

materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus bodies. The NTAA directs EPA to provide Congress, through the OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards. This proposed rulemaking does not involve technical standards. Therefore, EPA is not considering the use of any voluntary consensus standards. EPA welcomes comments on this aspect of the proposed rulemaking and, specifically, invites the public to identify potentially-applicable voluntary consensus standards and to explain why such standards should be used in this regulation.

10. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low Income Populations

To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency must make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health and environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Mariana Islands. Because this proposed rule addresses ocean dumping (away from inhabited land areas), with no anticipated significant adverse human health or environmental effects, the rule is not subject to Executive Order 12898.

List of Subjects in 40 CFR Part 228

Environmental Protection, Water Pollution Control.

Dated: March 4, 2003.

John Iani,
Regional Administrator for Region X.

For the reasons set out in the preamble, chapter I of title 40 of the Code of Federal Regulations is proposed to be amended as set forth below:

PART 228—[AMENDED]

1. The authority citation for part 228 continues to read as follows:

Authority: 33 U.S.C. 1412 and 1418.

2. Section 228.15 is amended by removing and reserving paragraphs (n) (6), (n) (7), and (n) (9), and revising paragraph (n)(8) to read as follows:

§ 228.15 Dumping sites designated on a final basis.

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(n) * * *

(6) [Reserved]

(7) [Reserved]

(8) (i) Mouth of the Columbia River, OR/WA Dredged Material Shallow Water site

(A) *Location:* Overall Site Coordinates/Site Placement Area: 46°15'31.64" N, 124°05'09.72" W; 46°14'17.66" N, 124°07'14.54" W; 46°15'02.87" N, 124°08'11.47" W; 46°15'52.77" N, 124°05'42.92" W; Site Drop Zone: 46°15'35.36" N, 124°05'15.55" W; 46°14'31.07" N, 124°07'03.25" W; 46°14'58.83" N, 124°07'36.89" W; 46°15'42.38" N, 124°05'26.55" W (All NAD 83).

(B) *Size:* 3.50 kilometers long and 0.94 to 1.71 kilometers wide; 0.626 square nautical miles.

(C) *Depth:* Ranges from 14 to 23 meters.

(D) *Primary Use:* Dredged Material determined to be suitable for ocean disposal.

(E) *Period of Use:* Continuing Use.

(F) *Restrictions:* (i) Disposal shall be limited to dredged material determined to be suitable for unconfined disposal; (ii) Disposal shall be limited by site restrictions and requirements contained in the then currently-approved Site Management and Monitoring Plan (SMMP); (iii) An Annual Use Plan (AUP) must be prepared and approved by EPA before disposal may occur in any year.

(ii) Mouth of the Columbia River, OR/WA Dredged Material Deep Water site.

(A) *Location:* Overall Site Coordinates: 46°11'03.03" N, 124°10'01.30" W; 46°13'09.78" N, 124°12'39.67" W; 46°10'40.88" N, 124°16'46.48" W; 46°08'34.22" N, 124°14'08.07" W (which includes a 3,000-foot buffer on all sides); Site Placement Area: 46°11'06.00" N, 124°11'05.99" W; 46°12'28.01" N, 124°12'48.48" W; 46°10'37.96" N, 124°15'50.91" W; 46°09'15.99" N, 124°14'08.40" W (All NAD, 83).

(B) *Size:* 7.01 kilometers long by 5.18 kilometers wide; 5 square nautical miles.

(C) *Depth:* Ranges from 55 to 94 meters.

(D) *Primary Use:* Dredged material determined to be suitable for ocean disposal.

(E) *Period of Use:* Continuing Use (subject to restriction 8) or until placed material has mounded to an average height of 40 feet within the placement area (see restriction 6 below).

(F) *Restrictions:* (i) Disposal shall be limited to dredged material determined

to be suitable for unconfined disposal; (ii) Disposal shall be limited by site restrictions and requirements contained in the then currently-approved Site Management and Monitoring Plan (SMMP); (iii) An Annual Use Plan (AUP) must be prepared and approved by EPA before disposal may occur in any year; (iv) A Drop Zone or Zones will be specified in the AUP for disposal, pursuant to restrictions and requirements contained in the then currently-approved SMMP; (v) Direct disposal of dredged material into the identified buffer zone is prohibited; (vi) The Corps and/or EPA shall undertake specific re-evaluation of site capacity once the site is used and an average mound height of 30 feet has accumulated throughout the Placement Area. This evaluation will either confirm the original 40-foot height restriction, or recommend a more technically appropriate one; (vii) Use of the Deep Water Site during the first three years following final designation is limited as follows subject to completion of baseline and other special studies identified in the 2003 Site Management and Monitoring Plan: (a) Drop Zones specified must correspond to locations where 2001–2002 physical and biological characterizations have occurred, and (b) Disposals will be required to minimize the spread of material on the sea floor within the placement area; (viii) Site use is automatically prohibited at the end of year three following final designation if, for any reason, baseline and other special studies identified in the 2003 SMMP have not been completed and accepted by EPA. Site use will remain prohibited until this condition is satisfied.

(9) [Reserved]

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[FR Doc. 03–5743 Filed 3–10–03; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 600

[Docket No. 030224043–3043–01; I.D. 040202C]

Magnuson-Stevens Act Provisions, Subpart H; General Provisions for Domestic Fishing

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of decision on petition for rulemaking on bycatch.

SUMMARY: NOAA announces its decision on a petition for rulemaking under the Administrative Procedure Act. Oceana, a non-governmental organization, petitioned the U.S. Department of Commerce to promulgate immediately a rule to establish a program to count, cap, and control bycatch in U.S. fisheries. The Oceana petition asserted that NMFS is not complying with its statutory obligations to monitor and minimize bycatch under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), the Endangered Species Act (ESA), the Marine Mammal Protection Act of 1972 (MMPA), and the Migratory Bird Treaty Act (MBTA). The petition sought a regulatory program that includes a workplan for observer coverage sufficient to provide statistically reliable bycatch estimates in all fisheries, the incorporation of bycatch estimates into restrictions on fishing, the placing of limits on directed catch and bycatch in each fishery with provision for closure upon attainment of either limit, and bycatch assessment and reduction plans as a requirement for all commercial and recreational fisheries. NMFS has decided not to initiate rulemaking immediately, but instead to update and renew its commitment to a National Bycatch Strategy, which may eventually result in rulemaking for some fisheries.

ADDRESSES: Copies of the petition are available from John H. Dunnigan, Director, Office of Sustainable Fisheries, NMFS, 1315 East-West Highway, Silver Spring, MD 20910; telephone 301-713-2334. The text of Oceana's petition is available via internet at the following NMFS web address: <http://www.nmfs.noaa.gov/bycatch.htm>.

FOR FURTHER INFORMATION CONTACT: John H. Dunnigan, telephone (301)713-2334.

SUPPLEMENTARY INFORMATION: NMFS published a notice of receipt of petition for rulemaking in the April 18, 2002, *Federal Register* (67 FR 19154) and invited public comments for 30 days ending June 17, 2002. In response, NMFS received 31 letters from different interest groups including Regional Fishery Management Councils (RFMCs), the Commonwealth of the Northern Mariana Islands, various commercial fishermen and fisheries organizations, environmental groups, and other interested individuals. Also, NMFS received tens of thousands of letters of similar content and petitions from interested members of the general public. Summaries of and responses to

comments are provided under Public Comments below.

The Petition

The petition sought rulemaking on "bycatch," which it refers to as "the incidental catch of birds, mammals, turtles, and fish." The petition cited specific legal responsibilities of NMFS for bycatch under the MSA, ESA, MMPA and MBTA, and concluded that NMFS must count, cap, and control bycatch. The petition stated that NMFS must monitor and report bycatch of seabirds that occurs in fishing operations and take steps to reduce seabird bycatch.

For the MSA and related regulations and Federal Court interpretations, the petition cited national standard 9 and other requirements for minimizing bycatch and related mortality, including the requirement to establish a standardized reporting methodology to assess the amount and type of bycatch occurring in a fishery. The petition concluded that any Federal Fishery Management Plan (FMP) or regulation prepared to implement an FMP must contain measures to minimize bycatch in fisheries to the extent practicable and argued that greater observer coverage is required.

For the ESA, the petition cited the prohibition on taking endangered species and protection of threatened species, including recovery plans to guide regulatory efforts, as well as consultation requirements and incidental take statements.

For the MMPA, the petition cited requirements for a regulatory system to avoid and minimize takes of marine mammals reducing mortality or serious injury to insignificant levels, as well as take reduction plans and monitoring of marine mammal takes.

For the MBTA, the petition cited the prohibition on taking any migratory bird, including seabirds, except as permitted by regulations issued by the Department of the Interior, and cited Federal case law and Executive Order 13186 as requirements that NMFS ensure that fishery management plans (FMPs) comply with the MBTA. The petition also referred to the NMFS-issued National Plan of Action for reducing seabird bycatch and the need to prepare a national seabird bycatch assessment.

The exact and complete assertions of nonconformance with Federal law are contained in the text of Oceana's petition which is available via internet at the following NMFS web address: <http://www.nmfs.noaa.gov/bycatch.htm>. Also, a copy of the petition may be

obtained by contacting NMFS at the above address.

The petition specifically requested that NMFS immediately undertake a rulemaking to meet its obligations under the above statutory authorities and that such rulemaking include the following four actions:

"1. Develop and implement a workplan for placing observers on enough fishing trips to provide statistically reliable bycatch estimates in all fisheries. This task involves several steps (taking into account the diversity of vessel category, gears used, and fishing region): (a) determining how many fishing trips must be observed, where observers should be stationed, and other details; (b) identifying funding sources to support such observer coverage, including taxpayer subsidies, taxing landings or user fees; and (c) hiring, training, and deploying the necessary observers.

"2. Incorporate reasonable estimates of bycatch into all total allowable catch levels and other restrictions on fishing.

"3. Set absolute limits on the amount of directed catch and bycatch (including non-fish bycatch) that can occur in each fishery, and close the fishery when the applicable catch or bycatch limit (whichever is reached first) is met.

"4. Within 12 months of initiating rulemaking, develop, approve, and implement bycatch assessment and reduction plans for commercial and recreational fisheries. Such plans should include, at minimum, (a) an assessment of the fishery according to its bycatch, including its types, levels, and rates of bycatch on a per-gear basis and the impact of that bycatch on bycaught species and the surrounding environment; (b) a description of the level and type of observer coverage necessary accurately to characterize total mortality (including bycatch) in the fishery; (c) bycatch reduction targets and the amount of directed and bycatch mortality allowed in each fishery to meet the target; and (d) types of bycatch reduction measures (such as closed areas, gear modifications, or effort reduction) that will be employed in the fishery, including incentives for those who use gears that produce less bycatch. Beginning 12 months after rulemaking commences, NMFS should not permit fishing in any fishery that lacks a functioning bycatch plan."

Public Comments on the Need for Such a Regulation, Its Objectives, and Alternative Approaches

Thousands of letters of similar content and petitions from interested members of the general public expressed concern about "the senseless

destruction of ocean life caused by wasteful fishing" and the failure of government to enforce four Federal laws (MSA, ESA, MMPA, MBTA) to reduce bycatch. Most urged the enforcement of law and the placement of observers on fishing vessels to monitor bycatch. These letters and petitions also urged near-zero levels of bycatch for all marine life. We acknowledge these comments and have given them due consideration in formulating this notice of decision.

Of the remaining 31 letters: 21 commenters urged that the petition should be rejected or denied; 2 commenters provided mixed comments on the petition; and 8 commenters supported the petition to count, cap, and control bycatch. Most of these commenters noted that there is an existing MSA process that should be used for rulemaking, that this process includes RFMCs, and that a global, national rulemaking is inappropriate. Some noted that the petition failed to acknowledge what NMFS and RFMCs have done and are doing to minimize bycatch. Many commenters specifically addressed the points of incorporating bycatch estimates into total allowable catches (TACs) and establishing quotas or absolute limits on catch and bycatch.

Other key points made by commenters included: observer programs are not needed for all fisheries; there should be selection criteria; and high priority fisheries should get observers. Several commenters noted that NMFS and RFMCs need a bycatch planning process. Others referred to seabird bycatch and seabird avoidance measures. Two commenters supported the call for a coordinated effort at a national level to standardize protocols for observers. Another commenter emphasized that bycatch is an international issue and urged NMFS to set an example on bycatch conservation goals. Commenters also expressed the need to make funding available for observer programs and bycatch programs.

