DRAFT ENVIRONMENTAL ASSESSMENT ON PROPOSED REGULATIONS TO IMPLEMENT VESSEL ASSESSMENT RESOLUTIONS OF THE AGREEMENT ON THE INTERNATIONAL DOLPHIN CONSERVATION PROGRAM AND CAPACITY RESOLUTIONS OF THE INTER-AMERICAN TROPICAL TUNA COMMISSION,

REGULATORY IMPACT REVIEW,

AND INITIAL REGULATORY FLEXIBILITY ANALYSIS

Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Office of Protected Resources
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Capacity Resolutions of the Inter-American Tropical Tuna Commission

SUMMARY

Purpose and Need for Action

This environmental assessment was prepared to evaluate the potential impacts of implementing proposed regulations on the human environment. National Marine Fisheries Service (NOAA Fisheries) is promulgating regulations pursuant to resolutions adopted by the Inter-American Tropical Tuna Commission (IATTC) and Parties to the Agreement on the International Dolphin Conservation Program (Agreement). These actions were taken internationally in order to conserve tunas in the eastern tropical Pacific Ocean (ETP) and ensure that fees paid by vessel owners participating in the fishery are adequate to maintain 100 percent observer coverage on vessels over 400 short tons (st) carrying capacity. Further, NOAA Fisheries is taking actions to update regulations governing the domestic tuna tracking and verification program so that the program remains efficient and consistent with international standards.

Alternatives

Because the proposed rule is implementing a mandate to meet commitments in international agreements with many specific required elements, the alternatives available are limited. Three alternatives were considered in this environmental assessment. Alternative 1 represents the "status quo," or the continuation of current fishing patterns, tracking and verification requirements and fee schedule for vessel assessments. Alternative 2, the preferred alternative, contains a combination of provisions concerning: (1) establishing a register of U.S. vessels with a history of fishing in the ETP prior to June 28, 2002, and requiring that only vessels on that list would be authorized to purse seine for tuna in the ETP; (2) limiting the aggregate capacity of U.S. purse seine vessels that may fish full time for tuna in the ETP to 8,969 metric tons (mt) carrying capacity per year; (3) revising the requirements for maintaining and submitting tuna tracking and verification records; (4) ensuring that owners of U.S. vessels on the register pay annual assessments; (5) prohibiting commerce in tuna or tuna products bearing a label or mark that refers to dolphins, porpoises, or marine mammals if the label or mark does not comply with the labeling and marking requirements of 16 U.S.C. 1385(d); and (6) prohibiting interference with enforcement and inspection activities, submission of false information, and other activities that would undermine the effectiveness of the Marine Mammal Protection Act (MMPA), International Dolphin Conservation Program Act (IDCPA), and Dolphin Protection Consumer Information Act (DPCIA). Alternative 3 retained the clearly required elements of the preferred alternative, but it also included other measures not specifically required by the IATTC or the Agreement. Generally, the objectives of resolutions adopted by the IATTC and Parties to the Agreement are clear; however, some provisions allow for agency discretion, either in implementing or interpreting the intent of the resolution. These discretionary areas provided the basis for alternative 3. The principal alternative against which the preferred alternative was evaluated is the status quo alternative.

Affected Environment

The ETP refers to an area of the Pacific Ocean that covers approximately 7 million square miles and is bounded by 40°N latitude, 40°S latitude, 160°W longitude and the coastlines of North, Central and South America (50 CFR 216.3). The ETP serves as habitat for many marine species, including yellowfin, skipjack and bigeye tunas, a variety of cetaceans, sea turtles, sport fishes and sharks.

The offshore stocks of spotted dolphins (*Stenella attenuata*) are most frequently associated with tunas in the ETP and have historically been set on by tuna purse seiners. However, the frequent appearance of spinner dolphins (*Stenella longirostris*; eastern and whitebelly stocks) in sets makes this species quite significant, although in almost all sets they appear in mixed herds with spotted dolphins. The common dolphin (*Delphinus delphis*) is another species which has been targeted for sets by purse seiners, although sets on this species are less frequent in recent years than on spotted and spinner dolphins. Four other dolphin species are sometimes found in association with tunas, but much less frequently than those previously mentioned. These species include striped (*Stenella coeruleoalba*), rough-toothed (*Steno bredanensis*), bottlenose (*Tursiops truncatus*), and Fraser's (*Lagenodelphis hosei*) dolphins (NRC, 1992).

In addition to the cetacean species already listed, the species that were sighted with the greatest frequency during the 1986-1990 cruises were the bottlenose dolphin (*Tursiops truncatus*), long- and short-finned pilot whales (*Globicephala* sp.), Risso's dolphin (*Grampus griseus*), sperm whale (*Physeter macrocephalus*), beaked whale (family Ziphiidae), and Bryde's whale (*Balaenoptera edeni*) (Wade and Gerrodette, 1993).

The blue whale (*B. musculus*), sei whale (*B. borealis*), fin whale (*B. physalus*), southern right whale (*Eubalaena australis*), and humpback whale (*Megaptera novaeangliae*) have also been sighted in the ETP. These species are all listed as endangered under the Endangered Species Act (ESA).

Pinnipeds have also been sighted in the ETP, but they have not been known to interact regularly with tuna purse seines. Pinniped species seen, usually one or two at a time, include the California sea lion (*Zalophus californianus*), northern fur seal (*Callorhinus ursinus*) and the northern elephant seal (*Mirounga angustirostris*). The northern fur seal is categorized as depleted under the MMPA. These other pinniped species have no special status under the MMPA or ESA.

The ETP tuna purse seine fishery is also known to take sea turtles incidental to fishing operations. Impacts of the purse seine fishery on sea turtles can include injury or mortality as a result of falling from the net onto the deck or being run through the power block as the net is hauled aboard, and entanglement in fish aggregating devices (FADs). Five species of sea turtle inhabit the ETP, all of which are listed as either threatened or endangered under the ESA, including the green, hawksbill, leatherback, loggerhead and olive ridley.

The most common sea birds found in the ETP include a variety of shearwaters, boobies, terns, frigates, petrels, phalaropes, and jaegers (Olson *et al.*, 2001). A close association exists between

seabirds and the ETP tuna purse seine fishery; tuna fishermen will often target aggregations of birds knowing that there may be schools of tuna below.

From an economic point of view, the most important species of tuna in the ETP tuna purse seine fishery is the yellowfin, although markets for skipjack, bluefin, bigeye, and black skipjack also exist. On average 1995-2001, yellowfin, skipjack and bigeye comprise the most significant portion of the annual catch in the ETP, although bluefin, albacore, black skipjack, bonito, and other species contribute to the overall harvest in this area (IATTC, 2002b).

Environmental Consequences

Alternative 1 (Status quo alternative)

Alternative 1 is not expected to result in effects to marine mammals, sea turtles, tuna other finfish or economic interests in the ETP that are significantly different from those under current conditions. Dolphin mortality resulting from the U.S. and foreign fleets is not expected to exceed 25 and 2,000 individuals per year, respectively. Turtle mortality in the tuna purse seine fishery is expected to remain at approximately current levels – 40 to 150 individuals per year, with the U.S. purse seine fleet responsible for a fraction of that total. Fishing pressure on tuna and bycatch of other fish species is expected to be consistent with current trends.

It is possible that implementing the status quo alternative (i.e., failure to implement recommendations of the IATTC and Parties to the Agreement) would result in a decline in compliance with and enforcement of past and current recommendation by other nations, as other nations would perceive the inaction of the United States as an act of defiance. If this scenario did result from implementation of this alternative (no action), the international agreements would likely fall apart leading to possibly unsustainable marine mammal and turtle takes as the result of unregulated fishing activities in the ETP.

Alternative 2 (Preferred alternative)

Implementation of the preferred alternative is not expected to have an effect on marine mammal or sea turtle populations, or tuna stocks. Similarly, bycatch of other fish species is not expected to differ significantly from current trends. However, it is possible that this alternative would benefit various target and non-target species over the long term through capacity controls.

The preferred alternative is not expected to have a significant economic impact on the U.S. tuna purse seine fleet operating in the ETP. While this alternative would implement capacity controls for the fleet, the proposed limit, 8,969 mt, is thought to be consistent with the recent level of interest and participation in the fishery by U.S. vessels. This alternative would also exempt smaller fishing entities that do not target tuna on a full-time basis from paying annual vessel assessments. Considering their access to fishing grounds in the western Pacific Ocean, vessels in excess of 400 st carrying capacity in the U.S. tuna purse seine fleet are expected to have sufficient flexibility to target tuna where and when they are seasonably available. Foreign purse seine fleets, as well as domestic and international tuna processors are not expected to be significantly adversely affected by implementation of this alternative, due to the global nature of tuna supply and pricing.

Alternative 3 (Variations on the preferred alternative)

Implementation of Alternative 3 is not expected to result in significant impacts to marine mammals, sea turtles, tuna stocks or other finfish species. Effects to these species are likely to be similar to those expected with implementation of the preferred alternative.

Depending on which of the variations considered in this alternative were implemented, the tuna purse seine fleet would likely experience varying degrees of economic impacts due to lower annual capacity limits for the U.S. tuna purse seine fleet or inadequate disincentives for vessel owners to occupy "active" capacity on the U.S. register of vessels authorized to purse seine for tuna in the ETP when they are not in fact actively participating in the fishery that year. Both of these measures would have the effect of reducing the capacity of U.S. vessels participating in the ETP tuna purse seine fishery below 8,969 mt, causing economic impacts to the fishery beyond those considered under the preferred alternative.

1.0 INTRODUCTION

Pursuant to resolutions adopted by the IATTC and Parties to the Agreement, NOAA Fisheries is promulgating regulations to conserve tunas in the ETP. Specifically, these regulations would: (1) establish a register of U.S. vessels with a history of fishing in the ETP prior to June 28, 2002, and require that only vessels on that list be authorized to purse seine for tuna in the ETP; (2) limit the aggregate capacity of U.S. purse seine vessels that may fish full time for tuna in the ETP to 8,969 metric tons (mt) carrying capacity per year; (3) revise the requirements for

maintaining and submitting tuna tracking and verification records; (4) ensure owners of U.S. vessels on the register pay annual assessments; (5) prohibit commerce in tuna or tuna products bearing a label or mark that refers to dolphins, porpoises, or marine mammals if the label or mark does not comply with the labeling and marking requirements of 16 U.S.C. 1385(d); and (6) prohibit interference with enforcement and inspection activities, submission of false information, and other activities that would undermine the effectiveness of the MMPA, IDCPA, and DPCIA. This rule is intended to contribute to the long-term conservation of dolphin and tuna stocks and to ensure that the domestic tuna tracking and verification program remains consistent with international standards.

1.1 Purpose and Need

In order to implement the provisions of IATTC and Agreement resolutions, NOAA Fisheries must amend 50 Part 300 and 50 Part 216 of the Code of Federal Regulations (CFR), which govern international fisheries and the taking and importing of marine mammals, respectively. The National Environmental Policy Act (NEPA) requires Federal agencies to evaluate the impacts of Federal actions on the human environment. Because NOAA Fisheries is promulgating regulations, it must prepare an environmental assessment (EA) to determine whether such a regulation would have significant impacts on the human environment.

1.2 Background

1.2.1 The Marine Mammal Protection Act: Early Regulations

Purse seine tuna fishing in the ETP involves setting on pure schools of tuna, tuna associated with floating objects, and tuna associated with marine mammals. In the late 1950's, fishermen became aware of the close association between schools of dolphins and large yellowfin tuna (over 25 kg), and used knowledge of this association to set nets around schools of dolphins, which are relatively easy to locate, in order to catch the associated tuna. In the 1960's, purse seining replaced pole fishing as the predominant fishing gear in this fishery. Fishermen continued to locate tuna by searching for dolphins and setting their nets around schools of dolphins to capture the tuna swimming below. Studies began in 1971 to estimate the incidental dolphin mortality caused by U.S. and foreign yellowfin tuna purse seine vessels in the ETP. At that time, the ETP fishery was dominated by U.S. vessels and the level of annual dolphin mortality was estimated to exceed 350,000. With enactment of the MMPA in 1972, incidental mortality from fishing by the U.S. domestic fleet began to decline, but participation in the fishery by foreign vessels began to increase. Although the U.S. industry was instrumental in developing gear for reducing mortality and adopting procedures for releasing animals, foreign vessels were not subject to the requirements of the MMPA, and dolphin mortality associated with fishing by the foreign fleet began to rise as participation grew in the ETP.

To address concerns regarding increased dolphin mortality by foreign vessels, Congress amended the MMPA in 1984 to tighten the importation requirements for fish and fish products harvested by foreign tuna vessels in the ETP. These amendments required nations which export

yellowfin tuna to the United States to implement a regulatory program for marine mammal protection and incidental mortality limits for dolphins in the yellowfin tuna fishery comparable to that of the United States. The 1984 amendments also set ETP annual mortality limits for the U.S. fleet of 250 coastal spotted dolphins and 2,750 eastern spinner dolphins, with an annual mortality cap for all species of 20,000 dolphins.

In 1988, Congress again amended the MMPA in response to continued high dolphin mortality caused by foreign vessels fishing in the ETP. Estimated mortality incidental to foreign fishing effort was over 85,000 dolphins in 1987, while mortality incidental to the U.S. fishing effort was under 14,000 dolphins for that same year. By imposing the following additional requirements on domestic and foreign tuna fishermen, Congress expected that overall mortality would decrease. With regard to the U.S. fleet, the 1988 amendments specified that U.S. tuna fishermen setting on marine mammals must complete the backdown procedure to remove dolphins from the net no later than 30 minutes after sundown. In addition, all U.S. tuna boats were required to carry an observer on every fishing trip, and a system of performance standards designed to maintain the diligence and proficiency of tuna purse seine skippers was to be developed and implemented by 1990. The 1988 amendments also provided more specific direction as to determining the comparability of foreign dolphin protection programs. Under the amendments, in order to be found comparable to the U.S. program, a foreign program was required to include by the beginning of the 1990 fishing season: (1) prohibitions on conducting sundown sets and such other activities as were applicable to U.S. vessels, (2) monitoring by observers, and (3) observer coverage equivalent to that for U.S. vessels. In addition, the average rate of incidental take for each foreign fleet was to be no more than twice that of the U.S. fleet by the end of the 1989 season and no more than 1.25 times the U.S. rate by the end of 1990 and in subsequent seasons. The amendments also placed additional limits on the take of coastal spotted and eastern spinner dolphins. Lastly, the 1988 amendments added Pelly certification to the embargo process for those nations not meeting the comparability requirements of the MMPA. The embargoes that have resulted from MMPA requirements have been challenged by other countries as being inconsistent with the General Agreement on Tariffs and Trade, although no resolution of these challenges has been forthcoming.

1.2.2 The Dolphin Protection Consumer Information Act (1990) and The International Dolphin Conservation Act (1992)

In 1990, Congress passed the DPCIA. The DPCIA required that tuna labeled as "dolphin-safe" meet certain dolphin-safe criteria: only tuna harvested in the ETP on a trip where no dolphins were encircled during the entire trip could be labeled dolphin-safe. The DPCIA did not actually require dolphin-safe labeling, but during the same time period, U.S. tuna canners instituted a voluntary dolphin-safe tuna campaign under which they purchased only dolphin-safe tuna for introduction into the U.S. market.

The International Dolphin Conservation Act (IDCA) was passed in 1992 with the goal of establishing an international moratorium on the practice of harvesting tuna through the use of purse seine nets deployed on or to encircle dolphins or other marine mammals. The United States, however, was unsuccessful in convincing any other nation to commit to the moratorium. In 1992, most U.S. vessels had left the ETP tuna purse seine fishery and transferred to the western Pacific fishing grounds. In 1993, only three U.S. vessels were setting on tuna associated with dolphins.

The IDCA established limits on dolphin mortality by U.S. fishing vessels and required that the number of dolphins killed or seriously injured decrease from one year to the next. Estimated U.S. dolphin mortality decreased from 19,712 in 1988, to 1,004 in 1991, to less than 500 in 1992, and to 115 animals in 1993. While Congress had established a mortality limit of 800 for the period January 1, 1993, to March 1, 1994, the fact that dolphin mortality in the U.S. fishery was 115 in 1993 meant that no more than 114 dolphins could be seriously injured or killed in the fishery in 1994. As a result, the U.S. ETP yellowfin tuna fishery on dolphin was closed on February 8, 1994 as the incidental dolphin mortality approached 114 animals. The IDCA also prohibited U.S. citizens from encircling marine mammals and made it unlawful for any person to sell non-dolphin-safe tuna in the United States after June 1, 1994. Foreign participation in the ETP tuna fishery continued to increase. However, dolphin mortality in the foreign fleets was monitored and limited under a voluntary International Dolphin Conservation Program organized by the IATTC.

1.2.3 The La Jolla Agreement (1992) and the Panama Declaration (1995)

In 1992, nations with tuna fishing interests in the ETP, including the United States, adopted a non-binding multilateral program known as the La Jolla Agreement. The La Jolla Agreement established a dolphin mortality reduction schedule providing for progressive reductions in annual dolphin mortalities, with a goal of eliminating dolphin mortality in the fishery. By resolution, the IATTC, to which the United States is a party, adopted this agreement. By 1993, nations fishing in the ETP under the La Jolla Agreement reduced dolphin mortality to less than 5,000 dolphins annually, six years ahead of the reduction schedule established in that agreement. The success of the La Jolla Agreement led the United States and other nations that participated in the agreement to strengthen and enhance the program by developing a legally binding, formal international agreement.

In October 1995, the governments of Belize, Colombia, Costa Rica, Ecuador, Honduras, Mexico, Panama, Spain, the United States, Vanuatu, and Venezuela signed the Panama Declaration. The Panama Declaration established conservative species/stock-specific annual dolphin mortality limits and represented an important step toward reducing bycatch in ETP tuna fisheries and implementing sound ecosystem management. The Panama Declaration anticipated that the United States would change the provisions of the MMPA to allow the United States to import yellowfin tuna from nations participating in, and in compliance with, the International Dolphin Conservation Program (IDCP).

1.2.4 The International Dolphin Conservation Program Act (1997) and The Agreement on the International Dolphin Conservation Program (1998)

Congress considered several bills to implement the Panama Declaration, ultimately passing the IDCPA (Public Law (P.L.) 105-42). The IDCPA was signed into law on August 15, 1997. The IDCPA was the domestic endorsement of the La Jolla Agreement, incorporating elements of the Panama Declaration, adopted under the auspices of the IATTC. The IDCPA allows the entry of yellowfin tuna into the United States under certain conditions from nations complying with the IDCP. The IDCPA also allows U.S. fishing vessels to harvest yellowfin tuna associated with dolphins in the ETP purse seine fishery. In addition, a U.S. citizen employed on a purse seine vessel of another IDCP nation signatory would not be in violation of the U.S. prohibitions on the taking of marine mammals if that vessel were to incidentally take marine mammals during fishing operations outside of the U.S. exclusive economic zone (EEZ) and in compliance with the requirements of the IDCP. The IDCPA provides that the dolphin-safe standard for tuna may change, provided that the Secretary of Commerce (Secretary) makes a finding that the tuna purse seine fishery is not having a significant adverse impact on depleted dolphin stocks in the ETP. Specifically, a finding of no significant adverse impact allows for tuna harvested in a set with no observed dolphin mortality or seriously injury to be considered dolphin-safe, regardless of whether dolphin were intentionally encircled to catch the tuna. The IDCPA ensures adequate tracking and verification of tuna imported from the ETP.

