nearly extinct white abalone along the Pacific Coast, and rock lobster and bottomfish in Hawaii. According to NOAA, 56 fish stocks in the U.S. are classified as overfished.[371] Declining or overfished commercial and recreational species are found in a number of sanctuaries, but in general sanctuaries do not prevent or regulate the taking of overfished species, whether they be transient or resident populations. For example, the Hawaiian Islands Humpback Whale sanctuary, established primarily for research and education about humpback whales, does not regulate fishing in the sanctuary, even though the "overfishing of bottom fish . . . and live capture of reef fish for the pet trade have depleted stocks sharply."[372]

Instead of aggressively pursuing the Act's purpose of comprehensive and coordinated conservation and management, and prohibiting uses incompatible with resource protection, Sanctuary Program staff candidly admit, "We don't do fish," meaning they leave commercial and recreational fisheries management in federal waters to NMFS and the regional fishery management councils.[373] This long-time stance has resulted in eight sanctuaries being designated where fishing is not subject to regulation under their designation documents.[374] NOS' hands-off-fishing policy has produced the bizarre situation of fishing being allowed to damage marine life in sanctuaries. Fishing not only removes large numbers of individual fish of various species, with potentially negative effects on the local or regional population, but may also damage seafloor

[371] Marine Fish Conservation Network, Shell Game: How the Federal Government is Hiding the Mismanagement of Our Nation's Fisheries (Washington: Marine Fish Conservation Network, 2006) 5.
[372] NAPA 92.
[373] Michael Weber, personal interview, 1 Oct. 2003.
[374] Untied States, Dept. of Commerce, NOAA, National Marine Sanctuary Program, Compilation of National Marine Sanctuary Designation Documents as of March, 2006 (Washington: NOAA, 2006).

habitats. For example, commercial fishing with bottom trawls for groundfish species can cause severe disturbance of the seafloor by crushing, burying and exposing to predators those species that live in, or on the bottom, suspending sediments in the water column, and leveling seafloor topography. Bottom trawling, which has been compared to forest clear cutting, is considered the most environmentally destructive method of commercial fishing because of its impact to physical habitat and its killing of non-target species.[375] Yet, bottom trawling is conducted in six of the larger sanctuaries, and is passively allowed to continue by NOAA. (See Appendix II.)

This dysfunctional situation arises from several causes. First, when the Sanctuaries Act was originally passed, commercial and recreational fishing were viewed by Congress as compatible activities, and sanctuaries were supposed to protect productive fisheries from the threat of industrial development, especially energy development. There was little thought that fishing itself could be a harmful activity. Indeed, fishing was not even mentioned in the 1972 law.

Second, fishing interests, fearful they would be restricted by sanctuaries, soon convinced Congress to amend the Sanctuaries Act to accommodate fishermen's desires. Congress started by requiring that the Sanctuary Program consult with federal, state and local fishery management bodies. In 1984, under pressure from fishermen, Congress amended the Act to require the Secretary to give the appropriate Regional Fishery Management Council "the opportunity to prepare draft regulations for fishing within the Exclusive Economic Zone as the Council may deem necessary to implement" a proposed

[375] Les Watling and Elliott A. Norse, "Disturbance of the Seabed by Mobile Fishing Gear: A Comparison with Forest Clear-cutting," Conservation Biology 12 (1998): 1189. Lance E. Morgan and Ratana Chuenpagdee, Shifting Gears: Addressing the Collateral Impacts of Fishing Methods in U.S. Waters (Washington: Island Press, 2003).

sanctuary designation.[376] The draft regulations must be guided by the national standards of the Magnuson-Stevens Act, to the extent these standards "are consistent and compatible with the goals and objectives of the proposed designation."[377] Furthermore, the Secretary must accept a council's recommendation unless it "fails to fulfill the purpose and polices [of the Sanctuaries Act] . . . and the goals and objectives of the proposed designation."[378] If the Secretary rejects the Council-proposed regulations, or the Council fails to submit regulations or to submit them in a timely manner, the Secretary must prepare the regulations.[379]

Although the Sanctuaries Act clearly gives the Secretary power to object to a council recommendation that would conflict with the Sanctuaries Act or a sanctuary's purposes, the Act places

> the burden on the Secretary to show why the regulations from Councils (that are generally less protective and more interested in resource exploitation) are incompatible with the goals and objectives of a sanctuary's designation. Given the multiple-use standard in The Sanctuaries Act, this finding is a difficult one to make. To our knowledge, this provision has never been used [by the Secretary] to protect Sanctuary resources from the effects of fishing.[380]

Recently, the Secretary did reject draft fishing regulations proposed for the Northwestern Hawaiian Islands sanctuary by the Western Pacific Regional Fishery Management Council because the regulations were not consistent with sanctuary's proposed goals and purposes, but it is too soon to call this a new trend.[381]

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[376] Marine Protection, Research and Sanctuaries Act of 1972 § 304(a)(5), 16 U.S.C. § 1434(a)(5) (2006).
[377] *Id.* § 304(a)(5).
[378] *Id.*
[379] *Id.*
[380] Turnstone 7.
[381] United States, Department of Commerce, NOAA, Finding on the Recommendation of the Western Pacific Fishery Management Council Regarding the Management of Fisheries within the Proposed Northwestern Hawaiian Islands National Marine Sanctuary (Washington: NOAA, 2005).

Third, NOAA's duty to regulate fishing in sanctuaries is compromised by the Secretary's conflicting statutory responsibilities for sanctuary preservation and fisheries exploitation. NMFS is a large, well-established agency that is responsive to its fishing stakeholders and their congressional allies, whereas sanctuaries are managed by a small office within NOS whose principal allies are a handful of national and local NGOs and some marine tourism operators. According to Turnstone Group, conflicts between NMFS and NOS typically "get resolved in favor of . . . [the fisheries service] at low levels before ever reaching the level of the Secretary."[382]

The historic reluctance of the Secretary to challenge council-proposed fishing regulations for sanctuaries, and to name fishing as an activity to be regulated in newly designated sanctuaries, avoids anticipated conflict and congressional disfavor. The Secretary's behavior is guided by congressional expectations and reinforced by congressional disinterest in addressing the negative impacts of fishing in sanctuaries. For example, the legislative designations of Monterey Bay and Stellwagen Bank were silent on fisheries regulation, leaving it to NOAA to decide the issue.[383] In both cases it was understood by NOAA that neither the fishing industry nor the local congressman supported regulating fishing, so neither sanctuary named fishing as an activity subject to regulation in its designation document. As a consequence, neither sanctuary was well positioned to help stop the drastic decline of certain commercial fish populations in their regions—cod and other ground fish off New England in the 1990s (Stellwagen) or Pacific rockfish in Monterey Bay in the early 2000s—by establishing no-fishing zones.

[382] Turnstone 7.
[383] Oceans Act of 1992, Pub. L. 102-587, tit. II, sec.s 2202-03, 106 Stat. 5039, 5048-49.

Despite NOAA's generous treatment of fishing in sanctuaries, fishing interests and the regional fishery management councils want the Sanctuaries Act further constrained, especially to prevent the Sanctuary Program from creating fully protected marine reserves in sanctuaries. A contentious but successful effort to create marine reserves at Florida Keys alerted fishing interests that on occasion NOAA was willing to use marine reserves as a conservation management tool. In 1999, the State of California and NOAA began a process to create a complex of marine reserves around the Channel Islands. After an attempt to get consensus among stakeholders failed, NOAA and the State of California decided to support an alternative that creates 10 no-take "marine reserves" and two limited-take "marine conservation areas." The state reserves constituting approximately 102 nautical square miles of sanctuary waters were approved in 2002 and took effect in 2003; the complementary federal reserves are still pending.

In 2000, President Clinton issued an executive order calling on federal agencies to establish a national system of marine protected areas (including marine reserves) by employing existing authorities. Shortly after the executive order's issuance, recreational fishing groups began seeking passage of a so-called Freedom to Fish Act. In its early form, the bill would have restricted the creation of fisheries closures under the MSA, and amended the Sanctuaries Act to require that all fishing regulations in sanctuaries be drafted by fishery management councils according to the standards and procedures of the MSA.[384]

President Clinton's executive order creating the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve capped commercial and recreational fishing and set aside a number of preservation zones in which fishing is prohibited. The possibility that the

[384] S. 3234, 106th Cong. (2000).

proposed sanctuary for the islands might increase the extent of the fully protected areas, or eliminate commercial and recreational fishing altogether, has fueled a counterattack by the Western Pacific Fishery Management Council to maintain fishing in the proposed sanctuary. In 2004, all eight councils jointly petitioned Congress to amend the MSA to make the MSA the controlling legal authority for fishing regulations in sanctuaries. The councils' latest position was submitted to the House Resources Committee at a May 2006 hearing.[385]

The two objects of fishermen's dissatisfaction—marine reserves and the Sanctuaries Act's real but latent authority to regulate incompatible fishing—were addressed in a 2006 legislative proposal to reauthorize the Magnuson-Stevens Act (MSA). H.R. 5018, introduced by House Resources Committee Chairman, Richard Pombo, in March 2006, stipulates that any sanctuary regulation that affects any fish species or essential fish habitat (as these terms are defined by the MSA), must meet the national standards and all other provisions of the MSA; and that closures of fisheries managed under the MSA must meet four criteria before they can be established, including a very broad cost-benefit impact analysis that is extremely vague.[386] The Pombo language is very similar to amendments suggested by the regional fishery management councils.

If it were enacted, the Pombo legislation apparently would override the authority of sanctuary managers to limit fishing activities determined to be incompatible with a sanctuary's ecosystem protection objectives, thus negating the primary purpose of the

[385] *Hearing on Reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act Before the H. Comm. on Resources*, 109th Cong. (2006) (attachment 2 to statement of Dr. Donald McIsaac, Executive Director, Pacific Regional Fishery Management Council).
[386] H.R. 5018, 110th Cong. (2006).

sanctuary system, which NOAA says is ecosystem protection. The chairman's language was opposed by twenty-three local and national conservation organizations and a bipartisan group of members of the Resources Committee.[387] Although the language was deleted during the committee's markup of the bill, the fishing issue is far from resolved; Chairman Pombo indicated his intent to revisit the issue when the Sanctuaries Act reauthorization bill is considered in the 110th Congress.

7. Sanctuaries prohibit oil development, but this policy is threatened with reversal. Like fishing, oil development has been a flashpoint in the designation process throughout the Act's history. Although there were assertions when the Act passed and afterwards that oil development could be a compatible use of a sanctuary, the Act itself neither allows nor prohibits oil development in sanctuaries. The oil industry has routinely opposed restraints on oil development, and its position has been supported by the Department of the Interior. NOAA's position on oil extraction has fluctuated. Under Carter, NOAA supported a ban on new oil development at Channel Islands and Farallones. In fact, it was the desire of local citizens to exclude oil from their shores that impelled the creation of sanctuaries in California. Under President George Herbert W. Bush, NOAA did not initially propose to completely ban oil development at Cordell Bank.[388] As a result, Congress stepped in and legislatively banned oil extraction at Cordell Bank, and later at Monterey Bay and Florida Keys. Meanwhile, NOAA left a small amount (less than 5 percent) of Flower Garden Banks open to oil development when it finally concluded its designation.

[387] American Cetacean Society *et al.*, letter to Members of Congress, 25 Apr. 2006. The author represented MCBI in advocating against the language.
[388] 54 Fed. Reg. 22,449 (1989).

More recently, President Clinton issued an executive memo to the Secretary of the Interior in 1998 which indefinitely bars new oil and gas activities in sanctuaries. Nevertheless, the issue of oil development is by no means settled.[389] The Clinton memo can be rescinded by a succeeding President. Also, Congress can intervene as it did in 2005, when it passed the Energy Policy Act, a provision of which authorizes an inventory of oil and gas resources throughout the entire Outer Continental Shelf, including potentially in marine sanctuaries.[390] Given the recent 2006 price of oil at over $60 per barrel, energy development on the OCS is likely to remain a threat to existing and potential sanctuaries in the foreseeable future. For example, legislation is under consideration in the second session of the 109th Congress to expand federal offshore oil and gas development.[391]

***Summary***

In summary, there are both statutory and administrative policy factors that significantly constrain NOAA's ability to provide uniformly strong protections to the ecosystems, habitats, and marine species within designated sanctuaries. Unlike wilderness areas, which have a clear preservation purpose and the same national protection standard, protections within sanctuaries are discretionary and variable. In particular, the Sanctuary Program's many limitations make it very difficult to create fully protected sanctuaries or even fully protected marine reserves within sanctuaries. Only two sanctuaries—Florida Keys and Channel Islands—have established marine reserves. (Monterey Bay incorporates three very small state marine reserves that were not

[389] Memorandum on Withdrawal of Certain Areas of the United States Outer Continental Shelf from Leasing Disposition, 34 WEEKLY COMP. PRES. DOC. 1111 (1998).
[390] S. 14, 108th Cong. § 105 (2003).
[391] H.R. 4761, 109th Cong. (2006).

designated by NOAA.) The marine reserves in Florida Keys comprise about six percent of sanctuary waters. The dearth of fully protected areas within the sanctuaries is starkly at odds with the Act's purpose of maintaining natural biological communities and protecting, restoring and enhancing natural habitats, populations and ecological processes within sanctuaries for the benefit of future generations. It is also at odds with the latest science, which recommends that at least 20 percent of ocean waters be set aside as marine reserves to restore ocean life, a recommendation discussed more fully in Chapter 6.

## CHAPTER 6. FINDINGS, CONCLUSIONS AND RECOMMENDTIONS

In previous chapters, the author has shown how NOAA's Sanctuary Program and its underlying authority, the National Marine Sanctuaries Act, have undergone a complex and turbulent evolution. Although the Act certainly has benefited ocean conservation, and the Sanctuary Program continues to forge ahead, the Program has faced and continues to face many problems and obstacles. The facts are these:

1. Preservation of resources in sanctuaries is not the Act's singular goal. The Sanctuaries Act calls for the protection of nationally significant marine areas, but does not clearly define the types of resources that are supposed to be protected as nationally significant, or specify how many sanctuaries of what kind are desired. Furthermore, there is no express authority in the Act to create marine reserves or no-extraction zones within sanctuaries.

2. In 33 years, NOAA has included less than 0.5 percent of the nation's ocean domain within the sanctuary system. Sanctuaries vary greatly in size, and represent only six of the 12 biogeographic provinces of the United States and its territories. Representative examples of many types of ecological communities and habitats remain unidentified and un-included in sanctuaries.

3. The Act does not mandate any specific, ongoing inventory process for classifying, locating and selecting examples of marine ecosystems or habitats for inclusion in sanctuaries; neither are there deadlines for inventories or designations. The Act gives complete discretionary power to the Secretary of Commerce to identify sanctuary sites at leisure. Although the Secretary has discretion to develop program guidelines and benchmarks, NOAA lacks a coherent preservation strategy that includes a

classification system for the ecological targets, a methodology for inventorying the oceans to determine where these resources are located, or a workable process for selecting and studying sites for designation.

4. The Act's multiple use mandate has severely compromised its preservation purpose. The Act does not prohibit any activity within sanctuaries. The Act declares that all uses are to be facilitated unless the Secretary makes a finding that a particular use or activity should be banned. It also grandfathers all authorized uses in existence at the time of designation. This puts the burden on the Secretary to show why a particular use should be prohibited and gives users the opportunity to challenge the Secretary's decisions.

5. The measurable benefits to resources covered by the Program's protection regime is difficult to know because NOAA does not compile or report status and trends information on sanctuary ecosystems, species or habitats.

6. States have the authority to block creation of nationally significant sanctuaries that lie wholly or partly within state territorial waters, and have done so on several occasions. This contrasts with land conservation statutes that do not allow state veto of federally authorized conservation designations, such as national parks and refuges that may include a mix of federal and private lands. The state veto power can be a problem because state waters include many ecosystem types that deserve protection or parts of ecosystems that span federal and state jurisdictions.

7. The designation process is maddeningly slow and unreliable, especially for controversial sites. The way the process operates, every designation becomes a consensus-seeking negotiation with stakeholders who have no incentive for giving up

their use. The more stakeholders affected, the less likely strong protections will emerge.[392] For example, it took over twelve years to designate the Flower Garden Banks and Monterey Bay sanctuaries. Congress became so frustrated with the designation process that it mandated designation deadlines for several sites and studies of others. When some of these deadlines were not met, Congress intervened to designate four sanctuaries in the 1990s. In short, the process was so dysfunctional that Congress had to bypass it.