Responses to the specific points of the 31 letters are provided below, organized under the four headings corresponding to the four main components of the bycatch petition.

1. Workplan for Sufficient Observer Coverage

Comment 1: Several commenters stated that bycatch is either nonexistent or extremely uncommon in certain fisheries such as in the Commonwealth of the Northern Marianas Islands or in the spiny lobster fishery of the Gulf of Mexico (i.e., 7 dead fish in 21,000 trap

observations). These commenters expressed that while some level of coverage may be valuable in certain fisheries such as the Gulf of Mexico shrimp fishery, any requirements for an observer program for those fisheries in which bycatch has been determined not to be a problem is onerous and costly with no added benefit.

Response: NMFS recognizes that certain fishing gears and configurations are more selective than others. Nonetheless, fisheries must be assessed at some level, using observers or other bycatch assessment methods, to determine whether there is a bycatch problem. NMFS uses logbook information, existing information on gear selectivity, distribution and abundance of fish and protected resource populations, and bycatch information in other similar fisheries to make preliminary evaluations of potential bycatch in unobserved fisheries. These preliminary evaluations are used by NMFS, and the RFMCs where appropriate, to determine whether observer placement in these fisheries is warranted, and at what levels. NMFS will be developing a national approach to a standardized bycatch reporting methodology as noted under the NMFS National Bycatch Strategy section below. A national in-house working group will evaluate the current methodologies for estimating bycatch, review the current use of self-reporting to estimate discards, evaluate the potential for estimating discards by inferences drawn from fishery independent surveys, recommend a statistical design for observer programs to cover all U.S. fisheries, recommend standards of precision to be achieved for discard estimates, and recommend observer sample sizes and associated costs for all U.S. fisheries.

Comment 2: Another commenter objected to the petition's request for requiring observers on all U.S. fleets regardless of whether there is bycatch and for requiring a statistically reliable estimate of bycatch within a 1-year time period, which would necessitate, in some cases, well in excess of 20 percent observer coverage. The commenter explained that this would be costly, unnecessary, inefficient, and devastating to fishermen.

Response: The bycatch petition does not request observers on all fleets, but instead, calls for a workplan for placing observers on enough fishing trips to provide statistically reliable bycatch estimates in all fisheries. NMFS, in collaboration with RFMCs, evaluates and addresses the problems of bycatch on a fishery-by-fishery basis. In some cases, this involves deploying observers

in certain fisheries. In other cases, because observer coverage is not possible, new methods must be devised to assess bycatch. This is an ongoing process, as part of the fishery management process, and we recognize that a 1-year time frame for collecting statistically reliable bycatch estimates by deploying observers in all fisheries is unrealistic, and, for some fisheries, unwarranted. The development by NMFS of a national approach to a standardized bycatch reporting methodology will help in determining what is needed in individual fisheries.

Comment 3: One commenter indicated that the Atlantic Coast Cooperative Statistics Program's (ACCSP) "Release, Discard, and Protected Species Interactions Monitoring Program Module" is in use on the Atlantic Coast and that it represents an adequate process for bycatch monitoring and collection standards.

Response: NMFS agrees that the goals and protocols of the ACCSP bycatch monitoring program, establishing the preferred methodology to collect data and estimate bycatch, are well defined and scientifically reliable. Once funded and implemented in all Atlantic fisheries, this should provide extremely valuable data and will be an effective tool for estimating bycatch.

Comment 4: While concurring that observers are an effective method for gathering detailed information on fishing activities, one commenter asserted that such programs may present logistical difficulties (small vessels, rare events) and may not be the best way to assess bycatch in "all" fisheries. The commenter urged NMFS not to rush to implement a comprehensive observer program for every fishery, but rather to consider a more strategic approach. The commenter also stated that observer programs should be prioritized by existing information demonstrating the need for observer coverage.

Response: NMFS agrees that observers are effective in many fisheries but are not appropriate in all fisheries. NMFS, in collaboration with RFMCs, evaluates and addresses the problems of bycatch and the need for observers on a fishery-by-fishery basis. The development of a national approach to standardized bycatch reporting methodology is discussed below in the NMFS National Bycatch Strategy section. In fisheries that NMFS determines are not appropriate for observer coverage, NMFS works with the RFMCs to implement alternative methods to assess bycatch in fisheries. Also, NMFS recently has developed long-term budget initiatives for observer programs,

including research into observer programs for small vessel coverage. This includes the testing of digital cameras strategically placed onboard vessels to monitor fishing activities and catch.

Comment 5: One commenter indicated that the North Pacific Fishery Management Council (NPFMC) and NMFS already have an observer program in place, stating that, while the program can be improved, such improvements must come from incremental changes as more information becomes available.

Response: NMFS agrees that the observer program in place for monitoring North Pacific groundfish fisheries has benefitted from changes implemented as new information and resources have become available. However, observer programs have not been implemented for all U.S. fisheries. The National Observer Program, a relatively new program within NMFS headquarters, is charged with facilitating the exchange of information and experiences between programs to facilitate the implementation of new programs and to improve the efficiency and effectiveness of existing observer programs.

Comment 6: Several commenters indicated that the NPFMC already has a functioning observer program for the North Pacific groundfish fishery that is large scale, mandatory, and industry-funded. At least one of these commenters indicated that as a result, the NPFMC has an observer-generated data base from which to evaluate catch and bycatch mortality levels in those sectors of the fleet that account for virtually all of the groundfish landings in the Bering Sea and Aleutian Islands and a large part of the landings in the Gulf of Alaska.

Response: NMFS agrees that industry funding of the North Pacific Groundfish Observer Program (NPGOP) has resulted in comprehensive coverage of North Pacific groundfish fisheries. The data collected by observers are critical to the management of these fisheries. NMFS is working with the NPFMC to review current funding mechanisms and coverage levels in the NPGOP. This review is focused on ensuring that funding mechanisms and coverage levels continue to address the need for collection of high quality catch and bycatch data to support management decisions.

Comment 7: Several commenters supported the development and implementation of an observer workplan, with consistent and adequate coverage as necessary to provide more reliable bycatch estimates and facilitate sound management. Commenters noted

that unreliable bycatch estimates can undermine stock assessments and impede rebuilding efforts, and that restrictive management regimes based on flawed data may economically destroy fisheries.

Response: For fisheries where observer coverage is needed to monitor bycatch, NMFS agrees that a level of coverage should be deployed that provides statistically reliable bycatch estimates. Because the need for coverage will vary from fishery to fishery, NMFS is undertaking a national review of coverage levels in the coming year to evaluate current mechanisms used for estimating appropriate coverage levels, and to determine the most appropriate statistical methodologies upon which to base sample size determinations. This review will be used in the refinement of future initiatives to address funding for observer programs. This review will also support the development of a national plan for NMFS observer programs, where needs for observer coverage to monitor bycatch will be outlined on a fishery by fishery basis.

Comment 8: One commenter supported a national work plan for observer placement that would include: hiring standards; coordination with states; maximum data collection regardless of the statutory authority; adequate support for observers; well-defined objectives and goals for each observer program; data quality and assurances; strong scientific sampling design; annual evaluations; and giving NMFS sole authority to make all decisions in regards to observers (i.e., RFMCs should not be involved in sampling design).

Response: NMFS agrees that a national plan for NMFS observer programs is important to address the commenter's concerns, and has initiated development of this plan. Historically, NMFS observer programs have operated independently in each region with little opportunity for exchange of information and with minimal guidance on the development of standardized operating procedures. With the establishment of the National Observer Program in 1999, NMFS has begun to address many issues critical to the effective deployment of observers nationwide, such as program goals and objectives, safety standards for observed vessels, hiring standards and wages for observers, vessel liability, observer compensation in the event of an injury, authorities to collect observer data, and options for industry funding of observer programs. As part of the agency's implementation of the Fisheries Information System, the National Observer Program has also begun to address issues to improve

overall data integrity, such as coordination with states and RFMCs, sampling design and data quality, observer coverage levels, integration of observer data with other fisheries data, data confidentiality, electronic data entry, and improved access to observer data. The National Observer Program will be drafting the national plan for NMFS observer programs in the coming year, in cooperation with each regional NMFS observer program, RFMCs, the states, and the state fishery commissions.

Comment 9: Another commenter supported a workplan, but expressed that observers may not necessarily be required in all fisheries if other reliable and accurate methods of assessing bycatch are available. The commenter suggested that NMFS prioritize which fisheries require observers to obtain accurate bycatch data and determine the level of coverage needed.

Response: NMFS agrees and is working towards this. Current efforts include research into alternative methods for collection of bycatch data, such as the use of video cameras and other means of electronic monitoring, and identification of fisheries with the highest priority for observer coverage. As discussed below, NMFS will be developing a national approach to standardized bycatch reporting methodology.

Comment 10: Commenters asserted that without the immediate implementation of a plan to count, cap, and control bycatch, including the implementation of an observer workplan, our oceans remain at risk from wasteful fishing practices.

Response: NMFS continues to work nationally and internationally to reduce bycatch. A wide variety of measures are already in place to monitor and reduce bycatch in numerous fisheries. Bycatch data from observers are used to develop and implement gear improvements and management measures to reduce bycatch. NMFS will continue to work on identifying fisheries for which bycatch is occurring, and furthering strategies for better estimating and reducing bycatch.

Comment 11: One commenter supported the development of a workplan for observer placement and suggested that NMFS should: devise a more effective system for observer deployment than the "lottery" system currently in place in the West Coast groundfish fishery; establish minimum standards at the national level for safety, hiring, sampling, and data integrity; require critical evaluation of observer sampling methods and heighten concern for data integrity; and improve

constructive communication between observers, NMFS, and Pacific States Marine Fisheries Commission employees.

Response: Same response as to Comment 8.

Comment 12: One commenter asserted that the universal implementation of observer programs is not practical for fishing vessels in the Western Pacific, as the majority of the fleet are small, 1–3 person vessels. The commenter also indicated that the deployment of observers on Hawaii longline vessels has permitted an evaluation of the accuracy of logbook records, and has led to a method whereby catch estimates can be generated from logbook data in the absence of observers. The commenter indicated that observer-validated logbooks and survey interceptions at landing sites should not be dismissed as alternate ways of monitoring bycatch.

Response: Non-biased observer data collection in the majority of instances is the most effective way to monitor bycatch, particularly of protected species, in order to obtain accurate data. Nonetheless, NMFS acknowledges that observer data are not the only way to monitor bycatch. More cost effective alternatives need to be developed and considered and may prove to be just as effective, depending upon the purpose. Electronic monitoring, self-reporting (logbooks), and/or dockside sampling may be viable alternatives to observers in some fisheries. For example, in small vessel fisheries electronic monitoring may be a viable alternative to observers; in other fisheries, technology may be used to augment observer data. A national approach to standardized bycatch reporting methodology will be useful in evaluating needs of individual fisheries.

Comment 13: One commenter recommended that NMFS should identify statistically significant levels of observer coverage necessary to obtain reliable estimates of the problem, and require each RFMC to develop, within a year, a draft plan that would include a standardized bycatch reporting methodology.

Response: NMFS continues to work with RFMCs and others to identify appropriate levels of observer coverage in fisheries where bycatch is a significant problem, and to implement bycatch reporting methodologies. Developing a more rigorous and “standardized” reporting methodology for all fisheries will require substantially higher levels of funding for the RFMCs and NMFS (particularly for observers and data analysis) and greater cooperation by industry where

voluntary measures have failed. Detailed administrative records are needed to comprehensively assess bycatch reporting methodology and any adverse impacts from fishing practices. NMFS will evaluate current methodologies for reporting bycatch and costs, among other things, as it develops a national approach to a standardized bycatch reporting methodology as part of its continuing efforts to reduce bycatch.

Comment 14: One commenter indicated that the at-sea Pacific whiting fleet in the North Pacific and the whiting fishery on the west coast have had bycatch avoidance plans in effect that are among the most sophisticated and effective of any in the world. Further, the commenter pointed out that observers in this fishery are not required by regulation; the fleet voluntarily carries these observers at their own expense.

Response: NMFS recognizes the effectiveness of the voluntary at-sea Pacific whiting fleet observer program, and the contributions of the industry to the success of this program and to the low levels of bycatch associated with this fishery.