The IDCPA, together with the Panama Declaration, became the blue print for the Agreement on the IDCP (Agreement). In May 1998, eight nations, including the United States, signed a binding, international agreement to implement the IDCP. The Agreement became effective on February 15, 1999 when, as required, four nations (i.e. the United States, Panama, Ecuador, and Mexico) had deposited their instruments of either ratification, acceptance, or adherence with the Depositary. On March 3, 1999, the Secretary of State provided the required certification to Congress that the Agreement was adopted and in force. The IDCPA became effective on that date.

1.2.5 1999 Environmental Assessment of Interim Final Rule to Implement the International Dolphin Conservation Program Act (P.L. 105-42) and Regulatory Impact Review

In the 1999 EA on the interim final rule to implement the IDCPA (1999 EA), the potential impacts of implementing the five main objectives of the IDCPA were analyzed. Those objectives included:

(1) Providing protection for dolphins;
(2) Enhancing the conservation of yellowfin tuna and other living marine resources in the ETP ecosystem;
(3) Allowing nations that are participating in, and in compliance with, the IDCP to export yellowfin tuna into the United States;

(4) Allowing U.S. vessels to participate in the ETP fishery on an equal basis with vessels of other nations; and
(5) Recognizing that nations fishing for tuna in the ETP have achieved significant reductions in dolphin mortality associated with this fishery.

Three alternatives were analyzed in the 1999 EA. Alternative 1 (status quo) did not impose any new requirements. Under this alternative, existing regulations would remain in place and activities would continue under the voluntary IDCP. Alternative 2 (preferred alternative) established several new requirements under the interim final rule. Alternative 3 consisted of adjustments to Alternative 2. These adjustments were only made in elements not clearly required in the IDCPA and where agency discretion may exist.

In addition, several alternatives were eliminated from further analysis. The alternatives included (1) restrictions for U.S. vessels, such as banning sets on floating objects, allowing vessels less than 363 mt carrying capacity to set on dolphins, and allocating U.S. dolphin mortality limits among U.S. vessels; (2) market restrictions, such as allowing non-dolphin-safe tuna for transport only and allowing sale of only tuna labeled "super dolphin-safe"; and (3) tuna tracking and verification, such as requiring paperwork through final sale, not requiring well segregation and tagging fish. These alternatives were excluded from analysis because they were either not legal, not practicable and/or not cost-effective.

NOAA Fisheries determined that approval of the interim final rule to implement the IDCPA would not significantly affect the quality of the human environment. A Finding of No Significant Environmental Impact was signed by the Assistant Administrator for Fisheries on December 8, 1999.

1.2.6 Litigation Challenging the Adequacy of the 1999 Environmental Assessment

On February 8, 2000, Defenders of Wildlife, various other non-governmental organizations, and several individuals filed suit in the Court of International Trade challenging, among other things, the 1999 EA. The plaintiffs alleged that the 1999 EA prepared by NOAA Fisheries violated NEPA and applicable regulations, and that NOAA Fisheries should have completed an Environmental Impact Statement for the entire new tuna/dolphin program. Specifically, Defenders of Wildlife *et al.* contended that the EA (1) was based upon inaccurate and dated information, (2) erroneously took a piecemeal approach and failed to consider the cumulative effects on the dolphin population of various environmental impacts, (3) failed to address certain problems with the dolphin-safe labeling program, and (4) was flawed because of the lack of public participation in the NEPA process. On December 7, 2001, the Court of International Trade held that the application of NEPA to the interim final rule and Agreement was not arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.

On February 1, 2002, Defenders of Wildlife *et al.* appealed the ruling made in the Court of International Trade. On June 4, 2003, the decision of the Court of International Trade was affirmed.

1.3 Objective of the Proposed Rule

The objective of the proposed rule is to implement internationally agreed upon resolutions adopted by the IATTC and Parties to the Agreement, which are intended:

1. To establish a register of U.S. vessels with a history of fishing in the ETP prior to June 28, 2002, and require that only vessels on that list be authorized to purse seine for tuna in the ETP;

2. To limit the aggregate capacity of U.S. purse seine vessels that may fish full time for tuna in the ETP to 8,969 mt carrying capacity per year;

3. To revise the requirements for maintaining and submitting tuna tracking and verification records;

4. To ensure that owners of U.S. vessels on the register pay annual assessments;

5. To prohibit commerce in tuna or tuna products bearing a label or mark that refers to dolphins, porpoises, or marine mammals if the label or mark does not comply with the labeling and marking requirements of 16 U.S.C. 1385(d); and

6. To prohibit interference with enforcement and inspection activities, submission of false information, and other activities that would undermine the effectiveness of the MMPA, IDCPA, and DPCIA.

2.0 ALTERNATIVES

Because the proposed rule is implementing a mandate to meet commitments in international agreements with many specific required elements, the alternatives available are limited. The preferred alternative contains a combination of provisions concerning: (1) procedures for implementing annual capacity limits for the U.S. fleet of tuna purse seine vessels operating in the ETP; (2) payment of annual vessels assessments; (3) prohibitions against activities that undermine the effective implementation and enforcement of the MMPA, IDCPA and DPCIA; (4) prohibitions against commerce in tuna or tuna products bearing a label or mark that refers to dolphins, porpoises, or marine mammals if the label or mark does not comply with the labeling and marking requirements of 16 U.S.C. 1385(d); and (5) updates to the domestic tuna tracking and verification program. The principal alternative against which the preferred alternative will be evaluated is the "status quo" alternative (i.e., a continuation of current fishing patterns under existing regulations).

The status quo alternative is presented principally to provide a benchmark against which to contrast conditions expected with the proposed actions. In most respects, the status quo alternative is not a "reasonable alternative" because maintaining the status quo would not meet the requirements of the international commitments of the United States under the IATTC and the Agreement.

The impact analysis looks at three "combinations" of actions: the status quo, the preferred alternative, and an alternative (Alternative 3) which represents a variation of discretionary aspects of the preferred alternative. NOAA Fisheries acknowledges that, within each category of actions (e.g., capacity limits) there may be measures that are possible within different interpretations of the requirements of the international agreements and the IDCPA. In addition to those requirements, there may be additional measures that are possible. For example, these measures might achieve the objectives of internationally agreed upon resolutions of the IATTC and Agreement, but they may not be specifically required by those resolutions or the measures may be more restrictive than what is required by the resolutions. Alternative 3 was developed to encompass some of these possible variations.

Emphasis must be made, however, on the fact that it is very difficult, if not impossible, to independently evaluate and portray the likely impacts of each specific possible alternative action in each of the categories of actions, for two reasons. First, actions in the categories of capacity limitation and annual vessel assessments are closely linked; they are not independent. They are intended to reinforce each other and should be viewed as inter-dependent parts of an overall strategy to carry out the resolutions adopted under the international agreements. Second, the analysis would be extremely difficult for reviewers if this EA tried to portray the impacts of separate actions independently. That is, if there are five categories of actions and only two alternatives in each category, then there could be 32 different "combinations" of actions (2 to the fifth power). With 10 impact categories (e.g., marine mammals, sea turtles, etc.), there would be 320 separate sections in which impacts would be described. This would be enormously unwieldy for the reviewer. NOAA Fisheries believes that examining combinations is a more constructive method for presenting relevant information.

In addition, during the development of the preferred action, NOAA Fisheries attempted to identify possible alternative actions that might (though not necessarily) contribute to effective achievement of the objectives of the regulations. Initial evaluation of these possible measures led to their rejection for the reasons presented in section 2.4, and detailed evaluations were not conducted. Generally, these alternatives were rejected because they did not fulfill the objectives of internationally agreed upon resolutions or they were not reasonable due to cost or impracticability.

2.1 Alternative 1: Status Quo - No New Requirements

Under this alternative, the status quo, existing regulations would remain in place and activities would continue and the United States would not be acting in compliance with international agreements. A summary of these provisions follows.

2.1.1 Capacity limits

Existing regulations do not provide for capacity limitation of U.S. flag vessels participating in the ETP tuna purse seine fishery. Currently, no specified "history" of fishing in the ETP is required to be eligible to participate in the fishery. Further, no procedures have been established to limit the aggregate capacity of vessels active in the fishery in a given year.

2.1.2 Vessel assessments

Current regulations require that all U.S. vessels participating in the ETP tuna purse seine fishery pay annual vessel assessments according to the schedule established by the Parties to the Agreement and that assessment payments that are received after established deadlines are subject to a 10 percent surcharge. However, existing regulations do not distinguish between payment schedules established for different categories of vessels (e.g., those that request a dolphin mortality limit (DML) and those that do not) and they do not tie the payment of assessments to a vessel's active/inactive status among all eligible (eligibility requirements have not been established; see section 2.1.1) vessels in the fishery.

Current regulations do not explicitly state that a vessel that fails to pay its annual assessment will not be included in the list of vessels eligible to participate in the fishery in a given year.

2.1.3 Prohibitions against activities that undermine the effective implementation and enforcement of the MMPA, IDCPA and DPCIA

Under the status quo, individuals who refuse to permit boardings by enforcement agents, interfere with inspections or stranding response, or intentionally submit false information, currently may not be subject to prosecution under the MMPA, as such activities are not specifically prohibited.

2.1.4 Tuna tracking and verification

Current regulations establish that Tuna Tracking Forms (TTFs) are confidential documents, but they do not prohibit the distribution of TTFs. Existing regulations require procedural updates to bring the domestic tuna tracking a verification program in conformance with international protocols.

Under the status quo, wholesalers/distributors are not included in the list of entities that are subject to spot-checks and required to maintain and submit pertinent records to the Southwest Regional Administrator related to caught, landed, processed and stored tuna. Certain entities (any exporter, transshipper, importer, processor or wholesaler/distributor of tuna or tuna products) are not required to submit FCOs within 30 days of every shipment. Under existing regulations, these entities are only required to submit the records within 30 days of a request by the Southwest Regional Administrator.

Record maintenance related to the shipment of tuna, including the Fisheries Certificate of Origin (FCO), required certifications, invoices, and other import documents is currently not required for all tuna, only for yellowfin tuna harvested in the ETP.

Importers, exporters and processors who take custody of all tuna shipments are not currently required to sign and date FCOs.

2.2 Alternative 2: Proposed rule (Preferred Alternative)

The preferred alternative would establish several new prohibitions against activities that interfere with enforcement of or undermine the effective implementation of the MMPA, IDCPA, or DPCIA and requirements concerning fleet capacity limits, annual vessel assessments, and tracking and verification procedures. Each of these requirements is described in greater detail below.

2.2.1 Capacity limits

Under the preferred alternative, a Vessel Register would be established. The Vessel Register would include two categories of purse seine vessels: "active" and "inactive." Purse seine vessels would be required to be categorized as "active" on the Vessel Register in order to target tuna on a full-time basis in the ETP. The Vessel Register would only include vessels that are eligible according to their history of fishing in the ETP prior to June 28, 2002. The annual aggregate capacity of vessels that participate in the ETP tuna purse seine fishery on a full-time basis (i.e., categorized as "active") will be limited to 8,969 mt. The Vessel Register could also include purse seine vessels that are categorized as "inactive" for a given year. Inactive vessels would only be allowed to purse seine for tuna in the ETP if they could switch to active status to replace an active vessel that requested to change to inactive status.

Each year, vessels would have the opportunity to be categorized as active or inactive on the Vessel Register, or to be removed from the Vessel Register for that year. Vessels that are eligible to be included on the Vessel Register would retain that eligibility whether or not they are included on the Vessel Register in a given year. The preferred alternative would include a provision to deter vessels from requesting active status for a given year and then participating in the fishery on a less-than-full-time basis (i.e. a frivolous request), unless due to extraordinary circumstances. Vessels that wish to be categorized as active in a given year would be prioritized according to the following hierarchy: (1) vessels that were categorized as active in the previous year, (2) vessels that were categorized as inactive in the previous year, (3) vessels that were not categorized as active or inactive in the previous year will be given first-come first-served priority behind vessels in (1) and (2), and (4) vessels that were determined to have made a frivolous request for active status on the Vessel Register in the previous year.

Except under extraordinary circumstances, a request for active status on the Vessel Register would be considered frivolous if, for a vessel categorized as active in a given calendar year, less

than 20 percent of the vessel's total landings, by weight, in that same year is comprised of tuna harvested by purse seine in the ETP.

Vessels less than or equal to 400 st (362.8 mt) that do not participate on the ETP tuna purse seine fishery on a full-time basis, defined as vessels for which tuna caught by purse seine in the ETP comprises less than 50 percent of its total annual landings, will not be required to be included on the Vessel Register or pay annual assessments in order to purse seine for tuna on a seasonal basis. In addition, purse seine vessels that normally fish in the western Pacific Ocean (WPO) and are licensed under the South Pacific Tuna Treaty would not be required to be included on the Vessel Register or pay annual assessments provided that they do not fish in the ETP. Each of these vessels would be allowed to make a single trip in the ETP, and the total number of trips by WPO vessels would not exceed 32 trips; however, they would be required to apply for and obtain a vessel permit, pay the required observer placement fee, and carry an approved observer prior to entering the ETP to fish.

2.2.2 Vessel assessments

Under the preferred alternative, all ETP tuna purse seine vessels, regardless of carrying capacity, listed on the Vessel Register as active or inactive would be required to pay annual vessel assessments to cover the costs of placing observers on 100 percent of the trips made by vessels in excess of 400 st (362.8 mt) and of maintaining the AIDCP On-Board Observer Program. Annual assessments would be paid in accordance with standards adopted by the Parties to the Agreement and payment due dates would be established according to the category to which they belong (e.g., vessels that request a DML, vessels that do not). Assessments not received by the payment deadline would be subject to a 10 percent surcharge of the assessment. If a vessel fails to make appropriate assessment payments for a given year, for either active or inactive status, it will be excluded from the Vessel Register for that year.

Vessels less than or equal to 400 st (362.8 mt) that do not participate on the ETP tuna purse seine fishery on a full-time basis, defined as vessels for which tuna caught by purse seine in the ETP comprises less than 50 percent of its total annual landings, will not be required to be included on the Vessel Register or pay annual assessments in order to purse seine for tuna on a seasonal basis.

2.2.3 Prohibitions against activities that undermine the effective implementation and enforcement of the MMPA, IDCPA and DPCIA

Under the preferred alternative, a new Section 216.17 would be added to address a long-standing deficiency within the MMPA and its regulations. The regulations would add prohibitions against activities that undermine the effective implementation and enforcement of the MMPA, DPCIA, and IDCPA. Individuals who refuse to permit boardings by enforcement agents, interfere with inspections or stranding response, or intentionally submit false information, currently may not be subject to prosecution under the MMPA, as such activities are not specifically prohibited. In one recent case, NOAA was unable to take action under the MMPA against a scientific research

permit holder that deliberately provided false information to law enforcement personnel in an effort to shroud illegal conduct. Such activities constrain law enforcement actions needed to ensure compliance with the statute. Lastly, this action would ensure that there are regulations protecting law enforcement officials while conducting investigations in the field.

2.2.4 Tuna tracking and verification

The preferred alternative would update the procedures for maintaining and submitting tuna tracking and verification records consistent with changes in the international tracking and verification program. Specifically, the update would prohibit the distribution of confidential tuna tracking forms, extend record (e.g., FCOs, invoices, other documents) maintenance and submission requirements to wholesalers/distributors throughout the country, require entities that submit FCOs to do so within 30 days of every shipment as opposed to at the request of the Regional Administrator, require record maintenance on all tuna not only tuna harvested in the ETP, and require that importers, exporters and processors who take custody of all tuna shipments sign and date FCOs.

2.3 Alternative 3: Adjustments to the Preferred Alternative

Generally, the objectives of resolutions adopted by the IATTC and Parties to the Agreement are clear; however, some provisions allow for agency discretion, either in implementing or interpreting the intent of the resolution. For example, the U.S. has agreed to limit the aggregate capacity of tuna purse seine vessels under United States flag fishing in the ETP to no more than 8,969 mt, but several potential procedures exist to limit capacity on an annual basis. Alternative 3 would retain the clearly required elements of the preferred alternative, but it would also include other measures (described below) not specifically required by the IATTC or the Agreement.

2.3.1 Capacity limits

(1) The aggregate capacity of active U.S. purse seine vessels participating in the ETP tuna fishery would be limited to an amount less than 8,969 mt each year;

(2) All vessels would have equal opportunity to be categorized as active from year to year (i.e., there would be no incentive or reward for being active in a prior year); and

(3) No provisions would be made to deter frivolous requests to be categorized as an active vessel on the Vessel Register.

2.3.2 Vessel assessments

Purse seine vessels that are eligible to be in the Vessel Register would be required to remain on the Vessel Register and pay associated fees, regardless of their size and whether they intend to actively participated in the fishery in a given year.

2.3.3 Prohibitions against activities that undermine the effective implementation and enforcement of the MMPA, IDCPA and DPCIA

No additional alternatives were considered under this subheading.

2.3.4 Tuna tracking and verification

No additional alternatives were considered under this subheading.

2.4 Alternatives Eliminated from Further Analysis

2.4.1 Capacity limits

In developing the fleet capacity portions of the preferred alternative and Alternative 3, member nations to the IATTC, including the United States, considered several possible alternative actions for initial determination as to their feasibility and practicality. Many of these alternative actions were determined to be either not practicable and/or not cost-effective, and were thus rejected without detailed analysis as part of the overall action to implement recent resolutions adopted by the IATTC and Parties to the Agreement. A discussion of the history of those alternative actions within the IATTC and the reasons for their rejection follows.

A Permanent Working Group on Fleet Capacity was established within the IATTC in 1998, with the first resolution addressing capacity of the ETP tuna purse seine fleet in October of the same year. Under the October 1998 resolution, the Parties agreed to limit their specific fleets to specified tonnage levels during 1999; the U.S. agreed to a level of 8,969 mt carrying capacity for vessels operating in the ETP.

In 2000, the Parties agreed to extend the capacity limits established in 1998 until June 2000 and to establish a regional list, or Vessel Register, of purse seine vessels fishing for tuna in the ETP. In addition, the Parties requested that the IATTC staff conduct analyses on fleet capacity management issues and draft a plan for managing fleet capacity. The goal of the Parties was to limit overall tuna purse seine fleet capacity to levels that would ensure the sustainability of tuna fisheries in the ETP. The Parties' goals were to develop and implement a plan to achieve a target level of 135,000 mt carrying capacity by January 2005.

The Parties agreed to use a Regional Vessel Register, established as of June 28, 2002, as the definitive list of purse seine vessels authorized to fish for tuna in the ETP and that any purse seine vessel fishing and not on the Vessel Register would be considered to be undermining IATTC management measures. Only vessels with a history of fishing in the ETP prior to the date on which the Vessel Register was established would be eligible for inclusion on the Vessel Register. The exception to this restriction was for vessels that were added to the Vessel Register to replace vessels of greater or equal carrying capacity that were removed from the Vessel Register (e.g., because they had sunk, etc.). In addition to vessels that would actively participate in the fishery in a given year, the Vessel Register also allowed for a list of "inactive" vessels that

would not fish during a year. An additional exception to the Vessel Register, was a class of 32 U.S. vessels that were authorized to fish in other areas of the Pacific Ocean, which under the Vessel Register system, would also be allowed to fish for one trip in the ETP each year.