8. Except for the proposed Northwestern Hawaiian Islands sanctuary, there are no candidate sites being surveyed or planned for designation. NOAA's previous list of 29 candidate sites on the 1983 SEL, was declared inactive in the mid-1990s, and is out of date. A desire to focus on developing existing sanctuaries led to an indefinite congressional moratorium on new designations.

9. The Sanctuary Program is not being used effectively or consistently to complement NOAA's Protected Resources Program for the conservation of marine mammals and endangered species. Although some sanctuaries protect marine mammals or endangered species, the habitats of many listed species remain unidentified or unprotected, or both. Thus, the Program is failing to achieve the Act's purpose of "comprehensive and coordinated conservation . . . in a manner which complements existing regulatory authorities."[393]

10. The Sanctuaries Act lacks a reasonably expeditious method for changing sanctuary management plans and regulating activities that are currently unregulated. The

[392] Brax 113-17.
[393] Marine Protection, Research and Sanctuaries Act of 1972 § 301(b)(2), 16 U.S.C. § 1431(b)(2) (2006).

complex procedures that are now followed waste time and resources, and work against smart adaptive management of a public trust resource.

11. NOAA has failed to issue regulations to implement the agency consultation provision of the Act, a mechanism that would enable NOAA to provide reasonable alternatives to agency-proposed actions that could negatively impact sanctuaries.

12. Most sanctuaries prohibit oil and gas development. However, the latest oil supply crisis prompted by the Iraq War is putting pressure on Congress to allow more offshore oil and gas drilling, and sanctuaries may be directly or indirectly affected in the future.

13. The management and protection of fish populations and fish habitat in sanctuaries has been tacitly ceded by NOS to NMFS and the regional fishery management councils with approval of the Secretary. The Sanctuaries Act has facilitated this by requiring fishery management councils to prepare draft fishing regulations for sanctuaries. Nevertheless, the Secretary of Commerce retains the power under the Sanctuaries Act to reject fishing regulations that would have negative impacts on sanctuary resources, but a secretarial rejection is rare. Furthermore, the entire issue of fishing impacts on a sanctuary can be ignored if NOAA does not list fishing as an activity to be regulated at the time a sanctuary is designated, as has frequently occurred.

14. The Sanctuaries Act has been under continuing pressure from fishing interests, and the issue of fishing in sanctuaries is again salient. The Sanctuary Program's efforts to set up marine reserves in several sanctuaries, combined with advocacy efforts by NGOs, have led fishing interests to seek proposed amendments to the Magnuson-Stevens Act that would require all sanctuary regulations affecting fishing to comply with

the Magnuson-Stevens Act's standards and provisions. If successful, this change would severely compromise the Secretary's authority to manage sanctuary waters holistically and to protect sanctuary ecosystems from damaging fishing practices.

***Conclusions***

The Sanctuary Program was intended to preserve important areas in the ocean for compatible multiple uses. While progress has been made over the last 33 years in providing certain protections to sanctuary resources, the Program has proved to be an unreliable vehicle for preserving the full array of the nation's ocean ecosystems and resources within a comprehensive national system. What accounts for this failure?

The Sanctuary Program is severely constrained by its own legal architecture. Unlike the Wilderness Act, which had a long history of development in the hands of Howard Zahnhiser of the Wilderness Society, and eight years of further refinement by Congress, the Sanctuaries Act was written and negotiated in a relatively short period of time under threat of a presidential veto if it restricted oil development. The veto threat helped move the House drafters of the bill away from a wilderness-type approach to one emphasizing multiple use, which meant that preservation could not be the singular goal. The Act that emerged in 1972 touted preservation and restoration as its purposes, but its mechanics were vague and ambiguous; the law had few guidelines for identifying and designating sanctuaries, and no deadlines and few protection standards. It did not define multiple use, though its sponsors claimed this was the law's preferred management aim.. And it provided no incentives for users to limit or give up existing uses in sanctuaries. Subsequent amendments have not corrected these defects, and in some ways made them worse by multiplying the Act's purposes, prescribing elaborate designation steps, and

denying managers full power to regulate all activities within sanctuaries. Finally, although the Act calls for the designation of state and federal waters in sanctuaries, the Act allows the governor of a state, commonwealth or territory to veto the state portion of the designation or any of a sanctuary's terms. This provision has enabled states and territories to undermine several sanctuary designations irrespective of their national significance.

The Act has been extremely difficult to implement due to its lack of boundaries, and continuously evolving provisions. The implementation of any new ocean program would be a challenge, but the Sanctuaries Act's lack of guidelines and specifics made the task even more difficult. As a new concept, comprehensive management of ocean areas was ripe with pitfalls. The implementers had to deal with an array of existing stakeholders and governmental agencies who had well-developed ideas about how oceans should be managed and for whom. Moreover, when NOAA inherited the Act, it was a new agency with no experience in place-based management. Nor did NOAA seem to learn much from the experience of the land managing agencies that had a long history identifying and preserving discrete land areas. NOAA's early mistakes in handling site nominations, surveys and designations produced years of turmoil.

Given the open-ended nature of the Sanctuaries Act and the Secretary's broad discretionary power, conflict over the Sanctuary Program was probably inevitable. Fishing and energy interests were bound to test a weak law that essentially sets up a stakeholder dogfight over which resources are to be protected in each sanctuary, how they are to be protected, and to what degree. Although the public's environmental concerns had impelled passage of the Act, the marine environmental community was

small in the 1970s and 1980s. So, when a backlash developed against the Act NGOs and their congressional allies were fortunate to save a watered down law that emphasized multiple use, not resource preservation, as the Program's driving concern. In the main, fishing interests have been extremely successful in maintaining fishing in sanctuaries, even to the detriment of sanctuary resources. The latest goal of fishing stakeholders and the fishery management councils is to stop the creation of marine reserves in sanctuaries by requiring that sanctuary fishing regulations be obedient to the standards and provisions of the Magnuson-Stevens Act, and thus under the control of the regional fishery management councils and NMFS. If fishing interests are successful, holistic management of sanctuaries as ecosystems will become a much more difficult, it not fruitless, exercise. Moreover, the ecological worth of the entire Program would be highly questionable.

A significant drag on program effectiveness is the lack of flexibility in dealing with new information and events. Congress prescribed an elaborate consultation and designation process, which in practice takes years to implement and has many intervention points for those who oppose sanctuary designation. In addition, Congress has mandated reviews of all management plans every five years. After a sanctuary has been designated, any proposal to change the original terms of designation dealing with the sanctuary's purposes, resources protected or activities regulated, must repeat the procedural steps of the original designation. This is both a disincentive to adjust the management plan, as well as a costly way to do business. The Act requires NOAA to "list the activities subject to regulation" to protect a sanctuary's characteristics and values and to prepare in advance the detailed regulations to implement the management plan in

order to facilitate public review and comment. NOAA implements the law by specifying a list of activities subject to regulation in each sanctuary designation document. At present, very few of these documents mention fishing, marine noise, aquaculture, or motorized recreation (e.g., jetskis) as being subject to regulation. Should the need arise to deal with any of these activities or impacts, NOAA must repeat the time-consuming and costly full-designation process. NOAA could avoid this trouble by routinely identifying all foreseeable activities that could harm a sanctuary's resources as subject to regulation, even if it did not actually regulate certain activities immediately. Alternatively, Congress could amend the law to give the Secretary the authority to regulate any activity in a designated sanctuary and establish a streamlined management plan amendment procedure.

NOAA has not risen to the challenge of making the Sanctuary Program a showcase worth developing and defending, though there are encouraging signs of change. To a large degree, the Program's progress and success hangs too much on the discretion of the Secretary of Commerce, whose options range from doing little, to making the Program a model of enlightened ecosystem management. Despite the drawbacks of the statute, one would think that building a strong Sanctuary Program with a large public constituency and increasing budget would be appealing to a federal bureaucracy, but apparently it has not been, at least historically. The Sanctuary Program has not been a NOAA favorite by several measures. For example, the Sanctuary Program has never been given bureau status within NOAA like the National Park Service has within the Department of the Interior. Additionally, budget growth has been slow. It was not until 1990—two decades after the Act passed—that the program had permanent field staff.

While Congress has modestly upped the budget routinely over the years, the budget still does not meet basic needs. Furthermore, NOAA has dragged its feet on a number of sanctuary designations, especially during the Reagan Administration. According to Weber, the Reagan appointee in charge of sanctuaries sought to kill the Program.[394] Even today, the Program does not have a scientifically defensible strategy for identifying new sanctuaries because NOAA failed to replace the classification system it threw out in the mid-1990s, then was caught by the 2000 congressional moratorium on growth.

In addition to inexperience, another explanation for NOAA's tepid implementation of the Sanctuary Program is the Secretary's conflicting mandate for managing the nation's fisheries. Although the Sanctuary Program dutifully set out in the mid-1970s to identify and manage significant ocean areas, NOAA quickly found out how difficult this was going to be when fishermen and oil companies registered their vigorous opposition. NMFS is one of NOAA's largest and most powerful bureaus, and had a long history of promoting commercial fisheries before becoming part of NOAA in 1970. Fishermen and seafood companies, of course, are NMFS' major constituents. NMFS had little reason to pay attention to the upstart Sanctuary Program when fisheries interests conflicted with sanctuary interests, especially so after passage of the MSA, which is NMFS' driving authority. The dominance of NMFS, with the implicit or explicit blessing of NOAA leaders and the Secretary of Commerce, has been a constant brake on the Sanctuary Program. What else could account for the Sanctuary Program's deference to NMFS in the management fishing in sanctuaries? Congress has generally turned a blind eye to this state of affairs, making it even harder for the Sanctuary Program to stand up to NMFS.

[394] Chandler and Gillelan 10541.

NOAA's slack implementation of the Sanctuary Program has invited extra-departmental intervention. Great leaps forward by the Program, such as they are, have resulted principally from presidential or congressional direction. President Carter was responsible for energizing a feeble program with his Environmental Message to Congress in 1977. Carter ultimately designated four sanctuaries, the most of any president. Congressional frustration with the pace of designations during the Reagan years impelled four legislative designations and three congressionally-mandated NOAA designations during the period 1989 to 1994. Part of the problem here, of course, lay in the laborious designation process Congress had itself designed, and part with Reagan Administration's bias against federal regulatory programs in general.

The other president who significantly boosted the Sanctuary Program was Clinton. In addition to his memorandum prohibiting oil development in sanctuaries, President Clinton indirectly stimulated the largest proposed sanctuary ever to be considered. In early 2000, Clinton announced his intention to create a large coral reef reserve in the Northwestern Hawaiian Islands (hereinafter "NWHI") as part of his conservation legacy. This triggered negotiations with the Hawaii congressional delegation over the fate of this vast, little known region. Ultimately, Congress authorized Clinton to create a reserve by executive order, but also required that the reserve be considered for sanctuary status. The purpose and management protocol for the 136,000 square mile NWHI Coral Reef Ecosystem Reserve established by Clinton reflects current scientific theory on the importance of ecosystem management and marine reserves. The principal purpose of the reserve is "long-term conservation and protection of the coral

reef ecosystem and related marine resources . . . in their natural character."[395] The reserve is managed using a "precautionary approach with resource protection favored when there is a lack of information regarding any given activity."[396] Among other things, fishing levels are capped in the reserve, and a number of preservation zones were designated in which no fishing is allowed. Thus, in one presidential act, Clinton created the foundation for a sanctuary that would be more than seven times the size of the entire sanctuary system and a sanctuary whose purpose would lean more towards preservation than multiple use.

In 1972, the Sanctuaries Act was ahead of its time in trying to protect and manage ocean areas. At the time the Act was passed, there was no scientific consensus about preserving ocean areas or how this would help marine conservation, and this may partly explain why the law turned out as it did. In the last 20 years, marine scientists have concluded that ocean restoration and protection cannot be achieved under the current paradigm of single-species management and single-activity regulation. What is needed is a strategy for protecting all types of marine ecosystems and their functions. As part of an ecosystem approach, scientific opinion is overwhelmingly in favor of creating networks of fully protected marine reserves to help preserve marine biodiversity and ecosystem functions and services.

Both the Pew Oceans Commission and U.S. Commission on Ocean Policy found America's governance of the oceans to be seriously outdated and increasingly ineffective. Both commissions called for a move toward regional ecosystem management and the establishment of new policies and administrative structures that can direct ocean agencies

[395] Exec. Order No. 13,178, 65 Fed. Reg. 76,903 (2000), *amended by* Exec. Order No. 13196, 66 Fed. Reg. 7395 (2001).
[396] *Id*.

toward that end. The U.S. Commission on Ocean Policy endorsed the value of marine protected areas as a tool for meeting ecosystem management goals in certain circumstances, and called for the promulgation of federal goals and guidelines for the uniform design and implementation of these areas. It made no recommendations regarding the Sanctuaries Act.[397] The Pew Commission went further, calling for a new national policy act for the oceans, establishment of regional ecosystem management councils, and creation of a national system of marine reserves. The ecosystem councils, said Pew, "should utilize ocean zoning to improve marine resource conservation, actively plan ocean use, and reduce user conflicts."[398] Marine reserves are necessary within this larger scheme, said Pew, "to protect marine ecosystems, preserve our national ocean treasures, and create a legacy for our children."[399] In other words, national marine reserves would protect nationally significant areas within a comprehensive ocean zoning framework. The Pew Commission left it to others to figure out how to reconcile the Sanctuaries Act with marine reserves legislation.[400]

As already noted, the Sanctuary Program neither mandates the creation of fully protected sanctuaries, nor expressly authorizes the establishment of marine reserves in sanctuaries. NOAA believes it has the discretion under the Sanctuaries Act to create different kinds of use zones in sanctuaries, including marine reserves, and has done so in several instances. To date, the Sanctuary Program has been opportunistic, pursuing marine reserves when circumstances and conditions permitted. But the going has been tough because of opposition from fishing and other interests. In view of the lack of a

[397] U.S. Commission 66-69.
[398] Pew Commission 34.
[399] Pew Commission 34.
[400] Christopher Mann, personal interview, 31 May 2006.

national policy for comprehensive ocean zoning, the Sanctuary Program could benefit by having an express mandate to zone sanctuaries to create marine reserves, as well as a process that would produce an outcome with reasonable dispatch.

Another factor hindering the Sanctuary Program has been lack of public support. In general, public support for the Sanctuaries Program has been modest compared to that for other conservation programs, such as those for parks, refuges and wilderness areas. Only a few national environmental NGOs have made improving the Sanctuary Program a priority.[401] While conservation organizations, fishermen and the local public might combine to support sanctuaries that exclude oil development in places like Channel Islands and Monterey Bay, environmentalists have not been able to regulate fishing, or destructive fishing practices, such as bottom trawling in the larger sanctuaries.

A major reason environmental organizations have been only modestly successful in securing sanctuary designations with strong protections is public ignorance. According to SeaWeb, the public at large still thinks the largest problems in the ocean are oil pollution and contaminated seafood, not overfishing or destruction of marine habitats. Furthermore, most respondents believe a larger percent of our oceans is fully protected than is the case now, and only one-third are aware that the sanctuary system even exists.[402] It has proven very difficult for the handful of environmental organizations working on sanctuaries to rally local, regional and national publics to demand strong sanctuary protections in the face of intense opposition from fishermen. For example, conservation organizations were unable to secure support for regulating fishing at

[401] These NGOs include Marine Conservation Biology Institute, Ocean Conservancy, National Marine Sanctuary Foundation, Natural Resources Defense Council, and Environmental Defense.
[402] SeaWeb, American Attitudes Toward Marine Protected Areas and Fully Protected Marine Reserves: Overview of Public Opinion Research 1999-2002 (Washington: SeaWeb, 2002).

Monterey Bay because of fisherman opposition, but the two sides agreed that a no-oil sanctuary was better than nothing.[403] A lack of public support also affects what environmental groups can accomplish at the national level. Riding on public sentiment that favored environmental programs generally, conservation NGOs were able to stave off repeal of the Act in the 1980s, but still saw the Act transformed into a multiple use program with reduced resource protections. The unequal balance between preservation and multiple use has not been altered since.