Comment 15: One commenter indicated that while the development of an observer workplan is desirable, it is unreasonable to request that such a plan be implemented without a known source of funding. The commenter asserted that the petitioners would be more productive if they influenced Congress to fund the existing mandates of the MSA, at which time NMFS and the RFMCs and the states could collaborate on development and implementation of such a workplan.

Response: NMFS has and will continue to develop budget initiatives to address needs for observer coverage in currently unobserved or under-observed fisheries. Funding for observer programs has been a priority for both the agency and Congress, as reflected in increased funding levels for observer programs from approximately \$8 million in 1999 to approximately \$21 million in 2002. In addition, NMFS is exploring alternative mechanisms for funding of observer programs, and the statutory authority to implement these alternative funding mechanisms. Authority for industry funding of observers under the MSA (section 313) currently exists only for fisheries managed by the NPFMC.

Comment 16: Another commenter asserted that the fisheries in the North Pacific are subject to the most comprehensive observer coverage of any fishery in existence. The commenter stated further that, based on scientific advice the NPFMC has received, the

accounting measures in place in the North Pacific fisheries more than adequately account for and monitor catch and bycatch in the groundfish and crab fisheries.

Response: NMFS agrees that the North Pacific Groundfish Observer Program has one of the most comprehensive levels of observer coverage, and the data collected by observers are critical to monitoring of catch and bycatch. NMFS implemented a similar level of coverage for purse seine vessels in the Eastern Tropical Pacific to monitor the effectiveness of measures to mitigate takes of marine mammals.

Comment 17: One commenter expressed opposition to short-term observer requirements that exceed a scale that NMFS could reasonably be able to implement. The commenter indicated that effective observer programs are difficult to design when a fleet is comprised of many different types of vessels with many different fishing strategies, including many small vessels that operate with only one or two crew members and when staffing is problematic. Further, the commenter stated that increased information from observer programs is only useful to the extent that NMFS has a system in place to integrate that information into fisheries management decisions in an efficient and timely way. Also, the commenter suggested that imposing user fees to defray observer costs fails to acknowledge the slim profit margins on which certain sectors of the U.S. fishing fleet already operate. The commenter believed that these issues explain why observer programs are discretionary rather than mandatory elements of FMPs.

Response: NMFS understands the difficulties involved in designing and implementing effective observer programs, particularly when resources are limited and/or vessels vary considerable in size and ability to accommodate an observer. The NMFS National Observer Program has been working in cooperation with each regional observer program to develop standards for monitoring small vessels, including research into alternative monitoring technologies. For North Pacific fisheries, NMFS has fully integrated observer data into monitoring of TACs and bycatch mortality while the fishery is being conducted. NMFS is implementing methods to ensure greater and more timely access to and use of observer data by NMFS scientists and managers through the implementation of the Fisheries Information System. NMFS is also exploring alternative mechanisms for funding of observer programs, and the statutory authority to

implement these alternative funding mechanisms, as mentioned in previous responses.

Comment 18: One commenter stated that it is essential to assess bycatch for all protected species recovery plans and FMPs, and assess the impact of bycatch on marine food webs.

Response: NMFS agrees that the assessment of bycatch and its effect on the ecosystem should be an important element in FMPs and protected species recovery plans. Indeed, the ESA is founded upon the concept that listed species and their critical habitat must be conserved to recover endangered and threatened species. For this reason, ESA recovery plans contain detailed site-specific management actions necessary to address ongoing threats, such as bycatch in fisheries.

2. Incorporation of Bycatch Estimates into All Total Allowable Catch (TAC) Levels and Other Fishing Restrictions

Comment 1: One commenter indicated that adjustments to TACs based on bycatch information are already being made by NMFS analysts who do stock assessments on stocks for which the Gulf of Mexico RFMC and NMFS set TAC. The commenter stated that the levels of fish discarded alive are adjusted by the current estimates of post-release mortality, which are 10 percent to 20 percent for recreational fish that are discarded and 33 percent for commercially discarded fish. These portions of the discarded fish are considered as additional mortality (part of the TAC) in the assessments.

Response: NMFS works with RFMCs to factor bycatch into the setting of fishery TACs or harvest guidelines.

Comment 2: One commenter concurred that "reasonable" estimates of bycatch should be used when setting TACs and indicated that the Pacific RFMC/NMFS harvest mortality monitoring and control system distinguishes between bycatch and bycatch mortality and expressed the view that these estimates have been reasonable.

Response: NMFS agrees that reasonable estimates of bycatch mortality should be used when setting TACs.

Comment 3: Several commenters indicated that the NPFMC counts bycatch of groundfish and crab species (whether retained or not) against the applicable TACs for these species and stated that such bycatch is generally not considered a biological problem.

Response: NMFS believes it is appropriate to apply both retained and discarded bycatch in this fishery against TAC levels. NMFS MSA regulations at

50 CFR 600.310(f)(4)(iii) specify that "All fishing mortality must be counted against OY [optimum yield], including that resulting from bycatch, scientific research, and any other fishing activities."

Comment 4: One commenter indicated that the Mid-Atlantic RFMC incorporates bycatch estimates into all TAC levels for all species it manages and supports requiring bycatch estimates to be incorporated into TACs.

Response: NMFS agrees with the incorporation of estimates of bycatch into TACs.

Comment 5: One commenter suggested incorporating all sources of mortality, including bycatch, into stock assessments and when establishing TACs.

Response: NMFS incorporates bycatch data, when available, into stock assessments and into setting TACs as stipulated in various FMPs or FMP regulations, and NMFS operational guidelines.

Comment 6: One commenter opposed a mandatory requirement to incorporate estimates of bycatch into all TACs and other restrictions on fishing stating that sufficient data do not exist to do this for most fisheries. The commenter expressed opposition to such a requirement until such time as the bycatch monitoring mandates of the MSA are funded and are given time for a sufficient body of data to be developed upon which to base such estimates.

Response: NMFS supports the inclusion of bycatch estimates in TACs and their consideration in other fishery management measures to the extent that adequate scientific data exist for doing so.

3. Limits on Directed Catch and Bycatch in Each Fishery

Comment 1: One commenter objected to having NMFS set absolute limits on the amount of bycatch that can occur, and specifically opposed the petition's recommendation that a fishery be closed when a bycatch quota is met. The commenter stated the objections were based on the fact that bycatch is already considered when setting TAC for Gulf of Mexico RFMC-managed finfish stocks, and that the bulk of the bycatch in this area has already been reduced to the level practicable by gear technology.

Response: NMFS believes that the level of bycatch for managed species should be considered in the setting of TACs, whether the acceptable level of bycatch is considered prior to setting of TACs for target species as in the Gulf of Mexico RFMC instance referred to by this commenter, or whether a bycatch quota is included in the actual TAC as

in the NPFMC. However, reaching a specified bycatch limit may not necessarily require closure of the fishery, particularly when other mitigating measures are in place (e.g., reaching the bycatch limit may trigger an area closure or gear restriction). What is most important is that available information on bycatch should be used in formulating regulatory measures to manage fisheries, including fishery closures, where appropriate.

Comment 2: One commenter indicated that the South Atlantic RFMC would evaluate setting absolute limits on direct catch and bycatch for each fishery and closing the fishery when the limit is met, as additional data become available and if other approaches are not better suited.

Response: NMFS believes that RFMCs should consider all feasible approaches, such as direct catch and bycatch limits, when devising ways to mitigate bycatch.

Comment 3: One commenter stated that most Pacific RFMC fisheries are managed according to optimum yields and believes that total mortality should be the guiding criterion in fishery closure considerations if stock sustainability is the main concern. The commenter expressed the belief that decisions to limit bycatch for the purpose of minimizing waste, which are regulatory discards or economic discards that are not conservation problems, are best made on a case-by-case basis through the RFMC process.

Response: NMFS agrees with the comment.

Comment 4: One commenter disagrees that absolute bycatch limits should be used to close fisheries. The commenter stated that NMFS does not currently have the resources or capability to monitor bycatch, and believes it would be impossible to estimate bycatch on a timely basis and use such quotas as a trigger to close fisheries.

Response: To the extent that NMFS has the resources and capabilities to accurately monitor bycatch on a timely basis, such information could be used to trigger fishery closures if appropriate. For instance, Alaska Region managers are able to open and close groundfish fisheries in the Bering Sea and Aleutian Islands and in the Gulf of Alaska based on attainment of bycatch quotas. However, in some cases, especially with protected resources in which populations are extremely depleted, the interactions are rare and may vary greatly over time and area; thus, the level of observer coverage needed to identify a trigger and effectively respond may not be feasible at this time. In such instances, NMFS will seek to identify other means to monitor levels of take, as

required within biological opinions and the MMPA.

Comment 5: One commenter expressed the belief that limits on catch and bycatch should be set, but stated that, as long as bycatch is counted against the TAC, there is no need to close a fishery when some predetermined bycatch limit is reached. The commenter suggests that reserve measures, such as area closures, gear restrictions or similar measures, should be developed on a case-by-case basis that would be triggered when the bycatch limit is reached.

Response: NMFS believes the comment is reasonable and that reaching of a bycatch limit may not necessarily require the closure of the fishery, particularly when other mitigating measures such as area closures or gear restrictions are in place and can adequately address any impacts that the bycatch may be having on the marine resource. Each fishery needs to be evaluated to determine the best means to mitigate bycatch.

Comment 6: One commenter suggested that NMFS identify catch limits of target and non-target species for each fishery, focusing first on populations that are most overfished. The commenter expressed support for moving toward absolute limits on bycatch in select fisheries based on status of the stocks and the life histories of all species affected by the fishery.

Response: NMFS generally agrees with the comment and particularly agrees with the need to set catch limits for target and non-target populations that are most overfished.

Comment 7: One commenter expressed the belief that the forced closure of fisheries when bycatch limits are reached ignores the "to the extent practicable" limitation of MSA national standard 9, the "optimum yield" requirements of MSA national standard 1, and the fishing community protection requirements of MSA national standard 8. Instead, the commenter supports the prohibited species catch (PSC) limits approach where practicable as employed by the NPFMC and NMFS in North Pacific fisheries (i.e., NPFMC exempting certain PSC bycatch limits when bycatch is negligible - low enough to make further reduction unnecessary from a biological standpoint and impracticable from a socio-economic standpoint).

Response: NMFS supports the flexibility that each RFMC has in developing appropriate conservation and management measures consistent with the MSA. At the same time, RFMCs and NMFS must consider the impact of

the recommended and alternative actions on the environment.

Comment 8: One commenter opposed setting absolute limits on directed catch and bycatch because in many cases sufficient information is not available to even grossly estimate such limits for target species, let alone non-target species. The commenter supports incorporating such limits within FMPs once sufficient monitoring data is available to develop such limits.

Response: Normally NMFS does not support the incorporation of directed catch or bycatch limits for purposes of closure where sufficient monitoring data are not available. There may be instances where directed catch or bycatch limits need be imposed, based on the best available information, in order, for example, to safeguard a protected species or an overfished stock.

4. Bycatch Assessment and Reduction Plans

Comment 1: One commenter indicated that a requirement for observer programs for fisheries in which bycatch does not occur would be an onerous and costly strain on limited management staff and resources.

Response: NMFS agrees that mandatory observer programs for fisheries that utilize very selective gear or that fully utilize target and nontarget catch would normally represent an inappropriate strain on management resources. However, we do not believe that the 4th component of the petition for rulemaking requests observer coverage for all fisheries. Rather, the 4th component of the petition requests a description of the level and type of observer coverage necessary to accurately characterize total mortality (including bycatch) in a fishery. Such a description could determine that no observer coverage is necessary to accurately characterize mortality for certain fisheries. The approach to standardized bycatch reporting methodology that NMFS is developing, as discussed below, will be useful in determining the needs of individual fisheries.

Comment 2: One commenter suggested that for fisheries in which there are very little available data on bycatch due to very low levels of bycatch in the fisheries, assessing bycatch within a 12-month period would require substantial levels of observer coverage, which would be costly and inefficient effort that would have devastating effects on fishermen.

Response: We believe that fisheries for which insufficient bycatch data exist should be subject to increased data collection efforts if bycatch is perceived

to be a problem. Monitoring efforts such as observer programs are very costly, and limited NMFS resources should be devoted to fisheries in which bycatch data are poor and where bycatch is perceived to be problematic. We agree that the 12-month time frame in the petition for developing, approving, and implementing bycatch assessment plans for commercial and recreational fisheries would be infeasible for most fisheries. While 12 months may be feasible for developing and seeking approval, this time frame would likely be insufficient for full (non-emergency) rulemaking.