The Vessel Register established in June 2002 provides the basis for the preferred alternative considered in this analysis. Parties to the IATTC also considered national fleet catch limits; however, the Vessel Register system was favored over national catch limits because it provided a more transparent and enforceable method for limiting participation and catch in the tuna purse seine fishery in the ETP.

2.4.2 Other aspects of the proposed action

No further alternatives were considered with respect to annual vessel assessments; prohibitions against activities that undermine the effective implementation and enforcement of the MMPA, IDCPA and DPCIA; or to procedural changes the domestic tuna tracking and verification program.

3.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT

3.1 Physical Environment

The ETP refers to an area of the Pacific Ocean that covers approximately 7 million square miles and is bounded by 40°N latitude, 40°S latitude, 160°W longitude and the coastlines of North, Central and South America (50 CFR 216.3). The ETP serves as habitat for many marine species, including yellowfin, skipjack and bigeye tunas, and a variety of dolphins. The ETP is the only known area in the world where tuna and dolphins are frequently found in close association with one another, and it is the only body of water in which purse seine fishing on dolphins is known to commonly occur. The tuna-dolphin association primarily occurs in a subregion of the ETP, a triangular region roughly the size of the continental United States (about 10 million km^2), extending from the tip of Baja California (approximately 20°N) southward to Peru (approximately 20°S) and seaward to approximately 140°W. This subregion is characterized by an exceptionally shallow surface mixed layer.

3.2 Biological Environment

In contrast to other areas of the equatorial Pacific Ocean, where the thermocline is generally 150-200 meters (m) deep, the depth of the thermocline layer throughout much of the ETP extends only 50-100 m below the surface. Water temperatures in this upper mixed layer are quite warm (25-30°C), and oxygen concentrations are high. Below this layer, water temperatures fall

relatively rapidly (from approximately 27°C to approximately 15°C) through the thermocline (usually 5-25 m thick), and stabilize again below the thermocline. Oxygen concentrations also decrease relatively rapidly through the thermocline before increasing again at much greater depths.

Total biological productivity in the ETP tends to be low relative to all other oceans, but productivity is high compared to other tropical oceans. Ocean currents and winds generate a typical pelagic environment, where areas of high productivity are distributed in dynamic, complex, non-random patterns or patches. In general, the productivity of the ETP is greater near the coastlines and decreases with distance offshore, but several ocean currents, which tend to control local levels of biological activity, can strongly affect the productivity of various areas. Large climatic events such as El Niño can temporarily change the distributions and abundance of various marine species, with patterns returning to more normal conditions when the anomalous event has passed.

In addition to the tunas and dolphins whose association has led to these international agreements and past legislation, the ETP is host to a wide variety of vertebrate and invertebrate species, including zooplankton, sport fishes, sharks, whales and sea turtles. The population dynamics of most of these species are not well known, in part due to the relative paucity of research done in this area of the world.

3.2.1 Marine Mammals

The offshore stocks of spotted dolphins (*Stenella attenuata*) are most frequently associated with tunas in the ETP and have historically been set on by tuna purse seiners. However, the frequent appearance of spinner dolphins (*Stenella longirostris*; eastern and whitebelly stocks) in sets makes this species quite significant, although in almost all sets they appear in mixed herds with spotted dolphins. The common dolphin (*Delphinus delphis*) is another species which has been targeted for sets by purse seiners, although sets on this species are less frequent in recent years than on spotted and spinner dolphins. Four other dolphin species are sometimes found in association with tunas, but much less frequently than those previously mentioned. These species include striped (*Stenella coeruleoalba*), rough-toothed (*Steno bredanensis*), bottlenose (*Tursiops truncatus*), and Fraser's (*Lagenodelphis hosei*) dolphins (NRC, 1992).

In 1986, NOAA Fisheries initiated a long-term, large-scale research program to monitor trends in the abundance of dolphin populations in the ETP. The line-transect field methods currently in use were first established for the five-year Monitoring of Porpoise Stocks (MOPS) study, conducted between 1986 and 1990, for a total of 5 surveys. Sightings of 24 stocks of cetacean representing 19 species or genera were recorded and serve as the basis for the stock assessment currently used in international fora (Wade and Gerrodette, 1993).

In 1998, NOAA Fisheries initiated the *Stenella* Abundance Research (STAR) project. STAR was a multidisciplinary study of cetaceans in the ETP and cruises were originally planned for three years. The objective of the STAR project was to collect data to enable abundance

estimation for the four dolphin stocks most affected by the tuna purse seine fishery operating in the ETP. Abundance estimates for the four target dolphin stocks from the 1998 and 1999 cruises were reported in Gerrodette (1999) and (2000), respectively. Dolphin abundance estimates from the 2000 cruise were made using updated methods in line-transect analysis and reported by Gerrodette and Forcada (2002). Data from past cruises, including those from 1998 and 1999, were also reanalyzed using the updated methods, from which the most up-to-date abundance estimates for spinner and spotted dolphin stocks in the ETP have been calculated (Gerrodette and Forcada, 2002).

In addition to surveys by NOAA Fisheries, observers are placed aboard tuna vessels not only to monitor the incidental mortality of dolphins and collect data that could lead to further reductions in dolphin mortality, but also to collect information on the searching activities of the vessels and the frequency of encounters with marine mammals. Observers have been required on 100 percent of the fishing trips by tuna purse seine vessels in excess of 400 st (362.8 mt) carrying capacity (i.e., Class 6 vessels) operating in the ETP since 1995. This level of observer coverage has been required on U.S. vessels involved in dolphin sets since 1990. The IATTC uses these data and line-transect analysis to estimate dolphin abundance, where a correction factor is estimated from the sightings data. Calculation of unbiased absolute dolphin abundance from observer data is complicated by the fact that tuna vessels are not operated evenly over the study area; generally, effort is concentrated in areas of greatest dolphin abundance. Because the procedures used by the IATTC are unlikely to remove all biases, the resulting estimates are treated as indices of relative abundance of the stocks, rather than estimates of their absolute abundance, as the NOAA Fisheries ship surveys provide. For purposes of this EA, absolute abundance estimates of marine mammal stocks from NOAA Fisheries ship surveys are used along with summaries of the general trends of dolphin stocks from observer data, as analyzed by the IATTC.

In the following section, information is presented on the status of the three cetacean stocks that interact to the greatest degree with the tuna purse seine fishery operating in the ETP. In addition, Table 2 presents a summary of the abundance and most recent mortality numbers of dolphin species that most frequently interact with the ETP tuna purse seine fishery.

Pantropical Spotted Dolphin (*Stenella attenuata*)

There are three recognized stocks of spotted dolphin in the ETP: northeastern offshore, western/southern offshore, and coastal. Spotted dolphins range from 1.6 to 2.6 m in length and weigh up to 100 kg, depending on the stock involved (Dizon *et al*., 1994). The northeastern and western/southern offshore stocks are relatively smaller, have smaller teeth, and are, on average, less spotted than the coastal stock. Distinctions between the northeastern and the western/southern offshore stocks have been made on the basis of external morphology and skull measurements. Spotted dolphins are extremely gregarious. The offshore stocks are often found in aggregations of more than several hundred animals, frequently in mixed herds with spinner dolphins. The coastal stock of spotted dolphin is usually encountered in herds of less than 100 animals (NOAA Fisheries, 1991). The northeastern offshore and coastal stocks interact most

frequently with the ETP tuna purse seine fishery. These two spotted dolphin stocks are described in greater detail below.

Northeastern offshore stock

The northeastern offshore stock of spotted dolphin is distributed north of the equator above 5°N and west to 120°W (Wade, 1993). On average, individuals in the northeastern offshore stock are larger than those of the western/southern form and smaller than the coastal form (NOAA Fisheries, 1991). Given a small cetacean's life history characteristics (e.g., sexual maturity at 10 years or more and mature females give birth approximately every 3 years), it is generally expected that maximum population growth rate for this population is 4 percent per year (Reilly and Barlow, 1986); however, few observed data from any cetacean population exist to support this theoretical maximum. Using cruise data for 1998-2000, the northeastern offshore spotted dolphin population abundance has been estimated at 640,000 animals (range 588,700 – 970,400 animals (CV = 0.17)) (Gerrodette and Forcada, 2002). The total annual fishing mortality for this stock for both the U.S. and the foreign fleets combined averaged approximately 320 animals between 1998 and 2000 (IATTC, 2002b), with the fishing mortality rate (i.e., annual estimates of mortality divided by conservative annual estimates of population abundance) varied between 0.05% and 0.06% over the three years (IATTC, 2002b). The preliminary estimate of fishing mortality rate for the northeastern offshore stock of spotted dolphin in 2002, using the 1998-2000 abundance estimate, was 0.07% (IATTC, 2002b). In 1993, NOAA Fisheries determined that the stock was below its maximum net productivity level and designated it as a depleted stock under the MMPA (58 FR 58285, November 1, 1993). The stock has no special status under the ESA.

Coastal stock

The coastal spotted dolphin ranges from south of the equator to the Gulf of California, approximately 28°N latitude, and is normally found in waters within 50 km of the coast. The stock occurs continuously along the Mexican, Central American, and South American coasts to well south of the equator. Individuals in this stock are larger and more robust than the those in other stocks and their light-colored spotting is so extensive that it is sometimes referred to as a "silver-back" (NOAA Fisheries, 1991). The average of abundance estimates 1998-2000 was approximately 140,000 animals, with estimates ranging from 97,000 to 228,000 animals (CV = 0.35) (Gerrodette and Forcada, 2002). Estimates of fishery-caused mortality for this stock are considered less reliable than for other stocks because of the difficulty in separating the offshore and coastal forms, and because of the low level of fishing effort in nearshore waters (NOAA Fisheries, 1991). The coastal spotted dolphin has been designated as depleted under the MMPA since 1980 (45 FR 72178 (October 31, 1980)). This stock has no special status under the ESA.

Spinner dolphin (*Stenella longirostris*)

There are four recognized stocks of spinner dolphins in the ETP: northern whitebelly, southern whitebelly, eastern, and Costa Rican. Due to the high degree of overlap in distribution between the northern and southern whitebelly spinner dolphin stocks, it has been suggested that northern and southern whitebelly stocks be combined into a single management unit. Spinner dolphins

often occur in very large herds, and are often found mixed with spotted dolphins. The whitebelly and eastern stocks are most affected by the tuna purse seine fishery (NOAA Fisheries, 1991).

Spinner dolphins reach a length of 1.5-2.2 m, although the size varies among the stocks. The Central American spinner is the longest, reaching a length of 2 m or more, while the eastern spinner dolphin is the smallest. The spinner dolphin name is derived from its habit of leaping clear of the water and spinning on its longitudinal axis, rotating as much as seven times in one leap (NOAA Fisheries, 1991).

Eastern spinner dolphin

Eastern spinner dolphins are, on average, about 3-4 cm smaller than the whitebelly spinner dolphins (NOAA Fisheries, 1991). The abundance estimate for the eastern stock of spinner dolphin, based on the five ship surveys from 1998 to 2000, is approximately 450,000 animals, ranging from 361,209 to 557,028 (CV = 0.23) (Gerrodette and Forcada, 2002). The total fishing mortality of eastern spinner dolphins from 1998-2000 ranged from 272 to 422 per year, averaging approximately 352 animals per year (IATTC, 2002b). Estimated fishing mortality for this stock was 469 and 405 animals in 2001 and 2002, respectively (IATTC, 2003). The estimated level of mortality varied between 0.06 percent and 0.09 percent for 1998-2000 (IATTC, 2002b). The eastern stock of spinner dolphin was designated as depleted under the MMPA in 1993 (58 FR 45066, August 26, 1993). This stock has no special status under the ESA.

Other marine mammals

Data reported by Wade and Gerrodette (1993) from cruises conducted between 1986 and 1990, and the most recent ship surveys (1998, 1999, and 2000) provide the most comprehensive information regarding abundance and distribution of marine mammals in the ETP that may interact with the tuna purse seine fishery. In addition to the cetacean species described previously, the species that were sighted with the greatest frequency during the 1986-1990 cruises were the bottlenose dolphin (*Tursiops truncatus*), long- and short-finned pilot whales (*Globicephala* sp.), Risso's dolphin (*Grampus griseus*), sperm whale (*Physeter macrocephalus*), beaked whale (family Ziphiidae), and Bryde's whale (*Balaenoptera edeni*) (Wade and Gerrodette, 1993).

The blue whale (*B. musculus*), sei whale (*B. borealis*), fin whale (*B. physalus*), southern right whale (*Eubalaena australis*), and humpback whale (*Megaptera novaeangliae*) have also been sighted in the ETP. These species are all listed as endangered under the ESA.

Pinnipeds have also been sighted in the ETP, but they have not been known to interact regularly with tuna purse seines. Pinniped species seen, usually one or two at a time, include the California sea lion (*Zalophus californianus*), northern fur seal (*Callorhinus ursinus*) and the northern elephant seal (*Mirounga angustirostris*). The northern fur seal is categorized as

depleted under the MMPA. These other pinniped species have no special status under the MMPA or ESA.

3.2.2 Sea Turtles

In addition to marine mammals, the ETP tuna purse seine fishery is also known to take sea turtles incidental to fishing operations. Impacts of the purse seine fishery on sea turtles can include injury or mortality as a result of falling from the net onto the deck or being run through the power block as the net is hauled aboard, and entanglement in FADs. Many impacts are avoidable if encircled turtles are removed from the net prior to hauling it aboard. The IATTC has recommended measures to address these potential impacts which include safe handling and release techniques, as well as methods to resuscitate comatose turtles. As a result of these recommendations and measures taken by individual tuna fishermen, turtle injuries and mortalities are decreasing in the fishery (IATTC, 2004b). The tendency for turtles to associate with flotsam in the open ocean make them more likely to be involved with sets on logs or other floating objects. Furthermore, turtles may also be captured in other types of sets if the area being fished has a high turtle density, such as the nearshore waters of southern Mexico, Costa Rica, and Panama (Fox, 1990) and oceanographic fronts. Because turtles cannot swim fast enough to keep up with tunas or dolphins, their capture in dolphin or school sets is a chance event.

Sea turtles generally nest in tropical regions, although their foraging area expands throughout tropical and temperate oceans, depending on the species. In the ETP, the location of important nesting beaches has been determined. However, studies of sea turtles at these sites are generally limited to monitoring trends in the counts of nesting females. Consequently, absolute abundance estimates are not available. Turtle sightings by observers aboard tuna purse seine vessels provide some perspective on the at-sea distribution and abundance of turtles in the ETP.

IATTC observers record sea turtle encounters, entanglements and mortalities in the ETP tuna purse seine fishery. IATTC data from 1993 to 2002 indicate that sea turtle mortality in the U.S. tuna purse seine fishery was highest in floating object sets, with the olive ridley being the species most often taken (IATTC, 2004b). The data indicate that for the period 1993 to 2002, the mean annual mortality of sea turtles was more than twice as high in floating object sets (83) than either dolphin sets (17) or school sets (36); sets on floating objects resulted in the highest per set rate of annual turtle mortality over the same period (0.02) as compared with dolphin (0.002) and school (0.007) sets (IATTC, 2004b). Between 1993 and 2002 the mean annual turtle mortality in the ETP tuna purse seine fishery was approximately 136 individuals, ranging from a high of 172 turtles in 1999 to a low of 46 turtles in 2002 (IATTC, 2004b).

Current estimates of the numbers and species of turtles that might be captured or killed annually in the ETP tuna purse seine fishery have been made using data collected by the Agreement's On-Board Observer Program (i.e., IATTC observers and national observer programs) on U.S. and foreign tuna purse seine vessels between 1997 and 2002. The average turtle mortality per observed set between 1997 and 2002 was approximately 0.007 (IATTC, 2004b).

Between 1993 and 2002, olive ridleys comprised the majority of turtle mortalities in all sets (60.6 percent), with greens (8 percent), loggerheads (1.4 percent) and unidentified species (29 percent) rounding out the total (IATTC, 2004b). Approximately one hawksbill mortality occurs each year in the fishery. One fishery-related leatherback mortality occurred between 1993 and 2002 (in 1994). Between 1997 and 2002, over 88 percent of all turtles incidentally taken during fishing operations observed by IATTC observers were released unharmed (N. Vogel, IATTC, pers. comm., January 14, 2004).

Between 1997 and 2002, approximately 250 sea turtles per year have been observed entangled, alive or dead, on trips carrying IATTC observers (N. Vogel, IATTC, pers. comm., January 14, 2004). Of these, approximately 71 dead turtles (28 percent) per year are observed entangled in floating objects. The majority of all identified turtles entangled in floating objects are olive ridleys (approximately 81 percent), followed by greens (13 percent), hawksbills (3 percent), loggerheads (2.5 percent) and leatherbacks (1 individual observed entangled alive in 2001) (N. Vogel, IATTC, pers. comm., January 14, 2004).

The following is a synopsis of the current state of knowledge on the distribution, abundance and activities that are known or thought to influence the survivorship of turtle species that have been reported incidentally taken in the ETP tuna purse seine fishery.

Green turtle (*Chelonia mydas*)

The green turtle is named for the color of its fat rather than for its external coloration, which can range from green to black to gray dorsally and white to yellow ventrally. The head of the green sea turtle is small relative to the size of its body with only a single pair of scales in front of the eyes. This characteristic helps to distinguish the green sea turtle from other sea turtles. The green turtle is listed as a threatened species under the ESA, except for breeding populations in Florida and on the Pacific coast of Mexico, which are listed as endangered. The green turtle is a circumglobal species found in tropical seas and, to a lesser extent, in subtropical waters with temperatures above 20°C (NOAA Fisheries and USFWS, 1998a). The species is common in the ETP (Fox, 1990). There are no known nesting grounds on the U.S. west coast, and little is known about the pelagic range of the green turtle. From 1993 to 2002, green turtles were sighted by observers in the ETP tuna purse seine fishery with the second highest frequency of any turtle species (IATTC, 2004a). Approximately 50-60 turtles reside in San Diego Bay, California, probably due to a warm water effluent from a power generating station (McDonald *et al.*, 1994). The diets of green turtles vary by life stage and geographic region (Bjorndal, 1997). In some regions adult green turtles have a nearly exclusively herbivorous diet consisting of selected macroalgae and sea grasses (Wetherall *et al.*, 1993.). In the eastern Pacific Ocean, green turtles are thought to have more carnivorous diets than in other regions. In some coastal areas, the contents of green turtle stomachs contained a large percentage of molluscs, polychaetes and other invertebrates (Bjorndal, 1997). The primary threats to green turtles in the ETP include harvest of eggs and turtles by humans, habitat loss, and entanglement in and ingestion of debris (IATTC, 2004a). Lesser known threats to the green turtle include the incidental take by coastal and distant-water fisheries, but the impact of this threat is unknown (NOAA Fisheries and USFWS, 1998a).