In spite of many obstacles, the Sanctuary Program has struggled forward and incremental progress has been made over the years, largely due to the determination and creativeness of NOAA employees. The National Academy of Public Administration observes that some sanctuaries have been able to create a supportive local constituency, even winning over some fishing interests in the zoning of the Florida Keys.[404] The Sanctuary Program has broadened its appeal by establishing sanctuary advisory councils for all sanctuaries, and has developed more supportive relationships in the scientific community and with some state and local governments. The Program relies on some 400 partner organization and 5,000 volunteers.[405] Yet, the Program is still a small one with little power within NOAA. Only a few marine conservation organizations pay much attention to sanctuaries, and collectively they have not been able to move the Program forward by reforming the Act's outdated provisions or launching new sanctuary initiatives.

As the declining state of the oceans becomes better known, there is some evidence

[403] Richard Charter, e-mail to author, 15 Apr. 2006
[404] NAPA 18.
[405] United States, NOAA, NOS, Our National Marine Sanctuaries: State of the Sanctuary Report 2003-04 (Washington: NOAA, 2004) ii, 2.

of more enlightened ecosystem management. Florida Keys has led the way by zoning six percent of its area in marine reserves. NOAA is cooperating with the State of California to put approximately 20% of the waters of the Channel Islands sanctuary in fully protected status; and the proposed NWHI sanctuary is unique in that its primary purpose is resource preservation under a precautionary management regime. From a preservation perspective, these trends are heartening. But will they continue in the face of fishing industry opposition? The defeat of the fishery management councils' most recent proposal to make all sanctuary fishing regulations obedient to the MSA is but one battle in a continuing struggle whose outcome remains in doubt. Certainly, it is up to conservation NGOs to rally the public and congressional and executive support necessary to advance enlightened oceans management.

***Recommendations***

The increasingly degraded state of the nation's marine ecosystems shows that existing single-species and single-activity conservation statutes have been inadequate to achieve effective marine conservation. The Sanctuaries Act, the one statute that was supposed to manage ocean areas for multiple uses, including preservation, also has fallen short because it has produced very few fully protected areas sheltered from human impacts. The scientific consensus is very strong that a network of marine reserves is needed to help protect and restore ocean life. What is the best way to achieve this network?

The author identifies several possible approaches and briefly discusses the merits and demerits of each. The author then elaborates a preferred course of action and examines the conditions under which it might reach fruition.

1. *Improve the Sanctuaries Act's administration and focus more attention on creating marine reserves within sanctuaries.* Some would argue that the existing law is adequate to fully protect small-sized sanctuaries and to create marine reserves in larger sanctuaries, if only the Secretary would apply his broad powers more effectively toward those ends. While in theory this might be done, this approach has major defects. First, the policy consensus within NOAA and in Congress has not coalesced around the use of the Act in this way, and especially regarding creation of sanctuaries that are themselves fully protected from incompatible uses or that are zoned to allow marine reserves. Second, the Act's tilt toward multiple use and the program's historical accommodation of multiple uses, constrain this approach. Third, even if the Secretary aggressively pursues marine reserves, user groups can use the Act's multiple entry points in the designation and management review processes, along with the Act's pro-use provisions, to whittle away at strong protections, shrink proposed reserve boundaries, or kill a sanctuary proposal. A strategy of aggressive protection under current law would be a very hard road for the Secretary, and would garner as much user resistance as has the current program.

2. *Amend the Sanctuaries Act to make it work better, and give it express authority to establish marine reserves.* The Turnstone Group concluded that the Sanctuaries Act is not capable of producing a national system of marine reserves, and that, at a minimum, the Act should be amended to require the Secretary to consider marine reserves as part of the sanctuary designation and review processes, and set clearly defined protections. In addition, the Act needs a "forcing mechanism" to provide "momentum" toward the establishment of a marine reserves network; the mechanism would be a congressionally

mandated survey (with deadlines) of the sanctuary system and the rest of U.S. ocean waters to identify and designate suitable sites for marine reserves.[406] Finally, the Turnstone Group recommends elimination of the moratorium on new designations and increasing the period between reviews of sanctuary management plans.[407]

The author agrees that the group's recommended changes would remove significant barriers to the creation of marine reserves, and authorize a positive program for establishment of a marine reserves system. However, the author has demonstrated numerous interlocking problems with the Sanctuaries Act that must be solved for the Act to be more effective. What is needed is a fundamental reassessment of the entire statute. Such an approach would not be unusual; archaic or failed statutes have been re-written by Congress when political conditions are right.

3. *Amend the Sanctuaries Act to address its most egregious implementation problems, but use the Antiquities Act as a mechanism to spur stakeholders to agree to marine reserves within sanctuaries.* This alternative was raised by Jeff Brax, who argues that despite its many flaws, the Sanctuaries Act can serve as the organic act for the creation of multiple use marine protected areas (MPAs), but that the Sanctuaries Act is insufficient for creating marine reserves.[408] Brax observes that "marine reserve proposals have proceeded along ad hoc, drawn-out, and unbounded negotiation sessions that have exacerbated the obstructionist power of certain interest groups."[409] It is hard for NOAA to build consensus for novel regulation such as marine reserves when politically powerful user groups must suffer economic losses if a reserve is created. For fishing interests,

[406] Turnstone 15-17.
[407] Turnstone 15-17.
[408] Brax 72-76.
[409] Brax 114.

"closing vast tracts of water is a political nonstarter."[410] Because consensus really means unanimity, stakeholder negotiations led by NOAA are likely to fail.

Brax proposes to change this dynamic through a combination of major amendments to the Sanctuaries Act and the President's use or threatened use of the Antiquities Act as a hammer to keep user groups from being obstructionist in marine reserve negotiations. The Antiquities Act authorizes the President to designate outright lands and waters owned by the federal government as national monuments for preservation or other purposes.[411] At the time a monument is proclaimed, the President specifies the purposes of the monument and how it is to be managed. Management responsibility for the monument can be assigned either to an Interior bureau like the National Park Service or the Fish and Wildlife Service, or to another resource-managing agency such as NOAA.[412] Because the ocean domain controlled by the federal government is vast and diverse, the Antiquities Act holds great potential as a tool for a proactive President to create federal marine reserves. Moreover, use of the Antiquities Act in the marine environment is not unprecedented. Several presidents have established marine national monuments. For example, President Clinton proclaimed the Virgin Islands Coral Reef National Monument in 2001.[413]

Brax recommends the Sanctuaries Act be amended to (1) authorize other government agencies to transfer management of their marine areas to NOAA; (2) simplify the designation process; (3) strengthen enforcement by adding criminal sanctions for violations; (4) increase protection of sanctuaries from the actions of other

[410] Brax 116.
[411] Antiquities Act of 1906, 16 U.S.C. §§ 431 (2006).
[412] Administration of Coral Reef Resources in the Northwest Hawaiian Islands, Op. Off. Legal Counsel, 2000 OLC Lexis 46 (Sept. 15, 2000).
[413] Proclamation No. 7399, 66 Fed. Reg. 7364 (2001).

agencies by giving NOAA greater leverage in the consultation process established under the current Act; (5) transfer NOAA to the Interior Department, a department more attuned to conservation management than Commerce; and (6) provide a long-term source of funding to build up the Program.[414] In addition, Brax would create express authority in the Act for creation of marine reserves, but use the current method of stakeholder negotiations to fashion reserves that all user groups would respect, thus making enforcement easier. Hanging over these negotiations would be the President's power to designate a national monument, an action that could be threatened by NOAA to secure stakeholder cooperation in reaching agreement on marine reserve proposals.[415]

Brax's argument that the Sanctuaries Act, with some amendments, could become a satisfactory organic act for a national system of marine protected areas is undermined by the long list of reforms he proposes. These changes are so substantial as to constitute a re-write of the entire Act. His bifurcation of the Act to deliver two distinct outcomes—multiple use sanctuaries and reserves—is also problematic. A multiple use MPA can be every bit as controversial as a more restrictive marine reserve, depending on which uses are favored. Perhaps Brax intends that MPA-type sanctuaries be congenially open to all uses as they are presently, but this is not clear. Moreover, his idea of transferring NOAA to the Department of Interior would require massive political buy-in; hence its realization is unlikely.

Use of the Antiquities Act to secure marine reserves is an interesting idea, but the law is unlikely to be used in the way Brax envisions. Threatening the proclamation of a national monument to cajole fishermen might prompt their congressional allies to

[414] Brax 90-93.
[415] Brax 127.

legislatively prohibit the monument's designation, or throw other obstacles in the President's way. The real power of the Antiquities Act lies in its swift use before too much opposition builds up. As Brax notes, once a marine reserve has been designated as a national monument, it becomes the status quo and is hard to undo.[416] Attention then shifts to how the monument will be managed and enforced. Furthermore, the Antiquities Act cannot be used to protect valuable resources in state territorial waters over which the federal government has no control.

The author doubts Brax's dual approach would work as intended. Better to craft a new act that corrects the Sanctuaries Act's many deficiencies. The Antiquities Act still could be employed to create marine reserves in remote or lightly used ocean areas where user groups are not dug in. In nearshore areas that are heavily used, the Antiquities Act also might be used to protect a small reserve area in federal waters around which a larger multiple use sanctuary could be designed.

4. *Bypass the Sanctuaries Act with a new MPA or marine reserves law.* The Pew Ocean Commission recommended new legislation to create a national system of marine reserves without specifying how the legislation should be shaped or what should happen to the Sanctuaries Act. The idea of a free-standing MPA law also has been debated among marine NGOs. The basic idea is to provide a process for establishing several distinct types of marine protected areas ranging from marine reserves to multiple use MPAs in which commercial and recreation fishing and other uses are allowed. Any appropriate state or federal authority could nominate sites for designation within the various categories. If approved by the supervising secretary as meeting national protection standards for the relevant type of MPA, the area would be designated and

[416] Brax 125.

managed by the nominating authority. Under this scenario, the Sanctuary Program would not change, but NOAA would have to decide whether to nominate its various sanctuaries for designation as part of the broader MPA network.

The implied benefit of a comprehensive MPA law is to facilitate rapid development of a national system of MPAs, including marine reserves, by avoiding altogether the black hole of the Sanctuaries Act. In particular, NOAA would not be a bottleneck to the proactive efforts of other governmental agencies that wanted to create their own reserves. A major consideration is whether the congressional committees with authority over the Sanctuaries Act would embrace the broader approach. It would require a significant education campaign to convince the Senate Commerce Committee and House Resources Committee that a new law is needed, as opposed to simply dealing with the reserves issue by reforming the Sanctuaries Act. Furthermore, the authorizing committees already have placed a moratorium on the creation of new sanctuaries because of fiscal concerns; they may be equally chary of yet another marine preservation law requiring federal expenditures.

5. *Replace the Sanctuaries Act with a new statute that makes preservation its singular purpose.* This is the author's preferred alternative. The author has argued in this thesis that the major flaw of the Sanctuaries Act is the lack of a singular preservation purpose. Without such a purpose, the Sanctuaries Act can never achieve for the marine environment what the Wilderness Act has achieved on land. Wilderness areas are discreet preservation zones in which commercial extractive uses are prohibited and the principal goal of management is to maintain the area's natural ecology. Similarly, marine sanctuaries should be discreet areas of the ocean that are managed for the preservation of

biodiversity, but configured where possible to contribute to sustainable use of marine life in the surrounding waters and maintain ecological functions of the larger eco-region. Under the preservation alternative, sanctuaries would be consistent with marine reserve theory.

The author recommends that a new sanctuaries law be patterned after the Wilderness Act. Douglas Scott identifies the features of the Wilderness Act that have made it such an effective conservation tool.[417] The Wilderness Act:

- "established a clear unambiguous national policy to preserve wilderness, recognizing wilderness itself as a resource of value;"
- provided a specific definition of wilderness which could be applied practically in the field;
- established a permanent wilderness preservation system, described its extent and designated the first 9.1 million acres of wilderness;
- "set out a single, consistent management directive" that applied to all wilderness areas which, among other things, clearly specified allowed and prohibited uses;
- mandated a clearly specified wilderness review process," which included an inventory of all federal roadless areas 5,000 acres and larger, and required the executive branch to recommended all suitable wilderness areas to Congress within 10 years;
- "asserted the exclusive power of the Congress to designate wilderness areas" and to maintain them as wilderness until Congress decided otherwise; and

[417] Douglas W. Scott, Campaign for America's Wilderness, A Wilderness-Forever Future: A Short History of the National Wilderness Preservation System (Durango, CO.: Pew Wilderness Center, 2001).

- "constituted the best, most practical mechanism to actually preserve wilderness in perpetuity."[418]

Like the Wilderness Act, the new Sanctuaries Act would establish a comprehensive, well-defined program with the singular purpose of conserving examples of America's most important marine ecosystems in perpetuity. A key provision of the new Sanctuaries Act would be a mandate that NOAA classify ocean ecosystems and identify sites that represent good examples of the classified resources. Existing sanctuaries would have to be reviewed to see what portion of them qualified under the new system. Portions that did not qualify could be open to other uses. Congress would give itself the duty of designating sanctuary sties recommended to it by the Secretary of Commerce.

Not only is the Sanctuaries Act not meeting the challenge of biodiversity preservation today, its basic premise of attempting to provide preservation while simultaneously encouraging multiple use is illogical and self-contradictory. This is the Act's fatal flaw. David Tarnas found the pursuit of multiple use in sanctuaries "unworkable" because both the meaning of the term and its practical application are unclear.[419] If preservation is the primary purpose of sanctuaries, at what point do multiple uses compromise resource protection? Furthermore, says Tarnas, according to some observers, application of multiple use management is "ineffective."[420] What ocean users "call multiple use appears to amount to a policy of non-exclusion of their favored uses."[421] Multiple use management would only make sense, says Tarnas, if it were

[418] Scott 15.
[419] Tarnas 278.
[420] Tarnas 279.
[421] Tarnas 279 (quoting Daniel Finn).

applied comprehensively to the entire ocean to "balance the whole range of marine uses."[422]

> Conflicting activities could be separated, complementary activities allowed together. Designated areas would have different levels of use restrictions to achieve different purposes. For example, a marine protected area, being part of a larger interactive marine ecosystem, would restrict those consumptive uses that conflict with the primary purpose of resource protection.[423]

The Sanctuary Program, concludes Tarnas has "assumed the task of trying to provide both the overall multiple-use management of large ocean areas, and the specialized protective management of smaller areas. Doing both has been difficult and has possibly weakened the program."[424]

Tarnas' observations ring true. If, as is currently the case, most of the U.S. ocean is generally available for all uses under various federal and state authorities, then the most direct and effective way to preserve ocean places for the long-term is to set them aside for the singular purpose of preservation just as national parks and wilderness areas have been created on land. Only truly compatible uses of sanctuaries, such as education, scientific research and low-impact recreation would be allowed in these permanently protected areas. This was precisely the approach taken by President Johnson's Science Advisory Committee in 1966 when it recommended creation of a marine wilderness preservation system composed of single-use preservation areas. And it is the approach recommended by hundreds of marine scientists today.

What it is the likelihood that Congress will re-write the Sanctuaries Act to make to make its sole purpose the preservation of marine biodiversity in permanent marine reserves? Presently the chances are low. According to Kingdon, successful new policies

[422] Tarnas 279.
[423] Tarnas 279-80.
[424] Tarnas 280.

emerge from the unpredictable confluence of three streams: Problems, policies and politics.[425] In this case, the problem—degrading oceans and loss of marine biodiversity—is well understood by scientists and some policymakers. Less well understood is how the Sanctuaries Act is failing to cope with the problem, much less achieving its own stated purposes. A number of policy proposals have been developed by scientists, NGOs, two national ocean commissions, and various members of Congress to address the ocean degradation issue broadly. However, to-date no detailed proposal on either sanctuaries or marine reserves has been introduced in Congress.