Comment 3: Two commenters indicated that two RFMCs have already implemented bycatch assessment and reduction plans for almost all of their fisheries in compliance with national standard 9 in Section 301 of the Sustainable Fisheries Act (SFA).

Response: NMFS agrees that the efforts of various RFMCs over the past few years to address bycatch have largely accomplished the objectives of the bycatch assessment and reduction plans described in the 4th component of the petition for rulemaking. Some RFMCs have accomplished the objectives more completely than others, and this variation among RFMCs in addressing bycatch will be assessed by NMFS as part of its National Bycatch Strategy discussed below. One result of the assessment may be a checklist for the purpose of ensuring that all FMPs achieve a standard level of bycatch assessment and reduction.

Comment 4: Several commenters suggested that the petition's 12-month time frame for completing bycatch assessments and the rulemaking process would be virtually impossible to comply with due to time-intensive monitoring requirements and the RFMC process. Another commenter thought that implementing bycatch assessment and reduction plans for commercial and recreational fisheries was a good idea but that a 2-year or even a 5-year time frame would be more appropriate to allow a realistic amount of time to implement data collection programs and fishery management plan amendments.

Response: We agree that bycatch assessment and reduction plans for commercial and recreational fisheries are desirable and believe that elements of these plans are available for many fisheries in which bycatch data are abundant. Because other fisheries, especially recreational fisheries, have not been subject to long-term and rigorous bycatch assessment and reduction efforts, NMFS agrees that for many fisheries the 12-month time frame would not realistically allow for the

implementation of bycatch assessment and reduction plans as outlined in the 4th component of the petition for rulemaking.

Comment 5: Several commenters suggested that the petition's directive that NMFS prohibit fishing in any fishery lacking a functioning bycatch plan 12 months after rulemaking commences represents an unduly severe burden on the fishing industry.

Response: NMFS has disapproved FMP amendments or portions thereof that inadequately addressed the bycatch requirements of the SFA. Examples include the partial disapproval of: Amendment 8 to the FMP for Pelagic Fisheries of the Western Pacific Region; Amendment 6 to the FMP for Bottomfish/Seamount Groundfish Fisheries of the Western Pacific Region; Amendment 12 to the FMP for Summer Flounder, Scup, and Black Sea Bass (only the bycatch provision for scup was disapproved); and the generic SFA amendment to all of the Gulf of Mexico FMPs. We believe that it is worthwhile to investigate the creation of uniform standards for bycatch assessment and reduction for all FMPs governing commercial and/or recreational fisheries based on the requirements listed in the 4th component of the petition for rulemaking. Nonetheless, NMFS believes that total fishing prohibitions for fisheries lacking bycatch plans within a 12-month time frame are inappropriate.

Comment 6: One commenter indicated that it would be impractical to assess fishery bycatch in relation to "the impact of that bycatch on bycaught species and the surrounding environment" because such data are not currently monitored and are unavailable.

Response: NMFS believes that the ecosystem effects of bycatch are an important consideration of fishery management. Nonetheless, we agree with the above comment that for many commercial and recreational fisheries, the ecosystem effects of bycatch are poorly understood due to monitoring limitations. NMFS has limited resources to fund the monitoring of bycatch and ecosystem effects of bycatch, and those resources, including resource-intensive observer programs, have to be prioritized to address fisheries with problematic levels of bycatch.

Comment 7: One commenter agreed with the petition's requirement that bycatch plans consider the various species with which a single fishery interacts, as well as the effects of multiple fisheries on a single stock, in order to create broad-based plans where

the likelihood of compliance, effective enforcement, and success is optimal.

Response: We agree that these factors should be fully considered for fisheries where data have been collected on fisheries interactions, and managers should identify areas where fisheries interaction data are lacking and create plans to improve data collection. These factors are considered in most cases during the FMP creation process and addressed in the National Environmental Policy Act (NEPA) process.

Comment 8: One commenter expressed reservations about the petition's recommendation to use incentives for those who use gears that produce less bycatch because of unintended consequences that might occur when segments of the fishing industry change gears from a gear that causes one type of bycatch problem to another gear that causes a different type of bycatch problem.

Response: NMFS recognizes this problem and strives to fully analyze the various consequences of management actions, whether they be closed areas, gear restrictions, or fishermen's incentives.

Accomplishments and Ongoing Activities

NMFS and the RFMCs have undertaken many activities to both quantify and reduce bycatch. The most successful of these have required a comprehensive understanding of the type of and cause of bycatch, and cooperation between NMFS scientists, managers, RFMCs, and the fishing industry in implementing measures that are effective in reducing bycatch yet result in minimal impacts to fishermen.

NMFS is in the process of compiling summary information on a regional basis that identifies: bycatch species (fish, sea turtles, marine mammals, seabirds, corals); bycatch data collection methods being used (logbooks, observer programs, dockside sampling, etc.); percentage of coverage in observed fisheries; bycatch estimates where available; gear requirements or prohibitions; and other management measures being used to reduce bycatch. This summary information is being compiled in matrix form and will be made available in the near future on a dedicated NMFS bycatch website (<http://www.nmfs.noaa.gov/bycatch.htm>) linked from the NMFS homepage. NMFS plans for its new bycatch website, unveiled in January 2003, to eventually contain information about bycatch regulations and policy, bycatch-reduction research, bycatch experts, bycatch data sets, conferences/

workshops, and technology-transfer efforts that will assist the public in understanding the bycatch problem, the efforts that have been taken and are being taken to address the bycatch problem, and the commitment of NMFS to meeting its bycatch goal. Following are some examples of progress made to date to quantify and reduce bycatch, and a summary of key ongoing activities.

A. Gear Technology and Fish Behavior Research

Prior to the enactment of the SFA, NMFS established a national team which produced the 1998 report *Managing the Nation's Bycatch* available at <http://www.nmfs.noaa.gov/bycatch.htm>. This comprehensive report identified a number of high-priority needs in the area of gear technology and selectivity and fish behavior research. As is described below, some of the research has been devoted to fisheries interactions that are not defined as bycatch in the SFA, because the SFA defines bycatch in terms of fish, which is defined as "finfish, mollusks, crustaceans, and all other forms of marine animal and plant life other than marine mammals and birds". However, *Managing the Nation's Bycatch* expanded the management concept of bycatch to include marine mammals, and seabirds. In 2001, NMFS formed the NMFS Gear Technology Working Group, and this group is helping to organize national priorities for gear technology research and ensure sustainable funding.

At the Alaska Fisheries Science Center (AFSC), gear technology research and research on the behavioral responses of fish both to fishing gear and to the stresses imposed by coming in contact with fishing gear have contributed substantially to efforts to address the bycatch problem. Species-specific differences in the response to fishing gear have been identified and used to develop gear modifications that increase the escapement of juvenile fish and other fish that would be discarded if caught. Examples of the gear modifications that have been developed include: (1) excluder grates to decrease halibut bycatch in the Alaska flatfish and Pacific cod trawl fisheries; (2) trawl modifications to decrease rockfish bycatch in west coast sole fisheries; (3) grates and square mesh in trawl codends to reduce the bycatch of juvenile pollock in the Alaska pollock fisheries; and (4) excluders and large mesh to reduce skate bycatch in Alaska trawl fisheries. Research on the differences in the responses of salmon and pollock to trawl gear has been completed and it is

expected to result in the development of gear modifications to decrease salmon bycatch in the pollock fisheries. These types of fish behavior and gear technology research have generally been successful in identifying and implementing gear modifications that increase the escapement of select species of sizes of fish.

Additionally, in gear research conducted by the Washington Sea Grant Program (WSGP) and partially funded by a NOAA Saltonstall-Kennedy grant, seabird avoidance gear devices for use in the groundfish and halibut longline fisheries off Alaska were tested and found to significantly reduce the incidental catch of seabirds. NMFS is in the process of revising regulatory requirements for longline vessel operators off Alaska, based on this WSGP research.

As new methods are developed for increasing the escapement of select species or sizes of fish, there is an increased need to estimate escapement mortality. If the escapement mortality rates are very high, increased escapement simply replaces one type of bycatch mortality (e.g., discard mortality) with another type of bycatch mortality (i.e., escapement mortality), and the latter is unobserved, and, therefore, often more difficult to estimate. Examples of escapement and discard mortality research being conducted by the AFSC include: (1) research to determine the escapement mortality rate for juvenile pollock and to develop methods and equipment for use in future survival studies; (2) research on the factors that affect the escapement and discard mortality rates for halibut; and (3) research on the injury rates of red king crab that encounter and escape bottom trawl footropes on the sea floor.

At the Southwest Fisheries Science Center (SWFSC), satellite tracking of sea turtles is revealing significant new information on sea turtle habitat, movement patterns, and post-hooking survival. Approximately 50 turtles have been tracked with conventional ARGOS transmitters, and about 20 turtles have been tracked with 'pop-up' satellite tags. ARGOS transmitters indicate that sea turtles survive for many months after release from longline gear. The pop-up tags will provide more long-term information on post-hooking survival rates indicating whether turtles survive for 6 months or longer after release from longline gear. Post-hooking survival is also being correlated with the condition of released turtles.

SWFSC scientists have initiated research to develop gear and technique modifications to reduce the incidental take of sea turtles in the Hawaii-based

pelagic longline fishery. The development of turtle-safe longline gear and turtle-safe fishing techniques are also needed to foster collaborative efforts with foreign fishing fleets in addressing the sea turtle bycatch problem on a world-wide basis. Although the research has been stalled due to litigation, NMFS remains committed to finding cost-effective approaches for protecting and conserving sea turtles while sustaining our domestic longline fisheries.

In 2001, the Southeast Fisheries Science Center, in cooperation with the U.S. pelagic longline fishing industry, the SWFSC, the Northeast Fisheries Science Center, and the University of Florida, began a research effort to investigate the feasibility of gear modifications and fishing practices to reduce the incidental capture of endangered and threatened sea turtles by pelagic longline fishing gear. NMFS gear specialists are working with fishermen and state and university researchers to gain insight into fishing gear and fishing practices to develop mitigation measures to reduce turtle interactions with longline gear. Prototype mitigation techniques are being developed using captive reared turtles in controlled experiments and these techniques are being evaluated on commercial fishing vessels in the Atlantic pelagic fishing grounds. These studies are ongoing and include evaluation of de-hooker and line cutter prototypes to allow removal of fishing gear from turtles; bait types and hook designs developed to reduce hooking rates and the severity of hooking of sea turtles; satellite tags to determine survival, distribution, and behavior of sea turtles released from fishing gear; and operational changes in fishing practices to reduce turtle interactions.

There have been several successful efforts by commercial fishermen and scientists in the Northeast to develop fishing gear with greater selectivity for a particular species, thus allowing the commercial fishing industry access to areas that have been closed to fishing due to declining groundfish stocks or entanglement mortality of marine mammals. Most notable among bycatch reduction efforts has been the use of sound producing devices called "pingers" in the sink gillnet fishery. Pingers that emit intervals of high frequency sound work well in deterring harbor porpoise from being entangled in fixed sink gillnets. In addition, various configurations of fish excluder devices have been tested and proven successful for the Northern shrimp fishery, which utilizes small-mesh net materials that

are capable of catching groundfish species as bycatch.

The Nordmore grate was introduced to the Northwest Atlantic shrimp fishery after successful deployment by northern European shrimp fishermen. This grate allows large fish to slide up and out of the net, while at the same time allowing the smaller shrimp to pass through the grate into the codend for harvest. Shrimp fishing has been demonstrated to be more efficient using the grate. The Pandalid shrimp fishery has been successful in reducing finfish bycatch, particularly bycatch of Atlantic cod, to less than 5 percent of total catch in most areas. Current research projects are looking at similar grates with horizontal configurations to allow harvest of flatfish such as flounders while protecting round fish such as cod, haddock, and pollock.

Similar small mesh fisheries in waters off the coast of Massachusetts and Georges Bank targeting silver hake or whiting have benefitted from the development of otter trawl gears with "raised footropes." Cape Cod and Massachusetts Bay fishermen developed and tested the raised footrope trawl to protect flounder species while allowing fishing for whiting during summer months. This innovative gear has reduced flounder bycatch in the whiting fishery by as much as 40 percent to 50 percent. The raised footrope trawl has been incorporated into the Georges Bank groundfish management plan and is being further tested in the Gulf of Maine. Additionally, various configurations are being researched using numerous short vertical dropper chains attached to the mouth of the net instead of the long horizontal "tickler" chain that is attached below the mouth of the net.