Hawksbill turtle (*Eretmochelys imbricata*)
Hawksbill turtles are recognized by their relatively small size (carapace length less than 95 cm), narrow head with tapering "beak," thick, overlapping shell scutes, and strongly serrated posterior margin of the carapace. The hawksbill turtle is listed as endangered under the ESA throughout its range. In the Pacific, the species is rapidly approaching extinction due to a number of factors, with the intentional harvest of the species for meat, eggs, and its shell having the greatest impact (NOAA Fisheries, 2001). The hawksbill turtle is circumtropical in distribution, generally occurring from 30°S to 30°N latitude within the Atlantic, Pacific, and Indian Oceans and associated bodies of water. Although the hawksbill was apparently common in nearshore waters from Mexico to Ecuador as recently as 50 years ago, there have been no documented nesting sites in recent years on the Pacific coast. Within the central Pacific, nesting is widely distributed but scattered and in very low numbers. Foraging hawksbill turtles have been reported in nearly all of the island groups of Oceania and among many islands in the far western and southwestern Pacific. They appear to be specialist sponge carnivores (Dam and Diez, 1997). The primary threat to hawksbill turtles are the harvest of turtles and eggs and increased human presence, which limits suitable habitat. Secondary threats include entanglement and ingestion of debris, and incidental take in recreational and commercial fisheries, although little is known about the impact of the latter. In Hawaii, incidental catches of hawksbill turtles occur primarily in nearshore gillnets. Driftnet fisheries in offshore waters in the North Pacific have taken turtles in the past, although hawksbills have not been documented in the take (NOAA Fisheries and USFWS, 1998b). Hawksbill takes in the ETP tuna purse seine fishery are relatively rare, with observers reporting ten takes from 1993 to 2002.

Olive ridley turtle (*Lepidochelys olivacea*)
The olive ridley is the smallest living sea turtle, with an adult carapace length usually between 60 and 70 cm, and they rarely weigh over 50 kg. The olive ridley is named for its coloration of its heart-shaped carapace–olive green. Nesting populations of olive ridleys along the Pacific coast of Mexico are listed as endangered under the ESA, and all other populations are listed as threatened. The olive ridley is highly migratory and occurs worldwide in tropical and warm temperate ocean waters. The olive ridley is by far the most common and widespread sea turtle in the waters of the ETP (Pitman, 1990), but increasingly uncommon farther offshore, and rare in the central Pacific, both at sea and around islands (Balazs, 1982). At-sea occurrences in waters under U.S. jurisdiction are limited to the west coast of the continental U.S. and Hawaii, where the species is rare but sightings are reportedly increasing. Olive ridleys comprised 80.3 percent (13,828 of 17,228) of all identified turtle sightings by observers aboard tuna purse seine vessels operating in the ETP, 1993-2002 (IATTC, 2004a). Olive ridleys feed on a variety of mostly benthic species, including tunicates, salps, crustaceans, other invertebrates and small fish (*in* NOAA Fisheries and USFWS, 1998c). However, available data indicated that olive ridleys off western Baja California may feed exclusively on pelagic red crabs (Marquez, 1990 *in* NOAA Fisheries and USFWS, 1998c). At sea in the ETP, olive ridleys readily associate with objects floating in the water, probably for shelter from predators and to feed on associated prey. The harvest of turtles and their eggs for food or any other domestic or commercial use constitutes a widespread threat to this species. In addition, loss of habitat due to beach mining, construction, and artificial lighting also constitute a major threat to the survival of olive ridleys. Additional

threats are vessel collisions and incidental take in fisheries (NOAA Fisheries and USFWS, 1998c).

Loggerhead turtle (*Caretta caretta*)
The loggerhead is large and yellow to reddish brown in color. Loggerheads are named for their exceptionally large heads relative to their bodies. Adult loggerheads reach 90 to 160 kg and 84-102 cm in carapace length. Throughout its range, the loggerhead turtle is listed as a threatened species under the ESA, primarily due to direct take, incidental capture in various fisheries, and alteration and destruction of its habitat. The loggerhead is a circumglobal species inhabiting continental shelves, bays, estuaries and lagoons in the subtropical, temperate and occasionally tropical waters of the Atlantic, Pacific, and Indian Oceans (*in* NOAA Fisheries and USFWS, 1998d). While there are no known nesting sites on the U.S. west coast, loggerheads have been sighted off the southern California coast, and most sightings were juveniles, 20-60 cm in length (NOAA Fisheries and USFWS, 1998d). Juvenile and subadult loggerheads are omnivorous, foraging in open ocean environments on pelagic crabs (*Pleuronocodes planipes*), molluscs, jellyfish and vegetation captured at or near the surface (Eckert, 1993). A high percentage of loggerheads sampled off Baja California Sur had exclusively pelagic red crab in their stomachs (Peckham and Nichols, 2003). Threats to loggerheads in the Pacific include the incidental mortalities associated with commercial fisheries, vessel collisions, egg and turtle harvest, ingestion and entanglement in debris and fishing gear, and loss of habitat due to human presence (NOAA Fisheries and USFWS, 1998d).

Leatherback turtle (*Dermochelys coriacea*)
At an average 360 kg and 160 cm in carapace length, the leatherback is the largest sea turtle. However, leatherbacks in the eastern Pacific are smaller than those in other oceans. As its name implies, the leatherback is named for its shell, which is composed of cartilaginous material and many small bones. The head, flippers and carapace are generally black with many white spots; however, the overall color scheme of the leatherback is typical of many pelagic animals–dark dorsally and white ventrally. An additional distinguishing feature of the leatherback relative to other sea turtles is the lack of scales and claws on the flippers. The leatherback turtle is listed as an endangered species under the ESA throughout its range. Leatherbacks, the largest of the sea turtles, have a circumglobal distribution and commonly range farther north than other sea turtles, probably because of their ability to maintain warmer body temperature over longer time periods and the widely dispersed nature of their primary food source, cnidarians (jellyfish and siphonophores) and tunicates (salps and pyrosomas) (Eckert, 1993; NOAA Fisheries and USFWS, 1998e). Adult leatherbacks are sometimes seen in coastal waters, but primarily inhabit open ocean environments. Their maximum recorded dive depth exceeds 1,000 m, although the leatherback's "typical" dive depth and duration have been recorded between 50-84 m and 4-14.5 minutes, respectively (*in* Lutcavage and Lutz, 1997). Nesting populations are declining at a rapid rate along the Pacific coast of Mexico and Costa Rica. Threats to leatherbacks in the Pacific include incidental takes in coastal and high seas fisheries, including the ETP tuna purse seine fishery (IATTC, 2004a), vessel collisions, habitat loss, and killing nesting females and collecting eggs at the nesting beaches (NOAA Fisheries and USFWS, 1998e).

3.2.3 Sea Birds

The most common sea birds found in the ETP include a variety of shearwaters, boobies, terns, frigates, petrels, phalaropes, and jaegers (Olson *et al.*, 2001). A close association exists between seabirds and the ETP tuna purse seine fishery; tuna fishermen will often target aggregations of birds knowing that there may be schools of tuna below. Despite such close associations between sea birds and tuna, sea birds have not been observed caught in purse seines during tuna fishing operations in the ETP and observer reports indicate that birds very rarely become caught in cables or the power block of tuna purse seine vessels.

3.2.4 Tunas

From an economic point of view, the most important species of tuna in the ETP tuna purse seine fishery is the yellowfin, although markets for skipjack, bluefin, bigeye, and black skipjack also exist. On average 1995-2001, yellowfin, skipjack and bigeye comprise the most significant portion of the annual catch in the ETP, although bluefin, albacore, black skipjack, bonito, and other species contribute to the overall harvest in this area (IATTC, 2002b). The catches in sets that encircle dolphins yield large yellowfin tuna that are between 20 kg and 50 kg, on average. Generally, catches in log sets and school sets consist of pure schools of relatively small yellowfin or skipjack, or a mixture of small yellowfin with skipjack (IATTC, 2004c).

Yellowfin tuna (*Thunnus albacares*)
The biology and population dynamics of ETP yellowfin have been extensively investigated by the IATTC. Yellowfin are upper trophic level predators, feeding opportunistically on fish and cephalopods. The majority of females mature at 120 cm, although considerable variance exists. Males may mature as small as 50 cm. Juvenile yellowfin may serve as prey for billfishes and sharks as well as other large predators. Fish larger than 85 cm are frequently found in association with dolphins (NOAA Fisheries, 1991). Yellowfin catches averaged 242,239 mt from 1995 to 2001 (IATTC, 2002b). The estimated catch for 2002 was 419,967 mt (IATTC, 2003). Detailed assessments for yellowfin indicate that long-term potential yield for the ETP is about 250,000 mt. The current biomass of this stock is estimated to be relatively constant at approximately 470,000-500,000 mt (Maunder, 2001a). The yield is greater than previously reported and is due to a period of high recruitment in the late 1980's and a shift in fishery operations, raising the yield-per-recruit. This species is fully utilized.

Skipjack tuna (*Euthynnus pelamis*)
Skipjack tuna biology has received less attention than that of yellowfin tuna. Skipjack are distributed throughout tropical waters. Spawning occurs between October and March, generally toward the mid-Pacific. The prey is different for skipjack tuna than that described for yellowfin, with crustaceans making up more than 50 percent of the diet. Skipjack grow rapidly; rates of up to 28 cm per year for the first year, and 12 cm during the second year are common. The maximum age of skipjack is approximately 5 years, although catches of fish older than 3 years are rare. Skipjack catches averaged 168,749 mt from 1995 to 2001 (IATTC, 2002b). The estimated catch for 2002 was 158,043 mt (IATTC, 2003). The skipjack resource is thought to be

under-exploited, although status reports of this stock are uncertain due to uncertainties in estimates of natural mortality and growth (Maunder, 2001b).

Bigeye tuna (*Thunnus obesus*)
Bigeye ranges worldwide in warmer seas and from central Washington to Peru and the Galapagos Islands. It is a pelagic species, and has been found as deep as 250 m. Specimens as large as 244 cm have been observed, but bigeye are usually smaller than 183 cm (Eschmeyer and Herald, 1983). Prior to 1994, the average catch of bigeye in the ETP by surface gear was approximately 4,000 mt. In 1994, the annual catch increased to 29,000 mt, in 1995, to 37,000 mt, and in 1996, to 52,000 mt. Between 1995 and 2001, bigeye catches averaged 47,088 mt annually (IATTC, 2002b). The estimated catch in 2002 was 35,201 mt (IATTC, 2003). These increasing catches resulted from the discovery that bigeye associated with floating objects, but well below the surface, and could be detected with sonar and caught with purse seines. Many of these floating objects are FADs placed in the water by fishermen. The biomass of bigeye has declined since 2000 (Maunder and Harley, 2001).

Other tunas
In 2001, the total combined catch for the following four tuna species (bluefin, albacore, black skipjack, and bonito) in the ETP purse seine fishery was 3,145 mt, approximately half of the annual mean 1995-2000 (6,308 mt; range: 2,000-17,000 mt) (IATTC, 2002b). In 2002, the catch of these four species and other tunas (except for yellowfin, skipjack and bigeye) was estimated to be 4,000 mt (IATTC, 2003).

Bluefin tuna (*Thunnus thynnus*)
The bluefin tuna ranges from as far north as Shelikof Strait in Alaska to southern Baja California, but it is most common south of Los Angeles, California. It appears to favor both inshore and offshore seas, and is the only large tuna with a short pectoral fin (Eschmeyer and Herald, 1983).

Albacore tuna (*Thunnus alalunga*)
The albacore tuna reaches a maximum length of 137 cm and ranges worldwide in temperate seas. It is rare in the tropics, though it has been caught in ETP tuna purse seine nets. It prefers the open ocean and clear water (Eschemeyer and Herald, 1983), rarely being found close to shore.

Black skipjack tuna (*Euthynnus lineatus*)
The black skipjack tuna ranges from central California south to Colombia and the Galapagos Islands, but rare north of Baja California. It is an epipelagic, usually coastal species, and reaches a maximum length of 99 cm (Eschmeyer and Herald, 1983).

Pacific bonito (*Sarda chiliensis*)
There are two populations of Pacific bonito. The northern population ranges from Alaska to southern Baja California, while the southern population occurs off Peru and Chile. Pacific bonito feed on fish and squid, and are usually found near shore. The Pacific bonito reaches a maximum length of 102 cm (Eschemeyer and Herald, 1983).

3.2.5 Other Fish (non-tuna)

Billfish

The billfish family (Istiophoridae) contains the marlins, sailfishes, and spearfishes, the last of which does not generally interact with the ETP tuna purse seine fishery. Billfish occur in all tropical seas, with a few species entering temperate waters (especially when following schools of prey fishes). They are among the largest and fastest swimming fish, and many migrate long distances. They can change depths quickly, but are usually found near the surface. They primarily feed on other fish, squid, and crustaceans and are often found near floating objects that attract prey, which probably explains why they are incidentally caught in the tuna purse seine fishery in the ETP. Common marlin species include the black marlin (*Makaira indica*), blue marlin (*Makaira nigricans*), and striped marlin (*Tetrapturus audax*) (Eschemeyer and Herald, 1983). The blue marlin catch, in particular, is larger in sets made on tunas associated with floating objects than in other types of sets. Striped marlin are most often caught by purse seiners off northern South America from the coast to about 120°W. The sailfish (*Istiphorus platypterus*), easily recognized by its fan-shaped dorsal fin, ranges from San Diego, California, to Chile and generally swims near the surface (Eschemeyer and Herald, 1983). The estimated annual catch of billfishes (blue marlin, black marlin, striped marlin, shortbill marlin, and sailfish) caught in the ETP purse seine fishery from 1995 to 2001 averaged 314 mt (IATTC, 2002b).

Swordfish (*Xiphias gladius*)

The swordfish (family Xiphiidae) is easily recognized by its upper jaw, shaped like a long flattened sword or bill. It is found worldwide, in tropical and temperate seas, from Oregon southward, and is migratory and solitary. Swordfish eat other fish, pelagic crustaceans, and squid, and reportedly use their sword to kill their prey (Eschemeyer and Herald, 1983). The estimated annual catch of swordfish in the ETP purse seine fishery, 1995-2001, was 1,066 mt (range: 4 mt in 2001 to 2,098 in 1995; IATTC, 2002b).

Sharks/rays

Sharks and rays are cartilaginous fish, belonging to the subclass Elasmobranchi. Four species of sharks and two species of rays interact with and are caught incidentally in the ETP tuna purse seine fishery. The average estimated number of sharks and rays caught by the ETP tuna purse seine fishery annually, 1995 to 2001, was 55,276 fish (IATTC, 2002b). The majority (76.7 percent) of these were taken in sets on floating objects (IATTC, 2002b).

Rays

The two common rays found in the ETP tuna purse seine fishery are manta rays (*Manta birostris*) and stingrays (family Dasyatididae). Manta rays are found in warm-temperate to tropical seas. Manta rays are pelagic and often swim actively at or near the surface, "flying" through the water. They feed mostly on pelagic crustaceans and small schooling fishes that they "herd" into their mouths with their head flaps and strain from the water with complex filter plates at the gills. Stingrays generally have 1 to 2 large stingers well back on their long and slender tail. They occur worldwide, mostly in warm coastal waters, and generally feed on small pelagic fishes, squids, shrimps, and mollusks (Eschemeyer and Herald, 1983).

Sharks

Commonly bycaught shark species in the ETP purse seine fishery include blacktip sharks (*Carcharhinus brachyurus*), silky sharks (*C. obscurus*), whitetip sharks (*C. longimanus*), and hammerhead sharks (Sphyrnidae family). Blacktip sharks, also known as narrowtooth sharks, have narrow-cusped upper teeth and dusky pectoral fin tips and feed on fish and cephalopods. They are mainly found inshore, and prefer warm-temperate waters. Silky sharks, also known as dusky sharks, have a middorsal ridge, broadly triangular upper teeth, and are gray and white with dusky or black-tipped fins. In the Pacific, they are found from Redondo Beach, California, to the Gulf of California. They feed on fish (including small sharks and rays), squid, and other invertebrates. Whitetip sharks are circumtropical and epipelagic, reaching the offshore ETP. Males grow as long as 8 ft, and females to at least 9 ft. They eat fishes, squids, other pelagic mollusks, and carrion. Lastly, hammerhead sharks are closely related to and probably descended from the requiem sharks (the first three sharks mentioned belong to this family), but their head is expanded on each side. They are found worldwide in warm seas and are common in the tropics, on continental shelves, around islands, and well offshore, but none are truly epipelagic. Most hammerhead species are fish-eaters, but their diets may also include some crustaceans (Eschemeyer and Herald, 1983).

Other finfish

Many other bony fish are less commonly caught as bycatch by the ETP tuna purse seine fishery, including triggerfish, wahoo, rainbow runners, yellowtail, dolphinfish, as well as various species of small bony fish. These species are bycaught to varying degrees in the ETP tuna purse seine fishery. They are not listed as threatened or endangered under the ESA and will not be analyzed in the same detail as the species described previously in this section. The estimated average number of other small bony fish that were caught and discarded by the ETP tuna purse seine fishery annually from 1995 to 2001 was 860,675 individuals (IATTC, 2002b). The IATTC maintains individual catch estimates for triggerfish, wahoo, rainbow runners, dolphinfish, and "other large teleost fish," but for the purposes of this EA catches of all of those species have been lumped together as "other bony fish." The estimated average number of other bony fish caught and discarded by the ETP tuna purse seine fishery from 1995 to 2001 was 1,942,659 individuals annually (IATTC, 2002b).

3.3 Tuna Purse Seine Fishing in the ETP

The primary species sought by the ETP tuna purse seine fishery are yellowfin and skipjack tuna, although bigeye has become an important component in the last five years. Tuna purse seine vessels under U.S. jurisdiction vary in size from 45 to 1,700 st (40.9 to 1,554 mt) carrying capacity and range from forty year old baitboat conversions to new super-seiners. Six U.S. purse seine vessels and approximately 130 foreign purse seine vessels with carrying capacity greater than 400 st (362.8 mt) are now operating or have recently operated in the ETP (IATTC, 2002b).

Purse seines are large nets that encircle the target species. Depending on the size of vessels, nets generally vary from 1/4 mile to one mile in circumference, and from 300 to 700 ft in depth.

The webbing is the main component of the purse seine and is generally made from nylon dipped in tar for added strength and longevity. Mesh size is predominantly 4 1/4 inch (in) (10.77 cm) stretched, but can be as large as 8 in (20.30 cm) at the bottom of the seine. During deployment of gear, the net forms a circular wall of webbing around the school of fish. The net must be deep enough to reduce the likelihood of fish escaping underneath, and the encircling must be done rapidly enough to prevent the fish from escaping before the bottom is secured ("pursed") shut.

A set is initiated when a skiff is released from the stern of the purse seiner, anchoring one end of the seine. The targeted fish are contained in a vertical cylinder of webbing after the seine vessel encircles the targeted school and rejoins the skiff. The bottom of the net is then pursed by hauling the cable that is threaded through rings on the bottom of the net. After the net is pursed, it is retrieved until the diameter of the net compass and the volume of water inside the net decreases to a point when, in both space and time, fish are sufficiently concentrated that they can be hydraulically scooped ("brailed") into wells onboard the vessel.

For reasons that are still not clear, yellowfin tuna over 55 pounds are often found in association with schools of dolphin in the ETP. Tuna fishermen have taken advantage of this association between yellowfin tuna and dolphins by using the more easily detected dolphin schools to help find fish. Dolphin sets yield relatively large yellowfin tuna and result in low bycatch relative to other types of sets: log sets and school sets. Log sets (sets on tuna schools associated with floating logs or FADs) tend to yield relatively small, pre-reproductive yellowfin tuna or skipjack tuna (or a mixture of both tuna), together with a wide variety and large quantity of other biota, including sea turtles, sharks, billfish, other sportfish, and a variety of other small non-commercial tunas. School sets (sets on tuna schools not associated with either floating objects or with dolphins) target free-swimming schools of yellowfin or mixed yellowfin and skipjack tuna that are generally moderately small, and result in relatively less bycatch than log sets. Traditionally, dolphin sets have been preferred by the majority of tuna fishermen because they yield large quantities of yellowfin tuna that are economically viable and reproductive, relatively easy to locate and capture, not associated with unwanted fish, and generally more valuable per pound than the smaller tuna associated with school or log sets. Currently, no U.S. Class 6 tuna purse seine vessels in the ETP are setting on tuna associated with dolphins.