A periodic window of opportunity for debating the Sanctuaries Act arises when the Act is reauthorized every five years. The Act's authorization expired in 2005, but Congress has continued the Program through appropriations. NOAA has drafted its version of a reauthorization bill, but as of May 1, 2006 it had not been cleared for release by the Commerce Department. Given what they perceive as the Bush Administration's low interest in environmental issues and the pro-development policies of congressional environmental committees, marine NGOs have focused their scarce resources on defending existing environmental laws from attack, not seeking new ones. Thus, the NGO community is not well prepared to take on an ambitious sanctuaries reform campaign. This will have to wait until more auspicious conditions materialize, and marine conservationists have better prepared the ground.

In conclusion, the Sanctuaries Act has proved to be an unreliable vehicle for the timely preservation of the full array of the nation's marine ecosystems and special places in a comprehensive national system of marine preservation areas, as reflected in its

[425] John W. Kingdon, Agendas, Alternatives and Public Policies, 2nd ed. (New York: Harper Collins College Publishers, 1995).

implementation history. Because of its incongruous and conflicting mandates, lack of precise implementation guidelines and failure to define uniform protection standards, the Act has proved baffling to NOAA and a continuing frustration to its authorizing committees. With the purposes and uses of each sanctuary up for grabs during the designation process, highly contentious and lengthy battles have been waged between conservationists and user groups over a number of candidate sites. Some of these sites were designated, others not. When NOAA became bogged down in designation battles in the 1980s, a preservation-leaning Congress was forced to mandate deadlines for NOAA to designate certain sanctuaries, then had to bypass the dysfunctional process to designate Florida Keys, the Hawaiian Islands Humpback Whale, Monterey Bay, and Stellwagen Bank marine sanctuaries. Likewise, when Congress found itself unhappy with NOAA's protection strategies for certain candidate sanctuaries, it intervened legislatively to prohibit new oil and gas leases at Cordell Bank and Olympic Coast, included an oil development ban in its legislative designation of Monterey Bay, and prohibited sand and gravel mining at Stellwagen.

At other times, Congress has allowed human uses of sanctuaries, irrespective of their impact on the natural environment. For example, Congress designated sanctuaries in which no regulations were placed on commercial fishing activities despite information at the time that fish populations were being depleted. At Stellwagen Bank and Monterey Bay, for instance, the sanctuary has no authority to protect its fish habitat from bottom trawling or to prohibit the catch of depleted species unless it first amends its designation document.

The Sanctuaries Act's frequent reinvention by Congress and NOAA, though well-

intentioned, has not really gotten at the root of the Act's problems. The Act is so constrained by its own architecture that it stands little chance of ever producing the comprehensive system of marine preservation areas envisioned by scientists and legislators who sought to create a system or marine wilderness preserves analogous to the terrestrial wilderness system. The blueprint of a permanent marine sanctuary system with the singular purpose of preservation was rejected in favor of a law that incongruously required preservation to be balanced with other uses. As a result, progress toward protecting America's ocean resources has been nowhere near what was needed to achieve the national network of marine reserves that scientists today say are vital to protecting and restoring ocean life. The time has come to address this situation, and to replace the Sanctuaries Act with a law more in tune with twenty-first century scientific recommendations for ecosystem-based ocean management. Before reform of the Sanctuaries Act can be achieved, however, marine conservation organizations will need to find the will, the resources, and a viable strategy that can move Congress in the right direction.

## APPENDIX I. SANCTUARIES MAP


Source: NOAA, National Marine Sanctuary Program.

## APPENDIX II. PROFILES OF THE THIRTEEN MARINE SANCTUARIES

# Channel Islands National Marine Sanctuary

MCBI MARINE CONSERVATION BIOLOGY Institute

- **Year Designated:** 1980
- **Size (area):** 1,658 square miles
- **Location:** Encompasses waters out to six nautical miles around Anacapa, Santa Cruz, Santa Rosa, San Miguel and Santa Barbara Islands
- **State Waters:** Includes approximately 905 square miles
- **Purpose:** To preserve and protect the natural and cultural resources within this unique and fragile ecosystem community.
- **Fully-Protected Areas:** Approximately 166 square miles of State waters in the sanctuary (10% of the NMS) are designated as no-take marine reserves by the State of California


Map credit: Channel Islands NMS

- **Date Management Plan Issued:** 1983
- **Date of Management Plan Review:** In February 2004, CINMS submitted their Final Draft Management Plan (DMP) and Draft Environmental Impact Statement (DEIS). Both documents are undergoing internal clearance review and should be cleared for public release by January 2006, followed by a 60-day formal public comment period.

**Sanctuary Website:** http://channelislands.noaa.gov/
**Sanctuary Regulations:** 15 C.F.R. § 922, Subpart G

**Examples of Research and Monitoring Activities in the Sanctuary:**

- Delta Submersible research cruise.
- Altair Integrated System Flight Demonstration Project.
- Southern California Bight Pilot Project.
- NOAA Teacher at Sea program.

**Examples of Endangered and Threatened Species in the Sanctuary (State and Federal):**

| Endangered | Threatened | Candidates/Of Concern | Delisted |
|---|---|---|---|
| White Abalone | Steller Sea Lion | Copper Rockfish | Gray Whale |
| Tidewater Goby | Bald Eagle | Brown Rockfish | Peregrine Falcon |
| Blue Whale | Xantus Murrelet | Ashy Storm Petrel | |
| Humpback Whale | (State listed) | | |
| Fin Whale | | | |
| Sei Whale | | | |
| Southern Sea Otter | | | |
| California Brown Pelican | | | |
| Snowy Plover | | | |
| California Least Tern | | | |

Marine Conservation Biology Institute, 600 Pennsylvania Avenue, SE, Ste 210, Washington, DC 20003
Phone: 202-546-5346 Web Site: www.mcbi.org Contact: Bill Chandler

## Summary of Regulation of Activities and Uses in the Channel Islands National Marine Sanctuary

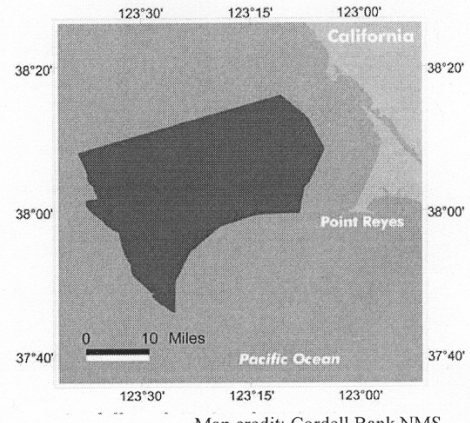
(For full regulations, see 15 C.F.R. § 922 and contact the regulating agencies)

| Type of Use | Regulated by the Sanctuary (NMS) | | | | Examples of Other Regulating Agencies, States/Territories, or Laws (may not be comprehensive list) |
|---|---|---|---|---|---|
| | Zoned (areas closed to this type of use) | Restricted | Prohibited | Comments | |
| Commercial Fishing | | | | Not regulated by NMS regulations | State of California, Channel Islands National Park, Pacific Fishery Management Council |
| Recreational Fishing | | | | Not regulated by NMS regulations | State of California, Channel Islands National Park, Pacific Fishery Management Council |
| Bottom Trawling | | | | Not regulated by NMS regulations | State of California, Channel Islands National Park, Pacific Fishery Management Council |
| Collecting Aquarium Fish | | | | Not regulated by NMS regulations | State of California, Channel Islands National Park, Pacific Fishery Management Council |
| Aquaculture | | | | May be regulated under Discharges and Alteration of or Construction on Seafloor | State of California, Army Corps, U.S. Fish and Wildlife, Environmental Protection Agency |
| Alteration of or Construction on Seafloor | √ | | | Bottom trawling and anchoring exempted from zone restrictions | |
| Seabed cables or devices | | | | May be regulated under Alteration of or Construction on Seafloor | Outer Continental Shelf Lands Act, Army Corps, U.S. Coast Guard, FCC |
| Exploring for, Developing, or Producing Oil and Gas | | √ | | Permitted for leases issued prior to March 30, 1981 | Minerals Management Service, Outer Continental Shelf Lands Act |
| Exploring for, Developing or Producing Other Minerals | | | | May be regulated under Alteration of or Construction on Seafloor | Minerals Management Service, Outer Continental Shelf Lands Act |
| Removal/Damage of Natural Resources | | | | Not regulated by NMS regulations | |
| Removal/Damage of Cultural or Historical Resources | | | √ | | Abandoned Shipwreck Act of 1987 |
| Overflights | √ | | | Overflights prohibited in zones | Marine Mammal Protection Act |
| Use of motorized watercraft | √ | | | Cargo carriers prohibited in zones | Channel Islands National Park |
| Underwater Noise | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Discharging or Depositing Material Within the NMS | | √ | | Listed types of discharge allowed | U.S. Coast Guard |
| Discharging or Depositing Material Outside the NMS that Might Injure NMS Resources | | | | Not regulated by NMS regulations | U.S. Coast Guard |

**Other Regulations:** Permits for research, education, or salvage/recovery operations may be issued to allow any otherwise prohibited or restricted activity. The California Department of Fish and Game requires a fishing license to fish in the Sanctuary. Fishing is prohibited in the sanctuary's State Marine Reserves.

# Cordell Bank
# National Marine Sanctuary

- **Year Designated:** 1989
- **Size (area):** 526 square miles
- **Location:** On the continental shelf, about 50 miles northwest of the Golden Gate Bridge and 21 miles west of the Point Reyes lighthouse
- **State Waters:** None
- **Purpose:** To protect and conserve that special, discrete, highly productive marine area and to ensure the continued availability of the ecological, research, educational, aesthetic, historical and recreational resources therein.
- **Fully-Protected Areas:** None
- **Date Management Plan Issued:** 1989
- **Date of Management Plan Review:** Cordell Bank National Marine Sanctuary is reviewing its management plan jointly with Monterey Bay NMS and Gulf of the Farallones NMS. The Draft Joint Management Plan is under NOAA review and is expected to be released by late Spring 2006. The Final Management Plan is expected to be completed by Fall/Winter 2006.



Map credit: Cordell Bank NMS

**Sanctuary Website:** http://cordellbank.noaa.gov/
**Sanctuary Regulations:** 15 C.F.R. § 922, Subpart K

**Examples of Research and Monitoring Activities in the Sanctuary:**
- Habitat Characterization and Biological Monitoring On and Around Cordell Bank.
- Cordell Bank Ocean Monitoring Project (CBOMP).
- Tracking Black-footed Albatross.
- Multibeam survey to map the bathymetry and substrate types on and adjacent to Cordell Bank.

**Examples of Endangered and Threatened Species in the Sanctuary:**

| Endangered | Threatened | Candidates/Of Concern | Delisted |
|---|---|---|---|
| Blue Whale | Stellar Sea Lion | Pacific Lamprey | Gray Whale |
| Fin Whale | Sea Otter | Longfin Smelt | |
| Humpback Whale | Chum Salmon | | |
| Northern Right Whale | Coho Salmon | | |
| Sei Whale | | | |
| Sperm Whale | | | |
| Leatherback Sea Turtle | | | |
| White Sturgeon | | | |
| Short-tailed Albatross | | | |

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Phone: 202-546-5346 Web Site: www.mcbi.org Contact: Bill Chandler

## Summary of Regulation of Activities and Uses in Cordell Bank National Marine Sanctuary

(For full regulations, see 15 C.F.R. § 922 and contact the regulating agencies)

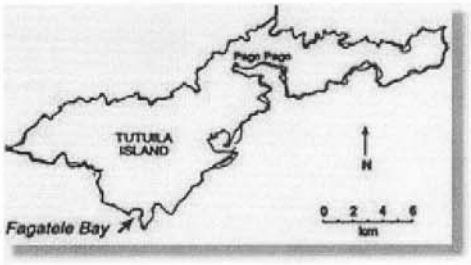
| Type of Use | Regulated by the Sanctuary (NMS) | | | | Examples of Other Regulating Agencies, States/Territories, or Laws (may not be comprehensive list) |
|---|---|---|---|---|---|
| | Zoned (areas closed to this type of use) | Restricted | Prohibited | Comments | |
| Commercial Fishing | | | | Not regulated by NMS regulations | Pacific Fishery Management Council |
| Recreational Fishing | | | | Not regulated by NMS regulations | Pacific Fishery Management Council |
| Bottom Trawling | | | | Not regulated by NMS regulations | Pacific Fishery Management Council |
| Collecting Aquarium Fish | | | | Not regulated by NMS regulations | Pacific Fishery Management Council |
| Aquaculture | | | | May be regulated under Discharges and Alteration of or Construction on Seafloor | Army Corps, U.S. Fish and Wildlife, Environmental Protection Agency |
| Alteration of or Construction on Seafloor | | | | Not regulated by NMS regulations | |
| Seabed cables or devices | | | | Not regulated by NMS regulations | Outer Continental Shelf Lands Act, Army Corps, U.S. Coast Guard, FCC |
| Exploring for, Developing, or Producing Oil and Gas | | | √ | | Minerals Management Service, Outer Continental Shelf Lands Act |
| Exploring for, Developing or Producing Other Minerals | | | √ | | Minerals Management Service, Outer Continental Shelf Lands Act |
| Removal/Damage of Natural Resources | √ | | | Does not apply to accidental removal, injury, or taking during normal fishing operations | |
| Removal/Damage of Cultural or Historical Resources | | | | Not regulated by NMS regulations | Abandoned Shipwreck Act of 1987 |
| Overflights | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Use of motorized watercraft | | | | Not regulated by NMS regulations | |
| Underwater Noise | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Discharging or Depositing Material Within the NMS | | √ | | Certain types of discharge allowed | U.S. Coast Guard |
| Discharging or Depositing Material Outside the NMS that Might Injure NMS Resources | | √ | | Certain types of discharge allowed | U.S. Coast Guard |

**Other Regulations:** Permits for research, education, or salvage/recovery operations may be issued to allow any otherwise prohibited or restricted

# Fagatele Bay
# National Marine Sanctuary

MCBI
MARINE CONSERVATION BIOLOGY
Institute

- **Year Designated:** 1986
- **Size (area):** 0.25 square miles
- **Location:** Bay area off the southwest coast of Tutuila Island, American Samoa
- **Territorial Waters:** Located entirely in Territorial waters
- **Purpose:** To protect and preserve an example of a pristine tropical marine habitat and coral reef terrace ecosystem of exceptional productivity; to expand public awareness and understanding of tropical marine ecosystems; to expand scientific knowledge of marine ecosystems; to improve resource management techniques; and to regulate uses within the Sanctuary to ensure the health and well-being of the ecosystem and its associated flora and fauna.



Map credit: Fagatele Bay NMS

- **Fully-Protected Areas:** None
- **Date Management Plan Issued:** 1986
- **Date of Management Plan Review:** Fagatele Bay NMS is beginning review of its Management Plan in 2005 and expects it to be completed by 2007.

**Sanctuary Website:** http://fagatelebay.noaa.gov/
**Sanctuary Regulations:** 15 C.F.R. § 922, Subpart J

**Examples of Research and Monitoring Activities in the Sanctuary:**

- Long-term monitoring to follow the recovery of a coral reef.
- Marine mammal survey (not limited to the Fagatele Bay Sanctuary).
- Planning a coral disease study that will be conducted next year.
- Submarine and ROV used to video as much of the sanctuary as possible, and the deep areas adjoining the site down to 1,500 ft. This project compliments previous GIS/multibeam mapping work.
- A science coordinator is being hired in 2005 and will develop and implement the site's coral reef monitoring plan.