B. NMFS Observer Programs

Observers provide the most reliable source of high quality, objective, fishery-dependent data. Observers provide information on all aspects of fishing operations, including total removal levels of catch and bycatch, biological samples and weights and measurements for life history research, temporal and spatial fishing strategies, and socio-economic data on fish loss and operating costs. They assist in special research activities, such as tagging and tracking of released animals. They also collect oceanographic and climate data for an ecosystem approach to fisheries and protected species management.

NMFS has seen an expansion in observer programs since the passing of the SFA. This has partly been in response to national standard 9, which

requires that FMPs include conservation and management measures, to the extent practicable, that (a) minimize bycatch and (b) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch. Observers provide a reliable platform for observations regarding bycatch—data that may not be available through other sources if there is release or discard of unwanted catch at sea.

NMFS has approved and implemented 43 FMPs (41 of these were developed by RFMCs) and manages 143 distinct fisheries within these FMPs under the authority of the MSA. Another 178 fisheries operate in Federal waters that are currently not managed under an FMP. Since 1996, the number of commercial fisheries observed has doubled from 13 to 26 fisheries. In addition, NMFS observes a limited number of recreational fisheries. For example, NMFS' large pelagics survey conducts at-sea observations of catch (including bycatch) by headboats that target Atlantic highly migratory species (HMS). Also, NMFS plans to implement a new data collection methodology utilizing on-board observations of catch (including bycatch) for headboats in non-HMS Atlantic recreational fisheries as part of NMFS' Marine Recreational Fisheries Statistics Survey.

NMFS established a National Observer Program office within the headquarters Office of Science and Technology in 1999. The mission of this office is to provide a formalized mechanism for NMFS to address observer issues of national importance and to develop policies, plans, and procedures to ensure that observers and observer programs are fully supported. The policies, plans, and procedures reflect the diverse needs of regional observer programs while enhancing data quality and achieving consistency in key areas of national importance. This office is aided by an intra-agency advisory team comprised of representatives from each NMFS headquarters office and region. The team functions to identify issues of national concern, recommending or establishing, where appropriate, priorities for national research and problem solving, and supporting information collection and program implementation. The National Observer Program office has convened several workshops and an international conference to this end.

In addition to its role in policy development, the National Observer Program has been a driving force in the development and tracking of budget initiatives to modernize and expand observer programs. The program also serves as a clearinghouse for

information regarding each of the regionally-implemented observer programs. General information about NMFS observer programs can be found on the National Observer Program's website, at <http://www.st.nmfs.gov/st1/nop/>.

C. Selected Accomplishments and Ongoing Activities under the MSA

In the over two decades since enactment of the MSA, the RFMCs and NMFS have taken many and varied actions to address bycatch. The RFMCs and NMFS have worked particularly hard to ensure that MSA bycatch requirements are reflected in management measures after the 1996 SFA amendments to the MSA focused additional attention on the issue of bycatch. Regional examples of progress are provided below.

1. Alaska Region: Bycatch Management in the Groundfish Fisheries

The bycatch of Pacific halibut, crab, Pacific salmon, and Pacific herring in the Alaska groundfish fisheries has been an important management issue for more than 20 years. To address this problem, the NPFMC recommended and the Secretary of Commerce approved and implemented a variety of management actions that were intended to help control the bycatch of these prohibited species in the groundfish fisheries. Since the late 1980s, the bycatch of groundfish in the groundfish fisheries has also been a major management issue. Through 1996, 35 amendments to the BSAI and GOA groundfish FMPs were intended principally or in part to manage the bycatch of prohibited species and groundfish.

The initial groundfish FMPs and amendments to them prior to the SFA included a variety of bycatch management measures, including prohibitions on the retention of specific non-groundfish species, which are referred to as prohibited species, time and area closures and seasonal apportionments of groundfish quotas, gear restrictions, groundfish quota allocations by gear type, reductions in some groundfish quotas, extensive at-sea and on-shore observer programs to monitor bycatch, extensive requirements for reporting catch and product utilization, prohibited species catch (PSC) limits, a vessel incentive program (VIP) with civil penalties for fishing vessels that exceed established bycatch rates for Pacific halibut or red king crab, a prohibition on roe-stripping, required retention of Pacific salmon bycatch until counted by an observer, individual fishing quota (IFQ)

management for the fixed-gear Pacific halibut and sablefish fisheries, target fishery definitions, and careful release regulations for longline fisheries. Additional measures that initially were considered before the SFA include: (1) a harvest priority program that would reserve part of the groundfish quotas or seasons for vessels that meet specific bycatch standards; (2) regulations that would both prohibit at-sea discards of the major groundfish species and limit the percentage of the catch that is not used to produce products for human consumption; (3) individual transferable bycatch quotas; and (4) methods to decrease the time between capture and release of Pacific halibut in groundfish trawl fisheries.

The at-sea observer program has been a critical element of the bycatch management regime for the Alaska groundfish fisheries for almost 30 years. The program was developed for the foreign fleets before the Fishery Conservation and Management Act (FCMA) was implemented and was extended to the domestic fishery once domestic vessels had all but replaced foreign fishing and processing vessels. The observer program resulted in fundamental changes in the nature of the bycatch problem. First, by providing good estimates of total groundfish catch and non-groundfish bycatch by species, it eliminated much of the concern that total fishing mortality was being underestimated due to fish that were discarded at sea. Second, it made it possible to establish, monitor and enforce the groundfish quotas in terms of total catch as opposed to only retained catch. For the groundfish fisheries, this means that both retained catch and discarded catch are counted against the TACs. Third, it made it possible to implement and enforce PSC limits. Finally, it provided extensive information that managers and the industry could use to assess methods to reduce bycatch and bycatch mortality. In summary, the observer program provided fishery managers with the information and tools necessary to prevent bycatch from adversely affecting the stocks of the bycatch species. Therefore, the bycatch in the groundfish fishery is principally not a conservation problem, but it can be a contentious allocation problem. Although this does not make it less controversial, it does help identify the types of information and management measures that are required to reduce bycatch to the extent practicable, as is required by the MSA.

Several post-SFA amendments to the GOA groundfish FMP were intended to decrease bycatch, including Amendment 59 (Cape Edgecombe

Pinnacle Closure) and Amendment 60 (Cook Inlet Bottom Trawl Ban). In addition, several post-SFA amendments to the BSAI groundfish FMP were intended to decrease bycatch, including:

(1) Amendment 37, which modified red king crab PSC limits and established trawl closure areas in nearshore Bristol Bay;

(2) Amendment 39, which established a license limitation system;

(3) Amendment 46, which modified allocation of Pacific cod by gear type;

(4) Amendment 40, which established PSC limits for *C. opilio* crab in trawl fisheries and a bycatch limitation zone;

(5) Amendment 49, which established a mandatory retention program for pollock, Pacific cod, yellowfin sole and rock sole (IRU); and

(6) Amendment 50, which allowed donation of halibut to foodbanks.

2. Atlantic HMS

In addition to the closed areas (areas of South Atlantic Bight, Gulf of Mexico, and off New Jersey), observer coverage, reporting requirements, dead discard accounting, and bycatch limits already in place for U.S. fishermen, the United States implemented new measures in 2002 to reduce bycatch in Atlantic HMS fisheries. These measures include:

a. *Sea turtle bycatch reduction.* New information on the sea turtle population status led NMFS to conclude that continued operation of the Atlantic pelagic longline fishery jeopardized endangered leatherback and threatened loggerhead sea turtles. Accordingly, per the requirements of a Biological Opinion (June 2001) and a final rule (67 FR 45393), NMFS closed the Grand Banks fishing area to U.S. vessels using pelagic longline gear. The Grand Banks has traditionally been an area of high swordfish catch as well as high sea turtle bycatch. Closure of the Grand Banks should decrease sea turtle bycatch by approximately 60 to 75 percent overall. The only pelagic longline fishing by U.S. pelagic longline fishing vessels currently allowed in the Grand Banks is under an experiment designed to test fishing techniques that will reduce interactions with sea turtles. Several other foreign countries fish on the Grand Banks, which is in international waters, so it is important to develop fishing techniques that those foreign fleets could use to reduce interactions. In addition to the closure of the Grand Banks, all longline fishermen are required in the Atlantic HMS fisheries to carry and use line clippers and dipnets to disentangle, and follow specific handling and release techniques to ensure survivability of,

sea turtles caught incidentally to fishing operations.

In support of its domestic actions, the United States has been pursuing action relative to bycatch reduction measures within the International Commission for the Conservation of Atlantic Tunas (ICCAT). ICCAT is the international body charged with coordinating the management of HMS throughout the Atlantic Ocean and adjacent seas. At its 2002 meeting, ICCAT adopted a resolution on seabirds that urges parties to collect and provide data on seabird interactions, including incidental catches in ICCAT fisheries. ICCAT's science body, the Standing Committee on Research and Statistics (SCRS), is to assess the impact of the incidental catch of seabirds in ICCAT fisheries when feasible and report its findings. The measure also calls on parties to inform SCRS and the ICCAT Commission of the status of their National Plans of Action for Reducing Incidental Catches of Seabirds in Longline Fisheries and to implement the International Plan of Action on seabirds if they have not already done so. A resolution on sea turtles was discussed but not adopted at the 2002 ICCAT meeting. Among other things, the measure called on parties to voluntarily release turtles incidentally captured and to share information on safe handling; to collect and report information on sea turtle interactions in all ICCAT fisheries, and to provide information on other impacts on sea turtles in the Convention area, such as deterioration of nesting sites. Given concerns expressed about the proposal and the lack of time for full discussion, it was agreed that an effort would be made to revise the proposal after the ICCAT meeting and, if appropriate, to circulate it for mail vote.

b. *Shark finning prohibition (applies in all areas subject to U.S. jurisdiction.* In December 2000, the President signed into law the Shark Finning Prohibition Act, which bans nationwide the practice of removing the fins from a shark and discarding the carcass. That Act is intended to minimize waste and mortality of shark bycatch. On February 11, 2002, NMFS published a final rule (67 FR 6194–6202) to prohibit persons onboard any domestic vessel anywhere and foreign fishing vessels in the U.S. exclusive economic zone (EEZ) from engaging in shark finning, and to prohibit landing of shark fins without the corresponding carcasses by domestic and foreign fishing vessels. In addition, the final rule prohibited imports of fins harvested through the practice of finning.

3. Southwest Region: HMS Bycatch Efforts

The Southwest Region has been supporting the Pacific Fishery Management Council's (PFMC) efforts to develop an FMP for U.S. West Coast Fisheries for Highly Migratory Species (HMS FMP). The PFMC recently adopted the HMS FMP for submission to NMFS for review and approval in 2003. SFA bycatch requirements were among the critical aspects of the HMS FMP. The HMS FMP would:

(1) maintain the bycatch reduction achieved by current controls on HMS fisheries through state and Federal regulatory action under other authorities (e.g., state laws and regulations, MMPA and ESA);

(2) promote additional reduction through a catch-and-release program for recreational fisheries, including promotion of fish handling and release procedures to minimize harm and mortality from catch and release of HMS; and

(3) establish mandatory observer programs for fishery sectors not currently observed in order to measure actual bycatch and ultimately develop new bycatch avoidance and bycatch mortality avoidance gear and fishing techniques.

It should be noted that the HMS FMP would incorporate measures to minimize and control the take of sea turtles in the drift gillnet fishery for swordfish and sharks. The HMS FMP also would include provisions requiring that U.S. longline vessels operating out of the West Coast employ seabird avoidance gear and techniques as required of U.S. longline vessels operating under Western Pacific longline limited entry permits. The FMP also would prohibit West Coast based longline vessels fishing west of 150° W. long. from engaging in swordfish targeting (i.e., they would be under the same controls as longline vessels with Western Pacific longline limited entry permits). The FMP also would include framework procedures to facilitate rapid adoption of new measures as new problems are identified or solutions are developed, including measures to resolve future bycatch problems. Finally, under the FMP as approved late in 2002, West Coast based longline vessels would have been permitted to target swordfish if fishing east of 150° W. long. However, in response to a request from the Southwest Region, the PFMC has agreed to delay submitting the FMP to allow NMFS to conduct a rigorous scientific review of new data to determine if this would pose too high a risk of an unacceptable level of

interactions with sea turtles. The PFMC will discuss this matter at its March 2003 meeting and may reconsider its decision on this measure in June 2003.