The bycatch of dolphins associated with large yellowfin tuna by purse seiners in the ETP prompted the United States to initiate action within the IATTC, a regional fisheries management organization of which the United States is a member, to establish a program to address the tuna-dolphin issue. The IATTC, whose Convention is implemented domestically by the Tuna Conventions Act of 1950, is responsible for developing measures to conserve and manage tuna resources in the ETP, and also provides the Secretariat for the International Dolphin Conservation Program. A schedule of progressively decreasing annual limits on dolphin mortality was implemented and a research program was approved.

Vessel captains helped develop the "backdown" procedure, along with other techniques and gear modifications, in the 1970's to promote the safe release of dolphins in the tuna purse seine fishery. The objective of performing the backdown is to allow the safe release of encircled

dolphins without loss of tuna. Backdown is a complex technique that may vary from set to set, depending on the specific conditions (e.g., currents, winds) present at any given time. Backdown occurs after the net has been pursed (rings along the bottom of the net are brought aboard the vessel, or "rings up") and consists of six mains steps (Coe *et al.*, 1984; NOAA Fisheries, 1986):

(1) Tie down at pre-established marks;

(2) With the wind at port beam, use the skiff and bow thruster to move the stern away from the net, then shift the vessel in reverse;

(3) Reverse slowly as the backdown channel (long narrow channel between the port bow of the purse seine vessel and the apex of the net) forms, then increase speed to sink the apex of the corkline;

(4) If fish move toward the apex, slow to allow the corks to rise. When the fish turn toward the vessel, shift back into reverse;

(5) Continue backdown until it is no longer possible to remove live marine mammals from within the net;

(6) Complete backdown with the wind on the port beam.

Backdown sinks the corkline of the seine net at the apex, which allows, with the aid of crewmembers deployed to the water and speed boats that hold the backdown channel open, dolphins to swim out over the top of the net and tuna to be retained. In many situations, the sunk corkline is actually pulled out from under dolphins, rather than the dolphins actively swimming out of the net.

No U.S. vessels are setting on tuna associated with dolphins; they are currently setting on free swimming schools of tuna or those associated with floating objects. Available data indicate that these two methods of purse seining for tuna result in higher rates of bycatch than setting on dolphin (Hall, 1998; IATTC, 2002b).

The IATTC classifies vessels according to their carrying capacity into the following size classes: Class 1 = less than 51 st; Class 2 = 51-100 st; Class 3 = 101-200 st; Class 4 = 201-300 st; Class 5 = 301-400 st, Class 6 = more than 400 st (362.8 mt).

The U.S. fleet of purse seiners in the ETP reached approximately 144 vessels in 1979, but by 1999 it had decreased to 10 vessels. In 2004, six U.S. Class 5 or 6 vessels participated in the fishery and were listed on the IATTC register of vessels qualified to purse seine for tuna in the ETP (Table 1). Until the 1990's, most of the U.S. purse seiners operating in the ETP were Class 6 vessels, targeting tuna year-round. However, in the mid-1990's smaller Class 1-5 purse seine vessels began to outnumber Class 6 vessels. Generally, Class 1-5 purse seine vessels only

occasionally target tunas when they are seasonally available and their effort is focused on coastal pelagic species, so Class 6 vessels still comprise the majority of purse seine vessels targeting tuna in the ETP.

Most Class 6 vessels that previously fished in the ETP have either re-flagged or are active in the western Pacific Ocean, where a treaty with the south Pacific islands (the South Pacific Regional Tuna Treaty, signed in 1988) provides the U.S. fleet with access to fishing grounds. For economic reasons, the trend is not likely to change. In general, western Pacific tuna fishermen catch more tuna per set compared to ETP tuna fishermen, and thus make fewer and shorter trips. However, it should be noted that yellowfin tuna are the target of the purse seine fishery in the ETP, whereas skipjack tuna are targeted in the western Pacific Ocean. No association is known to occur between skipjack tuna and dolphins.

Table 1. Estimates of the number of U.S. purse seine vessels fishing in the ETP by year and size class.

	Vessel size class						
Year	**1**	**2**	**3**	**4**	**5**	**6**	**Total**
1990	0	12	4	0	1	29	46
1991	0	5	5	0	1	13	24
1992	0	6	5	0	1	8	20
1993	0	10	5	0	2	8	25
1994	0	12	4	0	2	9	27
1995	0	7	4	0	2	5	18
1996	1	10	4	0	2	6	23
1997	1	12	4	0	2	6	25
1998	0	13	4	0	2	6	25
1999	0	4	3	0	2	5	14
2000	0	3	2	0	2	6	13
2001	0	0	1	0	2	5	8
2002	0	0	2	0	0	9	11
2003	0	0	1	0	0	6	7
2004	0	0	1	0	0	6	7

Source: IATTC, 1992a, 1992b, 1993, 1994, 1995, 1997, 1998, 1999, 2000, 2001, 2002a, 2002b, 2004c

Tropical tuna caught in the U.S. purse seine fishery in the ETP are canned as light meat tuna. Catches have historically been delivered or transshipped to canneries in California, Puerto Rico, American Samoa, other canneries in the Pacific rim or to Europe. Today only four U.S. plants are in operation, two in America Samoa (conventional canneries) and one in Puerto Rico, with a small plant in California that cans only imported tuna loins.

Landings and corresponding ex-vessel revenues at West Coast ports have greatly decreased since the 1980's, when the major West Coast canneries began relocating overseas. Most of the tropical tuna landings on the West Coast are now made by "wetfish" (sardine, mackerel, anchovy) purse seiners that catch relatively small quantities of tropical tunas only when they are seasonally available.

Significant growth in the West Coast purse seine fishery for tuna is not expected, and declines seem more likely, but changes are difficult to predict with so many variables. Tropical tunas are not significantly abundant in the U.S. EEZ or available to current commercial fishing gear off the West Coast. U.S. vessels continue to be excluded from Mexico's waters where fishing is more productive. Within the U.S. EEZ, the expected baseline for this fishery is no more than 5 part-time, small purse seine vessels with total landings of 1,000 mt or less valued at $1.5 million or less per year. Total employment in this fishery is expected to remain below 50 persons, with the fishery still centered in southern California.

In addition to the 5 small purse seine vessels that are expected to participate in the tuna fishery when fish are available in the U.S. EEZ, a maximum of six Class 6 U.S. purse seine vessels are likely to fish for tuna in the broader ETP. These large vessels target tuna on the high seas on a full-time basis.

Effort in the ETP purse seine fishery

As shown in Table 1, between 1996 and 2001, between 5 and 6 large U.S. vessels actively fished in the ETP. During that same period, the number of small U.S. purse seiners in this fishery ranged between a low of 3 to a high of 19. Between 1999 and 2001, the number of small vessels has declined, from 9 in 1999, to 7 in 2000, and finally to 3 small purse seine vessels in 2001.

NOAA Fisheries does not expect additional large U.S. purse seine vessels to enter the ETP tuna purse seine fishery in the future because of historical trends in vessel participation and the high start-up costs for a new large vessel to enter the fishery. In the late 1980's and early 1990's, with the passage of the South Pacific Regional Tuna Treaty, most U.S. large purse seiners either re-flagged or moved to the richer fishing grounds of the central-western Pacific Ocean. With little incentive to fish in the ETP, NOAA Fisheries does not expect a future influx of large U.S. purse seine vessels. A recent IATTC resolution which set fleet limits and U.S. commitment to limit participation of domestic vessels to a total 8,969 mt carrying capacity are also expected to limit or preclude future increases in participation of large U.S. purse seine vessels in the fishery.

NOAA Fisheries does not expect a significant influx of smaller vessels into the ETP tuna purse seine fishery. This coastal pelagic fishery is a limited entry fishery. Therefore, any small (≤ 400 st) purse seine vessels that potentially would enter the ETP tuna fishery would either be a brand-new purse seine vessel or a purse seine vessel that normally targets squid–squid is not a limited entry fishery. Squid purse seine vessels that originate from Washington generally fish for more profitable salmon in Washington and Alaska in the summertime, not for tuna in the ETP. Squid purse seine vessels also operate out of the ports at San Pedro and Monterey, California.

IATTC data indicate that fishing on floating objects is now more common than fishing on schools. For the international tuna purse seine fleet, the number of school sets per year has dropped from nearly 8,000 in 1988 to approximately 3,000 in 2001, while the number of floating object sets has risen from less than 3,000 sets in 1988 to approximately 5,700 sets in 2001. Sets made on FADs now account for 80-90% of all sets made on floating objects. Sets on FADs account for one-third of all sets in the international purse seine fishery and two-thirds of sets made by the U.S. fleet (Nick Vogel, IATTC, pers. comm., January 14, 2004). Fishing on floating objects of all kinds results in higher levels of discards of small tuna, with discards of almost 7 mt per set 1997-2001, versus discards of 0.76 mt tuna per set in school sets and 0.14 mt tuna in dolphin sets (IATTC, 2002b) over the same period. Total tuna discards from floating object sets in 2001 are estimated to have been 19,911 mt, out of a total catch of approximately 228,700 mt (IATTC, 2002b). In addition, of the three set types floating object sets result in the highest overall bycatch and bycatch per set of large bony fish such as mahi mahi and wahoo, as well as large numbers of other non-tuna species, such as billfish, sharks, rays, and triggerfish (IATTC, 2002b). Data from 1997 to 2001, comparing the average bycatch per year of the entire ETP purse seine fleet from sets on dolphins, unassociated fish schools, and floating objects, indicate that, of all sharks and rays caught in tuna sets, 9 percent were caught in dolphin sets, 13 percent in school sets, and 78 percent in floating object sets (IATTC, 2002b). The pattern in bycatch of large bony fish is similar to that for sharks and rays.

The Consolidated Resolution on Bycatch (C-04-05) adopted by the IATTC in June 2004, reaffirmed previous bycatch resolutions of 2000, 2001, 2002 and 2003. These resolutions require that all juvenile tunas caught be retained except for those considered unfit for human consumption, and that sharks, billfish, mahi mahi, and other pelagic fish caught incidentally be released unharmed.

3.4 Economic Environment

3.4.1 U.S. Purse Seine Fleet

As indicated above, one of the ways tuna is harvested is by searching for and then encircling dolphin, with the intent of capturing the associated tuna and releasing dolphins using backdown procedures. Under the IDCPA, U.S. tuna purse seine vessels greater than 400 st (362.8 mt) carrying capacity are allowed to fish for yellowfin tuna in the ETP in this manner, subject to a variety of permit, observer, gear and procedural requirements. U.S. regulations require domestic fishermen aboard vessels greater than 400 st (362.8 mt) carrying capacity that have requested

and been allocated DMLs to equip their vessels with special dolphin safety gear and to follow certain procedures for releasing dolphins. All purse seine vessels in excess of 400 st (362.8 mt) carrying capacity operating in the ETP are required to carry observers on 100 percent of their fishing trips. Purse seine vessels of less than 400 st (362.8 mt) capacity are not required to carry observers and are prohibited from intentionally setting nets on or to encircle dolphin. Generally, purse seine vessels in this size class are considered too small to effectively fish for tuna associated with dolphin because of their slow speeds, short nets and limited deck space to carry more than the two or three speedboats needed to herd dolphins. There is little indication that such vessels actually fish on dolphin; however, a few anecdotal observations of foreign flag vessels engaging in this activity have been made. In practice, no U.S. vessels have made intentional sets on dolphin for several years.

Most large U.S. tuna purse seine vessels that used to fish in the ETP have either left the U.S. fleet or are now active in the western Pacific Ocean, where a treaty provides the fleet with access to the EEZs of certain Pacific island states. The large U.S. vessels remaining in the ETP have shifted away from fishing on dolphin because tuna caught by intentionally encircling dolphin may not be labeled as "dolphin-safe" in the United States. In addition, U.S. processors will not buy tuna caught in association with dolphin. In the early 1990's, after U.S. canners announced that they would no longer accept tuna caught in association with dolphin, U.S. purse seine vessel operators discovered that fishing on floating objects, including FADs, with deeper nets resulted in larger catches of bigeye tuna which has a value equal to that of yellowfin tuna of the same size, as well as smaller yellowfin and skipjack tuna.

The U.S. tuna purse seine fleet operating in the ETP has decreased from a maximum of 155 purse seine vessels greater than 362.8 mt carrying capacity in 1976 to about 5 such vessels a year from 2001 through 2003. These vessels average 1,100 mt capacity or larger and are thus characterized as large business entities. In addition, there are 10 or fewer small purse seine vessels (mostly less than 100 mt carrying capacity) that fish most of the year for coastal pelagic species (Pacific mackerel and sardine) but occasionally fish for tuna in the ETP when the tuna are seasonably available. All small vessels are considered small business entities with total gross revenues below $3 million per year.

Over the period 1997-2001, the U.S. tuna purse seine fleet harvested an average of approximately 5,500 mt yellowfin tuna, 10,500 mt skipjack tuna, and 3,000 mt bigeye per year from the ETP (IATTC, 2002b). By 2003, according to preliminary estimates provided by the IATTC, the U.S. purse seine vessel harvest in the ETP had declined to 1,074 mt yellowfin tuna, 6,262 mt skipjack tuna, and 1,939 mt bigeye, due mainly to the decreasing number of U.S.-flag vessels operating in the ETP.

3.4.2 Foreign Purse Seine Fleets

The international fleet represents the majority of the fishing effort and carrying capacity in the ETP tuna fishery, with most of the total capacity consisting of purse seine vessels greater than 400 st (362.8 mt). These large vessels comprised approximately 87 percent of the total fishing

capacity operating in the ETP in 2001 (IATTC, 2002b). From 1997 to 2001, an average of 132 tuna purse seine vessels greater than 400 st carrying capacity participated in the ETP tuna fleet annually (IATTC, 1999, 2000, 2002b). In addition to these larger vessels, the international fleet contains smaller vessels of less than 400 st carrying capacity that occasionally target tuna in the ETP. From 1997 to 2001, an average of 71 vessels in this size category fished in the ETP annually. These smaller vessels fish for tuna year-round off the coast of Central and South America. In 2001, Ecuador's fleet of tuna purse seine vessels fishing in the ETP was the largest, both in number of large vessels (38) and total carrying capacity (41,311 mt) (IATTC, 2002b). In 2001, Mexico and Venezuela had 37 and 25 large vessels fishing in the ETP, respectively (IATTC, 2002b).

In the 1997-2001 period, the mean annual retained catch of tuna (i.e., yellowfin, skipjack, bigeye, bluefin, albacore, bonito, black skipjack and others) by all vessels (including the U.S.) using surface gear (i.e., purse seine and bait boats) was 536,753 mt, with a peak of 611,481 mt in 1999 (IATTC, 2002b). The U.S. tuna purse seine fleet accounted for approximately 3 percent of retained tuna catches in the ETP in 2001 (IATTC, 2002b) and slightly more than 1 percent in 2003 (IATTC, 2004c). Purse seine vessels account for more than 99 percent of total surface gear vessel capacity and catch in the ETP.

3.4.3 U.S. Canned Tuna Processing Industry

The U.S. canned tuna industry is comprised of three major processing companies owned by multinational corporations. These companies operate four fish canning plants in the United States which are located in Puerto Rico (1), American Samoa (2), and California (1). The plant in California processes only imported tuna loins recovered from whole fish that is cut and cooked outside the United States where labor rates are lower. The last full-service tuna canning facility in the mainland United States, located in Terminal Island, California, closed its doors in October 2001. The plant in Puerto Rico processes mostly albacore tuna for sale as "white meat" in the United States, a small amount of light meat tuna, and fish meal. The two plants in American Samoa produce white and light meat tuna for human consumption as well as fish meal, oil and other canned fish including salmon, wahoo, and various pet food mixtures. Virtually all the production of U.S. tuna canners is marketed in the United States.

In 2003, U.S. tuna processors purchased 150,751 mt of frozen light meat tuna species (skipjack, yellowfin, bigeye, bluefin) for canning, 6 percent less than in 2002 and down 12 percent from the 1998-2002, five-year average of 168,760 mt. Of the total raw tuna purchased, tuna harvested by U.S. flag vessels accounted for 70,963 mt, and imports of frozen loins and whole tuna totaled 79,789 mt. Of the total light meat species of tuna purchased in 2003, 138,928 mt (92 percent) was harvested in the western Pacific Ocean; 9,497 mt (6 percent) in the ETP; and 2,326 mt (2 percent) in the Atlantic and Indian Oceans combined.

During the period 1998 through 2000, U.S. canned tuna production averaged 310 million kg per year, worth over $900 million. During the period from 2001 through 2003, U.S. canned tuna production declined to an average of 240 million kg per year, worth about $667 million. This

decline in U.S. production was caused by the closure of the plant in California in late 2001 and the closure of a large plant in Puerto Rico earlier in that year. In 2003, the U.S. canned tuna industry produced about 90.3 million kg canned white meat tuna worth $366 million, and about 149.8 million kg light meat tuna worth $302 million, for a total of 240.1 million kg worth $668 million (NOAA Fisheries, 2003).

The annual U.S. supply of canned tuna is comprised of domestic production plus imports minus a small amount of exports. Historically, U.S. production of canned tuna has not been sufficient to fill the demand. However, U.S. production accounted for approximately 75 percent or more of the total U.S. supply through 1998. With each successive year from 1999 to the present, the proportion of domestic contribution to U.S. supply has decreased further. During the same period imports of canned tuna have been steadily rising. In 2003, only 53 percent (240,058,514 kg) of the U.S. supply could be attributed to domestic production; the remaining 47 percent (208,213,734 kg) of the U.S. supply was provided by imports.

In 2003, some 26 countries exported a total of 208,213,782 kg tuna in cans and pouches to the United States. Thailand, Ecuador, Philippines, and Indonesia accounted for 95 percent of the total. Besides Ecuador (44,703,788 kg), other ETP fishing and tuna processing nations that contributed to the total were Costa Rica (151,506 kg) and Mexico (1,403,907 kg).

3.4.4 Foreign Canned Tuna Processing Industries

Several IATTC member nations and Parties to the Agreement have well-developed tuna processing operations in their countries. Some of these include Costa Rica, Mexico, Venezuela, Ecuador, and Colombia. Others, that are in the process of building canneries and entering the canned tuna market, include El Salvador, Guatemala and Peru. Total production by these processors is not known; however, almost all of the tuna processed by these countries is harvested in the ETP. A significant portion of the production reportedly has been exported to Europe, and some countries, such as Mexico, have developed domestic markets for their tuna production. Although many of these nations are anxious to obtain access to the U.S. market as well, only a few have been able to do so. Among the nations that have obtained access to the U.S. market are Mexico, El Salvador and Ecuador, the only nations to have obtained affirmative findings from the Assistant Administrator. Costa Rica does not require an affirmative finding as it is a processing, but not an ETP fishing nation. Ecuador has been the most successful at penetrating the U.S. canned tuna market principally because two U.S. processors have arrangements with Ecuadorean canneries to process canned and pouched tuna specifically for export to the United States. In addition, most Ecuadorean vessels engage in FAD fishing instead of dolphin fishing; tuna harvested in this way can be labeled dolphin-safe. Finally, Ecuador enjoys the benefits of the Andean Trade Pact in lower tariffs for its products. Mexico, on the other hand, while not embargoed, actively promotes and engages in dolphin fishing making it impossible to currently label most of its canned tuna exports as dolphin-safe for sale in the United States. Although imports of canned tuna from Mexico have grown to over 1 million kg a year, even the North American Free Trade Agreement's (NAFTA's) lower tariff rates cannot make up for the lack of the dolphin-safe label in the U.S. market.