**Examples of Endangered and Threatened Species in the Sanctuary:**

| Endangered | Threatened |
|---|---|
| Humpback Whale | Green Sea Turtle |
| Hawksbill Sea Turtle | Olive Ridley Sea Turtle |

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**Summary of Regulation of Activities and Uses in the Fagatele Bay National Marine Sanctuary**
(For full regulations, see 15 C.F.R. § 922 and contact the regulating agencies)

| Type of Use | Regulated by the Sanctuary (NMS) | | | | Examples of Other Regulating Agencies, States/Territories, or Laws (may not be comprehensive list) |
|---|---|---|---|---|---|
| | Zoned (areas closed to this type of use) | Restricted | Prohibited | Comments | |
| Commercial Fishing | √ | √ | | Listed gears are prohibited sanctuary-wide. Greater protection in zones. | American Samoa Dept. of Marine and Wildlife Resources, Western Pacific Fishery Management Council (Wespac) |
| Recreational Fishing | √ | √ | | Listed gears are prohibited sanctuary-wide. Greater protection in zones. | American Samoa Dept. of Marine and Wildlife Resources, Wespac |
| Bottom Trawling | | | √ | | American Samoa Dept. of Marine and Wildlife Resources, Wespac |
| Collecting Aquarium Fish | | | | Not regulated by NMS regulations | American Samoa Dept. of Marine and Wildlife Resources, Wespac |
| Aquaculture | | | | May be regulated under Discharges and Alteration of or Construction on Seafloor | Army Corps, U.S. Fish and Wildlife, Environmental Protection Agency |
| Alteration of or Construction on Seafloor | | | √ | | |
| Seabed cables or devices | | | | May be regulated under Alteration of or Construction on Seafloor | Outer Continental Shelf Lands Act, Army Corps, U.S. Coast Guard, FCC |
| Exploring for, Developing, or Producing Oil and Gas | | | | May be regulated under Alteration of or Construction on Seafloor | Minerals Management Service, Outer Continental Shelf Lands Act |
| Exploring for, Developing or Producing Other Minerals | | | | May be regulated under Alteration of or Construction on Seafloor | Minerals Management Service, Outer Continental Shelf Lands Act |
| Removal/Damage of Natural Resources | | √ | | Listed natural resources are protected | |
| Removal/Damage of Cultural or Historical Resources | | | √ | | Abandoned Shipwreck Act of 1987 |
| Overflights | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Use of motorized watercraft | | √ | | Vessels may not speed near dive flags or strike/damage NMS natural features | |
| Underwater Noise | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Discharging or Depositing Material Within the NMS | | | √ | | U.S. Coast Guard |
| Discharging or Depositing Material Outside the NMS that Might Injure NMS Resources | | | | Not regulated by NMS regulations | U.S. Coast Guard |

**Other Regulations:** Permits for research, education, or salvage/recovery operations may be issued to allow any otherwise prohibited or restricted activity. Additionally, tampering with markers or diving without a flag is prohibited.

# Florida Keys
# National Marine Sanctuary

- **Year Designated:** 1990
- **Size (area):** 3,842 square miles
- **Location:** Extends 220 miles in a northeast to southwest arc between the southern tip of Key Biscayne, south of Miami, to beyond, but not including, the Dry Tortugas Islands, which are encompassed by the Dry Tortugas National Park
- **State Waters:** Approximately 2,497 square miles (65% of the NMS)
- **Purpose:** To protect and preserve this unique and fragile ecosystem.
- **Fully-Protected Areas:** Approximately 232 square miles
- **Date Management Plan Issued:** 1997
- **Date of Management Plan Review:** Draft Revised Management Plan completed in February 2005. The draft plan was open to public comment from February 15 through April 15, 2005. As of December 2005, the Final Revised Management Plan is still awaiting final approval.

Map credit: Florida Keys NMS

**Sanctuary Website:** http://floridakeys.noaa.gov/
**Sanctuary Regulations:** 15 C.F.R. § 922, Subpart P

**Examples of Research and Monitoring Activities in the Sanctuary:**

- Water Quality Protection Program began in 1994 and includes three monitoring projects: water quality, corals/hard bottoms, and seagrass.
- Monitoring changes within the Sanctuary as a result of the network of fully protected marine zones.
- Oceanographic monitoring.
- Numerous (approximately 50-100) research permits are issued each year to conduct research on a variety of topics, such as population genetics and ecology, community structure, microbial communities, biology of various plants and animals, physiology, and coral symbioses and bleaching.
- Socio-economic studies.

**Examples of Endangered and Threatened Species in the Sanctuary:**

| Endangered | | Threatened | Delisted |
|---|---|---|---|
| Blue Whale | Lower Keys Marsh Rabbit | Stock Island Tree Snail | Arctic Peregrine Falcon |
| Fin Whale | Bachman's Warbler | Bald Eagle | |
| Humpback Whale | Cape Sable Seaside Sparrow | Piping Plover | |
| Right Whale | Wood Stork | Roseate Tern | |
| Sei Whale | Small's Milkpea | Garber's Spurge | |
| Sperm Whale | Tree Cactus | | |
| Florida Manatee | Schaus' Swallowtail Butterfly | | |
| Key Deer | | | |
| Key Largo Cotton Mouse | | | |
| Silver Rice Rat | | | |

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**Summary of Regulation of Activities and Uses in the Florida Keys National Marine Sanctuary**
(For full regulations, see 15 C.F.R. § 922 and contact the regulating agencies)

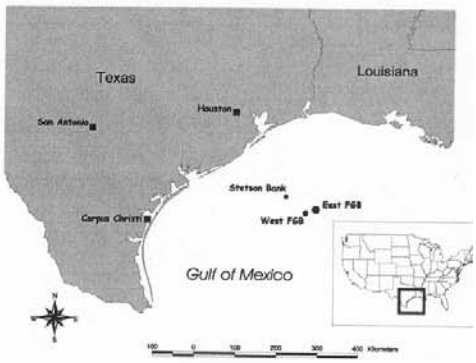
| Type of Use | Regulated by the Sanctuary (NMS) | | | | Examples of Other Regulating Agencies, States/Territories, or Laws (may not be comprehensive list) |
|---|---|---|---|---|---|
| | Zoned (areas closed to this type of use) | Restricted | Prohibited | Comments | |
| Commercial Fishing | √ | | | Listed gears prohibited in some zones; other zones prohibit all fishing | State of Florida, National Park Service, U.S. Fish and Wildlife, South Atlantic and Gulf Fishery Management Councils |
| Recreational Fishing | √ | | | Listed gears prohibited in some zones; other zones prohibit all fishing | State of Florida, National Park Service, U.S. Fish and Wildlife, South Atlantic and Gulf Fishery Management Councils |
| Bottom Trawling | √ | | | Prohibited in some zones; other zones prohibit all fishing | State of Florida, National Park Service, U.S. Fish and Wildlife, South Atlantic and Gulf Fishery Management Councils |
| Collecting Aquarium Fish | √ | | | Zones closed to take of any tropical fish | State of Florida, National Park Service, U.S. Fish and Wildlife, South Atlantic and Gulf Fishery Management Councils |
| Aquaculture | | | | May be regulated under Discharges and Alteration of or Construction on Seafloor | State of Florida, Army Corps, U.S. Fish and Wildlife, Environmental Protection Agency, National Park Service |
| Alteration of or Construction on Seafloor | √ | √ | | Zones closed to all anchoring; Sanctuary-wide, listed activities are allowed, e.g., anchoring, traditional fishing, etc. | U.S. Fish and Wildlife, National Park Service |
| Seabed cables or devices | | | | May be regulated under Alteration of or Construction on Seafloor | Outer Continental Shelf Lands Act, Army Corps, U.S. Coast Guard, FCC |
| Exploring for, Developing, or Producing Oil and Gas | | | √ | | Minerals Management Service, Outer Continental Shelf Lands Act |
| Exploring for, Developing or Producing Other Minerals | | | √ | | Minerals Management Service, Outer Continental Shelf Lands Act |
| Removal/Damage of Natural Resources | √ | √ | | Listed species are protected in all areas; some zones completely closed | U.S. Fish and Wildlife, National Park Service |
| Removal/Damage of Cultural or Historical Resources | | | √ | | U.S. Fish and Wildlife, National Park Service, Abandoned Shipwreck Act of 1987 |
| Overflights | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Use of motorized watercraft | √ | √ | | Some zones closed to vessels, other areas have speed and size restrictions | U.S. Fish and Wildlife, National Park Service |
| Underwater Noise | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Discharging or Depositing Material Within the NMS | | √ | | Only listed types of discharge are allowed | U.S. Coast Guard |
| Discharging or Depositing Material Outside the NMS that Might Injure NMS Resources | | | | Not regulated by NMS regulations | U.S. Coast Guard |

**Other Regulations:** The NMS coordinates management with the State (for State waters within the NMS) and the U.S. Fish and Wildlife Service (for Wildlife Refuges within the NMS). The National Park Service, however, maintains its own jurisdiction and no NMS regulations apply to the National Parks within the NMS. NMS regulations authorize permits for research, education, or salvage/recovery operations, even for otherwise prohibited or restricted activities. In additional to the uses regulated in the above table, the following are regulated: possession or use of explosives or electrical charges, release/introduction of exotic species, damage or removal of markers, diving/snorkeling without a dive flag, or release of exotic species.

# Flower Garden Banks National Marine Sanctuary

MCBI MARINE CONSERVATION BIOLOGY Institute

- **Year Designated:** 1992
- **Size (area):** 56 square miles
- **Location:** About 100 miles off the coasts of Texas and Louisiana; includes Stetson Bank, East Flower Garden Bank and West Flower Garden Bank
- **State Waters:** None
- **Purpose:** To protect and manage the conservation, ecological, recreational, research, educational, historic, and esthetic resources and qualities of the area.
- **Fully-Protected Areas:** None
- **Date Management Plan Issued:** 1991
- **Date of Management Plan Review:** The Management Plan Review process was initiated July 1, 2005.



Map credit: Flower Garden Banks NMS

**Sanctuary Website:** http://flowergarden.noaa.gov/
**Sanctuary Regulations:** 15 C.F.R. § 922, Subpart L

**Examples of Research and Monitoring Activities in the Sanctuary:**

- Habitat characterization, ultimately resulting in a base-line habitat map of the sanctuary that will be updated as new information becomes available.
- Long-term annual monitoring of coral health.
- Crustacean population surveys, studies of algae/coral dynamics, cephalopod population surveys, and studies of elasmobranch movements.

**Examples of Endangered Species in the Sanctuary:**

| Endangered | Threatened |
|---|---|
| Hawksbill Sea Turtle | Loggerhead Sea Turtle |

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Phone: 202-546-5346 Web Site: www.mcbi.org Contact: Bill Chandler

## Summary of Regulation of Activities and Uses in Flower Garden Banks National Marine Sanctuary

(For full regulations, see 15 C.F.R. § 922 and contact the regulating agencies)

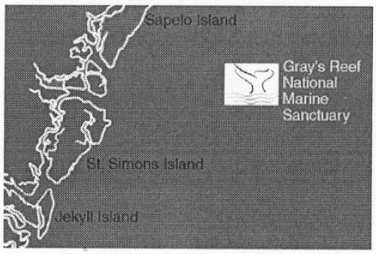
| Type of Use | Regulated by the Sanctuary (NMS) | | | | Examples of Other Regulating Agencies, States/Territories, or Laws (may not be comprehensive list) |
|---|---|---|---|---|---|
| | Zoned (areas closed to this type of use) | Restricted | Prohibited | Comments | |
| Commercial Fishing | | √ | | Only allowed gear is hook and line | Gulf Fishery Management Council |
| Recreational Fishing | | √ | | Only allowed gear is hook and line | Gulf Fishery Management Council |
| Bottom Trawling | | | √ | | Gulf Fishery Management Council |
| Collecting Aquarium Fish | | √ | | Only allowed gear is hook and line | Gulf Fishery Management Council |
| Aquaculture | | | | May be regulated under Discharges and Alteration of or Construction on Seafloor | Army Corps, U.S. Fish and Wildlife, Environmental Protection Agency, National Park Service |
| Alteration of or Construction on Seafloor | | | √ | | U.S. Fish and Wildlife, National Park Service |
| Seabed cables or devices | | | | May be regulated under Alteration of or Construction on Seafloor | Outer Continental Shelf Lands Act, Army Corps, U.S. Coast Guard, FCC |
| Exploring for, Developing, or Producing Oil and Gas | √ | √ | | Not permitted in more than 95% of NMS; restrictions on method used* | Minerals Management Service, Outer Continental Shelf Lands Act |
| Exploring for, Developing or Producing Other Minerals | √ | √ | | Not permitted in more than 95% of NMS; restrictions on method used | Minerals Management Service, Outer Continental Shelf Lands Act |
| Removal/Damage of Natural Resources | | √ | | Listed species are protected | |
| Removal/Damage of Cultural or Historical Resources | | | | Not regulated by NMS regulations | Abandoned Shipwreck Act of 1987 |
| Overflights | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Use of motorized watercraft | | √ | | Only vessels 100ft or less in length may moor in the NMS; No anchoring allowed | |
| Underwater Noise | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Discharging or Depositing Material Within the NMS | | √ | | Only listed types of discharge are allowed | U.S. Coast Guard |
| Discharging or Depositing Material Outside the NMS that Might Injure NMS Resources | | √ | | Only listed types of discharge are allowed | U.S. Coast Guard |

* There is only one production platform (gas) within sanctuary boundaries. There are no leases located entirely within the NMS boundaries; only lease blocks that have very small pieces of the block located within the NMS.

**Other Regulations:** NMS regulations authorize permits for research, education, or salvage/recovery operations, even for otherwise prohibited or restricted activities. In additional to the uses regulated in the above table, the use (and in some cases possession) of dangerous weapons/explosives is regulated by the NMS.

# Gray's Reef
# National Marine Sanctuary

- **Year Designated:** 1981
- **Size (area):** 22 square miles
- **Location:** About 20 miles off Sapelo Island, Georgia
- **State Waters:** None
- **Purpose:** To protect the quality of this unique and fragile ecological community, to promote scientific understanding of this live bottom ecosystem, and to enhance public awareness and wise use of this significant regional resource.
- **Fully-Protected Areas:** None
- **Date Management Plan Issued:** 1983
- **Date of Management Plan Review:** The Draft Management Plan was published on October 24, 2003. The final plan is undergoing formal clearance in December 2005.



Map credit: Gray's Reef NMS

**Sanctuary Website:** http://graysreef.noaa.gov/
**Sanctuary Regulations:** 15 C.F.R. § 922, Subpart I

**Examples of Research and Monitoring Activities in the Sanctuary:**
- Loggerhead Sea Turtle Satellite Tagging Project.
- Paleoarcheological investigations that attempt to model Gray's Reef when it was dry land (ca. 35,000 years ago).
- Studies to assess fish population size, abundance and species diversity.
- Invertebrate identification and study.

**Examples of Endangered and Threatened Species in the Sanctuary:**

| Endangered | Threatened |
|---|---|
| Humpback Whale<br>Northern Right Whale<br>West Indian Florida Manatee | Loggerhead Sea Turtle |

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Phone: 202-546-5346 Web Site: www.mcbi.org Contact: Bill Chandler

2/17/06

**Summary of Regulation of Activities and Uses in**
**Gray's Reef National Marine Sanctuary**
(For full regulations, see 15 C.F.R. § 922 and contact the regulating agencies)

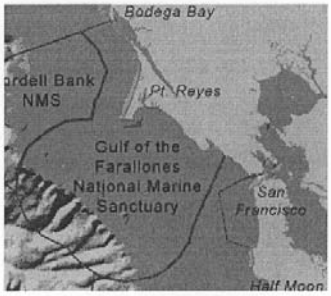
| Type of Use | Regulated by the Sanctuary (NMS) | | | | Examples of Other Regulating Agencies, States/Territories, or Laws (may not be comprehensive list) |
|---|---|---|---|---|---|
| | Zoned (areas closed to this type of use) | Restricted | Prohibited | Comments | |
| Commercial Fishing | | √ | | Only listed gears are allowed | South Atlantic Fishery Management Council |
| Recreational Fishing | | √ | | Only listed gears are allowed | South Atlantic Fishery Management Council |
| Bottom Trawling | | | √ | | South Atlantic Fishery Management Council |
| Collecting Aquarium Fish | | | √ | | South Atlantic Fishery Management Council |
| Aquaculture | | | | May be regulated under Discharges and Alteration of or Construction on Seafloor | Army Corps, U.S. Fish and Wildlife, Environmental Protection Agency, National Park Service |
| Alteration of or Construction on Seafloor | | √ | | Only allowed for placement of navigation aids | |
| Seabed cables or devices | | | | May be regulated under Alteration of or Construction on Seafloor | Outer Continental Shelf Lands Act, Army Corps, U.S. Coast Guard, FCC |
| Exploring for, Developing, or Producing Oil and Gas | | | | May be regulated under Alteration of or Construction on Seafloor | Minerals Management Service, Outer Continental Shelf Lands Act |
| Exploring for, Developing or Producing Other Minerals | | | | May be regulated under Alteration of or Construction on Seafloor | Minerals Management Service, Outer Continental Shelf Lands Act |
| Removal/Damage of Natural Resources | | √ | | Listed species are protected | |
| Removal/Damage of Cultural or Historical Resources | | | √ | | Abandoned Shipwreck Act of 1987 |
| Overflights | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Use of motorized watercraft | | | | NMS regulations make it an offense to use a vessel in violation of any non-NMS regulations | |
| Underwater Noise | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Discharging or Depositing Material Within the NMS | | √ | | Only listed types of discharge are allowed | U.S. Coast Guard |
| Discharging or Depositing Material Outside the NMS that Might Injure NMS Resources | | | | Not regulated by NMS regulations | U.S. Coast Guard |

**Other Regulations:** NMS regulations authorize permits for research, education, or salvage/recovery operations, even for otherwise prohibited or restricted activities.