4. Southwest Region: Pelagic Longlining and Sea Turtles

In June 2002, NMFS issued a final rule implementing a regulatory amendment under the Fishery Management Plan for the Pelagic Fisheries of the Western Pacific Region intended to minimize or prevent injury to and mortality of sea turtles accidentally caught by hook-and-line fishing. The intent of the rule is to reduce interactions between endangered and threatened sea turtles and pelagic fishing gear and to mitigate the harmful effects of interactions that occur. The rule applies to the owners and operators of all vessels fishing for pelagic species under Federal western Pacific limited access longline permits (longline vessels) within the U.S. EEZ and the high seas around Hawaii, as well as those fishing for pelagic species with other types of hook-and-line gear (non-longline pelagic vessels) within the EEZ around Hawaii, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, Midway, Johnston and Palmyra Atolls, Kingman Reef, and Wake, Jarvis, Baker, and Howland Islands (western Pacific region). This rule: (1) prohibits targeting swordfish north of the equator by longline vessels; (2) closes all fishing to longline vessels during April and May in waters south of the Hawaiian Islands (from 15° N. lat. to the equator, and from 145° W. long. to 180° long.); (3) prohibits the landing or possession of more than 10 swordfish per fishing trip by longline vessels fishing north of the equator; (4) allows the re-registration of vessels to Hawaii longline limited access permits only during the month of October; (5) requires all longline vessel operators to annually attend a protected species workshop; and (6) requires utilization of sea turtle handling and resuscitation measures on both longline vessels and non-longline pelagic vessels using hook-and-line gear.

5. Southeast Region: Gulf Shrimp Bycatch

Shrimp trawls have a significant, inadvertent bycatch of non-target finfish and invertebrates. Important fish species in the shrimp fishery bycatch include juveniles of red snapper, king and Spanish mackerel, and sharks. Current estimates indicate that roughly 34 million juvenile red snappers are caught annually by shrimp trawlers, with approximately an 88-percent mortality rate. The Gulf of Mexico Fishery

Management Council (GMFMC) developed Amendment 9 to the Fishery Management Plan for the Shrimp Fishery of the Gulf of Mexico (Gulf Shrimp FMP) which went into effect in 1998 to reduce the bycatch of juvenile red snappers while, to the extent practicable, minimizing adverse effects on the shrimp fishery. Amendment 9 requires the use of NMFS-certified bycatch reduction devices (BRDs) in shrimp trawls towed in certain areas of the Gulf of Mexico exclusive economic zone. To be certified, these BRDs, in conjunction with a vessels turtle excluder device (TED), must reduce the shrimp trawl bycatch mortality of age 0 and 1 red snapper by a minimum of 44 percent from the average level of mortality on these age groups during 1984–89.

The Gulf Fishery and Jones-Davis BRDs, which were developed by commercial fishermen, met this criterion and were certified for use when the final rule implementing Amendment 9 became effective in 1998. Since 1998, shrimp trawl bycatch mortality of finfish has been reduced by 40 percent, and a 50 percent reduction appears reasonable with refinements to the Gulf Fishery BRD or more extensive use of the Jones-Davis BRD. Since development of the recovery plan in 1989, directed landings of red snapper have increased from 3.9 million lbs. (1,769 mt) in 1990 to 9.12 million lbs. (4,136.8 mt) in 2001. Shrimp landings have increased since 1998 from 230 million lbs. (104,328 mt) to 256 million lbs. (116,121.6 mt) in 2001. In addition to reducing the shrimp trawl bycatch of red snapper, use of the Gulf Fishery BRD also reduce the shrimp trawl bycatch of Atlantic croaker, spot, and butterflyfish significantly.

6. Northwest Region

In March 2002, NMFS implemented a final rule for its groundfish annual specifications and management measures. This regulatory package notably revised the PFMC approach to managing of fisheries to reduce bycatch and discard of overfished groundfish species. This new approach calculated the co-occurrence of overfished species taken in fisheries for more abundant stocks. In analyzing these co-occurrences, analysts found seasonal variations in the rates at which overfished species were taken in fisheries for more abundant species. The PFMC then used this co-occurrence analysis to set trip limits and other management measures such that the groundfish fisheries had more access to abundant stocks during periods when overfished species co-occurrence rates

were low. Further, the co-occurrence ratios were used to guide the PFMC's recommendations during the year so that no changes to management measures would result in increased bycatch and/or discard of overfished species.

In May 2002, NMFS implemented a bycatch allowance for Pacific halibut in the commercial, limited entry primary sablefish fishery in Federal waters between the U.S./Canada border and Pt. Chehalis, Washington. Retention of incidental halibut caught in the primary sablefish fishery is only allowable when the overall Washington, Oregon, California total allowable catch for Pacific halibut is above 900,000 lbs. (408.2 mt) which it was in both 2001 and 2002. For 2002, a quota of 88,389 lbs. (40.1 mt) of halibut was allocated to the limited entry primary sablefish fishery as a bycatch allowance.

In September 2002, NMFS implemented new depth-based management measures in the Pacific Coast groundfish fishery for September–December 2002. These depth-based management measures are designed to allow the harvest of healthy groundfish stocks while protecting areas where overfished species are commonly found. An emergency rule established a darkblotched rockfish conservation area (DBCA) extending from the U.S./Canada border to 40°10' N. lat. and between approximately 100 fathoms and 250 fathoms. This emergency rule maintained the closure to trawling with groundfish gear where darkblotched rockfish are commonly found, but allowed limited entry trawl access to healthy deepwater groundfish (seaward of 250 fathoms) and nearshore groundfish (shoreward of 100 fathoms) stocks outside of the DBCA.

Throughout 2002, NMFS has also supported a number of exempted fishing permits (EFPs) in the Pacific Coast groundfish fishery with the goal of these EFPs being used to develop fishing technologies that can be applied on a fleet-wide basis to minimize the bycatch of overfished species. These EFPs test fishing strategies and/or gear types in an effort to harvest healthy groundfish stocks while minimizing bycatch of overfished species. Additionally, many of the EFPs have full retention programs that allow overages to be forfeited to the states for charitable donations.

7. Northeast Region

Under the sea scallop Fishery Management Plan, bycatch of finfish has been reduced by establishing minimum mesh requirements for the net material on the top of a scallop dredge (referred to as the "twine top"). The twine top is

the primary location where finfish escape the dredge, and larger mesh improves escapement, especially of flatfish. This mesh size was increased in 1999 from 5–1/2 inches (13.97 cm) to 8 inches (20.32 cm). In addition, under some of the access programs that have allowed sea scallop dredge fishing in areas closed to protect juvenile scallops and/or Northeast multispecies, the mesh size has been increased to as much as 10 inches (25.4 cm) to ensure that bycatch is eliminated.

Under the Northeast (NE) Multispecies FMP, a significant bycatch management measure was implemented beginning in 1994 under a Secretarial emergency action (and permanently implemented under Framework Adjustment 9 to the FMP in 1995), and which was made further inclusive under Amendment 7 to the FMP in 1996. This measure prohibits all vessels, regardless of what fishery it is targeting, from fishing in the Gulf of Maine, Georges Bank or Southern New England waters, unless the vessel is fishing under a NE multispecies or sea scallop day-at-sea, or unless the fishery has been determined to have less than 5-percent bycatch of regulated NE multispecies, or the vessel is fishing with handgear or exempted gear (gear deemed not to be capable of catching NE multispecies).

Other bycatch reduction measures under the NE multispecies FMP include mesh size restrictions starting in 1982 and increasing over the years to as high as 6.5 inch (16.51 cm) and 7.0 inch (17.78 cm) mesh size nets implemented under a recent interim action, some of the largest mesh sizes for groundfish in the world. Large year-round and seasonal closure areas have also been implemented under the FMP over the years to help protect fish when concentrated or when spawning. Also, gear prohibitions, such as a prohibition on pair-trawling and brush-sweep trawls, in 1994 and 1999, respectively, have also contributed to reducing bycatch.

Under the Summer Flounder, Scup, and Black Sea Bass Fishery Management Plan, NOAA Fisheries, Northeast Region implemented Gear Restricted Areas (GRAs) in the Mid-Atlantic Bight in 2000. GRAs had been recommended by the Mid-Atlantic Fishery Management Council (MAFMC) to reduce bycatch of small scup in small-mesh fisheries. These GRAs regulate the use of otter trawls with codend mesh less than 4.5 inches in size in areas and times that were identified as having high scup discards, specifically by vessels fishing for *Loligo* squid, black sea bass, and silver hake (whiting). The Northern GRA (located off the coast of Rhode

Island and New York) is effective November 1 through December 31; the Southern GRA (extending from southern New Jersey to the border between Virginia and North Carolina) is operative January 1 through March 15.

D. Selected Accomplishments and Ongoing Activities under the ESA

NMFS is undertaking a proactive program to address sea turtle bycatch in state and Federal fisheries. On July 31, 2001 (66 FR 39474), NMFS published a comprehensive strategy to address sea turtle capture in fishing gear. Numerous fisheries have been implicated in the incidental capture of sea turtles along the Atlantic and Gulf of Mexico coasts. Both state and federally managed fisheries are involved as well as fisheries operating outside of a management plan, including recreational and international fisheries. Data available on the magnitude of the problem vary by fishery and area. The issue is a gear-type problem, rather than a specific target fishery problem. Certain types of gear are more prone to incidentally capturing turtles than others, depending on the nature of the gear, the way the gear is fished, and the time and area within which it is fished. Incidental take of sea turtles in fisheries has mostly been addressed with ESA section 7 consultation process on FMPs. This approach does not allow the integration of state-managed fisheries or fisheries in Federal waters that are not operating under an FMP and that do not fall under the requirements of Section 7, since no Federal activity is involved.

Major goals of the sea turtle bycatch strategy are to increase effectiveness in management and prioritize fishery interaction concerns. To achieve these goals, NMFS will: (1) continue to improve stock assessments for each stock/species of sea turtle; (2) improve and refine estimation techniques for the takes of sea turtles to ensure that the criteria for recovery are being met consistent with ESA mandates; (3) continue to improve the estimation or categorization of sea turtle bycatch by gear type and fishery; (4) evaluate the significance of bycatch by gear type; (5) convene specialist groups to prepare plans for reduction of takes for gear types with significant levels of take; and (6) promulgate ESA and MSA regulations implementing plans developed for take reduction by gear type.

E. Selected Accomplishments and Activities under the MMPA

The MMPA provides a complex system for controlling bycatch of marine mammals by commercial fisheries.

NMFS implements this system through regulations at 50 CFR Part 229 for authorization for commercial fisheries under the MMPA and several other inter-related programs and actions. NMFS' Office of Protected Resources works with the National Observer Program to provide observer coverage under the MMPA. NMFS summarizes observer data in stock assessment reports, which NMFS prepares and periodically updates in accordance with the MMPA. In these stock assessment reports, NMFS estimates bycatch of marine mammals by commercial fisheries as provided under the MMPA. Stock assessment reports provide much of the data that NMFS uses to classify fisheries and publish the List of Fisheries under the MMPA.

NMFS implements bycatch reduction of marine mammals under the MMPA through take reduction teams and plans. The MMPA provides that NMFS must develop and implement a take reduction plan designed to assist in the recovery or prevent the depletion of each strategic stock of marine mammals that interacts with commercial fisheries that have frequent (Category I) or occasional (Category II) incidental mortality and serious injury of marine mammals. The MMPA provides the process by which NMFS is to develop take reduction plans through take reduction teams. Plans may include several types of measures to protect or restore marine mammal stocks, including fishery specific limits on bycatch, time or area restrictions, alternative gear or techniques and new technologies, education of commercial fishermen, and monitoring the effectiveness of such measures. NMFS must take a draft take reduction plan developed by the take reduction team into consideration and explain the reasons for any changes proposed by NMFS when publishing the plan and proposed regulations to implement the plan in the **Federal Register**. Given this process and these requirements, NMFS implements the take reduction team's draft plan to the maximum extent feasible given the goals of the MMPA and other legal requirements.