All other ETP fishing and canning nations in the region are subject to an embargo on yellowfin tuna harvested by purse seine vessels in the ETP. Colombia and Venezuela are currently under primary embargoes and are not able to export yellowfin tuna and yellowfin tuna products to the United States. Thus, while some small shipments of tuna are sent to the United States from Colombia and Venezuela, these must be certified to contain only skipjack and bigeye tuna. As a result, many embargoed nations have decided to concentrate on accessing the growing markets in many European countries.

3.4.5 U.S. Consumers

For many years, canned tuna was the single most popular fish product consumed in the United States, averaging about 3.4 pounds per capita in the decade between 1990 and 2000. In 2001, consumption slipped to 2.9 pounds per capita but recovered to 3.1 and 3.4 in 2002 and 2003, respectively. However, in 2002, consumption of shrimp (3.7 pounds per capita) exceeded that of canned tuna for the first time. Nonetheless, the markets for these two seafood products are somewhat different, and canned tuna remains a major component of American diets (NOAA Fisheries, 2003).

3.4.6 U.S. and Foreign Governments

The U.S. Government has significant responsibilities for the conservation of dolphins and the management of the ETP tuna fisheries. NOAA Fisheries has the responsibility to implement the regulations, monitor compliance, document potential violations and prosecute violators, and conduct necessary research and program evaluations. The U.S. Government may meet or fail to meet these responsibilities to varying degrees, depending on how recommendations of the IATTC and Parties to the Agreement are implemented.

4.0 ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACTS

4.0.1 Framework for Analysis of Impacts

In this assessment, the ranges of possible impacts are evaluated qualitatively, and to some extent quantitatively when practicable. However, it is not expected that the magnitude and distribution of impacts under various alternative actions can be predicted with great precision in all cases. Cases where uncertainties exist, and the sources of uncertainty, are discussed.

For the purpose of evaluating impacts, the following assumptions about the expected responses of the relevant economic sectors will be made in this analysis:

1. The number of vessels in the U.S. tuna purse seine fleet operating in the ETP will not grow substantially in the future;

2. Sufficient flexibility will exist for U.S. purse seine vessels to fish in the ETP and adjacent areas in the Pacific (e.g., western and central Pacific Ocean) to accommodate their fishing interests and economic needs; and

3. The U.S. tuna purse seine fleet will benefit from domestic and international capacity limits over the long term, as the supply and value of tuna will be sustained.

There are two important considerations to keep in mind when reviewing this assessment. First, for purposes of this analysis, the above assumptions are believed to be valid for comparing the results of alternative regulatory decisions. However, this may not be borne out in the future. For example, a delay may exist between implementation of capacity limits for the U.S. tuna purse seine fleet compared with the international fleet, resulting in a high supply of tuna, but a value that does not reflect U.S. capacity limits.

Second, and perhaps even more important, for purposes of this evaluation of the impacts of the preferred action and alternatives, NOAA Fisheries has considered the status quo generally to represent a continuation of management and fishery trends of the past 5 years. The United States and other nations have been cooperating closely in the IATTC and Agreement to protect dolphins and manage fisheries to maintain long-term yields. If the United States were now not to implement domestically the recommendations of the IATTC and Parties to the Agreement in a timely and reasonable manner, the current level of cooperation could disintegrate. If international cooperation were to disintegrate, existing protection of dolphin would likely decline and cooperation in management of the fisheries to conserve target fish stocks minimize bycatch of other stocks would cease. While NOAA Fisheries does not expect such an outcome,

these "worst case" conditions could result if NOAA Fisheries were to adopt the status quo alternative. Moreover, maintaining the status quo would be contrary to domestic law.

4.1 Impacts of Alternative 1: No Action Alternative (Status Quo)

4.1.1 Marine Mammals

Dolphin mortality in the ETP tuna purse seine fishery is managed by Parties to the Agreement. Under the Agreement, incidental dolphin mortality in the ETP tuna purse seine fishery may not exceed 5,000 dolphins per year, although mean annual dolphin mortality for the international fleet has been approximately 2,000 individuals since 1997 (IATTC, 2002b). Although current regulations allow U.S. tuna purse seine vessels that have requested and been allocated DMLs to encircle dolphins to catch tuna in the ETP, no U.S. vessel is currently tuna fishing on dolphin. Regardless, this alternative will neither provide an incentive nor a disincentive for U.S. vessels to fish on dolphin. However, occasional dolphin mortalities occur in school and floating object sets by U.S. vessels, as follows: 2001 - 0, 2002 - 5, and 2003 - 0. Under the status quo alternative, dolphin mortality due to fishing by the U.S. fleet is expected to continue to range from approximately 0 to 25 animals per year, while total ETP dolphin mortality would likely remain at the level of approximately 2,000 (and not more than 5,000) animals per year, consistent with the Agreement. The most recent data on the population abundance of depleted dolphin stocks indicate differing trends, depending on the model used. Therefore, some uncertainty exists as to the causes of mortality in addition to that directly observed in the tuna purse seine fishery. Although observed mortality in the ETP tuna purse seine fishery on all dolphin stocks is currently at sustainable levels and below (0.1 percent of the estimated minimum population abundance) (Table 2), it is possible that dolphin mortality could increase under the status quo.

If the United States fails to implement recommendations of the IATTC and the Parties to the Agreement, it is possible that compliance in implementing and enforcing these recommendations in the fleets of other nations will decline as a result. Should this scenario result, these international management regimes will likely fall apart due to their ineffectiveness managing tuna, dolphin and other living marine resources in the ETP. In the absence of regional management bodies to conserve dolphin and other marine mammals, stock-specific dolphin mortalities would likely increase, perhaps to unsustainable levels.

Table 2. Per-stock estimates of minimum abundance (N_{min}), mortality limits, and 2000-2003 dolphin mortalities

Dolphin Stock	N_{min}[1]	Mortality				Potential Biological Removal Level[4]	0.2% N_{min}	0.1% N_{min}
		2002[2]	2001[2]	2002[2]	2003[3]			
Northeastern offshore spotted*	556,000	303	591	439	281	5,284	1,114	556
Western/ southern spotted*	650,900	428	309	206	333	12,542	1,302	651
Eastern spinner	370,800	272	469	405	287	2,038	742	371
Whitebelly spinner	448,100	262	372	186	169	9,126	1,744	448
Northern common	562,700	56	94	69	133	10,706	1,125	563
Central common	207,300	222	203	155	140	3,591	415	207
Southern common	1,845,600	9	46	4	99	44,218	3,691	1,846

*Mortalities of coastal spotted dolphins are included in mortalities for offshore stocks
[1]Minimum abundance estimate (N_{min}) = $N/\exp(0.842 \times (\ln(1 + CV^2))^{½})$ calculated from PBR guidelines in Wade and Angliss (1997) using abundance estimates by Gerrodette and Forcada (2002).
[2]IATTC (2004c)
[3]IATTC (2004d)
[4]Wade and Angliss (1997); PBR = $F_R * N_{min} * 0.5 * Rmax$

4.1.2 Tuna

Under the status quo alternative, the total annual amount of tuna caught in the ETP purse seine fishery would remain at existing levels (approximately 550,000-600,000 mt per year), with the current size composition of large and small yellowfin and bigeye tuna being maintained, and skipjack contributing a moderate share of total catches. U.S. catches would remain at current levels (approximately 10,000 mt total of skipjack, yellowfin and bigeye). The stocks of tuna would remain at current levels, assuming that the IATTC is able to establish effective overall harvest and/or effort limits, although yields of yellowfin and bigeye would be lower than could be achieved if all effort was targeted on larger fish. Under the status quo alternative, there would continue to be substantial waste of tuna (approximately 35,000 mt per year) from the catch and discard of small yellowfin, bigeye, and skipjack tuna in the floating objects fishery, and the risk of recruitment overfishing would be substantial if there were no international cooperation to limit harvest levels and/or effort.

If the United States fails to implement recommendations of the IATTC and the Parties to the Agreement, it is possible that compliance in implementing and enforcing these recommendations in the fleets of other nations will decline as a result. Should this scenario result, these international management regimes will likely fall apart due to their ineffectiveness managing tuna, dolphin and other living marine resources in the ETP. In the absence of regional bodies to manage tuna stocks, fishing effort would be unregulated and would likely increase to unsustainable levels.

4.1.3 Sea Turtles

Data from the IATTC indicate that the mean annual turtle mortality in the ETP tuna purse seine fishery between 1997 and 2002 was 136 individuals (N. Vogel, IATTC, pers. comm., January 14, 2004). The data indicate that for the period 1993 to 2002, the mean annual mortality of sea turtles was more than twice as high in floating object sets (83) than dolphin sets (17) or school sets (36); sets on floating objects resulted in the highest per set rate of annual turtle mortality over the same period (0.02) compared with dolphin (0.002) and school (0.007) sets (IATTC, 2004b). Under the status quo alternative, total incidental mortality of sea turtles in the ETP purse seine fishery would likely remain at recent levels (between 40 and 150 per year). A small percentage of that overall incidental turtle mortality would be attributable to fishing activities of the U.S. tuna purse seine fleet. Between 1998 and 2001, U.S. purse seine vessels made an average of 268 sets on floating objects and 165 school sets per year (N. Vogel, IATTC, pers. comm., January 14, 2004). Given the overall turtle mortality per set data, it is expected that the U.S. tuna purse seine operations will result in approximately 6 turtle mortalities per year in sets on floating objects (268 sets per year 1998-2001) and 1 mortality in school sets (165 sets per year 1998-2001). United States vessels are expected to continue fishing on floating objects in which there are occasional turtle captures (approximately 25.6 turtles per 1,000 sets).

If the United States fails to implement recommendations of the IATTC and the Parties to the Agreement, it is possible that compliance in implementing and enforcing these recommendations in the fleets of other nations will decline as a result. Should this scenario result, these international management regimes will likely fall apart due to their ineffectiveness managing tuna, dolphin and other living marine resources in the ETP. In the absence of regional bodies to manage listed marine turtle species, fishing effort would be unregulated and it is possible that turtle mortality would increase in the absence of disentanglement and safe release measures.

4.1.4 Other Finfish

Under the status quo alternative, the incidental catch of other finfish by the ETP purse seine fishery is expected to remain at the levels of the recent past, as there are no expected changes in fishing strategy or effort levels. The most dramatic finfish bycatches are in the fishery targeting floating objects, in which the estimated annual bycatch of non-tuna finfish during 1998-2001 in FAD sets made by the international fleet was approximately 2.55 million fish (approximately 80 percent were triggerfish, other small fish, and mahimahi) (IATTC, 2002b). For the international

purse seine fleet, approximately 450 individual finfish were caught per set between 1998 and 2001 (IATTC, 2002b). With the U.S. tuna purse seine fleet making approximately 268 floating object sets per year between 1998 and 2001, and participation of U.S. vessels in the fishery decreasing, it is expected that the U.S. fleet will account for the bycatch of not more than 120,000 finfish per year under the status quo alternative. In general, the vast majority of the finfish bycatch from floating object fishing is discarded overboard, dead.

The estimated finfish bycatch in school sets in the international fleet is considerably lower, accounting for approximately 72,000 non-tuna fin fish per year (7 fish per set), with small fish making up more than one-third of the bycatch and yellowtail and other large teleosts being important components (comprising about 13 percent each) (IATTC, 2002b). With U.S. purse seine vessels making 165 sets per year on unassociated tuna schools between 1998 and 2001, it is expected that the U.S. fleet will account for an annual bycatch of less than 1,115 finfish.

The estimated finfish bycatch in dolphin sets in the international fleet is the lowest of all three set types, accounting for approximately 20,200 non-tuna fin fish per year (2 fish per set), with triggerfish and other small fish making up more than 96 percent of the bycatch (IATTC, 2002b). Currently, no U.S. purse seine vessels are making sets on dolphins and they have not been doing so for several years. Therefore, it is expected that the fishing activities of the U.S. fleet will result in no, or negligible amounts of, finfish bycatch from sets on tuna associated with dolphins. Under the status quo alternative, the trends in discarded finfish reflected in data collected between 1998 and 2001 and discussed in this section would be expected to continue.

If the United States fails to implement recommendations of the IATTC and the Parties to the Agreement, it is possible that compliance in implementing and enforcing these recommendations in the fleets of other nations will decline as a result. Should this scenario result, these international management regimes will likely fall apart due to their ineffectiveness managing tuna, dolphin and other living marine resources in the ETP. In the absence of regional bodies to manage listed marine turtle species, fishing effort would be unregulated and it is likely that incidental catches of non-target fish species would increase in the absence of bycatch reduction measures.

4.1.5 U.S. Purse Seine Fleet

The size of the U.S. ETP purse seine fleet has changed from a high of 155 large vessels in 1976 to a low of five large vessels in 2002-2003. Under the status quo alternative, including a treaty that provides U.S. vessels with access to western Pacific fishing grounds, it is advantageous for many U.S. vessel owners to either re-flag to another nation or reconfigure their vessels' nets to fish in the western Pacific. Currently there are six large U.S. purse seine vessels fishing most of the year in the ETP, while another 10 small purse seine vessels (362.8 mt or less carrying capacity) may operate on a seasonal basis in the ETP. The six large vessels now participate only in the floating object and schoolfish fishery in the ETP. The trends in the number of vessels, level of fishing effort, and tuna caught and landed by U.S. vessels under the status quo alternative are not expected to change significantly. These trends are expected to continue to

decline slowly or possibly stabilize. Under the status quo alternative, the U.S. fleet would be expected to continue fishing on floating objects and schoolfish in the ETP and harvest approximately 1,100 mt yellowfin tuna; 2,000 mt bigeye tuna; and 6,500 mt skipjack and annually (harvest levels in 2003). Under the status quo alternative, there is no restriction on targeting tuna in association with dolphin. The U.S. fleet may at any time resume this fishing method; however, current market demands and other factors have made this method of fishing undesirable to the U.S. tuna fleet. At this time, it is difficult to predict whether U.S. vessel owners would target fish associated with dolphin in the near future.

4.1.6 Foreign Purse Seine Fleets

Foreign purse seine fleets use a variety of techniques to fish for tuna in the ETP. Some nations prohibit their vessels from fishing on dolphin, while others promote dolphin fishing because of its efficiency (e.g., lower bycatch rates) and the higher overall yellowfin tuna yields that might result from fishing solely on dolphin. Under the status quo alternative, foreign fleets would be expected to continue fishing in current patterns, with some nations fishing on dolphin, others on floating objects and schools, and others using a mix of strategies. Foreign fleets would be expected to catch about 513,000 mt tuna per year, the mean foreign catch in the ETP 1997-2001 (IATTC, 2002b). (The foreign fleet retained approximately 292,000 mt yellowfin tuna, 45,000 mt skipjack tuna, and 176,000 mt bigeye tuna per year over this period.)

However, if the United States fails to implement recommendations of the IATTC and the Parties to the Agreement, it is possible that compliance in implementing and enforcing these recommendations in the fleets of other nations will decline as a result. Should this scenario result, these international management regimes will likely fall apart due to their ineffectiveness managing tuna, dolphin and other living marine resources in the ETP. In the absence of regional bodies to manage listed marine turtle species, fishing effort would be unregulated and it is likely that catches of target and non-target fish species would increase in the absence of management measures.

4.1.7 U.S. Canned Tuna Processing Industry

The status quo alternative is not expected to affect the U.S. canned tuna industry because activities by U.S. and foreign vessels are not expected to change from current trends. In 2002, the four U.S. canners purchased 177,154 st (160,714 mt) of light meat tuna (skipjack, yellowfin, bigeye and bluefin) (NOAA Fisheries, 2004). Of this total, 128,911 st (116,948 mt), or 73 percent, of light meat tuna purchases were imported, and the remainder (48,243 st (43,766 mt)) were purchased domestically (NOAA Fisheries, 2004).

In 2002, U.S. canners purchased 105,598 st (95,797 mt) of albacore tuna (NOAA Fisheries, 2004). Of this total, 98,465 st (89,326 mt), or 93 percent, of albacore tuna purchases were imported and the remainder (7,133 st (6,471 mt)) were purchased domestically (NOAA Fisheries, 2004).

Trends in U.S. activities associated with ETP fisheries are expected to continue under the status quo alternative. Under the status quo, current market conditions would continue.

4.1.8 Foreign Canned Tuna Processing Industry

Under the status quo alternative, impacts to foreign tuna processors are not expected. The fishing patterns of the U.S. and foreign fleets would not be expected to change. Therefore, there should be little or no change in the production patterns of foreign canneries.

4.1.9 U.S. Consumers

A change in U.S. consumption patterns of canned tuna are not likely to result from this status quo alternative (i.e., failing to implement recommendations of the IATTC and the Parties to the Agreement). However, if the U.S. fails to implement recommendations of the IATTC and the Parties to the Agreement, it is possible that compliance in implementing and enforcing these recommendations in the fleets of other nations will decline as a result. Under this scenario, it is possible that U.S. consumption of canned tuna will decline in protest to the U.S. Government's lack of compliance with international agreements and potential non-compliance by other nations that do not comply with these recommendations.

4.1.10 U.S. and Foreign Governments

Under the status quo alternative, the U.S. Government would not implement recommendations of the IATTC and the Parties to the Agreement. If the United States fails to implement these recommendations, it is possible that compliance in implementing and enforcing these recommendations in the fleets of other nations will decline as a result. Should this scenario result, these international management regimes will likely fall apart due to their ineffectiveness in managing tuna, dolphin and other living marine resources in the ETP. In the absence of regional management bodies, fishing effort would be unregulated and it is possible that catches of protected species and target and non-target fish species would increase to unsustainable levels in the absence of management measures.

Unrestricted fishing effort and the depletion of common resources in the ETP valued by both the U.S. and foreign Governments would reflect poorly on those governments. Consumers, environmental organizations and individuals would be expected to be highly critical of this possible outcome of implementing the status quo alternative.

4.2 Impacts of Alternative 2: Proposed rule (Preferred Action)

4.2.1 Marine Mammals

The proposed rule would: (1) establish a register of U.S. vessels with a history of fishing in the ETP prior to June 28, 2002, and require that only vessels on that list would be authorized to purse seine for tuna in the ETP; (2) limit the aggregate capacity of U.S. purse seine vessels that may fish full time for tuna in the ETP to 8,969 mt carrying capacity per year; (3) revise the requirements for maintaining and submitting tuna tracking and verification records; (4) ensuring that owners of U.S. vessels on the Vessel Register pay annual assessments; (5) prohibit commerce in tuna or tuna products bearing a label or mark that refers to dolphins, porpoises, or marine mammals if the label or mark does not comply with the labeling and marking requirements of 16 U.S.C. 1385(d); and (6) prohibit interference with enforcement and inspection activities, submission of false information, and other activities that would undermine the effectiveness of the MMPA, IDCPA, and DPCIA. These actions are not expected to have any effect on marine mammal populations in the ETP, or if anything, the actions may have positive effects on marine mammal populations.