# Gulf of the Farallones National Marine Sanctuary

MCBI MARINE CONSERVATION BIOLOGY Institute

- **Year Designated:** 1981
- **Size (area):** 1,255 square miles
- **Location:** Off the California coastline west of San Francisco, includes offshore marine regions of the Gulf of the Farallones and the nearshore waters of Bodega Bay, Tomales Bay, Estero de San Antonio, Estero Americano, and Bolinas Lagoon
- **State Waters:** Includes approximately 966 square miles
- **Purpose:** Preserving and protecting this "unique and fragile ecological community. In the face of increasing human activity in the marine area, existing regulatory controls beyond the nearshore zone which do not provide long term management may not ensure comprehensive protection for this unusual assemblage of marine mammals, numerous seabirds, and important fishery resources including kelp and shellfish."



Map credit: Gulf of the Farallones NMS

- **Fully-Protected Areas:** None
- **Date Management Plan Issued:** 1981
- **Date of Management Plan Review:** The Gulf of the Farallones NMS is reviewing its management plan jointly with Cordell Bank NMS and Monterey Bay NMS. The Draft Joint Management Plan is under NOAA review and is expected to be released by Summer 2006. The Final Management Plan is expected by Winter 2006.

**Sanctuary Website:** http://farallones.noaa.gov
**Sanctuary Regulations:** 15 C.F.R. § 922, Subpart H

**Examples of Research and Monitoring Activities in the Sanctuary:**
- Beach Watch monitoring program of birds, mammals, and pollution.
- Rocky intertidal habitat monitoring.
- Surveys of pelagic habitat, birds, mammals, krill, vessel activities.
- White shark population assessment and predatory behavior study.
- Invasive species assessment, eradication, and control.
- Biological inventory of Tomales Bay.
- Native oyster bed restoration.
- Blue and humpback whale population assessments for abundance and distribution.

**Examples of Endangered and Threatened Species in the Sanctuary:**

| Endangered | Threatened | Candidates/Of Concern | Delisted |
|---|---|---|---|
| Blue Whale | Guadalupe Fur Seal | Common Loon | (E. Pac.) Gray Whale |
| Fin Whale | Steller Sea Lion | Ashy Storm-petrel | Peregrine Falcon |
| Humpback Whale | Southern Sea Otter | Cassin's Auklet | Canada Goose |
| Northern Right Whale | Chum Salmon | Xantus's Murrelet | |
| Sperm Whale | Coho Salmon | Marbled Godwit | |
| Tidewater Goby | Green Sea Turtle | Black Oystercatcher | |
| Chinook Salmon (winter/spring run) | Olive Ridley Sea Turtle | Long-billed Curlew | |
| Steelhead Trout | | Pacific Lamprey | |
| Leatherback Sea Turtle | | Longfin Smelt | |

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Phone: 202-546-5346 Web Site: www.mcbi.org Contact: Bill Chandler or Hannah Gillelan

## Regulation of Activities and Uses of the Gulf of the Farallones National Marine Sanctuary

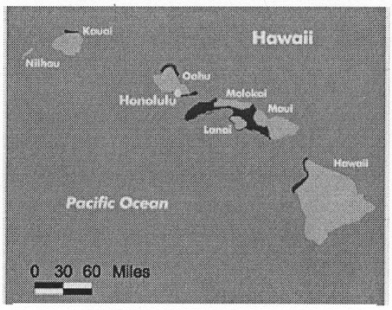
| Type of Use | Regulated by the Sanctuary (NMS) | | | | Regulated by Another Agency, State/Territory, or Law (may not be comprehensive list) |
|---|---|---|---|---|---|
| | Zoned (areas closed to this type of use) | Restricted | Prohibited | Comments | |
| Commercial Fishing | | | | Not regulated by NMS regulations | State of California, Pacific Fishery Management Council |
| Recreational Fishing | | | | Not regulated by NMS regulations | State of California, Pacific Fishery Management Council |
| Bottom Trawling | | | | Not regulated by NMS regulations | State of California, Pacific Fishery Management Council |
| Collecting Aquarium Fish | | | | Not regulated by NMS regulations | State of California, Pacific Fishery Management Council |
| Aquaculture | | | | May be regulated under Discharges and Alteration of or Construction on Seafloor | State of California, Army Corps, U.S. Fish and Wildlife, Environmental Protection Agency |
| Alteration of or Construction on Seafloor | | √ | | Only allowed for listed activities, including anchoring and bottom trawling | |
| Seabed cables or devices | | | | May be regulated under Alteration of or Construction on Seafloor | Outer Continental Shelf Lands Act, Army Corps, U.S. Coast Guard, FCC |
| Exploring for, Developing, or Producing Oil and Gas | | √ | | Only allowed for laying of pipeline to operations outside the NMS | Minerals Management Service, Outer Continental Shelf Lands Act |
| Exploring for, Developing or Producing Other Minerals | | | | May be regulated under Alteration of or Construction on Seafloor | Minerals Management Service, Outer Continental Shelf Lands Act |
| Removal/Damage of Natural Resources | | | | May be regulated by other NMS regulations | May be regulated by other agencies |
| Removal/Damage of Cultural or Historical Resources | | | √ | | Abandoned Shipwreck Act of 1987 |
| Overflights | √ | | | Overflights prohibited in zones | Marine Mammal Protection Act |
| Use of motorized watercraft | √ | √ | | Cargo carriers banned within 2 naut. miles of special zones. Personal watercraft (e.g., jet skis) prohibited in the entire NMS except for search & rescue and law enforcement. | |
| Underwater Noise | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Discharging or Depositing Material Within the NMS | | √ | | Listed types of discharge allowed | U.S. Coast Guard |
| Discharging or Depositing Material Outside the NMS that Might Injure NMS Resources | | | | Not regulated by NMS regulations | U.S. Coast Guard |

**Other Regulations:** Permits for research, education, or salvage/recovery operations may be issued to allow any otherwise prohibited or restricted

# Hawaiian Islands Humpback Whale National Marine Sanctuary

MCBI
MARINE CONSERVATION BIOLOGY Institute

- **Year Designated:** 1997
- **Size (area):** 1,370 square miles
- **Location:** Extends seaward from shore to 100-fathoms, includes areas around the islands of Maui, Lana`i, and Moloka`i, and parts of O`ahu, Kaua`i and the Big Island of Hawai'i
- **State Waters:** Includes 714 square miles
- **Purpose:** To (1) protect humpback whales and their habitat; (2) educate and interpret for the public the relationship of humpback whales to the Hawaiian Islands marine environment; (3) manage human uses of the Sanctuary consistent with the designation and [the National Marine Sanctuaries Act]; and (4) provide for the identification of marine resources and ecosystems of national significance for possible inclusion in the Sanctuary.
- **Fully-Protected Areas:** None
- **Date Management Plan Issued:** 1997, reviewed in 2002
- **Date of Management Plan Review:** The management plan is scheduled to undergo a second review in 2007.



Map credit: Humpback Whale NMS

**Sanctuary Website:** http://hawaiihumpbackwhale.noaa.gov/
**Sanctuary Regulations:** 15 C.F.R. § 922, Subpart Q

**Examples of Research and Monitoring Activities in the Sanctuary:**

- SPLASH (Structure of Populations, Levels of Abundance, and Status of Humpbacks), an international cooperative research effort to understand the population structure, levels of abundance and status of humpback whales across the entire North Pacific, will take place from 2004 to 2007.
- A Research Plan and Program is being developed to: 1) improve understanding of the central North Pacific population of humpback whales and their wintering habitat; 2) address and resolve specific management concerns; and 3) coordinate and facilitate information exchange among various researchers and institutions, agencies and the public.

**Examples of Endangered and Threatened Species in the Sanctuary:**

| Endangered | Threatened |
|---|---|
| Humpback Whale | Green Sea Turtle |
| Hawaiian Monk Seal | Newell's Shearwater |
| Hawksbill Sea Turtle | |
| Hawaiian Petrel | |
| Short-tailed Albatross | |

Marine Conservation Biology Institute, 600 Pennsylvania Avenue, SE, Ste 210, Washington, DC 20003
Phone: 202-546-5346 Web Site: www.mcbi.org Contact: Bill Chandler

2/17/06

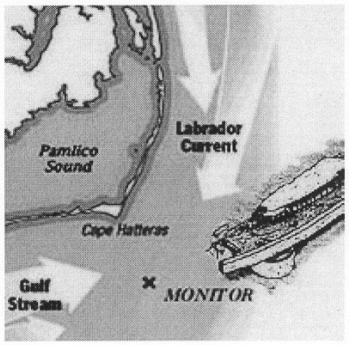
**Summary of Regulation of Activities and Uses in**
**the Hawaiian Islands Humpback Whale National Marine Sanctuary**
(For full regulations, see 15 C.F.R. § 922 and contact the regulating agencies)

| Type of Use | Regulated by the Sanctuary (NMS) | | | | Examples of Other Regulating Agencies, States/Territories, or Laws (may not be comprehensive list) |
|---|---|---|---|---|---|
| | Zoned (areas closed to this type of use) | Restricted | Prohibited | Comments | |
| Commercial Fishing | | | | Not regulated by NMS regulations | State of Hawaii, Western Pacific Fishery Management Council |
| Recreational Fishing | | | | Not regulated by NMS regulations | State of Hawaii, Western Pacific Fishery Management Council |
| Bottom Trawling | | | | Not regulated by NMS regulations | State of Hawaii, Western Pacific Fishery Management Council |
| Collecting Aquarium Fish | | | | Not regulated by NMS regulations | State of Hawaii, Western Pacific Fishery Management Council |
| Aquaculture | | | | May be regulated under Discharges and Alteration of or Construction on Seafloor; Aquaculture in the NMS has been allowed in the past | State of Hawaii, Army Corps, U.S. Fish and Wildlife, Environmental Protection Agency |
| Alteration of or Construction on Seafloor | | | √ | | |
| Seabed cables or devices | | | | Not regulated by NMS regulations | Outer Continental Shelf Lands Act, Army Corps, U.S. Coast Guard, FCC |
| Exploring for, Developing, or Producing Oil and Gas | | | | May be regulated under Alteration of or Construction on Seafloor | Minerals Management Service, Outer Continental Shelf Lands Act |
| Exploring for, Developing or Producing Other Minerals | | | | May be regulated under Alteration of or Construction on Seafloor | Minerals Management Service, Outer Continental Shelf Lands Act |
| Removal/Damage of Natural Resources | | √ | | Take of humpback whales or possession of any part of a humpback whale is prohibited | |
| Removal/Damage of Cultural or Historical Resources | | | | Not regulated by NMS regulations | Abandoned Shipwreck Act of 1987 |
| Overflights | | √ | | Restricted to at least 1000 feet above any humpback whale | Marine Mammal Protection Act |
| Use of motorized watercraft | | √ | | Restricted to more than 100 yards from a humpback whale; State regulations are more restrictive | State of Hawaii, Marine Mammal Protection Act |
| Underwater Noise | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Discharging or Depositing Material Within the NMS | | | √ | | U.S. Coast Guard |
| Discharging or Depositing Material Outside the NMS that Might Injure NMS Resources | | | √ | | U.S. Coast Guard |

**Other Regulations:** The Sanctuary does not issue permits, instead working within the existing permit processes of other Federal and State authorities. The Sanctuary's penalty schedule for violations of regulations protecting humpback whales is stricter than under the MMPA.

# Monitor
# National Marine Sanctuary

- **Year Designated:** 1975
- **Size (area):** 0.83 square miles
- **Location:** 16 miles south-southeast of the Cape Hatteras lighthouse
- **State Waters:** None
- **Purpose:** To protect the wreck of the Civil War ironclad *USS Monitor.*
- **Fully-Protected Areas:** None
- **Date Management Plan Issued:** 1997
- **Date of Management Plan Review:** The review process will begin in 2006.



Map credit: Monitor NMS

**Sanctuary Website:** http://monitor.noaa.gov/
**Sanctuary Regulations:** 15 C.F.R. § 922, Subpart F

**Examples of Research and Monitoring Activities in the Sanctuary:**
- Conducting inventory of artifacts and writing reports from the recovery expeditions.
- Monitoring the site for changes to the wreck.
- Material is being collected from the Monitor to further the understanding of current rates of corrosion.

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Phone: 202-546-5346 Web Site: www.mcbi.org Contact: Bill Chandler

2/17/06

## Summary of Regulation of Activities and Uses in the Monitor National Marine Sanctuary

(For full regulations, see 15 C.F.R. § 922 and contact the regulating agencies)

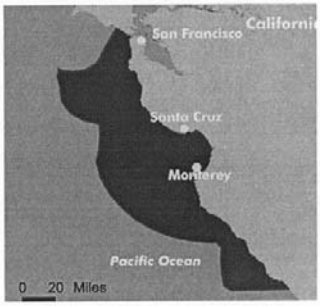
| Type of Use | Regulated by the Sanctuary (NMS) | | | | Examples of Other Regulating Agencies, States/Territories, or Laws (may not be comprehensive list) |
|---|---|---|---|---|---|
| | Zoned (areas closed to this type of use) | Restricted | Prohibited | Comments | |
| Commercial Fishing | | √ | | No grappling, suction, conveyor, or dredging devices allowed | Mid- and South Atlantic Fishery Management Councils |
| Recreational Fishing | | √ | | No grappling, suction, conveyor, or dredging devices allowed, no anchoring, no drifting without power | Mid- and South Atlantic Fishery Management Councils |
| Bottom Trawling | | | √ | | Mid- and South Atlantic Fishery Management Councils |
| Collecting Aquarium Fish | | | | Not regulated by NMS regulations | Mid- and South Atlantic Fishery Management Councils |
| Aquaculture | | | | May be regulated under Discharges and Alteration of or Construction on Seafloor | Army Corps, U.S. Fish and Wildlife, Environmental Protection Agency |
| Alteration of or Construction on Seafloor | | √ | | Listed activities are prohibited, including seabed drilling or coring | |
| Seabed cables or devices | | | √ | May be regulated under Alteration of or Construction on Seafloor | Outer Continental Shelf Lands Act, Army Corps, U.S. Coast Guard, FCC |
| Exploring for, Developing, or Producing Oil and Gas | | | | May be regulated under Alteration of or Construction on Seafloor | Minerals Management Service, Outer Continental Shelf Lands Act |
| Exploring for, Developing or Producing Other Minerals | | | | May be regulated under Alteration of or Construction on Seafloor | Minerals Management Service, Outer Continental Shelf Lands Act |
| Removal/Damage of Natural Resources | | | | Not regulated by NMS regulations | |
| Removal/Damage of Cultural or Historical Resources | | √ | | Subsurface salvage/recovery prohibited | Abandoned Shipwreck Act of 1987 |
| Overflights | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Use of motorized watercraft | | √ | | Anchoring and drifting without power are prohibited | |
| Underwater Noise | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Discharging or Depositing Material Within the NMS | | √ | | Discharge of waste material is prohibited | U.S. Coast Guard |
| Discharging or Depositing Material Outside the NMS that Might Injure NMS Resources | | | | Not regulated by NMS regulations | U.S. Coast Guard |

**Other Regulations:** Permits for research, education, or salvage/recovery operations may be issued to allow any otherwise prohibited or restricted activity. Additionally, the following activities are prohibited: use of explosives below the surface of the water, diving.