NMFS does not have sufficient funds available to develop and implement take reduction plans for all of these stocks, because there are considerable costs and personnel demands associated with the development of take reduction plans, including convening the take reduction team (which must include government and non-government representatives from various sectors), providing for team travel expenses, obtaining and preparing the data necessary to support team deliberations and devise take

reduction strategies, researching alternative gear technologies, holding skipper workshops, monitoring the fishery, and enforcing the regulations in order to implement the plan. The MMPA provides that, if there is insufficient funding available to develop and implement a take reduction plan for all such stocks, then NMFS must use several factors to prioritize development and implementation of take reduction plans. NMFS has followed this provision to prioritize development and implementation of Pacific Offshore Cetacean, Harbor Porpoise, and Atlantic Large Whale take reduction plans. In addition, NMFS is in the process of developing a take reduction plan with the Western North Atlantic coastal bottlenose dolphins take reduction team. Finally, NMFS disbanded the Atlantic Offshore Cetacean take reduction team in August 2001, because the nature of the fisheries that were included in a draft plan had changed tremendously since 1996, when the take reduction team was convened and prepared a draft plan. NMFS is compiling data necessary for any take reduction plan or plans for marine mammal stocks that were addressed by this team.

Implementation of these take reduction plans provide examples of accomplishments in reducing bycatch of marine mammals. In 1997, NMFS issued regulations to implement the Pacific Offshore Cetacean Take Reduction Plan addressing incidental takes of beaked whales, pilot whales, pygmy sperm whales, sperm whales, and humpback whales in the California Oregon thresher shark/swordfish drift gillnet fishery. Management efforts included use of new technology (pingers, i.e., acoustic deterrent devices), gear modifications (lowering the depth of the net in the water column), outreach (mandatory skipper workshops), and permitting changes (to limit expansion of the fleet). In 1998, the team determined that the fishery had achieved the MMPA's immediate goal of reducing incidental mortality and serious injury below the potential biological removal (PBR) level for the strategic marine mammal stocks addressed by the plan. Efforts continue to ensure that bycatch remains less than PBR and that the MMPA's long-term goal is achieved of reducing incidental mortality and serious injury to insignificant levels approaching a zero mortality and serious injury rate.

In 1998, NMFS issued regulations to implement the Harbor Porpoise Take Reduction Plan addressing incidental takes of harbor porpoise in the Northeast sink gillnet fishery and the Mid-Atlantic coastal gillnet fishery

through the use of pingers, gear modifications, and closures. Prior to implementation of this take reduction plan and fishery management plan actions intended to reduce harbor porpoise bycatch, an estimated 1,521 harbor porpoise died each year from interactions with these fisheries. Bycatch in both fisheries was dramatically reduced in 1999, 2000, and 2001 to levels below the PBR level in all three years. Efforts continue to ensure that bycatch remains less than the PBR level and that the MMPA's long-term goal is achieved.

Other marine mammals have been the focus of bycatch or entanglement reductions studies and regulations. In 1999, NMFS issued regulations to implement the Atlantic Large Whale Take Reduction Plan addressing incidental takes primarily of North Atlantic right whales, but also humpback, fin, and minke whales, in Atlantic lobster trap/pot and gillnet fisheries. This plan creates a regulatory (e.g., gear modifications, closures) and non-regulatory (e.g., disentanglement, gear research) framework for reducing bycatch. Recent efforts include a number of gear modifications, including requiring that fixed gear with lines attached to nets and traps have "weak links." These devices are designed to break in the event that a large whale gets entangled in the line before the whale becomes more entangled. Atlantic lobster trap/pot and gillnet fisheries are now required to have weak links at various intervals on their fishing gear. In order to further protect right whales, NMFS has instituted Dynamic Area Management and Seasonal Area Management regulations to restrict fishing in areas where and times when right whales congregate to feed and are vulnerable to becoming entangled in lines from fixed fishing gear.

F. Progress in NMFS's Commitment to Reducing Incidental Catch of Seabirds

In 1999, the United Nations' Food and Agricultural Organization (FAO) adopted an International Plan of Action for Reducing the Incidental Catch of Seabirds in Longline Fisheries (IPOA-Seabirds). The IPOA-Seabirds is a voluntary measure under which FAO Member States agree to: (1) assess the degree of seabird bycatch in their longline fisheries; (2) develop individual national plans of action to reduce seabird bycatch in their longline fisheries that have a seabird bycatch problem; and (3) develop a course of future research and action to reduce seabird bycatch.

In 2000, NMFS participated in the First International Fishers Forum for

Reducing Incidental Catch of Seabirds in Longline Fisheries. Fishermen, researchers, gear manufacturers, and others met for the first time and shared ideas, research plans, and codes of industry practices.

Then in February 2001, NMFS announced its U.S. National Plan of Action for Reducing the Incidental Catch of Seabirds in Longline Fisheries (NPOA), that was developed in cooperation with the U.S. Fish and Wildlife Service (USFWS) and the Department of State. Under the NPOA, NMFS is committed to: (1) assessing U.S. longline fisheries for seabird bycatch by February 2003 (including use of and expansion of existing observer programs); (2) implementing measures to reduce seabird bycatch within 2 years of determining a problem exists; (3) preparing an annual report on status of seabird bycatch mortality for each longline fishery; and (4) advocating NPOAs within relevant international fora.

In 2002, NMFS provided \$250,000.00 in assistance to the Western Pacific Regional Fishery Management Council (WPFMC) in sponsoring the Second International Fishers Forum for Reducing Incidental Catch of Sea Turtles and Seabirds in Longline Fisheries held in November 2002. This forum had grown in scope and enthusiasm from the initial forum in 2000 and was attended by participants from over 28 Nations. The meeting was very successful in enhancing cooperation with the fishing industry, fishery agencies, academic institutions, NGOs, and international bodies on seabird and sea turtle bycatch research and outreach. Efforts are underway for a Third International Fishers Forum planned for 2004 in Japan. To fulfill its protected resources obligations, NMFS believes it is critical for the agency to work side-by-side with the fishing industry to design gear and alter fishing practices to reduce bycatch, as well as to monitor and evaluate bycatch and the effectiveness of bycatch reduction measures.

In order to understand the population-level impacts of incidental longline bycatch of seabirds and sea turtles, NMFS and the USFWS have undertaken studies to monitor population status and threats. These studies have identified numerous threats that continue to impact sea turtle and seabird populations.

Under the MSA, NMFS has taken action to prevent further impacts on seabirds and sea turtles, including implementation of bycatch reduction techniques for seabirds and area closures to reduce interactions with sea

turtles. In recent years NMFS has promoted the development and use of practical and effective seabird and sea turtle management and mitigation measures by longline fishermen. A research program conducted by the Washington Sea Grant Program (WSGP) concluded that paired streamer lines effectively reduced seabird bycatch, compared to a control of no deterrents, by 88–100 percent. Regulatory requirements are being revised to reflect results from this research. This summer, the WSGP embarked on yet another study to test the effectiveness of seabird mitigation measures, this time testing the effectiveness of faster-sinking demersal gear at reducing seabird bycatch. Data are still coming in, but this technology looks very promising both as a seabird deterrent and as a gear that requires less handling on auto-liners. This kind of gear is being collaboratively tested on longliners in New Zealand.

A NMFS study in Hawaii found that blue-dyed bait and weights added to baits reduced the number of black-footed albatross gear interactions by approximately 90 percent. In addition, a highly successful pilot study was recently conducted in Hawaii on an underwater chute-setting device. This study included the Hawaii Longline Association, NMFS, the WPFMC, and the National Audubon Society, Bird Life International's U.S. partner. It found that underwater line-setting effectively reduced seabird bycatch, compared to a control of no deterrents, by 95–100 percent.

In 2002, NMFS implemented permanent seabird-specific mitigation measures (67 FR 34408, May 2002) recommended by the WPFMC to help reduce seabird interactions in the Hawaii-based longline fishery. Along with sea turtle conservation measures (67 FR 40232, June 12, 2002), including a prohibition on shallow setting for all Hawaii longline vessels fishing north of the equator, the seabird mitigation measures (i.e., use of thawed, blue-dyed bait, line setting machine or traditional basket-style longline gear, and strategic discard of offal) north of 23° N. lat., resulted in less than 50 seabird interactions observed in 2002, compared with about 160 interactions in 2001, and nearly 250 interactions in 2000. The reduction in seabird interactions occurred while NMFS was increasing observer coverage levels in the Hawaii longline fishery from 10 percent in 2000 to 23 percent in 2001, and to little more than 25 percent in 2002.

In the North Pacific, NMFS collaborated with Washington Sea Grant Program for the 2002 bycatch avoidance

workshops for commercial longliners in Alaska ports. The NPFMC is changing existing regulations for seabird avoidance measures required in the groundfish and halibut hook-and-line fisheries off Alaska, and NMFS is promoting the USFWS free streamer line program in Alaska.

Also, in 2002 NMFS added seabird bycatch issue to agendas of several bilateral fisheries meetings to highlight the issue and promote and encourage implementation of FAO's IPOA-Seabirds. NMFS has placed or supported the placement of seabird bycatch on the agenda of the meetings of several international organizations (Asia Pacific Economic Cooperation (APEC), Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), and ICCAT). NMFS has also formed a bycatch reduction task force that will be seeking ways to address the issue of seabird issues in the international arena.

NMFS is also working to implement Executive Order 13186, signed by the President on January 10, 2001 (66 FR 3853), on the responsibilities of Federal agencies to protect migratory birds under the Migratory Bird Treaty Act and other laws. NMFS, in cooperation with USFWS, is drafting a Memorandum of Understanding to identify strategies that promote conservation of migratory birds through enhanced collaboration between NMFS and USFWS, in coordination with state, territorial, tribal, and local governments.

G. International Activities to Reduce Bycatch

For several years NMFS has been engaged in ongoing activities, on a bilateral basis and through regional fisheries management organizations, seeking international bycatch assessment and bycatch reduction. Annual reports to Congress assessing the need for international bycatch agreements required by section 202(h) of the MSA have been made since 1996. In addition, an International Bycatch Reduction Task Force has been created whose activities are included in the most recent 202(h) report to Congress.

1. Activities Pursuant to Sec. 202(h) of the MSA

Section 202(h)(1) of the MSA directs the Secretary of State, in cooperation with NMFS, to secure international agreements to establish standards and measures for bycatch reduction that are comparable to the standards and measures applicable to U.S. fishermen. Section 202(h)(3) of the MSA requires NMFS, in consultation with the Secretary of State, to submit an annual

report to Congress describing actions taken regarding potential international bycatch agreements pursuant to Section 202(h)(1) of the Act.

NMFS reviews management measures under all approved and implemented FMPs that address fish stocks also harvested by foreign fishermen to identify relevant bycatch standards and measures. In the report covering the period September 2000–December 2001, NMFS concluded, and the Department of State concurred, that pursuing international bycatch agreements pursuant to Section 202(h) of the MSA continued to be necessary and appropriate to address sea turtle bycatch in longline fisheries in both the Atlantic and Pacific Oceans. As a result, an international strategy, referred to as the Course of Action to Promote International Agreements that Address the Need to Reduce Sea Turtle Bycatch in Foreign Longline Fisheries, was developed to address this issue.

2. International Bycatch Reduction Task Force

In January 2002, NMFS convened an International Bycatch Reduction Task Force made up of NMFS and U.S. Department of State representatives. A Plan of Action was subsequently developed by the Task Force to: (1) implement the strategy to promote international agreements that reduce sea turtle and seabird bycatch in foreign longline fisheries; and (2) promote the implementation of the Food and Agriculture Organization (FAO) International Plan of Action (IPOA) for Reducing Incidental Catch of Seabirds in Longline Fisheries and the FAO IPOA for the Conservation and Management of Sharks.

The Task Force Plan of Action outlines steps to be taken in implementing the U.S. strategy for international bycatch reduction. These tasks are broken up into two categories: international sea turtle workshops, and international communications relating to sea turtles, sharks and seabirds.

a. International Sea Turtle Workshops. The Task Force has engaged in a number of activities in support of international sea turtle workshops during 2002. A steering committee has been formed to guide the planning and execution of a NMFS-sponsored international technical workshop on sea turtle bycatch in longline fisheries during February 2003. This workshop: examined global and seasonal fleet distributions and effort; compared gear different configurations; looked at target species; compared existing regulatory regimes; and reviewed on-going bycatch reduction research. Diplomatic

communications (demarches) were sent to longlining states (and Taiwan) announcing the workshop and requesting information on sea turtle interactions in their longline fisheries. The workshop was attended by 197 countries. Additionally, the workshop and other sea turtle initiatives have been promoted in regional fisheries management and bilateral meetings.