First, limiting the capacity of the U.S. purse seine fleet in the ETP is expected to limit the potential for interactions between the tuna purse seine fishery and marine mammal stocks. Put simply, a limited number of vessels in the fishery will limit the number of sets that can be made annually. While no U.S. purse seine vessels are currently intentionally setting on dolphin to catch tuna, nothing in the current regulations or these proposed regulations prohibit vessels in the U.S. fleet from making intentional sets on tuna associated with dolphin in the future.

Second, ensuring that purse seine vessel owners participating in the fishery pay annual vessel assessments to maintain the Agreement's On-Board Observer Program will ensure that observers are aboard 100 percent of trips made by vessels greater than 400 st (362.8 mt) carrying capacity in the ETP. This level of observer coverage is an important part of documenting and reporting on a real-time basis the number of intentional sets made on marine mammals and the incidental marine mammal mortality in the fishery to ensure DMLs and stock mortality limits are not exceeded.

Third, investigating possible infractions and enforcing violations of the MMPA, IDCPA and DPCIA is essential to conserve and recover depleted marine mammal populations. The proposed actions will specifically prohibit activities that interfere with investigations and undermine the effectiveness of the MMPA, IDCPA and DPCIA. As a result, the proposed actions are expected to have a positive effect on marine mammal populations.

The preferred alternative is expected to result in similar or improved protection for dolphin and other marine mammals compared to the status quo.

4.2.2 Tuna

Under the preferred alternative, NOAA Fisheries expects that the aggregate capacity of the U.S. and international tuna purse seine fleets will be limited and that the approach of the fleets in catching tuna would not change compared with that observed in recent years. As a result,

implementation of the preferred alternative is expected to result in relatively constant overall tuna catches. Given the relatively small proportion of U.S. catches relative to the overall ETP catch of yellowfin, skipkack and bigeye tuna, any positive effects to tuna stocks associated with the preferred alternative are only expected to be realized if fleet capacity limits are implemented by all the Parties with purse seine vessels operating in the Convention Area.
The conservation of tuna is dependent on effective control of the total fishing mortality. This control of the total fishing mortality is more likely to be achieved under the preferred alternative, which would be viewed as the United States meeting its commitment under the IATTC and Agreement. After the enactment of the IDCP, several governments agreed that the IATTC should take an active role in managing all tuna fisheries in the ETP for the benefit of current and pending IATTC members. If the preferred alternative is not implemented, these nations may conclude that there is no benefit in cooperating, and the fishery conservation and management measures being pursued by the IATTC would not be effective. The results of this conclusion are likely to include serious adverse consequences for tuna stocks in the region.

4.2.3 Sea Turtles

Under the preferred alternative, large U.S. tuna purse seine vessels are expected to continue to use the same methods to catch tuna in the ETP as they have in the recent past: by setting on floating objects and school fish, and not on dolphin. U.S. purse seine vessels are expected to continue fishing on schools and floating objects at the same approximate levels as in the 1998-2001 period. Therefore, NOAA Fisheries expects that there would be little change in the number of sea turtles taken annually by U.S. vessels in the ETP, and the impact to sea turtles would be similar to the impact of the status quo alternative (see section 4.1.3).

NOAA Fisheries expects that, as with marine mammals (see section 4.2.1), some aspects of the preferred alternative may result in positive effects to sea turtle populations in the ETP. Specifically, limiting the aggregate capacity of large tuna purse vessels in the U.S. fleet is expected to have a positive effect on sea turtles for similar reasons as those discussed with respect to marine mammals. Thus, the net effect of the preferred alternative is expected to be beneficial to sea turtles in the ETP.

4.2.4 Other Finfish

The U.S. and international fleets' fishing strategies and overall fishing effort under the preferred alternative are not expected to change from the trends observed in recent years. As a result, incidental catches and discards of non-tuna finfish would be expected to remain at approximately current levels (i.e., 1998-2001 levels) (see section 4.1.4) or decrease consistent with decreasing effort in the U.S. fleet.

4.2.5 U.S. Purse Seine Fleet

The preferred alternative is not expected to have a significant economic impact on the U.S. fleet in the ETP. While the proposed actions would limit the aggregate capacity of the U.S. tuna

purse seine fleet operating in the ETP each year at 8,969 mt, this capacity limit is consistent with the total capacity of U.S. vessels that have participated in the fishery in recent years. As a result, the U.S. fleet would be expected to continue fishing in the same manner and at the same level as it has for the past few years.

The proposed action is not expected to have a significant adverse impact on small purse seine vessels (less than 400 st carrying capacity) because these vessels, which do not target tuna on a full-time basis, will not be required to be listed on the Vessel Register or pay annual vessel assessments. Therefore, small purse seine vessels that do not purse seine for tuna on a full-time basis would not be subject to the proposed capacity limitation and may continue to target tuna on a seasonal basis as they have done in the past. There would be no substantial compliance costs for small vessels that purse seine for tuna seasonally.

One small purse seine vessel in the U.S. fleet is known to target tuna on a full-time basis. This vessel and other small vessels that fish in the same manner will be required to be listed as active on the Vessel Register and pay annual assessments to participate in the tuna purse seine fishery in the ETP on a full-time basis. Given that this vessel has already been paying annual vessel assessments it is expected that it will continue to do so in the future, and that continuing to do so will not pose a significant economic impact to the vessel.

The proposed action is expected to result in an approximately equal supply of raw tuna to U.S. and foreign processors in the future as has been realized in recent years. NOAA Fisheries does not expect that lower prices will be paid to fishing vessels, regardless of their size, for their harvested tuna. Raw tuna for canning is a commodity for which prices are generally set on an international basis. The prices paid for raw product are generally a result of cumulative international demand for and supply of raw product throughout the year. The overall effect of implementing fleet capacity limits in the U.S. and internationally is expected to maintain long-term yield from the yellowfin, skipjack and bigeye tuna stocks in the ETP. When considered in the context of total worldwide supply of over one million tons of raw tuna for canned light meat tuna, the supply expected under the preferred alternative would not likely affect prices paid to fishing vessels. Thus, the proposed actions would not likely affect revenues to small or large U.S. tuna fishing vessels in the ETP.

4.2.6 Foreign Purse Seine Fleets

The preferred alternative is not expected to have a significant impact on foreign purse seine fleets. Under the preferred alternative, the U.S. fleet is expected to continue harvesting tuna at approximately current levels. The ability of foreign purse seine fleets to harvest tuna in the ETP would not be affected by the proposed action and it would be expected that foreign purse seine fleets will continue to harvest tuna at approximately current levels.

4.2.7 U.S. Canned Tuna Processing Industry

The U.S. canned tuna processing industry is not expected to be significantly affected, either positively or negatively, as a result of implementation of the proposed action. Availability, supply and sources of raw product for canning would be expected to be maintained at approximately current levels under the preferred alternative. A short-term objective of the preferred alternative is to limit the number of vessels purse seining for tuna in the ETP, which is expected in turn to limit the supply of tuna. However, this limit is not expected to constrain the ability of the U.S. tuna processing industry to obtain sufficient raw product to maintain its current level of processing activity. In the long term, capacity limitation that would be implemented under the preferred alternative is expected to promote sustainable harvest levels and healthy tuna stocks. Therefore, the U.S. tuna processing industry would be expected to benefit from the maintained supply of raw product over the long term expected under the preferred alternative.

4.2.8 Foreign Canned Tuna Processing Industry

The preferred alternative is not likely to affect, either positively or negatively, the foreign canned tuna processing industry. Possible long- and short-term effects to the foreign canned tuna processing industry under the preferred alternative would be expected to be similar in scope and magnitude to those discussed relative to the U.S. canned tuna processing industry (see section 4.2.7). A discussion of those possible effects is not repeated in this section.

4.2.9 U.S. Consumers

Under the preferred alternative, the availability of canned product originating from the ETP to U.S. consumers is not expected to change significantly from current levels. As noted earlier, canned tuna is an international commodity with worldwide production. Neither the supply nor price of canned product would be expected to change, and the ability of consumers to choose from a full range of tuna products would not be affected under the preferred alternative. Under the preferred alternative, U.S. consumption of canned tuna is expected to remain at recent levels, between 3 and 3.5 lbs per capita.

4.2.10 U.S. and Foreign Governments

Under the preferred alternative, procedural modifications to the international tracking and verification system would be established to ensure the capability to confirm that canned tuna is correctly labeled. The new procedures would address potential shortcomings of the current tuna tracking and verification system, as identified by NOAA Fisheries staff who have implemented the system for several years.

4.3 Impacts of Alternative 3: Variations on the Preferred Alternative

The preferred alternative described in section 2.2 and analyzed in section 4.2 would implement resolutions adopted by IATTC member nations and Parties to the Agreement. The preferred alternative has been designed to minimize any potential environmental and socioeconomic impacts while still achieving the objectives of the internationally agreed upon resolutions. However, it is possible to envision other sub-alternatives that would accomplish those same objectives. These sub-alternatives include:

> (1) Purse seine vessels that are eligible to be on the Vessel Register must remain on the Vessel Register and pay associated fees, regardless of their size and whether they intend to actively participate in the fishery in a given year;
>
> (2) The aggregate capacity of active U.S. purse seine vessels participating in the ETP tuna fishery is limited to some amount less than 8,969 mt for each year;
>
> (3) All vessels have equal opportunity to be active from year to year (i.e., there would be no incentive or reward for being active in prior year); and
>
> (4) No provisions are made to deter frivolous requests from vessels to be categorized as active on the Vessel Register for a given year.

The potential environmental and socioeconomic impacts associated with those sub-alternatives are described in concert in the following sections.

4.3.1 Marine Mammals

Under alternative 3, impacts to marine mammals would likely be the same as under the preferred alternative.

4.3.2 Tuna

Under alternative 3, impacts to tunas are not expected to be significantly different than under the preferred alternative. Alternative 3 may provide slight benefits to tuna if the aggregate capacity of the U.S. tuna purse seine fleet operating in the ETP was limited to less than 8,969 mt and if a provision to deter frivolous requests to be "active" was not implemented. In each of these cases, effectively fewer U.S. tuna purse seine vessels would be fishing in a given year than expected under the preferred alternative.

4.3.3 Sea Turtles

Under alternative 3, impacts to sea turtles are not expected to be significantly different than under the preferred alternative. Slight benefits to sea turtles similar to those discussed for tuna may occur if the aggregated capacity of the U.S. tuna purse seine fleet is less than that expected

under the preferred alternative. Lower capacity would be expected to result in less turtle bycatch.

4.3.4 Other Finfish

Under alternative 3, impacts to other finfish are not expected to be significantly different than under the preferred alternative. Slight benefits to other finfish similar to those discussed for tuna may occur if the aggregated capacity of the U.S. tuna purse seine fleet is less than that expected under the preferred alternative. Lower capacity would be expected to result in less finfish bycatch.

4.3.5 U.S. Purse Seine Fleet

Negative impacts to the U.S. tuna purse seine fleet would be expected as a result of implementing alternative 3. Alternative 3 would limit the aggregate capacity of the U.S. tuna purse seine fleet actively fishing in the ETP each year to an amount less than the agreed upon 8,969 mt. The potential effect of alternative 3 on the U.S. tuna purse seine fleet would be to reduce the number of vessels that could fish each year.

In addition, alternative 3 would not provide adequate disincentives for vessel owners to frivolously request active status for a given year. The effect of frivolous active requests would be similar to reducing the active capacity of the U.S. tuna purse seine fleet. For example, if an average size vessel of 1,200 mt made a frivolous active request, it could exclude another vessel of equal size from being active that same year. Under the proposed action, a vessel that makes a frivolous active request and lands no tuna caught by purse seine in the ETP would effectively reduce the capacity of the U.S. purse seine fleet to less than 7,769 mt.

4.3.6 Foreign Purse Seine Fleets

Under alternative 3, it is not expected that the ability of foreign purse seine fleets to harvest tuna in the ETP would be affected; it would be expected that foreign purse seine fleets would continue to harvest tuna at approximately current levels.

4.3.7 U.S. Canned Tuna Processing Industry

It is not expected that the U.S. canned tuna processing industry would be significantly negatively impacted by alternative 3. U.S. tuna processors receive raw product harvested by vessels of other nations as well as domestic vessels and tuna harvested by U.S. purse seine vessels in the ETP comprises a relatively small proportion of the total ETP tuna harvest. However, depending on the magnitude of the reduction in the capacity of the U.S. purse seine fleet, negative impacts to the U.S. canned tuna processing industry would be expected with increasingly large reductions in fleet capacity.

4.3.8 Foreign Canned Tuna Processing Industry

Under alternative 3, impacts to the foreign canned tuna processing industry are not expected to be significantly different from those expected under the preferred alternative. This expectation is based on the small capacity of the U.S. fleet relative to the capacity of the national fleet and the individual national fleet capacities.

4.3.9 U.S. Consumers

Under alternative 3, impacts to U.S. consumers would likely be the same as under the preferred alternative.

4.3.10 U.S. and Foreign Governments

Under alternative 3, impacts to the U.S. and foreign governments would likely be the same as under the preferred alternative.

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REGULATORY IMPACT REVIEW/
INITIAL REGULATORY FLEXIBILITY ANALYSIS (RIR/IRFA)

FOR

IMPLEMENTING PROCEDURES TO

MANAGE THE CAPACITY OF THE U.S. TUNA PURSE SEINE FLEET OPERATING IN THE EASTERN TROPICAL PACIFIC OCEAN

I. Purpose

The purpose of the actions proposed and evaluated in this RIR/IRFA is to meet United States obligations under the Tuna Conventions Act (16 U.S.C. 951-961 and 971 et seq.) and Marine Mammal Protection Act (MMPA) by implementing tuna fishery conservation and management recommendations of the Inter-American Tropical Tuna Commission (IATTC) and dolphin conservation measures recommended by the Parties to the Agreement on the International Dolphin Conservation Program (Agreement), respectively. Recommendations of the IATTC and Parties to the Agreement have been approved by the Department of State (DoS). The objectives of the recommendations are to prevent overfishing, maintain productive tuna stocks, minimize bycatch of non-target species and juvenile fish, and promote recovery of depleted dolphin stocks in the eastern tropical Pacific Ocean (ETP).

II. Background

The United States is a member of the IATTC and a Party to the Agreement. The IATTC was established to provide an international arrangement to ensure conservation and management of yellowfin tuna and other species of fish taken by tuna fishing vessels in the ETP. The Agreement provided greater protection to dolphin stocks and enhanced conservation of yellowfin tuna and other living marine resources in the ETP. Each member nation and Party is responsible for regulating its domestic fisheries to carry out recommendations of the IATTC and Parties to the Agreement, respectively. IATTC has recommended measures to limit capacity of the tuna purse seine fleet in the ETP and other measures to prevent overexploitation and promote achievement of maximum sustainable yield for yellowfin tuna. The success of these measures is contingent upon each nation managing the capacity of its tuna purse seine fleet. Purse seine vessels in excess of 400 short tons (st) (362.8 metric tons (mt)) carrying capacity under the jurisdiction of the Parties to the Agreement are required to carry observers on fishing trips in the ETP. As a member nation of IATTC and a Party to the Agreement, the United States takes action to implement recommendations of the IATTC and the Agreement that have been approved by DoS.

At its annual meeting in June 2002, the IATTC adopted a resolution to establish a Vessel Register, the definitive list of vessels authorized to purse seine for tuna in the ETP, as well as sub-categories of vessels on the Vessel Register that will be active and inactive for a given year. At the annual Meeting of the Parties in June 2003, the Parties to the Agreement adopted a resolution that uses a vessel's active/inactive status on the Vessel Register as a basis for calculating its annual fees (i.e. vessel assessments) for carrying observers and maintaining the IATTC observer program. DoS has approved these recommendations. Pursuant to regulations promulgated in 1999 (64 FR 44428, August 16, 1999) establishing the process for implementing IATTC actions, notice and comment rulemaking will be initiated to implement this recommendation.

These proposed regulations would: (1) establish a register of U.S. vessels with a history of fishing in the ETP prior to June 28, 2002, and require that only vessels on that list would be authorized to purse seine for tuna in the ETP; (2) limit the aggregate capacity of U.S. purse seine vessels that may fish full time for tuna in the ETP to 8,969 mt carrying capacity per year; (3) revise the requirements for maintaining and submitting tuna tracking and verification records; (4) ensure owners of U.S. vessels on the Vessel Register pay annual assessments; (5) prohibit commerce in tuna or tuna products bearing a label or mark that refers to dolphins, porpoises, or marine mammals if the label or mark does not comply with the labeling and marking requirements of 16 U.S.C. 1385(d); and (6) prohibit interference with enforcement and inspection activities, submission of false information, and other activities that would undermine the effectiveness of the MMPA, International Dolphin Conservation Program Act (IDCPA), and Dolphin Protection Consumer Information Act (DPCIA). These actions are not expected to have a any effect on marine mammal populations in the ETP, or if anything, the actions may have positive effects on marine mammal populations.

III. Affected Environment

a. The ETP

The ETP is an area that covers approximately 7 million square miles from 40° north latitude to 40° south latitude and from the west coast of North, Central, and South America west to 150° west longitude. The ETP provides habitat for many fish species (including yellowfin, skipjack and bigeye tuna, marlin, swordfish, and mahimahi) as well as a variety of other living marine resources such as cetaceans (e.g., dolphins) and sea turtles. The ETP appears to be the only area in the world where tuna and dolphins are frequently found in association with each other.

About 33 percent of the world's production of all tuna species and 28 percent of all the yellowfin tuna canned worldwide comes from the ETP, according to the IATTC. Although the catches of yellowfin in the ETP have increased substantially since 1970, the percentage increases in the catches in the western Pacific Ocean and the Indian Ocean have been even greater, so the ETP is now a relatively less important source of yellowfin than it was during the early 1970's.

b. Fish Stocks

The tuna purse seine fishery in the ETP harvests six species of tuna and tuna-like fish. The principal species of interest in the context of this EA are three tuna species. Two species - yellowfin and skipjack tuna - are the mainstay of the purse seine fishery, while bigeye is a lesser but still important component, especially in sets on floating objects and the longline fishery. These species are captured either in association with dolphin, in free-swimming tuna schools, or in association with floating objects (logs and Fish Aggregating Devices (FADs)). The term "dolphin fishing" refers to a method of harvesting tuna where purse seines are set around herds of dolphin and associated tuna. The terms "school fishing" or "log fishing " are used to describe fishing effort without intentional marine mammal involvement though marine mammals are occasionally taken in these strategies as well.

The 2003 stock assessment by the IATTC indicates that the stock of yellowfin tuna in the ETP is healthy. The purse seine fishery could possibly continue to harvest about 270,000 mt per year from the ETP without further decreasing the stock size, although this would require fishing in a strategy to maximize yield per recruit to the fishery. In recent years the fleet has been directing a greater portion of its effort toward fish not associated with dolphins. Fish caught in free-swimming schools or in association with floating objects are smaller than those caught in association with dolphins. If the shift in fishing modes were to continue to increase, the sustainable catch of yellowfin in the ETP could decline. Further, the annual effort (driven by increases in the total fleet carrying capacity) has increased by more than 15 percent in the last five years. This increase indicates a greater than optimum level of effort and could cause a decline in the sustainable production of yellowfin if unrestrained. These declines would take several years to manifest themselves fully. However, there is no immediate concern about the status of yellowfin as long as harvests remain within current quota levels and juvenile tuna catches are under some degree of control. In this regard, the IATTC has been concerned with the overall growth of the tuna purse seine fleet operating in the ETP and that overcapacity could result in excessive harvest of yellowfin tuna and adversely affect future productivity. The IATTC recommended in a 2002 Resolution that the capacity of the tuna purse seine fleet be limited through use of a vessel register, a definitive list of vessels authorized to purse seine for tuna in the ETP.