# Monterey Bay National Marine Sanctuary

MCBI MARINE CONSERVATION BIOLOGY Institute

- **Year Designated:** 1992
- **Size (area):** 5,322 square miles
- **Location:** Offshore of California's central coast, stretching from Marin to Cambria
- **State Waters:** 952 square miles
- **Purpose:** For the purpose of resource protection, research, education, and public use.
- **Fully-Protected Areas:** Three no-take marine reserves: Hopkins Marine Life Refuge, Point Lobos Ecological Reserve, and Big Creek Ecological Reserve
- **Date Management Plan Issued:** 1992
- **Date of Management Plan Review:** The Monterey Bay NMS is reviewing its management plan jointly with Cordell Bank NMS and the Gulf of Farallones NMS. The Draft Joint Management Plan is under NOAA review and is expected to be released by late Spring 2006. The Final Management Plan is expected to be completed by Fall/Winter 2006.




Map credit: Monterey Bay NMS

**Sanctuary Website:** http://montereybay.noaa.gov/
**Sanctuary Regulations:** 15 C.F.R. § 922, Subpart M

**Examples of Research and Monitoring Activities in the Sanctuary:**

- Sanctuary Integrated Monitoring Network (SIMoN) program -- enables researchers to monitor the sanctuary effectively by integrating the existing monitoring programs and identifying gaps in information.
- Exploring Davidson Seamount.
- Monitoring *Undaria* (an invasive species in Monterey Harbor).

**Examples of Endangered and Threatened Bird and Marine Species in the Sanctuary:**

| Endangered | Threatened | Candidates/Of Concern | Delisted |
|---|---|---|---|
| Tidewater Goby | Western Snowy Plover | Rough Sculpin | Peregrine Falco |
| California Clapper Rail | Marbled Murrelet | California Black Rail | |
| Bald Eagle | Green Sea Turtle | Loggerhead Shrike | |
| California Brown Pelican | Loggerhead Sea Turtle | Tricolored Blackbird | |
| California Least Tern | Olive Ridley Sea Turtle | Saltmarsh Common Yellowthroat | |
| Hawksbill Sea Turtle | Chinook Salmon | Belding's Savannah Sparrow | |
| Leatherback Sea Turtle | Steller Sea Lion | White-faced Ibis | |
| Blue Whale | Gaudelupe Fur Seal | MacKenzies' Cave Amphipod | |
| Fin Whale | Southern Sea Otter | Harlequin Duck | |
| Humpback Whale | | Elegant Tern | |
| Pacific Right Whale | | Coho Salmon | |
| Sperm Whale | | Summer Steelhead Trout | |
| Sei Whale | | Northern Fur Seal | |

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## Summary of Regulation of Activities and Uses in Monterey Bay National Marine Sanctuary

(For full regulations, see 15 C.F.R. § 922 and contact the regulating agencies)

| Type of Use | Regulated by the Sanctuary (NMS) | | | | Examples of Other Regulating Agencies, States/Territories, or Laws (may not be comprehensive list) |
|---|---|---|---|---|---|
| | Zoned (areas closed to this type of use) | Restricted | Prohibited | Comments | |
| Commercial Fishing | | | | Not regulated by NMS regulations | State of California, Pacific Fishery Management Council |
| Recreational Fishing | | | | Not regulated by NMS regulations | State of California, Pacific Fishery Management Council |
| Bottom Trawling | | | | Not regulated by NMS regulations | State of California, Pacific Fishery Management Council |
| Collecting Aquarium Fish | | | | Not regulated by NMS regulations | State of California, Pacific Fishery Management Council |
| Aquaculture | | | | May be regulated under Discharges and Alteration of or Construction on Seafloor | State of California, Army Corps, U.S. Fish and Wildlife, Environmental Protection Agency |
| Alteration of or Construction on Seafloor | | √ | | Listed activities allowed, including anchoring, aquaculture, and traditional fishing operations | |
| Seabed cables or devices | | | | May be regulated under Alteration of or Construction on Seafloor | Outer Continental Shelf Lands Act, Army Corps, U.S. Coast Guard, FCC |
| Exploring for, Developing, or Producing Oil and Gas | | | √ | | Minerals Management Service, Outer Continental Shelf Lands Act |
| Exploring for, Developing or Producing Other Minerals | √ | | | Only allowed for jade collection in zones; all other areas are closed | Minerals Management Service, Outer Continental Shelf Lands Act |
| Removal/Damage of Natural Resources | √ | √ | | Take of marine mammals, sea turtles, or seabirds restricted; attracting white sharks prohibited in state waters | State of California, Marine Mammal Protection Act, Endangered Species Act, Migratory Bird Treaty Act |
| Removal/Damage of Cultural or Historical Resources | | √ | | Only allowed if occurs incidental to traditional fishing operations | Abandoned Shipwreck Act of 1987 |
| Overflights | √ | | | Overflights at less than 1000 feet prohibited in zones | Marine Mammal Protection Act |
| Use of motorized watercraft | √ | | | Motorized personal watercraft prohibited except in zones | |
| Underwater Noise | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Discharging or Depositing Material Within the NMS | | √ | | Listed types of discharge allowed | U.S. Coast Guard |
| Discharging or Depositing Material Outside the NMS that Might Injure NMS Resources | | √ | | Listed types of discharge allowed | U.S. Coast Guard |

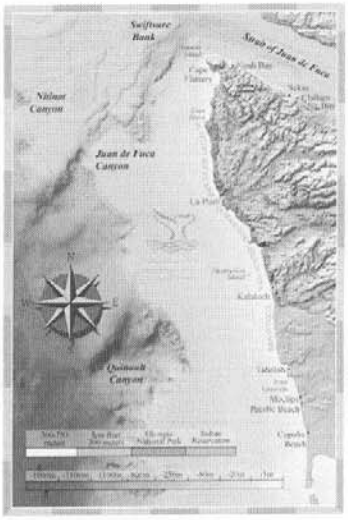
**Other Regulations:** Permits for research, education, or salvage/recovery operations may be issued to allow any otherwise prohibited or restricted activity.

# Olympic Coast
# National Marine Sanctuary

MCBI
MARINE CONSERVATION BIOLOGY
Institute

- **Year Designated:** 1994
- **Size (area):** 3,310 square miles
- **Location:** Off of Washington State's Olympic Peninsula, extending 135 miles along the Washington Coast from about Cape Flattery to the mouth of the Copalis River
- **State Waters:** Includes 560 square miles
- **Purpose:** To protect and manage the conservation, ecological, recreational, research, educational, historical, and esthetic resources and qualities of this area.
- **Fully-Protected Areas:** None
- **Date Management Plan Issued:** 1994
- **Date of Management Plan Review:** The Olympic Coast NMS will begin its Management Plan review in fall 2005.

**Sanctuary Website:** http://olympiccoast.noaa.gov/
**Sanctuary Regulations:** 15 C.F.R. § 922, Subpart O



Map credit: Olympic Coast NMS

**Examples of Research and Monitoring Activities in the Sanctuary:**

- Nearshore scientific moorings to collect May – Sept. physical oceanographic data.
- Offshore surveys for marine mammal and seabird distribution/abundance studies.
- Side scan sonar and high resolution multibeam habitat mapping program.
- Periodic subtidal diver surveys for monitoring macroinvertebrates and macroalgae communities.
- Annual intertidal surveys for monitoring macroinvertebrates and macroalgae communities.
- Periodic deep-sea monitoring efforts via submersibles and/or ROVs.
- Partnerships with ongoing monitoring efforts for harmful algal blooms (ORHAB & ECOHAB).
- The Coastal Observation and Seabird Survey Team (COASST) gathers data on seabird mortality.
- Participation in Marine Mammal Stranding program.
- Invasive species monitoring efforts.

**Examples of Endangered and Threatened Species in the Sanctuary:**

| Endangered | Threatened | Delisted |
|---|---|---|
| Humpback Whale | Steller Sea Lion | Peregrine Falcon |
| Southern Sea Otter | Bald Eagle | |
| Brown Pelican | Marbled Murrelet | |
| Northern Right Whale | | |
| Blue Whale | | |
| Fin Whale | | |
| Sei Whale | | |
| Sperm Whale | | |

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**Summary of Regulation of Activities and Uses in**
**Olympic Coast National Marine Sanctuary**
(For full regulations, see 15 C.F.R. § 922 and contact the regulating agencies)

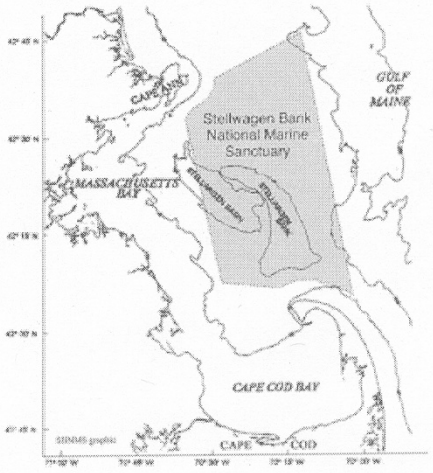
| Type of Use | Regulated by the Sanctuary (NMS) | | | | Examples of Other Regulating Agencies, States/Territories, or Laws (may not be comprehensive list) |
|---|---|---|---|---|---|
| | Zoned (areas closed to this type of use) | Restricted | Prohibited | Comments | |
| Commercial Fishing | | | | Not regulated by NMS regulations | State of Washington, Pacific Fishery Management Council |
| Recreational Fishing | | | | Not regulated by NMS regulations | State of Washington, Pacific Fishery Management Council |
| Bottom Trawling | | | | Not regulated by NMS regulations | State of Washington, Pacific Fishery Management Council |
| Collecting Aquarium Fish | | | | Not regulated by NMS regulations | State of Washington, Pacific Fishery Management Council |
| Aquaculture | | | | May be regulated under Discharges and Alteration of or Construction on Seafloor | State of Washington, Army Corps, U.S. Fish and Wildlife, Environmental Protection Agency |
| Alteration of or Construction on Seafloor | | √ | | Traditional fishing practices, anchoring, navigation aid construction and other uses are allowed | |
| Seabed cables or devices | | | | May be regulated under Alteration of or Construction on Seafloor | Outer Continental Shelf Lands Act, Army Corps, U.S. Coast Guard, FCC |
| Exploring for, Developing, or Producing Oil and Gas | | | √ | | Minerals Management Service, Outer Continental Shelf Lands Act |
| Exploring for, Developing or Producing Other Minerals | | | √ | | Minerals Management Service, Outer Continental Shelf Lands Act |
| Removal/Damage of Natural Resources | | √ | | Take of marine mammals, sea turtles, or seabirds restricted | Marine Mammal Protection Act, Endangered Species Act, Migratory Bird Treaty Act |
| Removal/Damage of Cultural or Historical Resources | | √ | | Only allowed if occurs incidental to traditional fishing operations | Abandoned Shipwreck Act of 1987 |
| Overflights | √ | | | Overflights less than 2000 feet are prohibited within zones around National Wildlife Refuges | Marine Mammal Protection Act, National Wildlife Refuges |
| Use of motorized watercraft | | | | Not regulated by NMS regulations | |
| Underwater Noise | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Discharging or Depositing Material Within the NMS | | √ | | Listed types of discharge allowed | U.S. Coast Guard |
| Discharging or Depositing Material Outside the NMS that Might Injure NMS Resources | | √ | | Listed types of discharge allowed | U.S. Coast Guard |

**Other Regulations:** Permits for research, education, or salvage/recovery operations may be issued to allow any otherwise prohibited or restricted

# Stellwagen Bank National Marine Sanctuary

- **Year Designated:** 1992
- **Size (area):** 842 square miles
- **Location:** 25 miles east of Boston, stretching between Cape Ann and Cape Cod at the mouth of Massachusetts Bay
- **State Waters:** None
- **Purpose:** To facilitate the long-term protection and management of the resources and qualities of the Stellwagen Bank system.
- **Fully-Protected Areas:** None
- **Date Management Plan Issued:** 1992
- **Date of Management Plan Review:** The Draft Management Plan is under NOAA review and is expected to be released in late spring 2006.

**Sanctuary Website:** http://stellwagen.noaa.gov/
**Sanctuary Regulations:** 15 C.F.R. § 922, Subpart N



Map credit: Stellwagen Bank NMS

**Research and Monitoring in the Sanctuary:**

- Marine mammals research including entanglement in fishing gear, vessel strikes, and human disturbance.
- Research in the Western Gulf of Maine closure area (created in 1998) on the effects of closed areas on responses of fish populations to changes in fish habitat, recovery rates of seafloor habitat from chronic gear disturbance, and (if experimental fishing would ultimately be permitted within the closure) habitat-gear-effort specific rates of impacts.
- Cod tagging program every summer to determine the extent to which cod return to the same locations.
- Searching for and identifying shipwrecks.

**Examples of Endangered and Threatened Species in the Sanctuary:**

| Endangered | Threatened |
|---|---|
| Sperm Whale | Green Sea Turtle |
| Sei Whale | |
| Northern Right Whale | |
| Humpback Whale | |
| Finback Whale | |
| Kemp's Ridley Sea Turtle | |
| Leatherback Sea Turtle | |
| Loggerhead Sea Turtle | |
| Atlantic Salmon | |

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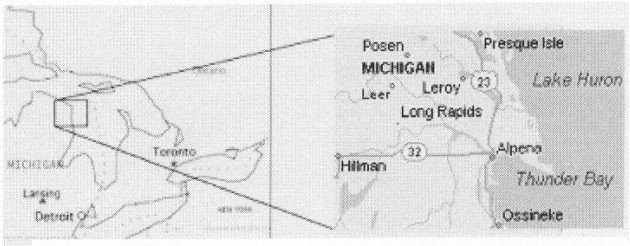
## Summary of Regulation of Activities and Uses in Stellwagen Bank National Marine Sanctuary

(For full regulations, see 15 C.F.R. § 922 and contact the regulating agencies)

| Type of Use | Regulated by the Sanctuary (NMS) | | | | Examples of Other Regulating Agencies, States/Territories, or Laws (may not be comprehensive list) |
|---|---|---|---|---|---|
| | Zoned (areas closed to this type of use) | Restricted | Prohibited | Comments | |
| Commercial Fishing | | | | Not regulated by NMS regulations | New England Fishery Management Council |
| Recreational Fishing | | | | Not regulated by NMS regulations | New England Fishery Management Council |
| Bottom Trawling | | | | Not regulated by NMS regulations | New England Fishery Management Council |
| Collecting Aquarium Fish | | | | Not regulated by NMS regulations | New England Fishery Management Council |
| Aquaculture | | | | May be regulated under Discharges and Alteration of or Construction on Seafloor | Army Corps, U.S. Fish and Wildlife, Environmental Protection Agency |
| Alteration of or Construction on Seafloor | | √ | | Only listed activities, including anchoring and traditional fishing operations, are allowed | |
| Seabed cables or devices | | | | May be regulated under Alteration of or Construction on Seafloor | Outer Continental Shelf Lands Act, Army Corps, U.S. Coast Guard, FCC |
| Exploring for, Developing, or Producing Oil and Gas | | | | May be regulated under Alteration of or Construction on Seafloor | Minerals Management Service, Outer Continental Shelf Lands Act |
| Exploring for, Developing or Producing Other Minerals | | | √ | | Minerals Management Service, Outer Continental Shelf Lands Act |
| Removal/Damage of Natural Resources | | √ | | Take of marine mammals, sea turtles, or seabirds restricted | Marine Mammal Protection Act, Endangered Species Act, Migratory Bird Treaty Act |
| Removal/Damage of Cultural or Historical Resources | | √ | | Only allowed if occurs incidental to traditional fishing operations | Abandoned Shipwreck Act of 1987 |
| Overflights | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Use of motorized watercraft | | √ | | Lightering prohibited, all other use is allowed | |
| Underwater Noise | | | | Not regulated by NMS regulations | Marine Mammal Protection Act |
| Discharging or Depositing Material Within the NMS | | √ | | Listed types of discharge allowed | U.S. Coast Guard |
| Discharging or Depositing Material Outside the NMS that Might Injure NMS Resources | | √ | | Listed types of discharge allowed | U.S. Coast Guard |

**Other Regulations:** Permits for research, education, or salvage/recovery operations may be issued to allow any otherwise prohibited or restricted activity except: exploring for, developing, or producing industrial materials (including sand & gravel), and discharging dredged materials within the Sanctuary.