Scientific activities undertaken in support of the NMFS sea turtle workshop include an October 2002, NMFS staff review of preliminary results of on-going research relating to the reduction of sea turtle bycatch in longline fisheries. The results of this in-house review were presented during sea turtle discussions in November 2002 at the Second International Fisher's Forum to Reduce Bycatch of Sea Turtles and Seabirds in Longline Fisheries. This information was updated as necessary and was presented at the February 2003 NMFS international technical workshop on sea turtle bycatch in longline fisheries. The February 2003 workshop, held in Seattle, WA, included participants representing 20 nations. The purpose of convening the workshop was to share information on global longline fisheries and to share ideas and information on experiments and solutions to reduce the bycatch of turtles in longline fisheries where interactions occur.

b. *International Communications Relating to Sea Turtles, Sharks and Seabirds.* The United States has communicated through diplomatic channels with flag states with significant longline fleets (and Taiwan). As noted above, a demarche relating to sea turtles was made that emphasized the international nature of the sea turtle bycatch problem in longline fisheries, described steps that the United States is taking to address this problem, and requested that recipients provide information relative to sea turtle bycatch in longline fisheries. The demarche announced the date and location of the International Longline Sea Turtle Bycatch Technical Workshop. The United States will also make similar demarches to Executive Secretaries (or equivalent) of regional fisheries management organizations or arrangements in whose area of operation longline fishing occurs during 2002.

Demarches have also been made to flag states with significant longline fleets (and Taiwan) that requested information on the status of implementing the IPOAs for Seabirds and Sharks. In these communications, the United States encouraged: development and implementation of National Plans of Action for Seabirds, to

promote the reduction of incidental catch of seabirds in longline fisheries where it occurs; and development and implementation of National Plans of Actions for Sharks, to promote the conservation and management of sharks and call attention to the international issue of shark finning. Additionally, the United States committed to provide information on topics relating to these IPOAs, including information that may be of use to states developing a National Plan of Action (NPOA) for Seabirds and an NPOA for Sharks. This communication provided an overview of the U.S. Shark Finning Prohibition Act.

During 2002, the United States has used current and new regional fishery management organizations (RFMOs) and existing bilateral relationships to call attention to the international problems of sea turtle bycatch and incidental catch of seabirds and sharks in longline fisheries. The United States continues to promote international cooperative efforts to collect standardized information on the incidence of sea turtle bycatch in longline fisheries and the technical workshop has been promoted as one forum to receive and consider such information.

In conclusion, NMFS has made significant progress on research and management measures to reduce bycatch and NMFS is committed to further expansion of these activities.

Agency Decision

After carefully considering all public comment, the Assistant Administrator for Fisheries has determined that the four-part program requested by the petition does not lend itself to specific rulemaking at this time. NMFS recognizes that the agency must continue to address bycatch in many domestic and international fisheries; however, given the vast array of characteristics among individual fisheries (including gear usage, fishing conditions, and other factors) and ongoing initiatives, we do not believe that global/national rulemaking as requested by Oceana is appropriate. Instead, NMFS believes in a regional approach working through the existing regulatory processes of the appropriate legal authority. NMFS will continue working with RFMCs, RFMOs, states, and other partners and constituents to address bycatch and will renew and revise, as explained below, the agency's strategy to combat bycatch both domestically and worldwide. Actions not subject to the MSA RFMC process will be carried out directly by NMFS.

NMFS believes that appropriate avenues exist for fisheries rulemaking to

address bycatch through the deliberative, public RFMC or Atlantic Highly Migratory Species Division process under the MSA, the ASMFC and the ACFCMA, the Take Reduction Teams under the MMPA, the ESA, and in support of the MBTA. NMFS believes that these processes and authorities should continue to be used to address specific bycatch problems rather than the petition process for comprehensive rulemaking. In addition, there is much that we have been doing and plan to do to address bycatch that is outside the purview of regulatory action, e.g., research for bycatch mitigation technology, international efforts, and voluntary use of observers.

NMFS National Bycatch Strategy

NMFS published a comprehensive national bycatch plan in 1998 entitled *Managing the Nation's Bycatch*. This plan defines bycatch as "Discarded catch of any living marine resource plus retained incidental catch and unobserved mortality due to a direct encounter with fishing gear." It is more inclusive than the definition of bycatch in the MSA because: (1) the plan's definition includes living marine resources other than "fish" as defined in the MSA (i.e., the plan's definition includes marine mammals and seabirds); (2) the plan's definition includes retained catch of non-target species, the MSA does not; and (3) the plan's definition includes fishing mortality of living marine resources that are not captured, but die after a direct encounter with fishing gear, the MSA does not. The plan's definition is also more inclusive than the definition of bycatch as used in the petition which refers to "the incidental catch of birds, mammals, turtles, and fish." It is also important to note that the plan addresses bycatch as occurring in recreational and subsistence fisheries as well as commercial fishing operations.

The 1998 plan was developed over an 18-month period by a planning team composed of fisheries managers and scientists from all of NMFS' administrative regions. The public participated in the development of this plan; NMFS carefully considered comments from 36 organizations or individuals in response to a March 1997 notice of availability published in the **Federal Register**. Seven national objectives are listed in the plan as supporting achievement of NMFS' national bycatch goal (i.e., "to implement conservation and management measures for living marine resources that will minimize, to the extent practicable, bycatch and the mortality of bycatch that cannot be

avoided”), and these seven objectives are broken down into 22 individual strategies consisting of 69 individual, substantive components. The plan also listed a series of regional recommendations. NMFS has undertaken many activities in support of these objectives and strategies, and continues to build on progress already made.

NMFS has determined, due to the continuing challenge of meeting the NMFS national bycatch goal, that we will undertake a comprehensive review of agency progress toward meeting the national bycatch goal, its supporting objectives and strategies, and the regional recommendations. This review will be part of the National Bycatch Strategy, which is comprised of the following six components:

1. Assess progress toward meeting the national bycatch goal, its supporting objectives and strategies, and regional recommendations (as set forth in *Managing the Nation's Bycatch*), which includes meeting the bycatch reduction requirements of relevant statutes, including national standard 9 of the MSA, Section 118 of the MMPA, and the take prohibitions of the ESA.

2. Develop a national approach to a standardized bycatch reporting methodology.

3. Implement the national bycatch goal through regional implementation plans.

4. Undertake education and outreach involving cooperative efforts, at the regional level (and other levels as appropriate), by fishery managers, scientists, fishermen, and other stakeholders to develop effective and efficient methods for reducing bycatch.

5. Utilize existing partnerships and develop new international approaches to reducing bycatch of living marine resources including fish stocks, sea turtles, marine mammals, and migratory birds, where appropriate.

6. Identify new funding requirements to effectively support the NMFS National Bycatch Strategy on an ongoing basis.

The first component of the National Bycatch Strategy will involve a headquarters-based team, along with an Atlantic HMS team and regional teams consisting of representatives from NMFS regional offices and science centers, in consultation with RFMCs, and will result in the preparation of “regional report cards” by July 2003: (1) documenting progress toward meeting the national goal, objectives, strategies, and regional recommendations; (2) suggesting ways to enhance compliance with existing bycatch mandates under the MSA (e.g., national standard 9) and

Section 118 of the MMPA; (3) suggesting ways to enhance compliance with the take prohibitions of the ESA and to reduce takes of migratory birds; (4) recommending ways to strengthen the national bycatch goal, objectives, strategies, and regional recommendations to ensure adequate consideration of protected species and address any deficiencies that are identified; (5) listing related bycatch management gaps by priority of funding needs; and (6) recommending updates to the goal, objectives, strategies, and regional recommendations of the 1998 report, as appropriate.

The second component of the National Bycatch Strategy will be the development of a national approach to standardized bycatch reporting methodology for all U.S. commercial and recreational fisheries. The MSA currently requires that this be specified on a fishery-by-fishery basis, but fishery interactions and the deployment of observers and other data collection systems across fisheries indicate the need for a coordinated approach. A national in-house working group will be convened to evaluate the current methodologies for estimating bycatch, review the current use of self-reporting to estimate discards, evaluate the potential for estimating discards by inferences drawn from fishery independent surveys, recommend a statistical design for observer programs to cover all U.S. fisheries, recommend standards of precision to be achieved for discard estimates, and recommend observer sample sizes and associated costs for all U.S. fisheries. The working group will submit a final report to the Assistant Administrator for Fisheries by June 2003.

The third component of the National Bycatch Strategy, based on the assessment from the first and second components, will be the production by regional teams of regional and Atlantic HMS implementation plans and timelines that are developed in concert with national policy and guidance on bycatch. These plans should reflect any updating of the goal, objectives, and strategies of the 1998 report. The timing of the actual implementation of these plans will vary, depending on rulemaking schedules as well as resources, but will all be submitted to the Assistant Administrator for Fisheries by September 2003. The plans will include criteria for identifying “vulnerability” of discard species to adverse impacts; application of those criteria to identify the most serious discard problems; identification and evaluation of alternatives for reducing the adverse impacts of discards

(including at least the reduction or elimination of overfishing target species, modification of fishing gear and/or fishing practices, time and/or area restrictions on fishing, and factors that determine the likelihood of success using each of the alternatives); and strategies for solving the problems that have been identified.

The fourth component of the National Bycatch Strategy will result, by September 2003, in the creation of a plan for expanding education and outreach activities involving the establishment of, coordination, and communications among regional working groups that specialize in fishery-specific bycatch issues. These regional groups may ultimately include regional marine advisory officers and others who work closely with fishermen. The purpose of these groups will be to formulate fishery-specific, effective, and efficient methods for cooperatively reducing bycatch. These methods could include incentive programs and/or other programs to encourage fishermen to reduce bycatch and assist in providing accurate estimates of bycatch. Incentives might include allocations of fish or extended fishing times to fishermen who voluntarily use specialized gear and fishing tactics to successfully reduce bycatch. Education and outreach will be an element of every regional plan developed in the third component. This effort will include sponsorship of symposia (including a major international bycatch symposium at the American Fishery Society's 2003 annual meeting), workshops, and other bycatch education and outreach activities. In addition, this effort will include updating and enhancing the dedicated NMFS bycatch website (<http://www.nmfs.noaa.gov/bycatch.htm>) on a regular basis.

The fifth component of the National Bycatch Strategy will address international approaches to reduce bycatch of living marine resources, including fish stocks, sea turtles, marine mammals, and migratory birds extending beyond U.S. waters. Existing international agreements will be examined for potential broadening and for progress in implementation. RFMOs and other fora will also be examined for effectiveness in resolving regional bycatch problems and as alternative fora for yielding more expedient results. NMFS will continue to report to Congress annually with an assessment of the need for international bycatch agreements, as required by section 202(h) of the MSA. Continuing activities will include seeking bycatch assessment and reduction on a bilateral basis and

through regional fisheries management organizations.

The sixth component of the National Bycatch Strategy directs NMFS headquarters staff to use gaps and funding needs identified by the Atlantic HMS team and regional teams as part of the first component of the National Bycatch Strategy, to use observer costs estimated by the national working group under the second component of the National Bycatch Strategy, as well as other sources, to identify new agency funding requirements and make recommendations to modify NMFS's comprehensive 5-year plan "NOAA Fisheries' Requirements for Improved and Integrated Conservation of

Fisheries, Protected Resources, and Habitat (Requirements Plan)." As this National Bycatch Strategy matures into a more robust strategy over coming months and years, funding needs and priorities will be revisited. The attainment of adequate funding is essential to the success of the National Bycatch Strategy.

NMFS will continue to build upon its accomplishments and accelerate its efforts in ensuring that renewed and revised objectives and strategies, as well as regional recommendations, from the 1998 *Managing the Nation's Bycatch*, the foundation for its National Bycatch Strategy, are fully implemented. We discussed the petition and NMFS'

efforts on bycatch at the January 2003 meetings of the Marine Fisheries Advisory Committee and the RFMC Chairs. NMFS will discuss our national strategy with these and other fisheries groups and non-government organizations and report progress on bycatch activities at periodic meetings and through the NMFS bycatch website (<http://www.nmfs.noaa.gov/bycatch.htm>).

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