The status of the skipjack tuna stock is less clear. There has been a significant increase in skipjack catches the past few years, and it is not known if this reflects a change in abundance of the stock, a change in its availability and vulnerability to the fishery, or a change in the effective effort or distribution of the fishery. It is known that the fishery to some extent has extended farther to the west in recent years, and when combined with greater use of fishing on floating objects, this may account for higher skipjack harvests. Also, skipjack tuna are generally more variable in productivity than yellowfin or bigeye tuna. In any event, there is no evidence to suggest that the skipjack stock is not in good condition.

The status of the bigeye stock is also not clear. While bigeye catches increased with the increased use of log sets in recent years, it is not known if this has substantially affected the stock. The IATTC has been concerned, however, that the catch of juvenile bigeye tuna could adversely affect the productivity of the stock in the future. Log sets account for virtually all purse seine catch of bigeye, and in general, the bigeye caught are below the size of maturity. In fact, some of the fish are so small that they have no market value and are therefore discarded and wasted. High continued catches of small bigeye could not only adversely affect the future productivity of the stock; it also could result in decreased catches of larger and more valuable bigeye in the longline fishery. The 1998 and 1999 quotas were set in part to address the concern that fishing mortality of juvenile bigeye needed to be controlled to reduce any biological risk. It is noteworthy, however, that the catches declined in 2001 and early 2002, and that there have been relatively lesser amounts of “small” bigeye taken in the purse seine fishery more recently; most of the catch has been of fish larger than usual. The reason for this observation is not clear. It may reflect poor recruitment in the past year, it may reflect a shift in availability of fish to the

fishery, or it may reflect a change in distribution of the fish or the fishing effort. In any event, it is a matter of some concern, and the IATTC is studying the implications. Bigeye are not declared to be overfished.

The status of stocks of other species of fish is unknown. The purse seine fishery (especially in log sets, and to a lesser extent in school sets) takes substantial numbers of such species as dorado (mahimahi), wahoo, sharks and rays, yellowtail, and small fishes. The IATTC has not studied or assessed the status of any of these stocks, though there is no evidence of any stress.

c. Protected Species

Sea turtles occur throughout the ETP. The species include the green, hawksbill, leatherback, olive ridley, and loggerhead. All species of Pacific sea turtles are listed as threatened or endangered under the Endangered Species Act (ESA), so their status is of special concern to the United States and the IATTC. The IATTC directed its Bycatch Working Group to begin assessing the implications of turtle takes in ETP tuna fisheries and the need for and benefits of alternative approaches for reducing turtle takes. The first meeting of the Bycatch Working Group was convened in January 2004.

More than 10 species of dolphin occur in the ETP, including common, coastal and offshore spotted, and spinner dolphins. Because dolphin interactions with the purse seine fishery are controlled under the International Dolphin Conservation Program, and regulations governing U.S. vessels under that program are promulgated under the MMPA. Nothing in this proposed action is expected to adversely affect the conservation of marine mammals in the ETP.

d. U.S. Interest in the ETP Purse Seine Fishery

The U.S. tuna catch relative to the total harvest of tuna in the ETP has declined considerably in the past 25 years. The international catch of tuna in the ETP has been about 600,000 mt per year the past few years, with yellowfin and skipjack dominating the catch the past two years. In 2003, the U.S. fleet harvested a small portion - about 1,074 mt yellowfin tuna, 6,262 mt skipjack tuna, and 1,939 mt bigeye, or 10,000 mt total. In contrast, in 1976, when the total international catch was about 371,000 mt, the U.S. fleet accounted for more than half the total purse seine catch in the ETP.

The decline in U.S. catch is associated with the decline in the number of U.S. purse seine vessels operating in the ETP. The U.S. fleet has decreased from a high of 155 purse seiners greater than 400 short tons (st) (362.8 mt) carrying capacity in 1976 to 5 such vessels in 2002-2003. The large vessels are characterized as large business entities. In addition, there are 10 or fewer smaller purse seine vessels (mostly less than 100 mt carrying capacity) that fish most of the year for coastal pelagic species (Pacific mackerel, Pacific sardine) but occasionally fish for tuna in the ETP when the tuna are seasonably available to these smaller vessels. These vessels are characterized as small business entities, most of which are based in southern California. The decline in the U.S. purse seine fleet is due to economics, sales to foreign investments, and vessel sinkings. There are no major tuna processing facilities left in California, so market opportunities

are limited. Total tuna landings (including landings in foreign ports) by U.S. purse seine vessels from the ETP are less than 25,000 mt per year with a total value of less than $20 million. Less than 1,000 mt of tuna valued at less than $1 million were landed into California ports in 2002.

IV. Management Issue: Conservation of Tuna Stocks

The principal function of the IATTC is to ensure that tuna stocks are maintained at levels that support the maximum sustainable yield from the stocks. Achieving this objective is complicated by the fact that the tuna fisheries comprise several gear types, different fishing strategies, and different fishery objectives among the member nations. Historically, the IATTC focused on a quota system to limit fishing mortality of yellowfin tuna, the most highly valued of the three species taken in the purse seine fisheries. The quota has applied in the Commission Yellowfin Regulatory Area (CYRA), which makes up about two-thirds of the overall Convention Area. More recently, due to concern about possible overcapacity of the tuna purse seine fleet operating in the ETP, the IATTC has developed criteria for vessels to be included on a the definitive list of vessels authorized to purse seine for tuna in the ETP (the Vessel Register). The Vessel Register is intended to limit the new entry of vessels into the fleet and provide a mechanism to reduce the capacity of the international tuna purse seine fleet in the ETP over time.

V. Proposed Management Measures and their Impacts

a. Proposed Action

NOAA Fisheries proposes to: (1) establish a register of U.S. vessels with a history of fishing in the ETP prior to June 28, 2002, and require that only vessels on that list would be authorized to purse seine for tuna in the ETP; (2) limit the aggregate capacity of U.S. purse seine vessels that may fish full time for tuna in the ETP to 8,969 mt carrying capacity per year; (3) revise the requirements for maintaining and submitting tuna tracking and verification records; (4) ensure owners of U.S. vessels on the Vessel Register pay annual assessments; (5) prohibit commerce in tuna or tuna products bearing a label or mark that refers to dolphins, porpoises, or marine mammals if the label or mark does not comply with the labeling and marking requirements of 16 U.S.C. 1385(d); and (6) prohibit interference with enforcement and inspection activities, submission of false information, and other activities that would undermine the effectiveness of the MMPA, IDCPA, and DPCIA.

b. Effects of Proposed Action

The proposed actions are expected to have minimal impacts on the U.S. purse seine fishing fleets and associated businesses.

Fleet capacity limitation
With only 1-2 exceptions, tuna landings of small purse seine vessels (less than 400 st carrying capacity) do not comprise a sufficient percentage of the total landings of small purse seine vessels. Therefore, these vessels will not be required to be categorized as active on the Vessel

Register in order to purse seine for tuna when they are seasonally available. The 1-2 small vessels that target tuna on a full-time basis, as well as large tuna purse seine vessels (in excess of 400 st carrying capacity), must be listed as active on the Vessel Register and pay associated annual vessel assessments in order to fish for tuna in future years. The annual capacity limit that will be imposed on the U.S. tuna purse seine fleet as a result of this action is expected to accommodate all interested vessels based on vessel participation in the fishery in recent years. However, as many as 2 purse seine vessels would be excluded on the ETP tuna fishery as a result of the proposed capacity limitation. When considered in the context of total worldwide supply of over one million tons of raw tuna for canned light meat tuna, the supply expected under the preferred alternative would not likely affect prices paid to fishing vessels. Thus, the proposed actions would not likely affect revenues to small or large U.S. tuna fishing vessels in the ETP.

The proposed capacity limitation provides several benefits. First, the proposed actions would enable the United States to fulfill its international commitments to limit participation by purse seine vessels under its jurisdiction in the ETP fishery to those that meet the criteria established by the IATTC (i.e., a history of fishing in the ETP prior to June 28, 2002). Second, the proposed actions would ensure that the United States fulfills another of its international commitments to restrict the capacity of its fleet operating in the ETP to 8,969 mt. Third, entities with economic or other interests in the conservation of living marine resources in the ETP, particularly tuna and other finfish stocks, will benefit from the capacity limits included in the proposed actions, which are designed to sustain both tuna stocks and the fisheries that harvest those stocks in the ETP.

Revisions to tuna tracking procedures

The proposed actions would require: (1) Fisheries Certificates of Origin (FCOs) and associated certifications be submitted by each importer of record by mail either on compact disc or as hard copies to the Tuna Tracking and Verification Program by the importer of record within 30 days of the shipment's entry into the commerce of the United States; (2) the name of the vessel be recorded on the FCO regardless of the gear type used; (3) importers, exporters, or processors who take custody of tuna shipments to sign and date FCOs; (4) maintenance of records on all tuna imported into the United States, not just tuna harvested in the ETP that is imported; and (5) wholesalers and distributors maintain records related to the shipment of tuna, including the FCO, required certifications, invoices, and other import documents.

NOAA Fisheries expects the first proposed change to tuna tracking procedures to increase the burden on importers of record. If implemented, the proposed regulations would require that importers of record submit documentation directly to NOAA Fisheries rather than to U.S. Customs and Border Protection, as they are doing under current regulations. However, importers of record would be required to submit documentation on a regular basis rather than upon request. NOAA Fisheries expects this change to increase the frequency of submissions by importers. The proposed regulations would benefit NOAA Fisheries in that they would increase the efficiency with which required documentation is submitted and reduce the tuna tracking burden on U.S. Customs and Border Protection.

The second proposed change to tuna tracking procedures is expected to add a burden to entities completing the FCO for tuna harvested by gear types other than purse seine. Currently, the name of the vessel is not required on the FCO for tuna harvested by non-purse seine vessels; however, this change would increase NOAA Fisheries' ability to identify fish harvested in contravention of internationally agreed upon conservation measures or in violation of resolutions of the IATTC or Agreement. This level of identification will enable NOAA Fisheries maintain the integrity of the dolphin-safe labeling standard for tuna imported into the United States, as information on the entire suite of tuna entering U.S. commerce is required to assess whether tuna which has purportedly been harvested by a specific gear type or in a specific ocean area was truly harvested in that way.

The third proposed change to tuna tracking procedures would add a burden to importers, exporters, and processors, as these entities would now be required to sign and date FCOs for all tuna not just tuna harvested by large purse seine vessels in the ETP. The proposed change would expand the scope of these entities which would have to sign and date FCOs. This modification is necessary because processors who import tuna must be able to verify dolphin-safe status through use of the FCO for all tuna imports regardless of gear or vessel size. U.S. consumers, the international community, and other organizations have demonstrated a strong investment in ensuring that tuna tracking and verification programs verify the dolphin-safe status of tuna. The experience of NOAA Fisheries' Tuna Tracking and Verification Program has shown that the proposed change would significantly increase the ability of the program to achieve this task.

The fourth proposed change to tuna tracking procedures would add a burden to all entities required to maintain records on tuna and tuna products (i.e., exporters, transshippers, importers, processors or wholesalers/distributors). The proposed change would expand the scope of these entities required to maintain records from only those who take custody of tuna harvested in the ETP to all tuna harvested in ocean areas around the world. U.S. consumers, the international community, and other organizations have demonstrated a strong investment in ensuring that tuna tracking and verification programs verify the dolphin-safe status of tuna. The experience of NOAA Fisheries' Tuna Tracking and Verification Program has shown that the proposed change would significantly increase the ability of the program to achieve this task.

The fifth proposed change to tuna tracking procedures would add a burden to wholesalers/distributors who are currently not required to maintain or submit records. Wholesalers/distributors would be identified as entities that sell from offices or warehouses, advertise to businesses rather than to the general public, and generally have no walk-in traffic or public displays. This addition is proposed because current regulations require importers to adhere to the tracking requirements, but do not extend the requirements to parties any farther in the stream of commerce. Investigations into the alleged illegal importation of tuna products have been thwarted because NOAA Fisheries discovered the products only after they had been delivered to the retailers. For example, wholesalers/distributors did not maintain any paperwork regarding the delivery or purchase of the tuna that would have allowed NOAA Fisheries to investigate who had been involved in the illegal importation. Without extending the tracking requirements to wholesalers/distributors, this complication with investigations would likely

continue, as there is the potential that illegal importations of tuna are ongoing. NOAA Fisheries does not propose extending recordkeeping requirements to retailers, but in order to aid enforcement of these regulations, NOAA Fisheries would apply the verification requirements of this section to wholesalers/distributors.

In summary, proposed changes to the tuna tracking and verification program are expected to result in additional burdens to some entities already required to maintain and submit records, as well as entirely new burdens on some entities that are not currently bound by the same requirements. However, the changes have been proposed as a result of years of experience tracking and verifying the origin of tuna and tuna products. The changes are necessary for NOAA Fisheries to continue to ensure the integrity of the dolphin-safe label and pursue enforcement actions against individuals or entities whose actions threaten consumer confidence in tuna product labeling standards.

Annual vessel assessments

The proposed actions would require that vessel permit applications be faxed and, for vessels that are going to be categorized as active on the Vessel Register, that payment of observer placement fees and the vessel permit application processing fee be received by the Regional Administrator within 10 days of the date NOAA Fisheries receives the faxed vessel permit application. This proposed rule would allow owners not requesting to have vessels categorized as active on the Vessel Register to fax vessel permit applications at any time, provided they allow at least 45 days for processing.

The proposed actions would revise the dates by which annual vessel assessments (observer fees) must be paid. As a result, the due date for the fee, currently September 1, would be changed to November 30 for vessels for which dolphin mortality limits (DMLs) are not requested and September 15 for those for which DMLs are requested. Observer placement fees would be required for all vessels listed on the Vessel Register, established in Section 300.22(b), including vessels not required to carry observers. Vessels for which the required observer placement fee is not paid in a given year would not be included on the Vessel Register for that year.

The proposed changes to the timing of vessel assessment payments are not expected create a burden on owners of either large or small vessels participating in the fishery. The proposed actions would exempt owners of most small vessels from paying annual vessel assessments. Owners of small vessels that would be required to pay annual assessments already do. That these owners are currently able to pay the required assessments is interpreted by NOAA Fisheries to indicate that doing so does not create a significant financial burden. However, the act of paying the assessment does create a burden for a small number vessel owners, albeit a small burden. The proposed actions do not expand the scope of large vessels required to pay annual assessments and, as a result, they do not create any new burdens on owners of these vessels.

The proposed changes to the timing of vessel assessment payments will ensure that the United States fulfills its international commitment to the Parties to the Agreement. Vessel assessments

collected from U.S. and foreign vessels support the majority of the costs of the international On-Board Observer Program operated under the Agreement. The international observer program provides valuable data on catches of tuna, dolphins, turtles and other species; it also contributes to the integrity of the dolphin-safe label recognized by tuna consumers throughout the world. Further, because of the close linkage between the payment of annual vessel assessments and whether or not a vessel is categorized as active on the Vessel Register, the proposed changes to vessel assessment payments will allow the United States to fully implement procedures to maintain its fleet capacity from year to year, consistent with its international obligations.

Prohibitions

The proposed actions include prohibitions against commerce in tuna or tuna products bearing a label or mark that refers to dolphins, porpoises, or marine mammals if the label or mark does not comply with the labeling and marking requirements of 16 U.S.C. 1385(d) against interference with enforcement and inspection activities, submission of false information, and other activities that would undermine the effectiveness of the MMPA, IDCPA, and DPCIA. The proposed prohibitions are not expected to result in any legal burdens on tuna fisheries, processors, importers, or other entities.

These prohibitions are proposed to promote compliance with domestic legislation protecting marine mammals and provide for more effective enforcement of non-compliance activities. Currently, individuals who refuse to permit boardings by enforcement agents, interfere with inspections or stranding response, or intentionally submit false information may not be subject to prosecution under the MMPA, as such activities are not specifically prohibited. Such activities constrain law enforcement actions needed to ensure compliance with the statute. Lastly, this action would ensure that there are regulations protecting law enforcement officials while conducting investigations in the field.

These prohibitions would also improve the ability of NOAA Fisheries Enforcement to pursue enforcement actions against entities in the retail stream beyond the party that labeled the product. Putting such enforcement pressure on wholesalers who purchase labeled products is likely to raise their awareness of the dolphin-safe labeling standards. NOAA Fisheries anticipates that this will, in turn, end the illegal trafficking of such products. During the course of recent investigations into illegally imported tuna products, NOAA Fisheries determined that there is both a ready supply of a certain brand of tuna products from Mexico entering the U.S. market that carries a label/mark that implies the tuna is dolphin-safe and a demand among consumers for this product. While there is no indication that the label is false, it appears that the product entered the U.S. market without being accompanied by the required paperwork documenting the dolphin-safe status of the tuna. Further, at the time such products were discovered by law enforcement officials, the party possessing the product (usually a retailer) was not the party that placed the dolphin-related label on the product.

c. Alternatives Considered

NMFS considered several alternatives to the proposed action.

The "No Action" alternative would leave annual participation by U.S. flag purse seine vessels in the fishery unrestricted. This alternative could enhance the competitive position of the U.S. fleet in the short term but would greatly impair the ability of the United States to promote international cooperation in tuna fisheries conservation and management in future years. The United States, while it has only a small fleet in contrast to the fleet of many years ago, is still a strong and well respected member of the IATTC and Agreement. The United States has been a strong proponent of uniform and strong compliance within the IATTC and Agreement, and U.S. action to reject recommendations of the IATTC or Agreement would provide a precedent for other nations to ignore future recommendations. In turn, the likelihood of an agreement on future tuna conservation measures would decline significantly, and tuna stocks would likely become overfished to the detriment of all members' fleets and industries. This outcome is not acceptable. Therefore, this alternative was rejected.

NOAA Fisheries also considered but rejected taking independent action to address tuna conservation (e.g., quota or area closures). Such steps could have put the United States in the forefront of fisheries management in the IATTC arena; however, the principal concern of the member nations, international overcapacity, would not have been addressed by this approach. In addition, the United States does not have independent sources of information or expertise that would provide a sufficiently sound approach to support a departure from the IATTC recommendations. It would take more research and analysis than NOAA Fisheries has been able to conduct independently to provide the needed data to make these types of fishery management decisions. Further, NOAA Fisheries notes that the Pacific Fishery Management Council (Council) has completed and submitted for implementation its Fishery Management Plan for West Coast Highly Migratory Species Fisheries under the Magnuson-Stevens Fishery Conservation and Management Act. To date, the Council has not identified any tuna conservation concerns that warrant unilateral action by the United States. Therefore, this alternative was rejected.

d. Other Evaluation Factors

These measures do not duplicate any other regulations affecting the entities in question. These measures complement measures applied under the MMPA and ESA to ensure that marine mammals (especially dolphin) and sea turtles, respectively, as well as other living marine resources, are not adversely affected by the fisheries being regulated. Every effort has been made to ensure that the measures under the different statutes will not conflict in any manner.

These actions will not result in a measurable effect on the economy. As noted above, total landings by U.S. purse seine vessels in 2002 were less than 25,000 mt valued at less than $20 million. This action is not expected to affect total landings and sales. Specifically, landings and sales of small purse seine vessels should not be affected.

These actions will not conflict with and are not inconsistent with the planned actions of any other agencies.

These actions will not affect budgetary entitlements, grants, or any other government program expenditures.