# Thunder Bay
# National Marine Sanctuary




Map credit: Thunder Bay NMS

- **Year Designated:** 2000
- **Size (area):** 448 square miles
- **Location:** Northwest Lake Huron, off the northeast coast of Michigan's Lower Peninsula
- **State Waters:** Entirely in State waters
- **Purpose:** To provide comprehensive and coordinated long-term protection and management of a unique collection of maritime heritage resources, primarily shipwrecks and associated artifacts.
- **Fully-Protected Areas:** None
- **Date Management Plan Issued:** 1999
- **Date of Management Plan Review:** The management plan review is expected to begin in spring 2006.

**Sanctuary Website:** http://thunderbay.noaa.gov/
**Sanctuary Regulations:** 15 C.F.R. § 922, Subpart R

**Examples of Research and Monitoring in the Sanctuary:**

- Surveys of the shipwrecks.
- Filming for shows on the history and importance of particular shipwrecks.
- Pride of Michigan, Sea Cadet training missions (diving, nautical archaeology, and seamanship).

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## Summary of Regulation of Activities and Uses in Thunder Bay National Marine Sanctuary and Underwater Preserve

(For full regulations, see 15 C.F.R. § 922 and contact the regulating agencies)

| Type of Use | Regulated by the Sanctuary (NMS) | | | | Examples of Other Regulating Agencies, States/Territories, or Laws (may not be comprehensive list) |
|---|---|---|---|---|---|
| | Zoned (areas closed to this type of use) | Restricted | Prohibited | Comments | |
| Commercial Fishing | | | | Not regulated by NMS regulations | State of Michigan |
| Recreational Fishing | | | | Not regulated by NMS regulations | State of Michigan |
| Bottom Trawling | | | | Not regulated by NMS regulations | State of Michigan |
| Collecting Aquarium Fish | | | | Not regulated by NMS regulations | State of Michigan |
| Aquaculture | | | | May be regulated under Alteration of or Construction on Lakebottom | State of Michigan, Army Corps, U.S. Fish and Wildlife, Environmental Protection Agency |
| Alteration of or Construction on Lakebottom | | √ | | Only allowed as incidental result of listed activities, including anchoring and traditional fishing operations | |
| Seabed cables or devices | | | | May be regulated under Alteration of or Construction on Lakebottom | Outer Continental Shelf Lands Act, Army Corps, U.S. Coast Guard, FCC |
| Exploring for, Developing, or Producing Oil and Gas | | | | May be regulated under Alteration of or Construction on Lakebottom | Minerals Management Service, Outer Continental Shelf Lands Act |
| Exploring for, Developing or Producing Other Minerals | | | | May be regulated under Alteration of or Construction on Lakebottom | Minerals Management Service, Outer Continental Shelf Lands Act |
| Removal/Damage of Natural Resources | | | | Not regulated by NMS regulations | |
| Removal/Damage of Cultural or Historical Resources | | | √ | | Abandoned Shipwreck Act of 1987 |
| Overflights | | | | Overflights prohibited in zones | |
| Use of motorized watercraft | √ | | | Grappling hooks or other anchors prohibited on underwater cultural sites marked by mooring buoys | |
| Underwater Noise | | | | Not regulated by NMS regulations | |
| Discharging or Depositing Material Within the NMS | | | | Not regulated by NMS regulations | U.S. Coast Guard |
| Discharging or Depositing Material Outside the NMS that Might Injure NMS Resources | | | | Not regulated by NMS regulations | U.S. Coast Guard |

**Other Regulations:** NOAA and the State of Michigan jointly manage the Sanctuary and its underwater cultural resources. Permits or licenses predating the Sanctuary are still valid if a certification process is undergone to ensure consistency with the Sanctuary Programmatic Agreement. New permits are generally issued by the State of Michigan. Permits for otherwise restricted or prohibited activities may be obtained after certification, as detailed in the NMS regulations.

## APPENDIX III. BIOGEOGRAPHIC REPRESENTATION OF SANCTUARIES

| Sanctuary Name | Acadian | Virginian | Carolinian | West Indian | Louisianian | Vera Cruzan | Californian | Oregonian | Sitkan | Aleutian | Arctic/ Subarctic | Indo-Pacific |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| U.S.S. Monitor | | | X | | | | | | | | | |
| Channel Islands | | | | | | | X | | | | | |
| Gulf of the Farallones | | | | | | | | X | | | | |
| Gray's Reef | | | X | | | | | | | | | |
| Fagatele Bay | | | | | | | | | | | | X |
| Cordell Bank | | | | | | | | X | | | | |
| Florida Keys | | | | | | | | | | | | |
| Flower Garden Banks | | | | X | | | | | | | | |
| Monterey Bay | | | | | | | | X | | | | |
| Stellwagen Bank | X | | | | | | | | | | | |
| Hawaiian Islands Humpback Whale | | | | | | | | | | | | X |
| Olympic Coast | | | | | | | | X | | | | |
| Thunder Bay | | | | | | | | | | | | |

Source: Updated from *The Current Status and Future Needs of the National Oceanic and Atmospheric Administration's National Marine Sanctuary Program: Hearing Before the Subcomm.s on Oceanography, Great Lakes and the Outer Continental Shelf of the House Comm. on Merchant Marine and Fisheries,* 102d Cong. 148-49 (1991) (reprinting in full the Ray and McCormick Ray report and the Marine Sanctuaries Review Team 1991 report).

## APPENDIX IV. MARINE MAMMALS LISTED UNDER THE MARINE MAMMAL PROTECTION AND ENDANGERED SPECIES ACTS AS OF DECEMBER 31, 2004

| Common Name | Scientific Name | Status | Range |
|---|---|---|---|
| **Manatees and Dugongs** | | | |
| West Indian manatee | *Trichechus manatus* | E/D | Caribbean Sea and North Atlantic from southeastern United States to Brazil; and Greater Antilles Islands |
| Amazonian manatee | *Trichechus inunguis* | E/D | Amazon River basin of South America |
| West African manatee | *Trichechus senegalensis* | T/D | West African coast and rivers; Senegal to Angola |
| Dugong | *Dugong dugon* | E/D | Northern Indian Ocean from Madagascar to Indonesia; Philippines; Australia; southern China |
| **Otters** | | | |
| Marine otter | *Lontra felina* | E/D | Western South America; Peru to southern Chile |
| Southern sea otter | *Enhydra lutris nereis* | T/D | Central California coast |
| **Seals and Sea Lions** | | | |
| Caribbean monk seal | *Monachus tropicalis* | E/D | Caribbean Sea and Bahamas (probably extinct) |
| Hawaiian monk seal | *Monachus schauinslandi* | E/D | Hawaiian Archipelago |
| Mediterranean monk seal | *Monachus monachus* | E/D | Mediterranean Sea; northwestern African coast |
| Guadalupe fur seal | *Arctocephalus townsendi* | T/D | Baja California, Mexico, to southern California |
| Northern fur seal | *Callorhinus ursinus* | D | North Pacific Rim from California to Japan |
| Western Steller sea lion | *Eumetopias jubatus* | E/D | North Pacific Rim from Japan to Prince William Sound, Alaska (west of 144° W longitude) |
| Eastern Steller sea lion | *Eumetopias jubatus* | T/D | North Pacific Rim from Japan to Prince William Sound, Alaska (east of 144° W longitude) |
| Saimaa seal | *Phoca hispida saimensis* | E/D | Lake Saimaa, Finland |
| **Whales, Porpoises, and Dolphins** | | | |
| Baiji | *Lipotes vexillifer* | E/D | Changjiang (Yangtze) River, China |
| Indus river dolphin | *Platanista minor* | E/D | Indus River and tributaries, Pakistan |
| Vaquita | *Phocoena sinus* | E/D | Northern Gulf of California |
| Northeastern offshore spotted dolphin | *Stenella attenuata attenuata* | D | Eastern tropical Pacific Ocean |
| Coastal spotted dolphin | *Stenella attenuata graffmani* | D | Eastern tropical Pacific Ocean |
| Eastern spinner dolphin | *Stenella longirostris orientalis* | D | Eastern tropical Pacific Ocean |
| Mid-Atlantic coastal bottlenose dolphin | *Tursiops truncatus* | D | Atlantic coastal waters from New York to Florida |
| Cook Inlet beluga whale | *Delphinapterus leucas* | D | Cook Inlet, Alaska |
| Northern right whale | *Eubalaena glacialis* | E/D | North Atlantic and North Pacific Oceans; Bering Sea |
| Southern right whale | *Eubalaena australis* | E/D | South Atlantic, South Pacific, Indian, and Southern Oceans |
| Bowhead whale | *Balaena mysticetus* | E/D | Arctic Ocean and adjacent seas |
| Humpback whale | *Megaptera novaeangliae* | E/D | Oceanic; all oceans |
| Blue whale | *Balaenoptera musculus* | E/D | Oceanic; all oceans |
| Finback or fin whale | *Balaenoptera physalus* | E/D | Oceanic; all oceans |
| Sei whale | *Balaenoptera borealis* | E/D | Oceanic; all oceans |
| Western gray whale | *Eschrichtius robustus* | E/D | Western North Pacific Ocean |
| Sperm whale | *Physeter macrocephalus* | E/D | Oceanic; all oceans |

Source: Fish and Wildlife Service regulations at 50 C.F.R. § 17.11 and National Marine Fisheries Service regulations at 50 C.F.R. § 216.15.

Source: Marine Mammal Commission. Annual Report to Congress 2004. Bethesda: Marine Mammal Commission, 2005, 32.

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## SUMMARY OF BACKGROUND

Over 20 years of experience in government relations and advocacy at the federal level. Skills include strategic planning; program design, evaluation and management; policy and budget analysis; legislative advocacy; and writing, editing, and media relations. Currently vice president for government relations with a marine conservation organization. Extensive experience managing nonprofit conservation programs, a private government relations firm and a natural resources policy newsletter. Also served as legislative assistant to Members of Congress. Areas of knowledge include marine affairs, public lands management, biodiversity conservation, water resources, pollution control and natural resource economics.

## EMPLOYMENT HISTORY

**Vice President and Washington Office Director** — **April 2001 - present**
**Marine Conservation Biology Institute**
**Washington, D.C.**

Manage the Washington office for the institute, which synthesizes cutting-edge science to help solve ocean conservation problems. Advocate conservation policies, prepare grant proposals and liaise with federal agencies. Coordinate non-profit group meetings with the Under Secretary of Commerce for Oceans and Atmosphere. Lobby for funding of key NOAA programs. Defend ocean protection laws and lead policy campaigns to protect ocean habitat. Co-authored legislative history of the National Marine Sanctuaries Act published in 2004.

**Vice President for Conservation Policy, and Director, Department of Conservation Programs** — **May 1991 - April 2001**
**National Parks Conservation Association**
**Washington, D.C.**

Managed the national park policy program for this 450,000-member nonprofit association and was member of the senior management team. Promoted from director to vice president. Coordinated legislative and administrative policy campaigns and related policy research; prepared grant proposals and solicited funds from donors. Represented the association to Congress, federal agencies, environmental organizations and the media. Created and managed Capitol Hill day for board members. Achievements included the following:

- Successfully led association's efforts to pass a major national parks and public lands bill in the last days of the 104th Congress despite attempts to load it with environmentally harmful provisions; the bill included a provision creating a tallgrass prairie park, a top NPCA goal. In recognition, the association received the 1998 policy achievement award from the Natural Resources Council of America.

- Supervised successful legislative campaigns in the 104th, 105th, and 106th Congresses to defeat several anti-park bills, including the national park closure commission act and a public lands omnibus bill that contained over 20 anti-environment provisions. Marshaled a coalition of Republicans and Democrats to defeat the omnibus bill. Blocked several attempts to pass anti-park riders on appropriations bills, such as one allowing helicopters to land in Alaska national parks.

- Coordinated eight-year national campaign to secure reform of concessions management in national parks despite strong opposition from the concessions industry. The law significantly increased revenue for national parks.

- Expanded staff to allow greater NPCA involvement in key park issues. Established lobby teams to more effectively deal with complex legislative campaigns. Initiated research program to support advocacy efforts. Created outreach program to the Congress that includes meetings with key members, educational trips to parks and a Friend of the National Parks award.

**President** **January 1982 – April 1991**
**W. J. Chandler Associates**
**Washington, D.C.**

Founded and managed firm that provided research, program evaluation, advocacy and editorial services to private sector, governmental and nonprofit clients. Diverse consulting portfolio included the following:

- Evaluated the habitat conservation program of the National Marine Fisheries Service for the Office of Protected Resources; my report led to significant improvements in the program. Also conducted a feasibility study for a proposed riparian areas protection bill for a nonprofit client.

- Conducted comprehensive program and budget needs assessments of the Fish and Wildlife Service and the National Marine Fisheries Service; identified agency policy, program, and budget needs. Principal author of two 300-page reports submitted by the client to Congress and the executive branch. These first-of-a-kind reports prompted increased appropriations for those agencies. Also evaluated wildlife trade programs.

- Member of lobbying teams that successfully prevented passage of pro-billboard industry legislation, and terminated federal funding for a dam that would have

flooded a Nature Conservancy preserve. Both campaigns reversed years of losses to the opposition. Secured appropriations for the acquisition of endangered sea turtle habitat in the Caribbean and surplus federal land for a local park authority.

- Served as contract research director (three years) and editor (two years) of the Audubon Wildlife Report. Hired and supervised scientists and policy specialists who prepared papers for this 500 to 1,000-page book that profiled federal natural resource agencies and significant fish and wildlife species, programs, and issues. Wrote several chapters of the report each year.

**Publisher and Editor-in-Chief** **March 1982 - August 1989**
**Land Letter**
**Washington, D.C.**

Founded, published and was editor-in-chief of a semi-monthly newsletter for natural resources professionals. The newsletter focused on national policy developments in natural resources and public lands management. Developed and sold Land Letter to another publisher.

**Legislative Representative** **February 1977 – December 1981**
**The Nature Conservancy**
**Arlington, Virginia**

Organized and developed the conservancy's first legislative program. Coordinated lobbying efforts of board and staff; created Hill visit day for the board. Successfully promoted tax legislation that established a permanent federal deduction for the donation of conservation easements – a law still in effect. Secured $22 million in appropriations for several fish and wildlife refuges; advocated the creation of new parks and refuges, including Channel Islands National Park.

**Legislative Staff Assistant** **December 1975 - February 1977**
**Rep. Gilbert Gude (MD)**
**U.S. House of Representatives**

Supervised three research assistants and obtained support from various federal agencies in support of Rep. Gude's environmental initiatives on water supply, pollution control and estuary protection in the Potomac River Basin. Helped design and coordinate oversight hearings on the status of Potomac River water supply and pollution control programs; drafted committee report, "State of the Potomac River." Designed and coordinated successful House campaign to ban the production of PCBs under the Toxic Substances Control Act.

**Program Analyst** **August 1974 – December 1975**
**National Commission on Water Quality**
**Washington, D.C**.

Oversaw two multidisciplinary teams of consultants who assessed the effectiveness of the Clean Water Act in New England and Puget Sound. Interviewed federal, state and local officials, industry managers, conservation representatives, and citizen group leaders to develop study agenda. Supervised contractors and reviewed report drafts. Wrote portions of the commission's final report to Congress.

**Legislative Assistant to Sen. Joe Montoya** **February 1972 – August 1974**
**Legislative Consultant to the Interior Committee**
**U.S Senate**

Served as one of two legislative assistants to Senator Montoya (N.M.). Conducted legislative research and policy analysis in various fields including environment, economic development, and Indian affairs. Coordinated several successful amendments to appropriations bills to fund Indian health and water projects in New Mexico. As a consultant to the U.S. Senate Interior Committee, designed and coordinated research efforts of executive and congressional agencies to develop policy alternatives for resolving a century-old land dispute between the Hopi and Navajo Indians in Arizona. Prepared briefing book and supervised the preparation of a social impact study.

## EDUCATION, TRAINING AND PUBLIC SERVICE

M.A. in Government, with honors, Johns Hopkins University, 2006 (to be conferred 2007)
Completed "Strategic Management for Nonprofit Executives," Harvard Business School, 1998
Graduate work in cultural anthropology, American University, 1969-1971
Peace Corps Volunteer, Costa Rica, 1966-68
B.A., Political Science, Stanford University, 1965